A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN PUBLIC HOSPITALS, THAILAND

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การวิจัยภาคตัดขวางในครั้งนี้ มีวัตถุประสงค์เพื่อพัฒนาและทดสอบความสัมพันธ์เชิงสาเหตุ ของภาวะผู้นำการเปลี่ยนแปลง คุณลักษณะของงาน บรรยากาศองค์การ ความพึงพอใจในการทำงาน และคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในโรงพยาบาลของรัฐ ประเทศไทย กรอบแนวคิดพัฒนามาจากทฤษฎีการเสริมสร้างพลังอำนาจในองค์การ สุ่มตัวอย่างแบบหลายขั้นตอน กลุ่มตัวอย่างจำนวน 392 คน ซึ่งเป็นพยาบาลวิชาชีพที่มีคุณสมบัติตามเกณฑ์การคัดเข้า จากโรงพยาบาลรัฐ 5 สังกัด จำนวน 22 แห่ง เครื่องมือวิจัยประกอบด้วย แบบสอบถามข้อมูลส่วนบุคคล แบบสอบถามภาวะผู้นำ แบบวัดความเครียดจากงาน แบบสอบถามบรรยากาศองค์การ แบบสอบถามความพึงพอใจในการทำงาน และแบบสำรวจคุณภาพชีวิตการทำงานของพยาบาลไทย แบบสอบถามทั้งหมดได้รับการตรวจสอบความตรงตามเนื้อหาโดยผู้ทรงคุณวุฒิจำนวน 5 ท่าน และตรวจสอบค่าความเชื่อมั่นโดยมีค่าสัมประสิทธิ์อัลฟาของครอนบาคเท่ากับ 0.96, 0.87, 0.81, 0.88, และ 0.93 ตามลำดับ ทดสอบแบบจำลองเชิงสาเหตุ โดยการวิเคราะห์สมการเชิงโครงสร้างด้วยโปรแกรม SPSS และ LISREL

ผลการวิจัยพบว่าภาวะผู้นำการเปลี่ยนแปลง คุณลักษณะของงาน บรรยากาศองค์การ และความพึงพอใจในการทำงานสามารถทำนายความแปรปรวนของคุณภาพชีวิตการทำงานของพยาบาล ได้ร้อยละ 72 X^2= 754.88, df = 487, p = 0.06172, GFI = 0.94, x^2/df = 1.550, AGFI = 0.91, CFI = 1.00, RMSEA = 0.021, RMR = 0.022, CN = 872.15) และพบว่าคุณลักษณะของงานเป็นปัจจัยที่มีอิทธิพล ต่อคุณภาพชีวิตการทำงานของพยาบาลมากที่สุด ($\beta = 0.97, p < .01$) รองลงมาคือภาวะผู้นำการเปลี่ยนแปลง มีอิทธิพลทางบวกทั้งทางตรงและทางอ้อมผ่านคุณลักษณะของงาน บรรยากาศองค์การ และความพึงพอใจในงาน ($\beta = .93, p < .01.$) ส่วนบรรยากาศองค์การมีอิทธิพลทางบวก ทั้งทางตรงและทางอ้อมต่อคุณภาพชีวิตการทำงานของพยาบาลผ่านความพึงพอใจในงาน ($\beta = 0.51, p < .01$) และความพึงพอใจในการทำงานมีอิทธิพลทางบวกต่อคุณภาพชีวิตการทำงานของพยาบาล ($\beta = 0.42, p < .01.$)

การศึกษาในครั้งนี้แสดงให้เห็นว่า ปัจจัยที่คัดสรรในการศึกษาทั้งหมดมีอิทธิพลต่อคุณภาพชีวิตการทำงานของพยาบาล ดังนั้นการสร้างสิ่งแวดล้อมการทำงานที่จะทำให้พยาบาลวิชาชีพรับรู้ถึงคุณภาพชีวิตการทำงานที่สูงขึ้น ต้องคำนึงถึงการส่งเสริมภาวะผู้นำการเปลี่ยนแปลงของหัวหน้าหอผู้ป่วย คุณลักษณะของงานที่ไม่ทำให้ผู้ปฏิบัติงานเกิดความเครียดจากการทำงาน การส่งเสริมบรรยากาศองค์การ ตลอดจนการเพิ่มความพึงพอใจในการทำงาน

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Pattaramon Tubsoongnoen : A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN PUBLIC HOSPITALS, THAILAND. Advisor: Assoc. Prof. JINTANA YUNIBHAND, Ph.D. Co-advisor: Assoc. Prof. Pol. Capt. YUPIN AUNGSUROCH, Ph.D.

This cross-sectional study aimed to develop and test causal relationships between transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life among professional nurses in Thailand. The hypothesized model was conducted based on Kanter's theory of structural empowerment. A multi-stage sampling technique was utilized to recruit 392 Thai professional nurses from 22 hospitals who met the inclusion criteria. Research instruments consisted of demographic data form, Multifactor Leadership Questionnaire, Job Content Questionnaire, Organizational Climate Questionnaire, Nurses' Job Satisfaction Scale, and the Thai version of Brooks' Quality of Nursing Work Life survey. The validity of all instruments was reassessed by five experts. Cronbach's alpha coefficients of each instrument was 0.96, 0.87, 0.81, 0.88, and 0.93 respectively. The developed model was examined by a structural equation modeling using SPSS and LISREL program.

The result findings revealed that the final model (consisted of transformational leadership, job characteristics, organizational climate, and job satisfaction) explained 72% quality of nursing work life variance X^2= 754.88, df = 487, p = 0.06172, GFI = 0.94, X^2/df = 1.550, AGFI = 0.91, CFI = 1.00, RMSEA = 0.021, RMR = 0.022, CN = 872.15. Job characteristic was the most influential factor affecting the quality of nursing work life by having a positive direct effect on the quality of nursing work life ($\beta = 0.97$, $p < .01$), followed by transformational leadership had a positive both direct and indirect effect on the quality of nursing work life through job characteristic, organizational climate, and job satisfaction ($\beta = .93$, $p < .01$), Moreover, the organizational climate had a positive both direct and indirect effect on the quality of nursing work life through job satisfaction ($\beta = 0.51$, $p < .01$). Besides, job satisfaction had a positive direct effect on the quality of nursing work life ($\beta = 0.42$, $p < .01$) respectively, policymakers and nurse administrators should provide a healthy environment to improve professional nurses' quality of nursing work life by enhancing transformational leadership among head nurses and providing proper job characteristics, organizational climate, and job satisfaction.

Field of Study:	Nursing Science	Student's Signature .....
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CHAPTER I
INTRODUCTION

Background and Significance of the study

Professional nurses are the most significant front-line workforce in the health care system (Thakre, Thakre, & Thakre, 2017). They have been claimed as critical human resources because they contribute to the high quality of nursing care, which is a primary concern in healthcare provision (Francis et al., 2021). Professional nurses have to deal with changes in social, economic, and political (Bureau of Policy and Strategy Ministry of Public Health, 2014; Srisupan & Sawengdee, 2012). Besides, they were also faced with more complex diseases and an aging population (Barnett et al., 2012). Based on their responsibility, professional nurses have received training to deliver high-quality care and enhance the quality of life for their patients. To provide high-quality care and quality of patient's life, professional nurses should have a very high quality of nursing work life (QNWL) (Thakre, Thakre, & Thakre, 2017). However, it has been reported that their health and workplace safety was not given the necessary priority and that the evaluation of the appropriateness of the work environments was not done correctly (Stuenkel, Nguyen & Cohen, 2007). These reflect that the quality of nursing work life is considered less important in the workforce (Abraham, & Silva, 2013).

Previous literature indicated poor consequences in hospitals that lack the QNWL. Professional nurses facing inadequate QNWL workload and performance are not reflected in compensation (TCJI editor, 2018), working hours greater than 40 hours per week which is more significant than international criterion overtime, provided non-nursing tasks (Homkaew, 2022), not being included as a civil servant which affects

professional nurses feel their career is lacking in security, and not getting enough welfare (The Coverage, 2021). The President of the Nursing Association of Thailand stated that there is an imbalance between the workload, workforce rate, and compensation. It is the primary factor in nurses' decisions to remain in or leave the system. When there is a shortage of nursing staff, personnel who are not nursing professionals are required to fill the gap (The Coverage, 2021). Because of this, patient care quality is declining (Laohawatanapinyo, Suriyo, Limpisil, & Yimsrual, 2009; The Coverage, 2021).

A previous study by Nantsupawat, Wichaikhum, & Nantsupawat (2014) studied outcomes in 506 professional nurses working 24 general hospitals who worked more than 40 hours per week. The study results showed that extended work hours are positively related to patient outcomes such as patient identification error and pressure soreness. Extended work hours are positively related to nursing outcomes such as nurses' health conditions, adequacy of rest and sleep, and the balance between work and life.

A consequence of the poor quality of nursing work life also affects the organization's outcome in terms of increased absence rate, intention to leave, and decreased organizational commitment (Eren & Hisar, 2016; Faraji, Salehnejad, Gahramani, & Valiee, 2017). This situation led to a significant shortage of nurses (Almalki, Fitzgerald, & Clark, 2012). When professional nurses resign, increased workload also occurs, which results in the quality of patient care (Ashrafi, Ebrahimi, Khosravi, Navidain, & Ghajar, 2018; Laohawatanapinyo, Suriyo, Limpisil, & Yimsrual, 2009) in terms of the poor standard of service delivery included low

productivity (Aiken, Sloane, Bruyneel, Heede, Griffiths, Busse, & Sermeus, (2015). For this reason, making nurses perceive a higher quality of life will help nurses to remain in the profession. The workload problem will be reduced. In comparison, nursing productivity and the quality of care increased, which is considered an essential goal of the organization (Nayeri, Salehi, & Noghabi, 2011; The Coverage, 2021).

The quality of nursing work life (QNWL) is defined as the degree to which registered nurses can satisfy critical personal needs through their experiences in their work organization while achieving the organization's goals (Brooks, 2001). This concept is a favorable condition, and a workplace environment supports and promotes employee satisfaction by providing rewards, job security, and growth opportunities. Existing literature revealed that QNWL could provide a more humanized work environment and attempts to serve the higher orders and their more basic needs (Jahanbani, Mohammadi, Noruzi, & Bahrami, 2018). Nurses are employees whose lives are entirely influenced by the quality of nursing work life as a consequence of dynamic changes in the work environment (Saleh, A., Ramly, M., Gani, M. U., & Suriyanti, 2016).

According to preliminary evidence mentioned about assessing and improving the QNWL that affects professional nurses, staff performance might increase (Fathimath, Chontawan, & Chitpakdee, 2014; Gayathiri & Ramakrishnan, 2013), while burnout, absenteeism, and turnover rates among nurses might be reduced (Suaib, Syahrul, & Tahir, 2019). Moreover, employees who satisfy with their QNWL reported reduced workplace accidents, increased job satisfaction, and satisfaction in other aspects of life (Dargahi, Changizi, & Gharabagh, 2012; Daubermann & Pamplona,

2012). A high QNWL is crucial for healthcare organizations to attract and retain professional nurses (Negi, Vaishnav, Nagar, & Thomas, 2021). They will present greater interest, more organizational commitment, and increased productivity (Delgoshyii, Riahi, & Motaghi, 2010; Liu et al., 2018). In conclusion, professional nurses will perceive high QNWL in organizations that offer a more humanized work environment. This might attract and retain professional nurses. *S*hortage in the nursing workforce might be reduced. Moreover, the quality of patient care and an organ organization's action will present a better aspect (Zeigen, 2016).

Numerous studies have reported that the QNWL is impaired because the results indicated professional nurses have an average quality of nursing work life. Several studies reported that the overall mean score of the QNWL among professional nurses was moderate (Thongkao, & Kangsanan, 2020; Phongmode, 2017). Even policymakers try to fix the problem by assigning payroll bars to temporary employees, creating progression bars and extending the right to welfare, medical treatment, and so on (Khunthar, 2014). However, those policies are only employed in local areas (Health Systems Research Institute, 2012). The quality of nursing work life was not adequately responsive; this can be reflected in the resignation of professional nurses as reported by Sawaengdee (2009), who studied the working life table and projection of registered nurses' workforce supply in Thailand over the next 15 years (2008-2022). Findings indicate professional nurses' attrition between the ages of 20 and 49. The percentage fell from 100% for those between the ages of 20 and 24 to 54.5% for those between the ages of 45 and 49 (Sawaengdee, 2009). This situation occurs in all public areas.

The following information is in the documentation of professional nurses' turnover from various public hospitals. Professional nurses who work in hospitals under the Jurisdiction of the Ministry of Public Health with work experience of at least one year tend to resign in the first year of work for 48.68 percent (Sawaengdee, Noree, Tungcharoenkul, & Pagaiya, 2009) and leave in the second year for 25.57 percent (Khunthar, Ketcham, Sawaengdee, & Teerawit, 2013). The resignation statistics of Uttaradit Provincial Public Health Office (2015) reported that two professional nurses are civil servants who resigned in 2013 and increased to 10 in 2015. At the same time, Phranangklao Hospital revealed that within one year (2016 - 2017), 15 professional nurses resigned after encountering with lack of career advancement (PPTV online, 2017). Srinagarind Hospital, a proportion of professional nurses' resignations in the last ten years (2001-2010) is between 2.11 percent to 7.62 percent with voluntary resignations (Jaiboon, Chiangnangarm, & Kuhirunyaratn, 2011). In addition, Songklanagarind Hospital reported that the professional nurses' resignation continued from 2008 until the year 2011, especially in the year 2011, the rate increased by 8.78 percent or 92 persons per year, ordinary eight people per month (Nursing Service Department of Songklanagarind Hospital, 2012). Based on previous evidence reflect, a failure to retain professional nurses (Sawaengdee, 2017). Based on provided evidence, it can be emphasized that professional nurses working in public hospitals have a continual attrition rate due to inadequate response needs.

In recent times, evidence has shown that professional nurses perceive QNWL as poor. This has resulted in a nursing shortage which affects the declining quality of patient care and productivity. Therefore, if the organization can provide a healthy working environment for professional nurses, they will perceive high QNWL. This

would attract and retain professional nurses in the profession. The quality of patient care will improve as well. In contrast, if professional nurses are still faced with poor QNWL, there is still a shortage of nurses. Quality of patient care cannot exist as well. This is the primary concern of policymakers and nurse administrators to find the causative of improving the quality of nursing work life because it can attain set goals by enhancing the quality of patient care and productivity.

To conclude, professional nurses' experience of basic needs was not met sufficiently. This situation results in a turnover of professional nurses, increased workload, nursing shortage, productivity decline, and poor quality of patient care. Therefore, it is necessary to know how one situation affects another to determine the best strategies for addressing professional nurses' needs. It's essential to develop a foundational understanding of its concepts to enhance factors influencing the QNWL, which will result in improved quality of patient care.

The finding from the systematic review by Tubsoongnoen, Yunibhand, & Aungsuroch (2018), which recruited 48 research studies about the QNWL in Thailand, revealed that all studies were quantitative. Twenty studies were both correlative and predictive; three were comparative studies, and one was a meta-analysis, factor analysis, predictive study, and instrument development. When considering QNWL as the dependent variable, there are 16 studies explained for correlative and predictive study, one predictive study, and one meta-analysis. Additionally, this systematic review's findings suggested that future research should concentrate on professional nurses with ages between 20 and 40 and work histories ranging from 1 to 20 years, regardless of whether they hold administrative positions. Furthermore, limited studies included all public sectors to explain the antecedents of QNWL at the national level.

Numerous studies on correlation are followed by analyses of the factors that predict QNWL in Thailand. However, they lack structural equation modeling. The significant findings regarding predicting factors reveal five categories; management factors, organizational factors, working factors, personal trait factors, and personal background factors. In addition, job characteristics and job involvement are also good predictors and were grouped into working factors and organizational factors, respectively (Tubsoongnoen et al., 2018). For meta-analysis by Kongyoo (2014) found five significant antecedents of QNWL in Thailand; 1) management factors (r=.57), 2) organizational factors (r=.55), 3) working factors (r=.38), 4) personal trait factors (r=.36), and 5) personal background factors (r=.07). The findings were congruent with systematic review.

According to previous studies in Thailand, it could be summarized that numerous correlational and predictive studies. However, prior findings cannot make causal inferences with correlation data. Further research should concentrate on staff nurses who are professional nurses who continually resign from the age range 20 to 49 regardless of head nurses or higher positions. Additionally, there are limited studies explaining the national-level predicting factors of QNWL that include all public sectors.

To fill the gap of knowledge, we need to understand the causative of quality of nursing work life in terms of predicting and confirming the direct and indirect effect in the dependent variable on the quality of nursing work life and the degree of the causal relationship between them, related to the specific phenomenon, structural equation modeling is required. For this reason, the researcher seeks to develop the hypothesized model of QNWL among professional nurses in Thailand at the national level. It is

essential to understand how the Thai cultural context connects to the factors that explain the QNWL among professional nurses in Thailand.

Based on the nursing phenomenon, in Thailand, quality of nursing work life was the selected concept because it can serve professionals' needs to attract and retain them in the nursing profession. The nursing shortage might be reduced while the care outcome also improves simultaneously.

Kanter's theory of structural empowerment (Kanter, 1993) was selected as the foundation of the current study. This theory identified four environmental and social structures necessary for worker effectiveness (Manojlovich & Laschinger, 2007, Kanter, 1993), which claims that theory also improves employees' quality of work life (Kanter, 1993). When organizations provide power to employees, formal power is created by the position of the job, while informal power is created through networks and connections within and outside the organization. Moreover, the power came from employee access to structural power comprising of opportunity, power, and proportions structures that organizations provide their employees. Depending on the amount of power they were given, each person in the organization would experience a personal impact that could be positive or negative. It would impact the worker's effectiveness (Kanter, 1993).

In conclusion, this study aims to develop a causal model for the QNWL among professional nurses in Thailand. The model would provide a fundamental understanding of the relationship between predicting factors and the quality of nursing work life and make a significant contribution to the nursing profession. Understanding the causative of quality of nursing work life will enhance the knowledge of policymakers, nurse administrators, and nurse managers to choose appropriate factors

and create a workplace that meets both basic and higher-order needs of professional nurses. This will attract and retain professional nurses and lead them to deliver high-quality patient care, which is the ultimate goal of the healthcare provider. Additionally, the model would help researchers create effective interventions that would meet the needs of professional nurses as well as improve the quality of nursing work life. This could help fill the nursing shortage, attract and keep professional nurses in the field, and encourage them to deliver high-quality patient care.

Research questions

The overarching research questions guiding this study are:

1. What are the relationships between transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life among professional nurses in Thailand?

2. How the hypothesized model explains the quality of nursing work life among professional nurses in Thailand, and how does the model adequately fit with the data?

Purposes of the study

1. To examine the relationships between transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life among professional nurses in Thailand.

2. To develop and test the causal model that explains the influence of transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life among professional nurses in Thailand.

Hypotheses with rationales

Based on the theoretical guidance, supported by empirical evidence in Thailand (Kongyoo, 2014; Tubsoongnoen et al., 2018). Four factors were recruited: transformational leadership, job characteristic, organizational climate, and job satisfaction. All recruited factors could explain the rationale that leads to healthy work environments for professional nurses, which reflects QNWL as illustrated in Figure 1.1

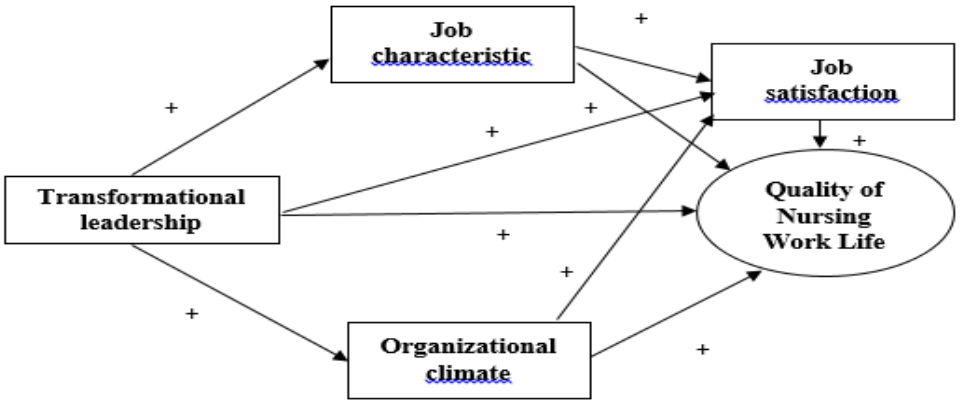


Figure 1.1 Hypothesized model of the study

This study proposed four hypotheses which rationale for selecting possible causative factors of QNWL also provided as follows:

Hypothesis 1

Statement: Transformational leadership has positive effects, both direct and indirect, through job characteristics, organizational climate, and job satisfaction to the quality of nursing work life.

Rationale: Theoretically, Kanter's theory of structural empowerment mentioned that power is the ability to do. Power is closer to mastery or autonomy. Power is more akin to mastery or autonomy. Effective leaders with better communication are more

supportive, are more likely to suggest promotions, generate more autonomy, more participation in decisions, and have credibility giving followers or subordinates more power. It might impact employee attitudes and customer service performance (Kanter, 1993).

Transformational leadership is a kind of leadership with charisma that could influence the empowerment structure. Moreover, this kind of leadership could be a strategy to provide a healthy environment for employees (Kanter, 1993). Transformational leadership could impact job characteristics, organizational climate, job satisfaction, and QNWL because transformational leaders who utilize intellectual stimulation by stimulating their followers' efforts to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways may boost follower perceptions of variety and autonomy. Followers would perceive that their leaders who engage in individualized consideration by paying attention to each follower's needs and concerns for achievement and growth should have their subordinates see more autonomy and feedback in their jobs (Nielsen et al., 2008). Furthermore, since positive affective climates in an organization arise from people's positive feelings through shared affective and emotional contagion mechanisms (Menges et al., 2011; Walter & Bruch, 2010), this leadership style was claimed to be the factor influencing the climate. Transformational leadership could provide a positive emotional atmosphere, encourage subordinates in visible and personal ways, express confidence in subordinates, and foster initiative and responsibility (Conger, 1990). Leaders who involve staff, foster teamwork, encourage motivation and reward good work performance can improve job satisfaction and influence QNWL (Opollo et al., 2014). Hence, Job satisfaction results from the

expectation gap between employee expectations and workplace reality (Johan, 2002, as cited in Simarmata, 2013). Additionally, regarding the constructs of QNWL about the interaction between work environment and personal needs. If leaders can provide the work environment to serve employees' individual needs, employees would be considered to have a positive interaction effect, which will lead to an excellent QNWL (Hackman & Oldham, 1980; Tett & Meyer, 1993).

Existing literature provided strong support for links between transformational leadership, job characteristic, organizational climate, job satisfaction, and QNWL. Regarding job characteristics, prior literature indicated that transformational leadership directly affects job characteristics. Nielsen et al. (2008) provided a longitudinal study to examine relationships between leadership, job characteristics, and psychological well-being. They were using structural equation modeling. The results indicated that followers' perceptions of their job characteristics did mediate the relationship between transformational leadership style and psychological well-being. In addition, Lin, MacLennan, Hunt, and Cox (2015) study the relationships between transformational leadership, job characteristic, job satisfaction, organizational commitment, and general health well-being. They found that transformational leadership behaviors can influence the QNWL through indirect pathways. The findings indicated that supervisor support was one of the job characteristics highly associated with transformational behavior, and transformational leadership had a direct influence on supervisor support ($\beta = .74$). Supervisor support is a core transformational behavior. It increases the job satisfaction of nurses ($\beta = .37$). Moreover, transformational leadership has been identified as a determining factor in the construction of an appropriate social climate for change (De Poel, Stoker, & Van der Zee, 2012; Gil, Rico, Alcover, & Barrasa, 2005). Positive

effects of this factor have been demonstrated in work-life balance, staff well-being, positive nursing outcomes, patient safety, openness about errors, and patient and job satisfaction (Apekey, McSorley, Tilling, & Siriwardena, 2011; McFadden, Henagan, & Gowen, 2009; Munir, Nielsen, Garde, Albertsen, & Carneiro, 2012). Thus, when professional nurses perceive that their supervisors play a role in transformational leadership, it results in QNWL.

Several studies also support this hypothesis. Swamy, Nanjundeswaraswamy, and Rashmi (2015) reported that the regression equation identified that for one value of QNWL, job satisfaction and job security contribute 0.159 (regression coefficient) is the maximum contribution, and the minimum contributor is the adequacy of resources is 0.0596. The value of R^2 is 1, $P < 0.00$, which indicates that QNWL accounts for 100% variation in the dependent variable under transformational leadership. While Helmiatin (2014) also found a positive effect between transformational leadership towards QNWL (t statistics = 11.0152 is greater than the table = 1.96). For empirical evidence in Thai, Meehanpong, Wongkhomthong, Boonsin, and Sritoomma (2019) report the effect value on QNWL (*ß*=.55, p<.001). Moreover, this factor could predict QNWL at the level β =.507 (Kongyoo, 2014). Based on provided reason and existing literature, transformational leadership could lead to job characteristics, organizational climate, job satisfaction, and QNWL.

Hypothesis 2

Statement: Job characteristics has positive effects, both direct and indirect, on job satisfaction to the quality of nursing work life.

Rationale: Theoretically, Kanter's theory of structural empowerment (Kanter, 1993) said that the organization's characteristics determine empowerment. Moreover, both formal job characteristics and informal alliances affect the ability of employees to accomplish their work. These factors determine the degree to which a person feels empowered. Empowered employees are generally more satisfied with their job (Laschinger et al., 2001, 2004; Wagner et al., 2010). In addition, characteristics of a situation can either constrain or encourage optimal job performance, regardless of personal tendencies or predispositions (Kanter, 1993). For this issue, Luthans (2006) explained that aspects of job characteristics such as opportunities to develop and the work itself are factors that affect job satisfaction. Ilgen and Hollenbeck (1991) stated that high levels of autonomy, variety, and task identity in a job could enhance intrinsic motivation by increasing the employee's feeling of accomplishment and self-actualization in performing their work. Besides, Werther and Davis (1982) emphasized that if the organization has designed its job as challenging and worthwhile and motivates employees to be satisfied, a variety of job and organizational factors can contribute to QNWL (Carayon & Smith, 2000). According to the provided reason, job characteristics influence job satisfaction and QNWL.

Existing literature from several fields reported the connections between job characteristics, job satisfaction, and QNWL. Nurullah (2010) study the predictors of job satisfaction among emerging adults in Alberta, Canada. The finding revealed that valued job characteristics were significant predictors of job satisfaction (ß=.54). Marin-Garcı'a, Bonaviab, & Losillac (2011) try to analyze the impact of 10 working conditions on job satisfaction utilizing structural equation modeling. They found the positive and significant effects on job satisfaction are esteem (0.40), predictability (0.17),

development and meaning (0.15), and social support (0.13). Emotional demands (20.13) and job insecurity (20.06) have a significant negative effect. In our global service sample, quantitative demands, role clarity, influence, and leadership quality have no significant effects. These variables explained 50% of the variance in job satisfaction. Moreover, Bhuidan and Menguc (2002) and Glisson and Durick (1998) also support this issue. Besides, research studies in Thailand also support that job characteristics could predict QNWL at the .05 level of Significance (r=.311-r=.574) (Bejrsuwana, Suwannapong, Howteerakul, & Boonshuya, 2012; Boonrod, 2009; Jaikhodee, 2008; Kalanetr, 2009; Klinfaung, 2000; Phuekphan, 2002; Sukonpaksa, Charoenloh- thongdee, & Mitrsupab, 2011; Thamwong, 2005; Youngsiri, 2016). Based on the rationale and literature provided above, when professional nurses perceive job characteristics well, it results in QNWL.

Hypothesis 3

Statement: Organizational climate has positive effects, both direct and indirect, on job satisfaction to quality of nursing work life.

Rationale: Theoretically, Kanter's theory of structural empowerment said that the structural power (access to job-related empowerment) is divided into three forces: access to information, support, and resources. With all three components, employees could gain information, support, and resources from well-connected peers or sponsors who make an informal introduction or educate them about the actual workings of the system. Therefore, a good climate organization could empower employees and be more effective in many dimensions.

The organizational climate could impact job satisfaction and QNWL because positive work incentives are incentives that make work interesting. If an organizational

climate is developed to provide a more desirable work environment, it will lead to job satisfaction (Afalobi, 2005; Metle, 2001). The climate generally refers to direct perceptions of the work environment. Organizations need a positive climate in their workplace to boost employee motivation and raise the opportunity that employees will implement adequate efforts in doing their tasks. Therefore, a favorable climate encourages employees' productivity (Griffin, 2001). Since the organizational climate is one of the essential characteristics of a great and comfortable workplace (Jung et al., 2003; Jung & Ali, 2017), employees who perceive a great workplace will increase productivity. Employees' productivity has been discussed as the indices of QNWL as well (Asadi, 2008). Based on the provided reason, it could be hypothesized that a good organizational climate could lead to job satisfaction and QNWL.

Existing literature reported the connections between organizational climate, job satisfaction, and QNWL. As Jyoti (2013) indicated, all organizational climate factors significantly influence job satisfaction except image, and these factors explain a sixty-nine percent variation in job satisfaction of the academicians (Adjusted R^2 = .692). Management policies (B= .386, Sig. < .001), and role clarity and team-spirit (B= .346, Sig. < .001) are contributing maximum to the job satisfaction. In addition, K. Z. B. Ahmad, Jasimuddin, and Kee (2018) also reported that the positive aspects of organizational climate (sum of structure, responsibility, rewards, and support) are directly and positively associated with job satisfaction ($r=0.543$, $p<0.01$). Besides, Urden (1999) also indicated that there was a statistically significant relationship between five climate dimensions and job satisfaction ($p < .01$-$.001$). In addition, empirical studies in Thailand also support the hypothesis that organizational climate could predict QNWL at the .05 level of Significance (Akewongtrakool, 2002; Boonrod,

2009; Insuwan, 2014; Klinfaung, 2000; Petchtang, 2011; Petphan, 2008; Promeiang, Suwannapong, Thipayamongkolkul, & Boonshuya, 2015; Suksaengthong, 2012). Furthermore, this factor could predict QNWL at the level β=.472 (Kongyoo, 2014). Thus, when professional nurses perceive that the organization provides a good climate of support, it results in QNWL.

Hypothesis 4

Statement: Job satisfaction has a positive and direct effect on the quality of nursing work life.

Rationale: Theoretically, Kanter's theory of structural empowerment (Kanter, 1993) mentioned an interest in the relationship of the formal task, formal location, to behavioral response also leads to an emphasis on competence which means the ability to do the job. Kanter (1993) also mentioned relationships between job satisfaction and overall performance in terms of organizational effectiveness, in which job satisfaction increases through greater power and plays the role of one part that affects organizational effectiveness. Prior literature found that work overload, role ambiguity, role conflict, and poor working conditions associated with a particular job reduce job satisfaction and affect low feelings toward the quality of nursing work life. In contrast, less satisfying jobs, employee performance, and initiative-taking ability are also reduced to a large extent (Cooper & Marshall, 1976). Based on the provided reason could hypothesize that job satisfaction could lead to QNWL.

Existing literature reported the link between job satisfaction and QNWL. Bhavani and Jegadeeshwaran (2014) reported the positive impact of job satisfaction on QNWL. The path equation is QNWL = 0.019 (pay and security) + 0.52 (working environment). Moreover, Islam (2012) also reported that six out of seven factors

(workload, family life, transportation, compensation policy and benefits, working environment, working conditions, and career growth) significantly influence QNWL. These seven independent factors explain the regression analysis, and the significance value is 0.000. In addition, research studies in Thailand support this hypothesis as well. The study of Boonrod (2009) indicated that job satisfaction was positively related at a high level, significantly at the 0.001 level (r = 0.724). Multiple regression analysis factors affecting QNWL indicated that professional nurses associated positive factors with job satisfaction. Thus, when professional nurses perceive that they are satisfied with their job, it results in QNWL.

Scope of this study

This study is a cross-sectional study to develop and test the causal model of QNWL in professional nurses in Thailand. Examining factors are Transformational leadership, job characteristics, organizational climate, and job satisfaction. The study will be conducted among Thai professional nurses aged less than or equal to 49 years old who work as staff nurses with bachelor's degrees and are registered nurses working in 5 public sectors of the hospitals in Thailand. The dependent variable is QNWL measured by modified from the Brooks Quality of Nursing Work Life Survey developed by Brooks (2001).

Operational definition

Quality of nursing work life is the degree to which Thai professional nurses can satisfy with their working life based on experiences in their work organization while achieving the organization's goals comprising of work-life-homelife, work design, work context, and work world. Measuring by the Brooks Quality of Nursing Work Life Survey (BQNWL) by Brooks (2001).

Work-life-homelife refers to the degree of Thai professional nurses' satisfaction with the balance they can make between work and home.

Work design refers to the degree of Thai professional nurses' satisfaction with the actual work that nurses perform. This dimension covers receiving sufficient assistance not only in quality but also quantity from unlicensed support personnel, authority to make decisions, sufficient workforce, and time to provide quality care.

Work context refers to the degree of Thai professional nurses' satisfaction with the practice settings in which nurses work and explores the impact of the work environment on nurses, colleagues, and patient systems. This dimension considers effective collaboration and communication between multidisciplinary professionals, supervisors, and peers. Receiving the respect of others, including the doctor. Workplace policies include things like facilities, training programs, and career development.

Work World refers to the degree of Thai professional nurses' satisfaction with the impact of broad societal influences and changes on nursing practice. This dimension considers the accurate perception of society regarding the image of nurses. Professional nurses perceive job security, equal rate of salary, and benefits when compared to the workforce market, including perceiving this job to provide beneficial effects on patients and their families.

Transformational leadership refers to the perception of Thai professional nurses toward how the head nurses influence and move their followers and organization based on behaviors and traits of leadership, including idealized influence (attribute),

idealized influence (behavior), intellectual stimulation, individual consideration, and inspirational motivation. Measuring by the Multifactor Leadership Questionnaire (MLQ-5X) by Bass and Avolio (2004) provides in the Thai version. Additionally, this instrument provides transactional leadership behavior, which consists of contingent reward, active management by exception, passive management by exception, and laissez-faire leadership because the author believes that no one can perform only one type of leadership. Moreover, leadership outcomes, including extra effort, effectiveness, and satisfaction, were included to measure this scale.

Idealized influence (attribute) refers to the perception of Thai professional nurses toward their head nurses as role models who uphold high standards of moral and ethical conduct and can be trusted to act morally.

Idealized influence (behavior) refers to the perception of Thai professional nurses as role models who have a standard of moral and ethical behavior and are being relied upon to do the right thing based on observation of the behavior of their head nurses.

Intellectual stimulation refers to the perception of Thai professional nurses toward their head nurses as inspiring their followers to be creative and innovative as well as their own beliefs, values, organizational beliefs, and leadership beliefs.

Individual consideration refers to the perception of Thai professional nurses toward their head nurses when they are giving guidance to subordinates to help them overcome their obstacles.

Inspirational motivation refers to the perception of Thai professional nurses toward their head nurses who can inspire followers through motivation to be loyal and to be part of a shared vision in the organization.

Transactional leadership refers to the perception of Thai professional nurses toward their head nurses who display behaviors associated with constructive and corrective transactions. The constructive style is labeled contingent reward, and the corrective style is labeled management-by-exception. Transactional leadership defines expectations and promotes performance to achieve these levels. Contingent reward and management-by-exception are two core behaviors. Associated with 'management' functions in organizations. Full-range leaders do this and more.

Contingent reward leadership refers to the perception of Thai professional nurses toward their head nurses who clarify expectations and offers recognition when goals are achieved, offer assistance to others in exchange for their efforts, discuss in detail who is responsible for meeting performance targets, make it clear what one can expect to receive when performance goals are met, and expresses satisfaction when their followers meet performance goals.

Active management by exception refers to the perception of Thai professional nurses toward their head nurses, who establish the requirements for performance and defines what constitutes ineffective performance. They discipline followers who fail to meet these requirements, closely observing deviations, mistakes, and errors and responding as quickly as possible.

Passive/avoidant behavior refers to the perception of Thai professional nurses toward their head nurses who perform another form of management-by-exception leadership that is more passive and "reactive." They do not respond to situations and problems systematically, avoid specifying agreements, clarifying expectations, and providing goals and standards to be achieved by followers. This leadership behavior is labeled passive management by exception and laissez-faire leadership.

Passive management by exception refers to the perception of Thai professional nurses toward their head nurses, who perform another style of management-by-exception leadership that is more "reactive" and passive. They don't respond to situations and issues in a systematic way, avoid specifying agreements and expectations in clear terms, and don't set expectations or goals for their followers to meet. They wait until issues are severe before intervening and act only when something goes wrong.

Laissez-faire leadership refers to the perception of Thai professional nurses toward their head nurses, who perform another style of management-by-exception leadership that is avoiding getting involved when essential issues arise, being absent when needed, avoiding making decisions, and delaying responding to urgent questions.

Outcomes of leadership refer to the perception of Thai professional nurses toward the success of the group. Success is measured by how often the Thai professional nurses perceive their head nurses to be motivating, how effective in interacting at different levels of the organization, and how satisfied they are with their head nurses' methods of working with others. These leadership outcomes are labeled extra effort, effectiveness, and satisfaction with the leadership.

Extra effort refers to the perception of Thai professional nurses on the success of the group through head nurses who get others to do more than they expected to do, heighten others' desire to succeed, and increase others' willingness to try harder.

Effectiveness refers to the perception of Thai professional nurses on the success of the group through head nurses who are effective in meeting others' job-

related needs, effective in representing their group to a higher authority, effective in meeting organizational requirements, and leading the group effectively.

Satisfaction with leadership refers to the perception of Thai professional nurses on the success of the group through head nurses who use methods of leadership that are satisfying by working with others in a satisfactory way.

Job characteristics refer to the degree to which Thai professional nurses react by mental perceptions, physiology to dislike hazards in the workplace, task structure, and other aspects of their workplace. Job characteristics consisted of job control, psychological job demand, physical job demand, job security, social support, and hazard at work. Measuring by the Thai Version of the Job Content Questionnaire (TJCQ) by Phakthongsuk (2009).

Job control refers to the degree to which Thai professional nurses perceive the ability to control the job and the autonomy to make decisions in various work-related matters.

Psychological job demand refers to the degree of Thai professional nurses' psychological perception of duties at work.

Physical job demand refers to the degree of Thai professional nurses' physical perception of duties at work.

Job security refers to the degree to which Thai professional nurses perceive job security in the workplace.

Social support refers to the degree to which Thai professional nurses perceive performance support, not only supervisors' support but also co-worker support.

Hazard at work refers to the degree to which Thai professional nurses

perceive any dangers or risks that might arise during the operation.

Organizational climate refers to the degree to which Thai professional nurses perceive a set of measurable properties of the work environment of the organization, consisting of structure, standards, responsibility, recognition, support, and commitment. Measuring by the Organizational Climate Questionnaire (OCQ) developed by Srtinger (2002). The OCQ was translated from the original language (English) into the Thai language by Sungwan (2018).

Structure refers to the degree to which Thai professional nurses perceive clarity in the chain of command, planning, organization structure, and job delegation in the workplace.

Standards refer to the degree to which Thai professional nurses perceive organizational standards and continual improvement in their workplace.

Responsibility refers to the degree to which Thai professional nurses perceive that they are trusted and believe teamwork could accomplish their job.

Recognition refers to the degree to which Thai professional nurses perceive being recognized and trusted by the workplace means that they are competent enough and able to achieve the organization's goals.

Support refers to the degree to which Thai professional nurses perceive receiving assistance and support from both supervisors and colleagues.

Commitment refers to the degree to which Thai professional nurses perceive being part of a team and the team's effectiveness.

Job satisfaction refers to the degree to which Thai professional nurses perceive a positive or pleasurable feelings one has as a result of an evaluation of their job experiences comprising of incentives, professional autonomy and recognition, nursing

supervisor, social aspect at work, workload, work environment, nursing policies and system, and assertiveness in confronting difficulties. Measuring ring by the Thai Nurses' Job Satisfaction Scale (TNJSS). Developed by Sriratanaprapat, Chaowalit, and Suttharangsee (2012).

Incentives refer to the degree to which Thai professional nurses perceive a positive or pleasurable feelings one has as a result of an evaluation of their pay/benefits, continuing education, and promotion.

Professional autonomy and recognition refer to the degree to which Thai professional nurses perceive a positive or pleasurable feeling of their granted appropriate professional status and being recognized.

Nursing supervisors refer to the degree to which Thai professional nurses perceive a positive or pleasurable of their nursing supervisors when dealing with them in terms of treating them fairly, giving them the chance to participate, or negotiating.

Social aspects at work refer to the degree to which Thai professional nurses perceive a positive or pleasurable with their co-workers based on being respectful and considerate of each other. Assist each other when problems or mistakes occur.

Workload refers to the degree to which Thai professional nurses perceive positive or pleasurable time management among paperwork and routine work. Appropriate quantity of assigned tasks that can complete within 8 hours/day and have enough time to help others without affecting routine work.

Work environment refers to the degree to which Thai professional nurses perceive a positive or pleasurable organized and good ventilation workplace that

is suitable for work.

Nursing policies and system refer to the degree to which Thai professional nurses perceive a positive or pleasurable with the nursing administration department that decentralized the system, creates faster management, and implement nursing policies to promptly and appropriately solve problems.

Assertiveness in confronting difficulties refers to the degree to which Thai professional nurses perceive a positive or pleasurable when facing a situation that needs to report healthcare team members and supervisors who treat them or patients wrong.

Expected outcome and benefits of the study

This study examined a causal model explaining the QNWL among Professional Nurse in Thailand, particularly specific to the Thai context. The hypothesized model was based on the theory of Kanter's theory of structural empowerment (Kanter, 1993) combined with empirical evidence. All of the chosen variables had potentially modifiable. The participants were professional nurses in Thailand working in five public sectors. Therefore, this result would provide several benefits to policymakers, nurse administrators, nurse managers, and researchers as following details.

1. The results of this study would thus fill in the knowledge gap in the causal relationship between predicting factors and quality of nursing work life. The results could serve as evidence for policymakers, nurse administrators, and nurse managers to create a healthy environment that includes meeting the needs of professional nurses by considering the appropriate factors to attract and retain skilled nurses in the profession. The nursing shortage might decrease while the care outcome would present better aspects.

2. The study's results will be the foundation for the researcher to develop effective interventions to raise the quality of nursing work life for this population.

3. Thai professional nurses were used in this study to test the psychometric properties of each research tool. The Brooks Quality of Nursing Work Life Survey (BQNWL) (Tubsoongnoen, Yunibhand, & Aungsuroch, 2022), which is specific to the hospital setting and provides well-validated and reliable results, was translated into Thai in particular (Tubsoongnoen, Yunibhand, & Aungsuroch, 2022). These research tools may be beneficial resources for Thai researchers.

CHAPTER II
LITERATURE REVIEW

This chapter presents a comprehensive review of Professional nurses in Public hospitals in Thailand, theoretical and empirical evidence describing concepts of interest, factors related to the quality of nursing work life among professional nurses, existing studies about the quality of nursing work life, and conceptual framework. The review covers the following topics:

1. Professional nurses in Public Hospitals, Thailand
2. Quality of nursing work life
    2.1 Concept of Quality of nursing work life
    2.2 Theories of quality of nursing work life
    2.3 Measurement
    2.4 Summary concept and dimensions used for the study
3. Factors related to the quality of nursing work life among professional nurses
    3.1 Transformational leadership
    3.2 Job Characteristics
    3.3 Organizational climate
    3.4 Job satisfaction
4. Existing studies about the quality of nursing work life
5. Conceptual framework

1. Professional nurses in Public Hospital, Thailand

Professional nurses

The professional nurse is a graduate of a nursing science program bachelor's degree or equivalent from a university or college of nursing accredited by the Nursing Council. Obtain First-class nurse or first-class nursing and midwifery that can still be used (not suspended or revoked or expired). They perform healthcare services in government agencies, state enterprises, or the private sector (Nursing Division, 1996).

Professional nurses are responsible for providing services to patients and clients in hospitals or communities within the scope of work. This includes solving fundamental health problems and complex nursing problems in any field of nursing. Supervision of nursing practice of technical nurses and second-class practitioners in the modern arts with all scope of duties according to activities in the details of the work done as follows:

1. Assessment and analyzed the data to diagnose health problems and nursing problems of clients' families and communities at all levels

2. Determine a plan for delivering nursing services, including resource management in nursing practice and personnel management in nursing, and include a system and process for supervision and evaluation.

3. Providing all levels of problems with general and specialized nursing services and all disease severity levels.

4. Observe, record, summarize and report clinical changes in patients' responses toward medical treatment as well as the progress of medical treatment.

5. Provide midwifery by class 1 of modern midwifery.

6. Decide on nursing problems.

7. Provide advice for the benefit of nursing and clients' physical and mental health at all levels and impart information on issues related to the pathology of disease progression and medical treatment strategies.

8. Physical examination, primary diagnosis for nursing of various medical and surgical symptoms, according to the Regulation of the Ministry of Public Health, No. 5 (1975).

9. Plan and implement health promotion as a team leader with other professions in community health promotion, family health, School health, health education, family planning, nutrition, and mental health services.

10. Make a plan and give those in charge specific tasks. Give patients and general advice to help prevent disease—collaboration in preventing and controlling the spread of germs in hospitals, disease surveillance, and immunization.

11. Coordination and execution of rehabilitation for safety protection or impeding the disability, and consideration of delegating tasks to subordinates.

12. Observe officers and give them guidance for Healthcare Professionals.

13. Identify issues with nursing services and make recommendations for potential fixes.

14. Assign tasks to operators with appropriate authority, divide tasks, and organize work.

15. Evaluate the performance of the officers in charge and their work using scientific principles.

16. Create a plan to prevent accidents, ensure patient safety, and place operators in accountable agencies.

17. Collaborate with other people and organizations in the planning and scheduling primary healthcare actions.

18. Prepare to offer academic education and rehabilitation and be able to teach staff members and students both inside and outside the organization.

19. Create instructional manuals and materials to support the advancement of nursing practice and health.

20. Support and coordinate with various agencies such as social work, laboratory autopsy, and pharmaceutical work.

Regarding primary clinical responsibilities of registered nurses include assessment of patients/clients, symptom distress management, provision for patient safety, prevention of complications, continual care, promoting the health of patients, clients, and their families, and enhancement of patient satisfaction (Ethics Subcommittee, 2002).

Professional nurses who work in Public hospitals

In Thailand, Public hospitals are hospitals run by the government. Therefore, professional nurses who work in government-run hospitals would be classified as follows.

According to the Collaborative Project to Increase Production of Rural Doctors (CPIRD), Medical Education Centers and Non-MOPH agencies were classified as several affiliates; therefore, all public hospitals are divided into five categories based on their current companion, including work context including 1) hospitals under the Ministry of Public Health (MOPH), 2) hospitals under the Department of Medical Services, all specialized hospitals, both inside and outside Bangkok, including Department of Disease Control, Department of Mental Health, 3) University Hospitals run directly by a university including operated by Ministry of Higher Education, Science, Research and Innovation, 4) Hospitals under the Jurisdiction of the Ministry of Defense and the Royal Thai Police, and 5) hospitals are operated by other Governmental Ministries and Organisations, such as Thai Red Cross Society, the Medical Services Department, Bangkok Metropolitan Administration, Department of Local Administration, and Public Organisation..

Four levels of roles and responsibilities are established for professional nurses working in public hospitals: Specifically, the following details are the practitioner level, the professional level, the senior professional level, and the expert level.

2. Quality of nursing work life

2.1 Concept of Quality of nursing work life and quality of work life

The quality of nursing work life (QNWL) concept is derived from the quality of work-life concept (QWL), which seeks to comprehend the interactions between critical vital elements of the working environment. (Easton, Van, & Marlow, 2013). According to a review of the literature (Morsy & Sabra, 2015), the quality of working life and the quality of nursing work life are two closely related concepts. These two

concepts can be used interchangeably if the context clue "quality of work life (QWL) of nurses," "quality of work life in nursing," "quality of working life," or "work-related quality of life" is added.

The concept of quality of work life is also used in the nursing field. Walton (1975) was the first to propose eight critical components and empirical referents based on studies of workers. This model was widely used in many disciplines, including the nursing field. Although this model is famous in many fields, it presents difficulties in interpretation more complex to understand, and lacks direct and specific questions or the definition of each criterion (Timossi, Pedroso, Francisco, & Pilatti, 2008).

Kerce and Kewley (1993) also suggested four components to explain and measure the QWL. The strength of these components comes from their integration of the individual, social, and organizational aspects. However, one component is job satisfaction, which is still questionable about its appropriateness measurable result (Brooks & Anderson, 2005; Knox & Irving, 1997).

Knox and Irving (1997) proposed the Interactive Quality of Work Life Model (IQWL), which consisted of eight concepts as a guide for application in designing new practice environments and identifying behavioral interactions that will enhance the QWL for staff members. However, this model has quite a specific use because it cannot function independently of another concept. After all, this model focuses on redesigning organizations and the effects on staff roles and QWL (Knox & Irving, 1997).

Sirgy, Efraty, Siegel, and Lee (2001) provided the model as the key factors in QWL are: 1) need for satisfaction based on job requirements; 2) need for satisfaction based on work environment; 3) need for satisfaction based on supervisory behavior; 4) need for satisfaction based on ancillary programs; and 4) organizational commitment.

This model covers health and safety, economic and family, social, esteem, actualization, knowledge, and aesthetics. However, the relevance of non-work aspects is played down as attention is focused on QWL rather than the broader concept of quality of life (Sirgy et al., 2001).

Quality of nursing work life was proposed by Brooks (2001), who provided a definition and dimension of QNWL from a nurse's perspective. A clear definition and clear boundaries between organizations and the environment were provided (Brooks & Anderson, 2005). Furthermore, she suggested going beyond job satisfaction because of measured confusion (Gifford, Zammuto, & Goodman, 2002). The dimensions that she proposed were widely used and developed for instrumentation and translation into five languages (Brooks & Anderson, 2005).

The QNWL is a comprehensive structure to describe the characteristics of a positive environment to ensure high job satisfaction for nurses and an improved sense of well-being for nurses, as well as improved results for both patients and healthcare personnel (Brooks & Anderson, 2005; Brooks et al., 2007). Using sociotechnical systems (STS) theory as a basis. This concept is composed of four dimensions: 1) work life-home life dimension or the interface between the nurses' work and home life. Since nurses are primarily female, this dimension reflects the role of mother, daughter, and spouse, 2) work design dimension is the composition of nursing work, or the actual work nurses do, which defines nurses' work environment, such as workload, staffing, and autonomy. 3) Work context dimension includes relationships with supervisory personnel, coworkers, and inter-disciplinary health team colleagues; the provision of resources to do the job; and the institution's promotion of lifelong learning, and 4) work

world dimension is defined as the effects of broad societal influences and change on the practice of nursing (Baumann & O'Brien-Pallas, 1993).

Regarding the QWL derived from the industrial field, it focused on Need satisfaction as an intrinsic factor that could motivate employees to improve the outcome of care. Furthermore, this concept used Need's theory as a basis (Maslow, 1954). The QWL also focused on measuring job satisfaction and linking job satisfaction to patient outcomes. However, numerous nursing job satisfaction studies have been linked to patient outcomes, but only a correlational relationship has been found, with no evidence of a causal relationship (Ma, Samuels, & Alexander, 2003). On the other hand, the QNWL was developed from a nursing perspective. In viewing organizations as open and living systems interacting with the environment (Cherns, 1976), There is a substantial body of literature supporting the causal relationships between improved QNWL and increased productivity (Borhani et al., 2016). Based on characteristics shared between QWL and QNWL, the researchers decided to select QNWL to solve the phenomena in Thailand.

Definition of quality of nursing work life

Based on the literature review, many fields also proposed the definition of quality of work life and quality of nursing work life as provided below:

Walton (1975) defines the quality of working life as the work culture that serves as the cornerstone. Kerce & Kewley (1993) define the quality of working life refers to a group of methods or technologies for making the work environment more productive and more satisfying to workers. While Knox & Irving (1997), who provided the "Interactive Quality of Work Life Model," stated that the quality of work life of any practicing nurse is influenced by the characteristics of the environment in which he/she

is employed. For Brooks (2001), she mentioned that the quality of nursing work life is the degree to which registered nurses are able to satisfy important personal needs through their experiences in their work organization while achieving the organization's goals.

For the current study, quality of nursing work life refers to the degree to which Thai professional nurses can satisfy with their working life based on experiences in their work organization while achieving the organization's goals consisting of work-life home life, work design, work context, and work world. The dimension of quality of nursing work life could describe as follows:

Work life-home life dimension is defined as the degree of Thai professional nurses' satisfaction with the balance they can make between work and home. Based nurses tend to be female; this dimension reflects their responsibilities as mothers, such as child care and caring for elderly parents and spouses (Brooks and Anderson, 2004).

The work design dimension refers to the degree of Thai professional nurses' satisfaction with the actual work that nurses perform. This dimension covers receiving sufficient assistance not only in quality but also quantity from unlicensed support personnel, authority to make decisions, sufficient workforce, and time to provide quality care.

The work context dimension is defined as the degree of Thai professional nurses' satisfaction with the practice settings in which nurses work and explores the impact of the work environment on nurses, colleagues, and patient systems. This dimension considers effective collaboration and communication between

multidisciplinary professionals, supervisors, and peers. Receiving the respect of others, including the doctor. Workplace policies include things like facilities, training programs, and career development. An essential component of this idea was the human relations between nurses and their coworkers, as well as coworker and supervisor support, teamwork and communication, organizational characteristics, perceptions of the organizations, control at work, empowerment, employee engagement, job involvement, management-personnel relations, and disturbance handling. According to Vagharseyyedin et al. (2011), standards to guarantee a good quality work life in nursing include the provision of: positive communication; feedback about performance; recognition of contributions; autonomy; effective problem solving; participative decision making; teamwork philosophy; effective communication with employees, including management-worker communication; and healthy work environments. Additionally, work autonomy reflects employees' perceptions of organizations' willingness to give them control over scheduling, discretion, and freedom in deciding how to carry out tasks, as well as the freedom to alter and modify evaluation criteria (Breaugh, 1985).

The work world dimension is defined as the degree of Thai professional nurses' satisfaction with the impact of broad societal influences and changes on nursing practice. This dimension considers the accurate perception of society regarding the image of nurses. Professional nurses perceive job security, equal rate of salary, and benefits when compared to the workforce market, including perceiving this job to provide beneficial effects on patients and their families. Aspects like socioeconomic relevance, fair and appropriate compensation, social integration within the organization, economic rewards, constitutional protection of worker rights, job

compensation, self-actualization, job pride, and career satisfaction were also taken into consideration.

2.2 Theories of Quality of Nursing Work Life

Based on the literature review, several theories were used to explain QNWL in many countries. Each theory provided characteristics as follows:

Maslow's Hierarchy of Needs: This theory was developed by Maslow (1943). He proposed the term “basic need" as five categories composed of physiological needs, safety needs, love needs, need for self-esteemed, and need for self-actualization. He believed that workers could achieve the highest possible productivity if they received the opportunity to fulfill all five levels of needs. However, this theory presents a number of problems, such as the status of the need hierarchy concept being uncertain. For all such psychological constructs, there is no direct method of doing so available as well (Rose, 1988). In addition, Maslow conceded that the ordering of needs might vary between individuals and across cultures. That means the hierarchy might not be true for most people, in most places, and most of the time because his perspective was based on observation from a specific group (Hoffman, 1996).

The Sociotechnical systems theory (STS): this theory was developed by Emery and Trist (1960). The STS theory focuses on the interface of technology, people, and the environment in which productivity is improved while employees are enriched through a design process (Hackman & Oldham, 1980). Two majors components were explained; 1) *Social subsystem* comprising people who work in the organization and the relationships among them must be able to attain the goals of the organization, adapt to the environment, integrate the activities of the people in the organization, and provide for the continued occupation of the essential roles through recruitment, socialization,

and retention (Cherns, 1976), and 2) *Technical subsystem* consists of the tools, techniques, procedures, skills, knowledge, and devices used by members of the social subsystem to accomplish the organization's tasks. (Pasmore, Francis, Haldeman, & A., 1982). The greatest weakness of this theory could explain in terms of "the freedom of choice and responsibility ."This could explain the reasons for their lack of use are primarily difficulties in using the methods and the disconnect between these methods, and issues of individual interaction with technical systems (Baxter & Sommerville, 2011; Cummings, 1981).

Kanter's theory of Structural Empowerment: this theory first emerged in the industrial field (Kanter, 1977; Kanter, 1993). Kanter (1993) expresses the characteristics of a situation can either constrain or encourage optimal job performance, regardless of personal tendencies or predispositions. Power, in the words of Kanter (1993), is the "ability to mobilize resources to get things done." Employees are empowered when they access channels of information, support, resources, and opportunities for learning and development. Power is "off," and productive work is impossible when these "lines" or sources are unavailable. These power structures provide the organization with "structural" empowerment (Laschinger et al., 2001).

This theory is composed of four significant constructs as follows (Kanter, 1993):

1. System factors: this construct is comprised of formal and informal power. *Formal power* can be obtained from jobs that allow for flexing, creativity, and visibility in the organization. Formal power is derived from jobs that are considered essential and relevant to accomplishing the organization's goals. *Informal power* comes from alliances with superiors, peers, and subordinates within the organization (Kanter, 1993).

2. Access to job-related empowerment (structural power): this construct comprises opportunity, power, and proportions structures.

3. Personal impact on employees is the construct that represents a positive or negative change for everyone in the organization. Kanter (1993) theorized that access to system factors and access to job-related empowerment has a personal impact on the employee and ultimately leads to worker effectiveness. High motivation, increased self-efficacy, organizational commitment, perceived autonomy, perceptions of participative management and job satisfaction, and lowered burnout level are the ways as behavioral responses.

4. Worker effectiveness is the outcome of power and opportunity in the work environment (Kanter, 1977). Employee investment and goal achievement are results of productive power and opportunity. Employees who are invested in their company will actively contribute to the achievement of the individual, unit, and organizational goals.

Although empowering strategically could give employees a chance to experience a greater sense of opportunity, power, and acceptance in their jobs, they are limited in practice by serious barriers to change as well as problems of intervention and implementation. The large organization might have inevitability limited in order to organization reform. Many bureaucratic binds would remain as well (Indik, 1963; Schumacher, 1973). However, Kanter's theory has been widely used in the professional nursing practice (Kluska, Laschinger-Spence, & Kerr, 2004; Mangold et al., 2006; Siu, Laschinger, & Vingilis, 2005).

An approach model for Employees' Improving Quality of Work Life (IQWL): this model was formed by a Quality of Work Life Strategic Planning

Committee to enhance Tehran University of Medical Sciences (TUMS) employees' quality of working life (Dargahi & Seragi, 2007). The IQWL focus on enhancing TUMS employees' QWL. Thirty QWL teams consisting of managers and employees were conducted in each of the 15 as all TUMS Hospitals. Then committee members identified similar key themes of dissatisfaction, including human resource issues relating to workload and staffing, management practices, poor communication between employees and management, leadership issues, inadequate rewards and income, loss of respect, trust and income among people, more involvement in decision making, identified Need from assistance for employees to deal with burnout and change, and caretaking function is not supported by TUMS Hospitals as a whole. Based on the key themes identified, a set of 12 dissatisfaction measures emerged. Then a survey was developed and distributed to 942 employees, and 755 of them were returned, and data were analyzed by statistical method. The findings revealed the perceived strongest areas among 12 categories. Regarding these results, QWL Strategic Planning also developed a new approach model to improve the employees, which comprises four categories: 1) support and decision making 2) communication and leadership, 3) reward and recognition, and 4) attendance management.

According to this model, which was conducted from a specific purpose and specific context. In addition, other research that was studied in TUMS context and related to QNWL also addresses the limitation that the results cannot generalize to different workplaces because working conditions affect the QNWL (Nayeri, Salehi, & Noghabi, 2011).

A unifying framework: this framework was provided by O'Brien-Pallas and Baumann (1992), which situates a nurse's work within the person's social and cultural

context. It draws a connection between the personal experience of nurses and the socioeconomic context, including government policies and the economic environment, which influence decisions regarding healthcare organizations. Defining by nurses for identified and prioritized into two major factors; internal and external factors. *Internal factors* consist of 4 dimensions which cover individual factors, social/environmental/contextual factors, operational factors, and administrative factors. *External factors* are composed of patient demand in the system, health care policy, and the labor market. All seven dimensions affect nurses, patients, and system outcomes (O'Brien-Pallas & Baumann, 1992). However, this framework discusses only internal and external factors related to QNWL but does not mention the facilitators related to QNWL among nurses. Those facilitators' perceptions might be different in a different context (Akter & Akter, 2017).

The Conceptual Model for Healthy Work Environments for Nurses: this framework has been developed to identify sources of occupational stress and injury that negatively influence health, well-being, and the QNWL. This guideline was based on existing theory and evidence relating to the following themes: 1) a comprehensive definition of the terms "health" and "wellbeing"; 2) legislation regarding workplace health and safety, and 3) nurses' connectedness with their work. Moreover, this framework also presents the healthy workplace as a product of the interdependence among individual (micro level), organizational (Meso level), and external (macro level) systems (Hancock, 2000). Three major components of this model consisted of 1) Physical/Structural Policy contains 15 factors, 2) Cognitive/Psycho/ Socio/Cultural contains 15 factors, and 3) Professional/ Occupational contains ten factors. Besides, each component is also composed of an individual level, organizational level, and

system or external level (Registered Nurses Association of Ontario, 2008). However, this framework is not meant to be applied as rules. Readers need to explore further and identify nurses' behaviors that need to be analyzed and/or strengthened in specific workplace situations. Furthermore, in some cases, there is a great deal of information to consider, recognizing everyone's unique culture, climate, and situational challenges (Registered Nurses' Association of Ontario, 2008).

Based on eight criteria of Khan (2019), which the researcher used to guide theory selection, including the phenomena of Thai context. In terms of collectivism which value relationship and group harmony than individualism, large power distance with a passive-defensive organizational culture influence conservative organization, traditional and bureaucratically controlled which reflect hierarchical controlled and non-participative employees (Kinicki & Kreitner, 2006), connection system, and humbleness which makes employees silent and do not stand out much (Sriratanaprapat, 2012). This could be stated that since collectivism creates relationships and support among each other, professional nurses would be satisfied when these components are well maintained by their administrators and supervisors (Kinicki & Kreitner, 2006). Furthermore, professional nurses who perceive that they are recognized and accepted by other disciplines make them satisfied and want to work longer (Boonthong, 2000). Besides, humbleness is one of the Thai cultures that influence autonomy, professional status, and incentive component (Sriratanaprapat, 2012). Based on theoretical characteristics combined with eight criteria of Khan (2019) that could explain well how this theory involves the Thai context, Kanter's theory of structural empowerment was selected

2.3 Measurement of quality of nursing work life

An initial review revealed that there is a large body of literature both abroad and in Thailand that attempts to develop an instrument to assess the quality of nursing work life. The quality of nursing work life has frequently been measured by researchers using their own instruments, combinations of different questionnaires, or qualitative approaches that are based on their own definitions, perspectives, and cultural characteristics. Existing instruments to measure the quality of nursing work life are also provided hereunder.

2.3.1 Brooks (2001) developed the Brooks Quality of Nursing Work Life Survey (BQNWL) in order to assess the quality of nursing work life among registered nurses. The 42-item BQNWL is a self-administered questionnaire that is divided into four subscales: home/work life, work design, work context, and work world. The original scale is graded on a 6-point Likert scale, with totals of "completely disagree" (1 point) and "completely agree" (6 points). The original scale's Cronbach alpha coefficient, which is used to demonstrate reliability and validity, is 0.83. The total score correlation coefficient ranged from r = 0.24 to r = 0.68, while the correlation coefficients for each sub-dimension were between r = 0.50 and 0.90. Cronbach alpha coefficients for subscales ranged from 0.45 to 0.60. The BQNWL scale is valid and reliable as a result of factor analysis's discovery of structural validity (Brooks 2001). A number of studies used this instrument, and it was translated into many languages (Brooks & Anderson, 2005).

2.3.2 Komjakraphan, Balthip, and Jittanoon (2017) translated the Brooks Quality of Nursing Work Life Scale Thai version for use with Thai Practitioner Nurses working in Primary care settings in 2017. In keeping with the original, this version has

42 items pertaining to the four dimensions. A panel of three bilingual public health research and health management experts will be used, using the back translation method by a translating device. A review of the survey was done to ensure its validity. The reliability questionnaire was tested through the pilot study (r = 0.91; n = 30). Test-retest reliability was used (Komjakraphan, Balthip, K., & Jittanoon, 2017). However, this scale did not examine construct validity, which is crucial for scale translation (Guillemin, Bombardier, & Beaton, 1993).

2.3.3 Walton's QWL questionnaire was developed using his QWL model (1975). This instrument was used to measure faculty perceptions of their quality of working life. This survey covers eight dimensions, including adequate and equitable pay; secure and healthy working conditions; opportunities for future growth and security; constitutionality in the workplace; the social relevance of work; total life space; social integration in the workplace; and the development of human capabilities. This tool consists of 32 questions and measures the quality of working life. Using a Likert five-point scale that ranges from completely dissatisfied (1 point) to completely satisfied (5 points) (5 points). Such a questionnaire's reliability score was 0.91.

2.3.4 The Work-related Quality of Life Scale (WRQLS) was created in England for the first time. This version aims to develop and evaluate the psychometric properties of the Work-Related Quality of Life scale for healthcare workers. This instrument has a higher level of relevance to healthcare workplaces than any previous scale because it is theoretically based and encompasses both work and non-work aspects of life as well as more modern issues like stress (Laar, Edwards, & Easton, 2007). This scale contains a 23-item, six-factor measurement model of work-related quality of life that covers job and career satisfaction, general wellbeing, home-work

interface, stress at work, control at work, and working conditions. This scale is a 5-point scale ranging from strongly disagree (1 point) to strongly agree (5 points). For reliability and validity evidence, its validity (Cronbach's of 0.91) and reliability (Cronbach's of 0.75–0.86) was verified among medical personnel in the United Kingdom (Laar, Edwards, & Easton, 2007). This famous scale was translated into versions in Singaporean, Chinese, and Thai.

2.3.5 The Thai version of the Work-related Quality of Life Scale-2 (WRQLS-2) was translated into the Thai language by forward and backward translations. Content validity was assessed by six nursing experts, and 374 registered nurses (RNs) participated in its testing. Sixty seven RNs were retested after a 2-week interval (r = 0.892, p 0.05). Validity evidence was evaluated by intraclass correlation coefficient and was used to analyze known-group validity (ICC = 0.89). The content validity index of the scale by six experts was 0.97. The principal component analysis resulted in a 7-factor model explaining 59% of the total variance (Sirisawasd, Chaiear, Johns, & Khiewyoo, 2014).

2.3.6 The Quality of Work Life Survey 2000 was conducted by Lewis et al. (2001). The objective of the study which conducted this instrument was to test whether extrinsic, intrinsic, or prior traits best predict satisfaction with the quality of working life in healthcare. This scale, which consists of 65 items, covers eight general topic areas that were determined through a literature review: Overall feelings about the organization Factor analysis was used to generate two main components that account for 57.5 percent of the variation in scale scores.

2.3.7 The Total quality of work life (TQWL-42) was developed and validated using contemporary Brazilian culture, with a foundation in classic QWL theoretical models (Azevedo, Nery, & Cardoso, 2017). The TQWL-42 is composed of 42 questions using a Likert-type response scale (1–5). Forty of them are equally divided into five spheres, which are composed of branches, named aspects, in which the questions are grouped. The spheres are: biological/physiological, psychological/behavioral, sociological/relational, economic/ political, and environmental/organizational. The remaining two questions, in turn, represent the aspect of "self-assessment of QWL," which is not inserted into any sphere. The content validation was performed through analysis by researchers in the area of QWL, and the verification of internal consistency was performed with Cronbach's alpha, which was obtained from the administration of the instrument and was 0.8568.

2.3.8 Swamy's QWL questionnaire was conducted by Swamy, Nanjundeswaraswamy, & Rashmi (2015). The objective of conducting this scale is to develop a valid and reliable scale by considering the significant dimensions of the quality of work life of employees in mechanical manufacturing small and medium-sized enterprises (SMEs) in Karnataka, India. The questionnaire had two important sections: 1) the firm's and employees' demographic information and 2) employees' perceptions of the quality of work life. Each section has multiple questions to cover different parameters with a 5-point Likert scale with "1" being "strongly disagree" and "5" being "strongly agree ."The questionnaire consists of 50 close-ended questions related to nine components of QWL: 3) Work environment, 2) Organizational culture and climate, 3) Relationship and cooperation, 4) Training and development, 5) Compensation and rewards, 6) Facilities, 7) Job satisfaction and job security, 8) Work autonomy, and

9) Resource adequacy Factor analysis also assessed and revealed nine dimensions together explained 82.24% of the total variance.

2.3.9 The Quality of Working Life Systemic Inventory (QWLSI) was conducted based on the conceptual analogies between the quality of life and quality of working life, which believes that quality of life will also apply in the area of work. Thus, based on the model of the general quality of life (Martel & Dupuis, 2006), this scale covered 34 items divided into eight subscales: compensation; career growth; work schedule; relationships with colleagues; relationships with superiors; physical environment; factors influencing appreciation of tasks; and employee support. Each item is measured using a Visual Analogue Scale-type dial. Each item is rated on a Likert scale from 1 (essential to my life) to 7 (completely useless). For **reliability and validity evidence,** global consistency (Cronbach's alpha) for QWLSI is 0.87; subscale consistency ranges from 0.60 to 0.82; and test-retest reliability is 0.84 (p 0.001).

2.3.10 The Self Evaluation of Working Life Quality Questionnaire (SEQWL) was conducted for the generic measurement of global quality of life (Ventegodt et al., 2008). It was developed on the basis of the philosophy and theory of quality of working life, quality of life theories, and the integrated quality of life theory with a focus on the quality of human relations. The SEQWL questionnaire has three levels: level 1: Global QWL; level 2: the 4 QWL—domains; and level 3: the 20 subdomains. One hundred two questions (+9 controls) were finally selected in total, about 25 from each domain, for internal consistency (focus) by the Cronbach alpha method. However, the external validity (criteria validity) has been shown to be validated by its correlation to the SEQWL. Its reliability has not been sufficiently tested

through test-retest procedures, but its sensitivity has been found through its statistical variation. All of the investigated parameters are found to be satisfactory compared to internationally accepted standards. External validation of the SEQWL questionnaires is defined by their correlation with self-assessed QWL and calculated QWL values. The correlation coefficient is 0.69, and the statistical co-variation is measured at 75.0% and calculated at 48.1%, using the method of modified regression (Ventegodt et al., 2008).

2.3.11 The Thai Version of the Quality of Work Life Scale was created by translating the English version into Thai. The original version of the Quality of Work Life Scale was developed by Sirgy et al. (2001). The procedure of back-translation was done by two native Thai university professors, both with doctorates from the U.S. This approach was also conducted by a Thai English language expert to assure the accuracy of this translation. The questionnaire was pretested by 55 graduate students studying in a master's degree program in HR and Organizational Development at a major university in Thailand. Internal consistency reliability (0.800 - 0.787) was used to validate reliability. At the same time, validity evidence was ensured by construct validity in terms of confirmatory factor analysis. The findings reveal a good fit to the data for the CFA with endogenous variables, including exogenous variables (Koonmee, Singhapakdi, Virakul, & Lee, 2010).

Based on the original version of the BQNWL is favored in the analysis of tools for assessing the quality of nursing work life. The operational definition of nursing work-life quality is relevant to this scale. It is used extensively in the nursing field, has good psychometric characteristics, and is a reasonable length. The use of this scale with graduate students and researchers in 30 nations, including Canada (Ontario,

Quebec), India, Iran, Australia, Malaysia, and Taiwan, has been requested. There are five different language versions of this instrument (Brooks, 2016). Therefore, this scale was selected for the current study.

2.4 Summary concept and dimensions used for the study

Based on provided detail, the researcher selected the quality of nursing work life proposed by Brooks (2001) to solve phenomena. The quality of nursing work life refers to the degree to which Thai professional nurses can satisfy their working life based on experiences in their work organization while achieving the organization's goals consisting of work-life homelife, work design, work context, and work world. The dimension of quality of nursing work life could describe hereunder:

Work life-home life dimension is defined as the degree of Thai professional nurses' satisfaction with the balance they can make between work and home.

The work design dimension refers to the degree of Thai professional nurses' satisfaction with the actual work that nurses perform. This dimension covers receiving sufficient assistance not only in quality but also quantity from unlicensed support personnel, authority to make decisions, sufficient workforce, and time to provide quality care.

The work context dimension is defined as the degree of Thai professional nurses' satisfaction with the practice settings in which nurses work and explores the impact of the work environment on nurses, colleagues, and patient systems. This dimension considers effective collaboration and communication between multidisciplinary professionals, supervisors, and peers. Receiving the respect of others, including the doctor. Workplace policies include things like facilities, training programs, and career development.

The work world dimension is defined as the degree of Thai professional nurses' satisfaction with the impact of broad societal influences and changes on nursing practice. This dimension considers the accurate perception of society regarding the image of nurses. Professional nurses perceive job security, equal rate of salary, and benefits when compared to the workforce market, including perceiving this job to provide beneficial effects on patients and their families. Aspects like socioeconomic relevance, fair and appropriate compensation, social integration within the organization, economic rewards, constitutional protection of worker rights, job compensation, self-actualization, job pride, and career satisfaction were also considered.

3. Factors related to the quality of nursing work life among professional nurses

Based on Kanter's theory of structural empowerment and empirical literature, the selected independent variables were transformational leadership, job characteristics, organizational climate, and job satisfaction. These four variables were selected as representative of formal and informal power concepts, access to information and opportunity, access to opportunity and support, and behavioral response concept, respectively. Theoretical substruction detail was provided in the latter part of this chapter. The details of each variable and their relationship are described below:

Formal and informal power

2.5 Transformational leadership

Transformational leadership had a significant impact on QNWL (β = 0.433, $p < .05$) (Akter, Tang, & Adnan, 2021) and had evidence of modifiable factors. Previous studies offered head nurses a program for developing transformational

leadership. The results demonstrated the program's effectiveness in terms of the nurse's performance and the leadership of head nurses, demonstrating a significant improvement over the baseline using a transformational leadership development program at the 0.00 level (Pumpech, Monaiyapong, & Buddiangkul, 2017).

Based on the provided rationale, the concept of transformational leadership is selected as the independent variable in the current study. First, such a concept is congruent with the first construct of Kanter's theory of structural empowerment (1993) because this theory also mentions the character of transformational leadership that could create power and impact QNWL. Second, previous evidence indicated a significant impact on QNWL. Third, the feasibility of further research, including the possibility of modifiable.

2.5.1 Definition of transformational leadership

A certain kind of leadership is transformational leadership. This concept is defined by many researchers. The definition is consistent across time, from the past to the present. Like Bass (1985), who defined a transformational leader as one who inspires followers to go above and beyond what they had anticipated, leaders who are transformational broaden and shift the interests of their followers and increase understanding and support for the group's goals and mission. According to Bryant's definition of transformational leadership, leaders who foster the support of creative endeavors, promote learning and foster organizational creativity also inspire their followers to create and share knowledge through charisma, intellectual stimulation, and individualized care for workers (Bryant, 2003).

Hassanian (2004) defines transformational leadership as leaders who use cooperative learning to improve critical thinking in their team members and are able to encourage new ideas to promote organizational outcomes, improve learning capacities, lead change, and spur innovation among themselves and their followers. According to Nielsen et al. (2009), transformational leaders display the following seven behaviors: 1) communicate a vision (create an image of the future of the organization and communicate it); 2) develop staff; 3) support them as they work towards their goals through coordinated teamwork; 4) empower staff (give them authority to implement policies and support their decisions), 5) are innovative (use non-traditional strategies to achieve their goals), 6) lead by example (adopt behaviors that are congruent with the attitudes and values they support), and 7) are charismatic (inspire employees to transcend their personal interests and limitations, develop a conscience of the collective interests, and guide them to achieve extraordinary goals).

In conclusion, transformational leadership is defined as a kind of leader who influences and moves their followers and organization based on behaviors and traits of leadership, including idealized influence (attribute), idealized influence (behavior), intellectual stimulation, individual consideration, and inspirational motivation.

2.5.2 Measurement of transformational leadership

Based on the definitions of transformational leadership that have been summarized above and the characteristics of Thai professional nurses, this study concentrated on subjective measures. Additionally, because they are adaptable, straightforward, and affordable, self-report methods have been widely used to estimate

transformational leadership. The following are some instruments used to measure transformational leadership as self-reported questionnaires.

3.1.2.1 The Multifactor Leadership Questionnaire (MLQ-5X) (Thai version) was translated from the original English version (Bass & Avolio, 2004). This scale consisted of 45 items. Using a 5-point scale within eight behaviors of transformational leadership and transactional leadership; 1) Contingent rewards, 2) Active management by exception, 3) Passive management by exception, 4) Laissez-faire leadership, 5) Idealized influence (attribute), 6) Idealized influence (behavior), 7) Intellectual stimulation, 8) Individual consideration, 9) Inspirational motivation For other 3, 4, 2 items come from the performance of leadership as outcome scale, as additional three dimensions: 10) Extra effort, 11) Effectiveness and 12) Satisfaction (Dimitrov & Darov, 2016). The original version provided a reliability test. By original version was between .74 to.94 (Bass & Avolio, 1994). The MLQ-5X has been used by over 300 research programs, doctoral dissertations, and master's theses, including in the healthcare field, especially the nursing field. In Thailand, Kongsuwan (2010) used this Thai version provided by Mind Garden, Inc. Professional nurses working in Hospital universities were a sample of such a study with reported reliability tested Cronbach's alpha = .95.

3.1.2.2 Global Transformational Leadership Scale (GTL) was developed by Nielsen et al. (2009). This scale consists of 7 items with a 5-point Likert scale ranging from "rarely or never" to "very frequently, if not always" This instrument was conducted based on the concept of transformational leadership covering seven dimensions: 1) communicates a vision, 2) develops staff, 3) provides support, 4)

empowers staff, 5) innovative, 6) leads by example, and, 7) charismatic. For reliability evidence, the GTL had an alpha coefficient of .90 (Carless et al., 2000). At the same time, convergent validity was examined by calculating correlations between the GTL and alternate measures of transformational leadership. Results showed the construct to which it is conceptually similar. The correlations range from .71 to .87. The correlations between total GTL scores and scores on the LPI and MLQ. The correlations range from .76 to .88 with a mean of .83 (SD = .04) (Carless et al., 2000). The GTL has high reliability and assesses a single global construct of transformational leadership. This scale is a short scale that is easy to administer and score.

3.1.2.3 Transformational Leadership Questionnaire was translated tool. The original version was developed by Yaghoubi et al. (2014). Regarding this Thai version, the translated approach was made by four experts; 2 experts who are influential in English and Thai and two experts in administration. This scale is a 5-point rating scale that includes 23 items within five core components; 1) idealized influence, 2) inspirational motivation, 3) intellectual inspiration, 4) individual consideration, and 5) vision explanation. For reliability tested, reported Cronbach's alpha = .94. Content validity was.80. This scale reported acceptable psychometric properties but provided for nurses in the level of administration.

3.1.2.4 The Survey of Transformational Leadership (STL) was developed by Edwards et al. (2010). The STL is a 5-point rating scale that includes 84 items and nine themes within five core components; 1) idealized influence, 2) intellectual stimulation, 3) inspirational motivation, 4) individualized consideration, and 5) empowerment. The reliability coefficient ranged from 92 to 88. Internal

consistency was tested by the coefficient (.78-.97). Convergent validity was assessed by first-order analysis (≥.5). The correlation between the STL and the global measure of the MLQ was.95 (second-order analysis). The results revealed a statistically significant difference between low (M = 26.27) and high (M = 32.15) job satisfaction (t (211) = 6.12, p.0001) (second order analysis). Factor analysis reported that factor loading ranged from 668 to 956. The total variation was 57% (TLI =.87). This scale provided acceptable psychometric properties. However, this study took place in outpatient substance use treatment settings only. So, results may not generalize to other community behavioral healthcare settings or workers (Edwards et al., 2010). For many reasons, the Multifactor Leadership Questionnaire (MLQ-5X) (Thai version) was selected to measure transformational leadership. First, the operational definition of transformational leadership is relevant to this scale. Second, this scale was widely used. Previous research on the nursing field in Thailand has also been used with professional nurses. Third, psychometric properties were tested with an acceptable value. Finally, the number of items is not too much.

3.1.3 The relationships between transformational leadership and quality of nursing work life

Transformational leadership and the quality of nursing work life are certainly related. Prior evidence has shown that leaders who perform as a transformational leaders can foster a positive emotional climate by rewarding and encouraging subordinates in visible and personal ways, expressing confidence in them, fostering initiative and responsibility, and building on success (Conger, 1990). They would assist their followers in aligning their professional aspirations with their personal

values (Bono and Judge, 2003). Therefore, transformational leadership may have a significant effect on followers' perceptions of the quality of nursing work life because they give individual attention to promoting development through individual consideration, enable new working methods, promote creative problem-solving, and coach and encourage particular behaviors in subordinates through intellectual stimulation (Nielsen et al., 2008). Based on QNWL constructs regarding the interaction between the workplace environment and personal needs. If leaders can create a workplace that meets employees' personal needs, they will be seen as having a positive interaction effect, which will result in an excellent QNWL (Hackman & Oldham, 1980; Tett & Meyer, 1993).

Previous studies from many fields, including the nursing field, also confirm the causal relationship among these variables. Likewise, Helmiatin (2014), who conducted a study regarding the implementation of transformational leadership and quality of work life toward organizational citizenship behavior in Tangerang, Banten, the findings indicated a positive effect of transformational leadership on quality of work life (t statistics = 11.0152, which is greater than the table = 1.96) at a 95% confidence interval. In Thailand, Meehanpong, Wongkhomthong, Boonsin, and Sritoomma (2019) also reported the causal relationship between transformational leadership and the quality of nursing work life at the level ß =.55 (p .001). Additionally, the meta-analysis of Kongyoo (2014) also confirmed that such a factor could predict QNWL at the level =.507.

In conclusion, a few studies have examined the association between transformational leadership and the quality of nursing work life. Combined with the

characteristics of transformational leadership that is also mentioned in Kanter's theory of structural empowerment. This might imply that transformational leadership is associated with the quality of nursing work life.

Accessed to information and opportunity

2.6 Job Characteristics

Job characteristics was the most appropriate factor that could derive from the second construct of the chosen theory. Kanter (1993) stated that access to empowering structures is facilitated by both formal and informal job characteristics. The mandate of management is to create conditions for worker effectiveness by ensuring employees have access to the information, support, and resources necessary to accomplish work and are provided ongoing opportunities for employee development. It is also supported by earlier research conducted in Thailand that a job characteristic could predict QNWL at a.05 level of significance (Bejrsuwana, Suwannapong, Howteerakul, & Boonshuya, 2012; Sukonpaksa, Youngsiri, 2016). In addition, prior evidence also supports that this variable could be modified (Holman, Axtell, Sprigg, Totterdell, & Wall, 2010).

2.6.1 Definition of job characteristics

Regarding job characteristics, this concept was defined by several authors. Hackman and Oldham (1975) define job characteristics as characteristics that lead to the desired psychological states. Morgeson & Humphrey (2006) define job characteristics as five core task characteristics (autonomy, task variety, task identity, task significance, and feedback) that are primarily concerned with how the work itself is accomplished and the range and nature of tasks associated with a particular job. While Hackman & Lawler

(1971) stated that job characteristics should be emphasized, it is not their objective state which affects employee attitude and behavior, but rather how they are experience by the employees. Regardless of the amount of feedback (or variety, autonomy, or task identity) a worker has in his work, how much he perceives that he has affects his reactions to the job". In conclusion, job characteristic is an individual reaction by mental perceptions, physiology to dislike hazards in the workplace, task structure, and other aspects of their workplace consisting of job control, psychological job demand, physical job demand, job security, social support, and hazard at work.

2.6.2 Measurement of job characteristics

Four instruments have been used to measure job characteristics in the literature, as described hereunder.

3.2.2.1 The Job Diagnostic Survey (JDS) was developed by Hackman and Oldham (1975). This scale was developed based on earlier work by Turner and Lawrence (1965) and Hackman and Lawler (1971). This scale measures five job characteristics using 7-point rating scales from Extremely Unsatisfied (1) to Extremely Satisfied (7) and from Strongly Disagree (1) to Strongly Agree (7) with 83 items: 1) skill variety; 2) task identity; 3) task significance; 4) autonomy; and 5) feedback. For reliability evidence, internal consistency reliabilities reported range from a high of.88 (growth need strength, in the "would like" format) to a low of.56 (social satisfaction). Discriminant validity: the median off-diagonal correlations range from.12 (task identity) to.28 (growth satisfaction).

This scale has several modified versions for back translation and adoption in nursing research to measure job characteristics (Othman & Nasurdin, 2019;

Yuxiu et al., 2011). However, the psychometric properties of the JDS are questionable (Taber & Taylor, 1990), based on the scales' reported low internal consistency, and numerous researchers have identified several problems with the factor structure of the JDS (Idaszak & Drasgow, 1987).

3.2.2.2 The Work Design Questionnaire (WDQ) was developed by Morgeson & Humphrey (2006). This tool was adapted based on several measurements concerning job characteristics. The WDQ is a self-reporting that comprises 21 scales on task, knowledge, social, and contextual work characteristics. It includes 77 items and uses a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). For reliability evidence, reported Cronbach's alpha coefficient ranged from.64 (ergonomics) to.95 (task variety and physical demands), with a mean alpha of.86. The intraclass correlation used inter-rater reliability. Confirmatory factor analysis ensured construct validity, revealing model fit with the data, including excellent convergent and discriminant validity (Morgeson & Humphrey, 2006).

Previous studies in the nursing field have selected this scale as a measurement of job characteristics (Mohamed & Morsy, 2016; Stegmann et al., 2010). The scores of all WDQ scales were considerably more homogeneous than in heterogeneous samples. High reliability and convergent and discriminant validity were reported.

3.2.2.3 The Thai Version of the Job Content Questionnaire (TJCQ) was developed by Phakthongsuk (2009). This scale was translated from the Job Content Questionnaire developed by Karasek (1985). This Thai version consisted of open-ended questions. Eight items were modified from in-depth interviews. The pilot study with a

small group of employees in different types of jobs (n = 58). The TJCQ consisted of 56 items and constituted a set of questions for six scales; 1) decision latitude, 2) psychological demand, 3) physical demand, 4) social support, supervisor support, coworker support, 5) job security, and 6) work hazards. Each item has a response set of four-point Likert scales that range from 1 or strongly disagree to 4 or strongly agree.

Regarding reliability, internal consistency reliability was ensured by Cronbach's alpha coefficients which reported higher than 0.7 and supported the internal consistency of TJCQ scales except for job security (0.55). For Exploratory factor analysis, factor loadings equal to or larger than 0.3 were accepted as sufficient loadings. Confirmatory factor analysis (CFA): results indicated moderate goodness-of-fit of both models.

The TJCQ has satisfactory validity and reliability, including identifying a psychosocial work environment with a simple and concise questionnaire that can be applied to a wide range of Thai work settings (Phakthongsuk, 2009). Moreover, this Thai version is also used in nursing research (245 ambulance nurses of network hospitals in nine zones of Bangkok EMS) (Sakkomonsri et al., 2016).

3.2.2.4 The Job Characteristic Inventory (JCI) was developed by Sim et al. (1976). The JCI consists of 30 items to measure six perceived job characteristic dimensions: 1) variety, 2) autonomy, 3) feedback, 4) dealing with others, 5) task identity, and 6) friendship. Each item has a five-point Likert scale response set that ranges from very little (1) to very much (5). Regarding reliability evidence, the split-half reliabilities (corrected by the Spearman-Brown formula) of the JCI scales.

With the exception of the friendship scale, all of the dimensions are above the 0.70 level. While the discriminant analysis evaluated validity evidence, multiple discriminant analysis (MDA) results show the average classification results of 12 independent MDA runs. For each run, each observation was randomly assigned to a classification group or the hold-out group. The percentage of successful hits for the original classification groups was 32.2 %, which is significant at the.001 level. The total percentage of successful hits for cross-validation groups was 29.9%, which was also significant at the.001 level. Most of the coefficients are in the high 80s and 90s, which indicates that the factors are congruent (Harman, 1967). The convergent validity was significant at the.001 level (Sim et al., 1976).

The JCI was largely independent of social desirability and acquiescence tendencies. However, the results suggest some overlap between subscales, little convergence between superior and subordinate ratings of the subordinate's job, and substantive validity is in question (Brief & Aldag, 1978).

Based on provided details, the Thai Version of the Job Content Questionnaire (TJCQ) was selected to measure job characteristics. First, the operational definition of job characteristics is consistent with this scale. Second, this scale was widely used. Previous research into the nursing field in Thailand has also been used with professional nurses. Third, psychometric properties were tested with an acceptable value. Fourth, this tool was translated into Thai. The development process was done specifically for the Thai context. Finally, the number of items is reasonable.

2.6.3 The relationships between job characteristics and quality of nursing work life

Previous literature also indicated the causal relation between job characteristics and the quality of nursing work life. Owuor, Chontawan, and Akkadechanunt (2014) studied factors related to QNWL among nurses in public hospitals in Nyanza Province in the Republic of Kenya. Findings revealed a significant positive correlation between job characteristics and QNWL (r = 0.17, p 0.01). In Thailand, Youngsiri (2016) also emphasized that job characteristics were positively related to QNWL at the.05 levels (r = 0.51).

In conclusion, some studies have examined the relationship between job characteristics and QNWL. It is combined with the aspects of job characteristics that Kanter's theory of structural empowerment also mentions. It may imply that job characteristic has a positive direct effect on the QNWL. However, this variable is not derived directly. As a result, this suggested that further research was necessary to investigate this causal relationship. Therefore, the model includes the job characteristic.

Accessed to opportunity and support

2.7 Organizational climate

The organizational climate offers a strategy for the observables that managers can concentrate on to produce the behaviors they need for effectiveness (Schneider, Ehrhart, & Macey, 2012). Additionally, organizational climate reflects how well employees comprehend the company's environment (Alvesson, 2002; Martin, 2002). Evidence of organizational climate could also be modified or established (Nembhard, Northrup, Shaller, & Cleary, 2012).

Based on organizational climate consistent with the second construct of Kanter's theory of structural empowerment, the concept of organizational climate was chosen as the independent variable in the current study based on the information provided. Like Chen (2019) suggested, organizational climate is a crucial empowerment component. The organizational climate includes formal and informal shared perceptions of organizational practices, policies, and procedures. Previous evidence also showed a significant impact on QNWL in the Thai context. Finally, the potential for additional research, including the potential for factor modifiability.

2.7.1 Definition of organizational climate

The definition of organizational climate several authors also define this concept. Asif (2011), and Denison (1996), Organizational climate is a fundamental construct in work and organizational settings as it provides an appropriate context for studying organizational behavior, allowing the exploration of individual and group behaviors. Organizational climate is defined by Garca et al. (2014) and Sungwan (2018) as the shared perceptions of organizational members about their work environment. In sum, organizational climate is the degree to which individuals perceive a set of measurable properties of the organization's work environment: structure, standards, responsibility, recognition, support, and commitment.

3.3.2 Measurement of organizational climate

There were several scales to measure the organizational climate, as provided hereunder.

3.3.2.1 The Organizational Climate Scale (CLIOR) was developed by Suárez et al. (2013). This scale consisted of 50 items, a 5-point Likert-type scale,

ranging from 1 (strongly disagree) to 5 (strongly agree). The organizational climate questionnaire covers five dimensions: 1) autonomy, 2) cooperation, 3) rewards, 4) work hours and work-life balance, 5) work organization, 6) participation, relations, 7) innovation, and attachment to the job. A short version of the scale was developed, comprising 15 items.

Regarding reliability evidence, internal consistency reported an alpha coefficient of 0.97. A short version reported that the alpha coefficient was 0.94. The short version correlated with the long version (.94) and with the scale made up of the 35 items excluded from the short version (.86). For item analysis, in the full version of the scale; the discrimination indexes of the items are greater than 0.40, and the items show no differential item functioning with participants' sex. While a short version was also validated by the discrimination indexes and reported with a score higher than 0.40. Cross-validation was used to test factor analyses; the KMO test resulted in 0.98, 2 (2,016, N = 1,581) = 53791.01, p.001. EFA confirmed that the items on the scale form a single dimension, and a dominant first factor explains 34.29% of the total variance. While a short version, the factor extracted explained 52.32% of the total variance. The goodness-of-fit indexes determined by CFA were: RMSEA=.056, CI [0.053, 0.057]; SRMR=.048; CFI =.85; and TLI =.84 (Suárez et al., 2013).

This scale provided good psychometric properties with the method used. The sample used, although significant, is from a multidisciplinary health workforce. So if we generalize this scale to the nursing field, there might be awareness.

3.3.2.2 The Nurse Practitioner Primary Care Organizational Climate Questionnaire (NPPCOCQ) was created by Poghosyan et al. (2019). The final version

of NPPCOCQ has 24 items. This scale is a four-point Likertlike scale ranging from "strongly agree" to "strongly disagree." The items are grouped into four subscales, capturing organizational climate domains: 3) NPphysician relations (NPPR)-measures the relationship, communication, and teamwork between NPs and physicians; 2) professional visibility (PV)-measures how visible NP role is in the organization; 3) NPadministration relations (NPAR)-measures collaboration and communication between NPs and managers; and 4) independent practice and support (IPS)-measures the resources and support NPS have for their independent practice.

Reliability evidence reported that Cronbach's reliability coefficients are between 0.87 and 0.95 (Poghosyan, Nannini, Finkelstein, et al., 2013). The item test correlations were high on all subscales, ranging from 0.55–0.88. For validity evidence, differential item functioning parameters were within the 3 to +3 range. Confirmatory factor analysis and regression modeling were used to validate and establish the validity of a revealed four-factor structure (Poghosyan, Chaplin, & Shaffer, 2017). This scale was designed explicitly for NPs practicing in primary care and used the conceptual definition of the organizational climate as the foundation for the tool design.

3.3.2.3 Practice Environment Scale of the Nursing Work Index (PES-NWI) was proposed by Lake (2002). The PES-NWI consists of 31 items, a 4-point Likert scale with response choices of 1 (strongly disagree) to 4 (strongly agree) within five subscales derived through factor analysis of the 48 NWI-R items; 1) Nurse Participation in Hospital Affairs; 2) Nursing Foundations for Quality of Care; 3) Nurse Manager Ability, Leadership, and Support of Nurses; 4) Staffing and Resource Adequacy; and 5) Collegial Nurse Physician Relations (Lake, 2002, p.181). Reliability

evidence, Inter-item correlations: Mean rater reliability was assessed by the intraclass correlation (1,k) [ICC(1,k)]; for validity evidence, construct validity was supported by higher scores of nurses in magnet versus non-magnet hospitals. Confirmatory factor analyses supported the exploratory structure. The PES-NWI has been used to assess the quality of practice environments in the US, Australia, Canada, Iceland, and Taiwan. However, based on Warshawsky et al. (2011), who reviewed the reported associations between PES-NWI Measures and organizational outcome variables, did not mention QNWL as an outcome.

3.3.2.4 The Organizational Climate Questionnaire (OCQ) Thai version was developed by Sungwan (2018). This scale was translated from the Organizational Climate Questionnaire's original version developed by Srtinger (2002). The Thai scale was developed based on yielding several dimensions of the organizational environment relevant to the assessment of institutional racism: 1) perceptions of general affective tone toward other people in the organization; 2) respondent perception of management; 3) communication up the chain of command Barbarin et al. (1976). This scale is a 24-item using a 4-point rating scale, a 6-dimensional; 1) structure, 2) standards, 3) responsibility, 4) recognition, 5) support, and 6) commitment were the dimensions. Reliability evidence, Cronbach's alpha coefficient was 0.82. While validity evidence, the content validity of this instrument has been validated in previous studies (Latif, 2010). The construct validity was tested by confirmatory factor analysis.

Based on provided details, the Organizational Climate Questionnaire (OCQ) Thai version was selected to measure organizational climate for many reasons.

First, the operational definition of organizational climate is consistent with this scale. Second, this scale was widely used and tested in Thailand's nursing field. Third, psychometric properties were tested with an acceptable value. Fourth, this tool was translated into Thai, which might fit better with the context than other scales. Finally, the number of items is reasonable.

3.3.3 The relationships between organizational climate and quality of nursing work life

Previous studies indicated the causal relation between organizational climate and QNWL. The study reported by Promeiang et al. (2015) examined the QNWL among professional nurses in Nakhonpathom Hospital. Results of this study point out that organizational climate had a positive statistical significance correlated to the QNWL ($p < 0.05$). In this study, organizational climate is one of five factors to predict QNWL. Stepwise multiple regression analysis was used, and the result was 28.4 percent (R^2 adj. = 0.284). Besides, many studies in Thailand also reported organizational climate as one of the selected factors that could predict the quality of nursing work life (Bulanleamvong, 2013; Dechkraisorn, 2009).

In sum, many studies in Thailand also support the relationship between organizational climate and QNWL. They are considering the organizational climate characteristics mentioned in Kanter's theory of structural empowerment. Based on provided detail may imply that organizational climate could predict the QNWL. However, this factor is not derived directly. As a result, further research was necessary to confirm the relationship among variables. Therefore, the model includes the organizational climate.

Behavioral response

3.4 Job satisfaction

Job satisfaction was selected as representative of the third construct of the chosen theory. For this construct, four variables in Thai were congruent with it: organizational commitment (ß=.287, p < .05), job satisfaction ($\bar{r}$=.535, β=.169), job stress ($\bar{r}$= -.285, β= -.168), and burnout ($\bar{r}$= -.507, β= -.110) (Kongyoo, 2014). However, several studies present contrary results for organizational commitment to Kanter's belief (Essa, Abood, & Thabet, 2021; Pasinringi, & Sari, 2020). Job satisfaction and burnout are two opposing factors. When considering the power of predicted value from Thai literature, researchers found that job satisfaction has stronger literature support than burnout. Therefore, job satisfaction was selected as a variable. Moreover, previous evidence supports that this variable could be modified (Britton, 2008).

3.4.1 Definition of job satisfaction

Job satisfaction is one factor that several studies reported in the relationship between this variable and QNWL. Many authors also defined this concept. Locke (1976) define job satisfaction as an evaluative affective reaction to a job in which the reaction is multi-faceted, corresponding to various salient aspect of the job. At the same time, Bush (1988) defines job satisfaction as the perception that one’s job fulfills or allows the fulfillment of one's essential job values, providing and to the degree that these values are congruent with one's needs. Mueller and McCloskey (1990) defined job satisfaction as “the degree of positive affective orientation toward employment" In Thailand, Sriratanaprapat, Chaowalit, & Suttharangsee (2012) defined job satisfaction

as the degree to which an individual perceives positive or pleasurable feelings one has as a result of an evaluation of their job experiences comprising of incentives, professional autonomy and recognition, nursing supervisor, social aspect at work, workload, work environment, nursing policies and system, and assertiveness in confronting difficulties.

3.4.2 Measurement of job satisfaction

Several instruments that researchers developed to measure job satisfaction. The reviewed instrument to measure job satisfaction is provided below.

3.4.2.1 Thai Nurses' Job Satisfaction Scale (TNJSS) was developed by Sriratanaprapat, Chaowalit, & Suttharangsee (2012). This scale was conducted based on various aspects of Herzberg's Motivation Theory and Vroom's Expectancy Theory combined within the context of Asian cultures, in-depth interviews of Thai nurses, and an extensive literature review. Which consists of 107 items within eight dimension:1) incentives; 2) professional autonomy and recognition; 3) nursing supervisor; 4) social aspect at work; 5) workload; 6) work environment; 7) nursing policies and system; and 8) assertiveness in confronting difficulties.

Reliability evidence was focus on stability ($r = 0.63 – 084$ and 0.83; $p < 0.01$). Item analysis was assessed by item-to-item correlation ($\alpha \leq 0.3$,-inter-item correlation: $\alpha > 0.7$). The final alpha coefficient of the total scale and all factors were .98 and range .89-.97, respectively. For validity evidence, content validity among three experts was 0.97. Construct validity was tested by EFA; PCA with orthogonal rotation, using the varimax method; KMO was adequate (0.97), and Bartlett's Test of Sphericity was 87634.02 ($p <.000$). Factor extraction found: eigenvalues > 1.0; the presence of

eight factors; a total of 107 items [loadings between 0.41-0.84]; total variance explained 60.35%. This instrument is unique in that it contains factors and items specific to the context of Thai culture, high response rate, and strength methodology—however, there are a number of items and many concepts in this scale.

3.4.2.2 The Nurse Satisfaction Scale was developed by Ng (1993). The questionnaire is multidimensional, with 24 items. The items are arranged in the order of their grouping under seven factors: 1) administration, 2) coworker, 3) career, 4) patient care, 5) relationship with supervisor, 6) nursing education, and 7) communication. The response format is a seven-point Likert scale, ranging from 'strongly agree' (1) to 'strongly disagree' (7). Reliability analysis was tested by internal consistency = 0.84. Test-retest = 0.75. For validity evidence, construct validity was tested by comparing the instrument with an Organizational Commitment Scale. Convergent validity reported a cross-validity of 0.64. This instrument was conducted for a specific career (Ng, 1993). Cultural specificity should be considered if the Thai context needs to use this scale to measure job satisfaction.

3.4.2.3 The Measure of Job Satisfaction (JMS) was developed by Traynor Wade (1993). This scale consists of 38 items. Respondents are asked to rate their degree of job satisfaction, including a neutral response choice covering 11 standard work factors. The response format is a five-point Likert scale, ranging from "very satisfied" to "very dissatisfied." Reliability was assessed by test-retest reliability of 0.89. Internal consistency was 0.93. For validity evidence, construct validity was tested by a comparative instrument with a Price Waterhouse instrument, concurrent validity *was* 0.83, and discriminant validity was 0.19-0.59. The Measure of Job

Satisfaction (JMS) was conducted for use in a longitudinal study. Moreover, it has high reliability and validity. However, this population consists of community nurses with very different job characteristics than nurses who work in hospitals.

3.4.2.4 The new McCloskey/Mueller Satisfaction Scale (MMS) was developed by Lee, Dahinten, & Macphee (2016). This scale consists of 25 items within five new subscales: 1) Work culture and conditions, 2) Scheduling and family/work balance, 3) Collegial relationships, 4) Extrinsic rewards, and 5) Professional opportunities. The response format is a five-point response scale that ranges from (1) "very dissatisfied" to (5) "very satisfied."The Cronbach's alphas for the new McCloskey/Mueller Satisfaction Scale subscales ranged from 0.71 to 0.87. Exploratory Factor Analysis: using the PCA method with varimax rotation; KMO = 0.897, Bartlett's Test of Sphericity (2 (30) = 8421.004, *P* 0.001). Using a minimum Eigenvalue of 1.0, five factors accounted for a total of 58.03%. The loadings of the variables on the factors ranged from 0.42 to 0.86. An EFA was used instead of a CFA because prior research had been conducted in another Canadian province and had failed to replicate the original scale (Tourangeau et al., 2006).

The internal consistency of this new scale is higher than that of the original subscales was 0.52-0.84. Moreover, the large sample consisted of nurses working in hospitals and community agencies across British Columbia. However, this scale was limited by its reliance on the EFA and should be followed up by CFA using other samples of nurses in Canada and other countries (Lee, Dahinten, & Macphee, 2016).

3.4.2.5 The measurement of Wade and Degerhammar was developed by Wade & Degerhammar (1991). This scale was a 17-item multidimensional scale for a specific job, which covered two subscales: 1) Intrinsic Job Satisfaction and 2) Patient Focus. This scale provides questions phrased to elicit responses on an ordinary, five-point Likert scale ranging from always, though often, sometimes, seldom, and never. Internal consistency ranged from 0.82–0.88. Construct validity revealed that a two-factor solution was obtained, which explained 50% of the variance. The results of the principal component analysis and the factor structure indicate which items had loadings >0.35. The two subscales of this instrument, comprising the overall measure of job satisfaction, are both reliable and valid with sufficient sensitivity to 1) discriminate between grades of staff and between wards or specialties; and 2) monitor the effect of a change in the system of care delivery on intrinsic job satisfaction.

According to the provided details, the Thai Nurses' Job Satisfaction Scale (TNJSS) was selected to measure job satisfaction for many reasons. First, the operational definition of job satisfaction is congruent with this scale. Second, this scale was conducted for Thai nurses and tested in a Thai context. Third, psychometric properties were tested with an acceptable value. However, this scale has several items, and researchers need more management during the collection of data procedures.

3.4.3 The relationships between job satisfaction and quality of nursing work life

Job satisfaction is one of the variables that play a vital role as a crucial indicator of QNWL (Cohen, Kinnevy, & Dichter, 2007). Previous studies in Thailand support this evidence by Boonrod (2009), who examined the determinants of QNWL among professional nurses at Phramongkutklao Hospital. The R^2 for this study was 0.621, implying that the four predictor variables explained approximately 62.10% of the QNWL, with job satisfaction being one of the four predictors (= 0.351, p 0.001). Moreover, a meta-analysis by Kongyoo (2015) supported the causal relationship among these variables.

In conclusion, a few studies in Thailand also support the causal relationship between job satisfaction and QNWL. It considers job satisfaction characteristics derived from behavioral responses in Kanter's theory of structural empowerment. Based on provided reason may imply that job satisfaction could predict the QNWL. However, this factor is not derived directly. As a result, further investigation needs to determine the relationship among variables. Therefore, the model includes job satisfaction.

Previous literature in Thailand reported three factors that were grouped into personal trait factors, including attitude toward the nursing profession ($\bar{r}$=.426, β=.171), work values ($\bar{r}$=.274, β=.174), and professional competency ($\bar{r}$=.368, β=.170) could influence on QNWL (Kongyoo, 2015). However, these factors are not consistent with any construct of the selected theory. Besides, predictive values are pretty small. Therefore, personal trait factors were not selected for this study. Moreover, prior studies reported numerous personal backgrounds that could influence QNWL, such as age, experience at work, salary, and educational level (Boonrod, 2009).

However, personal background factors, usually studied as predictors of QNWL, were not recruited into the current study because they have low power to predict QNWL (r=.077) (Kongyoo, 2015). Previous studies reported no significant findings either (Boonrod, 2009). The literature review also indicated that personal background factors were not recruited to study as predicting factors of QNWL more than ten years ago. Moreover, Kanter (1977) also mentioned that power is derived from structural conditions rather than individual personalities or social experiences. Furthermore, these factors are not congruent with any construct of the chosen theory either. Hence, personal background factors were not selected for this study.

Summary

The quality of nursing work life is a global issue that requires more attention because it relates to nursing shortages and attrition rates. These affect both productivity and the quality of care. However, despite implementing some strategies and policies, the issue persisted. According to the literature review, various factors, such as transformational leadership, job characteristic, organizational climate, and job satisfaction, impact QNWL and can be modified by policymakers and intervention. Despite the fact that these factors have a significant correlation with QNWL, limited study has looked into their complete interrelationships. Based on these factors have an impact on QNWL interacts in a complex way. As a result, most studies concentrate on their direct effects, while very few concentrate on their indirect effects, which is insufficient to explain the actual relationship.

In order to create a humanized environment for professional nurses in Thailand from relevant factors, policymakers, nurse administrators, nurse managers, and

researchers must understand the factors affecting QNWL among Thai professional nurses. There has not been much research explaining how these factors interact. An explanation for QNWL is, however, provided by earlier literature. Therefore, a causal model was conducted in the current study to test and explain the influence of transformational leadership, job characteristics, organizational climate, and job satisfaction on QNWL among Thai professional nurses in Thailand.

4. Existing Studies about the Quality of Nursing Work Life

Kongyoo (2015) attempts to describe research characteristics of antecedent variables of QNWL and identify the factor that influences nurses' quality of working life, compare the mean of correlation coefficients across antecedent variables and research characteristics, and analyze predictors of correlation coefficients by research characteristics variables. Findings revealed that the predictors of correlation coefficients of antecedent variables were management, organizational climate, job description, participation, organizational commitment, organizational culture, attitude toward the nursing profession, relationship, job satisfaction, motivation, work values, professional competency, leadership of head nurses, organizational support, job enrichment, job stress, burn out, and sample size predicted research. They accounted for 64.6% of the variance.

Viselita, Handiyani, & Pujasari (2019) conduct a systematic review to identify the quality level of nursing work life and improve interventions. The result showed twenty-one papers focused on the quality level of nursing work life, and six papers focused on interventions for improving the quality of nursing work life. Studies of QNWL level from eight countries, including Iran, Egypt, Mexico, Ethiopia,

Bangladesh, Saudi Arabia, India, and Turkey. The results showed the quality of nursing work life at a moderate level (52.4%). Only 19% of the studies reached a high level, which was found in Iran, India, and Egypt. The studies were primarily conducted in low and middle-income countries. Interventions for QNWL improvement include long-term care (LTC) team talks, empowerment models, integrating focus groups and round-table brainstorming, positive thinking training, stress inoculation programs, and participative teamwork and transactive memory improvement programs. Findings indicated that the quality of nursing work life is mainly moderate and needs improvement interventions.

Chinnawoot, Uraisripong, & Wongjan (2020) conducted a systematic review to explore factors related to the quality of nursing work life in Thailand. Findings revealed that factors related to the quality of nursing work life were personal factors, including age, family status, income, and working experience; personal trait factors, including values, stress, and burnout from work; work factors, including job characteristics, job motivation, and job satisfaction; organizational factors including organizational atmosphere, working environment, organizational culture, and organizational support; and management factors including participatory management, administration, and leadership of head nurses. According to the study's findings, organizations should be structured to support good work, participatory management, adequate and equitable compensation, transparent and verifiable evaluation, a safe workplace, and an excellent working atmosphere.

5. Conceptual framework of the study

Kanter's Theory of Structural Empowerment (1977, 1993) is a framework that explains the concepts and terms associated with empowerment. Kanter (1993) defines power as "the ability to get things done, to mobilize resources." Employees are empowered when they are given access to system factors and structural power to accomplish their work. Both types of power are associated with autonomy and mastery instead of domination and control. Kanter's theory of structural empowerment is composed of four constructs as follows:

1. System factors comprising of formal and informal power; formal power is the independence of people to make the decision-making that can be found in high-profile jobs. Regarding high-profile jobs, the power comes from roles that allow flexibility, visibility, and creativity. Formal power is also derived from work considered relevant and necessary for the organization and enables independence in decision-making. At the same time, informal power came from alliances with people at all levels within the organization and outside the organization (Kanter, 1993). Formal power is necessary to achieve strategic goals and company initiatives. Informal power can be equally valuable, particularly when those in official leadership roles recognize and use informal power to further organizational goals. Employees may be more to accept criticism or take direction when they receive guidance from someone at their level that they respect and trust (Davoren, 2019). Both types of power also affect employee access to an organization's opportunity, power, and resources.

2. Access to job-related empowerment (structural power) comprises opportunity, power, resources, and proportion structure. Based on proportion, the structure is the structure of a balanced division between duties and responsibilities,

which could be an essential key to empowerment. If the proportion is an imbalance as dominants and tokens (skewed group), it is difficult for the subgroup to generate an alliance that can become powerful in the group. In addition, employees who are a subgroup would have a low opportunity. The burdens carried by tokens in managing social relations take their toll on psychological stress, including unsatisfactory social relationships, unstable self-images, frustration from dealing with contradictory demands, physical and mental stress, and insecurity (Kanter, 1993).

3. Nevertheless, the nature of the nursing profession, both abroad and Thai context, has females as the central workforce (Chirawatkul et al., 2011; Landau, 2014). Therefore, the problem regarding minorities and majorities might not occur in this phenomenon. Hence, the researcher did not focus on this concept for the current study.

4. Personal impact on employees is the construct that represents a positive or negative change for everyone in the organization after evaluating power that gains from formal, informal power, and opportunity, power, and resources that they access.

5. Worker effectiveness is the outcome of Power and Opportunity in the work environment (Kanter, 1977).

For the substruction process of this study, Zauszniewski (1995) was used as outlined to assess congruence between selected theory and operational definition in the current research design and to identify the theoretical relationship among the variables of interest.

Based on Kanter's theory of structural empowerment comprising of 4 constructs: systemic factors, access to job-related empowerment, personal impact on employees, and work effectiveness. The conceptual level is composed of 8 concepts:

formal and informal power derived from system factors, while access to opportunities, information, resources, support, and proportion structure is derived from access to job-related empowerment. The behavioral response was derived from personal impact on employees, and the QNWL was derived from worker effectiveness, respectively (Kanter, 1993).

To select a variable that derives from such constructs, the researcher decides on each construct's characteristics combined with a meta-analysis and systematic review (Kongyoo, 2014; Tubsoongnoen et al., 2018) that related to the constructs. Moreover, relationship evidence among factors was considered. As a result, transformational leadership was derived from the first construct because this factor is relevant to both formal (Kanter, 1993) and informal power (Ainomugisha, 2020). Job characteristic was derived from access to information, opportunity, resource, and support structure based on their relevance to all empowering structures (Kanter, 1993). Organizational climate might be derived from access to opportunities and support with the definition and characteristic of this variable. Job satisfaction was representative of the positive aspect of behavioral responses based on the definition, including characteristics. While the QNWL was derived from the achievement and success construct, a reason for both concepts reflects the worker effectiveness construct, which means that an organization can respond to the needs of the stakeholders (e.g., clients, employees, and administrators) who are involved with the organization (Jones, 1994). Besides, CONVALORI (2019) believed that effective organization focuses on the human side. Employees' behavior and attitude comprise four characteristics; work engagement, emotional exhaustion, affective commitment, and productivity, as positively impacted by people's value preferences.

Regarding this study, all recruited factors could explain the rationale that leads to healthy work environments which reflect the QNWL. These premises, supported by theoretical writings including nursing and relevant disciplines, are discussed below (Figure 2.1).

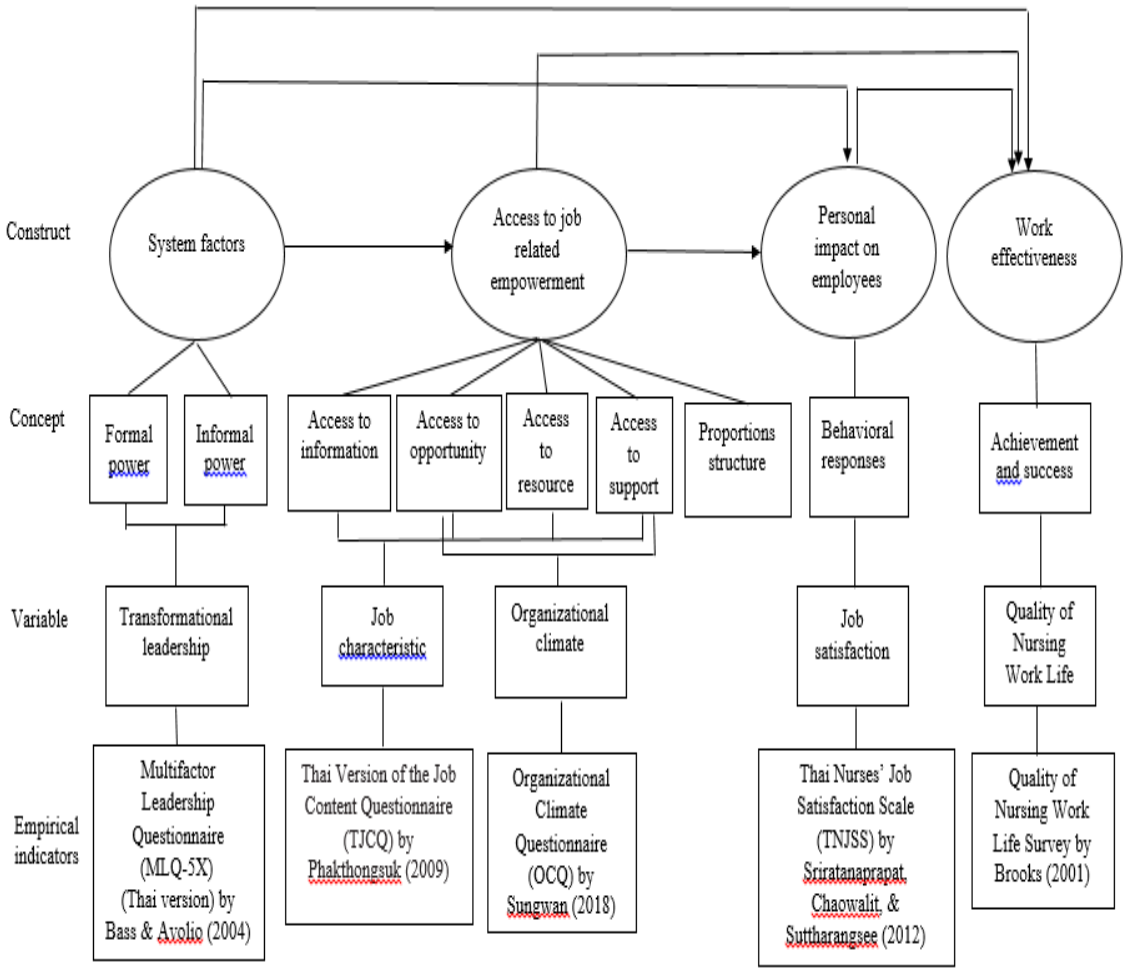


Figure 2.1 Theoretical Substruction Diagram from Kanter's theory of structural empowerment (1993)

Transformational leadership focuses on the leader developing active relationships with the subordinate based on idealized influence (charisma), individualized consideration, intellectual stimulation, and inspirational motivation

(Keskes, 2014). Transformational leader exhibit idealized influence (charisma) by exhibiting high moral and ethical standards, which is also mentioned in Kanter's theory regarding required leadership characteristics (Kanter, 1993). These leaders provide followers with a sense of mission and vision. They inspire motivate and prompt followers to do more by encouraging commitment to the organization's shared vision. They intellectually stimulate the followers by facilitating creativity and innovation and promoting followers to challenge the status quo. Based on theory writing, this kind of leadership could be another strategy to provide employees with a healthy environment (R.M. Kanter, 1993). Transformational leaders give individual consideration to their followers. They act as coaches and mentors while considering their individual needs (Bass, 1999; Northouse, 2013).

Transformational leadership claimed that this kind of leadership could influence job characteristics, organizational climate, job satisfaction, and quality of nursing work life. Many transformational leader behaviors have a direct impact on job characteristics. Nielsen, Randall, Yarker, and Brenner (2008) explained that leaders who utilize intellectual stimulation by stimulating their followers' efforts to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways might boost followers' perceptions of a variety and autonomy. Also, they think leaders who engage in individualized consideration by paying particular attention to each follower's needs and concerns for achievement and growth should have their followers see more autonomy and feedback in their jobs.

Regarding leadership style was claimed as one of the factors in order to influence the climate. Positive, effective climates in an organization arise from people's

positive feelings through shared affective and emotional contagion mechanisms (Menges, Walter, Vogel, & Bruch, 2011; Walter & Bruch, 2010). Transformational leadership also creates a positive emotional environment by rewarding and encouraging subordinates in visible and personal ways, expressing confidence in subordinates, encouraging initiative and responsibility, and building on success (Conger, 1990). Transformational leaders can constitute important affective events that heighten the positive feelings of their followers and seek to meet their emotional needs (Menges et al., 2011). Leaders who involve staff, foster teamwork, encourage motivation, and reward good work performance can improve job satisfaction and impact the quality of work life (Opollo, Gray, & Spies, 2014). Since the expectation between employee expectation and reality in the workplace is fulfilled factors (e.g., employment, salary, promotion, and facilities) (Lianda, 2003, as cited in Simarmata, 2013), it will result in job satisfaction (Johan, 2002, as cited in Simarmata, 2013).

Furthermore, Shamir, House, and Arthur (1993) explained that leaders who exhibit transformational behaviors could influence how followers judge a work environment by using verbal persuasion and by clearly communicating the value of an organization's mission. Bono and Judge (2003) point out that transformational leaders help followers view work goals as congruent with their values. Therefore, transformational leaders may have a profound impact on followers' perceptions of their job characteristics because they provide personal attention to promoting development through individualized consideration, enable new ways of working, encourage novel problem solving, and provide coaching and encouragement of specific behaviors in subordinates through intellectual stimulation (Nielsen et al., 2008).

Since transformational leadership leads to positive change, it gives hope to employees that there is a positive expectation of the job anyway. This type of leadership stimulates employees to have a favorable judgment of their job and encourages job satisfaction (Simarmata, 2013). Additionally, regarding the constructs of QNWL about the interaction between work environment and personal needs. If management leadership can provide the work environment to serve employees' personal needs, employees would consider a positive interaction effect, leading to an excellent QNWL (Hackman & Oldham, 1980; Tett & Meyer, 1993).

Based on provided reason, transformational leadership influences job characteristics, organizational climate, job satisfaction, and quality of nursing work life.

Job characteristic refers to aspects specific to a job, such as knowledge and skills, mental and physical demands, and working conditions that can be recognized, defined, and assessed (BusinessDictionary.com) while Hackman Hackman and Oldham (1980) also proposed that job characteristics have five factors: variety skills, task identity, task significance, autonomy, and feedback.

Job characteristic was claimed to influence job satisfaction and the quality of nursing work life. Luthans (2006) states that job characteristics, such as development opportunities and work, affect job satisfaction. For this issue, Ilgen and Hollenbeck (1991) explained that high levels of autonomy, variety, and task identity in a job could enhance the level of intrinsic motivation by increasing the employee's feeling of accomplishment and self-actualization in performing their work. Similarly, by the provision of information about the effectiveness of an employee's work activities in achieving desired end goals, the job characteristic of feedback clarifies the means end

linkage. The finding is motivationally uplifting as well. Besides, Werther and Davis (1982) stated that if the organization has designed their job as challenging, worthwhile, and also motivates employees to be satisfied, it will result in their followers' quality of working life. Moreover, job factors can influence attitudes (Igbaria & Greenhaus, 1992), while a variety of job and organizational factors can also contribute to QWL (Carayon & Smith, 2000). According to provided reason, job characteristics influence job satisfaction and the quality of nursing work life.

Organizational climate refers to a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in it and assumed to influence their motivation and behavior (Litwin & Stringer, 1974).

The organizational climate was claimed as an organizational factor that influenced job satisfaction and the quality of nursing work life. Organizational climate is an essential factor for good well-being at work (Alimo & Alban, 2006; Vanroelen, Levecque, & Louckx, 2009), participation in decision-making (Kivimäki, Feldt, Vahtera, & Nurmi, 2000), and social relationships (Vanroelen et al., 2009). Organizational climate has been described as the "engine" of empowerment, which leads employees to feel that they are doing something worth their time and effort and it is worthwhile in the large scheme of things; competence is the confidence they feel in their ability to do work well; self-determination is the freedom to choose how to do their work; and impact involves the sense that the task is proceeding and that they are accomplishing something and making a difference in the organization (Afalobi, 2005; Metle, 2001). The organizational climate that employees perceive would be mentioned in terms of cooperation, leadership support, trust, fairness, friendliness, conflicts,

performance standards, and commitment (Bamel, Rangnekar, Stokes, & Rastogi, 2013; A. P. Jones & James, 1979).

Organizational climate can directly cause work outcomes that are either positive or negative aspect (Ghosh & Joshi, 2016; Gunter & Furnham, 1996). The organizational climate also affects employees' perception of individuals and the organization (Adenike, 2011). The different types of social climate as relaxed and friendly, encouraging and supportive of new ideas, prejudiced and clinging to old ways, strained and quarrelsome, tense and competitive, and one where everyone looks after their own best interest (Elo, Ervasti, Kuosma, & Mattila, 2008) while negative behavior has been connected to a specific type of climate, and it is found to have a considerable impact on the effectiveness of organizations (Burnes, 2008) in this case, employees would feel work boring, unchallenging and dissatisfying (Malik & Pamela, 2005).

Organizational climate has causal relation with job satisfaction and QNWL; the main argument is that if the organizational climate is developed to provide a more desirable work environment, it will lead to job satisfaction (Afalobi, 2005; Metle, 2001) since positive work incentives are incentives that make work enjoyable (e.g., attractive work environment, provision of benefits, job structure and compensation). While the causal relationship between organizational climate and QNWL could be explained by the fact that organizational climate deals with the way(s) employees make sense of their environment (Reichers & Schneider, 1990). The climate generally refers to direct perceptions of the work environment. Organizations need a positive climate in their workplace to boost employee motivation and raise the opportunity that employees will implement adequate efforts in doing their tasks. Therefore, a favorable climate could

encourage employees' productivity (Griffin, 2001). Since the organizational climate is one of the essential characteristics of a great and comfortable workplace (Jung, Chow, & Wu, 2003; Jung & Ali, 2017), employees who perceive a great workplace will increase productivity. Employee productivity has also been discussed as the indices of the quality of nursing work life (Asadi, 2008). Based on provided reason could be hypothesized that organizational climate could lead to job satisfaction and QNWL.

Job satisfaction is a positive or pleasurable feeling one has as a result of an evaluation of his job or job experiences (Soe, Ko, & Price, 2004). Job satisfaction is also defined as the degree of affection toward a job and its main components (Adams & Bond, 2000) and can be considered a positive concept in describing work behaviors in work settings (Utriainen & Kyngas, 2009). Nurses' job satisfaction is influenced by both nurses' working environment and nurses' characteristics (Adams & Bond, 2000). Nurse managers must maintain high-quality standards of care and job satisfaction among nurses, often lacking human and financial resources (Lee & Cummings, 2008). Workplace structures can support healthier nurses, reduce stress, increase commitment and job satisfaction, and improve organization and patient outcomes (Wagner et al., 2010).

Job satisfaction can be used to assess the quality of the work life of nurses (Vecchio, Justin, & Pearce, 2008). Nurse leaders must carry out evidence-based approaches for empowering work environments that ensure satisfaction, which could ensure high-quality care (Laschinger, 2008). Besides, job satisfaction is one of the central variables in work and is seen as an essential indicator of the quality of nursing work life (Aryee, Fields, & Luk, 1999; Cohen, Kinnevya, & Dichtera, 2007). Job satisfaction and quality of work life go hand in hand when talking about absolute

satisfaction since one is the outcome of the other (Essays, 2018). Prior literature found that work overload, role ambiguity, role conflict, and poor working conditions associated with a particular job reduce job satisfaction and affect low feelings toward the quality of nursing work life. Regarding less satisfying jobs, employee performance and initiative-taking ability are also reduced to a large extent (Cooper & Marshall, 1976). Based on the provided reason could hypothesize that job satisfaction could lead to QNWL.

Quality of nursing work life (QNWL) is defined as the degree to which registered nurses can satisfy critical personal needs through their experiences in their work organization while achieving the organization's goals (Brooks, 2001). It also refers to the satisfaction, motivation, involvement, and commitment individuals experience concerning their work life (Srivastava & Kanpur, 2014). Most of QNWL's definitions aim to achieve an effective work environment that meets organizational and personal needs and values that promote health, well-being, job security, job satisfaction, competency development, and balance between work and non-work life (Rethinam & Ismail, 2008).

Regarding theory writing, the QNWL as targets or goals of the organizational success (R. M. Kanter, 1977; R.M. Kanter, 1993). Based on the QNWL is the core factor of the organization's success; if an organization gives more importance to improving the QNWL of employees, it will surely improve the organization's quality (Fasla & Dhanalakshmi, 2019). Moreover, previous studies regarding nursing also prove that QNWL plays a crucial role as an outcome of Kanter's theory of structural empowerment (Mota, 2015; Nursalam et al., 2018).

The QNWL is concerned with the type of work environment and its resulting impact on the organization's overall effectiveness and equally on individuals as employees (Essays, 2018). It can be equated with a set of objectives, organizational conditions, and practices and also with employees' perceptions that they are safe, satisfied, and able to grow and develop as human beings. S. Ahmad (2015) proposed that the QNWL of an organizational employee has to deal with the job of an employee, the design of their workplace, and what they need to make products or deliver services more effectively. The QNWL is a process in an organization that enables its members at all levels to participate actively and effectively in shaping the organizational environment, methods, and outcomes. This concept could be seen as a goal of improving organizational performance by creating more challenging, satisfying, and effective jobs and work environments for people at all levels of the organization (Mullins, 1997).

CHAPTER III
METHODOLOGY

This chapter describes the research design and the method used in the current study. The following sections cover the research design, population, sampling technique and sample selection, instrumentation, human subject protection, data collection, and data analysis procedures.

Research design

This study is a cross-sectional predictive study that uses the Structural Equation Model to investigate the causal relationship between transformational leadership, job characteristic, organizational climate, job satisfaction, and quality of nursing work life among professional nurses in Thailand as perceived by professional nurses working in Public Hospitals.

Population and sample

Population

The target population in this study was professional nurses working in Public hospitals in Thailand. Since it was impossible to recruit all professional nurses from across Thailand, thus, a study population was considered. The study population was a subset of the target population from whom an accessible sample was taken throughout data collection based on specific inclusion criteria. Therefore, the population in this study was Thai professional nurses who obtained at least a bachelor's degree and were less than 49 years old. These persons were the first class of registered nurses and midwifery who received a nursing license from the Thailand Nursing and

Midwifery Council (TNMC) and work as staff nurses in 5 public sectors of the hospital in Thailand.

This population was studied because they were concerned that evidence showed that this group of professional nurses has a continuous turnover rate. The current study focuses on professional nurses nationally, whereas public hospitals in Thailand are pretty diverse. Therefore, all public hospitals were grouped into categories, followed by sampling technique, to recruit samples for the current study.

Sample

The sample of this study were professional nurses working in the public hospital. They work as staff nurses. This study will not recruit professional nurses who work as first-line managers or in higher positions. Moreover, the inclusion criteria were as follows:

1) They were Thai professional nurses who obtained at least a bachelor's degree,
2) They were the first class of registered nurses and midwifery who received a nursing license from the Thailand Nursing and Midwifery Council (TNMC),
3) They had work experience of at least one year,
4) They had aged less than 49 years old,
5) They work as staff nurses,
6) They have been working in 5 public sectors of the hospital in Thailand; 1) hospitals under the Ministry of Public Health (MOPH), 2) hospitals under the Department of Medical Services, and all specialized hospitals, both inside and outside Bangkok, including the Department of Disease Control, Department of Mental Health, 3) University Hospitals run directly by a university including operated by Ministry of

Higher Education, Science, Research and Innovation, 4) Hospitals under the Jurisdiction of the Ministry of Defense and the Royal Thai Police, 5) hospitals are operated by other Governmental Ministries and Organisations, such as Thai Red Cross Society, the Medical Services Department, Bangkok Metropolitan Administration, Department of Local Administration, and Public Organisation, and

7) They were willing to participate in this study

Sample size

To date, no standard rule for calculating the sample size applies to all situations when conducting structural equation modeling (SEM). The sample size needed for a study of SEM depends on many factors, including the model size, the variable's distribution, the amount of missing data, the reliability of variables, and the strength of the relation among the variables (Kline, 2015). They considered the maximum likelihood with multivariate normal data—several suggestions regarding the sample size estimation based on structural equation model testing. Hoelter (1983) recommended at least 300 subjects. At the same time, Bentler and Chou (1987) and Kline (2011) suggest at least five respondents per each estimated parameter as a minimum ratio of the minimum sample size.

Moreover, Jackson (2003) proposed N:q rule. N is the number of needed subjects per one parameter (q). The proportion is commonly set as 10:1 in general. For example, if 40 free parameters remained in the hypothesized model; therefore, their sample size in that study would be 400. Moreover, Byrne (2010) and Kline (2011) recommend that the ratio should not be lower than 10:1 because it would lessen the credibility of the findings.

The sample size of the main study

According to the recommendation provided above, this study used the ratio of 10:1 recommended by Jackson (2003). The current study comprises 36 parameters, estimated by the number of observed variables (Vanichbuncha, 2013).and the sample size was expanded by 10% to account for missing data during the data collection. Therefore, data were obtained from a total of 396 subjects.

The sample size for the field test of the instruments

Before the main data collection, a field test of the instrument was conducted to examine its psychometric properties of the instruments. Confirmatory factor analysis (CFA) was used to evaluate the construct validity of measurements. This kind of analysis was employed to evaluate the construct validity of measurements. Participants were recruited using the same inclusion criteria of the main study. Therefore, a sample size of the pilot study was estimated to satisfy the use of CFA. The suggested Number of subjects per one item of the instrument varies. Kline (1998) suggested two, while Devellis (2012) recommended 5 to 10. Among questionnaires, the Thai Nurses' Job Satisfaction Scale (TNJSS) is the longest (107 items). Based on using the rule of thumb that has been mentioned above, thus the sample size for conducting CFA in the field test can be ranged from 214 to 1,070. Hence, a researcher using the ratio of 2:1 suggested by Kline (1998), at least 214 respondents were recruited for the field testing. In this step, only one hospital used to collect the data was selected randomly. Then samples were obtained as the step of the main study.

Sampling technique

The sample was selected by a multi-stage sampling technique (Manly, 1992). The participant who met the inclusion criteria and was available when the data collection took place were recruited for the study. Samples were obtained in steps as follows:

1. All public hospitals are divided into five categories. Then proportion among groups was identified. This step was done by the researcher as described below.

Based on the literature point, the nature of the affiliate was considered in terms of work context, including management practices, relationships with co-workers, professional development opportunities, and the work environment that affects the quality of nursing work life (Brooks, & Anderson, 2004: Brooks, Storfjell, Omoike, Ohlson, Stemler, Shaver, & Brown, 2007; Khani, Jaafarpour, & Dyrekvandmogadam, 2008).

According to the Collaborative Project to Increase Production of Rural Doctors (CPIRD), Medical Education Centers and Non-MOPH agencies were classified among several affiliates. Moreover, for other specialized hospitals under the Ministry of Public Health both in the central and in the region were operated by the Department of Medical Services; therefore, all public hospitals is divided into 5 categories based on their current affiliate including work context: 1) hospitals under the Ministry of Public Health (MOPH) which separated into 34 regional, 85 general and 721 community hospitals, 2) hospitals under the Department of Medical Services which operates public central hospitals in Bangkok, all specialised hospitals, both inside and outside Bangkok including Department of Disease Control, Department of Mental

Health, (48 hospitals) (Wikipedia, 2021), 3) University Hospitals which were operated directly by a university including operated by Ministry of Higher Education, Science, Research and Innovation (29 hospitals), 4) Hospitals under the Jurisdiction of the Ministry of Defense and the Royal Thai Police (51 hospitals), and 5) hospitals are operated by other Governmental Ministries and Organisations including Thai Red Cross Society, the Medical Services Department, Bangkok Metropolitan Administration, Department of Local Administration, and Public Organisation (25 hospitals) (Wikipedia, 2021). Therefore, the proportion among the five groups is 34: 2: 1: 2: 1, respectively.

The proportion of hospitals under the Ministry of Public Health (MOPH) is thirty-four hospitals which is pretty large, whereas the MOPH also operates such hospitals. Based on Kenton (2021) stated that a sample refers to a smaller, manageable version of a larger group. It is a subset containing the characteristics of a larger population. This should represent the population as a whole without any bias. When considering a representative sample that can reflect the population, if a smaller Number of setting under the same agency could be represented as the same as a more considerable Number of settings, a smaller Number without biased is enough. Thus, the researcher also selects three hospitals from each region. Each region comprises three hospital levels; secondary, tertiary, and super tertiary. However, some regions and provinces have no hospitals at the super tertiary care level. Therefore, at least twelve hospitals were selected to represent this category. In conclusion, the proportion among the five groups is 12: 2: 1: 2: 1, respectively.

According to the proportion of the hospitals under the Ministry of Public Health (MOPH), at least twelve hospitals were selected from a list of hospitals under the management of the Ministry of Public Health (MOPH). Based on such a category, the Geographic information system was classified into four levels depending on the number of populations in responsibility and length between district and province (Banyati, 2012) in terms of hospitals located in different geographical areas. Four levels of health services were categorized, including 1) Primary Care level (not included in the current study as the setting because this context is quite different from the hospital), 2) Secondary care level, including Community Hospitals which were under the category F1, F2, F3, M2 service level (hospitals have a capacity of 30 to higher than 120 beds), 3) Tertiary Care: Sub-specialists: General Hospitals which were under the category M1, S service level and Regional Hospitals which were under the category A service level (hospitals have a capacity of 150 to higher than 700 beds), and 4) Super-tertiary Care: Excellence Center (Public Health Administration Office of the Permanent Secretary, 2018).

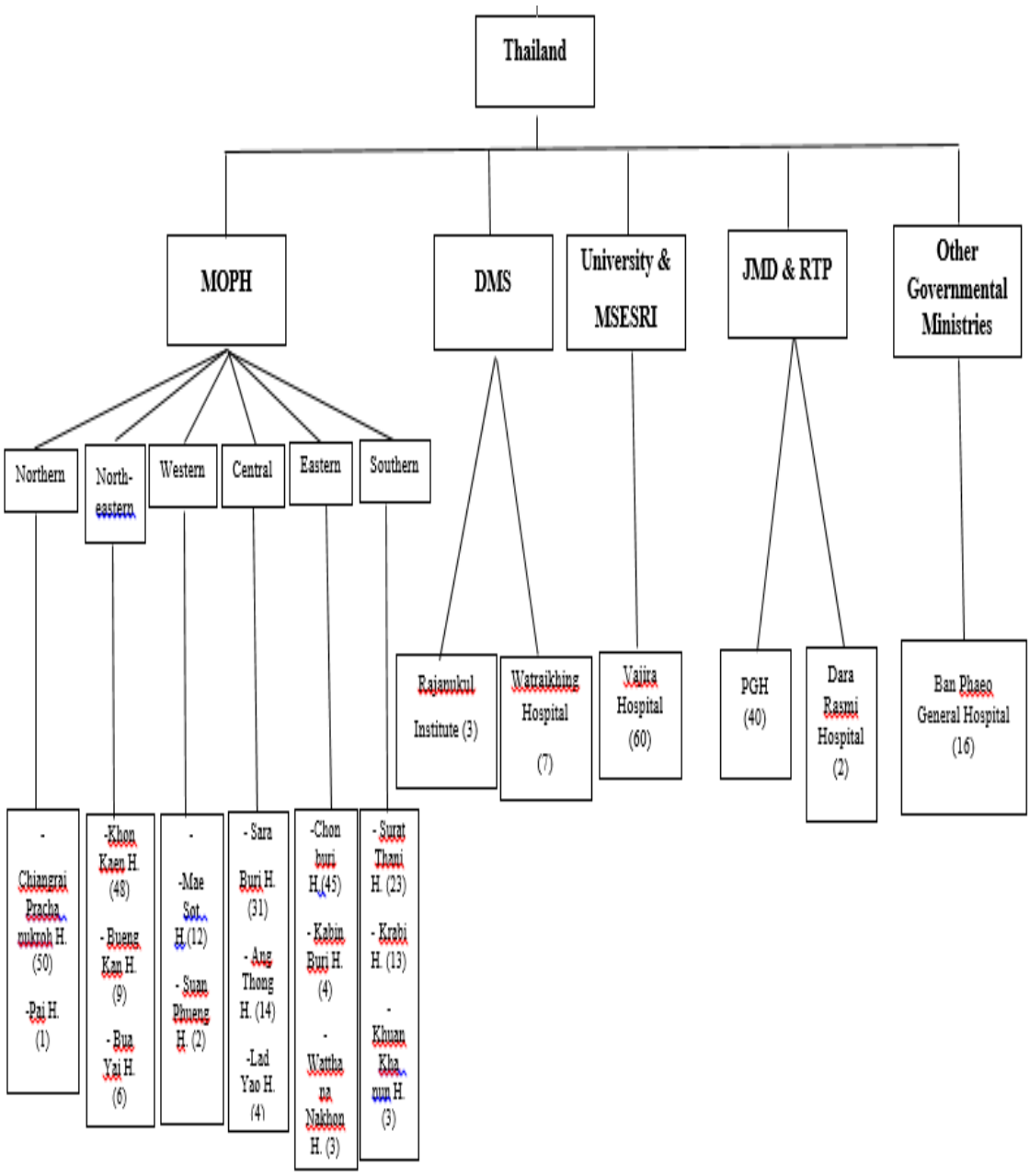
Thus, hospitals were selected from this category by considering six regions with three levels of care because a six-region system is commonly used for geographical and scientific purposes. It divides the country into Northern Thailand, Northeastern Thailand, Western Thailand, Central Thailand, Eastern Thailand, and Southern Thailand (Wikipedia, 2021). Hospitals will be selected as representatives from each region and each level of care as well,

2. Hospitals in each category were selected by simple random sampling. For the Number of hospitals, each group was guided by the proportion indicated in the first step. In this step, the researcher used a random sampling method from hospital lists, as shown in Figure 3.1. This step was done by the researcher as well.

3. Samples from recruited hospitals were obtained by simple random sampling. This step was done by nurse coordinators. Three major departments comprised Out Patient Department, In-Patient Department, and other departments based on hospital policy that professional nurses work were recruitment criteria. Sample from such a hospital was selected randomly by nurse coordinators. The sample size in each hospital was calculated by the number of professional nurses who met the criteria of each hospital. Then divide by the total number of professional nurses from 22 hospitals. For example, Khon Kaen Hospital has a total number of professional nurses who meet the criteria was 961 professional nurses. While the sample size of the current study was 396, the sum score of the Number of professional nurses who met the criteria from 22 hospitals was 7,877. Therefore, n of the sample in Khon Kaen Hospital were 48 subjects. The proportions were provided as follows:

$$\text{n of sample in each hospital} = \frac{\text{sample size x number of nurses who met the criteria (for each hospital)}}{\text{Total Number of professional nurses from 22 hospitals}}$$

The Number of samples in each hospital and the entire participants in this study is also illustrated in Table 3.1



Abbreviations: MOPH = Ministry of Public Health, DMS = Department of Medical Services, MSESRI = Ministry of Higher Education, Science, Research and Innovation, JMD = Jurisdiction of the Ministry of Defense, RTP = Royal Thai Police, H = hospital

Figure 3.1 multi-stage sampling technique

Table 3.1 Characteristics of selected hospitals, Number of professional nurses in each setting, and the entire participants in this study

Hospital's Name	Region/Province	Bed capacities	Total Number of Professional Nurses	N
Ministry of Public Health	**Northeast**			
Super Tertiary Care				
Khon Kaen Hospital	Khon Kaen	867	961	48
Tertiary Care				
Bueng Kan Hospital	Bueng Kan	200	180	9
Secondary Care				
Bua Yai Hospital	Nakhon Ratchasima	152	128	6
	North			
Super Tertiary Care	-	-		
-				
Tertiary Care				
Chiangrai Prachanukroh Hospital	Chiang Rai	758	1,000	50
Secondary Care				
Pai Hospital	Mae Hong Son	60	20	1
	West			
Super Tertiary Care	-	-		
-				
Tertiary Care				
Mae Sot Hospital	Tak	365	250	12
Secondary Care	Ratchaburi	60	40	2
Suan Phueng Hospital				
	Central			
Super Tertiary Care				
Saraburi Hospital	Saraburi	700	617	31

Table 3.1 Characteristics of selected hospitals, Number of professional nurses in each setting, and the entire participants in this study (cont.)

Hospital's Name	Region/Province	Bed capacities	Total Number of Professional Nurses	N
Tertiary Care Ang Thong Hospital	Ang Thong	324	270	14
Secondary Care Lat Yao Hospital	Nakhon Sawan	106	80	4
	East			
Super Tertiary Care Chonburi Hospital	Chonburi	850	869	45
Tertiary Care Kabin Buri Hospital	Prachinburi	248	80	4
Secondary Care Watthana Nakhon Hospital	Sa Kaeo	77	52	3
	South			
Super Tertiary Care Surat Thani Hospital	Surat Thani	748	456	23
Tertiary Care Krabi Hospital	Krabi	341	257	13
Secondary Care Khuan Khanun Hospital	Phatthalung	90	69	3
Department of Medical Services Rajanukul Institute	Bangkok	260	65	3
Mettapracharak Watraikhing Hospital	Nakhon Pathom	150	140	7
University Hospitals Vajira Hospital	Bangkok	875	1,200	60
The Ministry of Defense and the Royal Thai Police Police General Hospital	Bangkok	736	800	40

Table 3.1 Characteristics of selected hospitals, Number of professional nurses in each setting, and the entire participants in this study (cont.)

Hospital's Name	Region/Province	Bed capacities	Total Number of Professional Nurses	N
Dara Rasmi Hospital	Chiang Mai	30	33	2
Other Governmental Ministries and Organisations				
Ban Phaeo General Hospital	Samut Sakhon	323	310	16
	Total		**7,877**	**396**

Instrumentation

The current study collected data using six instruments (Appendix A). Five instruments were selected based on the operational definition of selected factors relevant to those scales. The instruments used in the nursing population have good psychometric characteristics and are reasonably long. Therefore, this scale was selected for the current study. These five instruments were used to gather data with permission from the original developers. An instrument, the Brooks' Quality of Nursing Work Life survey, was translated into the Thai language with the original developers' permission. The variables and their instruments are shown in Table 3.2 as below.

Based on Table 3.2, the content validity of all instruments was evaluated. Regarding the process of content validity, researchers used three steps recommended by Lynn (1986) to conduct content validity; 1) selecting and inviting experts, 2) quantifying content validity, and 3) revising and reconstructing the instrument. —using empirical techniques to calculate the index of content validity (CVI), which is the most widely reported approach for content validity in instrument development and can be

computed using the Item-CVI (I-CVI) and the Scale-level-CVI (S-CVI) (Zamanzadeh, Ghahramanian, Rassouli, Abbaszadeh, & Alavi, 2015). The Item-CVI (I-CVI) is computed as the number of experts giving a rating of "very relevant" for each item divided by the total number of experts. Values range from 0 to 1, where the minimum acceptable score for the I-CVI in this study was 0.70, but an I-CVI with a score of ≥ 0.80 was generally considered an excellent content validity (Lynn, 1986).

Table 3.2 Variables and their instruments in the current study

Variable	Instrument
1. Transformational leadership	1. Multifactor Leadership Questionnaire (MLQ-5X) Thai version
2. Job characteristics	2. Thai Version of the Job Content Questionnaire (TJCQ)
3. Organizational climate	3. Organizational Climate Questionnaire (OCQ) Thai version
4. Job satisfaction	4. Thai Nurses' Job Satisfaction Scale (TNJSS)
5. Quality of nursing work life	5. Brooks' Quality of Nursing Work Life Survey Thai version

The researchers selected five experts, as recommended by Chen (2019). These experts were selected due to their content expertise, experience in research regarding the quality of nursing work life, and expert in the nursing administration field to comprehensively assess the instrument. The detail of the expert selection for content validity assessment is also described in Appendix C.

Each was invited via email address, line, or cell phone to request participation. When the researcher received a positive response from the experts to participate, a cover letter, a copy of the BQNWL survey Thai version, a brief description of the instrument and its scoring, and a description of the content validity form were distributed to them. Based on the recommendation by Lynn (1986), each of the experts was asked to rate each BQNWL survey (Thai version) item on its relevance using a 4-point Likert-type format, ranging from "extremely relevant" (score 4) "quite relevant" (score 3), "somewhat relevant" (score 2), to "not relevant" (score 1). A description of each instrument, including the result of the content validity assessment, is provided

1. **The researcher developed the demographic information form**

. This demographic information form was conducted with the purpose of this form was to gather some background information of respondents (Jovancic, 2018) regarding age, gender, educational level, work experience, marital status, salary, type of workplace, employment status, position in the team, shift type and so on. This form was a self-reported questionnaire consisting of 15 items.

2. **Transformational leadership** was measured by the Multifactor Leadership Questionnaire (MLQ-5X) (Thai version) by Avolio and Bass (2004). This scale was the Thai version of the Multifactor Leadership Questionnaire (MLQ-5X) which various translations are available from Mind Garden, Inc. This scale was conducted based on the theory of transformational-transactional leadership proposed by Burns (Burns, 1978). In detail, five transformational, three transactional, one laissez-faire, and three outcome scales are included in the MLQ-5X; Inspirational Motivation, Idealized Influence (attributed), Idealized Influence (behavior), Intellectual Stimulation, and Individualized Consideration. The MLQ-5X has been used by over 300 research

programs, doctoral dissertations, and master's theses, including the healthcare field, especially the nursing field, along with several constructive outcomes for transformational leadership. Regarding this instrument's copyright of Mind Garden, Inc., the researcher also asked permission to reproduce the questionnaire.

Scoring and interpretation

This scale consisted of 45 items. Using a 5-point scale within 8 behaviors of transformational leadership and transactional leadership and outcomes measured questions consisting of 1) Contingent rewards (4items), 2) Active management by exception (4items), 3) Passive management by exception (4items), 4) Laissez-faire leadership (4items), 5) Idealized influence (attribute) (4items), 6) Idealized influence (behavior) (4items) 7) Intellectual stimulation (4items), 8) Individual consideration (4 items), 9) Inspirational motivation (4 items) 10) extra effort (3 items), 11) efficiency (4 items), and 12) satisfaction (2 items). Each item scored between one for 5 "completely agree," and 1 for "completely disagree."

Negative questions are included on this scale for items 5, 7, 12, 20, 28, and 30. The total score is calculated by adding all of the scores that have been submitted for each aspect. Divide by the total number of respondents in that aspect. Questions with incomplete information will not be included in the calculation. The results were interpreted by comparing the mean values for each side with the norm tables for an individual score in Appendix B of the MLQ Manual or by comparing the mean with the key of frequency as the perception of followers that perceived that their leader performs frequency of each characteristic. The detail of the interpreting score are provided below (Avolio, Zhu, Koh, & Bhatia, 2004).

Mean	Interpretation
4.0	Frequently
3.0	Sometimes
2.0	Once in a
0.0	Not at all

Psychometric properties testing

Validity testing

A previous study provided construct validity testing of this revealed good fit indices; $x^2 = 540.18$; $df = 474$; $p < .01$, the ratio of the chi-square to the degrees of freedom (x^2/df) was 1.14, the root mean square error of approximation (RMSEA) was 0.03, the goodness of fit index (GFI) was .84, and the adjusted goodness of fit index (AGFI) was .78 (Muenjohn & Armstrong, 2008).

In the current study, the S- CVI of the MLQ-5X was 0.91, and item-CVI ranged from 0.80 to 1.00, which indicated excellent content validity. No item was removed or revised. Confirmatory factor analysis (CFA) is also used to evaluate construct validity. The result showed that good fit indices: $\chi^2 = 1.91$, df = 2, p = 0.38542, χ^2/df = 0.955, GFI = 1.00, AGFI = 0.98, CFI = 1.00, RMSEA = 0.000, RMR = 0.0082, CN = 934.26.

Reliability testing

The reliability analysis of this tool has also been reported in previous research. The Cronbach's alpha coefficient was.95 (N=30) during the internal reliability test (Kongsuwan, 2010).

In the current study, Cronbach's alpha coefficient for the MLQ-5X was determined, which revealed satisfy score (0.956) (N=214).

3. Job characteristics were measured by the Thai Version of the Job Content Questionnaire (TJCQ) by Phakthongsuk (2009). This scale was translated into Thai from the Job Content Questionnaire (JCQ). Developed by Karasek (1985) developed based on the Job Demand-Control-Support (JDCS) Model (Karasek, 1990), which is composed of three major components that describe psychosocial work characteristics: psychological demand, job control or decision latitude, and social support. Psychological demand

4. refers to the measure of stress factors involved in accomplishing the workload, organizational constraints on task completion, and job-related conflicting demands. Job control or decision latitude relates to the freedom permitted to the worker in how to perform tasks and how to meet

5. the job demand and is assessed as a composite of skill discretion and decision authority (Phakthongsuk, & Apakupakul 2008), which reflects stress at work. This scale, the original version, contains 48 items. For the TJCQ, such a questionnaire adds eight items from in-depth interviews. The pilot study with a small group of employees in different types of jobs (n = 58). The TJCQ has satisfactory validity and reliability, including identifying a psychosocial work environment with a simple and concise questionnaire that can be applied to many Thai work settings (Phakthongsuk, 2009). Moreover, this Thai version is also used in nursing research (245 ambulance nurses of network hospitals in nine zones of Bangkok EMS) (Sakkomonsri, Ampai, & Kaewboonchoo, 2016). Based on this instrument having the copyright of the JCQ Center Global, the researcher also asked permission to reproduce the questionnaire.

Scoring and interpretation

The TJCQ consisted of 54 items and constituted a set of questions for six scales; 1) Decision latitude (11 items), 2) Psychological demand (12 items), 3) Physical demand (6 items), 4) Social support; supervisor support (4 items), co-worker support (4 items), 5) Job security (5 items), and 6) Work hazards (12 items). Item numbers 1-31 and 35-42 have a response set of 4-point Likert scales that range from 1 or strongly disagree to 4 or strongly agree, while item number 43-54 is the work hazard dimension. There were three levels of assessment responses: no problem (1), some/minor problem (2), and a lot of problems (3). Furthermore, this instrument was not intended to be used as a reversed questionnaire item. Regarding score, the calculation could calculate and interpret by comparing the mean with cut point median for job strain (Phakthongsuk & Apakupakul, 2008) as provided in detail hereunder.

Job Characteristics	Score calculation	Min	Max	Cut point Median	Interpretation
Job control	1.1x (summating score of item number 1 to 11)	12.1	48.8	≥ 36.3	High job control
Psychological job demand	the summating score of item number 12 to 23	12.0	48.0	≥ 34	High job control
Physical job demand	the summating score of item number 24 to 29	6.0	24.0	≥ 15	High
Job security	the summating score of item number 30 to 34	5	20.0	≥ 16	High
Social support	1.5x [(summating score of the item number 35 to 38) + (summating score of	12.0	48.0	≥ 35	High

	item number 39 to 42)]				
Hazard at work	the summating score of item number 43 to 54	12.0	36.0	$\geq$ 17	High

Psychometric properties testing

Validity testing

This tool also assessed construct validity analysis via CFA which reveal 6 factor model with good fit indices; χ^2= 14029.69; df = 1333; P-value < 0.05; GFI = 0.79; AGFI = 0.71; CFI = 0.55; RMSEA = 0.054; NNFI = 0.51 (Phakthongsuk, 2009).

In the current study, the S- CVI of the TJCQ was 0.91, which indicated excellent content validity, for item-CVI ranged from 0.60 to 1.00. Two items were revised based on the expert panel's recommendation. Result of confirmatory factor analysis (CFA) indicated good fit indices: χ^2= 6.43, df = 6, p = 0.37657, χ^2/df = 1.07, GFI = 0.99, AGFI = 0.97, CFI = 1.00, RMSEA = 0.018, RMR = 0.0046, CN = 538.2.

Reliability testing

Internal consistency reliability was performed by Cronbach's alpha coefficients and revealed a satisfied score (0.82) (Phakthongsuk, 2009).

The current study assessed Cronbach's alpha coefficient for the TJCQ. The result indicated excellent reliability (0.871) (N=214). Therefore, this scale provides appropriate reliability.

4. Organizational climate was measured by a back translation version of the Organizational Climate Questionnaire (OCQ) Thai version by Sungwan (2018). Using

the back translation technique (Brislin, 1970) and testing with two native Thai speakers to ensure that the items will be interpretable in the Thai language in the final version of the interpretation process Sungwan (2018). Srtinger (2002) was the first developer. This scale was developed based on the yield of several dimensions of the organizational environment relevant to the assessment of institutional racism: 1) perception s of general affective tone toward other people in the organization, 2) respondent perception of management, 3) communication up the chain of command (Barbarin, Good, Pharr, & Siskind, 1976).

Scoring and interpretation

This scale is a 24-item. Comprising of 6 dimensions; 1) Structure (4 item), 2) Standards (4 item), 3) Responsibility (4items), 4) Recognition (4 items), 5) Support (4 items), and 6) Commitment (4 items). Each item was rated using a 4-point scale, ranging from 1 = definitely disagree to 4 = agree, to classify the overall organizational climate level and each dimension. Score interpretation was divided into three levels: low, moderate, and high. The level of overall organizational climate and the dimensions were classified using the mean score percentage cut-off point below (Sungwan, 2018).

Cut of points **Percentage/mean score**	**Interpretation**
< 35 % [score < 33.6, < 5.6 respectively]	low
35-70 % [score 33.6-67.2, 5.6-11.2 respectively]	moderate
> 70 % [score > 67.2, > 11.2 respectively]	high

Psychometric properties testing

Validity testing

The content validity of this instrument was validated in previous studies. Construct validity was tested via CFA. (Latif, 2010).

The current study also performs the content validity analysis. The S- CVI of the OCQ Thai version was 0.83, while item-CVI ranged from 0.80 to 1.00. This indicated excellent content validity. No item was eliminated or revised for this scale. Construct validity testing was assessed by confirmatory factor analysis (CFA) was assessed. Findings revealed good fit indices: χ^2= 5.86, p = 0.55645, χ^2/df = 0.834, GFI = 0.99, AGFI = 0.97, CFI = 1.00, RMSEA = 0.000, RMR = 0.0048, CN = 653.70.

Reliability testing

Previous research also validated the internal consistency reliability by Cronbach's alpha coefficients which revealed a satisfied score (0.82) (Sungwan, 2018).

For the current study, the internal consistency was determined via Cronbach's alpha coefficients. The Cronbach's alpha coefficient for the OCQ Thai version was 0.812 (N = 214).

5. Job satisfaction was measured by the Thai Nurses' Job Satisfaction Scale. Developed by Sriratanaprapat, Chaowalit, and Suttharangsee (2012). This tool was developed based on various aspects of Herzberg's Motivation Theory and Vroom's Expectancy Theory combined within the context of Asian cultures, in-depth interviews of Thai nurses, and an extensive literature review. This instrument is unique in that it contains factors and items specific to the context of Thai culture, high response rate,

and strength methodology. However, the number of items and many concepts on this scale. This issue might burden participants and affect their responses.

Scoring and interpretation

This version provided 107-item covering eight factors: incentives (27 items); professional autonomy and recognition (21 items); nursing supervisor (13 items); social aspect at work (13 items); workload (11 items); work environment (8 items); nursing policies and system (9 items); and, assertiveness in confronting difficulties (5 items).

This tool interpreted the results by dividing obtained score of each dimension into three levels. The results were interpreted as low, moderate, and high satisfaction levels (Sriratanaprapat, 2012).

Dimensions	Range of Scores	Interpretation
Total score	107.00 - 285.33	Low
	285.34 - 463.67	Moderate
	463.68 - 642.00	High
Incentives	27.00 - 71.00	Low
	71.01 - 117.00	Moderate
	117.01 - 162.00	High
Professional autonomy and recognition	21.00 - 56.00	Low
	56.01 - 91.01	Moderate
	90.02 - 126.00	High
Nursing supervisor	13.00 - 34.67	Low
	34.68 - 56.35	Moderate
	56.36 - 78.00	High
Social aspects at work	13.00 - 34.67	Low
	34.68 - 56.35	Moderate
	56.36 - 78.00	High

Workload	11.00 - 29.33	Low
	29.34 - 47.67	Moderate
	47.68 - 66.00	High

Dimensions	Range of Scores	Interpretation
Work environment	8.00 - 21.33	Low
	21.34 - 34.67	Moderate
	34.68 - 48.00	High
Nursing policies and system	9.00 - 24.00	Low
	24.01 - 39.01	Moderate
	39.02 - 54.00	High
Assertiveness in confronting difficulties	5.00 - 13.33	Low
	13.34 - 21.67	Moderate
	21.68 - 30.00	High

Psychometric properties testing

Validity testing

In a previous study, content validity was examined by three experts in administration and instrument development (0.97). The instrument's construct validity was assessed via factor analysis and hypothesis testing. The EFA revealed the KMO was adequate (0.97), and Bartlett's Test of Sphericity was 87634.02 ($p < .000$). Factor extraction found: eigenvalues > 1.0; the presence of eight factors; a total of 107 items [loadings between 0.41-0.84]; and, an explained total variance of 60.35 (Sriratanaprapat, 2012).

In the current study, content validity was determined. The S- CVI of the TNJSS was 0.99. Item-CVI ranged from 0.80 to 1.00. This indicated that the content was of excellent quality. For this scale, no items were eliminated or revised. For construct validity testing, confirmatory factor analysis was utilized to determine the

validity of the construct also. Findings demonstrate good fit indices: χ^2= 11.82, p = 0.37756, χ^2/df = 1.07, GFI = 0.99, AGFI = 0.96, CFI = 1.00, RMSEA = 0.019, RMR = 0.015, CN = 437.72.

Reliability testing

For reliability analysis evidence, the TNJSS's alpha in the pre-test, field test, and reliability/validity confirmation were all 0.98. The alpha of the eight factors ranged from 0.84 to 0.97. For stability, the scores of all factors and the total scores of the TNJSS were highly correlated between the two-time testing (r = 0.63 – 084 and 0.83; p < 0.01).

In this current study, internal consistency was assessed. I used Cronbach's alpha coefficients. The Cronbach's alpha coefficient for the TNJSS was 0.879 (N=214).

6. Quality of nursing work life was measured by Brooks' Quality of Nursing Work Life Survey, developed by Brooks (2001) in the USA to determine the quality of nursing work life among registered nurses and was first published in 2005 (Brooks & Anderson, 2005). Based occupation-specific conceptualizations that lead to questionnaires that include subscales and items that are specifically tailored to a particular profession can provide valuable information in a particular setting. The QNWL was developed from the integration of three major works: Walton (1975), Taylor (1978), and Davis and Trist (1974). Furthermore, this concept is combined with two major works deployed in the nursing field: Attridge and Callahan (1990) and Villeneuve et al. (1995). Then this concept yields consistent descriptive dimensions and referents. Issues such as staffing, workload, respect, and scope of practice are inherently

a part of QNWL. Uses a unifying framework by O'Brien and Baumann (1992) as theoretical underpinning (Brooks & Anderson, 2005). Regarding this study, translated the original English version into the Thai version by the researcher followed by psychometric properties testing. The result revealed five items were eliminated based on poor factor loading. The current Thai instrument indicated a valid and reliable scale. Weigh scoring was reconsidered as well.

Scoring and interpretation

This scale consists of 37 items, and it is divided into four subscales: 1) Home life/work life (5 items), 2) Work design (7 items), 3) Work context (20 items), and 4) Work world (5 items). This scale included negative questions for items 16 and 21. Weigh scoring was provided with the source version combined with a mathematical approach and dimensionality (factor analysis) (Guillemin, Bombardier, & Beaton, 1993). The total score and each aspect of the score were divided for interpretation.

Dimensions	Ranged of score	Interpretation
Whole scale	37-222	
	37-99	Low QNWL
	100-161	Moderate QNWL
	162-222	High QNWL
Home life/work life	5-30	
	5-13	Low
	14-22	Moderate
	23-30	High
Work design	7-42	
	7-18	Low
	19-29	Moderate
	30-42	High

Dimensions	Ranged of score	Interpretation
Work context	20-120	
	20-38	Low
	39-77	Moderate
	78-120	High
Work World	5-30	
	5-13	Low
	14-22	Moderate
	23-30	High

Psychometric properties testing

Validity testing

Regarding validity analysis of this instrument was assessed by CFA. The result of CFA revealed good fit for 4 factor model (χ^2= 3050.23; χ^2/df = 3.72; GFI = 0.67; AGFI = 0.64; CFI = 0.52; RMSEA = 0.10) (Brooks, 2001).

In the current study, content validity was determined. The S- CVI of the BQNWL Thai version was 0.88. Item-CVI ranged from 0.80 to 1.00. The finding indicated that the content was of good quality. For this scale, no items were eliminated or revised. Regarding the result of CFA revealed good fit indices as well (χ^2= 997.83; df = 540; P-value = 0.064; GFI = 0.98; AGFI = 0.97; CFI = 1.00; RMSEA = 0.024; RMR = 0.025; CN = 622.07)

Reliability testing

In prior studies, reliability was already performed to assess its reliability. The Cronbach alpha coefficient of this scale was 0.83. Cronbach alpha coefficients for subscales ranging from 0.45 to 0.60, while the total score correlation

coefficient ranges from r= 0.24 to r= 0.68 and correlation coefficients for each sub-dimension were between r= 0.50 and 0.90.

The current study tested the internal consistency by Cronbach's alpha coefficients. The Cronbach's alpha coefficient for the BQNWL Thai version was 0.929 (N=214).

Instrument development

Based on almost selected questionnaires were Thai versions. The Quality of Nursing Work Life Survey is only one questionnaire provided in the English version. Therefore, such an instrument must translate from English to Thai, and psychometric testing before the data collection is undertaken. Such a method is divided into five phases; 5 phases guided by standardized methodologies (Brislin, 1970; Guillemin, Bombardier, & Beaton, 1993); 1) Translation, 2) Back translation, 3) Committee review, 4) Pre-testing, and 5) weighting of scores (Tubsoongnoen, Yunibhand, & Aungsuroch, 2022).

For psychometric properties, all five instruments were performed construct validity; CFA examined such instruments in a field test (Chatzoudes, 2017). All scales were assessed content validity by five experts who are fluent in the Administrative field and instrument development. The acceptable level of item and total CVI is 0.8. concerning reliability, Cronbach's alpha coefficients were used (Son, 2018).

The summary of all instruments and psychometric properties testing in the field test is illustrated in Table 3.3

Table 3.3 Psychometric properties of the instrument used in the field test (N=214)

Instrument	Items	Cronbach's alpha coefficient
Multifactor Leadership Questionnaire (MLQ-5X) Thai version	**45**	**0.956**
- Contingent rewards	4	0.914
- Active management by exception	4	0.902
- Passive management by exception	4	0.835
- Laissez-faire leadership	4	0.912
- Idealized influence (attribute)	4	0.827
- Idealized influence (behavior)	4	0.920
- Intellectual stimulation	4	0.881
- Individual consideration	4	0.877
- Inspirational motivation	4	0.838
- extra effort	3	0.945
- efficiency	4	0.932
- satisfaction	2	0.849

Table 3.3 Psychometric properties of the instrument used in the field test (N= 214) (cont.)

Instrument	Items	Cronbach's alpha coefficient
Thai Version of the Job Content Questionnaire (TJCQ)	54	**0.871**
-Decision latitude	11	0.886
- Psychological demand	12	0.856
- Physical demand	6	0.887
- Social support; supervisor support and co-worker support	8	0.889
- Job security	6	0.873
- Work hazards	12	0.815
Organizational Climate Questionnaire (OCQ) Thai version	**24**	**0.812**
- Structure	4	0.761
- Standards	4	0.717
- Responsibility	4	0.769
- Recognition	4	0.756
- Support	4	0.704
- Commitment	4	0.725

Table 3.3 Psychometric properties of the instrument used in the field test (N=214) (cont.)

Instrument	Items	Cronbach's alpha coefficient
Thai Nurses' Job Satisfaction Scale (TNNS)	**107**	**0.879**
- Incentives	27	0.856
- Professional autonomy and recognition	21	0.875
- Nursing supervisor	13	0.881
- Social aspects at work	13	0.923
- Workload	11	0.927
- Work environment	8	0.915
- Nursing policies and system	9	0.944
- Assertiveness in confronting difficulties	5	0.924
Brooks' Quality of Nursing Work Life Survey Thai version	**37**	**0.929**
- Home life/work life	5	0.819
- Work design	7	0.910
- Work context	20	0.934
- Work World	5	0.912

Protection of the rights of human subjects

This study has some important ethical decisions. This study was conducted with the approval of the Research Ethics Review Committee for Research Involving Human Research Participants, Group 1, Chulalongkorn University. This study gathered the data

from 22 hospital settings; thirteen hospitals have their Ethic Committee/Institution Review Board of each setting that need to obtain ethical approval before data collection is undertaken (see Appendix D).

In the data collection phase, respondents' informed consent was also embedded in the first page of the questionnaire as part of the information to participants section. The detailed information on this page explained to participants the benefits, rights, and consequences of engaging in the study and outlined the nature and the purpose of the research. Moreover, the respondents were informed of the voluntary nature of the survey and, therefore, were encouraged to respond by being offered an incentive to participate and to ensure their continued cooperation. No identifiable information was requested so that the participants" personal privacy and anonymity were ensured.

The field test of the instruments

The field test of the instrument used was conducted from November to December 2021. The objective of this field test was to assess the reliability and construct validity of confirmatory factor analysis (CFA). These five scales include the Multifactor Leadership Questionnaire (MLQ-5X) Thai version, Thai Version of the Job Content Questionnaire (TJCQ), Organizational Climate Questionnaire (OCQ) Thai version, Thai Nurses' Job Satisfaction Scale (TNNS), and the Brooks' Quality of Nursing Work Life Survey Thai version.

This procedure was carried out after being approved by the Bhumibol Adulyadej Hospital's Institutional Review Board (IRB no.33/64). A simple random sampling technique was used to find such a hospital. After obtaining permission from the Nursing Department of Bhumibol Adulyadej Hospital, a convenience sampling method was

used to select a list of professional nurses who met the inclusion criteria. The data collection was conducted two times; firstly, ten professional nurses conducted the cognitive interview for the BQNWL survey Thai version as a pre-testing stage. This method was used because the current Thai version was translated tool. There is a need for additional strategies to ensure accuracy, as ambiguous items run the risk of participant misinterpretation and measurement error. Before gathering data, this issue cannot be ignored. The cognitive interview (CI) is a strategy to strengthen the validity to identify potential issues before distribution to study subjects, including reducing misinterpretations (Dillman, 2007). Each interview lasted up to 90 minutes. Using the script and guidelines provided in Appendix F. to help schedule the pre-interview and cognitive interview. BRUSO model's suggestion (Peterson, 2000) to guide the item revision (Tubsoongnoen, Yunibhand, & Aungsuroch, 2021), secondly, two hundred and fourteen professional nurses were invited for the latter step without repeat samples from the previous step.

The questionnaires were administered by providing the Google link, which Nursing Department Bhumibol Adulyadej Hospital distributed the link to their head nurses in order to announce their professional nurses. However, according to the poor response rate, the researcher needs to distribute the scale as a hard copy. The researcher needs to go to each ward to inform the objective of this study and their right to decide to participate or refuse to participate in the study. If professional nurses agree to participate in this field test, they will be asked to sign a consent form. Then, the participants were asked to complete the questionnaire.

Data analysis of the field test of the instruments

Statistical analyses were conducted using SPSS software, version 26.0, and LISREL software, version 8.7. To imply a good fit of the model to the data, using the following criteria: $\chi^2/df \leq 2.00$ (Kline, 2005), the Goodness-of-Fit index value of ≥ 0.95 (GFI) (Steiger, 2007), the adjusted goodness of fit index value of ≥ 0.95 (AGFI) (Steiger, 2007), the relative mean square error of approximation of ≤ 0.05 (RMSEA) (Marsh, Hau, & Wen, 2004), Comparative fit index of ≥ 0.95 (CFI) (Hu & Bentler, 1999), Root Mean Square Residual of ≤ 0.05 (RMR) (Mattan, Shachar, Makowski, & Lüdecke, 2022), and critical $n > 200$ (CN) (Bollen, 1989).

Regarding the characteristics of 10 subjects who participated in the pre-testing researcher can summarize the finding as follow:

The respondents have an age range between 23-36 years old, with an average age of 27 years; the majority of the subject was born during 1980 - 1997 (Generation Y) as 90 percent of participants, while one subject was born during 1965 - 1979 (Generation X) as 10 percent of participants. For gender, females were the major group of this interview, accounting for 80 percent of the interviewee, followed by two males accounting for 20 percent of the respondents. Regarding educational level, the highest qualification in the nursing field, the majority of this group graduated with a bachelor's degree, accounting for 80 percent, while the other two informants graduated with master's degrees, accounting for 20 percent. For work experience: the average work experience of informants is 4.5 years, with work experience ranging from 1-16 years; the major group of participant has work experience of 1-2 years, followed by two respondent who has experience of 5 - 7 years, one person has experience for 3 - 4

years, 8 - 10 years, and higher than ten years the data accounting for 50, 20, 10, 10, and 10 percent respectively.

For marital status: The majority of interviewees were single, accounting for 80 percent, followed by two subjects who were married, accounting for 20 percent. While income: salary of respondents is between 15,900 -30,000 baht/month, average 18,895 baht/month. When considering result findings of the latest affiliation in the position of nurses, results show that 3 participants are working in the Medical ward accounting for 30 percent, three subjects working in Surgical wards, accounting for 30 percent, and one respondent working in the Orthopedic ward accounting for 10 percent, two registered nurses working in operating rooms accounting for 20 percent, and one participant working in Obstetric ward accounting for 10 percent. For employment status, the result indicated that all ten government official informants accounted for 100 percent. Regarding the Number of children living with the participant at home by age range: Of the ten respondents, only one respondent had a 1-year-old child accounted for 10 percent. While responsible for caring for their own elderly.

The results of this pre-testing indicated problems regarding comprehension of the question due to item difficulty and tended to misunderstanding. Therefore the 23 items were revised from the Thai version that provides the process of back translation of the current version by maintaining the same meaning (item numbers 1, 4, 6, 7, 8, 10, 12, 13, 14, 16, 18, 19, 20, 21, 24, 25, 27, 30, 31, 36, 40, 41, and 42). Item revisions were edited based on two reasons: 1) revised some words or sentences to shorter and simpler (item number 1, 4, 6, 7, 10, 12, 13, 14, 16, 18, 21, 24, 27, 31, 41, and 42), and 2) edited item to make meaning of item more understanding regarding specific context

(item number 8, 19, 20, 25, 30, 40, and 36). In addition, when the researcher compared this current version with the prior Thai version, the finding indicated that seven items provided different words specific to the hospital context) item numbers 7, 10, 20, 25, 27, 30, and 36(. The researcher also sends all revisions to ask for agreement from advisors before moving to the next step. More information about the results of the cognitive interview method is presented in Appendix G.

The characteristics of participants of the field test are detailed in Table 3.4. The final sample was made up of a total of 214 participants, whose ages range from 22–48 years old. The majority of them were born between 1980-1997 (86.40%), female (97.77%), and had a level of education as a bachelor's degree (94.81%). All of them were full-time nurses. The majority of them work in the In-Patient Department (75%), followed by Out Patient Department (24.36%) and another department (0.64%). In this phase, using a time period of 4 weeks. More information about the results of measurement model testing is presented in Chapter IV and Appendix I.

Table 3.4 Characteristics of participating nurses in the field test (n = 214)

Characteristics	Min	Max	Mean	SD
Age	22	48	30.05	5.89
Work experiences	1	24		
Salary (Baht)	15,000	48,000	25,274.18	
	N	%		
Generation				
X generation (born between 1973-1979)	19	8.8		
The millennial generation (born between 1980-1997)	185	86.40		
Z generation (born in 1998 and over)	10	4.72		
Gender				
Male	4	1.68		
Female	209	97.77		
Unspecified	1	0.55		
Marital status				
Single	144	66.87		
Married	67	31.30		
Spouse	1	0.61		
Divorce	1	0.61		
Separate	1	0.61		
Education				
Bachelor degree	203	94.81		
Master degree	11	5.19		
Type of workplace				
Out Patient Department	52	24.34		

Table 3.4 Characteristic of participating nurses (n = 214) (cont.)

Characteristics	N	%	Mean	SD
In Patient Department	161	75		
Other Department (IC, nurse educator)	1	0.64		
Employment status				
Government official	204	95.24		
Government employee	1	0.68		
Temporary employee	9	4.08		
Position in team				
Team leader	11	5.34		
Charge nurse	63	29.33		
Team member	140	65.33		
Shift type				
8 hours shift (morning-afternoon-night)	181	84.77		
Morning shift	33	15.23		

Abbreviations: n = Number of participants

Data collection procedure

Data was collected by the researcher and research coordinator. The current study will collect data from 5 public sectors in Thailand. In addition, the context of nursing work is in a shift. Therefore, it is not easy to administer the questionnaires to all participants simultaneously. Hence, the research coordinator was asked to help the researcher in order to administer the questionnaire. For the current study, the research coordinator was a nurse educator of each selected hospital. Before the data collection was undertaken, the research coordinator was brief about the objectives, design,

instruments, ethical issues, and data collection steps. In addition, the responsibilities of the research coordinator were to a) support the principal researcher in preparing data collection packages, send the link to Google form for participants who prefer online questionnaires, and b) administer the questionnaire to respondents by explaining how to answer the instruments and allowed professional nurses to have enough time to respond to questionnaires, c) deliver consent form, questionnaires, pen to the respondents, d) collect questionnaires from respondents and recheck to make sure no items were left blank before sent questionnaire back to the researcher. After the respondent finished all questionnaires, the research coordinator checked all pages to scan for missing data, verbally thanked the respondent, and terminated the data collection procedure. This study needs ethical approval from 13 hospital settings; this step occurs after receiving permission from the Research Ethics Review Committee for Research Involving Human Research Participants, Group 1, Chulalongkorn University. Therefore, the data were collected from December 2021 to June 2022 for the whole phase.

Data analysis:

For this step, returned questionnaires need to examine for any errors before the move to Structural Equation Modeling (SEM) analysis. Missing data were fixed by SPSS program. Human errors were considered.

Structural Equation Modeling (SEM) was defined as a multivariate statistic that integrates confirmation element analysis techniques. It consists of two types of model analysis:

1. Measurement model shows the linear structure relationship between latent and observable variables of both external and internal variables. The data analysis consisted of confirmatory factor analysis and regression analysis

2. Structural Modeling is a causal model that can find both direct and indirect effects of latent variables—using regression analysis techniques (Vanichbuncha, 2019).

The steps of data analysis are as follows.

1. The data were analyzed with the SPSS version 26 program. Using descriptive statistics to describe the sample characteristics and each variable's level, examine the variables' distributional features including computed mean and standard deviation.

2. Check the information for accuracy and completeness. Cronbach's alpha coefficient threshold of 0.8 was used to assess instrument dependability (Cortina, 1993). Evaluate the discrimination power of each item (Corrected – Item Total Correlation) (Field, 2005).

3. Verify the assumption by checking the outlier. Using Skewness and Kurtosis to determine the normality of the data (George & Mallery, 2010; Tabachnick & Fidell, 2007), a scatter plot to check Homoscedasticity, Linearity (O'brien, 2007).

4. Verify model identification and estimate model parameters using the Maximum Likelihood method. For this step, model specification, model identification, model estimation, model testing, and model modification were all evaluated in conducting a structural equation model (SEM) analysis. (Crockett, 2012). This step could describe as follows:

Model specification: The hypothesized model was conducted based on Kanter's theory of structural empowerment with a literature review. The model had five latent variables, divided into one exogenous variable (transformational leadership) and

four endogenous variables (job characteristics, organizational climate, job satisfaction, and quality of nursing work life).

Model identification: Based on Tabachnick and Fidell (2007) recommended that the over-identified model is one with more data points than free parameters. Model identification is required for developing results that can be used to estimate the model fit and parameters in SEM analysis. The model is over-identified when the Number of covariances exceeds the Number of parameters being estimated. When the Number of estimated parameters equals the Number of covariances, the model is referred to as -identified. Finally, if the number of parameters exceeds the Number of covariances, the model is under-identified (Crockett, 2012). In order to perform SEM analysis, the model must be over-identified (Crockett, 2012).

There are several conditions used to establish the model identification. The option that the researcher used for the model identification is calculating its degree of freedom. The model degree of freedom is equal to the adjusted degree of freedom minus the Number of parameters in the model. The model is over-identification if the degree of freedom of the model is positive. The number of manifest variables (p*(p+1)/2) is used to compute the adjusted degree of freedom. (B.H. Munro, 2005). The current study's hypothesized model included 36 observed variables. As a result, the degree of freedom was adjusted to (36*(36+1)/2). In the model, there are 81 free parameters. As a result, the model degree of freedom was set at 585. (666 minus 81). Finally, the proposed model is over-identification, which allows SEM to be performed.

Other options are the use first-order measurement model in the structure model (Bryne, 2012). Every observed variable is treated as an indicator of the latent

variable. However, because the sample is calculated based on the number of parameters underestimation, this approach necessitated a large sample size. As a result, this model is not appropriate for the current investigation. While Cohen, Cohen, Teresi, Marchi, and Velez (1990) recommend the method of total aggregation with reliability correction to deal with unidimensional latent variables. However, all instruments of the current study are multidimensional latent variables. Thus, this method might not fit with the study as well.

Model testing and model modification: for this step, in order to test the proposed model of nursing work-life quality among Thai professional nurses, structural model analysis and path analysis were used. The exogenous variable in the hypothesized model was transformational leadership, while the endogenous variables were job characteristics, organizational climate, job satisfaction, and the quality of nursing work life.

5. Then, the empirical data and the model are compared by looking at the predicted model harmony across the board. Using the following indices: the result of equation χ^2/ df ≤ 2.00 (Kline, 2005), the Goodness-of-Fit index value of ≥ 0.90 (GFI) (Hooper, Coughlan, & Mullen, 2008), the adjusted goodness of fit index value of ≥ 0.90 (AGFI) (Hooper et al., 2008), the relative mean square error of approximation of ≤ 0.05 (RMSEA) (Marsh, Hau, & Wen, 2004), Comparative fit index of ≥ 0.90 (CFI) (Hancock & Mueller, 2006), Root Mean Square Residual of ≤ 0.05 (RMR) (Mattan, Shachar, Makowski, & Lüdecke, 2022), and critical n > 200 (CN) (Bollen, 1989).

6. Adjust the model by examining the Modification Index: MI and expected value suggested through the Theta-Epsilon metric (TE) and Theta-Delta (TD). (Vanichbuncha, 2019).

7. Path analysis: To investigate the independent factors' direct and indirect effects on the dependent variable. The total effect was calculated by generating a path diagram in LISREL software, version 8.7. I am using the Maximum Likelihood approach to estimate the parameters. Evaluate the fit of the model using the fit indices as above. Then adjust the model based on the MI until the above criteria are met.

8. Use the Z test statistic (Critical ratio) and the regression weight test to check each parameter. Compare effect levels. Then the path coefficient, standard error, t-value, direct effect, indirect effect, and total effect are also reported as the significance level at the .05 level.

Summary

A proposed model of factors affecting the quality of nursing work life among Thai professionals was tested using a cross-sectional research design. The relationship between variables such as transformational leadership, job characteristics, organizational climate, job satisfaction, and the quality of nursing work life was also investigated in this study. The target population of this study included Thai professional nurses who obtained at least a bachelor's degree, the first class of registered nurses, and midwifery with a received nursing license from Thailand Nursing and Midwifery Council (TNMC), work experience of at least one year, aged less than 49 years old, work as operational level, and work in 5 public sectors of the hospital in Thailand. The study settings included 22 hospitals from six regions in Thailand. Multi-stage random

sampling was utilized to select such hospitals. Proportionate was used to include 407 participants following inclusion criteria.

Six self-report questionnaires were used to collect the data, including the demographic information form, Multifactor Leadership Questionnaire (MLQ-5X) Thai version, Thai Version of the Job Content Questionnaire (TJCQ), Organizational Climate Questionnaire (OCQ) Thai version, Thai Nurses' Job Satisfaction Scale, and Brooks' Quality of Nursing Work Life Survey Thai version. The pilot study found that all instruments were culturally appropriate for Thai professional nurses. The instrument's psychometric properties were found to be satisfactory. The data were analyzed using the maximum likelihood method run by LISREL software, version 8.7. The results of this investigation are reported in the following chapter.

CHAPTER IV
RESULTS

This chapter presents the findings of the study. This cross-sectional correlation study aimed to (1) develop a causal model consisting of transformational leadership, job characteristics, organizational climate, and job satisfaction for explaining the quality of nursing work life among professional nurses in Thailand and (2) test the causal relationships among transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life among professional nurses in Thailand. A multi-stage random sampling technique was used to recruit 407 professional nurses who obtained at least a bachelor's degree, the first class of registered nurses and midwifery with a received nursing license from Thailand Nursing and Midwifery Council (TNMC), and work experience of at least one year, aged less than 49 years old, work as operational level and work in 5 public sectors of the hospital in Thailand. The study settings included 22 hospitals across six regions in Thailand. The study's findings are presented in the sections below.

Descriptive characteristics of the participants

Descriptive characteristics of the study variables

Structural Equation Modeling assumption testing

Findings of research questions

Hypothesis testing

Descriptive characteristics of the participants

Characteristics of the participants

According to 396 questionnaires, three hundred and ninety-four were returned (99.49%). However, data from ten questionnaires indicated that professional nurses did not meet the inclusion criteria in terms of age over 49 years old. Previous literature indicated that professional nurses older than forty-nine have a decreased turnover rate (Sawaengdee, 2009). Moreover, they usually receive higher positions (Siripukdeekan & Boonrubpayap, 2014) and high compensation (Ruangrattanatrai & Sawaengdee, 2019), which reflect that they perceive high QNWL. Therefore, data from ten returned questionnaires were excluded. Hence, data from 392 respondents were used to conduct the analysis (98.99%). These participants were obtained across five public sectors, six regions, and three hospital levels; Super Tertiary Care, Tertiary Care, and Secondary Care. They used the multi-stage random technique in order to recruit subjects.

The findings in Table 4.1 revealed that the age range of the participants was 23 to 49 years old, with an average of 32.9 (SD = 7.84). More than half of them were born in the millennial generation (69.39%), followed by 19.64% of them in were x generation and z generation (10.97%), respectively. Most of the participants were female (95.92%). More than half of the participants were single (60.97%), followed by married or living with their spouse (35.46%), divorced (2.81%), widow (0.51%), and 0.25% of them were separated. Most of the participants completed bachelor's degrees (94.39%), while only 5.61% of them graduated with master's degrees. The biggest

number of the participants have work experience for 1-2 years (36.99%), followed by experience greater or equal to 10 years (36.73%).

For employment status, the result revealed that most of the participants were Government officials (74.74%), followed by the other type of employment status (University employees, day laborers) (14.54%). Major of them were full-time nurses (99.23). More than half of them were team members (65.82%). Over four-fifths of them work in In-Patient Department (82.40%), followed by Out Patient Department (13.01%) and other departments (e.g., infection control nurse, nurse educator) (4.59%).

Considering participants' salary, including other compensation, findings indicate salary is quite broad, ranging from 7,000 Baht to 100,000 Baht per month. Based on the compensation criteria of working in a specialty area, only 21.68% of participants could receive additional compensation for being certified in the specialty area. At the same time, the biggest number of them received additional compensation for overtime jobs (71.17%). Work schedule characteristics, the findings indicated that nearly half of the participants have a flexible schedule (47.70%), followed by 38.78% of them can plan their workdays and vacations in the advanced, inflexible schedule (8.42%), and other types of characteristics for 5.10%.

Regarding the responsibility for the care of their family members, results indicated that 60.71 participants have responsibility for the child. Moreover, most of the participants were also responsible for the care of your (and/or your spouse) elderly parent for 82.65%.

Table 4.1 Demographic characteristics of the study participants (N = 392)

Characteristics	Min	Max	Mean	SD
Age	23	49	32.9	7.84
Salary (Baht)	7,000	100,000		
	n	**%**		
Generation				
X generation (born between 1965-1979)	77	19.64		
Millennial generation (born between 1980-1997)	272	69.39		
Z generation (born in 1998 and over)	43	10.97		
Gender				
Male	14	3.57		
Female	376	95.92		
Unspecified	2	0.51		
Work experiences				
1-2 years	145	36.99		
3-4 years	47	11.99		
5-7 years	17	4.34		
8-10 years	39	9.95		
$\geq$ 10 years	144	36.73		
Marital status				
Single	239	60.97		
Married/ Spouse	139	35.46		
Divorce	11	2.81		
Widow	2	0.51		
Separate	1	0.25		

Table 4.1 Demographic characteristics of the study participants (N = 392) (cont.)

Characteristics	n	%
Education		
Bachelor degree	370	94.39
Master degree	22	5.61
Type of workplace		
Out Patient Department	51	13.01
In Patient Department	323	82.40
Other Department (Infectious control)	18	4.59
Employment status		
Government official	293	74.74
Government employee	27	6.89
Temporary employee	15	3.83
Other: University employees, Day laborers	57	14.54
Position in team		
Team leader	32	8.16
Charge nurse	102	26.02
Team member	258	65.82
Responsibility for child		
Yes	154	39.29
No	238	60.71
Responsibility for the care of your (and/your spouse) elderly parent		
Yes	324	82.65
No	68	17.35
Current position		
Full time	389	99.23
Part-time	3	0.77

Table 4.1 Demographic characteristics of the study participants (N = 392) (cont.)

Characteristics	n	%
Work schedule's characteristics		
Workdays and vacations could be planned ahead of time	152	38.78
Flexible	187	47.70
Inflexible	33	8.42
Other: sometimes schedule can be changeable	20	5.10
Received additional compensation for being certified in the specialty area		
Yes	85	21.68
No	307	78.32
Received additional compensation for overtime job		
Yes	279	71.17
No	113	28.83

Note: n = frequency

Descriptive characteristics of the study variables

Characteristics of the study variables

In this study, there were five variables. The quality of nursing work life was the dependent variable. The independent variables were transformational leadership, job characteristics, organizational climate, and job satisfaction. The characteristics of each variable are described in detail below.

Transformational leadership

Characteristics of transformational leadership among the sample are presented in Table 4.2. The total sum score of transformational leadership ranged from 25 to 177 points ($\bar{X}$ = 3.00, SD = 0.50). Using the criterion provided in Appendix B of the MLQ Manual (Avolio, Zhu, Koh, & Bhatia, 2004) by comparing the mean values with the key of frequency as the perception of followers that perceived that their leader performs frequency of each characteristic.

Table 4.2 Possible range, actual range, mean, standard deviation, and the interpretation of transformational leadership (N = 392)

Leadership	Possible range	Actual range	$\bar{X}$	*SD*	Interpretation
Transformational leadership					
Idealized influence (attribute)	0 – 16	0 – 16	3.19	0.67	Sometimes
Idealized influence (behavior)	0 – 16	2 – 16	3.00	0.57	Sometimes
Intellectual stimulation	0 – 16	4 – 13	2.53	0.36	Once in a
Individual consideration	0 – 16	1 – 16	3.02	0.65	Sometimes
Inspirational motivation	0 – 16	3 – 16	3.17	0.60	Sometimes

Table 4.2 Possible range, actual range, mean, standard deviation, and the interpretation of transformational leadership (N = 392) (cont.)

Transformational leadership	Possible range	Actual range	$\bar{X}$	*SD*	Interpretation
Transactional leadership					
Contingent rewards	0 – 16	2 – 16	2.98	0.61	Once in a
Active management by exception	0 – 16	4 – 16	3.35	0.59	Sometimes
Passive management by exception	0 – 16	6 – 16	2.69	0.59	Once in a
Laissez-faire leadership	0 – 16	2 – 16	2.71	0.65	Once in a
Leadership outcome					
Extra effort	0-12	0-12	3.08	0.72	Sometimes
Efficiency	0 – 16	0 – 16	3.22	0.66	Sometimes
Satisfaction	0 – 8	1 – 8	3.21	0.69	Sometimes
Total score	**0 – 180**	**25 – 177**	**3.00**	**0.50**	**Sometimes**

According to Table 4.2, the findings showed that the mean score of 12 dimensions was categorized based on the key of frequency provided in Appendix B of the MLQ Manual (Avolio, Zhu, Koh, & Bhatia, 2004). It was found that professional nurses perceive that their head nurses sometimes perform transformational characteristics including idealized influence (attribute) ($\bar{X}$ = 3.19, SD = 0.67), idealized influence (behavior) ($\bar{X}$ = 3.00, SD = 0.57), individual consideration, ($\bar{X}$ = 3.02, SD = 0.65) and inspirational motivation ($\bar{X}$ = 3.17, SD = 0.60), while their head nurses rarely perform intellectual stimulation characteristic ($\bar{X}$ = 2.53, SD = 0.36).

Transactional characteristic findings indicated that professional nurses perceive that their head nurses sometimes perform active management by exception ($\overline{X}$ = 3.35, SD = 0.59) behavior. Whereas rarely head nurses perform transactional characteristic including contingent rewards ($\overline{X}$ = 2.98, SD = 0.61), passive management by exception ($\overline{X}$ = 2.69, SD = 0.59), and laissez-faire leadership ($\overline{X}$ = 2.71, SD = 0.65).

The outcomes of leadership, findings reveal that professional nurses perceive that their head nurses sometime perform effective outcome including extra effort ($\overline{X}$ = 3.08, SD = 0.72), efficiency ($\overline{X}$ = 3.22, SD = 0.66), and satisfaction ($\overline{X}$ = 3.21, SD = 0.69).

The result of Table 4.2 could be summarized as participants perceived that their head nurses perform transformational leadership than transactional leadership. However, professional nurses are sometimes satisfied with the group's success based on head nurses' interaction.

Job Characteristics

For characteristics of job characteristics among the subjects are illustrated in Table 4.3. The actual score of job characteristics ranged from 16.88 to 39.47 points. The median score of each dimension ranged from 17 to 35 and was classified into two levels of participants' perceived job characteristics in terms of high and low levels. The scoring could calculate and interpret by comparing the mean with cut point median for job strain (Phakthongsuk & Apakupakul, 2008)

Table 4.3 Possible range, actual score, median, and the interpretation of job characteristics (N = 392)

Job Characteristics	Possible range	Actual score	Median	Interpretation
Job control (Decision latitude)	12.1-48.8	38.38	35.00	low job control
Psychological demand	12.0– 48.0	32.84	32.00	low job control
Physical demand	6.0 – 24.0	16.88	17.00	high
Job security	5.0 – 20.0	18.21	18.00	high
Social support; supervisor, co-worker	12.0 – 48.0	39.47	25.00	low
Work hazards	12.0 – 36.0	19.92	20.00	high
Total score	59.1 – 224.8	165.70	148.0	-

Based on the details provided in Table 4.3, the score interpretation would be described in two categories. Firstly, factor-related strain is based on job characteristics. This would focus on job control (decision latitude) and psychological demand. Findings revealed that participants perceived that they have a low ability to control in the workplace, which was supported by decision latitude (median = 35.00) and Psychological demand dimension (median = 32.00). Considering about high strain jobs based on the characteristic of the job regarding physical job demand, hazards at work, social support, and job security, the report found that respondents perceived that they have been facing physical job demand as high level (median = 17.00), low support from supervisor and colleague, and high level of hazards at work (median = 20.00).

Meanwhile, respondents also perceived that they have a high level of job security (median = 18.00).

Organizational climate

Regarding characteristics of organizational climate perceived by respondents are also shown in Table 4.4. The total sum score of organizational climate ranged from 51 to 93 points ($\overline{X}$ = 72.61, SD = 7.94). The mean score of each dimension ranged from 11.40 to 13.25 and was classified into three levels regarding their organizational climate perception (low, moderate, and high).

Table 4.4 Possible range, actual range, mean, standard deviation, and the interpretation of organizational climate (N = 392)

Organizational climate	Possible range	Actual range	$\overline{X}$	SD	Interpretation
Structure	1 – 16	4 – 16	11.40	2.05	High
Standards	1 – 16	6 – 16	11.63	1.65	High
Responsibility	1 – 16	8– 16	12.45	1.63	High
Recognition	1 – 16	6 – 16	12.05	1.66	High
Support	1 – 16	7 – 16	11.84	1.67	High
Commitment	1 – 16	7 – 16	13.25	1.94	High
Total score	**6 – 96**	**51 –93**	**72.61**	**7.94**	**High**

Based on the data in Table 4.4 point that participants perceived their organizational climate as high level in all aspects including structure ($\overline{X}$ = 11.40, SD = 2.05), standards ($\overline{X}$ = 11.63, SD = 1.65), responsibility ($\overline{X}$ = 12.45, SD = 1.63),

recognition ($\overline{X}$ = 12.05, SD = 1.66), support ($\overline{X}$ = 11.84, SD = 1.67), and commitment ($\overline{X}$ = 13.25, SD = 1.94).

Job satisfaction

Considering the characteristic of job satisfaction perceived by participants are also provided in Table 4.5. The total sum score of job satisfaction ranged from 247 to 642 points ($\overline{X}$ = 476.48, SD = 79.75). The mean score of each dimension ranged from 21.70 to 105.72 and was categorized into three levels; low, moderate, and high.

Table 4.5 Possible range, actual range, mean, standard deviation, and the interpretation of job satisfaction (N = 392)

Job satisfaction	Possible range	Actual range	$\overline{X}$	SD	Interpretation
Incentives	27 – 162	38– 162	105.72	26.46	Moderate
Professional autonomy and recognition	21 – 126	52 – 126	100.97	16.53	High
Nursing supervisor	13 – 78	16– 78	62.74	11.94	High
Social aspects at work	13 – 78	17 -78	64.69	10.45	High
Workload	11 – 66	12– 66	45.41	10.62	Moderate
Work environment	8 – 48	8 – 48	36.78	7.64	High

Table 4.5 Possible range, actual range, mean, standard deviation, and the interpretation of job satisfaction (N = 392) (cont.)

Job satisfaction	Possible range	Actual range	$\bar{X}$	SD	Interpretation
Nursing policies and system	9 – 54	13 – 54	38.46	8.96	Moderate
Assertiveness in confronting difficulties	5 – 30	10– 30	21.70	4.37	High
Total score	**1 – 642**	**247 – 642**	**476.48**	**79.75**	**High**

According to the report from Table 4.5 regarding the characteristic of job satisfaction that participants perceived from all aspects. The findings revealed 5 dimensions that participants perceived as high level including professional autonomy and recognition ($\bar{X}$ = 100.97, SD = 16.53), nursing supervisor ($\bar{X}$ = 62.74, SD = 11.94), social aspect at work ($\bar{X}$ = 64.69, SD = 10.45), work environment ($\bar{X}$ = 36.78, SD = 7.64), and assertiveness in confronting difficulties ($\bar{X}$ = 21.70, SD = 4.37). On the other hand, report from respondents also indicated that they perceive 3 dimensions of job satisfaction as moderate level which including incentives ($\bar{X}$ = 105.72, SD = 26.46), workload ($\bar{X}$ = 45.41, SD = 10.62), and Nursing policies and system ($\bar{X}$ = 38.46, SD = 8.96).

Quality of nursing work life

Characteristics of quality of nursing work life are also provided in Table 4.6. The total sum score of quality of nursing work life ranged from 119 to 245 points ($\bar{X}$ = 185.23, SD = 24.05). The result was categorized as low, moderate, and high levels.

Table 4.6 Possible range, actual range, mean, standard deviation, and the interpretation of quality of nursing work life (N = 392)

Quality of nursing work life	Possible range	Actual range	$\bar{X}$	SD	Interpretation
Home life/work life	5 – 30	7-30	21.03	4.08	Moderate
Work design	7 – 42	17-42	32.32	4.78	High
Work context	20 – 120	54 – 120	93.44	13.31	High
Work World	5 – 30	12– 30	22.65	3.54	High
Total score	**37 – 222**	**119 –245**	**185.23**	**24.05**	High QNWL

Based on the details provided in Table 4.6, the results showed that the respondents perceived their quality of nursing work life for the whole aspect as high level. Considering each dimension, it was found that 3 dimension were perceive as high level including work design ($\bar{\mathbf{X}}$ = 32.32, SD = 4.78), work context ($\bar{\mathbf{X}}$ = 93.44, SD = 13.31), and work world ($\bar{\mathbf{X}}$ = 22.65, SD = 3.54). For homelife/work-life, only one aspect was perceived as moderate level ($\bar{\mathbf{X}}$ = 21.03, SD = 4.08).

Structural equation modeling assumptions testing

The assumptions of structural equation modeling (SEM) testing was carried out during the preliminary analysis period to ensure that the underlying assumption was not violated. Normality, linearity, homoscedasticity, and multicollinearity testing, according to Tabachnick and Fidell (2007), were among the assumptions underlying multivariate analysis. This section presents the assessment of statistic assumptions prior to SEM analysis.

Normality testing

Univariate normality

Estimation procedures in SEM assume normal distributions for continuous variables. Univariate normality was examined using a histogram with a normal curve, normal probability plot, skewness, and kurtosis (Appendix H1). Multivariate normality was diagnosed through bivariate normality testing using scatter plots for each pair of variables (Pituch & Stevens, 2015).

In the current study, Most of the normal probability plots of each study variable demonstrate that the line representing the actual data distribution closely follows the diagonal. Skewness values ranged from -.80 to .07, and kurtosis values from -.63 to 1.31 (Table 4.7). The distribution of the score for the quality of nursing work life was close to normal because the skewness value of this variable was -.43 while the kurtosis value was .21. For the distribution of the score for the transformational leadership was close to normal since the skewness value of this variable was -.80 while the kurtosis value was 1.31. The distribution of the score for the job characteristics was close to normal since the skewness value of this variable was .10 while the kurtosis

value was .35. Considering the distribution of the score for the organizational climate was close to normal since the skewness value of this variable was .07 while the kurtosis value was -.63. For the distribution of the score for the job satisfaction was close to normal since the skewness value of this variable was -.51 while the kurtosis value was -.22.

These values show that the data does not deviate significantly from the normal distribution. It's also evidence that the Maximum Likelihood method works as long as the measured variables are not severely non-normal (the skewness exceeds two, and the kurtosis exceeds 7) (Pituch & Stevens, 2015). This can be concluded that there is efficient evidence of the reasonable satisfaction of the univariate normality assumption. The summary of SEM assumption testing is shown in Table 4.7 hereunder.

Table 4.7 Descriptive statistics for the major studied variables (N = 392)

Variables	Min	Max	$\bar{X}$	SD	CV	Sk	Ku
Quality of nursing work life	119.00	245.00	185.23	24.05	0.13	-0.43	0.21
Transformational leadership	34.00	174.00	135.06	22.29	0.17	-0.80	1.31
Job characteristics	59.10	224.80	167.70	13.49	0.07	0.10	0.35
Organizational climate	51.00	93.00	72.61	7.94	0.11	0.07	-0.63
Job satisfaction	247.00	642.00	476.48	79.75	0.17	-0.51	-0.22

Abbreviations: *Min = Minimum, Max = Maximum, SD = Standard deviation, CV = Coefficient of variation, Sk = Skewness, Ku = Kurtosis*

Linearity testing

The assumption of linearity requires that the relationships between variables follow a linear pattern. Nonlinear effects will not be represented in correlation values because correlation only represents the linear relationship between variables. This omission results in an underestimation of the actual strength of the relationship. According to Hair et al. (2009), linearity can be assessed using simple regression analysis to assess residual, where residual refers to the portion of the dependent variable that is unexplained. As a result, any nonlinearity in the relationship will be visible in the residuals. Normal P-P plots of regression standardized residual among variables for the current study. As a result, it is possible to conclude that the linearity assumption was met. The P-P plots of regression standardized residual among each variable in this study are also presented in Appendix H2.

Measurement model of the latent variables

Five instruments were tested for the measurement model, including the Multifactor Leadership Questionnaire (MLQ-5X) Thai version, Thai Version of the Job Content Questionnaire (TJCQ), Organizational Climate Questionnaire (OCQ) Thai version, Thai Nurses' Job Satisfaction Scale, and Brooks' Quality of Nursing Work Life Survey Thai version.

Statistical analyses were conducted using LISREL software, version 8.7, and SPSS software, version 26.0. To imply a good fit of the model to the data, the following criteria were used: the result of equation $\chi^2/df \leq 2.00$ (Kline, 2005), the Goodness-of-Fit index value of ≥ 0.90 (GFI) (Hooper, Coughlan, & Mullen, 2008), the adjusted goodness of fit index value of ≥ 0.90 (AGFI) (Hooper et al., 2008), the relative mean

square error of approximation of ≤ 0. 05 (RMSEA) (Marsh, Hau, & Wen, 2004), Comparative fit index of ≥ 0.90 (CFI) (Hancock & Mueller, 2006), Root Mean Square Residual of ≤ 0.05 (RMR) (Mattan, Shachar, Makowski, & Lüdecke, 2022), and critical n > 200 (CN) (Bollen, 1989).

The Brooks' Quality of Nursing Work Life Survey measurement model

The Brooks' Quality of Nursing Work Life Survey Thai version (BQNWL) is a 37-items scale with four dimensions: home life/work life, work design, work context, and work world. This scale was tested by the confirmatory factor analysis (CFA). The findings indicated that the model showed good fit to the empirical data (χ^2 = 0.07; df = 1; P-value = 0.793; GFI = 1.00; AGFI = 0.97; CFI = 1.00; RMSEA = 0.000; RMR = 0. 012; CN = 887.79). The factor loading for each factor ranged from 0.73 to 0.90. The measurement model of the BQNWL is illustrated in Appendix I1.

The Multifactor Leadership Questionnaire (MLQ-5X) measurement model

The Multifactor Leadership Questionnaire (MLQ-5X) Thai version is a 45-items scale with 12 dimensions: Confirmatory factor analysis was utilized to test the measurement model of the MLQ-5X Thai version. The result findings point that the model display good fit with the empirical data (χ^2 = 1.52, df = 1, p = 0.218, χ^2/df = 1.52, GFI = 1.00, AGFI = 0.99, CFI = 1.00, RMSEA = 0.011, RMR = 0.011, CN = 397.91). The factor loading for each factor ranged from 0.53 to 0.94. The measurement model of the MLQ-5X Thai version is presented in Appendix I2.

The Thai Version of the Job Content Questionnaire measurement model

The Thai Version of the Job Content Questionnaire (TJCQ) is a 54-item scale with six subscales: Confirmatory factor analysis was used to determine the measurement model of TJCQ. The result findings point that the model revealed good fit with the empirical data (χ^2= 1.29; df = 1; P-value = 0.257; GFI = 1.00; AGFI = 0.99; CFI = 1.00; RMSEA = 0.025; RMR = 0.012; CN = 222.63). The factor loading for each factor ranged from 0.63 to 0.79. The measurement model of the TJCQ is shown in Appendix I3.

The Organizational Climate Questionnaire measurement model

The Organizational Climate Questionnaire Thai version (OCQ) is a 24-item scale with six dimensions: Confirmatory factor analysis was used to determine the measurement model of OCQ. The result findings point that the model revealed good fit with the empirical data (χ^2= 1.32; df = 1; P-value = 0.251; GFI = 1.00; AGFI = 0.99; CFI = 1.00; RMSEA = 0.027; RMR = 0.014; CN = 289.88). The factor loading for each factor ranged from 0.63 to 0.83. The measurement model of the OCQ Thai version is demonstrated in Appendix I4.

The Thai Nurses' Job Satisfaction Scale measurement model

The Thai Nurses' Job Satisfaction Scale (TNJSS) is a 107-items scale with eight subscales: Confirmatory factor analysis was used to test the measurement model of TNJSS. The findings showed that the model revealed good fit with the empirical data (χ^2= 3.47; df = 3; P-value = 0.325; GFI = 0.99; AGFI = 0.99; CFI = 1.00; RMSEA =

0.019; RMR = 0.018; CN = 253.85). The factor loading for each factor ranged from 0.69 to 0.86. The measurement model of the TNJSS is presented in Appendix I5.

The latent variable measurement model summary is demonstrated in Table 4.8.

Table 4.8 Goodness of fit of each construct (N = 392)

Construct	χ^2	df	χ^2/df	p-value	GFI	AGFA	RMS
QNWL	0.07	1	0.07	0.793	1	1	0.000
TRL	1.52	1	1.52	0.218	1	0.99	0.034
JCH	1.29	1	1.29	0.257	1	0.99	0.025
ORC	1.32	1	1.32	0.251	1	0.99	0.027
SAT	3.47	3	1.17	0.325	0.99	0.99	0.019

Abbreviations: χ^2 = Chi-square, df = Degree of freedom, GFI = Goodness-of-Fit index, AGFI = adjusted goodness of fit index, RMSEA = relative mean square error of approximation, QNWL = Quality of Nursing Work Life, TRL = Transformational leadership, JCH = Job characteristic, ORC = Organizational Climate, SAT = Job satisfaction

In conclusion, all instruments were evaluated in terms of their measurement models. This evidence suggests that the overall measurement models were accepted. Each instrument was examined for indicator loading and construct validity. All the studies had their measurement models fitted with empirical data.

Finding research questions

Research question 1: What are the relationships among transformational leadership, job characteristics, organizational climate, job satisfaction, and QNWL among professional nurses in Thailand?

Discriminant validity was used to evaluate relationships among transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life. According to this criterion, the square root of the average variance extracted by a construct must be greater than the correlation between the construct and any other construct. When this condition is satisfied, discriminant validity is established (Analysis INN, 2020). The correlation matrix between the studied variables is presented in Table 4.9

Table 4.9 The discriminant validity between the studied variables (N = 392)

Variables	**TR**	**JC**	**OR**	SA	**QW**
Transformational leadership	**0.834**	*0.232*	*0.368*	*0.180*	*0.156*
Job Characteristics		**0.781**	*0.366*	*0.271*	*0.276*
Organizational climate			**0.802**	*0.228*	*0.237*
Job satisfaction				**0.752**	*0.575*
Quality of nursing work life					**0.771**

Noted: Bold value = Square root AVE value, Italic value = the square of the correlation (R^2)

Abbreviations: TR = Transformational leadership, JC = Job characteristics, OR = Organizational climate, SA = Job satisfaction, QW = Quality of nursing work life

According to Table 4.9, it was found that all values of the square root of the average variance extracted were greater than all of the R-square values, which means that discriminant validity is established. It could be concluded that all variables were suitable for this study.

Moreover, the correlation coefficient between 36 variables was examined by Pearson correlation to confirm the correlation between the studied variable. The value should not exceed 0.9, which is the criterion used in this study (Mukaka, 2012). The correlation coefficient matrix between studies variables is provided in Table 4.10.

Table 4.10 shows a positive correlation among variables with $p < .01$. Those values do not exceed 0.9. Therefore, the findings could be summarized that there is no multicollinearity between studies variables.

Table 4.10 Correlation matrix between studies variables (N = 392)

variables	TRL01	TRL02	TRL03	TRL04	TRL05	TRL06	TRL07	TRL08	TRL09	TRL10	TRL11	TRL12	JCH1	JCH2	JCH3	JCH4	JCH5	JCH6
TRL01	1.00																	
TRL02	0.74**	1.00																
TRL03	0.77**	0.76**	1.00															
TRL04	0.66**	0.57**	0.68**	1.00														
TRL05	0.73**	0.70**	0.71**	0.68**	1.00													
TRL06	0.69**	0.65**	0.71**	0.62**	0.70**	1.00												
TRL07	0.78**	0.71**	0.77**	0.58**	0.69**	0.56**	1.00											
TRL08	0.51**	0.36**	0.44**	0.38**	0.45**	0.44**	0.51**	1.00										
TRL09	0.47**	0.39**	0.41**	0.31**	0.37**	0.33**	0.46**	0.41**	1.00									
TRL10	0.71**	0.72**	0.74**	0.66**	0.61**	0.75**	0.68**	0.44**	0.35**	1.00								
TRL11	0.76**	0.73**	0.75**	0.66**	0.72**	0.71**	0.77**	0.51**	0.40**	0.78**	1.00							
TRL12	0.74**	0.69**	0.70**	0.62**	0.78**	0.64**	0.72**	0.48**	0.36**	0.70**	0.75**	1.00						
JCH1	0.43**	0.35**	0.44**	0.40**	0.42**	0.45**	0.35**	0.31**	0.37**	0.42**	0.44**	0.48**	1.00					
JCH2	0.32**	0.40**	0.41**	0.32**	0.34**	0.41**	0.38**	0.45**	0.48**	0.37**	0.47**	0.42**	0.54**	1.00				
JCH3	0.51**	0.65**	0.54**	0.55**	0.57**	0.44**	0.34**	0.31**	0.37**	0.31**	0.32**	0.51**	0.60**	0.67**	1.00			
JCH4	0.46**	0.61**	0.72**	0.64**	0.53**	0.64**	0.67**	0.69**	0.51**	0.43**	0.58**	0.68**	0.34**	0.44**	0.58**	1.00		
JCH5	0.68**	0.54**	0.62**	0.56**	0.61**	0.58**	0.57**	0.42**	0.33**	0.58**	0.63**	0.62**	0.56**	0.54**	0.55**	0.37**	1.00	
JCH6	0.53**	0.48**	0.61**	0.57**	0.41**	0.51**	0.44**	0.55**	0.54**	0.59**	0.55**	0.53**	0.41**	0.44**	0.47**	0.52**	0.42**	1.00

** P-value < 0.01

Table 4.10 Correlation matrix between studies variables (N = 392) (cont.)

variables	TRL01	TRL02	TRL03	TRL04	TRL05	TRL06	TRL07	TRL08	TRL09	TRL10	TRL11	TRL12	JCH1	JCH2	JCH3	JCH4	JCH5	JCH6
QRC1	0.47**	0.39**	0.44**	0.37**	0.41**	0.44**	0.51**	0.48**	0.36**	0.43**	0.46**	0.41**	0.43**	0.49**	0.46**	0.63**	0.47**	0.41**
QRC2	0.40**	0.38**	0.42**	0.36**	0.39**	0.42**	0.38**	0.36**	0.46**	0.42**	0.44**	0.37**	0.38**	0.42**	0.49**	0.52**	0.48**	0.45**
QRC3	0.46**	0.34**	0.54**	0.34**	0.41**	0.40**	0.43**	0.35**	0.49**	0.45**	0.48**	0.46**	0.55**	0.45**	0.54**	0.43**	0.47**	0.46**
QRC4	0.49**	0.30**	0.64**	0.33**	0.42**	0.37**	0.41**	0.34**	0.31**	0.52**	0.49**	0.47**	0.43**	0.42**	0.52**	0.50**	0.52**	0.42**
QRC5	0.38**	0.31**	0.36**	0.35**	0.34**	0.34**	0.31**	0.48**	0.47**	0.38**	0.38**	0.33**	0.35**	0.52**	0.32**	0.69**	0.34**	0.52**
QRC6	0.40**	0.46**	0.32**	0.48**	0.32**	0.47**	0.37**	0.39**	0.32**	0.33**	0.37**	0.32**	0.47**	0.32**	0.48**	0.49**	0.33**	0.66**
SAT1	0.57**	0.47**	0.48**	0.43**	0.34**	0.49**	0.39**	0.45**	0.51**	0.42**	0.43**	0.48**	0.41**	0.45**	0.33**	0.51**	0.46**	0.56**
SAT2	0.34**	0.31**	0.35**	0.37**	0.44**	0.34**	0.36**	0.43**	0.53**	0.34**	0.38**	0.34**	0.61**	0.44**	0.46**	0.56**	0.35**	0.59**
SAT3	0.61**	0.51**	0.59**	0.57**	0.57**	0.53**	0.53**	0.44**	0.32**	0.57**	0.62**	0.60**	0.51**	0.53**	0.59**	0.52**	0.56**	0.69**
SAT4	0.34**	0.34**	0.37**	0.34**	0.33**	0.35**	0.40**	0.32**	0.53**	0.31**	0.35**	0.32**	0.48**	0.48**	0.63**	0.43**	0.42**	0.62**
SAT5	0.48**	0.55**	0.68**	0.30**	0.53**	0.55**	0.43**	0.48**	0.46**	0.41**	0.32**	0.39**	0.34**	0.48**	0.32**	0.40**	0.31**	0.52**
SAT6	0.42**	0.51**	0.43**	0.46**	0.43**	0.40**	0.66**	0.45**	0.51**	0.42**	0.46**	0.44**	0.59**	0.40**	0.47**	0.55**	0.55**	0.47**
SAT7	0.57**	0.58**	0.31**	0.40**	0.39**	0.33**	0.58**	0.41**	0.69**	0.30**	0.31**	0.55**	0.45**	0.58**	0.53**	0.44**	0.53**	0.54**
SAT8	0.50**	0.54**	0.45**	0.30**	0.37**	0.31**	0.44**	0.51**	0.56**	0.47**	0.58**	0.42**	0.38**	0.48**	0.52**	0.41**	0.54**	0.42**
QWL1	0.66**	0.66**	0.48**	0.47**	0.43**	0.36**	0.46**	0.41**	0.50**	0.50**	0.51**	0.37**	0.35**	0.32**	0.58**	0.51**	0.42**	0.52**
QWL2	0.32**	0.57**	0.32**	0.57**	0.32**	0.38**	0.32**	0.57**	0.62**	0.35**	0.36**	0.37**	0.49**	0.39**	0.40**	0.61**	0.35**	0.69**
QWL3	0.34**	0.34**	0.36**	0.36**	0.37**	0.36**	0.36**	0.44**	0.58**	0.45**	0.39**	0.34**	0.51**	0.48**	0.58**	0.46**	0.39**	0.53**
QWL4	0.56**	0.44**	0.58**	0.46**	0.50**	0.50**	0.56**	0.49**	0.45**	0.43**	0.31**	0.47**	0.39**	0.51**	0.49**	0.48**	0.45**	0.38**

** P-value < 0.01

Table 4.10 Correlation matrix between studies variables (N = 392) (cont.)

variables	QRC1	QRC2	QRC3	QRC4	QRC5	QRC6	SAT1	SAT2	SAT3	SAT4	SAT5	SAT6	SAT7	SAT8	QWL1	QWL2	QWL3	QWL4
QRC1	1.00																	
QRC2	0.45**	1.00																
QRC3	0.54**	0.47**	1.00															
QRC4	0.47**	0.54**	0.65**	1.00														
QRC5	0.43**	0.51**	0.53**	0.57**	1.00													
QRC6	0.38**	0.37**	0.51**	0.58**	0.39**	1.00												
SAT1	0.44**	0.53**	0.41**	0.53**	0.45**	0.42**	1.00											
SAT2	0.42**	0.35**	0.38**	0.37**	0.33**	0.49**	0.62**	1.00										
SAT3	0.43**	0.43**	0.47**	0.49**	0.38**	0.37**	0.53**	0.76**	1.00									
SAT4	0.42**	0.40**	0.43**	0.42**	0.31**	0.31**	0.53**	0.77**	0.73**	1.00								
SAT5	0.52**	0.34**	0.32**	0.33**	0.32**	0.42**	0.66**	0.56**	0.59**	0.57**	1.00							
SAT6	0.69**	0.61**	0.62**	0.57**	0.47**	0.51**	0.53**	0.56**	0.49**	0.59**	0.56**	1.00						
SAT7	0.55**	0.59**	0.57**	0.47**	0.33**	0.54**	0.74**	0.63**	0.60**	0.58**	0.72**	0.63**	1.00					
SAT8	0.58**	0.36**	0.53**	0.33**	0.31**	0.53**	0.62**	0.64**	0.58**	0.61**	0.67**	0.52**	0.77**	1.00				
QWL1	0.55**	0.58**	0.53**	0.45**	0.43**	0.48**	0.58**	0.45**	0.40**	0.37**	0.62**	0.40**	0.60**	0.62**	1.00			
QWL2	0.43**	0.41**	0.42**	0.42**	0.39**	0.36**	0.54**	0.56**	0.50**	0.53**	0.68**	0.50**	0.59**	0.56**	0.58**	1.00		
QWL3	0.35**	0.38**	0.37**	0.36**	0.33**	0.48**	0.65**	0.79**	0.70**	0.75**	0.66**	0.66**	0.71**	0.72**	0.67**	0.66**	1.00	
QWL4	0.65**	0.58**	0.47**	0.44**	0.54**	0.34**	0.63**	0.61**	0.51**	0.56**	0.59**	0.53**	0.66**	0.59**	0.62**	0.60**	0.76**	1.00

** P-value < 0.01

Research question 2: How the hypothesized model explains the quality of nursing work life among professional nurses in Thailand, and how does the model adequately fit with the data?

In order to answer this research question, model specification, model identification, model estimation, model testing, and model modification were all evaluated as five steps in conducting structural equation model (SEM) analysis. (Crockett, 2012). The procedure of model testing is provided as follows:

Model 1: The initial model

The proposed model tested is shown in Figure 4.1. Path coefficients are standardized because it is easier to compare the model coefficient (Hair, Black, Babin, Anderson, & Tatham, 2010). The results reveal that the hypothesized model did not fit the empirical data (χ^2= 3115.68, df = 585, p = 0.00, χ^2/df = 5.326, GFI = 0.69, AGFI =0.78, CFI = 0.95, RMR = 0.39, and RMSEA= .105). The model explains 42% of the variance in the quality of nursing work life.

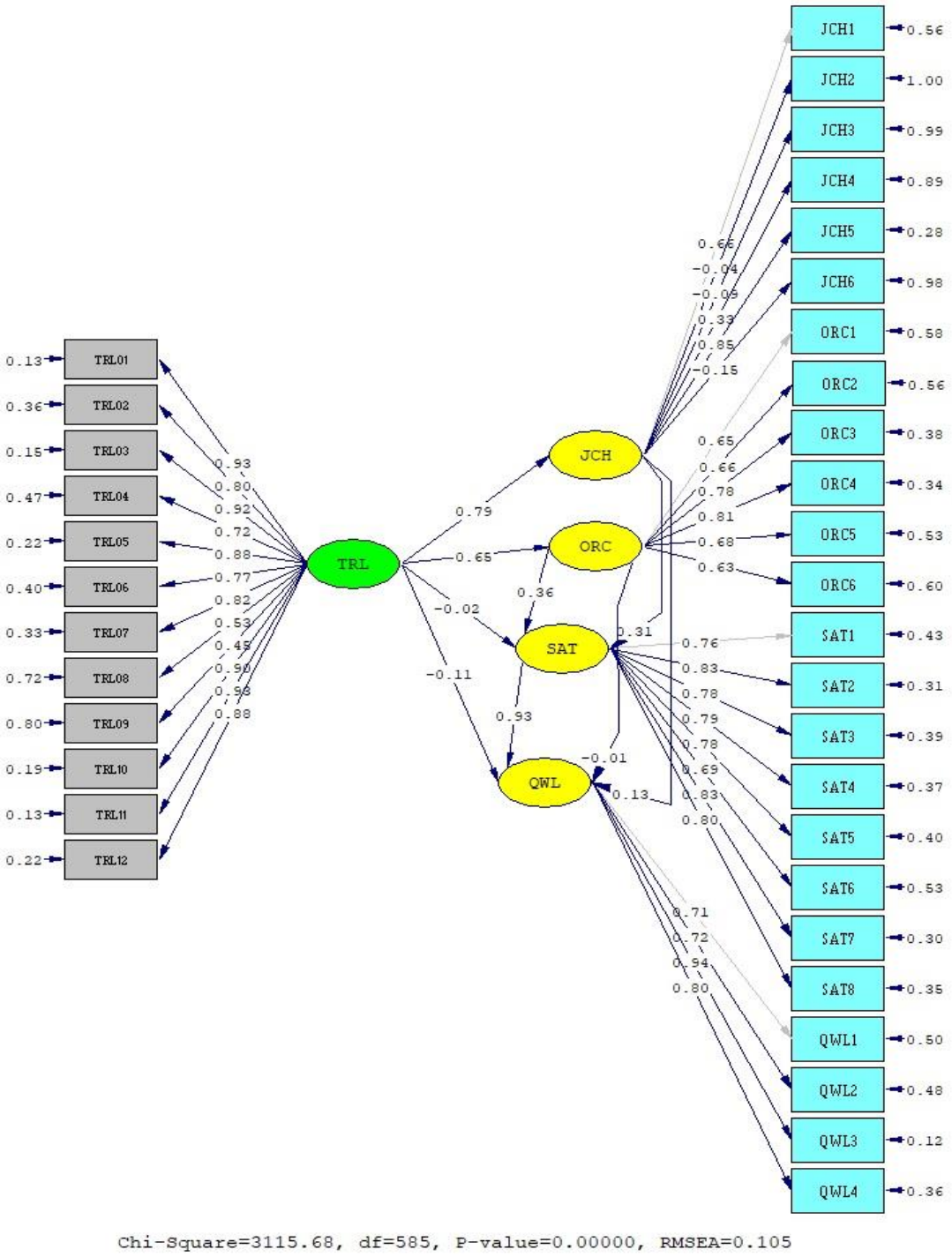


Figure 4.1 The initial model of quality of nursing work life among Thai professional nurses

Hair et al. (2006) suggested that the significant χ^2 sample size greater than 250 is an acceptable value. These diagnostics suggest the initial model provided a bad fit with the data because only CFI and RMR met the good fit indices. Therefore, the proposed model required modification.

Model 2: The modification of the hypothesized model

For this step, in order to decrease χ^2 values, the modification indices, standardized residuals, and expected value adjust the model by examining the Modification Index: MI and expected value suggested through the Theta-Epsilon metric (TE) and Theta-Delta (TD) (Vanichbuncha, 2019). This step would be repeated until all fit indices met the criteria.

Model 3: The final model

The final adjusted model reveals that the Chi-square value is not significant at a 0.05 level (χ^2 = 754.88, df =487, p=0.062) (Joreskog & Sorbom, 1999). Besides, the Chi-square Relative (Chi-square to the degree of freedom ratio is equal to 1.550, which is lower than 2.0. This can be interpreted that the null hypothesis regarding the covariance matrix of the theoretical and empirical models is equal and is not rejected at a level of significance of 0.05. In addition, the values of GFI (0.94), AGFI (0.91), and CFI (1.00) are greater than a cut-off value (0.90), while RMSEA (0.021) and RMR (0.022) are lower than 0.5. The model explains 72% of the variance in the quality of nursing work life (see Figure 4.2).

According to Bryne (2012), there is no set rule for when a researcher should stop re-specification a model. As a result, the best yardsticks for the researcher

were (a) a thorough understanding of the substantive theory, (b) an adequate assessment of statistical criteria based on information pooled from various indices of fit, and (c) a keen eye on parsimony. In this regard, the researcher must walk a fine line between incorporating a sufficient number of parameters to yield a model that adequately represents the data and falling prey to the temptation of incorporating too many parameters in a zealous attempt to attain the best-fitting model statistically.

The current model's fit statistics were all at the acceptable threshold. Significantly, the proposed modification help improve model fit, but at this step, the model appears to be parsimonious to the initial hypothesized model. Therefore, the model was accepted at this stage, and no further modifications were proposed. The fit indices comparison between the initial and final models is presented in Table 4.11.

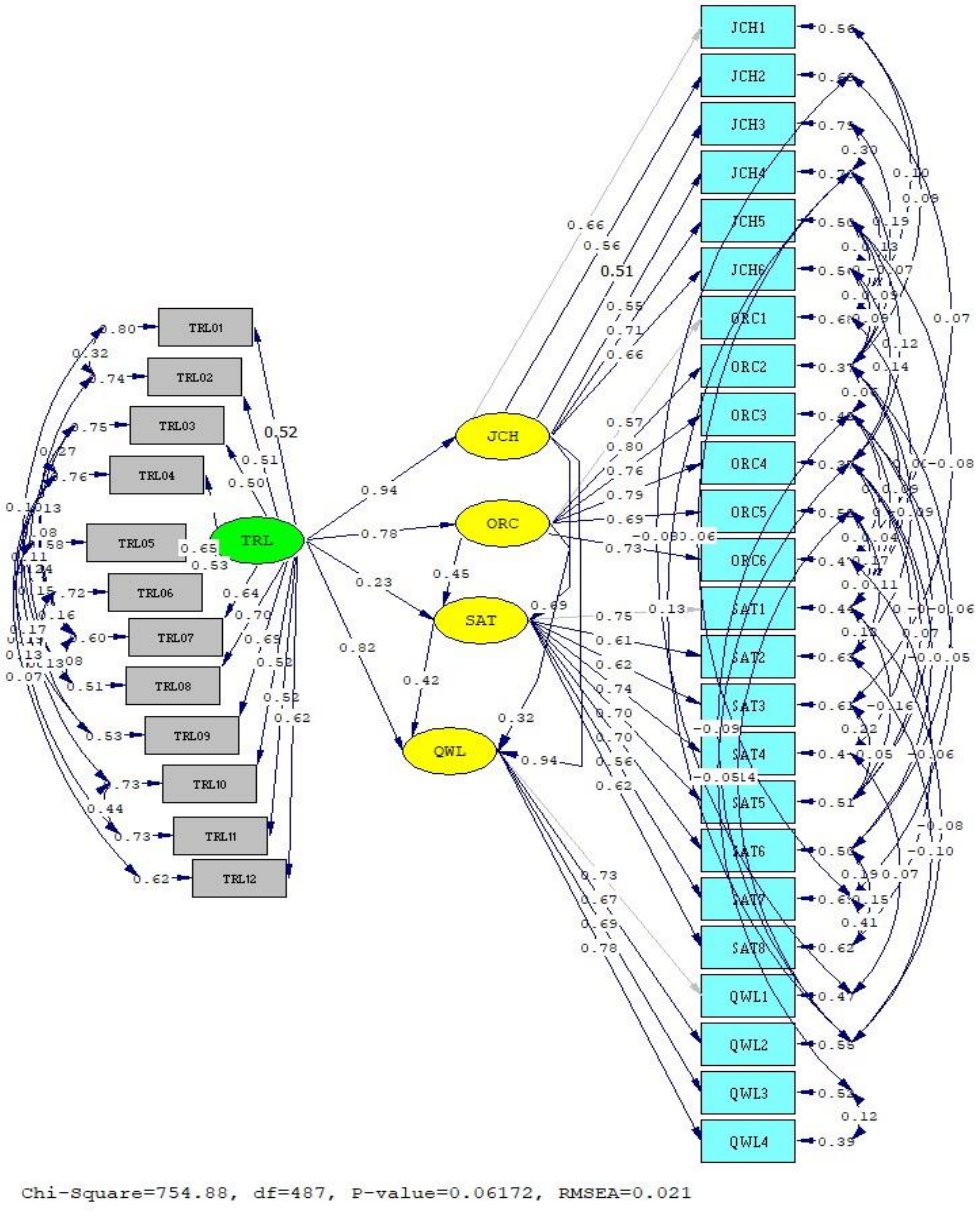


Figure 4.2 The causal model of quality of nursing work life among Thai professional nurses

Table 4.11 Comparison of hypothesized and final structural model

The goodness of Fit indices	Criterions	Initial Model		Final Model	
χ^2/ df	≤ 2.00	5.326	x	1.550	√
P-value	> 0.05	0.000	x	0.062	√
CFI	≥ 0.90	0.95	√	1.00	√
GFI	≥ 0.90	0.69	x	0.94	√
AGFA	≥ 0.90	0.78	x	0.91	√
RMESA	≤ 00.5	0.105	x	0.021	√
RMR	≤ 00.5	0.039	√	0.022	√
CN	> 200	101.21	x	872.15	√

Note: x = Not fit with the criteria, √ = fit with the criteria

Hypothesis testing

The summary of hypothesis testing is illustrated following the hypothesized model, as shown in Table 4.12.

Hypothesis 1: Transformational leadership has positive effects, both direct and indirect, through job characteristics, organizational climate, and job satisfaction to the quality of nursing work life.

The result showed that the standardized total effect of transformational leadership on the quality of nursing work life is 0.93. The effect was statistically significant ($p < .01$). The direct effect was 0.82 ($p < .05$) and indirect effect through

job characteristics, organizational climate, and job satisfaction was 0.11 ($p < .01$). The above-zero standardized regression weight represent a positive impact. Transformational leadership has a significant impact on job characteristic ($\beta = 0.94$, $p < .01$), organizational climate ($\beta = 0.78$, $p < .01$), and job satisfaction ($\beta = 0.23$, $p < .01$)

Therefore, it could be summarized that the hypothesis toward the positive direct and indirect effect (via job characteristics, organizational climate, and job satisfaction) of transformational leadership on the quality of nursing work life is supported by empirical data in the current study.

Hypothesis 2: Job characteristic has positive effects, both direct and indirect, on job satisfaction and to quality of nursing work life.

The result showed that the standardized total effect of job characteristics on the quality of nursing work life is 0.97. The effect was statistically significant ($p < .01$). The direct effect was 0.94 ($p < .05$) and indirect effect through job satisfaction was 0.03 with non-significant ($p > .05$). The above-zero standardized regression weight represent a positive impact.

Therefore, it is concluded that the hypothesis that job characteristic has positive effects directly on the quality of nursing work life is supported in this study but failed to affirm the hypothesis that job characteristic has a positive indirect effect through job satisfaction on the quality of nursing work life.

Hypothesis 3: Organizational climate has positive effects, both direct and indirect, on job satisfaction to quality of nursing work life.

The result revealed that the standardized total effect of organizational climate on the quality of nursing work life is 0.51. The effect was statistically

significant($p < .01$). The direct effect was 0.32 ($p < .01$) and indirect effect through job satisfaction was 0.19 ($p < .01$). The above-zero standardized regression weight represent a positive impact. Organizational climate significantly impacts job satisfaction ($\beta = 0.45$, $p < .01$). This suggests that the organizational climate not only directly impacts the quality of nursing work life but also indirectly impacts the quality of nursing work life through job satisfaction.

Therefore, it is concluded that the hypothesis toward the positive direct and indirect effects (via job satisfaction) from organizational climate to quality of nursing work life is supported in the current study.

Hypothesis 4: Job satisfaction has a positive and direct effect on the quality of nursing work life.

The result showed that the standardized total effect of Job satisfaction on the quality of nursing work life is 0.42. The effect was statistically significant($p < .01$). and The direct effect was 0.42 ($p < .01$). The above-zero standardized regression weight represents a positive impact.

Therefore, it is concluded that the hypothesis toward the positive and direct effect of job satisfaction on the quality of nursing work life is supported by empirical evidence in the current study.

Table 4.12 Summary of the total, direct, and indirect effects of causal variables on the quality of nursing work life (N = 392)

DV / IV	Job Characteristics			Organizational climate			Job satisfaction			Quality of nursing work life		
	TE	IE	DE	TE	IE	DE	TE	IE	DE	TE	IE	DE
Transformational leadership	0.94 (14.86**)	-	0.94 (14.86**)	0.78 (11.40**)	-	0.78 (11.40**)	0.39 (14.11**)	0.16 (3.74**)	0.23 (0.86)	0.93 (11.12**)	0.11 (3.99**)	0.82 (2.25*)
Job characteristics	-	-	-	-	-	-	0.69 (2.70**)	-	0.69 (2.70**)	0.97 (3.27**)	0.03 (0.15)	0.94 (2.41*)
Organizational climate	-	-	-	-	-	-	0.45 (5.45**)	-	0.45 (5.45**)	0.51 (5.69**)	0.19 (3.10**)	0.32 (3.11**)
Job satisfaction	-	-	-	-	-	-	-	-	-	0.42 (3.09**)	-	0.42 (3.09**)
R^2	0.35			0.39			0.41			0.44		
Model fit indices Chi-square (n = 392, df =487) = 754.88, p=0.062, GFI = 0.94, AGFI = 0.91, CFI =1.00, RMSEA = 0.021, RMR = 0.022												

Noted: *p < .05, **p < .01, Value in parentheses (…) = t-value

Abbreviation: ID = Independent variable, DV = Dependent variable, TE = Total effect, IE = Indirect effect, DE = Direct effect

Summary

The descriptive statistics of the variables studied in this study have been tested. The path analysis assumption was not violated in the preliminary analysis. The hypothesized path model of work-life quality among Thai professional nurses was determined. Notably, most of the main hypotheses were backed up by the empirical data, which expanded the meaningful and valuable of the model for explaining factors affecting the quality of nursing work life among professional nurses in Thailand. Finally, the model's variables accounted for about 72% of the variance in nursing work-life quality.

CHAPTER V
DISCUSSION

This study aimed to develop and test the model of quality of nursing work life among professional nurses in Thailand. The quality of nursing work life was used as the dependent variable. The independent variables were transformational leadership, job characteristics, organizational climate, and job satisfaction. The focus of this chapter was on discussing the study's findings. The study's sample and variables are discussed, as well as the causal model, hypothesis testing, and the study's limitations. The findings were also interpreted and evaluated in terms of nursing implications. This chapter's final section includes recommendations for future research and the study's conclusion.

Characteristics of the study participants

The statistical analyses presented in the previous chapter revealed that the participants' ages ranged from 23 to 49. The average age is 32.9 (SD = 7.84). Most participants were female (95.92%), aged between 25 to 42 years old (69.39%). The findings were in line with those previously studied by Khani, Jaafarpour, and Dyrekvandmogadam (2008), who conducted a study on 120 registered nurses in Iran and found that most of the respondents were females (74.2%), the mean age of the participants was 32.2 (SD = 6.3). Like Thailand, Promeiang, Suwannapong, Thipayamongkolkul, and Boonshuya (2015) researched the quality of work life among professional nurses in Nakhonpathom Hospital and found that almost of respondents were female (93.8%). The mean age of participants was 37.87 years old, and the majority of the samples (36.99 %) have work experience of 1-2 years, followed by

experience of greater than or equal to 10 years (36.73%), more than half of them were team members (65.82 %).

Worldwide studies also support that majority of nurses are female, with an age range of 25 to 42 years old (Fathimath, Chontawan, & Chitpakdee, 2014; Junyatham, Suwannapong, Tipayamongkholgul, & Aimyong, 2018; Y.W. Lee, Dai, McCreary, Yao, & Brooks, 2014). Several types of research both in Thailand and abroad reported that the most significant number of their participants were team members or staff nurses (Almalki, FitzGerald, & Clark, 2012; Brooks & Anderson, 2004; Khani et al., 2008; Sirisawasd, Chaiear, Johns, & Khiewyoo, 2014). This might imply that nursing is still viewed as the Florence Nightingale profession to some extent and is still primarily dominated by women. The issue of pay is another factor that may deter some men from entering the field. While both males and females start at the same low level, males may be more of a deterrent because they earn more on average than females (NT Contributor, 2008). Moreover, in terms of significant workforces, nurses born in the Y generation were dominant and also fulfilled in the nursing profession (American Hospital Association, 2014; Samsung & Oumtanee, 2020). Besides, such a range of age was period of operational level might be due to the career path of the professional nurse (Office of the Civil Service, 2013).

Regarding marital status, findings illustrated that more than half of the participants were single (60.97%). Most of them had completed a bachelor's degree (94.39%). These findings also shared the similarity and differences between countries. Previous studies by Lee, Dai, Park, and McCreary (2015) researched the quality of nursing work life as a predictor of nurses' intention to leave units, organizations, and

the profession in Taiwan. They reported that most samples were single (65.3%) and had achieved an educational level of bachelor's degree or higher (65.9%). Previous evidence in Thailand also shows such findings (Kaptoom, Sirichotiratana, Prutipinyo, & Pobkeeree, 2019; Promeiang et al., 2015). Unlike the findings reported in previous evidence, most respondents were married and of educational level with a Diploma in Nursing (Almalki et al., 2012; Fathimath et al., 2014; Mohamad & Mohamed, 2012). This might be explained in terms of cultural differences, various systems of nursing education, and types of organizations that operate the nursing profession (All Answers Ltd, 2018).

Considering the employment status, including financial compensation, most participants were government officials (74.74%), most of them (99.23%) were full-time nurses, and salaries ranged from 7,000 to 100,000 Baht per month. While roughly 70% of them received additional compensation for working overtime, 21.68% of participants obtained additional compensation for being certified in a specialty area. Interestingly, findings point out that most professional nurses working in Government hospitals were government officials. However, regarding compensation issues between novice and expert nurses, aging nurse workforces received salary quite a broad range. In terms of employment type, even the result revealed that government employees were the dominant group, but the proportion differed from the previous study. Moradi, Maghaminejad, and Fini (2014) reported their participants as having the highest number of permanent employees ($\overline{X}$ = 93.09, SD = 17.45), whereas Sadat, Aboutalebi, and Alavi (2017) reported that temporary employees were the primary group of participants. This might be explained in terms of the policy of each country. Thailand might be explained in terms of Healthcare facilities under the Permanent Secretary Office (PSO).

By 2021, healthcare facilities covered by the PSO would require 136,520 Full-Time-Equivalent (FTE) nurses. There should be around 112,170 civil servant posts for nurses in Thailand to maintain an adequate supply of skilled nurses and strengthen the healthcare system (equivalent to 90 percent of the FTE requirement). This contrasts with the current situation, in which only 71.87% of the estimated demands have been met (Sawaengdee, 2017).

For salary, including compensation, prior literature in Thailand also supported current findings that financial compensation for professional nurses is quite broad (Ruangrattanatrai & Sawaengdee, 2019). However, the findings varied from previous studies abroad (Suleiman, Hijazi, Kalaldeh, & Sharour, 2019). The situation in Thailand might be summarized as financial compensation inconsistent with the labor market. Moreover, additional compensation occurs in some particular areas and different levels of the hospital (Ruangrattanatrai & Sawaengdee, 2019). Other countries could be explained in terms of the type of country's income and policy of each country. In other words, high-income countries like the USA also pay high wages for professional nurses (Drexel University, 2022). Whereas some high-middle-income countries, such as Iran, pay low salaries to their nurses (Moradi et al., 2014). Moreover, a nurse's pay is determined by educational level, experience, role, industry, and location (Nursing License Map, 2021).

Characteristics of the study variables

In the current study, quality of nursing work life, transformational leadership, job characteristics, organizational climate, and job satisfaction are five variables to examine. These variables are discussed in detail:

Quality of nursing work life

The findings in this study revealed that the mean score of four dimensions was categorized into high quality of nursing work life. Three of four subscales indicated high level of quality of nursing work life including work context ($\overline{X}$ = 93.44, SD = 13.31), work design ($\overline{X}$ = 32.32, SD = 4.78), and work world ($\overline{X}$ = 22.65, SD = 3.54). Meanwhile, home life/work life ($\overline{X}$ = 21.03, SD = 4.08) represented a moderate quality of nursing work life. These results pointed out that professional nurses believe that their practice settings, including the impact of the work environment on them and the patient's systems, are in fine condition. They were also pleased with the nursing work composition covering the work performed. Furthermore, broad societal influences and change impact on nursing practice is satisfactory. Professional nurses, on the other hand, face challenges with the interface between work and home life, according to the findings.

Based on the results of the current study, these findings were in line with prior research, which reported high quality of nursing work life. Like Sukonpaksa, Charoenloh- thongdee, and Mitrsupab (2011) examined the relationship between job characteristics, organizational atmosphere, and quality of nursing working life at Pra Nangklao Hospital, Thailand. Results showed that the average mean quality of working life of professional nurses at Pra Nangklao Hospital was high ($\overline{\mathbf{X}}$3.51. S.D. = 0.44).

However, the result findings are incongruent with numerous studies Bejrsuwana, Suwannapong, Howteerakul, and Boonshuya (2012), which aim to assess the nurses' quality of nursing work life and analyze relationships between organizational commitment, job characteristics, and organizational climate and quality of nursing work life. The study revealed that the nurses' overall quality of work life was moderate (61.5%). Moreover, Srigunta, Intaraprasong, Jiamton, and Pattara-Archachai (2013) also supported their study, which described and determined the relationship between job satisfaction, level of burnout, and quality of work life in the workplace of registered nurses at Siriraj Hospital and found that the quality of nursing work life was at the moderate level as well.

According to the findings, Valickas (2017) mentioned that there are currently three generations on the job market: baby boomers, Generation X, and Generation Y. When analyzing the attitudes of different generations, it is discovered that they have different perspectives on the relationship with managers, necessitating the use of different motivation tools and communication methods. The reason may be that most respondents are born in the millennial (Y) generation (69.39%). Regarding the Y generation, Cramer, Parris, and Saville (2011) and Kumar and Velmurugan (2018) stated that such a generation prefers employers who provide flexible work schedules, teleworking, a family-friendly work environment, an open work culture, tech-savvy, and friendly supervisors. Moreover, they preferred creativity, self-confidence, and openness to new experiences (ManpowerGroup Thailand, 2022). The findings revealed that most of them have responsibility for the care of the elderly parent, including spouses' parents (82.65), and responsibility for their child, for 39.29% need

more time to take care of their family members. However, nearly half of respondents perceived that their workplace provides a flexible schedule (47.70%).

Additionally, they could plan the workday and vacation days (38.78%). On the other hand, respondents are also faced with the inflexible schedule for 8.42%, and sometime the schedule could be changeable for 5.10%. These findings may explain why, in terms of the interface between work and family, a flexible schedule provided by the workplace may not be sufficient to meet their needs.

When looking at the work world subscale, the results show a high level but slightly higher than moderate ($\overline{X}$ = 22.65, SD = 3.54). Many factors could explain these findings. The findings show that participants perceived moderate levels of financial compensation ($\overline{X}$ = 105.72, SD = 26.46) and workload ($\overline{X}$ = 45.41, SD = 10.62) in job satisfaction, as measured by incentive and workload.

Thakre, Thakre, and Thakre (2017) stated that professional nurses are essential to improving the high quality of hospital services and patient care. Consequently, the quality of nursing work life should be very high. Based on the recommendation of Thakre et al. (2017), recommendation, the findings of the current study should be taken into account because such a score could quickly be decreased and moved to a moderate level. As a result, even though the quality of nursing work life is high, many issues must be addressed. Importantly, even though the quality of nursing work life is high overall, the home/work life subscale of that quality of nursing work life, along with other predicting factors, shows a moderate level of participant satisfaction (e.g., financial compensation and workload). In order to maintain the overall mean score of the quality of the nursing work life at a high level, administrators

and policymakers must not only monitor and maintain existing policies but also reconsider additional policies in light of all factors in detail that show a moderate level.

Transformational leadership

The results of this study shows that participants perceived that their head nurses sometimes perform transformational characteristics including idealized influence (attribute) ($\bar{X}$ = 3.19, SD = 0.67), idealized influence (behavior) ($\bar{X}$ = 3.00, SD = 0.57), individual consideration, ($\bar{X}$ = 3.02, SD = 0.65) and inspirational motivation ($\bar{X}$ = 3.17, SD = 0.60), while their head nurses rarely perform intellectual stimulation characteristic ($\bar{X}$ = 2.53, SD = 0.36). However, there has no type of transformational characteristic that the head nurse performs often. While transactional characteristic, the findings indicated that professional nurses perceive that their head nurses sometimes perform active management by exception ($\bar{X}$ = 3.35, SD = 0.59) behavior, head nurses rarely perform transactional characteristic including contingent rewards ($\bar{X}$ = 2.98, SD = 0.61), passive management by exception ($\bar{X}$ = 2.69, SD = 0.59), and laissez-faire leadership ($\bar{X}$ = 2.71, SD = 0.65).

When consider to the outcomes of leadership, findings indicate that professional nurses perceive that their head nurses sometime perform effective outcome including extra effort ($\bar{X}$ = 3.08, SD = 0.72), efficiency ($\bar{X}$ = 3.22, SD = 0.66), and satisfaction ($\bar{X}$ = 3.21, SD = 0.69).

Table 4.2 could be summarized as participants perceived that their head nurses perform transformational rather than transactional leadership. However, professional nurses are sometimes satisfied with the group's success based on head nurses' interaction.

Based on the result findings, the current study indicated the findings inconsistent with numerous studies reported by Kempech and Daengthern (2018) study the relationship between transformational leadership of head nurses with organizational commitment and job satisfaction as perceived by professional nurses. Samples were 205 professional nurses working in regional health areas 2. They found that transformational leadership was at a high level ($\bar{X}$ = 4.19, SD = 0.17). Sun, Thungjaroenkul, and Supamanee (2018) also report findings on the same level of transformational leadership ($\bar{X}$ = 4.25, SD = 0.58). In addition, Abualrub and Alghamdi (2011) also reported their study that the mean of transformational leadership style ($\bar{X}$ = 3.43, SD = 0.82) which was higher than the mean of transactional leadership style ($\bar{X}$ = 2.98, SD = 0.57). This means that participants perceived their managers as transformational rather than transactional.

The findings might imply that participants believed that their head nurses performed transformational leadership than transactional leadership. At the same time, the outcome of leadership is not successful enough. Evidence from data collection also emphasized that the behavior might not adequately represent intellectual stimulation, which is one of the critical issues that generation Y requires from the workplace (ManpowerGroup Thailand, 2022). Moreover, when professional nurses perceive their head nurses sometimes perform transformational behavior. This issue might result in the QNWL because transformational leadership plays a crucial role in both formal and informal power in terms of both types of power and also affect employee access to an organization's opportunity, power, and resources (Kanter, 1993). Therefore, policymakers and nurse administrators should be concerned about improving the transformational leadership of head nurses.

Job Characteristics

The findings in this study revealed that the median score of six dimensions represents the job strain by the job control (decision latitude) and psychological demand. Findings indicated that participants perceived that they have low job strain, including decision latitude (median = 35.00) and psychological demand dimension (median = 32.00). In terms of job strain based on the characteristic of the job, the findings reveal that respondents perceived that they faced high physical job demand (median = 17.00), high level of work hazard (median = 20.00), and low social support from supervisor and colleague (median = 25.00). Meanwhile, respondents perceived high job security (median = 18.00).

The current study's findings share some similarities and differences with previous studies. Like the study of Tangsathajaroenporn, Kaewthummanukul, and Sripusanapan (2012), who conducted the study to examine work ability among professional nurses in a university hospital and the related factors. The 406 professional nurses working in a university hospital were recruited and found that work factors affecting poor workability were high physical demands (OR_{adj} = 4.52, 95% CI = 1.01-20.24, $p < 0.05$) and low job control (OR_{adj} = 11.02, 95% CI = 1.98-61.28, $p < 0.01$).

Regarding findings of the current study are inconsistent with prior evidence for some dimensions. Abadi, Taban, HKhanjani, and Konjin (2021) reported that almost studied dimensions were in line with current study including high physical demand (M = 17.21, SD = 2.51), low job control; skill discretion (M = 32.91, SD = 5.60), decision authority (M = 28.13, SD = 6.41), and low social support; supervisor support (M = 12.14, SD = 2.60), co-worker support (M = 12.21, SD = 2.33), except

psychological demand which present high level (M = 38.00, SD = 6.29). In addition, Kaewboonchoo, Yingyuad, Rawiworrakul, and Jinayon (2014) conducted research to create and evaluate the intent of nurses working at hospitals to continue working and to determine the relationship between job stress and intent to stay at work. Findings indicated high psychological job control ($\overline{X}$ = 33.50, SD = 4.4), high decision latitude; skill discretion ($\overline{X}$ = 35.80, SD = 3.60), decision authority ($\overline{X}$ = 34.90, SD = 4.60), and low social support; supervisor support ($\overline{X}$ = 11.50, SD = 1.80), co-worker support ($\overline{X}$ = 12.30, SD = 1.50), except psychological demand which present high level (M = 38.00, SD = 6.29).

When comparing the results among reviewed studies, the researcher found that all studies reported that their respondents perceived that their jobs were high physical job demands and low social support. In comparison, psychological demand and decision latitude present incongruent ways. Less reported for work hazard and security of job due to dimension that researcher of each studied focus. According to the findings, this might be stated that professional nurses believed that their jobs were in high demand, especially in hospitals. Among the challenging working conditions were long hours, heavy lifting, low staffing, and a lack of support from coworkers and management (Brown et al., 2004). However, Psychological demand and decision latitude might be explained in different contexts, such as research conducted in Iran. Such a country have research paper as meta-analysis support, including 30 types of research with a sample size of 4630, and the overall prevalence of job stress was estimated to be 69% (confidence interval [CI] 95%: 0.58–0.79). The highest prevalence of nurses' job stress was 90% (CI 95%: 0.85–0.96) in region one (Alborz, Tehran, Qazvin, Mazandaran, Semnan, Golestan, and Qom provinces), 70 % (CI 95%: 0.60–

0.80) in public and private hospitals, and 79% (CI 95 %: 0.58–1.01) in studies where the type of study had not been mentioned (Ghanei et al., 2017).

According to the results, participants believe they face a high physical job demand while working in an environment with low social support. According to the nursing profession's dominant workforce, Millennials do not believe excessive work demands are worth sacrificing their personal lives, and they want to feel supported and appreciated by their employer and superiors (British Council, 2022). Moreover, the findings reflect that participants cannot obtain enough power from access to information, opportunity, resource, and support from their leaders and peers. Therefore, policymakers and nurse administrators must be aware of their workload and work-life balance satisfaction levels, provide information, opportunity, sufficient resources for work, and support between supervisors and professional nurses, as well as among peers in the workplace.

Organizational climate

The findings in this study demonstrated that the mean score of six dimensions were categorized into high level of organizational climate including structure ($\bar{X}$ = 11.40, SD = 2.05), standards ($\bar{X}$ = 11.63, SD = 1.65), responsibility ($\bar{X}$ = 12.45, SD = 1.63), recognition ($\bar{X}$ = 12.05, SD = 1.66), support ($\bar{X}$ = 11.84, SD = 1.67), and commitment ($\bar{X}$ = 13.25, SD = 1.94). This result of the current study demonstrated that participants perceived that they were satisfied with the climate of their work in all aspects. These results findings are also consistent with previous studies, like Insuwan (2014), who study the relationship between the organizational climate and quality of work life of professional nurses in the nursing task group at Sriratana hospital,

Si Saket province. The findings reported that the overall domain was at a high level ($\overline{X}$ = 3.73, SD = 0.39). The studied domains also demonstrated high level including structure ($\overline{X}$ = 3.70, SD = 0.53), standard ($\overline{X}$ = 3.67, SD = 0.49), responsibility ($\overline{X}$ = 4.01, SD = 0.56), and support ($\overline{X}$ = 3.71, SD = 0.65). Similarly to Thongnuch (2013), who studied the perceived organizational climate, job stress, and quality of work life of professional nurses: A case study of a Public Hospital in Pathum Thani found that the overall domain was at a high level ($\overline{X}$ = 3.59). Julianto (2013) studied the Organizational climate and patient safety competencies of nurses in Aceh, Indonesia, and reported that the overall domains of organizational climate were at a high level as well ($\overline{X}$ = 3.70, SD = 0.53). When considering by domains, there were three domains that were at a high level including team commitment ($\overline{X}$ = 3.31, SD = 0.45), flexibility ($\overline{X}$ = 3.28, SD = 0.41), and standards ($\overline{X}$ = 3.13, SD = 0.41). However, the current findings of this study were incongruent with the responsibility subscale of such a study which was a moderate level ($\overline{X}$ = 2.75, SD = 0.29).

The findings could imply that participants perceived that they received all aspects properly and adequately. In terms of structure dimension, participants had the impression that they could accept the group's constraints, such as rules, regulations, and procedures because the atmosphere was loose and informal. While the standards domain, they recognize and accept the principles of development and reward evaluation as reasonable. For responsibility, they perceive that their workplace treats them as their boss without double-checking all of their decisions, and they enjoy knowing that they are in charge of their work. Regarding the recognition domain, the respondents perceived that they would be rewarded for a job well done, particularly positive

rewards. In addition, they thought the pay promotion policies were reasonable. Considering the support dimension, respondents thought they received assistance from their bosses and coworkers, especially mutual support from above and below. For the commitment subscale, participants have a sense of belonging at work and are essential team members (ManpowerGroup Thailand, 2022).

According to Kanter's theory of structural empowerment, the findings could be explained well in terms of participants obtaining enough opportunity and support from their head nurses and colleagues. Moreover, they are satisfied with the organization structure, continual improvement in their workplace, responsibility, recognition, support, and commitment to their team. Therefore, policymakers and nurse administrators should keep or promote the policy to support professional nurses.

Job satisfaction

The results of this study revealed that the mean score of eight aspects was classified as high ($\bar{X}$ = 476.48, SD = 79.75) in terms of job satisfaction. Professional autonomy and recognition ($\bar{X}$ = 100.97, SD = 16.53), nursing supervisor ($\bar{X}$ = 62.74, SD = 11.94), social aspect at work ($\bar{X}$ = 64.69, SD = 10.45), work environment ($\bar{X}$ = 36.78, SD = 7.64), and assertiveness in confronting difficulties ($\bar{X}$ = 21.70, SD = 4.37) were found to be five dimensions that participants rated as high. Respondents, on the other hand, reported that three dimensions of job satisfaction including incentives ($\bar{X}$ = 105.72, SD = 26.46), workload ($\bar{X}$ = 45.41, SD = 10.62), and nursing policies and system ($\bar{X}$ = 38.46, SD = 8.96), are moderately satisfied.

The current study's findings revealed that participants were satisfied with the overall aspects. When comparing with prior evidence, most research studies

reveal that overall scores were high while each domain varied in detail. In Thailand, Kriwong and Leenum (2020) studied the Job Satisfaction of Nurses in Songklanagarind Hospital and found that the overall score for job satisfaction of nurses with high level ($\overline{X}$ = 3.87, SD = 0.36). All domains also reported a high level. Chalamket (2016), who conducted the research entitled "Factor affecting retention of professional nurses at Thammasat University Hospital in Pathumthani," found that the overall score for job satisfaction of nurses was at a high level ($\overline{X}$ = 3.71, SD = 0.96). When looking in-depth at each subscale, findings indicated that the incentive dimension was at a moderate level ($\overline{X}$ = 3.11, SD = 0.73), whereas other dimensions present a high level of job satisfaction. Considering another study, Chanaken (2016) researched to study the Factors Influencing Work Retention of Generation Y Professional Nurses at a Tertiary Level Hospital in the Department of Medical Service under the Ministry of Public Health and found the overall score was at a moderate level ($\overline{X}$ = 3.36, SD = 0.47). In terms of professional autonomy ($\overline{X}$ = 3.36, SD = 0.76), nursing policy ($\overline{X}$ = 3.16, SD = 0.99), and incentive ($\overline{X}$ = 2.63, SD = 0.98) also present moderate level as well.

Regarding evidence abroad, Lorber and Savič (2012) studied the Job satisfaction of nurses and identified factors of job satisfaction in Slovenian Hospitals by including four hospitals selected from the hospital list comprising 26 hospitals in Slovenia. The employees of these hospitals represent 29.8%, and 509 employees included in the study represent 6% of all employees in nursing in Slovenian hospitals. Findings demonstrated that overall job satisfaction was at a moderate level ($\overline{X}$ = 3.19, SD = 0.60). When considering in detail, findings illustrated that pay for work ($\overline{X}$ = 2.56, SD = 1.00), management of the organization ($\overline{X}$ = 3.08, SD = 1.00), interpersonal

relationship ($\bar{X}$ = 3.30, SD = 0.90), working hour ($\bar{X}$ = 3.33, SD = 1.00) was at a moderate level. Whereas superior's leadership style was at a high level ($\bar{X}$ = 3.73, SD = 0.90). As reported by Al Maqbali (2015), who studied Job Satisfaction of Nurses in a Regional

Hospital in Oman as a cross-sectional survey. This study found that nurses were moderately satisfied in all seven subscales ($\bar{X}$ = 3.49, SD = 1.10). The mean job satisfaction in each subscale was at a high level as follows: scheduling items ($\bar{X}$ = 3.53, SD = 0.84), praise and recognition items ($\bar{X}$ = 3.55, SD = 0.82), interaction with co-workers items ($\bar{X}$ = 3.87, SD = 0.84), whereas three subscale revealed moderate level of satisfaction including extrinsic reward items ($\bar{X}$ = 3.01, SD = 1.08), interaction opportunities items ($\bar{X}$ = 3.63, SD = 0.66), professional opportunities items ($\bar{X}$ = 3.03, SD = 0.87), and control and responsibility items ($\bar{X}$ = 3.72, SD = 0.73).

The results, when compared to prior evidence, show that even the overall scale of job satisfaction is consistent, while reports from abroad show a moderate level. It is interesting to note that every study showed that participants not only in Thailand but also globally demonstrated that they perceive their incentives inadequately. The results indicate that workload is also inadequately classified as being at a moderate level. Notably, a high level was also indicated regarding the social aspect of work. Other elements, such as the nursing supervisor and the nursing policy and system, are pretty diverse.

Furthermore, the finding might reflect that some dimensions, including nursing policies and systems that determine from their workplace, poor workload from nursing shortage and non-nursing tasks, and incentives that do not reflect their workload have

enough impact on them. The findings might explain by Kanter's theory on structural empowerment in terms of those problem dimensions might consider that participants' feelings were affected by less power than they gained from their head nurses. Besides, the way they access power from access to the opportunity, information, resources, and support might be an obstacle. These results highlighted that even professional Thai nurses reported high job satisfaction and that workload, incentives, and nursing policy needed more consideration. The satisfaction with professional autonomy and recognition, social aspects at work, and the work environment may contribute to professional nurses' continued employment. (ManpowerGroup Thailand, 2022).

The causal model and hypotheses testing results

The causal model of quality of nursing work life among professional nurses in Thailand

The final model in the current study fit well to the empirical data (χ^2 = 754.88, df =487, p=0.062, GFI = 0.94, AGFI = 0.91, CFI = 1.00, RMSEA = 0.021, RMR = 0.022. The model explains 72% of the variance in the quality of nursing work life. These results suggested that other factors might be incorporated into the causal model of this phenomenon. The current study used empirical data and Kanter's theory of structural empowerment to construct its model. As a result, this study only focused on the variables that included transformational leadership, job characteristics, organizational climate, and job satisfaction because the current state of science only identified a limited number of variables that could be included in the model explaining the quality of nursing work life among Thai professional nurses. Therefore, it is advised that future studies examine additional factors. As was mentioned at the beginning, this

study model explained 72% of the variation in the quality of nursing work life. Interestingly, since no studies have examined a causal model of the quality of nursing work life among professionals nurses in Thailand, the findings in this study help to confirm the consistency theory and empirical data that explain the variation in the quality of nursing work life and verify multiple variables in the same model.

This study discovered, in particular, that job characteristic was the most significant factor influencing the quality of nursing work life by having a positive direct effect on the quality of nursing work life. Furthermore, transformational leadership had a positive direct and indirect effect on the quality of nursing work life through job characteristics, organizational climate, and job satisfaction. Moreover, the organizational climate had a positive direct and indirect effect on the quality of nursing work life through job satisfaction. Besides, job satisfaction had a positive direct effect on the quality of nursing work life. These indicated that the quality of nursing work life among professional nurses in Thailand was usually affected by many factors directly and indirectly. The findings of this study contribute to the representation of the factors unique to the Thai context that impact the quality of nursing work life among professional nurses in Thailand, which is essential given that the quality of nursing work life is a problem that affects nursing professionals worldwide.

In conclusion, these results prove that transformational leadership, job characteristics, organizational climate, and job satisfaction all impact the quality of nursing work life for professional nurses in Thailand. Therefore, it is necessary to develop an integrated intervention, including policies to improve the quality of nursing work life. It is crucial and required to incorporate these elements into the intervention component.

Hypothesis testing

Hypothesis 1: Transformational leadership has a positive effect, both direct and indirect, through job characteristics, organizational climate, and job satisfaction to the quality of nursing work life.

1.1 Transformational leadership has a positive direct effect on the quality of nursing work life.

This study found that transformational leadership had a positive direct effect on the quality of nursing work life ($\beta = 0.82$, $p < .05$). The finding supports the study's hypothesis. The result of the study is congruent with previous studies from many fields, including the nursing field. Like Helmiatin (2014), who conducted the study regarding the implementation of transformational leadership and quality of work life toward organizational citizenship behavior in order to find out the research question “Is there a significant effect of the application of transformational leadership on the quality of work life?” at the Open University's headquarters in Tangerang, Banten with 233 participants. The finding found a positive effect of transformational leadership on the quality of work life (t statistics = 11.0152 is greater than the table = 1.96) at a 95% confidence interval. For empirical evidence in Thailand, Meehanpong, Wongkhomthong, Boonsin, and Sritoomma (2019) also reported the effect of transformational leadership on the quality of nursing work life at the level ß=.55 ($p<.001$). While the meta-analysis of Kongyoo (2014) also emphasized that this factor could predict the quality of nursing work life at the level $\beta = .507$.

The role can explain the occurrence or development of high-quality nursing work life that leaders play in inspiring team members and achieving their

trust to ensure effective management. Employees and leaders will work together under transformational leadership to fulfill the organization's vision and mission (Helmiatin, 2014). Good leadership plays a crucial role in achieving a good working environment. Consequently, productivity will exist due to employees' good work (Robbins, 2001). When attaining goals, transformational leadership is more holistic than just the subject matter (Cascio, 2006).

Furthermore, favorable working conditions concern a high quality of nursing work life. Employees will generally behave better if they are happy with their working conditions (B.M. Bass, 2010). It can be stated that the study's findings confirm previous studies on the quality of nursing work life.

1.2 Transformational leadership positively affects the quality of nursing work life through job characteristics, organizational climate, and job satisfaction.

Transformational leadership had a positive indirect effect on the quality of nursing work life through job characteristics, organizational climate, and job satisfaction ($\beta = 0.11$, $p < .01$). The results in this study supported the hypothesis model. Nevertheless, it could be seen that the coefficient between transformational leadership and the quality of nursing work life through job characteristics, organizational climate, and job satisfaction was relatively small (Funder & Daniel, 2019). The findings suggest that although the rising of transformational leadership through job characteristics, organizational climate, and job satisfaction may increase the quality of nursing work life, the effectiveness of such intervention might not be high. However, it is strongly believed that this factor should not be overlooked in improving the quality of nursing work life because leadership is a process of social influence in which a person can

obtain the assistance and support of others when carrying out a common task. Leadership is essential to achieving organizational objectives and efficiency because of its significant impact on followers and organizational processes (Rizki, Parashakti, & Saragih, 2019).

According to Salanova, Lorente, Chambel, and Martínez (2011), transformational leadership can improve employees' psychological well-being, resulting in more favorable attitudes and behaviors. It can also improve employees' emotional responses (Dale & Fox, 2008). As a result, both positive and negative effects of various leadership philosophies may indirectly impact patient outcomes in the healthcare workforce (Wong, Cummings, & Ducharme, 2013). Leadership style is one of the factors that can have a more profound impact on the climate. People's positive feelings spread throughout an organization through mechanisms of shared affect and emotional contagion (Menges, Walter, Vogel, & Bruch, 2011). Following B.M. Bass (1985) theoretical assertion that inspirational leaders enthuse followers about the significance of their work, as well as with Yukl and Van Fleet (1982) definition of inspirational leadership as leadership that “stimulates enthusiasm among subordinates for their work. These results are consistent with earlier research (Hussain & Khayat, 2021; Radostina, Bono, & Dzieweczynski, 2006). In order to promote the quality of nursing work life, it is advised to combine transformational leadership, job characteristics, organizational climate, and job satisfaction.

Hypothesis 2: Job characteristic has positive effects, both direct and indirect, through job satisfaction to the quality of nursing work life.

2.1 Job characteristic has a positive direct effect on the quality of nursing work life.

This study found that job characteristics positively affect the quality of nursing work life ($\beta = 0.94$, $p < .05$). Thus, this result supported the hypothesis model. Moreover, the coefficient reveals a large effect. This findings suggests that the rising job characteristics may increase the high quality of nursing work life. Theoretically, the Kanter theory of structural empowerment proposed that the nature of the organization determines empowerment. Furthermore, the ability of employees to complete their work is impacted by both formal job characteristics and informal relationships (Laschinger, Finegan, Shamian, & Wilk, 2004; Laschinger, Sabiston, Finegan, & Shamian, 2001; Wagner et al., 2010). This is also confirmed by Hackman and Oldham (1976), who mentioned regarding if the job characteristics needs are fulfilled, the employees can experience a high quality of nursing work life.

This finding is consistent with prior evidence by Owuor, Chontawan, and Akkadechanunt (2014). They studied factors related to the quality of nursing work life among nurses in Public Hospitals Nyanza Province in the Republic of Kenya and found a significant positive correlation between job characteristics and quality of nursing work life ($r=0.17$, $p<0.01$). Moreover, Abadi, Taban, Khanjani, et al. (2021) who explored the relationship between several work-related risk factors and job satisfaction and found significant relationships between job satisfaction and several dimensions of the JDCS model, including psychological job demands ($\beta = -0.11$, $p < .001$), physical job demands ($\beta = -0.86$, $p = .004$), skill discretion ($\beta = 0.48$, $p = .033$),

decision authority (β = 0.43, p = .028), and supervisor support (β = 1.85, p = .004). In line with previous studies in Thailand, which were reported by Youngsiri (2016), who studied factors predicting staff nurses' quality of nursing work life, Hospitals under the Jurisdiction of the Ministry of Defense. Stepwise multiple regression analyses were used. Major findings reported that job characteristics were positive and significantly related to the quality of nursing work life at the .05 level (r = 0.51).

As was to be expected, professional nurses who satisfied their job characteristics at a high level also had a high quality of nursing work life. It could be argued that job characteristics are crucial resources to support and encourage Thai professional nurses.

2.2 Job characteristics has a positive indirect effect on the quality of nursing work life through job satisfaction.

Although previous studies indicated a causal relationship among three variables in terms of job characteristics has a positive direct effect on the quality of nursing work life (Abadi, Taban, Khanjani, et al., 2021; Owuor et al., 2014; Youngsiri, 2016) while job satisfaction has a positive direct effect on the quality of nursing work life (Bhavani & Jegadeeshwaran, 2014; Boonrod, 2009; Islam, 2012). In addition, job characteristics have a positive direct effect on job satisfaction (Giles, Parker, Mitchell, & Conway, 2017; Marin-Garcı´a, Bonaviab, & Losillac, 2011; Nurullah, 2010). However, a lack of evidence supported the link between the three variables. In order to test such a hypothesis among these variables, mediation analysis was used to determine the relationship between three sets of variables. This study found that the hypothesis of job characteristics being a positive indirect effect on the quality of nursing work life via job satisfaction was rejected.

This might state that there is no significant inferential link between job characteristics and quality of nursing work life via job satisfaction.

Moreover, sampling variation might be explained because participants were recruited from three hospital levels. Their perception of job characteristics and job satisfaction might also vary, which reflects the finding. The other reason might explain a structural bias because there is a lack of evidence supporting that job characteristics positively or indirectly affect the QNWL through job satisfaction. Therefore, further studies need to confirm the findings.

Hypothesis 3: Organizational climate has positive effects, both direct and indirect, on job satisfaction to quality of nursing work life.

3.1 Organizational climate has a positive direct effect on the quality of nursing work life.

The organizational climate positively affected the quality of nursing work life ($\beta = 0.32$, $p < .01$). Kanter's theory of structural empowerment can be used to explain the study's findings. According to this theory, the three forces of information access, support, and resource availability make up the power structure. All three of these components' employees have access to information, resources, and support through their well-connected peers or sponsors, who can inform or teach them about the system's inner workings. As a result, a good climate organization could empower employees and be more effective in various ways. Organizational climate can be described in terms of a shared understanding of the importance of policy and practice, as well as the procedures that employees go through and the behaviors they adhere to in order to receive rewards, support, and expectations (Ostroff, Kinicki, & Tamkins, 2003; B. Schneider, Ehrhart, & Macey, 2011). The employees can thus experience a

high quality of nursing work life if the characteristic job needs are met (R. Hackman & Oldham, 1975). Additionally, according to the socio-technical system (STS) theory, the quality of nursing work life improves when they are given more freedom to take the initiative while also being given opportunities to meet their basic psychological needs (Brooks & Anderson, 2005).

The current study is also congruent with prior evidence. Promeiang et al. (2015) studied the Quality of Work Life among Professional Nurses in Nakhonpathom Hospital. The findings revealed that organizational climate had a positive statistical significance correlated to the quality of nursing work life ($p < 0.05$). Organizational climate is one of five factors that predict the quality of nursing work life. Using stepwise multiple regression analysis, the result was 28.4 percent (R^2 adj.= 0.284). Moreover, empirical studies in Thailand also support this hypothesis regarding organizational climate as one of the selected factors that could predict the quality of nursing work life (Bulanleamvong, 2013; Dechkraisorn, 2009).

In conclusion, the findings of this study offer a preliminary understanding of organizational climate, showing that Thai professional nurses perceive higher quality nursing work life to be associated with a more positive organizational climate.

3.2 Organizational climate has a positive indirect effect on the quality of nursing work life through job satisfaction.

The organizational climate positively affected the quality of nursing work life through job satisfaction ($\beta = 0.19$, $p < .01$). These findings support the hypothesis model. Previous studies in other fields have reported that organizational climate positively affected the quality of work life via job satisfaction ($\beta = 0.86$) (Rujit

& Liemsuwan, 2021). Furthermore, a previous study in another field also reported that organizational climate determines job satisfaction, like the study of Gaunya (2016), who investigated the effect of organizational climate on employee job satisfaction among Public Sector employees in Kisii County. Regression results for constructs of organizational climate on job satisfaction reported that the coefficient of determination (R^2) was 0.653.

Moreover, Numerous pieces of evidence in Thailand also support this hypothesis that organizational climate could predict the quality of nursing work life (Boonrod, 2009; Promeiang et al., 2015). Based on current findings combined with previous studies, this might imply that professional nurses who perceived an excellent organizational climate in their workplace would perceive their job satisfaction in a positive way, which in turn increases the quality of nursing work life as well.

Hypothesis 4: Job satisfaction has a positive and direct effect on the quality of nursing work life.

Job satisfaction positively affected the quality of nursing work life (β = 0.42, $p < .01$). This finding supported the hypothesis. The findings in this study are congruent with previous literature. Previous studies in other fields also supported that job satisfaction is one of the central variables in work and is seen as an essential indicator of the quality of working life (Aryee, Fields, & Luk, 1999; Cohen, Kinnevy, & Dichter, 2007). Similar to Thailand, prior research in nursing by Boonrod (2009). This study aimed to determine the determinants of the quality of nursing work life among professional nurses at Phramongkutklao Hospital. A stepwise regression method was used. The findings reported R^2 of 0.621, which implied that the four predictor variables explain about 62.10% of the quality of nursing work life while job satisfaction

is one of four predictors ($\beta = 0.351$, $p < 0.001$). This further supports recent findings. The conclusion of this study may therefore suggest that job satisfaction and quality of nursing work life are related. It could be said that when formulating plans related to the quality of nursing work life, job satisfaction is one of the crucial factors that need to be considered.

Implication for nursing

The implication of this study focuses on the implication for healthcare policy and nursing research as follows:

Implications for healthcare policy

One of the study's strengths is the application of Kanter's (1993) theory of structural empowerment, which defines power as the ability in an organization. Kanter believed that structural conditions, rather than a person's traits or socialization, determine organizational power. As opposed to the conventional views of power as dominance or coercion. Kanter's model may serve as a roadmap for policymakers and nurse administrators looking to implement theory-based strategies for creating more productive work environments because numerous studies were used and test this theory in nursing phenomena (Frank, 1993; Haugh & Laschinger; Wilson & Laschinger, 1994). Even though the current study selected factors based on theory derivation, evidence also supported that each factor was related to Kanter's theory of structural empowerment (Chen, 2019; Craig, 2021; R. Hackman & Oldham, 1975; Kinicki & Kreitner, 2006; B. Schneider, 1975). Therefore, this might be stated that the current study's finding has produced converging evidence regarding how the working environment affects the quality of nursing work life among Thai professional nurses. These findings could be evidence for policymakers, nurse administrators, and nurse

managers to provide professional nurses with a healthy environment by considering the following crucial factors.

Based on the study's results, policymakers, nurse administrators, and nurse managers are given guidance on creating a healthy work environment by enhancing transformational leadership for head nurses, who have a crucial role in providing formal and informal power to their followers. Head nurses should receive programs for developing transformational leadership for them. Moreover, designing appropriate channels for professional nurses includes easy-to-access opportunities, information, resources, and support. Policymakers and nurse administrators should be concerned about reducing psychological work demands, promoting skill discretion and decision authority, managing physical loads, launching policies to increase safety, reducing work hazards, and encouraging social support among coworkers and supervisors. Additionally, foster a positive organizational climate by establishing clear rules and regulations while maintaining an informal atmosphere, promoting job assessment standards, emphasizing positive reinforcement rather than punishment, ensuring that pay promotion policies are perceived as fair, encouraging employees to feel like valued members of a team and encouraging mutual support from both above and below. Promote professional nurses' autonomy and recognition in the workplace to increase their job satisfaction by supporting pay, benefits, continuing education, and advancement. These strategies might improve the sense of high-quality nursing work life in professional nurses, which could aid in the recruitment and retention of professionals.

Implications for nursing research

The current study is the first to examine how organizational climate, job characteristics, job satisfaction, and transformational leadership affect the quality of nursing work life among Thai professional nurses. The study's results will be used as a starting point for interventions to investigate and improve the quality of nursing work life in this population. Since this study was conducted in six different regions of Thailand, there were significant correlations among the key ideas in the model, indicating the need for additional private sector research or larger sample size.

Limitations of the study

Overall, the methodology used in this study was rigorous, and the sample size was large enough to detect any differences in the results that were statistically significant. There were a few things to keep in mind as caveats, however. This discussion of the findings' limitations emphasized the study's design and generalizability. The following information is provided for each topic.

This research is cross-sectional. It cannot establish a causal link between the study variables nor rule out the possibility of reverse causation. The causal path in the model is based on the hypothesized relationship that has been assessed in the theory of structural empowerment and has accumulated in the literature review because the study assessed multiple constructs simultaneously. It is possible that outcomes could go in different directions. Finally, three hospital levels (secondary, tertiary, and super tertiary) were used to recruit participants for the current study. Literature suggests that professional nurses who work at different hospital levels may have a different

perspective on the quality of nursing work life. As a result, the proper response could be affected by this.

Recommendation for future research

1. This study is a cross-sectional predictive study conducted among Thai professional nurses working in all three levels of the public hospital sector across six regions in Thailand. Therefore, additional research should be conducted to replicate the current study in another setting in terms of the private sector. In addition, novice nurses should be a focus of further research. Besides, expanding the sample size should also be taken into consideration.

2. Because this is a cross-sectional study, a longitudinal analysis is required to determine how transformational leadership, job characteristics, organizational climate, job satisfaction, and quality of nursing work life have changed over time among professional nurses in Thailand. Therefore, this implication may offer a more causal explanation for the quality of nursing work life among professional nurses in Thailand and its predictors.

3. Since the organizational climate and the concept of transformational leadership were predictors that required more time for professional nurses to perceive without bias, this issue may not be appropriate for novice nurses who have less experience with their workplace, even though this group of professionals should also be focused because they have the highest rate of nursing profession resignation. Other predictors ought to be investigated for this group as well.

4. Developing and testing a management intervention study to improve the quality of nursing work life among Thai professional nurses is also essential. It should

include improving transformational leadership, designing good job characteristics in the workplace, and offering appropriate strategies to boost a positive organizational climate and job satisfaction. This suggested intervention m.ight improve the quality of nursing work life for Thai professional nurses

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APPENDICES

APPENDIX A
INSTRUMENTS

APPENDIX A1

แบบสอบถามข้อมูลส่วนบุคคล

คำชี้แจง โปรดทำเครื่องหมาย √ ลงใน ( ) หน้าข้อความหรือเติมข้อความที่ตรงกับความเป็นจริงของท่านลงในช่องว่าง เพื่อเป็นข้อมูลอ้างอิงถึงคุณสมบัติผู้ให้ข้อมูลเกี่ยวกับการศึกษาคุณภาพชีวิตการทำงานของพยาบาลที่ปฏิบัติงานในโรงพยาบาลของรัฐ

1. อายุ_____ปี

2. เพศ

   (1) ชาย (2) หญิง (3) ไม่ประสงค์จะระบุ

3. ข้อใดคือคุณวุฒิระดับ**สูงสุด**ของท่านในสาขาการพยาบาล

   (1) ปริญญาตรี

   (2) ปริญญาโท

   (3) ปริญญาเอก

   (4) อื่นๆ (โปรดระบุ)_____

4. ประสบการณ์การทำงาน _____ ปี

   (1) 1 - 2 ปี (2) 3 – 4 ปี

   (3) 5 - 7 ปี (4) 8 – 10 ปี

   (5) 10 ปีขึ้นไป

5. สถานภาพสมรส

(1) สมรส/มีคู่ชีวิต (2) หม้าย

(3) หย่าร้าง (4) แยกกันอยู่

(5) โสด

6. รายได้(เงินเดือนและค่าตอบแทนอื่นๆ) _____ (บาท/เดือน)

7. โปรดระบุหน่วยงานที่ท่านสังกัดล่าสุดในตำแหน่งพยาบาล

(1) แผนกผู้ป่วยนอก (โปรดระบุชื่อหน่วยงาน) _____

(2) แผนกผู้ป่วยใน (โปรดระบุชื่อหน่วยงาน) _____

(3) แผนกอื่นๆตามนโยบายของโรงพยาบาล (โปรดระบุชื่อหน่วยงาน)

_____

8. สถานะการจ้างงาน

(1) ข้าราชการ (2) พนักงานราชการ

(3) ลูกจ้างชั่วคราว (4) อื่นๆ (โปรดระบุ) _____

9. โปรดระบุจำนวนของบุตรที่อาศัยอยู่กับท่าน**ที่บ้าน** โดยแบ่งตามช่วงอายุดังต่อไปนี้

(1) 0-2 ปี	0	1	2	3	4 หรือมากกว่า
(2) 3-4 ปี	0	1	2	3	4 หรือมากกว่า
(3) 5 ปี	0	1	2	3	4 หรือมากกว่า

(4) 6-12 ปี	0	1	2	3	4 หรือมากกว่า
(5) 13-18 ปี	0	1	2	3	4 หรือมากกว่า
(6) 18 ปีขึ้นไป	0	1	2	3	4 หรือมากกว่า

10. ท่านรับผิดชอบดูแลบิดามารดาที่สูงอายุของตนเอง (และหรือของคู่สมรส/)

(1) ไม่ใช่

(2) ใช่

หากใช่ โปรดระบุประเภทของการดูแลเช่น ไม่ได้อยู่บ้านหลังเดียวกันแต่ไปเยี่ยมในช่วง)

(วันหยุดและส่งเสียเงินให้_____

11. ในตำแหน่งงานหลักของพยาบาล ณ ปัจจุบัน ท่านทำงาน:

(1) เต็มเวลา (ทำตลอดระยะเวลาปีปฏิทินอย่างเต็มเวลา)

(2) ทำงานพิเศษ (บางเวลา/พาร์ทไทม์)

12. ลักษณะการปฏิบัติงานของท่าน

(1) สามารถระบุวัน เวลาที่ต้องการปฏิบัติงาน หรือวันหยุดได้ล่วงหน้า

(2) มีความยืดหยุ่น สามารถปรับเปลี่ยนได้

(3) ไม่มีความยืดหยุ่น ไม่สามารถปรับเปลี่ยนได้

(4) รูปแบบอื่นๆ ระบุ_____

13. ท่านได้รับค่าตอบแทนประกาศนียบัตรความเชี่ยวชาญในสาขาเฉพาะจากหน่วยงานหรือไม่

(1) ไม่ใช่

(2) ใช่

หากใช่ ความเชี่ยวชาญเฉพาะดังกล่าวคือ_____

14. ท่านได้รับค่าตอบแทนเพิ่มเติมจากการปฏิบัติงานล่วงเวลาหรือไม่

(1) ไม่ใช่

(2) ใช่

15. ตำแหน่งพยาบาลที่ท่านทำเป็นหลักในปัจจุบัน (โปรดระบุเพียงคำตอบเดียว)

(1) สมาชิกทีม (2) หัวหน้าทีมพยาบาล (3) พยาบาลหัวหน้าเวร

APPENDIX A2

แบบสอบถามภาวะผู้นำ

คำชี้แจง: โปรดพิจารณาข้อความต่อไปนี้โดยละเอียด แล้วเลือกใส่เครื่องหมาย √ ในช่องระดับคะแนนในช่องที่ตรงกับความรู้สึกของท่านต่อ**<u>หัวหน้าหอผู้ป่วยของท่าน</u>** โดยเลือกตอบเพียงคำตอบเดียว **หากไม่แน่ใจ หรือคิดว่าคำถามนั้นไม่ตรงกับหัวหน้าของท่าน กรุณาเว้นคำตอบข้อนั้นไว้** โดยมีเกณฑ์การให้คะแนนดังนี้

0 หมายถึง ไม่เคยเลย
1 หมายถึง นานๆครั้ง
2 หมายถึง บางครั้ง
3 หมายถึง บ่อยๆครั้ง
4 หมายถึง เสมอๆหรือบ่อยมาก

ข้อความ **บุคคลที่ท่านกำลังประเมินอยู่นี้คือ หัวหน้าหอผู้ป่วยของท่าน**	ระดับคะแนน				
	0	1	2	3	4
1. ช่วยเหลือท่านเพื่อให้ท่านทุ่มเทกับงานเป็นการแลกเปลี่ยน					
2. สอบถามท่านเกี่ยวกับหลักการในการให้การพยาบาล สมมติฐาน และความเหมาะสมกรณีที่เกิดปัญหาทางการพยาบาล					
3. ให้อิสระในการแก้ปัญหา จนกว่าท่านจะร้องขอความช่วยเหลือ หรือเห็นว่าปัญหาจะลุกลาม					
4. ให้ความสนใจต่อสิ่งผิดปกติ และข้อผิดพลาดที่เกิดขึ้นภายในหอผู้ป่วย					
5. ……..					
6. …….					
7. …….					
45. เป็นผู้นำที่มีประสิทธิภาพและสามารถนำกลุ่มให้ทำผลลัพธ์ได้อย่างมีประสิทธิภาพ					

APPENDIX A3

แบบวัดความเครียดจากงาน

คำชี้แจง: โปรดพิจารณาข้อความต่อไปนี้โดยละเอียด แล้วเลือกใส่เครื่องหมาย √ ในช่องระดับคะแนนในช่องที่ตรงกับความรู้สึกของท่านต่องาน โดยเลือกตอบเพียงคำตอบเดียว ในกรณีที่ไม่มีคำตอบใด ตรง กรุณาเลือกข้อที่ใกล้เคียงความรู้สึกที่สุดเพียงข้อเดียว **กรุณาอย่าเว้นข้อใดว่างไว้** โดย**ข้อที่ 1 ถึง 31 และข้อที่ 35 ถึง 42** โดยมีเกณฑ์การให้คะแนนดังนี้

1 หมายถึง ไม่เห็นด้วยมาก
2 หมายถึง ไม่เห็นด้วย
3 หมายถึง เห็นด้วย
4 หมายถึง เห็นด้วยมาก

สำหรับข้อที่ 43 ถึง 54 มีเกณฑ์การให้คะแนนดังนี้

1 หมายถึง ไม่มีปัญหา
2 หมายถึง มีบ้าง/เป็นปัญหาน้อย
3 หมายถึง มี/เป็นปัญหามาก

ข้อความ	ระดับความคิดเห็น			
	1	2	3	4
1. ท่านได้พัฒนาความสามารถของตนเองในการทำงาน				
2. ท่านสามารถแสดงความเห็นได้เต็มที่ในเรื่องที่เกี่ยวข้องกับการทำงานของท่าน				
3. ……..				
4. ……..				
5. ……				
6. ……..				
7. ……..				

32. งานที่ท่านทำมีสม่ำเสมอตลอดปีใช่หรือไม่ (เลือกข้อใดข้อหนึ่ง)

☐ 1. ไม่ใช่ มีงานเป็นช่วง และเลิกจ้างงานบ่อยๆ ☐ 2. ไม่ใช่ เลิกจ้างงานบ่อยๆ

☐ 3. ไม่ใช่ มีงานเป็นช่วงๆ ☐ 4. มีงานทำสม่ำเสมอตลอดปี

ท่านมีปัญหาต้องเจอกับ**อันตรายในสถานที่ทำงาน**ต่อไปนี้หรือไม่

ข้อความ	ระดับความคิดเห็น		
	1	2	3
43……			
44. ……..			
54. เสียงดังรบกวน			

APPENDIX A4

แบบสอบถามบรรยากาศองค์การ

คำชี้แจง: โปรดพิจารณาข้อความต่อไปนี้โดยละเอียด แล้วเลือกใส่เครื่องหมาย √ ในช่องระดับคะแนนที่ตรงกับความรู้สึกของท่านที่มีต่อสภาพแวดล้อมในการทำงานบรรยากาศที่เกิดขึ้น/ โดยองค์การหรือหน่วยงานในการศึกษาครั้งนี้ หมายถึง หอผู้ป่วยที่ท่านปฏิบัติงานอยู่ รวมถึงฝ่ายการพยาบาลโดยมีเกณฑ์การให้คะแนนดังนี้

หมายถึง ไม 1ิ่เห็นด้วยอย่างยิ่ง ถ้าข้อความดังกล่าวไม่ตรงกับความรู้สึกของท่านเลย

หมายถึง ไม่เห็นด้วย ถ้าข้อความดังกล่าวมีแนว 2โน้มจะไม่ตรงกับความรู้สึกของท่าน

หมายถึง เห็นด้วย ถ้าข้อความดังกล่าวมี 3แนวโน้มจะตรงกับความรู้สึกของท่าน

หมายถึง เห็นด้วยอย่างยิ่ง ถ้าข้อควา 4มดังกล่าวตรงกับความรู้สึกของท่านมากที่สุด

ข้อความ	ระดับความคิดเห็น			
	1	2	3	4
1. การให้รางวัลและกำลังใจจากหน่วยงานเป็นสิ่งที่มีค่าและสำคัญต่อการทำงาน มากกว่าคำตำหนิ ต่อว่า				
2. ท่านรู้สึกว่าท่านเป็นสมาชิกของทีมงานที่มีประสิทธิภาพ				
3. ขาดความชัดเจนในการมอบหมายงานในบางโครงการ				
4. ……..				
5. …….				
24. บุคลากรดูเหมือนไม่มีความภาคภูมิใจในผลงานของหน่วยงาน				

APPENDIX A5

แบบสอบถามความพึงพอใจในการทำงานของพยาบาลไทย

คำชี้แจง: โปรดพิจารณาข้อความต่อไปนี้โดยละเอียด แล้วเลือกใส่เครื่องหมาย √ ในช่องระดับคะแนนที่ตรงกับความรู้สึกของท่านมากที่สุด โดยเลือกตอบเพียงคำตอบเดียว ซึ่งในแต่ละช่องมีเกณฑ์การให้คะแนนดังนี้

1 หมายถึง ข้อความนั้นไม่ตรงกับสิ่งที่เกิดขึ้นกับท่านมากที่สุด

2 หมายถึง ข้อความนั้นไม่ตรงกับสิ่งที่เกิดขึ้นกับปานกลาง

3 หมายถึง ข้อความนั้นไม่ตรงกับสิ่งที่เกิดขึ้นกับท่านน้อย

4 หมายถึง ข้อความนั้นตรงกับสิ่งที่เกิดขึ้นกับท่านน้อย

5 หมายถึง ข้อความนั้นตรงกับสิ่งที่เกิดขึ้นกับท่านปานกลาง

6 หมายถึง ข้อความนั้นตรงกับสิ่งที่เกิดขึ้นกับท่านมากที่สุด

ข้อความ	ระดับความคิดเห็น					
	1	2	3	4	5	6
1. โรงพยาบาลมีงบประมาณเพียงพอสำหรับพัฒนาความรู้และทักษะของบุคลากรทางการพยาบาล						
2. โรงพยาบาลมีนโยบายที่ยืดหยุ่นเกี่ยวกับเวลา เพื่อเอื้อให้ท่านได้สามารถเพิ่มพูนความรู้และทักษะอย่างเต็มที่ตามความเหมาะสม						
3. ท่านได้รับค่าเบี้ยเลี้ยง ค่าที่พัก และค่ายานพาหนะอย่างเหมาะสม เมื่อท่านต้องเดินทางไปปฏิบัติงานนอกสถานที่						
4. ……						
107. ท่านมีอิสระในการจะปฏิเสธการทำงานที่นอกเหนือขอบเขตความรับผิดชอบของวิชาชีพ						

APPENDIX A6

ส่วนที่ 6 แบบสำรวจคุณภาพชีวิตการทำงานของพยาบาล

คำชี้แจง: โปรดพิจารณาข้อความต่อไปนี้โดยละเอียด แล้วเลือกใส่เครื่องหมาย √ ในช่องระดับคะแนนที่ตรงกับความรู้สึกของท่านมากที่สุด โดยเลือกตอบเพียงคำตอบเดียว ซึ่งในแต่ละช่องมีเกณฑ์การให้คะแนนดังนี้

1 หมายถึง ไม่เห็นด้วยอย่างยิ่ง

2 หมายถึง ค่อนข้างจะไม่เห็นด้วย

3 หมายถึง ไม่เห็นด้วยเล็กน้อย

4 หมายถึง เห็นด้วยเล็กน้อย

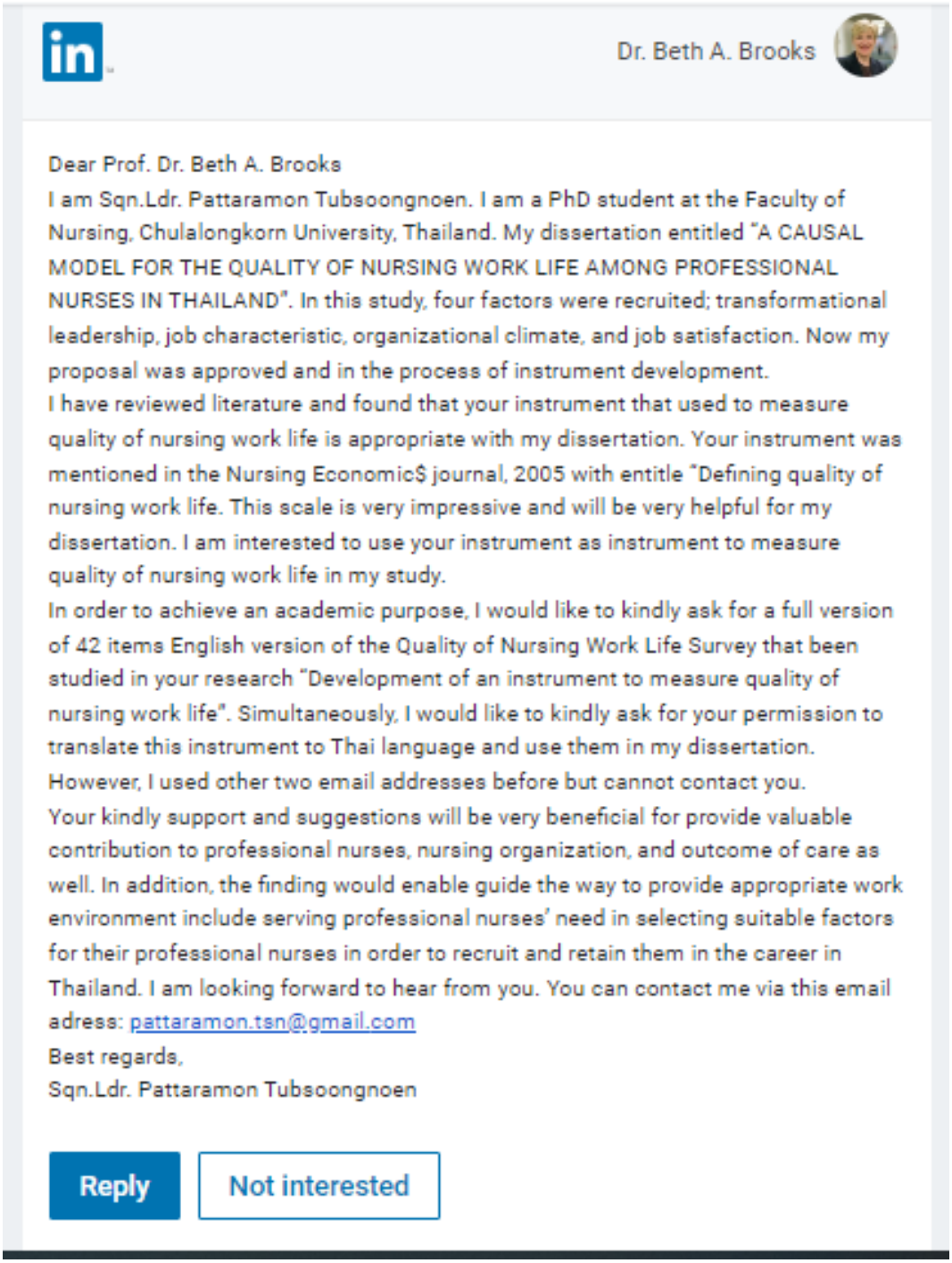
5 หมายถึง ค่อนข้างจะเห็นด้วย

6 หมายถึง เห็นด้วยอย่างยิ่ง

ข้อความ	ระดับความคิดเห็น					
	1	2	3	4	5	6
1. ท่านได้รับความช่วยเหลืออย่างเพียงพอจากบุคลากรสายสนับสนุนที่ไม่มีใบประกอบวิชาชีพทางการพยาบาล						
2. ท่านพึงพอใจกับงานของตนเอง						
3. ภาระงานของท่านหนักเกินไป						
4. ……						
5. ……						
42. ท่านได้รับความช่วยเหลือเป็นอย่างดีจากบุคลากรในระดับที่ไม่มีใบประกอบวิชาชีพพยาบาล (ผู้ช่วยด้านโภชนาการ พนักงานทำความสะอาด ทีมดูแลผู้ป่วย และผู้ช่วยพยาบาล)						

APPENDIX B
PERMISSION DOCUMENT FOR THE INSTRUMENTS

Quality of Nursing Work Life



Dr. Beth A. Brooks

Dear Prof. Dr. Beth A. Brooks
I am Sqn.Ldr. Pattaramon Tubsoongnoen. I am a PhD student at the Faculty of Nursing, Chulalongkorn University, Thailand. My dissertation entitled "A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND". In this study, four factors were recruited; transformational leadership, job characteristic, organizational climate, and job satisfaction. Now my proposal was approved and in the process of instrument development.
I have reviewed literature and found that your instrument that used to measure quality of nursing work life is appropriate with my dissertation. Your instrument was mentioned in the Nursing Economic$ journal, 2005 with entitle "Defining quality of nursing work life. This scale is very impressive and will be very helpful for my dissertation. I am interested to use your instrument as instrument to measure quality of nursing work life in my study.
In order to achieve an academic purpose, I would like to kindly ask for a full version of 42 items English version of the Quality of Nursing Work Life Survey that been studied in your research "Development of an instrument to measure quality of nursing work life". Simultaneously, I would like to kindly ask for your permission to translate this instrument to Thai language and use them in my dissertation.
However, I used other two email addresses before but cannot contact you.
Your kindly support and suggestions will be very beneficial for provide valuable contribution to professional nurses, nursing organization, and outcome of care as well. In addition, the finding would enable guide the way to provide appropriate work environment include serving professional nurses' need in selecting suitable factors for their professional nurses in order to recruit and retain them in the career in Thailand. I am looking forward to hear from you. You can contact me via this email adress: pattaramon.tsn@gmail.com
Best regards,
Sqn.Ldr. Pattaramon Tubsoongnoen

Reply Not interested

4217 West Thorndale Avenue • Chicago, Illinois USA 60646
www.773-612-7224 • thebrooksgroupllc.net

July 6, 2020

Sqn.Ldr. Pattaramon Tubsoongnoen
PhD Student
Faculty of Nursing
Chulalongkorn University
Bangkok, Thailand

Dear Pattaramon:

You have permission to use my instrument for your PhD dissertation in the Faculty of Nursing at Chulalongkorn University. I understand your dissertation is entitled "A Causal Model for the Quality of Nursing Worklife Among Professional Nurses in Thailand." In addition, I agree to your request to translate my instrument into Thai language.

In return, I require that you:

- Report summary findings to me from the survey, including reliability analysis
- Credit the use and my authorship of the survey in any publication of your research

Keep in mind that the survey was originally designed to assess the nursing worklife of staff nurses in hospital settings. Using the survey with other groups of nurses (e.g. charge nurses, nurse managers, nurse midwives etc.) is not appropriate. Making significant changes to the intent of the items and/or adding items is prohibited. Some minor changes to account for cultural differences are acceptable.

Please do not hesitate to call upon me to discuss your research. I am also available for onsite speaking or consultation.

Good luck with your research.

Sincerely,

Beth A. Brooks

Beth A. Brooks, PhD, RN, FACHE
President

Robert Wood Johnson Foundation Executive Nurse Fellow Alumna, 2012-2015 Cohort

ที่ อว 64.11/

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

26 พฤศจิกายน 2563

เรื่อง ขออนุญาตใช้เครื่องมือในการทำวิทยานิพนธ์

เรียน คณบดีคณะพยาบาลศาสตร์ มหาวิทยาลัยสงขลานครินทร์

เนื่องด้วย น.ต.หญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาวิทยานิพนธ์ เรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ และรองศาสตราจารย์ ร.ต.อ.หญิง ดร.ยุพิน อังสุโรจน์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม ในการนี้ใคร่ขออนุญาตใช้เครื่องมือการวิจัย คือ แบบสำรวจคุณภาพชีวิตการทำงานของพยาบาลของบรู๊คส์ ฉบับภาษาไทย จากงานวิจัย เรื่อง "Quality of Work Life among Nurse Practitioners Working at Primary Care Setting in Thailand" ของผู้ช่วยศาสตราจารย์ ดร.พัชรี คมจักรพันธุ์ ภาควิชาการพยาบาลสาธารณสุขศาสตร์ คณะพยาบาลศาสตร์ มหาวิทยาลัยสงขลานครินทร์ (2560)

จึงเรียนมาเพื่อโปรดพิจารณาอนุญาตให้นิสิตใช้เครื่องมือการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

สุรศักดิ์ ศรีนัย

(ผู้ช่วยศาสตราจารย์ ดร.สุรศักดิ์ ศรีนัย)
รองคณบดี
ปฏิบัติการแทนคณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 02-218-1131, 08-1933-9791 E-mail: fonbox@chula.ac.th
อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร. จินตนา ยูนิพันธุ์ โทร. 02-218-1153
อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ร.ต.อ.หญิง ดร. ยุพิน อังสุโรจน์ โทร. 02-218-1360
ชื่อนิสิต น.ต.หญิง ภัทรมน ทับสูงเนิน โทร. 09-8297-4950

ที่ อว ๒๘๐๑๘/๐๒๖

อุทยานวิทยาศาสตร์
มหาวิทยาลัยสงขลานครินทร์
วิทยาเขตหาดใหญ่ส่วนขยาย
ต.ทุ่งใหญ่ อ.หาดใหญ่
จ.สงขลา ๙๐๑๑๐

๗ มกราคม ๒๕๖๔

เรื่อง อนุญาตให้ใช้ลิขสิทธิ์ในเครื่องมือวิจัย

เรียน คณบดีคณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

อ้างถึง หนังสือเลขที่ อว.๒๘.๑๑ ลงวันที่ ๒๖ พฤศจิกายน ๒๕๖๓

ตามที่ น.ต.หญิงภัทรมน ทับสูงเนิน นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย มีความประสงค์ขออนุญาตใช้เครื่องมือวิจัยเรื่อง "แบบสำรวจคุณภาพชีวิตการทำงานของพยาบาลของบรู๊คส์ ฉบับภาษาไทย" ซึ่งเป็นส่วนหนึ่งของงานวิจัยเรื่อง " Quality of Work life among Nurse Practitioners Working at Primary Care Setting in Thailand" ของ ผศ.ดร.พัชรี คมจักรพันธุ์ คณะพยาบาลศาสตร์ และเป็นลิขสิทธิ์ของมหาวิทยาลัยสงขลานครินทร์ เพื่อประกอบการดำเนินการวิจัยเรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" นั้น

ในการนี้ มหาวิทยาลัยสงขลานครินทร์ได้พิจารณาแล้วมีความเห็นว่าควรอนุญาตให้หาง น.ต.หญิงภัทรมน ทับสูงเนิน ใช้ผลงานลิขสิทธิ์ดังกล่าวโดยไม่มีค่าตอบแทนและใช้สิทธิได้เฉพาะ การทำวิจัยในเรื่องดังกล่าวข้างต้น เท่านั้น ทั้งนี้จะต้องมีการอ้างถึงมหาวิทยาลัยสงขลานครินทร์และชื่อผู้สร้างสรรค์ผลงานให้เป็นที่ประจักษ์ในการใช้ผลงานดังกล่าวด้วย หากมีผู้ประสงค์จะใช้งานในผลงานอันมีลิขสิทธิ์ดังกล่าวนอกเหนือจากที่ได้อนุญาตไว้ จักต้องมีการขออนุญาตและได้รับการอนุญาตจากมหาวิทยาลัยสงขลานครินทร์ก่อนทุกครั้ง

จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ศิรณ พิทักษ์)
ผู้อำนวยการอุทยานวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์

Transformational Leadership

Multifactor Leadership Questionnaire

Instrument (Leader and Rater Form)

and Scoring Guide
(Form 5X-Short)

English and Thai versions

by Bruce Avolio and Bernard Bass

Published by Mind Garden, Inc.

info@mindgarden.com

www.mindgarden.com

Job Characteristic

JCQ CENTER GLOBAL

Karasek Job Content Questionnaire

R Karasek Director JCQ Center Global & Øresund Synergy ApS.
Professor Emeritus, Department of Work Environment, University of Massachusetts Lowell, USA &
Professor Emeritus, Work and Organizational Psychology, Institute for Psychology, Copenhagen University, Denmark

Job Content Questionnaire and User's Guide

Revision 1.8 10/15 revised policy

This Packet Contains:

1. Introductory comments, discussion of scales, sample size and statistical equations.
2. Scale construction equations.
3. Occupation and industry category definitions, and our sample size
4. Examples of national mean scores by occupation and industry groups; and subgroup sample sizes.
5. Questionnaire

For Further Information Contact:

Web: www.jcqcenter.com & www.oresundsynergy.com

Email: Eva.orum@oresundsynergy.com

Mobile: +45 4046 1000

JCQ Center Global ApS cvr: 35820043. Bank: 3409 3409154077.

IBAN DK0330003409154077. SWIFT: DABADKK Danske Bank Copenhagen Denmark.

List of Revisions:

1. Revision 1.11. revision of scale formula 6/86-R-1.11
2. Revision 1.12 5/94- new content from replaces section
3. Revision 1.5 10/96 – recommend additional scales
4. Revision 1.7 */97 revised policy
5. Revision 1.8 10/15 revised policy

ที่ อว 64.11/0742

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

21 กรกฎาคม 2563

เรื่อง ขออนุญาตใช้เครื่องมือในการทำวิทยานิพนธ์

เรียน คณบดีคณะแพทยศาสตร์ มหาวิทยาลัยสงขลานครินทร์

เนื่องด้วย น.ต.หญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญามหาบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาวิทยานิพนธ์ เรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ และ รองศาสตราจารย์ ร.ต.อ.หญิง ดร.ยุพิน อังสุโรจน์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม ในการนี้ใคร่ขออนุญาตใช้เครื่องมือการวิจัย คือ แบบวัดความเครียดจากงานชนิด Job Content Questionnaire ฉบับภาษาไทย (TJCQ) จากรายงานการวิจัย เรื่อง ความตรงเชิงโครงสร้างของแบบประเมินความเครียดจากงานชนิด Job Content Questionnaire ฉบับภาษาไทย ในประชากรขนาดใหญ่และหลากหลายอาชีพ ของ รองศาสตราจารย์ ดร.พิชญา พรรคหงสุช ภาควิชาเวชศาสตร์ชุมชน คณะแพทยศาสตร์ มหาวิทยาลัยสงขลานครินทร์ (2552)

จึงเรียนมาเพื่อโปรดพิจารณาอนุญาตให้นิสิตใช้เครื่องมือการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

สุรศักดิ์ ศรีนัย

(ผู้ช่วยศาสตราจารย์ ดร.สุรศักดิ์ ศรีนัย)
รองคณบดี
ปฏิบัติการแทน คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 0-2218-1131 E-mail : fonbox@chula.ac.th
อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ โทร. 0-2218-1153
อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ร.ต.อ.หญิง ดร.ยุพิน อังสุโรจน์ โทร. 0-2218-1360
ชื่อนิสิต น.ต.หญิง ภัทรมน ทับสูงเนิน โทร. 09-8297-4950

คณะพยาบาลศาสตร์
จุฬาลงกรณ์มหาวิทยาลัย
เลขรับที่ 1467
วันที่ 26 สิงหาคม 2563 เวลา 13:34

ที่ อว 6801.0609/63- 00089

คณะแพทยศาสตร์
มหาวิทยาลัยสงขลานครินทร์
อำเภอหาดใหญ่ จังหวัดสงขลา
รหัสไปรษณีย์ 90110

26 สิงหาคม 2563

เรื่อง อนุญาตให้ใช้เครื่องมือในการทำวิทยานิพนธ์

เรียน คณบดีคณะพยาบาลศาสตร์

ตามหนังสือที่ อว 64.11/0742 ลงวันที่ 21 กรกฎาคม 2563 เรื่องขออนุญาตให้ใช้เครื่องมือในการทำวิทยานิพนธ์ นั้น ในการนี้ รองศาสตราจารย์ ดร.แพทย์หญิงพิชญา พรรคทองสุข สาขาวิชาเวชศาสตร์ครอบครัวและเวชศาสตร์ป้องกัน คณะแพทยศาสตร์ มหาวิทยาลัยสงขลานครินทร์ อนุญาตให้ น.ส.หญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญามหาบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ใช้เครื่องมือวิจัย คือ แบบวัดความเครียดจากงานชนิด Job Content Questionaire ฉบับภาษาไทย (TJCQ) จากรายงานการวิจัย เรื่อง ความตรงเชิงโครงสร้างของแบบประเมินความเครียดจากงานชนิด Job Content Questionaire ฉบับภาษาไทย ในประชากรขนาดใหญ่และหลากหลายอาชีพ ในการทำวิทยานิพนธ์

จึงเรียนมาเพื่อทราบ

เรียน คณบดี ผ่านรองคณบดี
เพื่อทราบ และแจ้งนิสิตดำเนินการต่อไป

26 สิงหาคม 2563 เวลา 14:26

27 สิงหาคม 2563 เวลา 11:34

28 สิงหาคม 2563 เวลา 08:59

ขอแสดงความนับถือ

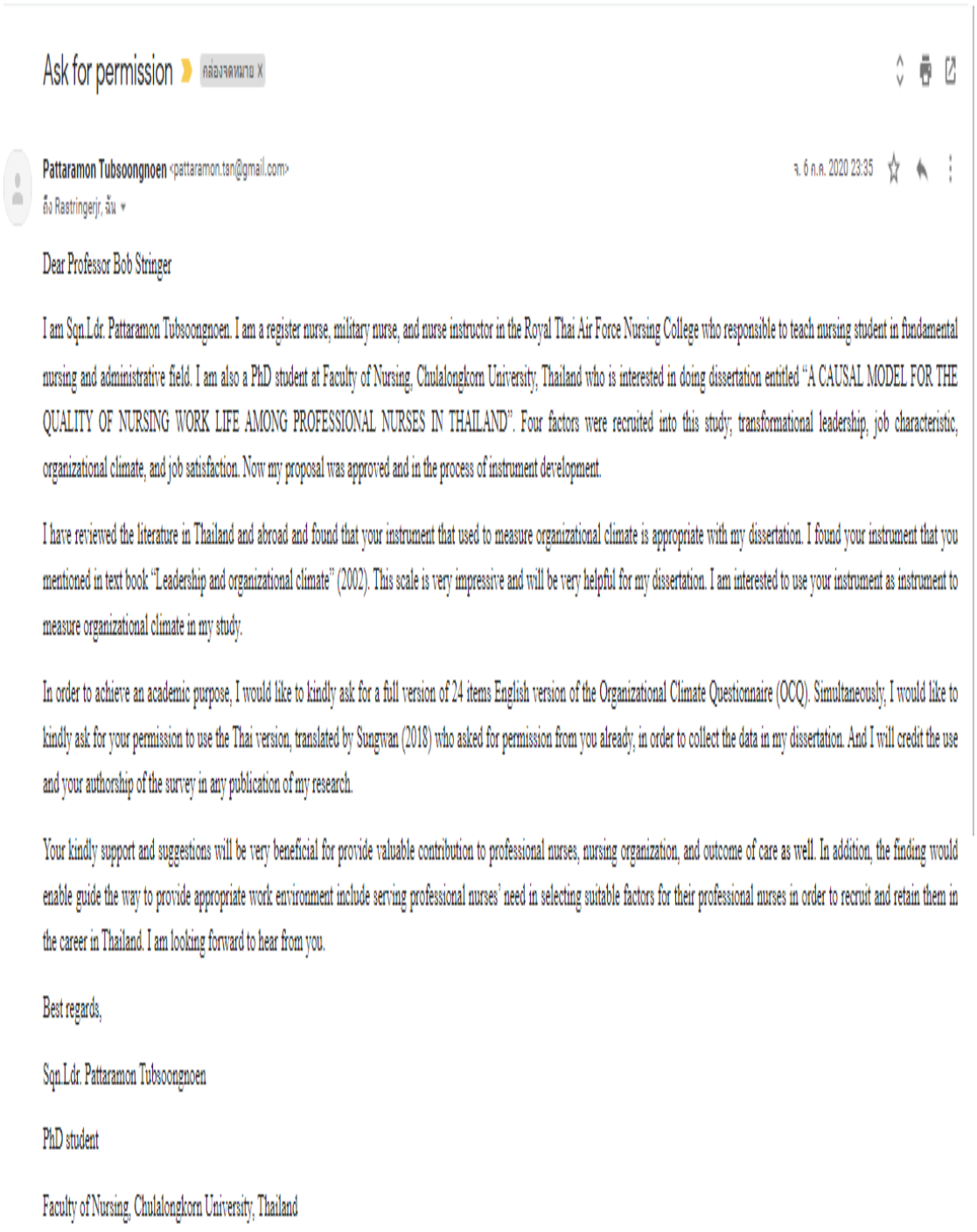
(อาจารย์นายแพทย์พิชญานนท์ งามเฉลียว)
รักษาการในตำแหน่งหัวหน้าสาขาวิชาเวชศาสตร์ครอบครัว
และเวชศาสตร์ป้องกัน

ทราบและโปรดดำเนินการตามเสนอ

28 สิงหาคม 2563 เวลา 11:26

หน่วยอาชีวเวชศาสตร์ สาขาวิชาเวชศาสตร์ครอบครัวและเวชศาสตร์ป้องกัน คณะแพทยศาสตร์
โทร.0-4745-1167, 0-7445-1548

Organizational Climate



Ask for permission กล่องจดหมาย X

Pattaramon Tubsoongnoen <pattaramon.tsn@gmail.com> จ. 6 ก.ค. 2020 23:35

ถึง Rastringerjr, ฉัน

Dear Professor Bob Stringer

I am Sqn.Ldr. Pattaramon Tubsoongnoen. I am a register nurse, military nurse, and nurse instructor in the Royal Thai Air Force Nursing College who responsible to teach nursing student in fundamental nursing and administrative field. I am also a PhD student at Faculty of Nursing, Chulalongkorn University, Thailand who is interested in doing dissertation entitled "A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND". Four factors were recruited into this study; transformational leadership, job characteristic, organizational climate, and job satisfaction. Now my proposal was approved and in the process of instrument development.

I have reviewed the literature in Thailand and abroad and found that your instrument that used to measure organizational climate is appropriate with my dissertation. I found your instrument that you mentioned in text book "Leadership and organizational climate" (2002). This scale is very impressive and will be very helpful for my dissertation. I am interested to use your instrument as instrument to measure organizational climate in my study.

In order to achieve an academic purpose, I would like to kindly ask for a full version of 24 items English version of the Organizational Climate Questionnaire (OCQ). Simultaneously, I would like to kindly ask for your permission to use the Thai version, translated by Sungwan (2018) who asked for permission from you already, in order to collect the data in my dissertation. And I will credit the use and your authorship of the survey in any publication of my research.

Your kindly support and suggestions will be very beneficial for provide valuable contribution to professional nurses, nursing organization, and outcome of care as well. In addition, the finding would enable guide the way to provide appropriate work environment include serving professional nurses' need in selecting suitable factors for their professional nurses in order to recruit and retain them in the career in Thailand. I am looking forward to hear from you.

Best regards,

Sqn.Ldr. Pattaramon Tubsoongnoen

PhD student

Faculty of Nursing, Chulalongkorn University, Thailand

Bob Stringer

ถึง ฉัน ▾

7 ก.ค. 2020 04:22 (7 วันที่ผ่านมา)

อังกฤษ ▾ › ไทย ▾ แปลข้อความ ปิดสำหรับ: อังกฤษ ×

Pattaramon – You hereby have my permission to use the Organizational Climate Questionnaire for your research. Let me know if you have any problems scoring the OCQ. Best, Bob

Bob Stringer
Crimson Seed Capital
rastringerjr@gmail.com

Check out my latest book, Culture.Com

ที่ อว 64.11/0741

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

21 กรกฎาคม 2563

เรื่อง ขออนุญาตใช้เครื่องมือในการทำวิทยานิพนธ์

เรียน คณบดีคณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา

เนื่องด้วย น.ต.หญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญามหาบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาวิทยานิพนธ์ เรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ และ รองศาสตราจารย์ ร.ต.อ.หญิง ดร.อุพิน อังสุโรจน์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม ในการนี้ใคร่ขออนุญาตใช้เครื่องมือการวิจัย คือแบบสอบถามบรรยากาศองค์การ จากวิทยานิพนธ์ เรื่อง การถูกข่มเหงรังแกในที่ทำงานของพยาบาลวิชาชีพไทยที่จบใหม่: แบบจำลองเชิงสาเหตุและผลลัพธ์ ของนางสาวพัชรินทร์ สังวาลย์ สาขาวิชาพยาบาลศาสตร์ (หลักสูตรนานาชาติ) คณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา (2561) โดยมี รองศาสตราจารย์ ดร.วรรณี เดียวอิศเรศ เป็นอาจารย์ผู้ควบคุมวิทยานิพนธ์

จึงเรียนมาเพื่อโปรดพิจารณาอนุญาตให้นิสิตใช้เครื่องมือการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.สุรศักดิ์ ศรีนัย)
รองคณบดี
ปฏิบัติการแทน คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 0-2218-1131 E-mail : fonbox@chula.ac.th
อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ โทร. 0-2218-1153
อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ร.ต.อ.หญิง ดร.อุพิน อังสุโรจน์ โทร. 0-2218-1360
ชื่อนิสิต น.ต.หญิง ภัทรมน ทับสูงเนิน โทร. 09-8297-4950

ที่ อว ๘๓๓๗/๒๕๑๑

มหาวิทยาลัยบูรพา
๑๖๙ ถ.ลงหาดบางแสน ต.แสนสุข
อ.เมือง จ.ชลบุรี ๒๐๑๓๑

๑๗ กันยายน ๒๕๖๓

เรื่อง อนุญาตให้ใช้เครื่องมือวิจัย

เรียน คณบดีคณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

อ้างถึงหนังสือที่ อว ๖๔.๓๓/๐๕๕๗ ลงวันที่ ๓๑ กันยายน พ.ศ. ๒๕๖๓ เรื่อง ขออนุญาตใช้เครื่องมือในการทำวิทยานิพนธ์ โดย น.ต.หญิงภัทรมน ทับสูงเนิน นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ได้ขอใช้เครื่องมือวิจัย "แบบสอบถามบรรยากาศองค์การ" จากดุษฎีนิพนธ์เรื่อง การถูกข่มเหงรังแกในที่ทำงานของพยาบาลวิชาชีพไทยที่จบใหม่: แบบจำลองเชิงสาเหตุและผลลัพธ์ ของคุณพัชรินทร์ สังวาลย์ หลักสูตรปรัชญาดุษฎีบัณฑิต (พยาบาลศาสตร์) หลักสูตรนานาชาติ คณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา พ.ศ. ๒๕๖๑ โดยมี รองศาสตราจารย์ ดร.วรรณี เดียวอิศเรศเป็นอาจารย์ที่ปรึกษาหลักและ รองศาสตราจารย์ ดร.นุจรี ไชยมงคล เป็นอาจารย์ที่ปรึกษาร่วม

เพื่อนำไปใช้ในการทำวิจัยเรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" โดยมีรองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์หลักและ รองศาสตราจารย์ ร.ต.อ. หญิง ดร.ยุพิน อังสุโรจน์ เป็นอาจารย์ที่ปรึกษาร่วม ตามความทราบแล้วนั้น

ในการนี้ มหาวิทยาลัยบูรพา โดยบัณฑิตวิทยาลัยอนุญาตให้ น.ต.หญิงภัทรมน ทับสูงเนิน ใช้เครื่องมือวิจัยดังกล่าวได้

ทั้งนี้ขอให้อ้างอิงวิทยานิพนธ์ของนิสิตดังกล่าวด้วย รวมถึงจัดส่ง "แบบฟอร์มรับรองการใช้ประโยชน์จากผลงานวิจัยหรืองานสร้างสรรค์" มายังบัณฑิตวิทยาลัย มหาวิทยาลัยบูรพา ที่ E-mail: grd.buu@go.buu.ac.th (สามารถดาวน์โหลดแบบฟอร์มได้ที่ http://grd.buu.ac.th/wordpress/?page_id=3717)

จึงเรียนมาเพื่อโปรดทราบและดำเนินการต่อไปด้วย

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.นุจรี ไชยมงคล)
คณบดีบัณฑิตวิทยาลัย ปฏิบัติการแทน
อธิการบดีมหาวิทยาลัยบูรพา

บัณฑิตวิทยาลัย มหาวิทยาลัยบูรพา
โทร ๐๓๘ ๑๐๒ ๗๐๐ ต่อ ๗๐๗, ๗๐๕
อีเมล์ grd.buu@go.buu.ac.th

สำเนาเรียน น.ต.หญิงภัทรมน ทับสูงเนิน

Job Satisfaction

ที่ อว 64.11/0750

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

23 กรกฎาคม 2563

เรื่อง ขออนุญาตใช้เครื่องมือในการทำวิทยานิพนธ์

เรียน คณบดีคณะพยาบาลศาสตร์ มหาวิทยาลัยสงขลานครินทร์

เนื่องด้วย น.ต.หญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญามหาบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาวิทยานิพนธ์ เรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ และรองศาสตราจารย์ ร.ต.อ.หญิง ดร.ยุพิน อังสุโรจน์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม ในการนี้ใคร่ขออนุญาตใช้เครื่องมือการวิจัย คือแบบสอบถามความพึงพอใจในการทำงานของพยาบาลไทย จากวิทยานิพนธ์ เรื่อง การพัฒนาและการประเมินเครื่องมือวัดความพึงพอใจในการทำงานของพยาบาลไทย ของนางจารุรัตน์ ศรีรัตนประภาส สาขาวิชาการพยาบาล (หลักสูตรนานาชาติ) คณะพยาบาลศาสตร์ มหาวิทยาลัยสงขลานครินทร์ (2555) โดยมี รองศาสตราจารย์ ดร.อรัญญา เขาวลิต เป็นอาจารย์ควบคุมวิทยานิพนธ์

จึงเรียนมาเพื่อโปรดพิจารณาอนุญาตให้นิสิตใช้เครื่องมือการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

สุรศักดิ์ ศรีนัย

(ผู้ช่วยศาสตราจารย์ ดร.สุรศักดิ์ ศรีนัย)
รองคณบดี
ปฏิบัติการแทน คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 0-2218-1131 E-mail : fonbox@chula.ac.th
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อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ร.ต.อ.หญิง ดร.ยุพิน อังสุโรจน์ โทร. 0-2218-1360
ชื่อนิสิต น.ต.หญิง ภัทรมน ทับสูงเนิน โทร. 09-8297-4950

ที่ อว 68018/ ๒๖๖

อุทยานวิทยาศาสตร์
มหาวิทยาลัยสงขลานครินทร์
วิทยาเขตหาดใหญ่ส่วนขยาย
ต.ทุ่งใหญ่ อ.หาดใหญ่
จ.สงขลา 90110

๒๗ สิงหาคม 2563

เรื่อง ขอนุญาตให้ใช้สิทธิ์ในเครื่องมือวิจัย

เรียน คณบดีคณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

อ้างถึง หนังสือเลขที่ อว 64.11/0750 ลงวันที่ 23 กรกฎาคม 2563

ตามที่ น.ต.หญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญามหาบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย มีความประสงค์ขออนุญาตใช้เครื่องมือวิจัยเรื่อง "แบบสอบถามความพึงพอใจในการทำงานของพยาบาลใหม่" จากวิทยานิพนธ์เรื่อง "การพัฒนาและการประเมินเครื่องมือวัดความพึงพอใจในการทำงานของพยาบาลไทย" ของ นางจารุรัตน์ ศรีรัตนประภาส คณะพยาบาลศาสตร์ และเป็นลิขสิทธิ์ของมหาวิทยาลัยสงขลานครินทร์ เพื่อประกอบการดำเนินการวิจัยเรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพไทยในประเทศ" นั้น

ในการนี้ มหาวิทยาลัยสงขลานครินทร์ได้พิจารณาแล้วมีความเห็นว่าควรอนุญาตให้ทาง น.ต.หญิง ภัทรมน ทับสูงเนิน ใช้ผลงานลิขสิทธิ์ดังกล่าวโดยไม่มีค่าตอบแทนและใช้สิทธิ์ได้เฉพาะ การทำวิจัยในเรื่องดังกล่าวข้างต้น เท่านั้น ทั้งนี้จะต้องมีการอ้างถึงมหาวิทยาลัยสงขลานครินทร์และชื่อผู้สร้างสรรค์ผลงานให้เป็นที่ประจักษ์ในการใช้ผลงานดังกล่าวด้วย หากมีผู้ประสงค์จะใช้งานในผลงานอันมีลิขสิทธิ์ดังกล่าวนอกเหนือจากที่ได้อนุญาตไว้ จักต้องมีการขออนุญาตและได้รับการอนุญาตจากมหาวิทยาลัยสงขลานครินทร์ก่อนทุกครั้ง

จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดำรณ พิทักษ์)
ผู้อำนวยการอุทยานวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์

เรียน คณบดี ผ่านรองคณบดี
เพื่อทราบ และแจ้งนิสิตดำเนินการต่อไป

24 สิงหาคม 2563 เวลา 15:18

25 สิงหาคม 2563 เวลา 14:35

25 สิงหาคม 2563 เวลา 15:24

ทราบและโปรดดำเนินการตามเสนอ

25 สิงหาคม 2563 เวลา 15:28

APPENDIX C
LIST OF THE EXPERTS

List of Experts for Content Validity Testing

1. Assoc. Prof. Dr. Nongnut Boonyoung, RN, PhD.

   Dean, Faculty of Nursing Prince of Songkla University

2. Assoc. Prof. Dr. Apiradee Nantsupawat, RN, PhD.

   Nursing Administration Department, Faculty of Nursing Chiang Mai University

3. Asst. Prof. Col. Dr. Wallapa Boonrod, RN, PhD.

   School of Nursing Management, Institute of Nursing, Suranaree University of Technology

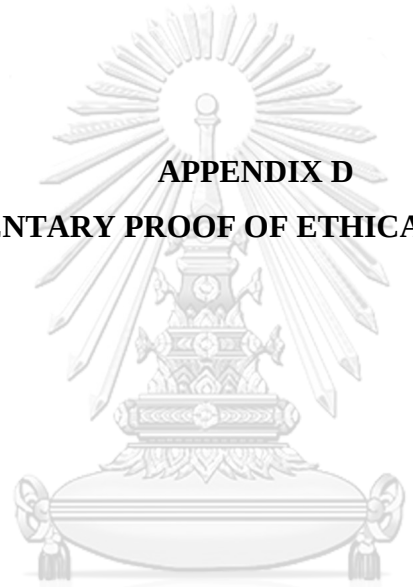
4. Asst. Prof. Dr. Patcharee Komjakraphan, RN, PhD.

   Division of Community Nurse Practitioner, Faculty of Nursing Prince of Songkla University

5. Asst. Prof. Dr. Sahattaya Rattanajarana, RN, PhD.

   Nursing Administration Division, Faculty of Nursing Burapha University

APPENDIX D
DOCUMENTARY PROOF OF ETHICAL CLEARANCE



โรงพยาบาลภูมิพลอดุลยเดช กรมแพทย์ทหารอากาศ
ศูนย์วิจัยและพัฒนาสิ่งประดิษฐ์คิดค้นทางการแพทย์

RC-FO-020
ปรับปรุง : ม.ย.๖๔

Institutional Review Board

เอกสารรับรองโครงการวิจัย IRB no. 33/64

พิจารณาโดย คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลภูมิพลอดุลยเดช กรมแพทย์ทหารอากาศ

ขอรับรองว่า

โครงการ โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND

โดย นาวาอากาศตรีหญิง ภัทรมณ ทับสูงเนิน

สังกัด วิทยาลัยพยาบาลทหารอากาศ

Type of review: ๑. Expedited review of research protocol ๒. Full board

เอกสารที่พิจารณา

๑. โครงร่างงานวิจัย
๒. เอกสารข้อมูลสำหรับผู้ป่วย และเอกสารแสดงความยินยอมเข้าร่วมการวิจัยฉบับภาษาไทย

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลภูมิพลอดุลยเดช กรมแพทย์ทหารอากาศ ได้พิจารณารายละเอียดโครงร่างงานวิจัย เอกสารข้อมูลสำหรับผู้ป่วย และเอกสารแสดงความยินยอมเข้าร่วมการวิจัยฉบับภาษาไทยแล้ว ลงความเห็นว่า ไม่ขัดต่อสวัสดิภาพหรือก่อให้เกิดภัยอันตรายแก่ผู้ถูกวิจัยแต่ประการใด

จึงเห็นสมควร ให้ดำเนินการวิจัยในขอบข่ายของโครงการที่เสนอได้
ออกให้ ณ วันที่ ๑๖ เมษายน ๒๕๖๔

นาวาอากาศเอก
(ทวีวงศ์ หาญตำรงค์)
ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์
โรงพยาบาลภูมิพลอดุลยเดช
กรมแพทย์ทหารอากาศ

พลอากาศตรีหญิง
(อิศรญา สุขเจริญ)
ผู้อำนวยการโรงพยาบาลภูมิพลอดุลยเดช
กรมแพทย์ทหารอากาศ

171 PHAHOLYOTHIN ROAD, KHLONG THANON, SAI MAI,
BANGKOK, THAILAND 10220 TEL. 02-534-7255

AF 02-12

คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย
254 อาคารจามจุรี 1 ชั้น 2 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330
โทรศัพท์: 0-2218-3202, 0-2218-3049 E-mail: eccu@chula.ac.th

COA No. 224/2564

ใบรับรองโครงการวิจัย

โครงการวิจัยที่ 173.1/64 : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย

ผู้วิจัยหลัก : นาวาอากาศตรีหญิงภัทรมน ทับสูงเนิน

หน่วยงาน : คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย ได้พิจารณา โดยใช้หลัก ของ Belmont Report 1979, Declaration of Helsinki 2013, Council for International Organizations of Medical Sciences (CIOM) 2016, มาตรฐานคณะกรรมการจริยธรรมการวิจัยในคน (มคจค.) 2560, นโยบายแห่งชาติและแนวทางปฏิบัติการวิจัยในมนุษย์ 2558 อนุมัติให้ดำเนินการศึกษาวิจัยเรื่องดังกล่าวได้

ลงนาม	ลงนาม ....
(รองศาสตราจารย์ นายแพทย์ปรีดา ทัศนประดิษฐ)	(ผู้ช่วยศาสตราจารย์ ดร.ระวีนันท์ มิ่งภัคนีย์)
ประธาน	กรรมการและเลขานุการ

วันที่รับรอง : 17 พฤศจิกายน 2564 วันหมดอายุ : 16 พฤศจิกายน 2565

เอกสารที่คณะกรรมการรับรอง

1) โครงการวิจัย

2) ผู้วิจัย

3) เอกสารข้อมูลสำหรับผู้มีส่วนร่วมในการวิจัยและหนังสือแสดงความยินยอมของผู้มีส่วนร่วมในการวิจัย

4) แบบสอบถาม

เลขที่โครงการวิจัย 173.1/64
วันที่รับรอง 17 พ.ย. 2564
วันหมดอายุ 16 พ.ย. 2565

เงื่อนไข

1. ข้าพเจ้ารับทราบว่าเป็นการผิดจริยธรรม หากดำเนินการเก็บข้อมูลการวิจัยก่อนได้รับการอนุมัติจากคณะกรรมการพิจารณาจริยธรรมการวิจัยฯ

2. หากใบรับรองโครงการวิจัยหมดอายุ การดำเนินการวิจัยต้องยุติ เมื่อต้องการต่ออายุต้องขออนุมัติใหม่ล่วงหน้าไม่ต่ำกว่า 1 เดือน พร้อมส่งรายงานความก้าวหน้าการวิจัย

3. ต้องดำเนินการวิจัยตามที่ระบุไว้ในโครงการวิจัยอย่างเคร่งครัด

4. ใช้เอกสารข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย ใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย และเอกสารเชิญเข้าร่วมวิจัย (ถ้ามี) เฉพาะที่ประทับตราคณะกรรมการเท่านั้น

5. หากเกิดเหตุการณ์ไม่พึงประสงค์ร้ายแรงในสถานที่เก็บข้อมูลที่ขออนุมัติจากคณะกรรมการ ต้องรายงานคณะกรรมการภายใน 5 วันทำการ

6. หากมีการเปลี่ยนแปลงการดำเนินการวิจัย ให้ส่งคณะกรรมการพิจารณารับรองก่อนดำเนินการ

7. หากยุติโครงการวิจัยก่อนกำหนดต้องแจ้งคณะกรรมการฯ ภายใน 2 สัปดาห์พร้อมคำชี้แจง

8. โครงการวิจัยไม่เกิน 1 ปี ส่งแบบรายงานสิ้นสุดโครงการวิจัย (AF 01-15) และบทคัดย่อผลการวิจัยภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น สำหรับโครงการวิจัยที่เป็นวิทยานิพนธ์ให้ส่งบทคัดย่อผลการวิจัย ภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น

9. โครงการวิจัยที่มีหลายระยะ จะรับรองโครงการเป็นระยะ เมื่อดำเนินการวิจัยในระยะแรกเสร็จสิ้นแล้ว ให้ดำเนินการส่งรายงานความก้าวหน้า พร้อมโครงการวิจัยและเอกสารที่เกี่ยวข้องในระยะถัดไป

10. คณะกรรมการฯ สงวนสิทธิ์ในการตรวจเยี่ยมเพื่อติดตามการดำเนินการวิจัย

11. สำหรับโครงการวิจัยจากภายนอก ผู้บริหารส่วนงาน กำกับการดำเนินการวิจัย

KEF65004

F/17-03/03.0

Khon Kaen Hospital
Institute Review Board in Human Research

เอกสารรับรองจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลขอนแก่น

ชื่อคณะกรรมการ: คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลขอนแก่น
ที่อยู่คณะกรรมการ: 54, 56 ถนนศรีจันทร์ ตำบลในเมือง อำเภอเมือง จังหวัดขอนแก่น 40000

ชื่อผู้วิจัยหลัก: นาวาอากาศตรีหญิง ภัทรมน ทับสูงเนิน
หน่วยงาน: คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ชื่อผู้ร่วมวิจัย: นางผนึกแก้ว คลังคา
หน่วยงาน: กลุ่มภารกิจด้านการพยาบาล โรงพยาบาลขอนแก่น

ชื่อเรื่อง: โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND
รหัสโครงการวิจัย: KEF65004
สถานที่ทำวิจัย: แผนกผู้ป่วยนอก แผนกผู้ป่วยใน กลุ่มภารกิจพยาบาล โรงพยาบาลขอนแก่น

รายการเอกสาร	การอ้างอิง
แบบเสนอเพื่อขอรับการพิจารณาจริยธรรมการวิจัยในมนุษย์	เวอร์ชั่น 2 วันที่ 21 กุมภาพันธ์ 2565
โครงร่างการวิจัยฉบับสมบูรณ์	เวอร์ชั่น 2 วันที่ 21 กุมภาพันธ์ 2565
เอกสารชี้แจงข้อมูลแก่ผู้เข้าร่วมโครงการวิจัย กรณีอายุ ≥ 18 ปี	เวอร์ชั่น 2 วันที่ 21 กุมภาพันธ์ 2565
หนังสือแสดงเจตนายินยอมเข้าร่วมการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ (อายุตั้งแต่ 18 ปีขึ้นไป)	เวอร์ชั่น 2 วันที่ 21 กุมภาพันธ์ 2565
ประวัติความรู้ความชำนาญของนักวิจัย	

การพิจารณา: [ ] แบบเร็ว [√] แบบปกติ

เสนอรายงานความก้าวหน้า: ทุกๆ ☐ 3 เดือน ☐ 6 เดือน ☑ 12 เดือน

วันที่เริ่มอนุมัติ: 10 มีนาคม 2565 **วันหมดอายุ:** 9 มีนาคม 2566

ได้ผ่านการพิจารณาด้านจริยธรรมการวิจัยในมนุษย์จากคณะกรรมการจริยธรรมวิจัยในมนุษย์ โรงพยาบาลขอนแก่น โดยอ้างปฏิญญาเฮลซิงกิ (Declaration of Helsinki) และแนวทางปฏิบัติการวิจัยทางคลินิกที่ดี (ICH GCP) แล้ว และเห็นว่าผู้วิจัยต้องดำเนินการตามโครงการวิจัยที่ได้กำหนดไว้ หากจะมีการปรับเปลี่ยนหรือแก้ไขใดๆ ควรผ่านความเห็นชอบหรือแจ้งต่อคณะกรรมการจริยธรรมวิจัยในมนุษย์ โรงพยาบาลขอนแก่นก่อน

(นางสาวทุมวดี ตั้งศิริวัฒนา)
นายแพทย์ชำนาญการพิเศษ
ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลขอนแก่น

ชื่อหน่วยงาน โรงพยาบาลบึงกาฬ

กระทรวงสาธารณสุข

ที่อยู่ 255 ม.1 ต.บึงกาฬ อ.เมืองบึงกาฬ จ.บึงกาฬ โทร.042-491161-3 (ต่อ 318)

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลบึงกาฬ ดำเนินการให้การรับรองโครงการการวิจัยตามแนวทางหลักจริยธรรมการวิจัยในมนุษย์ที่เป็นมาตรฐานสากล ได้แก่ Declaration of Helsinki และ CIOMS Guideline

เอกสารรับรองเลขที่	: BKHEC2022-07
ชื่อโครงการ	: โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
ผู้วิจัยหลัก	: นาวาอากาศตรีหญิงภัทรมน ทับสูงเนิน
สังกัดหน่วยงาน	: วิทยาลัยพยาบาลทหารอากาศ กรมแพทย์ทหารอากาศ
วิธีทบทวน	: แบบเร่งด่วน (Expedited review)
รายงานความก้าวหน้า	: ส่งรายงานฉบับสมบูรณ์หากดำเนินการเสร็จสิ้น
เอกสารที่รับรอง :	1. แบบเสนอโครงการวิจัย
	2. แบบยินยอมอาสาสมัคร
	3. แบบชี้แจงอาสาสมัคร
	4. แบบสอบถาม
วันที่รับรอง	: 28 ธันวาคม พ.ศ. 2564
วันที่หมดอายุ	: 27 ธันวาคม พ.ศ. 2565

ลงนาม.....

(นางวัลลภา ช่างเจรจา)

คณะกรรมการจริยธรรมการวิจัยในมนุษย์

ลงนาม.....

(นางยัญชลี มาลาศรี)

คณะกรรมการจริยธรรมการวิจัยในมนุษย์

ลงนาม.....

(นายพิสิทธ์พงษ์ บึงมุม)

ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์

	มาตรฐานการปฏิบัติงานจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลสระบุรี	SRBR AF 02-07
	เอกสารรับรองโครงการวิจัย (Certificate Form)	เริ่มใช้ 1 ธันวาคม 2564

คณะกรรมการจริยธรรมการวิจัยในมนุษย์โรงพยาบาลสระบุรี กระทรวงสาธารณสุข
เลขที่ 18 ถนนเทศบาล 4 ตำบลปากเพรียว อำเภอเมือง จังหวัดสระบุรี (18000)
โทร. 036-343500 ต่อ 1551

เอกสารรับรองโครงการวิจัย

คณะกรรมการจริยธรรมการวิจัยในมนุษย์โรงพยาบาลสระบุรี ดำเนินการให้การรับรองโครงการวิจัยตามแนวทางหลักจริยธรรมการวิจัยเกี่ยวกับคนที่เป็นมาตรฐานสากล ได้แก่ Declaration of Helsinki, The Belmont Report, CIOMS Guideline และ International Conference on Harmonization in Good Clinical Practice หรือ ICH-GCP

ชื่อโครงการ : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย

เลขที่โครงการวิจัย : SRBR64-047 **เลขที่หนังสือรับรอง :**EC043/2564

ผู้วิจัยหลัก : นาวาอากาศตรีหญิง/[illegible] ทับสูงเนิน

สังกัดหน่วยงาน : วิทยาลัยพยาบาลทหารอากาศ

เอกสารรับรอง :

1. โครงร่างการวิจัย
2. Inform consent form and assent form
3. เครื่องมือที่ใช้เก็บรวบรวมข้อมูล

ส่งรายงานความก้าวหน้าทุก : ☐ 3 เดือน ☐ 6 เดือน ☑ 1 ปี

ลงนาม : ..... **ลงนาม :** .....

(นายแพทย์ณรงค์ศักดิ์ วัชโรทน)
ประธานกรรมการจริยธรรมการวิจัยในมนุษย์

(นางสมศิริ พันธุ์ศักดิ์สิริ)
เลขานุการคณะกรรมการจริยธรรมการวิจัยในมนุษย์

วันที่รับรอง : 28 ธันวาคม 2564 **วันหมดอายุ : 28 ธันวาคม 2565**

ทั้งนี้ การรับรองนี้มีเงื่อนไขดังที่ระบุไว้ด้านหลังทุกข้อ (ดูด้านหลังของเอกสารรับรองโครงการวิจัย)

รหัสโครงการวิจัยเลขที่ ATGEC ๐๖/๒๕๖๕

คณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์จังหวัดอ่างทอง

โครงการวิจัย : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
: A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND.

รหัสโครงการ : ATGEC ๐๖/๒๕๖๕

หัวหน้าโครงการ : นางอากาศตรีหญิง ภัทรมน ทับสูงเนิน

สถานที่ดำเนินวิจัย : จังหวัดอ่างทอง

เอกสารที่พิจารณา

๑. โครงการวิจัยเพื่อขอรับการพิจารณาจากคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์จังหวัดอ่างทอง
๒. เครื่องมือเก็บรวบรวมข้อมูล เช่น แบบสอบถามเพื่อการวิจัย

คณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์จังหวัดอ่างทองได้พิจารณาโครงการฉบับภาษาไทยแล้ว คณะกรรมการฯพิจารณาอนุมัติในแง่จริยธรรมให้ดำเนินการศึกษาวิจัยเรื่องข้างต้นได้ ทั้งนี้โดยยึดตามเอกสารฉบับภาษาไทยเป็นหลัก อนึ่งท่านต้องทำรายงานสถานะของโครงการให้คณะกรรมการฯ ทราบ (ระบุระยะเวลา/ปี) เพื่อขออนุมัติดำเนินโครงการต่อจนกว่าจะหมดอายุโครงการ

.....ประธานกรรมการ
(นายทวีโชค โรจนอารัมภ์กุล)
นายแพทย์เชี่ยวชาญ (ด้านเวชกรรมป้องกัน)

.....กรรมการและเลขานุการ
(นายเสกสรรค์ สวัสดี)
นักวิชาการสาธารณสุขชำนาญการ

วันที่ประชุมครั้งแรก วันที่ ๓๐ ธันวาคม พ.ศ. ๒๕๖๔
รับรองตั้งแต่วันที่ วันที่ ๖ มกราคม พ.ศ. ๒๕๖๕ ถึงวันที่ ๕ มกราคม พ.ศ. ๒๕๖๖

เอกสารเลขที่ ๐๐๖ / ๒๕๖๕ รหัสวิจัย ๑/๖๕/O/q

ใบรับรองโครงการวิจัย
โดย คณะกรรมการจริยธรรมการวิจัย โรงพยาบาลชลบุรี

โครงการวิจัย : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพ **ในประเทศไทย**
A Causal Model for the Quality of Nursing Work Life Among Professional Nurses in Thailand

ฉบับที่และวันที่ : ฉบับที่ ๔ วันที่ ๑๕ กุมภาพันธ์ ๒๕๖๕

ผู้ดำเนินการวิจัยหลัก : นาวาอากาศตรีหญิงภัทรมน ทับสูงเนิน

หน่วยงานที่รับผิดชอบ : คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

คณะกรรมการจริยธรรมการวิจัย โรงพยาบาลชลบุรี ได้พิจารณาแล้วเห็นว่าสมควรให้ดำเนินการวิจัยในขอบข่ายของโครงการวิจัยที่เสนอได้

ลงนาม

(แพทย์หญิงวรนาฏ รัตนากร)
ประธานคณะกรรมการจริยธรรมวิจัย
วันที่รับรอง : ๑๘ กุมภาพันธ์ ๒๕๖๕

ลงนาม

(แพทย์หญิงจิรวรรณ อารยะพงษ์)
ผู้อำนวยการโรงพยาบาลชลบุรี
วันหมดอายุ: ๑๘ กุมภาพันธ์ ๒๕๖๖

เอกสารที่คณะกรรมการรับรอง

๑. โครงการวิจัย
๒. ข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัยและใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย
๓. ผู้วิจัย
๔. แบบสอบถาม
๕. ใบยินยอมเข้าร่วมงานวิจัยของอาสาสมัคร

กำหนดการส่งรายงานความคืบหน้าการวิจัย

☐ทุก ๓ เดือน ☐ทุก ๖ เดือน ☑๑ ปี

COA 003/2565

คณะกรรมการจริยธรรมการวิจัยในมนุษย์
โรงพยาบาลสุราษฎร์ธานี

เอกสารรับรองจริยธรรมการวิจัยในมนุษย์

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลสุราษฎร์ธานี ดำเนินการให้การรับรองโครงการวิจัยตามแนวทางหลักจริยธรรมการวิจัยเกี่ยวกับคนที่เป็นมาตรฐานสากล ได้แก่ Declaration of Helsinki, The Belmont Report, CIOMS Guideline และ International Conference on Harmonization in Good Clinical Practice หรือ ICH-GCP

ชื่อโครงการ : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
A causal model for the quality of nursing work life among professional nurses in Thailand

เลขที่โครงการวิจัย : REC 65-0002

ผู้วิจัยหลัก : นาวาอากาศตรีหญิงภัทรมน ทับสูงเนิน

สังกัดหน่วยงาน : คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

เอกสารรับรอง

1. แบบเสนอเพื่อขอรับการพิจารณาจริยธรรมการวิจัยในมนุษย์ ฉบับที่ 002/65 ลงวันที่ 05/01/2565
2. โครงร่างวิจัยฉบับสมบูรณ์ ฉบับที่ 002/65 ลงวันที่ 05/01/2565
3. แบบบันทึกข้อมูล ฉบับที่ 002/65 ลงวันที่ 05/01/2565
4. ประวัติผู้วิจัยและหลักฐานการอบรมจริยธรรมการวิจัย (GCP)

หากมีการปรับเปลี่ยนหรือแก้ไขใดๆ ควรผ่านความเห็นชอบหรือแจ้งต่อคณะกรรมการจริยธรรมทางการวิจัยอีกครั้ง และส่งรายงานความก้าวหน้าสิ้นสุดการวิจัย หรือไม่เกิน 1 ปี

วันที่รับรอง 24 มีนาคม 2565
วันหมดอายุ 24 มีนาคม 2566

(นายประกอบ ลือชาเกียรติศักดิ์)
นายแพทย์ทรงคุณวุฒิ (ด้านเวชกรรมสาขาศัลยกรรม)
ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลสุราษฎร์ธานี
56 ถนนศรีวิชัย อำเภอเมือง จังหวัดสุราษฎร์ธานี 84000
โทร 077 952 900 ต่อ 2296,3105 โทรสาร 077 952 942

COA No. 1/2565

PPHOREC No.....

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลควนขนุน อำเภอควนขนุน จังหวัดพัทลุง

กระทรวงสาธารณสุข

ที่อยู่ 232 หมู่ที่ 9 ตำบลควนขนุน อำเภอควนขนุน จังหวัดพัทลุง

เอกสารรับรองโครงการวิจัยแบบเร็ว

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ สำนักงานสาธารณสุขจังหวัดพัทลุง ดำเนินการให้การรับรองโครงการวิจัยตามแนวทางหลักจริยธรรมการวิจัยในมนุษย์ที่เป็นมาตรฐานสากลได้แก่ Declaration of Helsinki, The Belmont Report, CIOMS Guideline และ International Conference on Harmonization in Good Clinical Practice หรือ ICH-GCP

ชื่อโครงการ : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย

เลขที่โครงการวิจัย : -

ผู้วิจัยหลัก : นางวาอากาศตรีหญิง ภัทรมน ทับสูงเนิน

สังกัดหน่วยงาน : โรงพยาบาลควนขนุน อำเภอควนขนุน จังหวัดพัทลุง

วิธีทบทวน : แบบเร็ว

รายงาน : ส่งรายงานความก้าวหน้าอย่างน้อย 1 ครั้ง/ปี หรือ ส่งรายงานฉบับสมบูรณ์หาก

ความก้าวหน้า ดำเนินโครงการเสร็จสิ้นก่อน 1 ปี

เอกสารรับรอง :

ลงนาม.....

(นายเชษฐพงศ์ สัจจาผล)

ประธาน

คณะกรรมการจริยธรรมการวิจัยในมนุษย์

ลงนาม.....

(นางสาวเบญจวัน ชำเกื้อ)

กรรมการ

คณะกรรมการจริยธรรมการวิจัยในมนุษย์

วันที่รับรอง : 1 มกราคม 2565

วันหมดอายุ : 31 ธันวาคม 2565

ทั้งนี้ การรับรองนี้มีเงื่อนไขดังที่ระบุไว้ด้านหลังทุกข้อ (ดูด้านหลังของเอกสารรับรองโครงการวิจัย)

ที่ สธ ๐๘๒๒.๑๒/๔๙๙

สถาบันราชานุกูล
ถนนดินแดง เขตดินแดง กรุงเทพฯ ๑๐๔๐๐

๑๖ เมษายน ๒๕๖๕

เรื่อง แจ้งผลการพิจารณาจริยธรรมการวิจัย

เรียน คณบดีคณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ด้วยคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ สถาบันราชานุกูล ได้พิจารณาโครงการวิจัย เรื่อง "โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย" ผู้วิจัยหลักคือ นาวาอากาศตรีหญิง ภัทรมน ทับสูงเนิน เรียบร้อยแล้ว

คณะกรรมการฯ มีมติการพิจารณาโครงการวิจัยดังกล่าว เป็นประเภทที่ ๑ รับรองโครงการวิจัย ขอให้ท่านดำเนินการดังนี้

๑. ติดต่อขอรับเอกสารรับรองโครงการได้ที่สำนักงานจริยธรรมการวิจัยในมนุษย์ ชั้น ๒ อาคารนายแพทย์รสชง ทัศนาญชลี โดยผู้มาติดต่อรับเอกสารต้องเป็นผู้วิจัยหรือผู้ร่วมงานวิจัยที่มีรายชื่อปรากฏในแบบเสนอโครงการเท่านั้น พร้อมลงบันทึกลายมือชื่อผู้รับ วันที่รับเป็นลายลักษณ์อักษร

๒. ใช้เอกสารแนะนำอาสาสมัคร ใบยินยอม แบบสัมภาษณ์ และหรือแบบสอบถาม เฉพาะที่มีตราประทับของคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ สถาบันราชานุกูล เท่านั้น

๓. รายงานเหตุการณ์ไม่พึงประสงค์ร้ายแรงที่เกิดขึ้นหรือการเปลี่ยนแปลงกิจกรรมวิจัยใด ๆ ต่อคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ ภายใน ๕ วันทำการ

๔. ส่งรายงานความก้าวหน้าต่อคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ ตามเวลาที่กำหนดหรือเมื่อได้รับการร้องขอ

๕. หากการวิจัยไม่สามารถดำเนินการเสร็จสิ้นภายในกำหนด ผู้วิจัยต้องยื่นขอความเห็นชอบใหม่ก่อนหมดอายุ ๑ เดือน

๖. หากการวิจัยเสร็จสมบูรณ์ผู้วิจัยต้องแจ้งปิดโครงการในแบบรายงานความก้าวหน้าโครงการวิจัย (AP 06.0) และแบบรายงานสรุปผลการวิจัย (AP 07.0) พร้อมส่งเอกสารงานวิจัยฉบับสมบูรณ์หรือบทความวิจัยฉบับเต็ม (Manuscript) หรือสรุปผลการวิจัย จำนวน ๑ ฉบับ

จึงเรียนมาเพื่อทราบและดำเนินการตามเงื่อนไขข้างต้นต่อไปด้วย จะเป็นพระคุณ

ขอแสดงความนับถือ

(นางนพวรรณ ศรีวงค์พานิช)
ผู้อำนวยการสถาบันราชานุกูล

สำนักงานจริยธรรมการวิจัยในมนุษย์
โทร. ๐ ๒๒๔๘ ๘๘๐๐ ต่อ ๗๐๙๓๓
โทรสาร ๐ ๒๖๔๐ ๒๐๓๕

AF 14-12

COA No 004/2565

ใบรับรองโครงการวิจัย

โครงการวิจัยที่ : 004/2565

ชื่อโครงการวิจัย (ภาษาไทย) : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย

(ภาษาอังกฤษ) : A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND

ผู้วิจัยหลัก : นางสาวกาศตรีหญิง ภัทรมน ทับสูงเนิน

หน่วยงาน : คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลเมตตาประชารักษ์ (วัดไร่ขิง) ได้พิจารณา โดยใช้หลักของ The International Conference on Harmonization – Good Clinical Practice (ICH-GCP) อนุมัติให้ดำเนินการศึกษาวิจัยเรื่องดังกล่าวได้

ลงนาม .....
(พญ.สุณิสา สินธุวงศ์)
ประธาน

ลงนาม .....
(นางวิวรรณ อภินันทชาติ)
กรรมการและเลขานุการ

วันที่รับรอง : 11 มกราคม 2565 ครั้งที่ 1 วันหมดอายุ : 10 มกราคม 2566

เอกสารที่กรรมการรับรอง

1. โครงการวิจัย Version1_Date22/12/64
2. ข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัยและใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย
3. ผู้วิจัย
4. เอกสารเครื่องมือต่าง ๆ ที่ใช้ในการวิจัย เป็นต้นว่า แบบสอบถาม
5. เอกสารอื่น ๆ ที่เกี่ยวข้อง เช่น เอกสารประชาสัมพันธ์ เป็นต้น

เงื่อนไข

1. ผู้วิจัยรับทราบว่าเป็นการผิดจริยธรรม หากดำเนินการเก็บข้อมูลการวิจัยก่อนได้รับการอนุมัติจากคณะกรรมการจริยธรรมการวิจัยในมนุษย์
2. หากใบรับรองโครงการวิจัยหมดอายุ การดำเนินการวิจัยต้องยุติ เมื่อต้องการต่ออายุต้องขออนุมัติใหม่ล่วงหน้าไม่ต่ำกว่า 1 เดือน พร้อมส่งรายงานความก้าวหน้าการวิจัย
3. ต้องดำเนินการวิจัยตามที่ระบุไว้ในโครงการวิจัยอย่างเคร่งครัด
4. ใช้เอกสารข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมการวิจัย ใบยินยอมของกลุ่มประชากรหรือผู้มีส่วนร่วมการวิจัย และเอกสารเชิญเข้าร่วมวิจัย (ถ้ามี) **เฉพาะที่ประทับตราคณะกรรมการเท่านั้น**
5. หากเกิดเหตุการณ์ไม่พึงประสงค์ร้ายแรงในสถานที่เก็บข้อมูลที่ขออนุมัติจากคณะกรรมการ ต้องรายงานคณะกรรมการภายใน 5 วันทำการ
6. หากมีการเปลี่ยนแปลงการดำเนินการวิจัย ให้ส่งคณะกรรมการพิจารณารับรองก่อนดำเนินการ
7. โครงการวิจัยไม่เกิน 1 ปี ส่งแบบรายงานสิ้นสุดโครงการวิจัย (AF 01-15) และบทคัดย่อผลการวิจัยภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น สำหรับโครงการวิจัยที่เป็นวิทยานิพนธ์ให้ส่งบทคัดย่อผลการวิจัยภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น

V. 1/2560

681 SAMSEN ROAD, DUSIT, BANGKOK 10300
Tel. 0-2244-3843

COA 051/2565

INSTITUTIONAL REVIEW BOARD
FACULTY OF MEDICINE VAJIRA HOSPITAL
CERTIFICATE OF APPROVAL

The Institutional Review Board of the Faculty of Medicine Vajira Hospital, is in full compliance with the International guidelines for human research protection as Declaration of Helsinki, The Belmont Report, CIOMS Guideline and International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

PROTOCOL TITLE	A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
STUDY CODE	310/64 E
PRINCIPAL INVESTIGATOR	Sqn.Ldr. Pattaramon Tubsoongnoen
AFFILIATION	Faculty of Nursing Chulalongkorn University

APPROVAL DOCUMENTS

1. Research protocol **version 2 date 1 February 2022**
2. Informed consent documents **version 2 date 1 February 2022**
3. Case Record Form **version 2 date 1 February 2022**
4. Investigator's CV and ICH-GCP Training Certificate and Declaration of conflict of interest
   4.1 Investigator's
      1) Sqn.Ldr. Pattaramon Tubsoongnoen

Signature.....
(Professor Siriwan Tangjitgamol, MD)
Chairman
Vajira Institutional Review Board

Date of Approval 17/02/2022
Approval Expire Date 16/02/2023
Approval is granted subject to the following conditions (see back of this Certificate)

ศูนย์วิจัยและนวัตกรรม โรงพยาบาลตำรวจ
สำนักงานตำรวจแห่งชาติ
492/1 ถนนพระรามที่ 1 เขตปทุมวัน
กรุงเทพมหานคร 10330

เอกสารรับรองโครงการวิจัย
โดยคณะอนุกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลตำรวจ

เลขที่หนังสือรับรอง จว.04/2565

ชื่อโครงการ/ภาษาไทย	โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย
ชื่อโครงการ/ภาษาอังกฤษ	A CAUSAL MODEL FOR THE QUALITY OF NURSING WORK LIFE AMONG PROFESSIONAL NURSES IN THAILAND
ชื่อหัวหน้าโครงการ/หน่วยงานที่สังกัด	นางอาภาศศรีหญิง ภัทรมน ทับสูงเนิน นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
รหัสโครงการ	OqL/65
สถานที่ทำการวิจัย	โรงพยาบาลตำรวจ
เอกสารรับรอง	1. รายละเอียดโครงร่างการวิจัยฉบับที่ 1.0 ลงวันที่ 17 มกราคม 2565 (Version 1.0 Date 17 January 2022) (ฉบับภาษาไทย) 2. เอกสารชี้แจงข้อมูลและเอกสารลงนามยินยอมฉบับที่ 1.0 ลงวันที่ 17 มกราคม 2565 (Version 1.0 Date 17 January 2022) (ฉบับภาษาไทย) 3. แบบฟอร์มการเก็บข้อมูลและการวิเคราะห์ข้อมูลฉบับที่ 1.0 ลงวันที่ 17 มกราคม 2565 (Version 1.0 Date 17 January 2022) (ฉบับภาษาไทย) 4. อัตตประวัติผู้วิจัย
รับรองโดย	คณะอนุกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลตำรวจ
วันที่รับรองโครงการ	17 มกราคม 2565
วันที่หมดอายุ	16 มกราคม 2566

คณะอนุกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลตำรวจ จัดตั้งและดำเนินการตาม Good Clinical Practice (GCP) และแนวทางจริยธรรมสากล กฎหมายและข้อบังคับที่เกี่ยวข้อง

ร้อยตำรวจเอก
(อฐิรัฐ จันทร์พานิชเจริญ)
เภสัชกร (สบ 1) กลุ่มงานเภสัชกรรม/
รองประธานคณะอนุกรรมการพิจารณาจริยธรรม
การวิจัยในมนุษย์โรงพยาบาลตำรวจ

พลตำรวจตรีหญิง
(ธนินทร สมนึก)
นายแพทย์ (สบ 6) โรงพยาบาลตำรวจ/
ประธานคณะอนุกรรมการพิจารณาจริยธรรม
การวิจัยในมนุษย์โรงพยาบาลตำรวจ

หมายเลขโครงการ 001/65

คณะกรรมการพิจารณาจริยธรรมการวิจัย
โรงพยาบาลบ้านแพ้ว (องค์การมหาชน)
198 หมู่ 1 อำเภอ บ้านแพ้ว จังหวัด สมุทรสาคร 74120 โทร 034-419555

หนังสือรับรองเอกสารที่เกี่ยวข้องกับโครงการวิจัย

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลบ้านแพ้ว(องค์การมหาชน) ดำเนินการให้การรับรองเอกสารที่เกี่ยวข้องกับโครงการวิจัยตามแนวทางหลักจริยธรรมการวิจัยในคนที่เป็นมาตรฐานสากลได้แก่ Declaration of Helsinki, The Belmont Report, CIOMS Guideline และ International Conference on Harmonization in Good Clinical Practice หรือ ICH-GCP

ชื่อโครงการ : โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย

เลขที่โครงการวิจัย : 001/65

ผู้วิจัยหลัก : นางวาธากาศศรีหญิง ภัทรมน ทับสูงเนิน

สังกัดหน่วยงาน : คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

วิธีทบทวน : คณะกรรมการแบบเร่งด่วน (Expedited review)

รายงานความก้าวหน้า : ส่งรายงานความก้าวหน้าอย่างน้อย 1 ครั้ง/ปี

เอกสารที่ได้รับการรับรอง :

1. โครงร่างการวิจัย (Version 2 Date 11 มี.ค. 65)
2. เอกสารชี้แจงข้อมูล คำแนะนำแก่ผู้เข้าร่วมการวิจัย (Version 2 Date 11 มี.ค. 65)
3. หนังสือแสดงความยินยอมเข้าร่วมโครงการวิจัย
4. แบบฟอร์มเปิดเผยการมีผลประโยชน์ทับซ้อนและทุนวิจัย
5. แบบสอบถามการเก็บรวบรวมข้อมูลสำหรับการวิจัย
6. ประวัติและหลักฐานการผ่านแนวทางปฏิบัติการวิจัยทางคลินิกที่ดี
   - นางวาธากาศศรีหญิง ภัทรมน ทับสูงเนิน
   - รองศาสตราจารย์ ดร. จินตนา ยูนิพันธุ์
   - รองศาสตราจารย์ ร.ต.อ.หญิง ดร. อุพิน ยังสุโรจน์

ลงนาม.....
(พันตแพทย์ ดร.สิเรส รติพัฒนา)
ประธานคณะกรรมการจริยธรรม
การวิจัยในมนุษย์

ลงนาม ศิรินทิพย์ นิมิตรกูลกล
(นางสาวศิรินทิพย์ นิมิตรกูลกล)
กรรมการและเลขานุการ
คณะกรรมการจริยธรรมการวิจัยในมนุษย์

วันที่รับรอง : 22 มีนาคม 2565
วันหมดอายุ : 21 มีนาคม 2566

APPENDIX E

INFORMED CONSENT AND PARTICIPANT INFORMATION SHEET

เอกสารข้อมูลสำหรับผู้มีส่วนร่วมในการวิจัย

และหนังสือแสดงยินยอมเข้าร่วมการวิจัย

ชื่อโครงการวิจัย โมเดลเชิงสาเหตุของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย

ชื่อผู้วิจัย นาวาอากาศตรีหญิง ภัทรมน ทับสูงเนิน นิสิตคณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

สถานที่ติดต่อผู้วิจัย (ที่ทำงาน) คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อาคารบรมราชชนนีศรีศตพรรษ ชั้น11 ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน กรุงเทพฯ 10330

โทรศัพท์02-2181128 โทรสาร 0-2218-1130

(ที่บ้าน) วิทยาลัยพยาบาลทหารอากาศ พอ .171/2 แขวง คลองถนน เขตสายไหม กรุงเทพฯ 10220

โทรศัพท์ที่บ้าน-

โทรศัพท์มือถือ 09-8297-4950 หรือ 09-2932-6497 E-mail :pattaramon.tsn@gmail.com

แหล่งทุนวิจัย ผู้สนับสนุนการวิจัย บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย และคณะแพทย์/ประเทศญี่ปุ่น

ขอเรียนเชิญเข้าร่วมการวิจัย ก่อนตัดสินใจเข้าร่วมในการวิจัย โปรดทำความเข้าใจว่างานวิจัยนี้เกี่ยวข้องกับอะไรและทำเพราะเหตุใด กรุณาใช้เวลาในการอ่านข้อมูลต่อไปนี้อย่างรอบคอบ หากมีข้อความใดที่อ่านแล้วไม่เข้าใจหรือไม่ชัดเจน โปรดสอบถามเพิ่มเติมกับผู้วิจัยได้ตลอดเวลา ผู้วิจัยจะอธิบายจนกว่าจะเข้าใจอย่างชัดเจน

1. การวิจัยครั้งนี้เป็นการวิจัยเชิงบรรยาย เพื่อศึกษาความสัมพันธ์เชิงสาเหตุ (Structural Equation Model) ระหว่างปัจจัยคัดสรรที่ประกอบด้วย ภาวะผู้นำการเปลี่ยนแปลง คุณลักษณะของงาน บรรยากาศองค์การ ความพึงพอใจในการทำงาน และคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในประเทศไทย โดยผู้วิจัยพยายามพัฒนาโมเดลเชิงสาเหตุตามสมมติฐานของคุณภาพชีวิตการทำงานของพยาบาลโดยมุ่งเน้นไปที่ชุดของปัจจัยทำนายของคุณภาพชีวิตการทำงานของพยาบาลวิชาชีพในบริบทของประเทศไทย ที่เพื่อค้นหาปัจจัยทำนายที่สำคัญที่จะส่งเสริมสภาพแวดล้อมความเป็นมนุษย์ในการทำงาน รวมไปถึงการตอบสนองความต้องการขั้น

พื้นฐานในระดับที่สูงขึ้น โดยศึกษาในกลุ่มพยาบาลวิชาชีพที่ปฏิบัติงานในโรงพยาบาลรัฐทั้ง 5 สังกัดที่ยังอยู่ในระดับปฏิบัติการ และมีอายุน้อยกว่า 49 ปี

2. การให้ข้อมูลและขอความยินยอม

ในการวิจัยครั้งนี้ ผู้ประสานงานวิจัยเป็นผู้ให้ข้อมูลแก่พยาบาลวิชาชีพเพื่อขอความยินยอมเข้าร่วมวิจัย โดยผู้ประสานงานวิจัยจะทำการแนะนำตัวเองโดยเตรียมเอกสารข้อมูลคำอธิบายงานวิจัยให้พยาบาลวิชาชีพได้อ่านทำความเข้าใจ ชี้แจงวัตถุประสงค์ และรายละเอียดเบื้องต้น เกี่ยวกับการทำวิจัย ประโยชน์และความเสี่ยงเมื่อเข้าร่วมวิจัย ตลอดจนการพิทักษ์สิทธิ์ของผู้เข้าร่วมวิจัย เปิดโอกาสให้พยาบาลวิชาชีพมีเวลาในการทบทวนเพื่อตัดสินใจในการเข้าร่วมการวิจัยตามความสมัครใจ หากพยาบาลวิชาชีพต้องการรายละเอียดเพิ่มเติม ผู้ประสานงานวิจัยจะประสานให้ผู้วิจัยเป็นผู้ให้ข้อมูลแก่พยาบาลวิชาชีพเอง จนกว่าจะเข้าใจอย่างชัดเจน หากพยาบาลวิชาชีพสมัครใจที่จะเป็นผู้เข้าร่วมวิจัย จึงจะดำเนินการในขั้นตอนการเก็บข้อมูลต่อไป

3รายละเอียดของผู้เข้าร่วมการวิจัยและคุณสมบัติ .

ผู้เข้าร่วมการวิจัยในครั้งนี้ คือพยาบาลวิชาชีพในประเทศไทยทั้งสิ้นจำนวน 407 คน จากโรงพยาบาล 22 แห่ง คัดเลือกประชากรตามเกณฑ์การคัดเข้าและคัดออกดังต่อไปนี้

เกณฑ์การคัดเข้า

3.1 เป็นพยาบาลวิชาชีพระดับการศึกษาปริญญาตรีขึ้นไป

3.2 ได้รับใบอนุญาตเป็นผู้ประกอบวิชาชีพการพยาบาลและผดุงครรภ์ชั้นหนึ่ง

3.3 ประสบการณ์การทำงาน 1 ปีขึ้นไป

3.4 อายุน้อยกว่า ปี 49

3.5 เป็นพยาบาลระดับปฏิบัติการ

3.6 ปฏิบัติงานในโรงพยาบาลสังกัดใดสังกัดหนึ่งของรัฐ ได้แก่ 1) สังกัดสำนักงานปลัดกระทรวงสาธารณสุข 2) กรมการแพทย์ 3) โรงพยาบาลมหาวิทยาลัยที่สังกัดกระทรวงการอุดมศึกษา วิทยาศาสตร์ วิจัยและนวัตกรรม หรือสังกัดมหาวิทยาลัยนั้นๆโดยตรง 4) โรงพยาบาลใน

สังกัดกระทรวงกลาโหมและสำนักงานตำรวจแห่งชาติ และ 5) โรงพยาบาลที่กำกับโดยกระทรวงและองค์กรอื่นๆของรัฐ

3.7 ยินดีเข้าร่วมการวิจัย

เกณฑ์การคัดออก

หากเป็นบุคลากรทางการแพทย์วิชาชีพอื่น ตลอดจนพยาบาลวิชาชีพที่เป็นผู้บริหารตั้งแต่ระดับต้นขึ้นไป จะไม่ได้รับการคัดเลือกในการศึกษาในครั้งนี้

เมื่อผ่านการพิจารณาจริยธรรมการวิจัยจากคณะกรรมการพิจารณาจริยธรรมการวิจัยในคนกลุ่มสหสถาบัน ชุดที่ 1 และผ่านการพิจารณาจริยธรรมการวิจัยของโรงพยาบาลแต่ละแห่งแล้ว ผู้วิจัยจะทำหนังสือขอความอนุเคราะห์ในการดำเนินการเก็บข้อมูลถึงผู้อำนวยการโรงพยาบาล เพื่อขอความอนุเคราะห์ ในการมอบหมายผู้ประสานงานวิจัย และอนุญาตในการพิจารณาคุณสมบัติของผู้ให้ข้อมูลและทำการเก็บข้อมูลจากผู้เข้าร่วมการวิจัยโดยวิธีการสุ่มอย่างเป็นระบบ (Systemic random sampling) จากตารางรายชื่อพยาบาลวิชาชีพเพื่อคัดเลือกพยาบาลวิชาชีพ

ผู้วิจัยติดต่อกับหัวหน้ากลุ่มภารกิจด้านการพยาบาลกลุ่มงานการพยาบาล ในขอการอนุญาตให้ / ผู้ประสานงานวิจัย เป็นผู้ติดต่อพยาบาลวิชาชีพที่มีคุณสมบัติตามเกณฑ์คัดเลือก เพื่อตรวจสอบคุณสมบัติอีกครั้ง หากพยาบาลวิชาชีพมีคุณสมบัติตามเกณฑ์คัดเลือก ผู้ประสานงานวิจัยจะเป็นผู้ติดต่อในการ ให้ข้อมูลและขอความยินยอมเพื่อดำเนินการเก็บข้อมูลวิจัยต่อไป

4 .การคัดกรองผู้มีส่วนร่วมฯตามเกณฑ์การคัดเข้าคัดออก-

ผู้เข้าร่วมวิจัยจะต้องผ่านตามเกณฑ์การคัดเข้าและคัดออกก่อน จึงจะเป็นผู้มีส่วนร่วมในการวิจัยได้ ทั้งนี้เบื้องต้นผู้วิจัยได้ติดต่อประสานเบื้องต้นกับฝ่ายการพยาบาลของแต่ละโรงพยาบาลเกี่ยวกับเกณฑ์การคัดเข้าและคัดออก เพื่อทราบจำนวนพยาบาลที่ผ่านตามเกณฑ์และขออนุญาตให้ผู้ประสานงานวิจัย เป็นผู้ติดต่อประสานการให้ข้อมูลแก่พยาบาลวิชาชีพ ขอความยินยอม และดำเนินการเก็บข้อมูลต่อไป จากนั้นทำการสุ่มอย่างเป็นระบบ (Systemic random sampling) จากตารางรายชื่อพยาบาลวิชาชีพ ให้ได้ตามจำนวนตัวแทนแต่ละโรงพยาบาลที่คำนวณได้ เพื่อคัดเลือกพยาบาลวิชาชีพจำนวน 407 คน จากโรงพยาบาลทั้งสิ้น 22 แห่ง โดยกระบวนการดังกล่าวจะไม่เป็นอันตรายหรือผลกระทบใดๆต่อพยาบาลวิชาชีพ ทั้งนี้หากผู้ที่ได้รับการสุ่มเลือกไม่ยินยอมเข้าร่วมการวิจัย จะไม่มีการบีบบังคับหรือมีผลใดๆทั้งสิ้น ภายหลังการคัดกรองเสร็จสิ้น ผู้วิจัยกล่าวแสดง

ความขอบคุณแก่หัวหน้ากลุ่มภารกิจด้านการพยาบาลกลุ่มงานการพยาบาลและผู้ประสานงานวิจัย/ ที่รับหน้าที่การติดต่อประสาน ตลอดจนกล่าวขอบคุณพยาบาลวิชาชีพทุกคนที่เข้าร่วมการคัดเลือกในครั้งนี้ผ่านทางหัวหน้ากลุ่มภารกิจด้านการพยาบาลกลุ่มงาน/การพยาบาล และผู้ประสานงานวิจัย

5 .หลังจากพยาบาลวิชาชีพยินยอมเป็นผู้เข้าร่วมวิจัย ผู้ประสานงานวิจัยจะเริ่มทำการเก็บข้อมูลโดยผู้ประสานงานวิจัยจะทำการส่งลิงค์กูเกิลฟอร์ม (Google form) พร้อมทั้งขอให้ผู้เข้าร่วมวิจัยลงชื่อยินยอมเข้าร่วมวิจัยทุกราย และมอบปากกาให้แก่ผู้เข้าร่วมวิจัยเพื่อแทนคำขอบคุณจากผู้วิจัย ทำการอธิบายวิธีการตอบแบบสอบถาม และให้ผู้เข้าร่วมวิจัยมีเวลาเพียงพอในการตอบแบบสอบถาม โดยผู้เข้าร่วมวิจัยสามารถเลือกเวลา และสถานที่ที่สะดวกในการตอบแบบสอบถามได้ด้วยตนเอง โดยแบบสอบถามมีจำนวน 6 ชุด จำนวน 287 ข้อ ประกอบด้วย แบบสอบถามปัจจัยส่วนบุคคล จำนวน 15 ข้อ แบบสอบถามภาวะผู้นำ จำนวน 45 ข้อ แบบวัดความเครียดจากงาน จำนวน 54 ข้อ แบบสอบถามบรรยากาศองค์การ จำนวน 24 ข้อ แบบสอบถามความพึงพอใจในการทำงานของพยาบาลไทย จำนวน 107 ข้อ และแบบสำรวจคุณภาพชีวิตการทำงานของพยาบาล จำนวน 42 ข้อ ซึ่งใช้เวลาตอบประมาณ 65-75 นาที

อย่างไรก็ตาม เนื่องจากข้อคำถามมีจำนวนมาก ซึ่งอาจทำให้เกิดความเบื่อหน่าย เหนื่อยล้า และมีผลต่อการตอบแบบสอบถาม ผู้เข้าร่วมวิจัยสามารถแบ่งช่วงเวลาในการตอบแบบสอบถามได้ โดยคำตอบที่ผู้เข้าร่วมวิจัยได้ตอบไว้แล้วจะถูกบันทึกไว้ในระบบ เมื่อกลับเข้ามาตอบแบบสอบถามอีกครั้ง ผู้เข้าร่วมวิจัยสามารถตอบแบบสอบถามต่อได้ โดยไม่ต้องย้อนกลับไปตอบแบบสอบถามใหม่ และจากประเด็นจำนวนข้อคำถามยังอาจมีผลกับผู้เข้าร่วมวิจัยในโรงพยาบาลบางแห่งที่มีปัญหาความ ไม่เสถียรของสัญญาณอินเทอร์เน็ต ตลอดจนข้อขัดข้องอื่นๆที่ทำให้ผู้เข้าร่วมวิจัยไม่สามารถตอบแบบสอบถามผ่านกูเกิลฟอร์ม (Google form) โดยผู้ประสานงานวิจัยจะเป็นผู้สรุปจำนวนผู้เข้าร่วมวิจัยที่ต้องการรับเอกสารเป็นแบบสอบถาม)hard copy โดยผู้วิจัยจะ (ทำการจัดเตรียมเอกสารส่งให้ ผู้ประสานงานวิจัยตามจำนวนที่ร้องขอ จากนั้นผู้ประสานงานวิจัยจะดำเนินการแจกจ่ายเอกสาร ให้แก่ผู้ร่วมการวิจัยตอบแบบสอบถามต่อไป

เนื่องจากแบบสอบถามในครั้งนี้ มีลักษณะเป็นกูเกิลฟอร์ม (Google form) ซึ่งข้อคำถามทุกข้อมีการกำหนดให้ตอบทุกข้อ เพื่อป้องกันการข้ามข้อคำถามโดยไม่ตั้งใจ ซึ่งเป็นการป้องกันปัญหาการสูญหายของข้อมูล (Missing Data) เมื่อผู้เข้าร่วมวิจัยตอบแบบสอบถามเสร็จ ผู้ประสานงานวิจัยจะเป็นผู้เก็บรวบรวมหนังสือแสดงความยินยอมเข้าร่วมการวิจัยที่ผู้เข้าร่วมวิจัยได้ลงชื่อยินยอมเข้าร่วม

โครงการวิจัยใส่ในซองสีน้ำตาลที่เตรียมไว้ ซึ่งได้จ่าหน้าซองถึงผู้วิจัยพร้อมติดแสตมป์ รวบรวมแบบสอบถามจากผู้เข้าร่วมวิจัย และปิดผนึกเพื่อส่งคืนที่ผู้วิจัยโดยตรง กล่าวขอบคุณผู้เข้าร่วมวิจัย และยุติขั้นตอนการรวบรวมข้อมูล โดยกำหนดระยะเวลา 2 สัปดาห์ในเก็บข้อมูลจากโรงพยาบาลแต่ละแห่ง

6เนื่องจากการวิจัยในครั้งนี้เป็นการศึกษารับรู้ของพยาบาลวิชาชีพเกี .ี่ยวกับภาวะผู้นำการเปลี่ยนแปลงของหัวหน้าหอผู้ป่วย คุณลักษณะของงาน บรรยากาศองค์การ ความพึงพอใจในงาน ตลอดจนคุณภาพชีวิตการทำงานของพยาบาล ท่านจึงอาจมีความเสี่ยงที่อาจมีผลกระทบต่อความรู้สึก ในการทำงานเล็กน้อย จากประเด็นความเสี่ยงที่อาจเกิดขึ้น ผู้วิจัยมีความตระหนักถึงประเด็นนี้ ในกรณีที่ผู้เข้าร่วมวิจัยไม่สบายใจจากการเข้าร่วมงานวิจัยนี้ ผู้วิจัยขอให้ผู้เข้าร่วมวิจัยโปรดแจ้งมายังผู้วิจัยปรึกษาหารือร่วมกัน โดยผู้เข้าร่วมวิจัยสามารถเลือกที่จะให้ข้อมูลต่อ ขอข้ามการให้ข้อมูล ในข้อดังกล่าว โดยหากเป็นระบบกูเกิลฟอร์ม)Google formผู้วิจัยจะทำการปลดล็อค (ข้อคำถามให้เป็นรายบุคคล หรือถอนตัวจากการวิจัยโดยไม่ต้องอธิบายเหตุผล และการลงนามในเอกสารให้ความยินยอม ไม่ได้หมายความว่าท่านได้สละสิทธิ์ทางกฎหมายตามปกติที่ท่านพึงมีในกรณีที่ท่านได้รับผลกระทบใดๆ หรือต้องการข้อมูลเพิ่มเติมที่เกี่ยวข้องกับโครงการวิจัยท่านสามารถติดต่อกับผู้ทำวิจัยได้ตลอด 24 ชั่วโมง อย่างไรก็ตามหากท่านปฏิเสธการตอบแบบสอบถามข้อนั้น หรือต้องการยุติการตอบแบบสอบถาม ท่านสามารถทำได้ทันที ทั้งนี้ชื่อของท่านจะไม่ถูกบันทึกไว้ในแบบสอบถาม และข้อมูลในการตอบแบบสอบถามจะถือเป็นความลับ แม้ผู้วิจัยเองก็ไม่สามารถระบุตัวผู้ตอบแบบสอบถามได้

7. ท่านจะไม่ได้รับประโยชน์ใดๆจากการเข้าร่วมในการวิจัยครั้งนี้โดยตรง แต่ผลการศึกษาที่ได้จะเป็นประโยชน์ต่อวิชาชีพพยาบาล องค์การพยาบาล รวมไปถึงผลลัพธ์ของการดูแล นอกจากนี้ผลการศึกษายังสามารถเป็นแนวทางให้แก่ผู้กำหนดนโยบาย ผู้บริหารทางพยาบาล รวมไปถึงนักวิชาการในการพัฒนาโปรแกรม ตลอดจนเป็นแนวทางในการจัดสภาพแวดล้อมการทำงานที่เหมาะสม รวมถึงการเลือกปัจจัยที่เหมาะสมสำหรับพยาบาลวิชาชีพ อันจะเป็นการตอบสนองความต้องการของพยาบาลวิชาชีพ และช่วยในการสรรหาและคงพยาบาลวิชาชีพไว้ในวิชาชีพต่อไป

8. **ข้อมูลที่เกี่ยวข้องกับผู้มีส่วนร่วมในการวิจัยจะเก็บเป็นความลับโดย**ข้อมูลที่ได้รับจากการตอบแบบสอบถามของท่านจะถูกนำไปรวมกับข้อมูลของผู้เข้าร่วมวิจัยท่านอื่นๆที่เข้าร่วมในการศึกษาครั้งนี้ โดยข้อมูลจะถูกเก็บเป็นความลับ แม้แต่ตัวผู้วิจัยก็ไม่มีโอกาสทราบว่าแบบสอบถามนี้

ตอบโดยผู้ร่วมวิจัยท่านใด หากผู้วิจัยตีพิมพ์ผลการศึกษา การรายงานผลการวิจัยจะเป็นการนำเสนอข้อมูลการวิจัยในภาพรวมเท่านั้น ไม่มีข้อมูลใดในการรายงานที่จะนำไปสู่การระบุตัวตนของผู้เข้าร่วมวิจัยหรือชื่อโรงพยาบาล ส่วนการเปิดเผยผลการวิจัยต่อหน่วยงานที่เกี่ยวข้อง จะกระทำได้เฉพาะในกรณีจำเป็นด้วยเหตุผลอันเป็นประโยชน์ต่อการวางแผนกำลังคนทางการพยาบาล และการวางแผนเพื่อพัฒนา ส่งเสริมบุคลากรวิชาชีพพยาบาลในประเทศไทย หรือเหตุผลทางวิชาการเท่านั้น

9. **เมื่อเสร็จสิ้นการวิจัยแล้ว** ข้อมูลที่เกี่ยวข้องกับผู้เข้าร่วมวิจัยทั้งหมดจะถูกทำลาย โดยผู้วิจัยจะทำลายแบบสอบถามทุกฉบับ ตลอดจนข้อมูลไฟล์อิเลกทรอนิกส์ที่บันทึกไว้ในคอมพิวเตอร์ภายหลังเสร็จสิ้นการวิจัยครั้งนี้ด้วยตนเอง

10. เพื่อเป็นการแสดงความขอบคุณท่านในการเข้าร่วมการวิจัย ผู้วิจัยจึงขอมอบปากกาเป็นของที่ระลึกแก่ท่าน เมื่อสิ้นสุดการตอบแบบสอบถาม รวมถึงผู้ที่ถอนตัวระหว่างโครงการวิจัย

11 .การเข้าร่วมการวิจัยเป็นโดย**สมัครใจ** สามารถ**ปฏิเสธ**ที่จะเข้าร่วมหรือ**ถอนตัว**จากการวิจัยได้ทุกขณะ **โดยไม่ต้องให้เหตุผล ไม่สูญเสียประโยชน์ที่พึงได้รับ และไม่มีผลกระทบใดๆต่อผู้เข้าร่วมวิจัย**

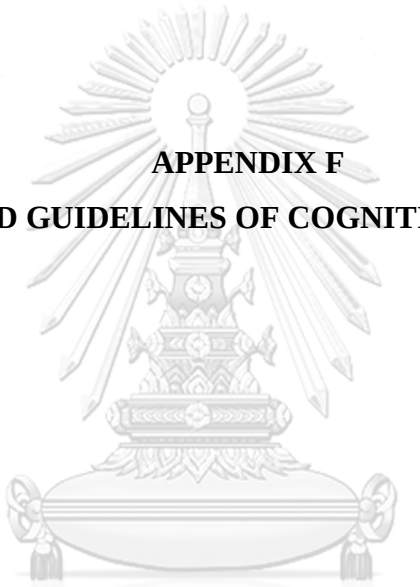
12 .**หากมีข้อสงสัย** โปรดสอบถามเพิ่มเติมจากผู้วิจัยได้ตลอดเวลา โดยสามารถติดต่อนาวาอากาศตรีหญิง ภัทรมน ทับสูงเนิน 09-8297-4950 หรือติดต่อตามที่อยู่ที่ผู้วิจัยให้ไว้ข้างต้นได้ตลอด 24 ชั่วโมง และหากผู้วิจัยมีข้อมูลเพิ่มเติมที่เป็นประโยชน์หรือโทษเกี่ยวกับการวิจัย ผู้วิจัยจะแจ้งให้ท่านทราบอย่างรวดเร็ว

13. **หากได้รับการปฏิบัติไม่ตรงตามข้อมูลดังกล่าว**สามารถร้องเรียนได้ที่ คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ อาคาร 254 จุฬาลงกรณ์มหาวิทยาลัย 10 โทรศัพท์ 10330 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 2 ชั้น 1 จามจุรี-2218-3202, 0-2218- 3049E-mail :eccu@chula.ac.th

ข้าพเจ้าได้รับการอธิบายจากผู้วิจัย **และเข้าใจข้อมูลดังกล่าวข้างต้นทุกประการแล้ว จึงลงนามเข้าร่วมการวิจัยนี้ด้วยความสมัครใจ** และได้รับเอกสารไว้ ชุดแล้ว 1

ลงชื่อ.....	ลงชื่อ.....
(.....)	(.....)
ผู้วิจัยหลัก	ผู้เข้าร่วมการวิจัย
วันที่...../...../.....	วันที่...../...../.....

APPENDIX F
SCRIPT AND GUIDELINES OF COGNITIVE INTERVIEW



เลขที่แบบสอบถาม: .....

แบบสอบถามกระบวนการคิดในการตอบแบบสอบถาม)*cognitive interview*)

เรื่อง "แบบสำรวจคุณภาพชีวิตการทำงานของพยาบาล"

คำชี้แจง โปรดทำเครื่องหมาย √ ลงใน ( ) หน้าข้อความหรือเติมข้อความที่ตรงกับความเป็นจริงของท่าน ลงในช่องว่าง เพื่อเป็นข้อมูลอ้างอิงถึงคุณสมบัติผู้ให้ข้อมูลเกี่ยวกับการศึกษาคุณภาพชีวิตการทำงานของพยาบาล ที่ปฏิบัติงานในโรงพยาบาลของรัฐ

ส่วนที่ 1: ข้อมูลส่วนบุคคล

วัน เดือน ปี ที่สัมภาษณ์ .....

4. อายุ_____ปี

   (1) เกิดตั้งแต่ปี 2541 เป็นต้นไป (2) เกิดช่วงปี 2523 – 2540

   (3) เกิดช่วงปี 2508 – 2522

5. เพศ

   (2) ชาย (2) หญิง (3) อื่นๆ

6. ข้อใดคือคุณวุฒิระดับ**สูงสุด**ของท่านในสาขาการพยาบาล

   (5) ปริญญาตรี

   (6) ปริญญาโท

   (7) ปริญญาเอก

   (8) อื่นๆ (โปรดระบุ)_____

4. ประสบการณ์การทำงาน _____ ปี

   (1) 1 - 2 ปี (2) 3 – 4 ปี

   (3) 5 - 7 ปี (4) 8 – 10 ปี

   (5) 10 ปีขึ้นไป

5. สถานภาพสมรส

(1) สมรส (2) คู่ชีวิต (กลุ่มเพศทางเลือก)

(3) หม้าย (4) หย่าร้าง

(5) แยกกันอยู่ (6) โสด

6. รายได้ _____ (บาท/เดือน)

7. โปรดระบุหน่วยงานที่ท่านสังกัดล่าสุดในตำแหน่งพยาบาล

(1) ห้องอุบัติเหตุและฉุกเฉิน

(2) หอผู้ป่วยอายุรกรรม

(3) หอผู้ป่วยศัลยกรรม

(4) หอผู้ป่วยศัลยกรรมกระดูก

(5) ห้อง
ผ่าตัด

(6) หออภิบาลผู้ป่วยวิกฤต (ICU)

(7) หออภิบาลผู้ป่วยวิกฤตโรคหัวใจ (CCU)

(8) ห้องคลอด

(9) หอผู้ป่วยจิตเวช

(10) อื่นๆ (โปรดระบุ) _____

8. สถานะการจ้างงาน

(1) ข้าราชการ (2) พนักงานราชการ

(3) ลูกจ้างชั่วคราว (4) อื่นๆ (โปรดระบุ) _____

9. โปรดระบุจำนวนของบุตรที่อาศัยอยู่กับท่าน**ที่บ้าน** โดยแบ่งตามช่วงอายุดังต่อไปนี้

(1) 0-2 ปี	0	1	2	3	4 หรือมากกว่า
(2) 3-4 ปี	0	1	2	3	4 หรือมากกว่า
(3) 5 ปี	0	1	2	3	4 หรือมากกว่า
(4) 6-12 ปี	0	1	2	3	4 หรือมากกว่า
(5) 13-18 ปี	0	1	2	3	4 หรือมากกว่า
(6) 18 ปีขึ้นไป	0	1	2	3	4 หรือมากกว่า

10. ท่านรับผิดชอบดูแลบิดามารดาที่สูงอายุของตนเอง (และหรือของคู่สมรส/)

(1) ไม่ใช่

(2) ใช่

หากใช่ โปรดระบุประเภทของการดูแล

---

11. ในตำแหน่งงานหลักของพยาบาล ณ ปัจจุบัน ท่านทำงาน:

(1) เต็มเวลา (ทำตลอดระยะเวลาปีปฏิทินอย่างเต็มเวลา)

(2) ทำงานพิเศษ (ทำตลอดระยะเวลาปีปฏิทินบางเวลา)

12. ท่านมีการเปลี่ยนกะช่วงเวลาทำงานหรือไม่/

(1) ไม่ใช่

(2) ใช่

13. ลักษณะการเปลี่ยนกะช่วงเวลาการทำงาน/

(1) เป็นไปตามความสมัครใจของท่าน

(2) เป็นไปตามข้อกำหนดของหน่วยงาน และสามารถปรับเปลี่ยนได้

(3) เป็นไปตามข้อกำหนดของหน่วยงาน และไม่สามารถปรับเปลี่ยนได้

14. ท่านได้รับเงินค่าตอบแทนเพิ่มเติมสำหรับการปฏิบัติงานนอกเวลาราชการหรือไม่ เช่น ค่า) (เวร บ่าย ดึก

(1) ไม่ได้รับ

(2) ได้รับ

15. ท่านได้รับค่าตอบแทนประกาศนียบัตรความเชี่ยวชาญในสาขาเฉพาะจากหน่วยงานหรือไม่

(1) ไม่ใช่

(2) ใช่

หากใช่ ความเชี่ยวชาญเฉพาะดังกล่าวคือ_____

16. ท่านได้รับค่าตอบแทนเพิ่มเติมจากการปฏิบัติงานล่วงเวลาหรือไม่

(3) ไม่ใช่

(4) ใช่

17. ตำแหน่งพยาบาลที่ท่านทำเป็นหลักในปัจจุบัน (โปรดระบุเพียงคำตอบเดียว)

(1) พยาบาลประจำการ (2) หัวหน้าทีมพยาบาล (3) พยาบาลหัวหน้าเวร

ส่วนที่ 2: แบบสำรวจคุณภาพชีวิตการทำงานของพยาบาล

ข้อคำถามข้อที่ 1: ท่านได้รับความช่วยเหลืออย่างพอเพียงจากบุคลากรสนับสนุนที่ไม่มีใบประกอบวิชาชีพพยาบาล (พนักงานทำความสะอาด ทีมดูแลผู้ป่วย/ทีมนำทางคลินิก และผู้ช่วยพยาบาล)

***ข้อคำถาม*การสัมภาษณ์แบบสืบค้น (Verbal Probing techniques):**

Scripted probe:

1. ท่านสามารถทวนคำถามด้วยคำพูดของท่านเองได้หรือไม่ (Paraphrasing: เพื่อทดสอบว่าผู้เข้าร่วมเข้าใจคำถามได้ดีเพียงใด)

……

……

2. คำถามนี้ตอบง่ายหรือยาก (General probes: เพื่อกำหนดระดับความยากและความเป็นไปได้การประมาณ/ การคาดเดา)

……

……

Spontaneous probes:

……

……

ข้อเสนอแนะในการปรับแก้

……

……

……

ข้อคำถามข้อที่ 2: ท่านพึงพอใจกับงานของตนเอง

***ข้อคำถาม*การสัมภาษณ์แบบสืบค้น (Verbal Probing techniques):**

Scripted probe:

1. ท่านสามารถทวนคำถามด้วยคำพูดของท่านเองได้หรือไม่ (Paraphrasing: เพื่อทดสอบว่าผู้เข้าร่วมเข้าใจคำถามได้ดีเพียงใด)

……

……

2. สำหรับท่าน “ความพึงพอใจในงาน”คืออะไร (Comprehension/interpretation probe: เพื่อทดสอบความเข้าใจของคำศัพท์เฉพาะ)

.....

.....

Spontaneous probes:

.....

.....

ข้อเสนอแนะในการปรับแก้

.....

.....

.....

ข้อคำถามข้อที่ 3: ภาระงานของท่านหนักเกินไป

***ข้อคำถาม*การสัมภาษณ์แบบสืบค้น (Verbal Probing techniques):**

Scripted probe:

1. ท่านสามารถทวนคำถามด้วยคำพูดของท่านเองได้หรือไม่ (Paraphrasing: เพื่อทดสอบว่าผู้เข้าร่วมเข้าใจคำถามได้ดีเพียงใด)

.....

.....

2. สำหรับท่าน “ภาระงาน”คืออะไร (Comprehension/interpretation probe: เพื่อทดสอบความเข้าใจของคำศัพท์เฉพาะ)

.....

.....

3. ท่านมั่นใจแค่ไหนว่าภาระงานของท่านหนักเกินไป (Confidence judgment: เพื่อตรวจสอบความมั่นใจ)

.....

.....

Spontaneous probes:

……

……

ข้อเสนอแนะในการปรับแก้

……

……

……

ข้อคำถามข้อที่ 4: โดยทั่วไป สังคมรับรู้ภาพลักษณ์ของพยาบาลได้อย่างถูกต้อง

***ข้อคำถาม*การสัมภาษณ์แบบสืบค้น (Verbal Probing techniques):**

Scripted probe:

1. ท่านสามารถทวนคำถามด้วยคำพูดของท่านเองได้หรือไม่ (Paraphrasing: เพื่อทดสอบว่าผู้เข้าร่วมเข้าใจคำถามได้ดีเพียงใด)

……

……

2. สำหรับท่าน “ภาพลักษณ์ของพยาบาล” คืออะไร (Comprehension/interpretation probe: เพื่อทดสอบความเข้าใจของคำศัพท์เฉพาะ)

……

……

3. คำถามนี้ตอบง่ายหรือยาก (General probes: เพื่อกำหนดระดับความยากและความเป็นไปได้การประมาณ/ การคาดเดา)

……

……

Spontaneous probes:

……

……

ข้อเสนอแนะในการปรับแก้

……

……

ข้อคำถามข้อที่ 42: ท่านได้รับความช่วยเหลือที่มีคุณภาพจากบุคลากรในระดับที่ไม่มีใบประกอบวิชาชีพพยาบาล (ผู้ช่วยด้านโภชนาการ พนักงานทำความสะอาด ทีมดูแลผู้ป่วย และผู้ช่วยพยาบาล)

Scripted probe:

1. ท่านสามารถทวนคำถามด้วยคำพูดของท่านเองได้หรือไม่ (Paraphrasing: เพื่อทดสอบว่าผู้เข้าร่วมเข้าใจคำถามได้ดีเพียงใด)

.....

.....

2. คำถามนี้ตอบง่ายหรือยาก (General probes: เพื่อกำหนดระดับความยากและความเป็นไปได้การประมาณ/ การคาดเดา)

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Spontaneous probes:

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.....

ข้อเสนอแนะในการปรับแก้

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APPENDIX G
RESULTS FROM COGNITIVE INTERVIEW

แบบสำรวจคุณภาพชีวิตการทำงานของพยาบาล

No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
1	ท่านได้รับความช่วยเหลืออย่างพอเพียงจากบุคลากรสนับสนุนที่ไม่มีใบประกอบวิชาชีพพยาบาล (พนักงานทำความสะอาด ทีมดูแลผู้ป่วย/ทีมนำทางคลินิก และผู้ช่วยพยาบาล)	ท่านได้รับความช่วยเหลืออย่างพอเพียงจากบุคลากรสนับสนุน	ท่านได้รับความช่วยเหลืออย่างเพียงพอจากบุคลากรสายสนับสนุนที่ไม่มีใบประกอบวิชาชีพทางการพยาบาล
2	ท่านพึงพอใจกับงานของตนเอง	-	-
3	ภาระงานของท่านหนักเกินไป	-	-
4	โดยทั่วไป สังคมรับรู้ภาพลักษณ์ของพยาบาลได้อย่างถูกต้อง	ท่านเชื่อว่าโดยทั่วไป สังคมรับรู้ภาพลักษณ์ของพยาบาลได้อย่างถูกต้อง	สังคมรับรู้ภาพลักษณ์และบทบาทหน้าที่ของพยาบาลได้อย่างถูกต้อง
5	ท่านสามารถรักษาสมดุลระหว่างเรื่องงานกับความต้องการของครอบครัว	-	-
6	ท่านมีอำนาจตัดสินใจดูแลผู้ป่วย	ท่านมีอำนาจตัดสินใจในการดูแลผู้ป่วย	ท่านมีอำนาจตัดสินใจดูแลผู้ป่วยตามขอบเขตมาตรฐานทางวิชาชีพ

No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
7	ท่านสามารถสื่อสารได้เป็นอย่างดีกับหัวหน้าพยาบาล/ผู้ตรวจการพยาบาลได้ดี	ท่านสามารถสื่อสารได้เป็นอย่างดีกับหัวหน้าพยาบาล/ผู้ตรวจการพยาบาล	ท่านสามารถสื่อสารกับหัวหน้าพยาบาลและผู้ตรวจการพยาบาลได้เป็นอย่างดี
8	ท่านมีวัสดุและอุปกรณ์พอเพียงในการดูแลผู้ป่วย	-	ในหน่วยงานของท่านมีวัสดุ เครื่องมือ และอุปกรณ์ทางการแพทย์ที่ใช้ในการดูแลผู้ป่วยอย่างเพียงพอ
9	หัวหน้าพยาบาล/ผู้ตรวจการพยาบาลนิเทศงานของท่านได้อย่างเหมาะสม	-	-
10	โรงพยาบาลพึงจัดหาศูนย์ดูแลเด็กในโรงพยาบาลเพื่อเป็นสวัสดิการให้กับพนักงาน	โรงพยาบาลมีศูนย์ดูแลเด็กในโรงพยาบาลเพื่อเป็นสวัสดิการให้กับพนักงาน	โรงพยาบาลพึงจัดศูนย์ดูแลบุตรของบุคลากรในโรงพยาบาลเพื่อเป็นสวัสดิการให้กับพนักงาน
11	ท่านปฏิบัติงานหลายอย่างที่ไม่ใช่งานในหน้าที่ของพยาบาล	ท่านต้องปฏิบัติงานหลายอย่างที่ไม่ใช่งานในหน้าที่ของพยาบาล	-
12	ท่านยังมีแรงเหลือหลังสิ้นสุดชั่วโมงการทำงาน	ท่านยังมีพลังเหลือหลังสิ้นสุดชั่วโมงการทำงาน	ท่านสามารถไปทำภารกิจอื่นได้หลังจากหมดเวลางานโดยที่ไม่รู้สึกเหนื่อยเกินไป

No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
13	มิตรภาพกับเพื่อนร่วมงานนับเป็นสิ่งสำคัญสำหรับท่าน	-	สัมพันธภาพกับเพื่อนร่วมงานเป็นสิ่งสำคัญสำหรับท่าน
14	บริบทในการทำงานของท่านเปิดโอกาสให้ท่านก้าวหน้าในวิชาชีพ	-	หน่วยงานของท่านเปิดโอกาสให้ท่านก้าวหน้าในวิชาชีพ
15	ที่ทำงานของท่านมีการทำงานเป็นทีม	-	-
16	ท่านประสบปัญหาการถูกขัดจังหวะการทำงานมากมายในการทำงานประจำของท่าน	ท่านถูกขัดจังหวะการทำงานมากมายในการทำงานประจำของท่าน	ท่านประสบปัญหาการถูกขัดจังหวะการทำงานในการทำงานประจำ
17	ท่านมีเวลาเพียงพอที่จะทำงานให้ดี	ท่านมีเวลาเพียงพอที่จะทำงานให้ดีได้	-
18	มีพยาบาลวิชาชีพจำนวนพอเพียงในที่ทำงานของท่าน	ในที่ทำงานของท่านมีพยาบาลวิชาชีพเพียงพอกับการปฏิบัติงาน	ในที่ทำงานของท่านมีพยาบาลวิชาชีพเพียงพอกับการปฏิบัติงาน
19	ท่านมีสำนึกความเป็นเจ้าของต่อสถานที่ทำงาน	ท่านมีสำนึกความเป็นเจ้าของต่อสถานที่ทำงาน	ท่านรู้สึกเหมือนเป็นส่วนหนึ่งของหอผู้ป่วยที่ท่านปฏิบัติงาน

No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
20	การหมุนเวียนตารางเวลาทำงานมีผลกระทบเชิงลบต่อชีวิตของท่าน	-	การเข้าล็อคเวร เช้า บ่าย ดึก มีผลกระทบเชิงลบต่อชีวิตของท่าน
21	ท่านสามารถสื่อสารกับนักบำบัดจากหน่วยงานอื่นๆ (กายภาพบำบัด หน่วยระบบทางเดินหายใจ เป็นต้น)	ท่านสามารถสื่อสารกับนักบำบัดจากหน่วยงานอื่นๆ เช่น กายภาพบำบัด หน่วยระบบทางเดินหายใจ ได้ดี	ท่านสามารถสื่อสารกับสหวิชาชีพได้
22	ท่านได้รับคำติชมเรื่องการปฏิบัติงานจากหัวหน้าพยาบาล/ผู้ตรวจการพยาบาล	-	-
23	ท่านสามารถให้การดูแลผู้ป่วยได้อย่างมีคุณภาพ	-	-
24	เงินเดือนของท่านพอเหมาะกับงานที่ได้รับมอบหมายเมื่อเทียบกับสภาพตลาดงานในปัจจุบัน	เงินเดือนของท่านเหมาะสมกับงานที่ได้รับมอบหมายเมื่อเทียบกับสถานการณ์การทำงานในปัจจุบัน	เมื่อพิจารณาปริมาณงานกับเงินเดือนที่ท่านได้รับถือว่ามีความเหมาะสมเมื่อเทียบกับทุกอาชีพในตลาดงานในปัจจุบัน
25	หน่วยงานของท่านมีนโยบายเรื่องการลาเพื่อดูแลครอบครัวได้อย่างเหมาะสม	หน่วยงานของท่านมีนโยบายให้ลาเพื่อดูแลครอบครัวได้ตามความเหมาะสม	หน่วยงานของท่านมีเกณฑ์เรื่องการลาเพื่อดูแลครอบครัวได้อย่างเหมาะสม
26	ท่านสามารถมีส่วนร่วมในการตัดสินใจกับหัวหน้าพยาบาล/ผู้ตรวจการพยาบาล	ฉันสามารถแสดงความคิดเห็นและมีส่วนร่วมในการตัดสินใจกับหัวหน้าพยาบาล/ผู้ตรวจการพยาบาล	-

No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
27	โรงพยาบาลพึงจัดสวัสดิการบริการศูนย์ดูแลผู้สูงอายุซึ่งเป็นบิดามารดาของพนักงาน	-	โรงพยาบาลควรจัดสวัสดิการสถานที่ดูแลผู้สูงอายุซึ่งเป็นบิดามารดาของพนักงาน
28	ท่านได้รับการยอมรับนับถือจากบรรดาแพทย์ในที่ทำงานของท่าน	ท่านได้รับการยอมรับจากบรรดาแพทย์ในที่ทำงานของท่าน	-
29	โรงพยาบาลควรจัดสถานที่เฉพาะและเป็นส่วนตัวสำหรับเวลาพักของพยาบาล	-	-
30	โรงพยาบาลของท่านควรมีการจัดโปรแกรมการศึกษาสำหรับพยาบาล	โรงพยาบาลของท่านควรมีการจัดโปรแกรมการศึกษาสำหรับพยาบาล	โรงพยาบาลของท่านควรมีการจัดอบรมความรู้ต่างๆสำหรับพยาบาล
31	ท่านได้รับการสนับสนุนให้เข้ารับการอบรมที่จัดขึ้นในโรงพยาบาลและเข้าโปรแกรมการศึกษาต่อเนื่อง	-	ท่านได้รับการสนับสนุนให้เข้ารับการอบรมที่จัดขึ้นในโรงพยาบาลและเข้ารับการศึกษาต่อเนื่อง
32	ท่านสื่อสารได้ดีกับแพทย์ในที่ทำงานของท่าน	-	-
33	ท่านได้รับการยกย่องจากหัวหน้าพยาบาล/ผู้ตรวจการพยาบาลเมื่อทำงานสำเร็จ	-	-

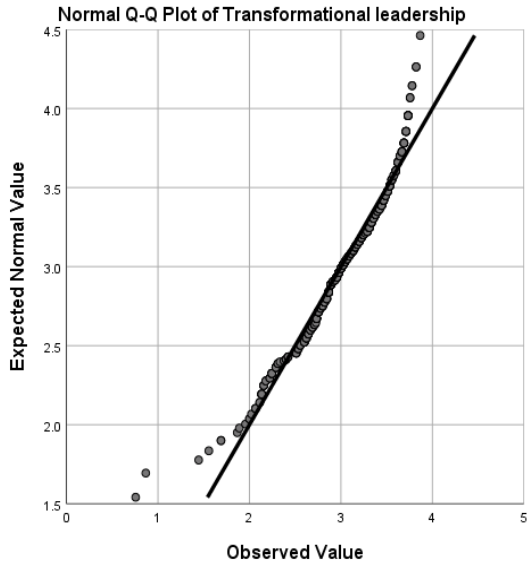
No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
34	นโยบายและขั้นตอนการทำงานพยาบาลเอื้อต่อการทำงานของท่าน	-	-
35	แผนกรักษาความปลอดภัยดูแลให้สถานที่ทำงานมีความปลอดภัย	แผนกรักษาความปลอดภัยของโรงพยาบาลปฏิบัติหน้าที่ได้อย่างมีประสิทธิภาพ	-
36	โรงพยาบาลพึงจัดสวัสดิการบริการศูนย์ดูแลบุตรที่เจ็บป่วยของพนักงาน ณ โรงพยาบาล	โรงพยาบาลมีสวัสดิการเพื่อดูแลบุตรที่เจ็บป่วยของพนักงาน โดยการรับตัวเข้ารักษา การให้การช่วยเหลือค่าใช้จ่าย เช่น ฟรีค่าห้องสามัญ/ จ่ายบางส่วนของห้องพิเศษ ฯลฯ"	โรงพยาบาลควรจัดสวัสดิการการดูแลบุตรที่เจ็บป่วยของพนักงาน เช่น สิทธิ์การรักษา อัตราค่าห้องพักในราคาพิเศษ เป็นต้น
37	ท่านสามารถสมัครงานพยาบาลแบบเดียวกันนี้ที่อื่นได้โดยได้รับเงินเดือนและผลประโยชน์ที่เท่าเทียมกัน	ท่านสามารถสมัครงานพยาบาลตำแหน่งนี้ที่อื่นได้โดยได้รับเงินเดือนและผลประโยชน์ที่เท่าเทียมกัน	-
38	ท่านรู้สึกปลอดภัยจากการถูกทำร้าย (ทางร่างกาย ทางจิตใจ ทางวาจา) ในที่ทำงาน	-	-
39	ท่านเชื่อว่างานของท่านมีความมั่นคง	-	-

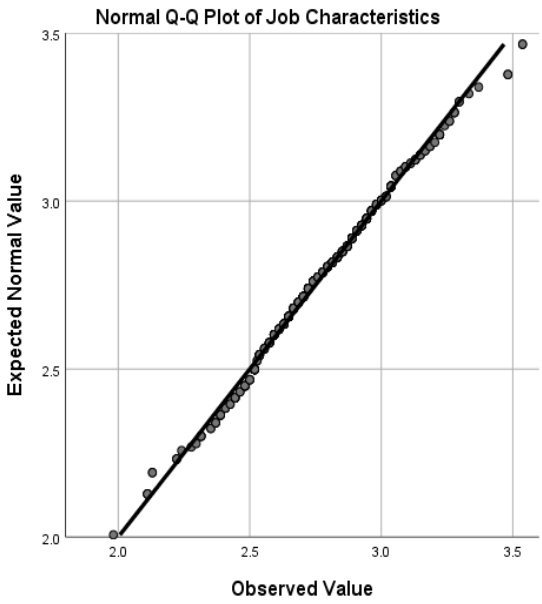
No	First Thai Version	Expert's suggestion	Suggestion from Cognitive interview
40	ผู้บริหารระดับสูงให้ความยอมรับนับถือต่องานพยาบาล	ท่านรู้สึกว่าผู้บริหารระดับสูงให้การยอมรับต่องานพยาบาล	ผู้บริหารระดับสูงยอมรับและให้เกียรติต่องานการพยาบาล
41	งานของท่านมีผลกระทบต่อชีวิตของผู้ป่วย/ครอบครัวของผู้ป่วย	ท่านเชื่อว่างานของท่านมีผลกระทบต่อชีวิตของผู้ป่วย/ครอบครัวของผู้ป่วย	งานของท่านมีผลต่อชีวิตของผู้ป่วย/ครอบครัวของผู้ป่วย
42	ท่านได้รับความช่วยเหลือที่มีคุณภาพจากบุคลากรในระดับที่ไม่มีใบประกอบวิชาชีพพยาบาล (ผู้ช่วยด้านโภชนาการ พนักงานทำความสะอาด ทีมดูแลผู้ป่วย และผู้ช่วยพยาบาล)	ท่านได้รับความช่วยเหลือที่มีคุณภาพจากบุคลากรในระดับที่ไม่มีใบประกอบวิชาชีพพยาบาล เช่น ผู้ช่วยด้านโภชนาการ พนักงานทำความสะอาด ฯลฯ	ท่านได้รับความช่วยเหลือเป็นอย่างดีจากบุคลากรในระดับที่ไม่มีใบประกอบวิชาชีพพยาบาล (ผู้ช่วยด้านโภชนาการ พนักงานทำความสะอาด ทีมดูแลผู้ป่วย และผู้ช่วยพยาบาล)

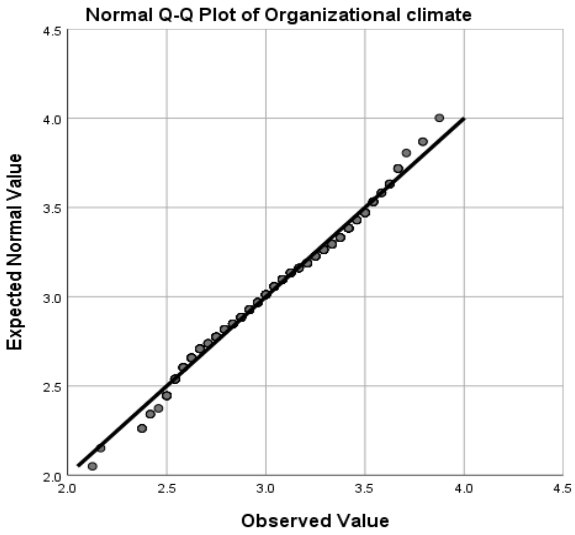
APPENDIX H
PRELIMINARA ANALYSIS

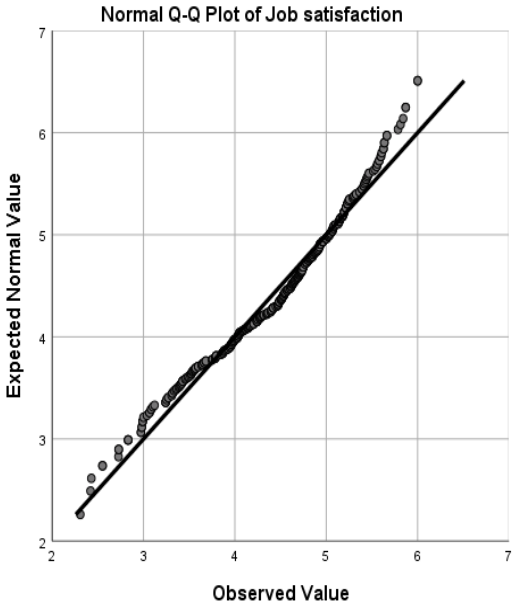
APPENDIX H1: Normality testing

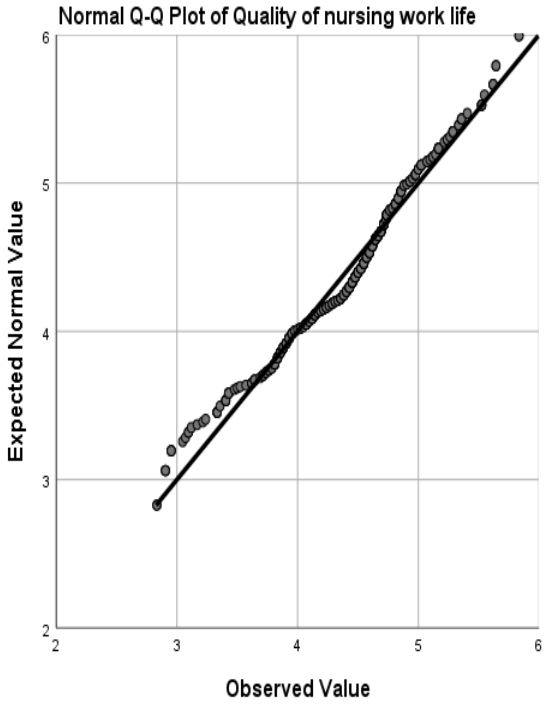
Normal Q-Q plots of the main studied variables






Normal Q-Q Plot of Organizational climate
Expected Normal Value
Observed Value
4.5
4.0
3.5
3.0
2.5
2.0
2.0
2.5
3.0
3.5
4.0
4.5

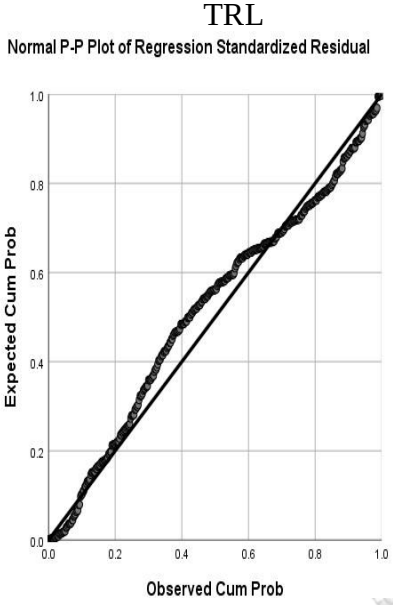

Normal Q-Q Plot of Job satisfaction
Expected Normal Value
Observed Value
7
6
5
4
3
2
2
3
4
5
6
7



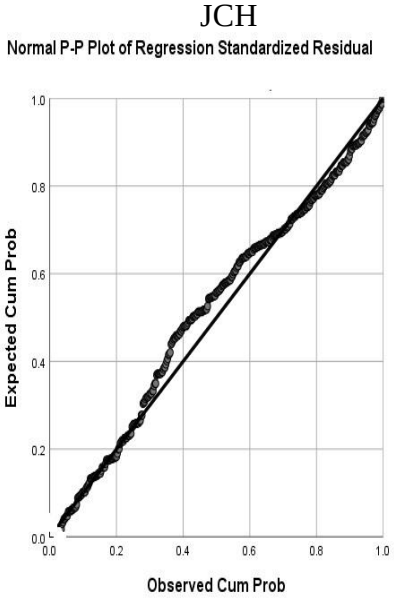
APPENDIX H2: Linearity testing

P-P plots of regression standardized residual

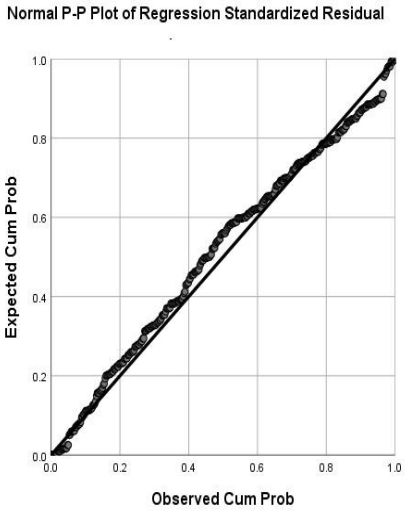
TRL



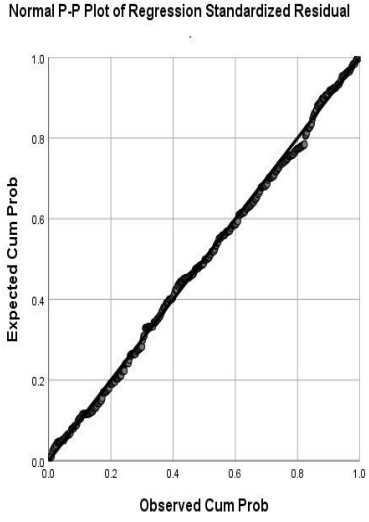
JCH

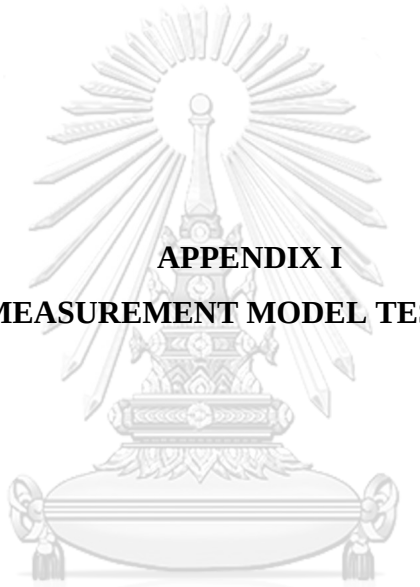


ORC



SAT

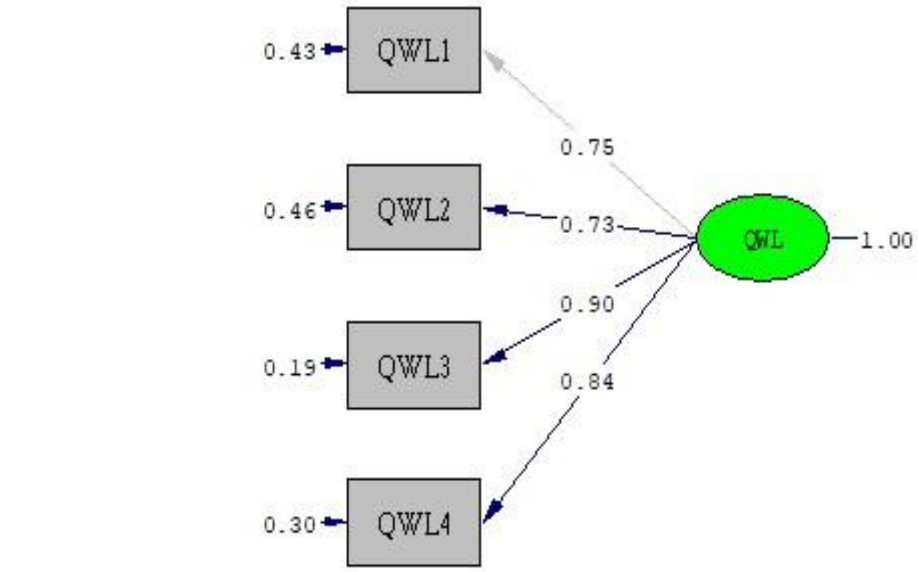




APPENDIX I
MEASUREMENT MODEL TESTING

APPENDIX I 1

Brooks' Quality of Nursing Work Life Survey (BQNWL) Thai version measurement model



Chi-Square=0.07, df=1, P-value=0.79342, RMSEA=0.000

Fit indices of the Brooks' Quality of Nursing Work Life Survey Thai version

Syntax used for analyzing confirmatory factor analysis of the BQNWL survey Thai version

```
TI FIRST CFA QWL
 !DA NI=4 NO=392 MA=CM
 SY='C:\05FIRSTCFAQWL\cfaqwl.dsf' NG=1
 MO NX=4 NK=1 TD=SY
 LK
 QWL
 FR LX(2,1) LX(3,1) LX(4,1)
 FR TD(1,4) TD(2,3)
 VA 1 LX(1,1)
 PD
 OU AM RS FS SC AD=OFF
```

Printout of final model testing of the BQNWL Thai version

Goodness of Fit Statistics

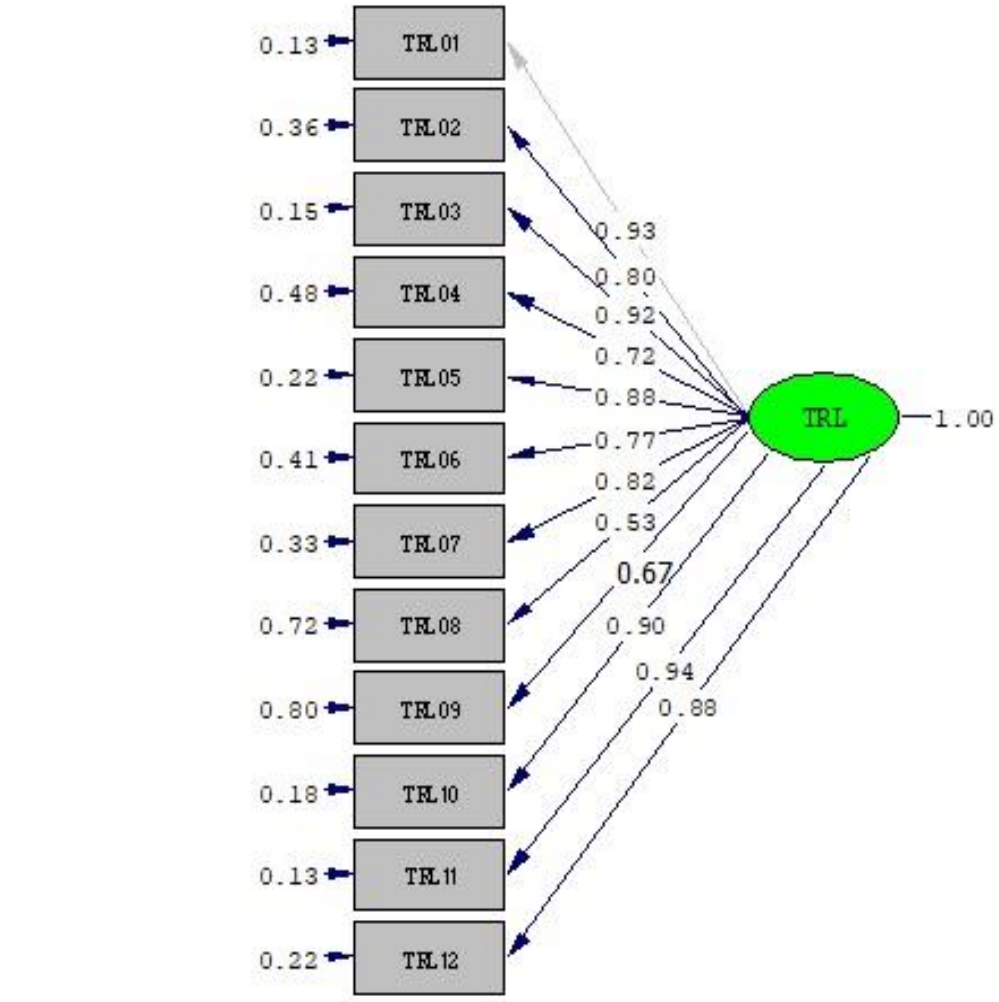
Degrees of Freedom = 1
Minimum Fit Function Chi-Square = 0.07 (P = 0.79342)
Normal Theory Weighted Least Squares Chi-Square = 0.07 (P = 0.79342)
Root Mean Square Error of Approximation (RMSEA) = 0.000

Comparative Fit Index (CFI) = 1.00
Critical N (CN) = 887.79

Root Mean Square Residual (RMR) = 0.012
Standardized RMR = 0.012
Goodness of Fit Index (GFI) = 1.00
Adjusted Goodness of Fit Index (AGFI) = 1.00

APPENDIX I 2

The Multifactor Leadership Questionnaire (MLQ-5X) measurement model



Chi-Square=1.52, df=1, P-value=0.21795, RMSEA=0.034

Fit indices of the Multifactor Leadership Questionnaire

Syntax used for analyzing confirmatory factor analysis of the MLQ-5X questionnaire

```
TI FIRST CFA TRL
!DA NI=12 NO=392 MA=CM
SY='C:\01FIRSTCFATRL\cfatrl.dsf' NG=1
MO NX=12 NK=1 TD=SY
LK
TRL
FR LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1) LX(7,1) LX(8,1) LX(9,1)
LX(10,1)
FR LX(11,1) LX(12,1)
FR TD(1,4)TD(1,5) TD(2,1) TD(5,8) TD(7,9) TD(10,11) TD(2,8)
VA 1 LX(1,1)
PD
OU AM RS FS SC AD=OFF
```

Printout of final model testing of the MLQ-5X

Goodness of Fit Statistics

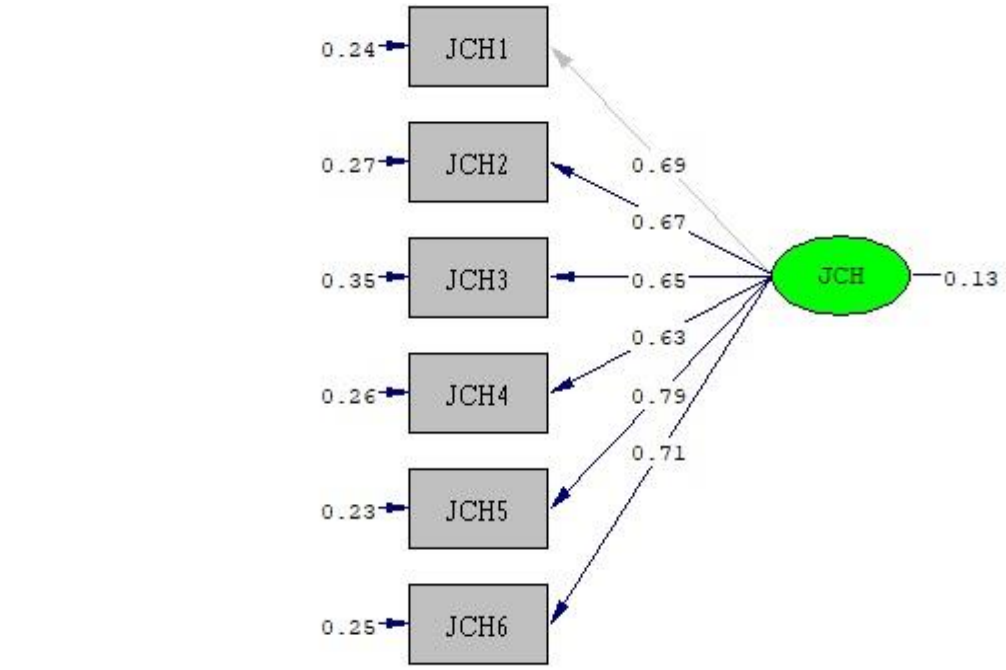
Degrees of Freedom = 1
Minimum Fit Function Chi-Square = 1.52 (P = 0.21795)
Normal Theory Weighted Least Squares Chi-Square = 1.52 (P = 0.21795)
Root Mean Square Error of Approximation (RMSEA) = 0.034

Comparative Fit Index (CFI) = 1.00
Critical N (CN) = 397.91

Root Mean Square Residual (RMR) = 0.011
Standardized RMR = 0.011
Goodness of Fit Index (GFI) = 1.00
Adjusted Goodness of Fit Index (AGFI) = 0.99

APPENDIX I 3

The Thai Version of the Job Content Questionnaire measurement model



Chi-Square=1.29, df=1, P-value=0.25667, RMSEA=0.025

Fit indices of the Thai Version of the Job Content Questionnaire

Syntax used for analyzing confirmatory factor analysis of the Thai-JCQ

```
TI FIRST CFA JCH
 !DA NI=6 NO=392 MA=CM
 SY='C:\02FIRSTCFAJCH\cfajch.dsf' NG=1
 MO NX=6 NK=1 TD=SY
 LK
 JCH
 FR LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1)
 FR TD(1,6) TD(1,5) TD(2,4) TD(2,3)
 VA 1 LX(1,1)
 PD
 OU AM RS FS SC AD=OFF
```

Printout of final model testing of the Thai-JCQ

Goodness of Fit Statistics

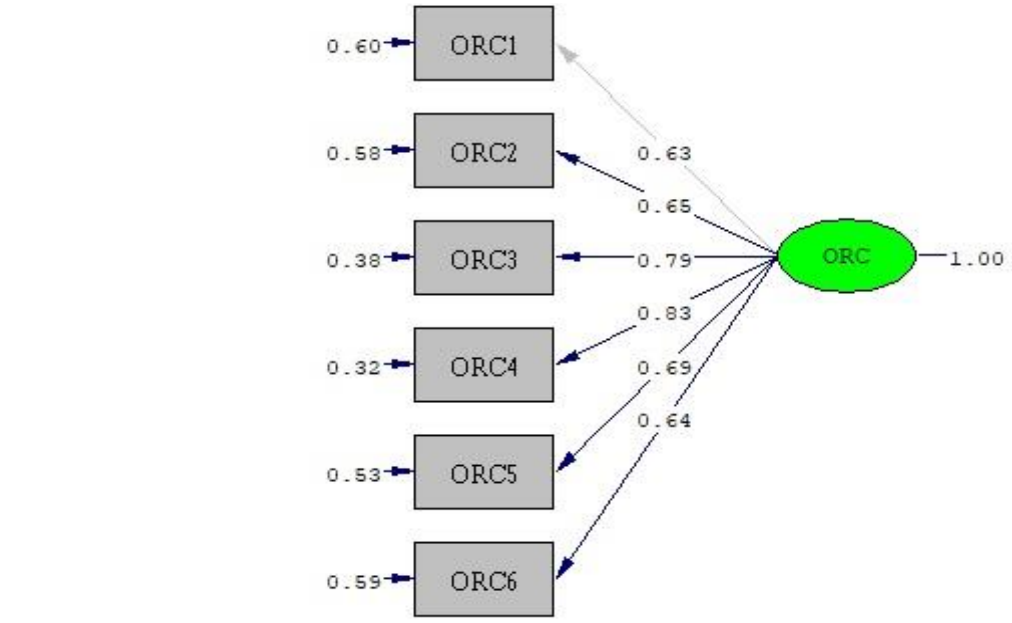
Degrees of Freedom = 1
Minimum Fit Function Chi-Square = 1.29 (P = 0.25667)
Normal Theory Weighted Least Squares Chi-Square = 1.29 (P = 0.25667)
Root Mean Square Error of Approximation (RMSEA) = 0.025

Comparative Fit Index (CFI) = 1.00
Critical N (CN) = 222.63

Root Mean Square Residual (RMR) = 0.012
Standardized RMR = 0.012
Goodness of Fit Index (GFI) = 1.00
Adjusted Goodness of Fit Index (AGFI) = 0.99

APPENDIX I 4

The Organizational Climate Questionnaire measurement model



Chi-Square=1.32, df=1, P-value=0.25134, RMSEA=0.027

Fit indices of the Organizational Climate Questionnaire

Syntax used for analyzing confirmatory factor analysis of the Thai-OCQ

```
TI FIRST CFA ORC
 !DA NI=6 NO=392 MA=CM
 SY='C:\03FIRSTCFAORC\cfaorc.dsf' NG=1
 MO NX=6 NK=1 TD=SY
 LK
 ORC
 FR LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1)
 FR  TD(2,3) TD(2,4) TD(2,5) TD(3,5)
 VA 1 LX(1,1)
 PD
 OU AM RS FS SC AD=OFF
```

Printout of final model testing of the Thai-OCQ

Goodness of Fit Statistics

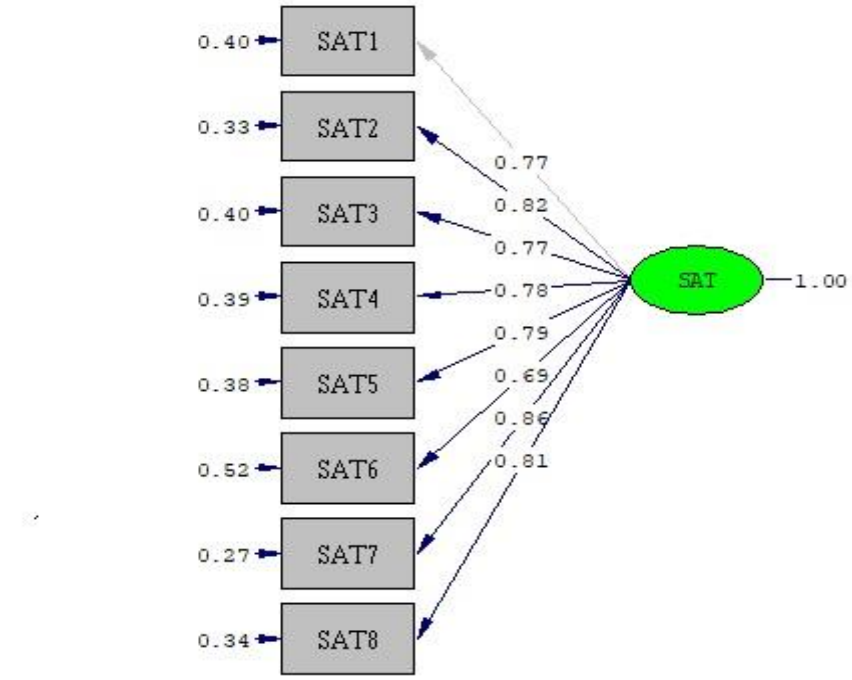
Degrees of Freedom = 1
Minimum Fit Function Chi-Square = 1.32 (P = 0.25134)
Normal Theory Weighted Least Squares Chi-Square = 1.32 (P = 0.25134)
Root Mean Square Error of Approximation (RMSEA) = 0.027

Comparative Fit Index (CFI) = 1.00
Critical N (CN) = 289.88

Root Mean Square Residual (RMR) = 0.014
Standardized RMR = 0.014
Goodness of Fit Index (GFI) = 1.00
Adjusted Goodness of Fit Index (AGFI) = 0.99

APPENDIX I 5

The Thai Nurses' Job Satisfaction Scale measurement model



Chi-Square=3.47, df=3, P-value=0.32486, RMSEA=0.019

Fit indices of the Thai Nurses' Job Satisfaction Scale

Syntax used for analyzing confirmatory factor analysis of the TNJSS

```
TI FIRST CFA SAT
 !DA NI=8 NO=392 MA=CM
 SY='C:\04FIRSTCFASAT\cfasat.dsf' NG=1
 MO NX=8 NK=1 TD=SY
 LK
 SAT
 FR LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1) LX(7,1) LX(8,1)
 FR TD(1,8) TD(2,7) TD(3,5) TD(4,3) TD(5,4)
 VA 1 LX(1,1)
 PD
 OU AM RS FS SC AD=OFF
```

Printout of final model testing of the TNJSS

Goodness of Fit Statistics

Degrees of Freedom = 3
Minimum Fit Function Chi-Square = 3.47 (P = 0.32486)
Normal Theory Weighted Least Squares Chi-Square = 3.47 (P = 0.32486)
Root Mean Square Error of Approximation (RMSEA) = 0.019

Comparative Fit Index (CFI) = 1.00
Critical N (CN) = 253.85

Root Mean Square Residual (RMR) = 0.018
Standardized RMR = 0.018
Goodness of Fit Index (GFI) = 0.99
Adjusted Goodness of Fit Index (AGFI) = 0.99

APPENDIX J
MODEL TESTING

Fit indices of the causal model of quality of nursing work life among professional nurses in Thailand

Syntax used for analyzing

MODEL NURSE MODEL

DA NI = 36 NO =490 NG=1 MA=KM

LA

MLQ01 MLQ02 MLQ03 MLQ04 MLQ05 MLQ06 MLQ07 MLQ08 MLQ09 MLQ10 MLQ11 MLQ12 JCQ1 JCQ2 JCQ3 JCQ4 JCQ5 JCQ6 QRC1 QRC2 QRC3 QRC4 QRC5 QRC6 SAT1 SAT2 SAT3 SAT4 SAT5 SAT6 SAT7 SAT8 QWL1 QWL2 QWL3 QWL4

KM

1 .000

. 532 1.000

. 363 .363 1.000

. 354 .339 .497 1.000

. 366 .329 .385 .246 1.000

. 262 .320 .355 .185 .592 1.000

. 283 .218 .446 .315 .613 .522 1.000

. 428 .421 .477 .341 .564 .435 .548 1.000

. 317 .297 .371 .270 .670 .540 .570 .555 1.000

. 207 .282 .212 .405 .254 .132 .315 .334 .306 1.000

. 220 .231 .240 .398 .209 .121 .282 .342 .260 .726 1.000

. 268 .265 .359 .394 .395 .302 .441 .403 .367 .301 .352 1.000

. 366 .220 .230 .464 .331 .167 .339 .397 .355 .381 .440 .439 1.000

. 370 .337 .269 .280 .284 .255 .334 .330 .280 .330 .396 .371 .465 1.000

. 179 .251 .137 .173 .290 .285 .224 .274 .313 .345 .239 .218 .319 .290 1.000

. 183 .246 .152 .247 .310 .284 .245 .275 .346 .444 .461 .282 .424 .322 .558 1.000

. 210 .320 .308 .346 .417 .295 .333 .432 .456 .326 .389 .419 .482 .331 .384 .445 1.000

. 236 .278 .237 .336 .363 .317 .346 .439 .411 .327 .339 .397 .446 .306 .373 .416 .680 1.000

. 192 .297 .178 .225 .323 .306 .225 .366 .316 .321 .320 .232 .396 .286 .460 .469 .521 .579 1.000

. 167 .279 .160 .282 .313 .240 .252 .289 .394 .355 .326 .371 .450 .292 .363 .356 .546 .531 .492 1.000

. 118 .267 .206 .254 .310 .256 .237 .333 .379 .328 .329 .351 .304 .247 .260 .380 .489 .475 .415 .685 1.000

. 313 .226 .200 .230 .349 .285 .284 .308 .349 .397 .340 .345 .396 .297 .396 .477 .562 .584 .517 .646 .662 1.000

. 142 .252 .307 .238 .288 .290 .329 .263 .407 .367 .360 .316 .306 .270 .328 .389 .408 .4 38. 366. 562. 598.1 547.000

. 144 .228 .274 .234 .304 .296 .331 .333 .376 .371 .397 .316 .309 .326 .280 .366 .432 .440 .365 .594 .704 .604 .700 1.000

. 160 .208 .290 .247 .345 .329 .358 .381 .417 .259 .248 .473 .318 .330 .311 .322 .439 .435 .353 .545 .630. 531 .582 .622 1.000

. 150 .274 .254 .179 .320 .367 .331 .367 .380 .268 .257 .391 .267 .329 .216 .272 .404 .429 .362 .366 .477 .459 .509 .475 .612 1.000

. 303 .363 .248 .254 .225 .139 .307 .307 .266 .302 .302 .327 .324 .343 .256 .287 .373 .464 .422 .322 290.. 414. 280. 318. 418 .1 414.000

. 171 .229 .229 .254 .372 .322 .319 .303 .320 .301 .263 .424 .398 .340 .365 .369 .509 .499 .496 .437 .380 .540 .330 .369 .556 .480 .665 1.000

. 188 .305 .195 .264 .265 .202 .219 .296 .242 .317 .352 .352 .393 .369 .287 .31 5. 453. 393. 331. 485. 344. 518. 375. 377. 363 . 415. 412.1 508.000

. 295 .393 .304 .360 .367 .245 .334 .398 .391 .344 .336 .406 .419 .299 .273 .317 .494 .486 .384 .434 .405 .419 .377 .349 .489 .345 .448 .541 .521 1.000

. 176 .246 .146 .287 .245 .136 .142 .204 .255 .182 .206 .230 .305 .211 .243 .312 .381 .408 .332 .412 .365 .435 .255 .264 .365 .223 .347 .404 .480 .579 1.000

. 179 .220 .237 .218 .327 .226 .263 .285 .381 .155 .142 .286 .348 .312 .295 .277 .451 .421 .318 .409 .307 .407 .277 .231 .428 .261 .358. 439 .496 .586 .751 1.000

. 117 .272 .202 .292 .235 .262 .198 .183 .254 .194 .212 .348 .422 .241 .298 .335 .431 .413 .441 .442 .340 .444 .416 .388 .383 .341 .354 .504 .461 .422 .363 .338 1.000

. 118 .216 .208 .277 .222 .103 .192 .244 .259 .267 .238 .279 .408 .281 .265 .447 .356 .343 .365 .362 .240 .383 .438 .264 .264 .194 .355 .361 .386 .356 .312 .319 .516 1.000

. 106 .189 .300 .248 .299 .208 .326 .252 .324 .197 .262 .362 .334 .355 .175 .318 .38 6. 338. 290. 350. 360. 327. 420. 386. 441 . 279. 368. 387. 339. 368. 282. 328. 497.1 515.000

. 171 .222 .237 .280 .364 .221 .326 .252 .353 .267 .284 .410 .401 .377 .242 .343 .458 .421 .377 .451 .395 .444 .420 .366 .489 .370 .439 .501 .432 .479 .393 .416 .5 42. 541.1 670.000

ME

3 .2 1901.3 9994.2 1747.3 5261.2 0153.3 9758.2 3450.2 6881.3 7143.3 0825.3 2226.3 2066.2 1718.2 7370.3 8125.3 6423. 2889 1.3 6604.2 2098.3 9962.3 0000.2 1531.3 7710.3 0236.4 9156.4 8081.4 8261.4 9827.4 1285.4 5980.4 2737.3 3396..4 98981212 4.6719 4.5349

SD

0 .0 66775.0 56753.0 60004.0 36396.0 64523.0 61450.0 59468.0 59072.0 64541.0 72487.0 65869.0 69113.0 41363. 42197 0.0 59126.0 26403.0 49687.0 39214.0 36836.0 44303.0 42912.0 51279.0 41898.0 43014.0 97972.0 78719.0 91868. 77695 0.0 96522.0 95504.0 99548.0 87491.0 72441.0 54250.0 66551.70632

SE

30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13

12 11 10 9 8 7 6 5 4 3 2 1 36 35 34 33 32 31 /

MO NX=12 NY=24 NK=1 NE=4 BE=FU GA=FI PS=SY TE=SY TD=SY

FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(8,2) LY(9,2) LY(10,2) LY(11,2)

FR LY(12,2) LY(14,3) LY(15,3) LY(16,3) LY(17,3) LY(18,3) LY(19,3) LY(20,3) LY(22,4)

FR LY(23,4) LY(24,4) LX(1,1) LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1) LX(7,1)

FR LX(8,1) LX(9,1) LX(10,1) LX(11,1) LX(12,1) BE(,31 (BE(3,2) BE(4,1) BE(4,2)

FR BE(4,3) GA(1,1) GA(2,1) GA(3,1) GA(4,1)

FR TE(23,24) TE(15,17) TE(15,16) TE(13,14) TE(3,4) TE(5,6) TE(11,12) TE(11,22)

FR TE(13,17) TE(13,7) TE(9,12) TE(1,8) TE(19,20) TE(4,22) TE(11,14) TE(7,3)

FR TE(18,19) TE(18,20) TE(13,22) TE(14,22) TE(10,23) TE(16,21) TE(5,15)

FR TE(4,19) TE(8,14) TE(8,4) TE(8,9) TE(7,6) TE(10,16) TE(10,18) TE(10,13)

FR TE(9,17) TE(22,9) TE(9,13) TE(12,13) TE(13,11) TE(7,4) TE(10,6) TE(10,5)

FR TE(10,17) TE(21,2) TE(18,8) TE(8,5) TE(7,5) TE(7,1) TE(8,6) TE(20,12)

FR TE(12,2) TE(19,9) TE(13,8)

FR TD(10,11) TD(2,1) TD(4,3) TD(5,9) TD(6,5) TD(6,9) TD(7,5) TD(7,6) TD(7,2)

FR TD(7,3) TD(10,4) TD(11,4) TD(8,1) TD(12,4) TD(8,3) TD(8,7)

FR TH(1,10) TH(4,1) TH(2,1) TH(11,3) TH(4,19) TH(6,15) TH(2,15) TH(1,15) TH(5,15)

FR TH(8,4) TH(8,11) TH(3,8) TH(10,10) TH(6,1) TH(6,21) TH(2,21) TH(9,20) TH(1,9)

FR TH(8,8) TH(1,2) TH(7,9) TH(11,4) TH(10,4) TH(11,2) TH(2,2) TH(2,18) TH(11,5)

FR TH(11,20) TH(11,1) TH(9,17) TH(12,13) TH(10,3)

VA 1 LY(1,1)

VA 1 LY(7,2)

VA 1 LY(13,3)

VA 1 LY(21,4)

LE

JCQ QRC SAT QWL

LK

MLQ

PATH DIAGRAM

OU SE TV EF SS RS FS SC MI AM AD=OFF

Printout of the causal model of the quality of nursing work life among Thai professional nurses

Goodness of Fit Statistics

Degrees of Freedom = 487

Minimum Fit Function Chi-Square = 754.88) P = 0.06(

Normal Theory Weighted Least Squares Chi-Square = 754.88) P = 0.06(

Estimated Non-centrality Parameter (NCP) = 716.65

90 Percent Confidence Interval for NCP = (618.52 ; 822.46)

Minimum Fit Function Value = 2.55

Population Discrepancy Function Value (F0) = 1.47

90 Percent Confidence Interval for F 0= (1.26 ; 1.(68

Root Mean Square Error of Approximation (RMSEA) = 0.021

90 Percent Confidence Interval for RMSEA = (0.051 ; 0.059)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.020

Expected Cross-Validation Index (ECVI) = 3.19

90 Percent Confidence Interval for ECVI = (2.99 ; 3.41)

ECVI for Saturated Model = 2.72

ECVI for Independence Model = 82.81

Chi-Square for Independence Model with 630 Degrees of Freedom = 40421.74

Independence AIC = 40493.74

Model AIC = 1561.65

Saturated AIC = 1332.00

Independence CAIC = 40680.74

Model CAIC = 2491.45

Saturated CAIC = 4791.47

Normed Fit Index (NFI) = 1.00

Non-Normed Fit Index (NNFI) = 1.00

Parsimony Normed Fit Index (PNFI) = 0.75

Comparative Fit Index (CFI) = 1.00

Incremental Fit Index (IFI) = 0.98

Relative Fit Index (RFI) = 0.96

Critical N (CN) = 872.15

Root Mean Square Residual (RMR) = 0.022

Standardized RMR = 0.022

Goodness of Fit Index (GFI) = 0.94

Adjusted Goodness of Fit Index (AGFI) = 0.91

Parsimony Goodness of Fit Index (PGFI) = 0.34

VITA

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PUBLICATION	Pattaramon Tubsoongnoen and Wasinee Wisesrith. (2009). The Competency of emergency nurses, government hospitals. Kuakarun Journal of Nursing. 16(2). 45-74.