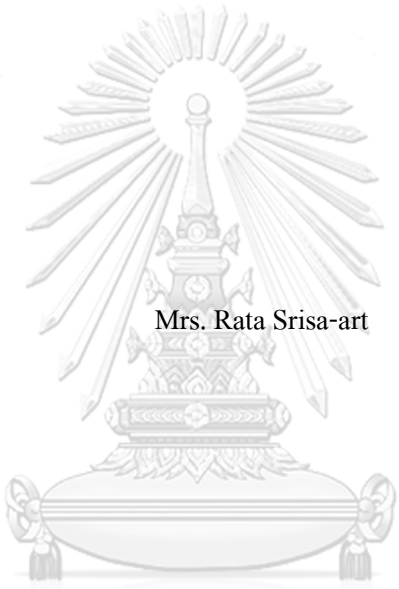
INTENTION TO STAY AMONG NURSES IN MINISTRY OF PUBLIC HEALTH, THAILAND: A CROSS-SECTIONAL SURVEY

Mrs. Rata Srisa-art



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ความตั้งใจคงอยู่ในงานของพยาบาลกระทรวงสาธารณสุข ประเทศไทย: การศึกษาภาคตัดขวาง

นางรตา ศรีสอาด

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาพยาบาลศาสตรดุษฎีบัณฑิต
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รตา ศรีสอาด : ความตั้งใจคงอยู่ในงานของพยาบาลกระทรวงสาธารณสุข ประเทศไทย: การศึกษาภาคตัดขวาง. (INTENTION TO STAY AMONG NURSES IN MINISTRY OF PUBLIC HEALTH, THAILAND: A CROSS-SECTIONAL SURVEY) อ.ที่ปรึกษาหลัก : รศ. ดร.จินตนา ยูนิพันธุ์, อ.ที่ปรึกษาร่วม : รศ. ดร.อารีย์วรรณ อ่วมตานี,ผศ. ดร.ชนกพร จิตปัญญา

การศึกษาภาคตัดขวางนี้ เพื่อศึกษาความตั้งใจคงอยู่ในงานของพยาบาลวิชาชีพ ในโรงพยาบาลสังกัดกระทรวงสาธารณสุข และเพื่อเปรียบเทียบความตั้งใจคงอยู่ในงานของพยาบาลวิชาชีพ จำแนกตามระดับโรงพยาบาลซึ่งเป็นลักษณะขององค์กร คุณลักษณะพยาบาล คุณลักษณะการบริหารจัดการ และคุณลักษณะงาน กลุ่มตัวอย่างเป็นพยาบาลวิชาชีพในแผนกผู้ป่วยใน จำนวน 1524 คน ที่ได้จากการสุ่มแบบหลายขั้นตอนจาก 59 โรงพยาบาล เครื่องมือวิจัยมี 4 ส่วน คือ 1) ข้อมูลลักษณะส่วนบุคคล 2) แบบสอบถามคุณลักษณะการบริหารจัดการ 3) แบบสอบถามคุณลักษณะงาน 4) แบบสอบถามความตั้งใจคงอยู่ในงาน แบบสอบถามทั้งหมดผ่านการตรวจสอบความตรงตามเนื้อหา และความเที่ยง ได้ค่าสัมประสิทธิ์แอลฟาของครอนบาค เท่ากับ .98, .96, .74 และ.87 ตามลำดับ วิเคราะห์ข้อมูลด้วย สถิติบรรยาย CROSSTAB และ one-way ANOVA

ผลการวิจัยโดยสรุปมีดังนี้

1. ความตั้งใจคงอยู่ในวิชาชีพของพยาบาล อยู่ในระดับปานกลาง (Mean = 3.38, SD = .68) ส่วนความตั้งใจคงอยู่ในโรงพยาบาลของพยาบาล อยู่ในระดับสูง (Mean = 3.88, SD = 1.02) เมื่อเปรียบเทียบความตั้งใจคงอยู่ในงานของพยาบาลในโรงพยาบาลระดับต่างๆ พบว่า พยาบาลมีความตั้งใจคงอยู่ในวิชาชีพของพยาบาลระดับสูงสุด ในโรงพยาบาล ระดับ M1 (61.30%) และต่ำสุด ในโรงพยาบาล ระดับ F2 (61.30%) นอกจากนั้น พยาบาลมีความตั้งใจคงอยู่ในโรงพยาบาลระดับสูงสุด คือพยาบาลในโรงพยาบาล ระดับ F2 (72.60%) และต่ำสุด คือพยาบาลในโรงพยาบาล ระดับ A (61.70%)

2. การเปรียบเทียบความตั้งใจคงอยู่ในวิชาชีพ และความตั้งใจคงอยู่ในโรงพยาบาล จำแนกตามปัจจัยที่ศึกษา มีข้อค้นพบ ดังนี้

พยาบาลมีความตั้งใจคงอยู่ในวิชาชีพของพยาบาล จำแนกตาม สถานภาพสมรส ประสบการณ์การทำงาน ตำแหน่งงาน รายได้ ลักษณะการบริหารจัดการ และลักษณะของงาน แตกต่างกัน อย่างมีนัยสำคัญทางสถิติที่ระดับ .05 ในขณะที่ ความตั้งใจคงอยู่ในโรงพยาบาล จำแนกตาม ตำแหน่งงาน รายได้ หน่วยงานที่ปฏิบัติ ภูมิลำเนา ลักษณะการบริหารจัดการ และ ลักษณะงาน แตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

เมื่อพิจารณา ความตั้งใจคงอยู่ในวิชาชีพของพยาบาล จำแนกตาม ลักษณะการบริหารจัดการ การวิเคราะห์ post hoc test พบว่า พยาบาลรับรู้ระดับของลักษณะการบริหารจัดการในระดับกลางและระดับสูง มีค่าเฉลี่ยการรับรู้ความตั้งใจอยู่ในวิชาชีพสูงกว่าพยาบาลที่รับรู้ระดับการบริหารจัดการในระดับต่ำ นอกจากนั้น พยาบาลที่รับรู้ระดับลักษณะการบริหารจัดการในระดับสูง มีค่าเฉลี่ยการรับรู้ความตั้งใจอยู่ในวิชาชีพสูงกว่าพยาบาลที่รับรู้ระดับการบริหารจัดการในระดับปานกลาง ในทางกลับกัน จากการวิเคราะห์ post hoc test พบว่า ความตั้งใจอยู่ในโรงพยาบาล พยาบาลรับรู้ระดับการบริหารจัดการในระดับปานกลางและสูงจะมีค่าเฉลี่ยการรับรู้ความตั้งใจอยู่ในโรงพยาบาลสูงกว่าพยาบาลที่รับรู้ระดับการบริหารจัดการในระดับต่ำ และความตั้งใจอยู่ในโรงพยาบาลของพยาบาลที่รับรู้ระดับการบริหารจัดการในระดับสูง มีค่าเฉลี่ยของความตั้งใจอยู่ในโรงพยาบาลสูงกว่าพยาบาลที่มีระดับการรับรู้ระดับการบริหารจัดการในระดับปานกลาง

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สาขาวิชา	พยาบาลศาสตร์	ลายมือชื่อนิสิต .....
ปีการศึกษา	2563	ลายมือชื่อ อ.ที่ปรึกษาหลัก .....
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		ลายมือชื่อ อ.ที่ปรึกษาร่วม .....

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KEYWORD: NURSES INTENTION TO STAY, PUBLIC HOSPITAL, THAILAND

Rata Srisa-art : INTENTION TO STAY AMONG NURSES IN MINISTRY OF PUBLIC HEALTH, THAILAND: A CROSS-SECTIONAL SURVEY. Advisor: Assoc. Prof. JINTANA YUNIBHAND, Ph.D. Co-advisor: Assoc. Prof. AREEWAN OUMTANEE, Ph.D.,Asst. Prof. CHANOKPORN JITPANYA, Ph.D.

A cross-sectional survey designed to investigate intention to stay (ITS) of nurses (RNs) in public hospitals under the Ministry of Public Health (MOPH) and to compare the intention to stay among nurses in various hospital types of care delivery of organizational characteristics, nurse characteristics, managerial characteristics, and work characteristics. The multi-stage sampling technique was used to recruit 1,524 nurses from in-patient units of 59 public hospitals under MOPH. Four instruments were used, namely: Nurse Characteristics and Socio-Demographic Data Form; Management Factors Questionnaire; Job Diagnostic Survey; and Intention to Stay Scales. All instruments were examined for content validity and reliability. The alpha Cronbach coefficients were .98, .96, .74 and .87, respectively. Descriptive statistics, CROSSTAB, and one-way ANOVA were used for data analysis.

The finding revealed the followings:

1. Intention to stay in profession (ITSP) was at a moderate level (Mean = 3.38, SD = .68). While, the intention to stay in current workplace (ITSW) was at a highest level (Mean = 3.88, SD = 1.02). When comparing ITS among nurses working in six hospital levels, it was found that the highest percentage of ITSP was at hospital level M1 (61.30%), and the lowest of ITSW at hospital level F2. Moreover, RNs perceived ITSW at a high-level. The highest percentage of ITSW was at hospital level F2 (72.60%) and lowest at hospital level A (61.70%).

2. A comparison of ITSP and ITSW classified by selected variables indicated the following findings:

Nurses perceived ITSP classified by marital status, working experience, job position, income, managerial characteristics, and job characteristics were statistically significantly different, at the .05 level. While, nurses' perceived ITSW regarding work position, income, working unit, hometown location, management characteristics and job characteristics were statistically significantly different, at the .05 level.

Considering ITSP among nurses who perceived different level of managerial characteristics, the post hoc test showed that nurses who perceived moderate and high managerial characteristics had a higher mean of ITSP than nurses who perceived low managerial characteristics. In addition, nurses who perceived high managerial characteristics had a higher mean score of ITSP than nurses who perceived moderate managerial characteristics. On the other hand, the post hoc test revealed that ITSW among nurses who perceived moderate and high managerial characteristics had a higher mean than those who perceived low managerial characteristics, and ITSW among nurses who perceived high managerial characteristics had a higher mean score of ITSW than nurses who perceived moderate managerial characteristics.

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Field of Study:	Nursing Science	Student's Signature .....
Academic Year:	2020	Advisor's Signature .....
		Co-advisor's Signature .....
		Co-advisor's Signature .....

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CHAPTER I

INTRODUCTION

Background and significance of the study

Retaining nurses is a significant concern to all hospital levels of care service delivery, especially hospitals under the Ministry of Public Health in Thailand. According to inadequate nurses, it indicated a severe human resource issue because Registered Nurses (RNs) comprised the largest number of healthcare professionals, with almost 60 percent in the nursing workforce. Sufficient RNs in the healthcare settings has been recognized as a priority concern for promoting nurses' ability to provide quality care and encourage nurses to stay at the bedside (Cowden & Cummings, 2015). Moreover, it reduces the mortality rate, organizational costs, and the workload of remaining nurses in healthcare organizations (Somchalski, 2001; Aiken *et* al., 2008b, Buchan, 2018). There is growing recognition that achieving healthcare systems objectives, including sustaining effective delivery of universal health coverage requires an adequate and effective nurse workforce (Buchan, 2018).

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The Ministry of Public Health designed the staff maintenance policy and implemented it in the healthcare system. For example, increased welfare services promoted career development, and organizational climate to maintain nurses within an organization (Thailand Nursing and Midwifery Council, 2006; Srisuphan & Sawaengdee, 2012; Khunthar, 2014; Ministry of Public Health, 2016). However, nursing workforce issues are unlikely to be entirely resolved yet; currently, nurses leaving the profession with 4.4% each year. Moreover, the healthcare subsystem shortage exists at all hospital levels (MOPH, 2019; Sawaengdee, 2017). The statement

above confirmed the failure in human resource management in health. Failure to intervene in the nursing shortage at any level in the healthcare system will terminate care quality (Buchan, Shaffer & Catton, 2018). This situation indicates a need to understand deeper human capital and maintenance to find a way to keep RNs in the current workplace and the profession.

Intention to stay of nurses could be a sustaining process that starts with an intention to stay at the clinical unit or ward, then their hospitals or workplace, and finally, intention to stay in the nursing profession (Hannigan, Patrick, & Machin, 2016). The evidence indicated that whenever nurses perceived intention to stay in the current workplace at a low level, then nurses will do job transfer or leave the organization soon after (Oliveira et al., 2017, Khunthar et al., 2013).

The low to moderate levels of nurses' intention to stay, especially in the current workplace and the nursing profession, significantly impact the healthcare system as an unstable nursing workforce. The inconsistency of retaining nurses in healthcare organizations affects the workforce planning and healthcare organizational budget and patient outcomes at all healthcare service delivery levels (WHO, 2006; Buchan & Aiken, 2008; Sawaengdee & Srisaprasert, 2012; Buchan, 2018). Healthcare organizations tried to provide appropriate workload to retain staff while reducing their very heavy workload which leads to stress and burnout. The low quality of work-life, and low quality of nursing care results in a higher risk for the patients (Needleman, 2001; Vahey *et* al., 2004, Oliveira, 2017; Buchan, 2018). Also, a low to moderate level of nurses' intention to stay leads to limited number of qualified nurses, which was recognized as a barrier to achieving the Sustainable Development Goals (SDGs) (United Nations, 2016).

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According to healthcare system in Thailand, the Ministry of Public Health established the healthcare service delivery system with the standard of care delivery network to utilize the referral system, reduce service congestion, and allocate resources efficiently within 12 Health Areas networks (Haruthai et al., 2017). The implementation of the service plan focuses on developing service systems at all levels, which ~~has~~ classified the status of a hospital for delivery per patient of the service system into three groups:

1. The First-level Hospital is responsible for forwarding patients from the primary care network consists of 1) Small community hospital (F3) (> 30 beds); 2) Medium size community hospital (F2) (30-90 beds); 3) Large community hospital (F1) (90-120 beds).

2. The Middle-level Hospital is responsible for transporting the patient from the secondary care network. It is divided into two levels: 2.1) Referral community hospital (M2) (> 120 beds); 2.2) A small General Hospital (M1) (150-200 beds).

3. The High-level Hospital is responsible for transferring patients from medium-sized hospital to tertiary hospitals that are divided into two levels: 3.1) General hospital refers to the province's service network (Level S: Standard - level Hospital) (150-500 beds); 3.2) Regional Hospital is the center for a referral from the Provincial Service Network (Level A: Advanced-level hospital) (> 500 beds) (Haruthai et al., 2017).

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However, the service plan can operate effectively based on registered nurses' adequacy to provide care for the patients towards each service plan's objectives. The healthcare organizational structure's functionality clusters the distribution of registered nurses' human capital at the nursing service delivery level. Each healthcare

service delivery is different from others based on the purpose, policy, and size of a hospital. Human resource management must play a significant role in facilitating nurses' demand and supply to serve an appropriate workload with nurses' competency or Full-Time Equivalent (FTE). Thus, the management strategy impacts nurses' characteristics, managerial characteristics, organizational characteristics, and work characteristics. Moreover, the demand and supply of nurse specialists are also crucial for providing care and treatment. Therefore, sufficient number of nurses is the core of nursing services for patient safety at the service plan level.

Hence, a community hospital requires sufficient RNs (100%) of Full-Time Equivalent (FTE) to strengthen the quality of healthcare service delivery, reduce transferring patients across the area health at 10% each year as a policy launched (Haruthai, 2017). However, recently, primary and secondary care levels have RNs at 7,130 (62.5%) and 7,094 (84.5%), respectively (Health Data Center, 2019). Thus, shortages in community hospitals are a barrier to achieve UHC and SDG. In other words, the nurse shortage at this level impacts the quality of nursing care due to the heavier workload and higher mortality and morbidity rates (Nursing Division, 2017; Srisuphan, 2012; Buchan, 2019).

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For Thailand's nursing workforce, Sawaengdee *et* al. (2009) investigated nurses' intention to stay in their profession and projected that by the year 2029, only 60 percent of nurses would remain working in the profession. And 24 percent would work in healthcare support jobs; the other 16 percent would work in other occupations. This study demonstrated a severe perception level of nurses who would not intend to stay in the profession. Besides, the initial cohort study revealed 15.4 percent of nurses would not plan to remain in the nursing career (Sawaengdee *et* al.,

2016). Furthermore, the study also disclosed a moderate level of nurses' intention to stay in the profession in Community hospitals in Health Area 1 (Tongniran, Intaraprasong & Pattara-Archacha, 2018).

For intention to stay in the current workplace, the previous studies indicated a low level of nurses' intention to stay in the current workplace at all hospital types of care delivery (Pho-Ong, 2015; Khunthar *et* al., 2012; Srisuphan & Sawaengdee, 2012). For example, in the annual report of Saraburi Regional Hospital, nurses' intention to stay in the current workplace was only 33.71 percent in 2015 (Saraburi Hospital yearly report, 2015). Moreover, a Pranakorn Si Ayuthaya province study revealed a low intent to stay at work at 22.4 percent (Kaewboonchoo *et* al., 2014).

Another study indicated that when nurses perceive a low percentage of nurses' intention to stay in the current workplace, they did a job transfer. This study further claimed that this condition predominates, especially within the public sector at 86.80 percent, who were in a group of 31- 40 years of age (Khunthar *et* al., 2013). This group was composed of skilled nurses who were needed to be kept in the current workplace to promote quality nursing outcomes (Sawaengdee, 2009, 2016). This study also specified that there was a 4.11 percent of job transfers among nurses from public hospitals to private hospitals during 2000-2009 (Khunthar *et* al., 2013).

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In a substantial number of research findings, some of the variables of intention to stay were consistently explained by the variety of antecedents and variables, such as socio-demographic characteristics. Existing studies also found that specific socio-demographic characteristics were related to nurses' intention to stay in the current workplace (Pongsuwan, Noimuenwai, & Maruo, 2019) and the profession (Engeda *et* al., 2014; Sawaengdee et al., 2016; Taokumlue & Damapong, 2007; Thongniran,

2015). In Canada, nurse's personal characteristics were allied to nurses' intention to stay. In this study, the findings revealed that marital status and educational level significantly enhanced nurse's intention to stay. Moreover, other survey studies showed that nurses' intention to stay was at a higher level in nurses with a diploma than nurses with a baccalaureate degree (Byun & Shin, 2014; Beukes & Botha, 2013).

In addition, nurses' socio-demographic characteristics including age, educational level, years of employment, and job position, only age and job position were significantly and positively allied with nurse intention to stay (Wang *et* al., 2014). Another study strengthens these findings where age and years of employment contributed significantly with nurses' intention to stay in their current workplace (Wang *et* al., 2012). However, South African study results showed that increasing age was found to predict turnover intention. In the same study, educational level was significantly and negatively associated with intention to stay in the profession in that higher educated nurses were more than twice as likely to consider leaving the profession (Engeda *et* al., 2014). Besides, the studies suggested that tenure was positively related to nurses' intention to stay (Boyle et al., 1999; Cowden & Cummings, 2012; Liang et al., 2016; Tourangeau et al., 2010). Tourangeau and Cranley (2006) found that increasing employment years at the current hospitals was one of the most significant predictors of acute care nurses' intention to remain.

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Consequently, generation impacts nurses' intention to stay or leave the organization (Chamchan & Kittisuksathit, 2019). The study showed that generation workers are related to the intention to stay. There are four generations of workers in the nursing workforce. Likewise, income has become an important variable related to

nurses' intention to stay. Many studies claimed that income impacts the decision-making to leave or stay in the organization (Chen, Rasdi, Ismail, & Asmuni, (2017).

Furthermore, the nursing units enhanced intention to stay. The study showed that nurses want to work in the Intensive Care Unit because of challenging experiences (Kuewong, 2016). Also, the research in Jordan supported that nurses perceived intention to stay at work in ICU as significant to intention to stay at work (Mrayyan, 2008).

Moreover, the study showed that personal factors, work factors, and management factors had a moderate level to promote satisfaction and organizational climate in 70 general hospitals under the Ministry of Public Health (Maihom, 2015). Similarly, personal characteristics, job characteristics, and organizational characteristics were at a moderate level to promote nurses' intention to stay in community hospitals in Phetabon province (Nasornjai, & Limdsawasdikul, 2015).

The existing studies demonstrated managerial characteristics enhance intention to stay in the current workplace and the profession (Chutchawanchanakij, 2017; Nasornjai, 2016). The studies indicated human capital promoted nurses' perception of intention to stay. Transformational leadership also promoted nurses' intention to stay in the current workplace (Liang, Tang, Wang, Lin, & Yu, 2016). Moreover, justice, professional growth, work happiness, work-life balance promoted intention to stay (Patthapong & Volrathongchai, 2018). Job characteristics included skill variety, task identity, task significance, autonomy, and feedback were found allied with the intention to stay in the current workplace (Khaowphong, 2013).

Furthermore, recently, the Ministry of Public Health forecasted nurses' intention to leave the organization during 2019-2021 would be an average of 600

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nurses per year and retirement at an average of 1070 nurses per year. The Thailand Nursing and Midwifery Council stated that there were 118,560 nurses in 2020. In 2019, the Ministry of Public Health revealed that the number of Registered Nurses (RN) shortage at all healthcare delivery services was 50,021 (Health Data Center, 2019). In 2020, the Health Data Center proposed a lower number of RN at all healthcare service delivery levels under the Ministry of Public Health (MOPH, 2020). Hence a careful consideration and immediate attention to these statistics related to the level of nurses' intention to stay has to be acknowledged to respond to the desertion from the nursing profession (Sawaengdee et al., 2009; Khunthar, 2014).

The literature review revealed the variables encounter with nurses' intention to stay in the current workplace and nursing profession remain exclusive and those variables have been changed over time. The literature in Thailand exhibited the sources of variables of intention to stay in the profession and the current workplace including demographic variables such as age, education level, nursing unit, nursing position and managerial characteristics, work characteristics. However, the application of those studies did not effectively solve shortage issues in Thai nursing workforce yet, especially the shortage in rural and remote areas. According to the literature review, the gap of knowledge regarding the limitations of critical shortage at the hospital levels of care services delivery in service plans, and lack of study which investigated the level of intention to stay in the profession and the current workplace in the same time. There is an absence of study that compares managerial characteristics, work characteristics and intention to stay in the profession and the workplace through service delivery in Thailand yet.

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Therefore, this study looks at the approaches that are commonly used to fill the gap of knowledge by investigating the level of nurses' intention to stay in the current workplace and the profession and to compare the intention to stay of nurses with various personal characteristics, managerial characteristics, work characteristics, and organization characteristics, through hospital levels of care delivery to a better understanding nurses' intention to stay in the profession and intention to stay in the current workplace.

Objective of the study

1) To investigate intention to stay of nurses in public hospitals under the Ministry of Public Health.

2) To compare the intention to stay among nurses with hospital types of care delivery of organization characteristics, nurse characteristics, managerial characteristics, and work characteristics.

Conceptual framework of the study

This study is guided by literature review. According to the literature review, there were antecedent variables of intention to stay which can be classified into work-related factors and organizational factors. The various work-related or job-related characteristics (Beehr et al., 2000; Taylor & Shore, 1995; Sohaba, 2012; Sufyan, 2010), that is, work-related variables may push an individual away from work and affect toward a decision to leave or stay in the profession. Limited autonomy at work, job value, work schedule, pay, and welfare manifested by an adverse reaction to professional life was associated with less intention to stay in the profession (Flinkman et al., 2008). The other variable that was found to cause a significantly reduced intention to remain in a nursing career was organizational characteristics.

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Organizational characteristics, especially in the public sector, were relevant to intrinsic motivation due to being a notation of push variables such as managerial support, income, professional development, and job characteristics determine the intention to stay (Clegg, 1983; Alsos, 2016; Sohaba, 2012).

The variables that are attractive as external organizational variables are presented by economic factors (Irvine & Evans, 1995; Alsos, 2016; Sohaba, 2012). It found that several alternative employment opportunities were associated with intention to leave or stay in the current workplace and the profession (Irvine & Evans, 1995; Simon et al. 2010). Mainly, Thailand 4.0 policy (2017) and Thailand Health Act (2001) drive the Thai healthcare system to increase the demand of nurses to deliver medical hub policy and participate in the ASEAN Economic Community (Stordeur et al., 2007). Those policies can facilitate free movement across regions and increase employment opportunities or chances on the labor market. It can significantly affect the intention to stay in a nursing career, prevent job transfer, and severe migration to work abroad.

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Moreover, literature frequently mentioned variables refer to organizations and working conditions that are more conducive to stay in the current workplace. Therefore, theoretical emphasis on a nurse's working condition contributing to success in attracting and retaining nurses has been recognized as an essential issue. The NEXT study supports this and showed that a supportive work condition improves nurses' intention to stay in the profession (van der Heijden, Dam, Hasselhorn, & the NEXT study group, 2007).

This evidence supports the investigator's purpose in the study. However, this study does not intend to investigate which characterize by work-related factors (autonomy, job value, work schedule, pay, and welfare), organizational characteristics (workload, type of hospital care delivery and professional, promotion opportunity, and career development) and nurses' intention to stay in the nursing profession as decisional components. The proposed relationships among the variables and concepts are depicted as the following characteristics and, organizational characteristics may be manager characteristics as well.

Likewise, the literature review indicated some important dimension which have been related to nurse's intention to stay, such as nurse manager characteristics, personal characteristics, organizational characteristics, and work characteristics (Cowden, 2011; Sourdif, 2004; Taunton et al., 1997; Tourangeau & Cranley, 2006). Many researchers examined the influence of manager characteristics on nurses' intention to stay (Tourangeau & Cranley, 2006; Tourangeau & Cummings, 2009; Toungeau *et* al., 2013; Tourangeau *et* al., 2014).

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First, nurse's personal characteristics are related with the intention to stay (Shields & Ward, 2001; Chan & Morrison, 2000; Larrabee et al., 2003; Maihom, 2015). Among the demographics, age, marital status, year of employment, nurse manager characteristics: supervision support, manager-staff relationship, staff involvement in the decision, and positive feedback, and job satisfaction throughout the literature, job satisfaction was the most consistent influence of nurse intention to stay and has even been reported as explaining most of the variance in job satisfaction (Sourdif, 2004; Cowden, 2011; Engada *et* al., 2014).

Secondly, managerial characteristics are associated with nurse intention to stay (Chan & Morrison 2000; Kunaviktikul *et* al., 2000; Janney *et* al., 2001; Joshua-Amadi, 2002; Lacey, 2003; Larrabee *et* al., 2003, Roberts *et* al. 2004; Sourdif 2004, Cowden & Cummings, 2017). Also, workload, promotion, and career development were related to nurses' intention to stay (Cowden, 2011; Tourangeau & Cranley, 2006)

Thirdly, work characteristic is associated with nurse intention to stay (Shader *et* al., 2001; Aiken *et* al., 2002; Bogaert, 2013).

Fourthly, organizational characteristics, the hospital level (A, S, M1, M2, F1, and F2), promote nurses' intention to stay in the profession and current workplace (Ingersoll *et* al. 2002; Sourdif, 2004; Ingersoll *et* al., 2002).

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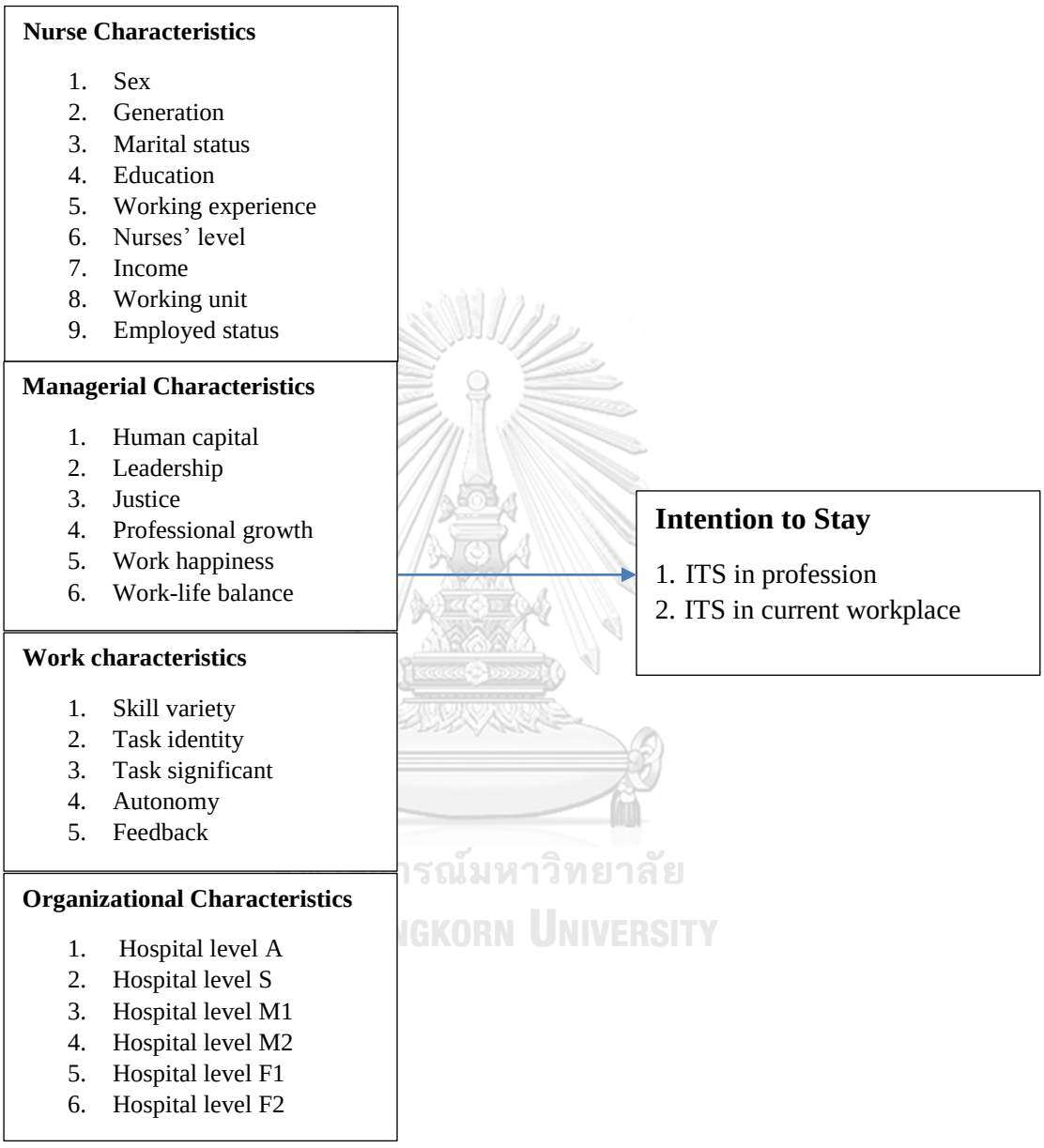
Figure 1: Conceptual Framework of Nurses' Intention to Stay based on the literature review



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The operational definition

1. Nurse characteristics

Nurse characteristics is defined as nurse's personal socio-demographic characteristics which include sex, generation, marital status, education level, working experience, nurses' level, income, working unit, and employed status.

1.1 **Sex** refers to gender and defined either male and female.

1.2 *Generation* refers to the nurse's age in years and is divided into groups of people who live at the same time and are about the same age. The cluster are classified into 3 generations, 1) Gen of Millennial (who was born between 1977 to 1995); 2) Gen X (who were born between 1965 to 1976), and 3) Baby Boomers (who were born between 1946 to 1964).

1.3 **Marital status** refers to the nurse's personal status of being single, married, divorce, and separate.

1.4 **Education level** refers to the level of education as nurses.

1.5 **Working experience** refers to the year of staff experience in nursing at a healthcare organization.

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1.6 **Nurses' level** refers to the professional level in the healthcare organization of registered nurses.

1.7 **Income** refers to money received from working.

1.8 **Working unit** refers to the nursing unit where a nurse was working on recently.

1.9 **Employment status** refers to nurse's work in a healthcare organization based on employment contract. Nurses may be a full-time employee or a part-time employee.

These nurse's characteristics and demographic data measures by the Nurses Characteristics and Demographic Data Form are created by the researcher.

2. Managerial characteristics

Managerial characteristics refer to the nurse manager's administrative behaviors to achieve the ultimate goals of an organization and encourage nurses' intention to stay through management factors regarding human capital, leadership, justice, professional growth, work happiness, and work-life-balance. Managerial characteristics are measured by Management Factor Questionnaire (Chutchawanchanchanakij, 2017) consists of 55 items with a 5 points Likert scale.

3. Work Characteristics

Work Characteristics are job characteristics that define job enrichment that provides skill variety, task identity, task significance, autonomy, and feedback regarding the job. Job characteristics measure by the Job Diagnostic Survey (Boonmung, 2009) Thai version. It consists of 26 items with a 5 points Likert scale.

4. Organizational Characteristics

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Organizational characteristics refer to organizations' aspects identified as the hospital levels based on service plans to achieve organizational goals. There are 6 hospital levels:

4.1 **F2** (First-level Hospital with Medium-size community hospital) refers to a community hospital that provides 30-90 beds with a practitioner or family physician to provide services according to the standards of secondary services without a specialist doctor.

4.2 **F1** (First-level Hospital with Large-size community hospital) refers to a community hospital that provides 90-120 beds with special treatment in the major areas of Internal Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Orthopedic, and Anesthesiologists.

4.3 **M2** (Middle-level Hospital, referral community hospital) refers to a referral community hospital that offers more than 120 beds with a specialty treatment in all six main fields (Internal Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Orthopedic Surgery Anesthesiologist).

4.4 **M1** (Middle-level Hospital or a small General Hospital) refers to a hospital with 150-200 beds to support patients who need treatment in complex, expert-level, which consists of specialist doctors.

4.5 **S** (The High-level with Standard - level Hospital or General hospital) refers to the province's service network that provides 150-500 beds which can support specialized treatment among patients at a complicated story designated as a referral hospital standard patients care.

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4.6 **A** (Advanced-level hospital or Regional Hospital) refers to Provincial Service Network with more than 500 beds that can support the patient in complex treatment, proficient and technologically advanced, and is expensive (Haruthai et al., 2017).

5. Nurses' intention to stay

Nurses' intention to stay refers to the perception of nurses toward their intention to stay in the profession, and intention to stay in the current workplace.

5.1 **Nurses' intention to stay in the profession** refers to nurse's plans to stay in the nursing career. The nurses' intention to stay in the profession was measured by McCain's Intention to Stay Scale (cited in McCloskey,1990) that consists of 5 items scale of 5 points Likert scale.

5.2 **Nurses' Intention to Stay in the current workplace** refers to the estimated likelihood of continued membership of a registered nurse in an organization. Nurses' intention to stay in current workplace measures by the Intent to Stay Scale (Price & Mueller, 1986) consists of 3 items scale of 5 points Likert scale.

Scope of the study

A cross-sectional survey research design aims to assess nurses' intention to stay in public hospitals under the Ministry of Public Health and to compare nurses' intention to stay with various personal characteristics, managerial characteristics, work characteristics, and organizational characteristics through hospital levels of care delivery. The sample were registered nurses who have been employed at least one year in public hospitals under the Ministry of Public Health. The participants were recruited from inpatient units of 59 hospitals in four health areas (health area 3, health area 6, health area 9, and health area 11). Finally, 1524 participants participated in this study. The study was conducted from April to July 2020.

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Study benefits

This study provides useful findings

1. This study can expand new knowledge to enhance nurses' intention to stay in the current workplace, wherever a critical nursing shortage at the hospital level in which the situation exists. In other words, knowing low to moderate levels of intention to stay in the current workplace can promote the success of the service plan.

2. The findings provide an in-depth understanding of the variables allied intention to stay that would be beneficial for nurse administrators and policymakers for creating effective nursing workforce planning strategies in order to improve nurse's retention, reduce nursing shortage, and improve the quality of nursing care.

3. The findings also exhibit intention to stay in the nursing profession that should be the focus on retaining nurse which is better than producing new nurses.

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CHAPTER II

LITERATURE REVIEW

This study aims to investigate the intention to stay of registered nurses who work in public hospitals under the Ministry of Public Health (MOPH) and to compare the intention to stay of nurses with various nurse characteristics, managerial characteristics, work characteristics, and organizational characteristics through the hospital type of care delivery. An extensive review of this chapter's existing literature was associated with nurses' intention to stay, including theory and empirical studies. The chapter divided into four sections, as follows:

1. Thailand healthcare system context
2. Nursing workforce in Thailand
3. Nurses' intention to stay in the current workplace and the
4. The theoretical perspective of nurses' intention to stay
5. Factors related to nurses' intention to stay in the profession and the current workplace

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1. Thailand Healthcare System Context

The Ministry of Public Health (MOPH) is a national health authority responsible for formulating, implementing, monitoring, and evaluating health policy as indicated by laws and act as a service provider (Jongudomsuk et al., 2015). The administrative structure of MOPH clusters into two levels, central and provincial to delegates function, monitor, and support allocate resources as well as coordination bodies across provinces within a geographical region regarding providing healthcare service delivery (Jongudomsuk et al., 2015; Tangcharoensathien, Witthayapipopsakul,

Panichkriangkrai, Patcharanarumol, & Mills, 2018). The healthcare delivery system has established in the 1980s to provide health services covering all Thailand's geography that clusters into sub-districts, districts, and provinces. World Health Organization classified Thailand as an upper-middle-income country in 2011(Jongudomsuk et al., 2015; W. World Health Organization, 2017). There are currently 66.25 million people in Thailand's kingdom (Institute for Population and Social Research, 2019).

Healthcare delivery systems form how care is delivered, where it is delivered, and how it is paid (MOPH, 2016). So, Thailand's healthcare service delivery systems classify into two main sectors of the public sector and the private sector. The public hospitals account for 79 percent, while private hospitals provide the rest of healthcare delivery accounts for 21 percent. Also, the MOPH hospitals offer the highest bed occupancy rate (>80%), while private hospitals have a lower rate (20%). Besides, private non-profit charity runs the hospital's account for a small hospital bed share (Jongudomsuk et al., 2015). The healthcare service delivery system also provides health networks down from provinces to districts, then sub-district hospitals service provision covering all Thailand (M. Ministry of Public Health, 2017; The National Geographical Committee, 1977). Thus, the healthcare delivery system has a significant impact on acute care delivery, especially departments under the Ministry of Public Health supervision, which provide 24 hours in nursing care services.

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Sub-districts level offers primary care, disease prevention, health promotion, chronic care, rehabilitation, palliative care, and long-term care that are covered all sub-districts for an average population of 5,000. Most of this level of healthcare delivery does not provide inpatient or acute care services. Therefore, this healthcare

delivery doesn't have a physician working there. There are 9,781 hospitals in Thailand (Ministry of Public Health, 2018).

Districts level offers healthcare services delivered through a community hospital, a specific classification of public hospitals that provide 30, 60, 90, or 120 beds for the patients in that all districts area, covering a population of approximately 600,000 (Thai Health Systems Review, 2015). There are four levels of care delivery of the community hospital that provide primary healthcare services to support all the community primary healthcare centers located in the village and sub-district. The community hospitals and other public agencies with less than 100 beds provide healthcare facilities as the necessary medical care and refer to the more advanced cases to the general hospitals or the regional hospitals (referral community hospital or M2). It also provides secondary care level that focuses on health promotion, disease prevention, and simple curative care. There are 781 community hospitals in Thailand (The Division of Human Resource, 2019).

Provinces level offers healthcare services delivery through the provincial hospital in each of the 76 provinces in Thailand. Most hospitals at this level call the general hospital that provides 150 to 500 beds for inpatients, and it covers a range of population approximately 600,000. Some general public hospitals have been upgraded to regional hospitals with 400 to 1,000 beds and act as referral centers in a region. General hospitals provide secondary to tertiary care at the province's referral centers (Thai Health Systems Review, 2015). There are 82 hospitals in Thailand (The Division of Human Resource, 2019).

Regional level acts as a referral center and offers healthcare services delivery through the regional hospitals that provide care as advance service/Care training

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center. This hospital delivers care with 500 to 1,500 beds that contribute both services and education. The regional hospital offers primary care, secondary care, and tertiary care. This type of hospital focuses on tertiary care that emphasizes treating disease, rehabilitation, and the sophisticate of curative care (Ruangrattanatri, 2017). There are 34 regional hospitals (The Division of Human Resource, 2019) authorize by the Permanent Secretary, Ministry of Public Health, and 34 hospitals under the Department of Medical Services, 20 hospitals under the Department of Mental Health, and two hospitals under the Department of Disease Control. However, to transform the healthcare system forward to healthcare excellence and accomplish the Sustainable Development Goals, the service plan was developed to improve all Thais population health in 2011(Sathirakoon et al., 2018).

The Service Plan Development

The Ministry of Public Health (MOPH), the fiscal year 2011- 2012, has reviewed and created the guidelines for developing the healthcare service delivery systems with the standard of care delivery network. Also, it utilizes the referral system to reduce service congestion and allocate resources efficiently. In this regard, MOHP, by the Office of the Permanent Secretary, has formulated a plan to develop the healthcare service delivery system from 2012 to 2016. This service plan can change the healthcare environment's challenges in the future, including the financial situation. Implementing the healthcare development plan is consistent with individual care and service quality through a service plan network management's model within 12 health networks. The service plan concept is as follows (Haruthai et al., 2017).

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1) Seamless Service Network (Seamless Health Service Network) is an arrangement of a health service system in the form of a network instead of expanding

the hospital under the principle "Seamless service network" that can link primary, secondary and tertiary level together.

2) Development of the Provincial Administration Network (Provincial Health Service Network) is a network in each province to accomplish the provincial referral system's standard at least one network. This network must develop to achieve the network's efficiency at a higher level of standards, and a committee operates this network.

3) Rating the Referral Hospital Cascade by clustering service plan to be three levels: primary, intermediate, and high levels of service plan forward effective allocation the use of limited network resources. Avoiding duplicate investments and eliminating competition.

Capacity Rating of Public Health Facilities

Implementation of the 5-year Service Plan (B.E. 2017-2021) focused on developing and implementation of service systems at all levels. From primary, secondary, and tertiary care delivery are including setting a high level of expertise by creating a service network system that linked together at the provincial, district, and network levels, which has classified the status of the hospital for delivery per patient of the service system into three groups (Haruthai et al., 2017) as follows.

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1.1. The hospital forwarding level (First - level Hospital) (F) is responsible for forwarding. Patients from the primary care network are divided into three groups, as follows:

1.1.1 Small community hospital (F3) refers to a less than 30 beds community hospital equipped with a general practitioner or a family practice physician. A total of 1-2 people have a small operating room. There is no operating

room, delivery room, inpatient building. Providing uncomplicated patient care network support primary care in each district is not a surgical procedure, such as major surgery. Moreover, it does not require a full inpatient service in each community to support each district's primary care network.

1.1.2 Medium size community hospital (F2) refers to the hospital providing 30-90 beds with 2-5 practitioners or family doctors. There are none specialized doctors who offer inpatient services. There is an operating room and a delivery room to accommodate patients and patients.

1.1.3 Large community hospital (F1) refers to a community hospital that provides 90-120 beds with practitioners or family physicians and specialists in the major areas of Internal Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Orthopedic, and Anesthesiologists. Total 3 - 10 specialists include providing care for the Operation room patient, Labor room, and support district primary care networks.

1.2. The Middle-level Hospital is responsible for transporting the patient from the secondary care network is divided into two levels as follows:

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1.2.1 Referral community hospital (M2) refers to a community hospital of more than 120 beds with 3-5 or more practitioners or family practitioners and a specialist in all six main fields (Internal Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Orthopedic Surgery Anesthesiologist) at least two persons each branch. The service delivery is for the patients in the operating room, labor room, and intensive care unit. There is a laboratory for the diagnosis and treatment of specialists. Diagnostic radiology supports the treatment by doctors in 6 main branches to support referral from the hospital. Other communities are to reduce referral to general hospitals and support each district's primary care network.

1.2.2. A small General Hospital (M1) refers to a hospital with 150-200 beds to support patients who need treatment in complex, expert-level is consisting of specialist doctors. All significant branches and sub-branches in individual components require designating as a referral hospital medium level.

1.3. The High-level Hospital has to transfer patients from medium-sized hospital to tertiary hospitals that are divided into two levels as follows:

1.3.1 General hospital refers to the province's service network (Level S: Standard - level Hospital). This hospital level with 150-500 beds can support specialized treatment patients at a complicated story. This level consists of doctors specialists in primary, secondary, and some sub-fields and designated as a referral hospital standard patients care.

1.3.2 Regional Hospital is the center for a referral from the Provincial Service Network (Level A: Advanced-level hospital). It refers to a hospital with more than 500 beds that can support the patient in complex treatment, proficient and technologically advanced, and expensive (Advance and Sophisticate Technology). It has medical education and medical research mission. It consists of medical specialists in the primary, secondary, and sub-branches in all fields as needed. A regional hospital designate is a high-level referral hospital (Haruthai et al., 2017).

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To sum up, the service plan can operate effectively based on registered nurses' adequacy to provide care for the patients regarding each service plan's objectives. The healthcare organizational structure's functionality clusters the distribution of registered nurses' human capital at the nursing service delivery level. Each healthcare service delivery is different from others based on the purpose, policy, and size of a hospital. Human resource management must play a significant role in facilitating

nurses' demand and supply to serve an appropriate workload with nurses' competency or Full-Time Equivalent (FTE). Thus, the management strategy impacts nurses' characteristics, managerial characteristics, organizational characteristics, and work characteristics. Moreover, the demand and supply of nurse specialists are also crucial for providing care and treatment. Therefore, sufficient nurses are the heart of nursing services for patient safety.

Additionally, the healthcare system has adopted the legal framework principle for moving the welfare state by proving the Universal Health Coverage (UHC) in 2002. The UHC is a pillar of Sustainable Development and global security to enable access services through a multi-level geographical equality system of health services delivery system. Equality in healthcare access requires healthcare services and claims as essential people's rights to the Thai population (U.N., 2016). The UHC achieves through three public insurance schemes: 1) the Civil Servant Medical Benefit Scheme (CMBS) for civil servants and their dependents that cover 8 percent or 5 million, 2) Social Health Insurance (SHI) for formal sector employees that cover 10 million or 16 percent, and 3) the Universal Coverage Scheme (UCS) for the remainder of the population that covers 48 million or 75 percent of Thai population ((Organization, 2016; Strategy and Planning Division, 2018; Tangcharoensathien et al., 2018; World Health Organization, 2016)).

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To achieve the healthcare system's excellent service, the Ministry of Public Health (MOPH) developed a long-term national strategic plan within 20 years (2017 to 2037) to shape the healthcare system into excellent services. Also, WHO recommends a threshold of 4.45 nurses per 1000 population to meet the SDGs by

2030 (WHO, 2018) but, the threshold of Thai nurses has only 2.3 per 1000 people in 2015 (World Bank Organization, 2015).

In other words, UHC implementation's achievement goals need sufficient nurses to provide care for the Thai population at all levels of healthcare service delivery. However, all hospital levels at nursing services delivery face understaffing that seem to be less intentional stay in the profession and the current workplaces (Bureau of Nursing, 2015; Health Data Center, 2019; Khunthar, 2014). Consequently, sufficient and qualified human resources for health are crucial for achieving UHC as part of the Sustainable Development Goals (SDGs) (Tangcharoensathien, 2018; World Health Organization, 2017).

Further challenges relate to the nursing workforce to increase nurses' demand to provide care in the Association of Southeast Asian Nations (ASEAN) Economic Community. This policy drives the ASEAN Economic Community to upgrade the standard of care and increase patient access to Thais' care and promote Thailand as a Medical Hub in Asia in 2025 (M. Ministry of Public Health, 2016). The consequence of this policy is to gain revenues from foreign medical tourism. The hospitals, especially at a high-level hospital (regional and general hospitals), have a significant impact on providing sophisticated nursing care and advanced complex medical technologies with utilization in the healthcare system to make services become the duties of specialization (MOPH, 2017). This situation also requires sufficient skilled nurses to deliver excellent care to the achievement of the policy goals.

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The service plan establishes to strengthen the quality of care at all healthcare service deliveries to promote all Thai population health through service plans at primary, secondary, and tertiary care levels at the Health Area forward achieving

Universal Health Coverage (UHC) and Sustainable Development Goals (SDGs). Therefore, sufficient RNs require at all levels of service plan from community hospitals through regional hospitals. Since the policy determines the ratio between nurses to population is 1:300 to upgrade the standard of nursing care and improve access to the Thai people's care to achieve health for all in 2021 (The Ministry of Public Health, 2017). So, it requires strong support from a first-level hospital (community hospitals), middle-level hospitals (referral community hospital and small general hospital), through the high-level hospital (large-size general hospital and regional hospitals).

Hence, a community hospital requires sufficient RNs (100%) of Full-Time Equivalent (FTE) to strengthening the quality of healthcare services delivered, reduce transferring patients across the area health at 10% each year as a policy lunched (Haruthai, 2017). However, recently, primary and secondary care levels have RNs at 7,130 (62.5%) and 7,094 (84.5%), respectively (Health Data Center, 2019). Thus, shortages in community hospitals are a barrier to achieve UHC and SDG. In other words, the nurse shortage at this level impacts the quality of nursing care due to the heavier workload and higher mortality and morbidity rates (Nursing Division, 2017; Srisuphan, 2012; Buchan, 2019).

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Furthermore, the evidence showed that 15% of RNs intend to leave their nursing career in 2014 (Swaengdee, 2016). The brain also drained the public to private sectors with proper payment (Khunthar, 2014; Rujivanarom, 2017). This situation revealed a low intention to stay in the current workplace. The evidence indicated that the low quality of nurses' retention has significant implications for nurse shortages.

2. Nursing Workforce in Thailand

The healthcare system has increased the demand for healthcare workers especially registered nurses (RN), to provide sufficient healthcare services delivery to accomplish the goals of achieving Sustainability Development Goals (SDG) and Medical Hub in Asia in 2025 as the policy mandate (MOPH, 2017; Witoolkollachit, 2017). Furthermore, an aging society in the Thai population demands nursing services to offer nursing care for chronic illnesses (MOPH, 2017). Consequently, achieving the policy goals needs to sustain and have adequate nurses to deliver healthcare services. Unfortunately, the registered nurses' shortage problem still exists 50,021 nurses approximately under the Ministry of Public Health in 2019 (ICN, 2019; Jongudomsuk et al., 2015; Sawaengdee et al., 2016).

The majority of registered nurses (RNs) (80%) work in a public hospital under the Ministry of Public Health (MOPH, 2017; Jongudomsuk, 2015). According to studies from nurses' demand and supply projection from 2017 to 2021, healthcare service required 136,520 Full-Time-Equivalent (FTE) nurses by 2021 still. There are only 71.87% of the estimated current demands of registered nurses (K. Sawaengdee, 2017). Of this number, 73.4% were in the hospitals under the Ministry of Public Health (MOPH). There is 26.6 % in other Ministries, local government agencies, the private sector, and state enterprises (World Health Organization, 2018). The number of RNs is under actual standard FTE units. Therefore, the strategies to keep nurses within the profession and the current workplace are needed.

It has known that the Thailand Nursing and Midwifery Council (TNMC) and the Nurses Association of Thailand had proposed policy and guidelines to strengthen all RNs to provide a standard of nursing care with an appropriation of FTE units for

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patient care. The policy launched to increase nurses' retention in public and private hospitals (Khunthar, 2014; Sawaengdee, 2017; TNC, 2010). Nevertheless, nurse retention issues still exist with the exiting rate of registered nurses from the profession is 4.4% each year (Sawaengdee, 2016).

The above could lead to more crises of less intention to stay in the current hospital and the profession than before. To promote nurses' intention to stay in the current workplace and the profession is vital to the nurse manager, nurse administrators, and policymakers to understand the issues and knowing the level of intention to stay and what variables encounter nurses' intention to stay in both current hospital and the profession.

3. Nurses' Intention to Stay in the Current Workplace and the Profession

Nurses' intention to stay has drawn the attention of the researchers for more than a half-century. In the early years of the 20th century, researchers focused on the investigation of employee turnover in the organization and documented, for example, how employees are satisfied with pay, benefits, job, coworker, and leadership. In the meantime, the employers emphasized investigation on quits with income, turnover costs and formulated decrease strategies to reduce the employee's leave healthcare organization (Fisher, 1917a,b cited in Hom, Lee, Shaw, & Hausknecht, 2017). Since then, hundreds of studies have appeared examining practical methods for turnover control or reduction and then explain how theory development and testing began in the mid-20th century and dominated the academic literature until the turn of the century.

At the beginning of the 21st century, the researchers were growing interest in the psychology of staying rather than leaving and attitudinal lines in predicting

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turnover or retention (Hom, Lee, Shaw, & Hausknecht, 2017). Finally, the rising learning on collective turnover or retention gave the centrality of human capital flight to practitioners and the field of management strategy. For example, the most well-known turnover theories are the turnover process by Mobley (1977), the turnover theory (by Price and Mueller in 1981, 1986, 1990) that add intention to stay into their conceptual frameworks as a variable of the investigation.

The term intention to stay has no single meaning. The term 'intention to stay' has been used as 'intent to stay' (Abualrub, Mohummed &Alghamgi, 2011; Chitpakdee, Nansupawat, & Wichikhum, 2013; Cowden & Cummings, 2011, 2012; McGilton *et* al., 2013), 'intention to remain' (Tallman & Bruning 2005; Taokumlue & Damapong, 2007), 'intention to remain employed' (Sourdif, 2004; Tourangeau1 & Cranley, 2006;); 'behavioral intention' (Gregory et al., 2007; Sriprasert; 2007) that leads to the outcome of retention or turnover (Cowden et al., 2011; 2015). Moreover, intention to stay is viewed as an antecedent of nurse retention (Cowden et al., 2011, 2015), turnover intention, and assessment process of nurse retention and a measurable tool for nurse retention (Ellenbecker, 2004; Fisher et al., 1994). Also, it views as a process of decision making to plan to stay in the current workplace. Moreover, intention to stay is simply the converse of the turnover intention (Kim, Price, Mueller & Watson, 1996). Consequently, nurses' intention to stay has been used exchangeable to leave and intend to quit (Cowden et al., 2011; Padumanonda, 2016).

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3.1 Nurses' Intention to Stay

In this decade, however, the investigators more intention in intention to stay than intention to leave the organization or the profession, and noticed that both nurses' intention to stay and intention to leave are different concepts (Cho, Johanson,

& Guchait, 2013; Cowden, 2011; Geraldine, P., & Elaine, 2007; Nancarrow, Bradbury, Pit, & Ariss, 2014). Furthermore, the existing knowledge provides the evidence to suggest that the most positive way to increase nurse retention is to sustain RNs in the current workplace, then in the nursing profession. So intention to stay has become the most appropriate lens to fit the strategies to increase nurse retention (Buchan, Shaffer, & Catton, 2018; International Council of Nurses, 2006; Mrayyan, 2005).

Some studies investigate nurses' intention to stay in the current workplace/hospital and intention to stay in the profession to develop crucial strategies to keep the nurses within a healthcare organization. Since nurses' intention to stay could be a sustaining process, RNs start with intention to stay in the clinical units, their hospitals, and the intention to stay in the nursing profession (Hannigan, 2016). There were very few studies that investigated both nurses' intention to stay in the current workplace and the profession at the same time. Therefore, this study intends to examine both nurses' intention to stay in the current workplace and the profession and compare nurses' intention to stay with various personal characteristics, managerial characteristics, organizational characteristics, and work characteristics thru hospital types of care delivery.

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3.1.1 Nurses' Intention to Stay in the Current Workplace

This study uses the word "Nurses' intention to stay in the current workplace" and "Nurses' intention to stay in the current hospital" interchangeably. Nurses' intention to stay in the current workplace is an important variable that encounters nurse retention and reduces nursing shortage worldwide. The concept has been investigated for more than five decades. The phenomenon of interest in this

concept is also different based on the context of each country. The differences between countries' nurses' intention to stay in the current workplace/hospital were noticeable. The previous study examines nurses' intention to stay in the current workplace indicated nurses' perception on the level of nurses' intention to stay in the current workplace with the percentage and levels of those who intend to stay in the current workplace, it ranged from a high level (Al-Hamdan, 2017), to a moderate level (Liang, 2016; Eltaybani, 2018) and a low level (Engeda,2014: Gizaw, 2018; Liang et al., 2016), respectively. In Thailand, the study found the level of nurses' intention to stay in the current workplace at a low level (Saraburi yearly reported, 2015), at a moderate level (Chitpakee et al. 2013; Chupan, 2016; Khaowphong,2013; Thongniran, 2015) and a high level (Kaewboonchoo, 2014; Padumanonda, 2017; Sornpho, 2010).

Moreover, existing studies explored this concept and identified the antecedents of nurses' intention to clarify this concept and increase knowledge to improve nurse retention and reduce the nursing shortage. Also, some studies claimed that nurses' intention to stay in the current workplace was strongly predicting factors of nurses' retention or turnover (Boyle, Bott, Hansen, Woods, & Taunton, 1999; James & Price, 1997; James, Price & Mueller, 1981; Taunton, Boyle, Woods, Hansen, & Bott, 1997; Tourangeau & Cranley, 2006; Tourangeau et al., 2013). Then, many studies investigated nurses' intention to stay as a dependent variable. Therefore, this study also investigates nurses' intention to stay in the current workplace as a dependent variable due to get in dept in the level of intention to stay in the current workplace that congruence with some variables.

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Previous studies have examined various variables of intention to stay in the current hospital to gain inside the problem and mentioned that if the nurse has a low to moderate level of nurses' intention to stay in the current workplace, they will leave the organization soon after. It will be a significant impact on the healthcare services provided (AACN factsheet, 2020), threaten the quality of the care provided (Karlsson et al., 2018), and reduce organizational productivity (Buchan, 2018). It is also expensive for healthcare organizations to recruit new nurses to fill vacancies and arrange orientation and training programs for new nurses (Buchan, 2018). The evidence showed that nurses' high turnover rate in the current hospital is associated with increased adverse outcomes in healthcare (Fisher et al., 1996; Khunthar, 2014; World Health Organization, 2016). It is important to mention that nurse managers and policymakers considerations on intention to stay directly influence nurses' retention (Surdif, 2004).

Furthermore, the level of nurses' intention to stay in the current workplace is a significant contributor to nurse retention that a national pursue (The Ministry of Public Health, 2017). Therefore, deeply understand the variables associated with nurses' intention to stay in the current workplace are necessary. Understanding the variables can help to create strategies to promote nurses' intention to stay in the current workplace. Consequently, several strong evidence supported that 80% of RNs who had left the hospital begun considering leaving (intention to leave) 12 months before they quit (Hasselhorn et al. 2005).

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1) Definition of the Intention to Stay in the Current Workplace

The concept of intention to stay could be differed from intention to leave. Existing literature showed consistency of the studies in many countries that explored

intention to stay in two mains of ways, 1) the researchers defined intention to stay as behavioral intention, and most of them referred to behavior intention directly related to turnover intention or intention to leave (Gregory, Way, LeFort, Barrett, & Parfrey, 2007). On the contrary, 2) intention to stay referred to the perception to Registered Nurses (R.N.) that strongly related to nurses' retention ((Case, 2012; Chupan, Khumyu, Vatanasin, & Vatanasin, 2017; McCloskey, 1982; Comi J. McCloskey & Bruce E. McCain, 1987; Comi J. McCloskey & Bruce E. McCain, 1987; Moosa, Chontawan, & Akkadechanunt, 2016; Phongphan, 2014; Price & Mueller, 1981; Sornpho, 2010; Thongniran, Intaraprasong, & Pattara-Archachai, 2015)).

Additionally, the literature review showed the definition of intention to stay could also divide into two groups: Group 1: intention to stay refers to the feeling or perception to continue working in the current workplace and did not mention the time for staying in the organization (Boyle, Bott, Hansen, Woods, & Taunton, 1999; Ellenbecker, 2004; Praditilp, 2008; Price & Mueller, 1981; Sornpho, 2010; Sriprasert, 2007). Group2: intention to stay refers to the plan or the time that plan to continue working in the current position in a certain period in the organization such as one year, two years, five years, or more extended ((Case, 2012; Fisher, Hinson, & Deeft, 1994; Kunaviktikul, Nuntasupawat, & Booth, 2000; Moosa et al., 2016; Pongsuwan, Noimuenwai, & JarupatMaruo, 2019; Sornpho, 2010; Sritharathikhun, 1999)). In this study, nurses' intenton to stay in the current workplace interchange with nurses' intention to stay in the current workplace.

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Boyle et al. (1999) defined intention to stay in the current hospital as a nurses' intention to remain within the hospital or unit (Boyle et al., 1999). Similarly, Cowden (2011) defined intention to stay in the current hospital as a stated probability of an

individual remaining in the current organization (Gregory, Way, LeFort, Barret & Parfrey, 2007). In contrast, Fisher et al. (1994) defined intent to stay in the current hospital as RNs who plan to remain in an institution within more than three years. This study let the respondents indicated how likely they were to stay for the next three years at the institution, current position, competitive, etc. In this study, M.E. and E/V accounted for 27% of the variance in ITS. If ME and E/V are combined with the more traditional variables, the predictive power of up to 50% of the variance may be possible. Also, Yoder (1995) defined intention to stay as the level of intention to stay in the current organization. This study measured the process of intention to stay and intention to leave at the same time. Hence, Price and Mueller (1986) defined nurses' intention to stay in the current workplace as the perception of the "estimated likelihood of continued membership in an organization" (Price & Mueller, 1981).

According to literature review of intention to stay in the current workplace, those study tried to understand nurse retention or turnover through the perception of nurses' intention to stay in the current workplace because the intention to stay in the current workplace is antecedent or predictors of retention (Price & Mueller, 1981, 1986). Therefore, this study tends to use the term intention to stay in the current hospital to understand workforce retention and shortage. However, the concept of intention to stay in the current workplace provides a better translation because it implies a person's perception of staying (Mobley, 1995; Price & Mueller, 1981). When known early enough, such perceptions can alert nurse managers, administrators, and policymakers to encourage nurses to stay in the hospital before leaving, which contributes to the nursing shortage as a consequence.

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The operational definition of intention to stay in the current workplace in the present study refers to the estimated likelihood of continued membership in an organization. Nurses' intention to stay in the current workplace is measured by the Intent to Stay Scale (Price & Mueller, 1986), a 3-items scale of 5 points on the Likert scale. Besides, this study adds one more open-ended question for participants to fill up their opinion of why they do not intend to stay in the current workplace/hospital.

2) The Literature Review

There are several variables from an existing study associated with nurses' intention to stay. The integrative review showed the common socio-demographic characteristics, including age, education, marital status, tenure, employment status, and generation related to nurses' intention to stay in the current workplace. Moreover, nurses' characteristics, organizational characteristics, and managerial characteristics are related to nurses' intention to stay.

According to the review, there is empirical evidence related to nurses' intention to stay in the current workplace. Abualrub and Alghamdi (2012) investigate the impact of nurse managers' leadership styles on Saudi nurses' job satisfaction and their intent to stay at work. A descriptive correlational study was conducted to investigate the data from a convenience sample of 308 professional nurses at six hospitals. The study found that Saudi nurses were moderately satisfied in their jobs. Furthermore, nurses were more satisfied with leaders who demonstrated transformational leadership styles and those who were more satisfied with their jobs intended to say at work. The transformational leadership style and the transactional style explained 32% of the variation in job satisfaction.

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AbuAlRub, El-Jardali, and Jamal (2016) conducted a descriptive correlational study to examine the relationships between work environment, job satisfaction, and intention to stay at work. Also, it explored the predicting factors of intention to stay at work among 330 nurses in underserved areas in two underserved governorates in Jordan. They found a strong positive association between job satisfaction and work environment. Moreover, logistic regression specified receiving housing, job satisfaction, and work environment were the predicting variables of the level of intention to stay at work.

AbuAlRub, Gharaibeh, Alaa, and Bashayreh (2012) examined the relationships among safety climate, teamwork, and intent to stay at workplace perceived by Jordanian hospital nurses. A descriptive correlational design was conducted to investigate the relationships among a convenience sample of 381 hospital nurses. The findings showed a strong positive correlation between safety climate and teamwork; and moderate positive correlations between safety climate and intent to stay at work, and between teamwork and intention to stay at work. Also, the overall model of hierarchical regression account for 45% of the variation in the level of intent to stay at work was explained by background variables, leadership styles, decision-making styles, and safety climate.

Al-Hamdan, Manojlovich, and Tanima (2016) conducted a descriptive cross-sectional survey study to investigate the nursing work environment's associations, nurse job satisfaction, and intent to stay for nurses who work in hospitals in Jordan. The sample was 650 Registered Nurses (RNs) in three public hospitals. The finding revealed a positive association between nurses' job satisfaction and the nursing work environment ($t = 6.42$, $p < .001$). For each one-unit increase in the total score of the

PES-NWI, nurses' average job satisfaction increased by 1.3 points, controlling for other factors. Overall, nurses employed in public hospitals were more satisfied than those working in teaching hospitals. The nursing work environment was positively associated with nurses' intent to stay ($t = 4.83$, $p < .001$). The Intent to Stay score increased by 3.6 points for every one-unit increase in the total PES-NWI score on average. The highest Intention to Stay nurses from public hospitals reported scores.

Liang, Tang, Wang, Lin, & Yu (2016) conducted a cross-sectional study to examine the structural relationships among nurse characteristics, leadership characteristics, safety climate, emotional labor, and intention to stay for hospital nurses. A purposive sample of 414 full-time nurses was recruited from two regional hospitals in Taiwan. The results showed intention to stay was positively correlated with age and the safety climate; however, working hours per week and emotional labor were negatively correlated with intention to stay in the current hospital. The nursing position and transformational leadership indirectly affected intention to stay; this effect was mediated separately by emotional labor and the safety climate.

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Wang, Tao, Ellenbecker, and Liu (2012) investigated the level of nurses' job satisfaction, occupational commitment, and intent to stay among mainland Chinese nurses and explored their relationship. A descriptive correlation design was conducted to examine the relationship among variables related to intention to stay. The sample was 560 nurses working in four large-size hospital facilities in Shanghai. The results showed the mean scores for nurses' job satisfaction, occupational commitment, and intent to stay were 3.25(0.48), 3.1(0.40), and 3.56(0.65), 3.25(0.48), 3.11(0.40), and 3.56(0.65), respectively. Job satisfaction and occupational commitment were significantly related to intent to stay. A statistically significant positive correlation

was found between occupational commitment and job satisfaction. Age and job positions were significantly related to job satisfaction, occupational commitment, and intent to stay.

In Thailand, the study of nurses' intention to stay in the current workplace is exclusive. However, the previous study focused on the nurses' intention to stay in the current workplace and the profession. The literature demonstrated many variables associated with nurses' intention to stay in the current workplace. Chitpakdee, Nansupawat, Wichaikhum (2013) investigated nurses' intention to stay 249 among professional nurses who work in a public hospital in the northern region. They found the relationships with intention to stay were: 1) happiness at work among the sample was at a moderate level ($\bar{x}$ = 6.27; S.D. = 1.26); 2). Intent to stay among the sample was at a moderate level ($\bar{x}$ = 10.2; SD = 4.38) and; 3). Happiness at work positively moderately correlated with intent to stay among the sample at the significance level of 0.01 (r = 0.44).

Sornpho (2010) conducted a predictive correlation study to investigate the relationship between work environment and intention to stay and identify if each work environment components were good predictors of nurses' intention to stay. The sample was 164 RNs employed in community hospitals, District 11, under the Ministry of Public Health. The results showed that the work environment was at a high level. A moderate, significant positive correlation was found between intention to stay and overall work environment scores both at the team and organizational levels (r=.451 to .552, P<.01). Good predictors of nurses' intention to stay were two components of the work environment: nursing organizational structure and

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administration and nurse autonomy. The two variables explained 33.7 percent of the nurses' intention to stay variance.

Kaewboonchoo, Yingyuad, Rawiworrakul, and Jinayon (2014) conducted a cross-sectional study design to evaluate nurses' intention to stay at work and determine their relationship with job stress and intent to stay at work. The sample was 526 RNs who work in two medium- and large-sized government hospitals in Phranakhon Si Ayutthaya Province. The study revealed the prevalence of high job strain and low intent to stay at work was 17.5 and 22.4%, respectively. The mean (S.D.) scores of the nurses for psychological job demand, decision latitude, workplace social support, and intent to stay at work were 33.5 (4.4), 70.7 (6.9), 23.8 (2.8), and 14.6 (2.9), respectively.

Khaowphong (2013) conducted a correlational and predictive study to explore intention to stay among 280 RNs who work in five private hospitals of the eastern region. The results exhibited RNs in private hospitals of the eastern region had intent to stay (M = 3.35, SD = 0.95) and job satisfaction (M = 3.29, SD = 0.70) at moderate level. Organization climate (M = 3.84, SD = 0.57) and job characteristics (M = 4.13, SD = 0.52) were at high level. Nurses' intent to stay was positively correlated with organization climate and job satisfaction at moderate level and was positively correlated with job characteristics at low level ($r = .444, .464$ and $.270$, $p < .01$ respectively). Job satisfaction was positively correlated with organization climate and job characteristics at moderate level ($r = .467$ and $.344$, $p < .01$ respectively). The factors predicting professional nurses' job satisfaction were organizational climate in structure ($\beta = .262$) and support ($\beta = .159$); job characteristics in work autonomy ($\beta = .361$), task significance ($\beta = - .186$) and task identify ($\beta = .132$) ($R^2 = .383$). The

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factors that could predict professional nurses' intent to stay were job satisfaction in work-life balance (β = .316), in progression opportunities (β = .255) and in job performance (β = -.176); organizational climate in support (β = .297) and structure (Beta = .129) (R^2= .428).

Khunthar, Sujijantararat, Thongchareon, Namthep, and Klayklongjit (2012) conducted a correlational predictive study to determine the predictors of intent to stay among 212 RNs at a university hospital. The results indicated that 25.2% (R2 = .252, F = 14.687, p < .001) of the intention to stay of the nurses in the next year could be predicted by the following factors: 1) welfare services for family members, 2) the timing of night shift, 3) organizational commitment, and 4) quality of work life. Besides, 26.2% (R2= .262, F = 16.360, p < .001) of the intent to stay of the nurses in the next three years could be predicted by the following factors: 1) welfare services for family members, 2) the timing of night shift, 3) work experience, and 4) organizational climate. This study is limited to generalize to other hospitals in Thailand.

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Padumanonda, Metiyothin & Wirunraj (2017) investigated the levels of intention to stay by examining the causal relationship model of intention to stay through perceived organizational support as exogenous variable job satisfaction and organizational commitment as mediators' variables. The samples consist of 1,197 professional nurses from Regional Hospital Operated by the Ministry of Public Health, Office of The Permanent Secretary. The results showed that 1) Professional nurses had a level of intention to stay, perceived organizational support and job satisfaction in the moderate level, and had a level of organizational commitment in the hight level; 2) The factor on organizational commitment had the greatest total

influence of 0.66 on intention to stay. The factor on Perceived organizational support had the second-highest total influence of 0.48 on intention to stay. However, the factor on job satisfaction had a total influence of 0.12 on intention to stay no significantly ($p>.05$). Job satisfaction and organizational commitment mediated the relationship between perceived organizational support and intention to stay. Altogether the three factors, which are the causes, were explained the 40 variances of intention to stay of professional nurses.

However, increasing nurse retention or lessening nurse shortage needs the knowledge initially from investigating nurses' intention to stay in the current workplace. In Thailand, several studies attempted to investigate nurses' intention to stay in the current workplace; however, these studies' findings are limited in a particular area. The results might not reflect to solve the shortage issue. There is limited information from previous studies regarding national planning concerns. It could not be a generalization to the population as a whole picture in the Thai nursing workforce. However, the understanding of variables to promote nurses' intention to stay in the current workplace, particularly in registered nurses in governmental hospitals, remains a shortcoming.

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Moreover, the variables with nurses' intention to stay in the current workplace have changed over time. Existing studies provided general information about the variables related to nurses' intention to stay in the current workplace. However, they still did not give information on nurses' differences based on what variables to enhance the level of intention to stay in the current workplace and whether or not different. Therefore, it's necessary to examine variables and nurses' intention to stay in the current workplace. This knowledge could help nurse administrators and

policymakers tailor strategies in promoting registered nurses' retention and lessen the nursing workforce shortage.

3.1.2 Nurses' Intention to Stay in the Profession

Nurses' intention to stay in the nursing profession was conducted around 1980 by Wandelt et al. (1980). They explored the crucial reasons explaining why nurses remain in the workforce were not insufficient to account for this occurrence. This study suggested that more professional identity variables may need to consider for further investigation. Then, the evidence suggested that nurse shortage from a lack of nurses' intention to stay in the current workplace (Buchan, 2008) and nurses who less intention to stay will do job transfer and exist from a nursing career (Khunthar, 2013; Khunthar, 2012). The study also indicated that nurses' intention to stay in the profession as the process of nurse decision-making to stay. It starts with intention to stay in a unit, then to the hospital, and finally intention to stay in the profession. Moreover, intention to stay is simply the converse of the turnover intention (Kim, Price, Mueller & Watson, 1996).

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The nursing shortage is a significant part of the on-going healthcare crisis in the healthcare delivery system. Many nurses are changing their profession while others pursue careers in another profession, and others were quitting the profession altogether. These results from a lack of nursing resources required to give adequate nursing care, justifying the importance of analyzing the problem with the angle of nurses' intent to stay in the profession and understanding the factors related to this issue. So, assessing nurses' intention to stay in their profession, and its variables were needed to guide nurses' retention in their workplace. Also, it encounters within their profession and finally their career plan in the profession and improves nursing care

quality and may help that concerned body to use as a baseline data for further study and designing strategies for retaining nurses in their profession.

The study mentions that the timeline of staying or leaving might be from few months to two to three years of leaving (the unit, the hospital, or the nursing profession) or the final decision to stay. This lapse of time maintains that individuals keep working in their positions, although they feel "on the border" with the outside (Cortese, 2012).

The statistics showed many nurses voluntarily leave their profession before the typical retirement (Gizaw, 2018). The nurse leaves the profession starts from feelings of an individual, which is less intention to stay in the current workplace, then the profession (Cortese, 2012). This intention to stay would end to the actual performance of action if conditions were not solved early enough. Therefore, the nursing shortage is receiving many manners from the healthcare manager and leaders. The cost of losing one nurse has been counted as equal to twice the nurse's annual salary in a year (Gizaw, 2018). Losing these critical employees negatively affects healthcare organizations' bottom line in various ways, including decreasing patient care quality, increasing mortality, morbidity, and health of nurses remaining (Buchan, 2018). The shortage of healthcare professionals, in particular, nurses, as they constitute over 50% of the healthcare workforce, is a serious global issue. About 4-54% of nurses worldwide intend to leave.

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The existing studies showed the percentage of nurses' intention to stay in the profession from low to high levels (Chen et al., 2016; Engeda et al., 2014; Gizaw et al., (2017 Moosa, 2016; Wang, 2012). In Thailand, few studies investigate this

concept, the level of nurses' intention to stay in the profession at a moderate level (Chupan et al., 2017; Thongiran, Intaraprasong, & Pattara-Achachai, 2015).

1) The literature review

A report in the International Journal of Nursing Studies in Canada Toronto revealed that autonomy and relationships with doctors directly affected psychological empowerment, job satisfaction, and intent to stay in the nursing profession (Hayes, et al. 2011).

Chen, Ho, Lin, Chung, Chao, Chou, and Li (2016) examined nurses' intention to stay through a cross-sectional survey conducted and a sample of 791 RNs in a Medical Centre in Taiwan. This study found that social support, work stress, job satisfaction, and organization-based self-esteem (OBESE) significantly affected the intention to stay in nurses. Moreover, social support and job satisfaction showed a positive direct effect on the intention to stay and an indirect impact on the intention to stay; the indirect effect was mediated by Organization-based self-esteem (OBESE).

Engeda, Birhanu, and Alene, (2014) assessed intent to stay among 389 nurses who worked in 5 referral hospitals, Amhara Regional State, Ethiopia. Job Satisfaction, organizational commitment, and intent to stay were investigated thru a cross-sectional study. The results showed that the number of nurses who reported intent to stay was 39.8%. The nurses have satisfaction with: autonomy and professional opportunities (AOR [95% CI] 2.6 [1.2-5.9]), scheduling (AOR [95% CI] 3.4 [1.6-7.5]), and pay and benefits (AOR [95% CI] 8.8 [4.5-17.1]); high continuance commitment (AOR [95% CI] 2.4 [1.3-4.8]) and high normative commitment (AOR [95% CI] 3.7 [1.9-7.2]) were the significant predictors of intent to stay in the nursing profession.

Gizaw et al. (2017) examined the level of intention to stay in the nursing profession and its predictors among nurses working in Jimma Zone public Hospitals. A cross-sectional study was conducted on 317 nurses. The results showed the overall level of intention to stay was low. Only less than one-third of nurses have a high intention to stay in their profession in this study. Organizational and professional commitment, working hospital, job satisfaction, organizational factor, and job-related stress were identified as predictors of nurses' intention to stay in their profession. Only less than one-third of nurses have a high intention to stay in their profession in this study.

Wang, Tao, Ellenbecker, and Liu (2012) investigated the level of nurses' job satisfaction, occupational commitment, and intent to stay in the nursing profession among mainland Chinese nurses and explored their relationship. A descriptive correlation design was conducted to examine the relationship among variables related to the intention to stay. The sample was 560 nurses working in four large hospital facilities in Shanghai. The results showed the mean scores for nurses' job satisfaction, occupational commitment, and intent to stay were 3.25(0.48), 3.1(0.40), and 3.56(0.65), 3.25(0.48), 3.11(0.40), and 3.56(0.65), respectively. Job satisfaction and occupational commitment were significantly related to intent to stay. A statistically significant positive correlation was found between occupational commitment and job satisfaction. Age and job positions were significantly related to job satisfaction, occupational commitment, and intent to stay.

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In Thailand, Thongiran, Intaraprasong, & Pattara-Achachai, (2015) conducted a cross-sectional explanatory study to determine the relationship between age, job satisfaction, and intention to stay in the occupation of RNs at the community hospital

in region 1, Central region of Thailand. This study investigated 436 RNs who work at least one year. The results indicated the relationship to intention to stay where age and overall job satisfaction were significantly correlated with ITS (r=0.101 and 0.129, p< 0.05) at a low level. The registered nurses were satisfied with pay, promotion opportunity, and operating condition significantly explained 12.60% of the variation in ITS (R2=0.126, p< 0.01).

Moreover, Chupan, Khumyu, Vatanasin, and Vatanasin (2017) conducted a cross-sectional study to examine nurses' intention to stay and influence nurses' intention to stay among professional nurses. A sample of 360 professional nurses is who has been working not less than one year in central hospitals of the eastern region. The results revealed that the participants had a moderate level of intention to stay (M = 44.38, S.D. = 9.64). Organization commitment was the best predictor (β = .55) following happiness at work (β = .24). These two factors accounted for 54.0% in predicting intention to stay in career among professional nurses (F =211.19, p < .001).

The nursing shortage is a significant part of the on-going healthcare crisis in the healthcare delivery system. Many nurses are changing their profession while others pursue careers in another profession, and others were quitting the profession altogether. These results from a lack of nursing resources required to give adequate nursing care, justifying the importance of analyzing the problem with the angle of nurses' intent to stay in the profession and understanding the variables related to this issue. So, assessing nurses' intention to stay in their profession, and it's variable would guide the development of policies on nurse retention in their workplace and their career plan. Also, it can improve nursing care quality and may help those concerned

bodies to use as baseline data for further study and designing strategies to improve retention of nurses in their profession.

2) Definition of Nurses' Intention to Stay in the Profession

Gizaw et al. (2018) defined intent to stay in the nursing profession as nurses' decision to stay in their profession, which was measured by three items in the nursing profession having a 4 point Likert scale (1=strongly disagree to 4=strongly agree). The sum score ranging from a minimum of 3 to 12; the higher the score, the higher intention to stay in the profession. In comparison, Wang et al. (2012) defined intent to stay in the profession as the nurses' decision to remain in their nursing profession before retirement. McCloskey (1990) defined intention to stay in the profession as a degree to professional nurses plan to continue working at the current position in the next two years.

In this study, the operational definition of nurses' intention to stay in the profession refers to nurse plans to stay in the nursing career. The nurses' intention to stay in the profession was measured by McCain's Intention to Stay Scale (cited in McCloskey,1990) that consists of 5 items scale of 5 points Likert scale. This instrument was translated and modified from the original version. The details of the modification process and psychometric properties testing of the instrument are presented in Chapter III.

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3.2 Measurement of Nurses' Intention to Stay in the Current Workplace and the Profession

3.2.1 Price and Mueller's (1986) *Intent* to *Stay* Scale

Price (1977; Price & Mueller, 1986) found that perceptions of an employee's current workplace and perceptions of the external workplace or called the "grass is greener" phenomenon and explained intent to stay. Later on, Price and Mueller (1986) developed an instrument that consisted of three items scale, which measures the intent to stay of employees in the current organization also, can be interpreted in both ways of *intent to stay or* leave. The intention to stay scores was reported on a Likert-type scale. Scores range from 1 to 5. Cronbach's alpha for the Price and Mueller intent to stay measure have ranged from .85 to .90 (Kim, Price, Mueller, & Watson, 1996; Price & Kim, 1993). This instrument is used in many studies worldwide.

3.2.2 McCain's Intent to Stay Scale (McCloskey (1990)

McCain's Intent to Stay Scale (cited in McCloskey, 1990) was developed by McCloskey and McCain (1987) as a part of their instrument. In their study, nurse retention was defined conceptually as the percentage of nurses who stay in their jobs during a period of a year (Hofmann 1981). Nurse retention was also defined operationally as nurses' intent to stay in their present jobs throughout the rest of their careers. Nurse retention was measured by McCain's Behavioral Commitment Scale (McCloskey & McCain 1987). McCain's Behavioral Commitment Scale consisted of 38-items; McCain extracted 5-items from this scale to measure nurse intent to stay (McCloskey, 1990). McCain's Behavioral Commitment Scale is a 5-point scale rated as: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5= strongly agree.

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McCain's Intent to Stay Scale is also a 5-point scale rated as: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. In McCloskey (1990), the Cronbach's alpha of the Nurse Intent to Stay Scale was 0.90 (McCloskey, 1990).

In conclusion, in this study, nurses' intention to stay in the current workplace refers to the estimated likelihood of continued membership of a registered nurse in an organization. Nurses' intention to stay in current workplace measures by the Intent to Stay Scale (Price & Mueller, 1986) consists of 3 items scale of 5 points Likert scale. This instrument was translated and modified from the original version. The details of the modification process and psychometric properties testing of the instrument are presented in Chapter III.

4. Theoretical Perspectives of Nurses' Intention to Stay

Nurses' intention to stay and nurse retention theories are different in the complexity and inclusive determinate variables. According to the literature review, several theoretical models of nurses' intention to stay are as follows:

4.1 Boyle et al. (1999) Conceptual Model of Intent to Stay

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Boyle, Bott, Hansen, Woods, and Taunton (1999) developed the Conceptual Model of Intent to Stay. They hypothesized that four sets of predictor variables explain staff nurses' ITS. These sets of variables are manager characteristics, which include power, influence, and leadership style; organizational characteristics, which include distributive justice, promotional opportunity, and control over practice, as well as the unit characteristics of staffing and workload; nurse characteristics of age, education, tenure expectations, years in position, hospital, and profession, and marital status; and work characteristics, which include autonomy, instrumental communication, workgroup cohesion, and routinization. Intervening variables

between the manager, organizational nurse, and work characteristics are job satisfaction, job stress, and organizational commitment. The finding of Boyle et al.'s model described 52% of the variance in ITS among ICU nurses. The study variables that were found to contribute directly to ITS was manager power and influence over work coordination, opportunity elsewhere, promotional opportunity, and staff nurse satisfaction. Manager characteristics alone accounted for 12% of the variance in ITS. Boyle et al. (1999) used causal modeling and multiple regression techniques to analyze their theoretical models. However, this intention to stay model has a limitation due to the testing results because they reported model variance but not model fit.

4.2 Tourangeau and Cranley Model of the Determinants of Nurse Intention to Remain Employed (2006)

Tourangeau and Cranley (2006) developed the Determinants of Nurse Intention to Remain Employed, a theoretical model that builds on Boyle et al. (1999) Conceptual Model of Intent to Stay and essential findings from the literature. They proposed that 'job satisfaction, manager ability and support, organizational commitment, burnout, workgroup cohesion and collaboration, and nurses' characteristics were predictors of nurses' intent to remain employed. This study's findings did not support all of Boyle et al. (1999) previous outcomes, nor all of the models hypothesized relationships. Manager ability and support and burnout did not have a direct connection with ITS. Organizational commitment, job satisfaction, workgroup cohesion and collaboration, and age was found to influence a nurse's intention to remain employed and explained 34% of the variance in ITS. Tourangeau and Cranley (2006) used multiple regression to test their model. While predictive in

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nature, multiple regression techniques cannot truly test relationships nor make statements of influence or the directionality of that influence (Hayduk 1987).

4.3 Cowden and Cummings (2012) theoretical model of nurses' intention to stay

This theoretical model of Nurses' intention to stay (Cowden & Cummings, 2012) was developed based on the work of Boyle et al. (1999) and Tourangeau and Cranley (2006). This theoretical model differs from Boyle et al. (1999) and Tourangeau and Cranley (2006) in its complexity and detail. The variables are in common to all three models are age, autonomy, career opportunities, education, job satisfaction, job stress, leadership/ management practices, opportunity elsewhere, organizational commitment, workgroup cohesion, and work status. The concepts of job stress and managerial practices were replaced with multiple new indicators to enhance knowledge of specific affective and leadership variables' effects. The indicators used to illustrate job stress were abuse and moral distress. Managerial practices were expanded to include praise and recognition, shared decision-making, and supervisor support. The work of Boyle et al.(1999) and Tourangeau and Cranley (2006) did not address the emotional response of individual staff nurses to their work environment. This new model proposes to capture the emotional response through variables of desire to stay, job satisfaction, joy at work, and moral distress. Concepts added to the model to assess the work environment's perception were adequate staffing, empowerment, and position preference. This model added a new variable ' 'desire to stay," which described as the positive feelings a nurse has toward remaining in his or her current position (Cowden & Cummings, 2012). In turn, positive feelings may contribute to the development of nurses' intention to stay. It is postulated that a

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desire to stay is antecedent to intention to stay, implying that the concept ''desire to stay'' is differentiated from the concept ''intent to stay.'' The ''intent to stay'' is described as the stated probability of an individual nurse staying in their current position (Boyle et al., 1999). Notably, nurses' intent to leave can be a precursor to actual leaving (Lee, Chiang, & Kuo, 2019) and connected to cognitive and behavioral interaction processes determined by individual needs, work-related feedback, and work climate (Leone et al., 2015). However, it has also been questioned whether nurses were leaving their current position to leave the profession or the organization (Kristoffersen, 2019; Simon, Mueller, & Hasselhorn, 2010).

4.4 Push and Pull Theoretical Model (Lee, 1966)

The Push and Pull (Factors) Theory, also calls the "Theory of Migration," was developed by Everett S. Lee in 1966. Lee (1966) had a broader investigation of the work and economics through the migration theory. The migration is broadly defined as a permanent or semi-permanent change of residence. No restriction is placed upon the distance of the move or the voluntary or involuntary nature of the act, and no distinction is made between external and internal migration (Lee, 1966). Lee explained the factors in the act of migration with four factors: 1) Factors associated with the area of origin. 2) Factors related to the area of destination, 3) Intervening obstacles, and 4) Personal factors. This conceptualization of migration as involving a set of factors at origin and destination, a set of intervening obstacles, and a series of personal factors is a simple one that may be accepted as self-evident. Also, it provides a framework for migration and indicates several fields for investigation under varying conditions, the development of stream and counter

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stream, and the characteristics of migrants. This theory is broad and has been applied in many areas, including nursing human resource management areas.

According to the literature review, push factors that are antecedent of intention to stay can be classified into work-related and organizational factors. The various work-related or job-related characteristics can be conceptualized as “push” variables (Beehr et al., 2000); that is, work-related variables may push an individual away from work and affect a decision to leave or stay in the current workplace and the profession. Limited autonomy, task identity, work schedule, pay, and welfare manifested by an adverse reaction to professional task significant, and feedback was associated with less intention to stay (Flinkman et al., 2008; Bogaert, 2013; Alsos, 2016; Sohaba, 2012). The other variables that were significantly related to less intention to stay from a nursing career included organizational characteristics that relevant effects related to intrinsic motivation due to being a notation of push factors (Sohaba, 2012; Sufyan, 2010).

The pull factors that are attractive external organizational factors are present by economic factors (Irvine & Evans, 1995). It found that much alternative employment opportunity has a relationship with intention to leave or stay in the profession (Simon et al., 2010). Particularly, Thailand 4.0 policy (2017) and Thailand Health Act (2001) drive the Thai health care system that increased in demand for nursing personnel due to medical hub policy and participated in the ASEAN Economic Community (Strategy and Planning Division, 2018). These policies could facilitate free movement across this region and increase employment opportunities or chances on the labor market. It can contribute a significant effect on the intention to stay in a nursing career and job transfer and have more severe migration to work aboard than in the past.

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This evidence supports the investigator's purpose in this study. However, this study does intend to investigate push factors which characterize by work-related factors (work characteristics and managerial characteristics including professional, promotion opportunity, and career development), organizational characteristics, nurses' characteristics, and nurses' intention to stay in the profession and the current workplace are a decisional component.

Similarly, the literature review, these are essential dimension have been related to nurse intention to stay, such as nurse manager characteristics, personal characteristics, organizational characteristics, and work characteristics (Cowden, 2011; Sourdif, 2004; Taunton et al., 1997; Troungeau & Cranley, 2006;). Many researchers examined the influence of manager characteristics on nurses' intention to stay (Troungeau & Cranley, 2006; Troungeau & Cummings, 2009; Troungeau *et* al., 2013; Troungeau *et* al., 2014). Push and Pull Factors Model is composed of nurse manager characteristics, personal characteristics, organizational characteristics, and work characteristics (Troungeau & Cranley, 2006) as well.

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Regarding explain the variables instituted nurses' intention to stay in the current workplace and the profession, a substantial amount of evidence has been adopted from the literature review. Based on the literature review, a new conceptual model of Thai nurses' intention to stay in the current workplace and the profession incorporates four sets of variables that related to cognitive and affective response to registered nurses' work and intention to stay in the current workplace and the profession. The model variables are groups into subcategories of nurse characteristics, managerial characteristics, work characteristics, and organizational characteristics.

5. Factors Related to Nurses' intention to stay in the profession and the workplace

Understanding nurses' intention to stay in the professional and the current workplace phenomenon in the Thai context is necessary. So, an integrative review was conducted in order to look over the best available variables related to nurses' intention to stay in the profession and the current workplace and. The studies published from 2009 to 2018 were investigated. The results found from fourteen published studies were synthesized through an integrative review methodology that followed five stages of Whittemore & Knafl (2005). The results found nineteen variables related to nurses' intention to stay. Job satisfaction most frequently found in 9 studies (Abualrub, & Alghamdi, 2012; Abualrub et al., 2016; Al-Hamdan, Manojlovich, & Tanima, 2017; Chen et al., 2016; Chupan, Khumyu, Vatanasin & Vatanasin, 2016; Engeda et al., 2014; Khaowphong, 2013; Thongiran, Intaraprasong, & Pattara-Achachai, 2015; Wang et al., 2012). Secondly, nurse characteristics/personal data/demographic characteristics were found in six studies (Chitpakdee et al., 2013; Khaowphong, 2013; Liang et al., 2016; Praditsilip & Ractchukul, 2009; Tongnirun et al., 2015; Wang et al., 2012). Thirdly, organizational commitment found in 3 studies (Chupan, Khumyu, Vatanasin & Vatanasin, 2016; Engeda et al., 2014; Wang et al., 2012), and occupational commitment found in one study (Wang et al., 2012), as well as nursing work environment found in three studies (Abualrub et al., 2016; Al-Hamdan, Manojlovich, & Tanima, 2017; Sornpho, 2010) and similar to leadership characteristics/leadership style (Abualrub et al., 2012; Liang et al., 2016; Praditsilp & Ractchukul, 2009). The fourth safety climate was found in 2 studies (Abualrub et al., 2012; Liang et al., 2016) and organizational climate (Khaowphong, 2013; Praditsilip & Ractchukul, 2009). Moreover, job/work

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stress/emotional labor was found in two studies (Chen et al., 2016; Liang et al., 2016). In addition, happiness at work found in two studies (Chitpakdee, Nansupawat, Wichaikhum, 2013; Chitpakdee, Nansupawat, Wichaikhum, 2013) Finally, workplace promotion (Chen et al., 2016); social support (Chen et al., 2016), organize-based self-esteem, organizational factor (Chen et al., 2016); teamwork (Abualrub et al., 2012); job characteristic (Khaowphong, 2013) and quality of work-life (Chitpakdee, Nansupawat, Wichaikhum, 2013) found in 1 study of each variable.

All these variables are grouped into four sets of characteristics, followed by clinical nurses' intention to stay model (Cowden & Cummings, 2012). The four sets of characteristics are nurse characteristics, managerial characteristics, organizational characteristics, and work characteristics. Nurse characteristic includes demographic characteristics.

5.1 Nurse characteristics and intention to stay

Nurses'personal characteristics have been shown to be related to the intention to stay in the current workplace and the profession. There are some nurse characteristics hypothesized to be predictors of nurse intention to stay in their current workplace: age, sex, marital status, working experience, educational level, year in position, income, working unit, and employment status.

5.1.1 Sex

Sex is the state of being male or female. The existing studies consistently show that being male or female is related to nurses' intention to stay (Cho, Johanson, & Guchait, 2009; Tourangeau & Cranley, 2006). Gender diversity in an organization is also on the rise, as reflected in growing female labor participation

rates worldwide (Vaiman, Scullion & Collings, 2012). Therefore, a solution to the workplace human resources complexity that is underway needed to investigate.

5.1.2 Age

Age and nurses' intention to stay: the studies have shown that age is positively related to nurses' intention to stay (Boyle et al., 1999; Chan et al., 2008; Cowden & Cummings, 2012; Chupan, 2017; Gizaw, 2018; Liang et al., 2016; Nasongjai et al., 2016; Tourangeau & Cranley, 2006). The study also indicated that the older hospital employees, especially females with higher qualification and full-time nurses, were more likely to remain employed. The higher the level of intention to stay (Cho, Johanson, & Guchait, 2009). In contrast, a new registered nurse who is a younger age has a lower level of nurses' intention to stay and leave the workplace or profession (Tangcharoensathien et al., 2018; Unruh, Zhang, & Chisolm, 2016)). Nurses with less than five years of nursing experience were more likely to leave than nurses with more than ten years (Chan et al., .2008).

5.1.3 Education

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The level of education and nurses' intention to stay is related. The studies illustrated the lower level of education, the higher the intention to stay in the current workplace (Cho et al., 2009). While RNs were a higher education level, they will less intend to stay (Thongniran et al., 2015; Tourangeau & Cranley, 2006).

5.1.4 Year of experience

Tenure and nurses' intention to stay: the studies suggested that year of experience was positively related to nurses' intention to stay (Boyle et al., 1999; Cowden & Cummings, 2012; Liang et al., 2016; Tourangeau et al., 2010).

Tourangeau and Cranley (2006) found that increasing employment years at the current hospitals was one of the most significant predictors of acute care nurses' intention to remain.

5.1.5 Marital status

Marital status and nurses' intention to stay: the study indicated that marital status allied to nurses' intention to stay (Boyle et al., 1999; Chupan, 2017; Liang et al., 2016; Nasongjai et al., 2016; Taunton et al., 1997).

5.1.6 Year in position

The studies showed that year in a nursing position has represented related to nurses' intention to stay in the current workplace (Boyle et al., 1999; Cowden & Cummings, 2015; Chupan, 2017; Gill et al., 2012; Nasongjai et al., 2016; Taunton et al., 1997). Whereas demographic characteristics provide some explanatory power of intention to stay and retention, they have some policy or─practice implications.

5.1.7 Generation

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Generation is the term used to refer to groups of people born at certain times in history and share unique experiences in life, such as socio-economic circumstances, historical events, technological impact, and dominant cultural values. The generation impacts nurses' intention to stay or leave the organization (Chamchan & Kittisuksathit, 2019). The study showed that Generation workers are related to the intention to stay. There are four generations of workers in the nursing workforce.

First, Baby Boomers refer to the employees who were born between 1947 to 1964. Second, Generation Y or Millennial refers to the employees who were born between 1977 to 1995. Third, Generation X refers to the employee who was born

between 1965 to 1976. Generation Z refers to an employee who was born from 1995 to 2010. Each generation has specific characteristics. For example, Generation Y (Gen Y) workers are expected to represent most employees globally shortly. Then the Gen Y workforce is perceived to be confident, moral, and multitasking workers, who are technologically smart, creative, flexible in terms of work time and place, and accepting of diversity (United Nations, 2015; Mujtaba, Manyak, Murphy, & Sungkhawan, 2010). On the other hand, some view Gen Y negatively (as compared to BB) as not -working, challenging to work with, not good team players, and, importantly, having a low commitment to the organization, resulting in a high turnover (Generations in the workplace," 2013; PwC, 2013).

In Thailand, the workforce under the Ministry of Public Health in 2015 was 370,840. The age is average of 40.12 years; this number is Gen X is 42.37 percent, and Gen Y 33.25 percent. There are three employment types: Civil Servant 53 percent, employee 28 percent, and temporary employee 11 percent (The Ministry of Public Health, 2017).

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5.1.8 Income

Income is one of the important variables that are related to nurses' intention to stay. Many studies claimed that income impacts the decision-making to leave or remain in the employees (Chen, Rasdi, Ismail, & Asmuni, (2017).

While demographic characteristics provide some explanatory power for nurses' intention to stay, they have few policies or practice implications. Moreover, the findings from both nurses' intention to stay and non-nurses' intention to stay that examined relationship, age, and nurses' intention to stay differ. However, the

inclusion of demographics in the study of nurses' intention to stay will provide a description of which sub-groups of nurses' intention to stay are more likely to stay and those who are not. Therefore, the following demographic characteristics are selected for the model (as table1): age, sex, education level, marital status, year of experience, generation.

5.2 Managerial characteristics

The nurse manager or nurse leader plays a critical role in the healthcare organization's business and the quality and safety of the services provided (Huber, 2018). The strong evidence showed the nurse manager's critical role both in the business of a healthcare organization and in the quality and safety of service delivery related to nurses retention that had been laid out by the Institue of Medicine (IOM) and American Nurses Credentialing Center (IOM, 2004; American Nurses Credentialing Center (ANCC), 2008). Nursing is a service profession whose core mission is to care for and nurture human beings in their health and illness experiences. According to nursing management, Management has been described as a discipline that uses a set of tools to achieve desired outcomes. Management defines as "the process of working with individuals and groups and other resources, such as equipment, capital, and technology, to accomplish organizational goals" (Hersey et al., 2008, p.5 cited in Huber, 2010). In the system approach to management, the inputs would be represented by human resource management and physical and technical resources. The outputs would be the realization of goals (Figure2).

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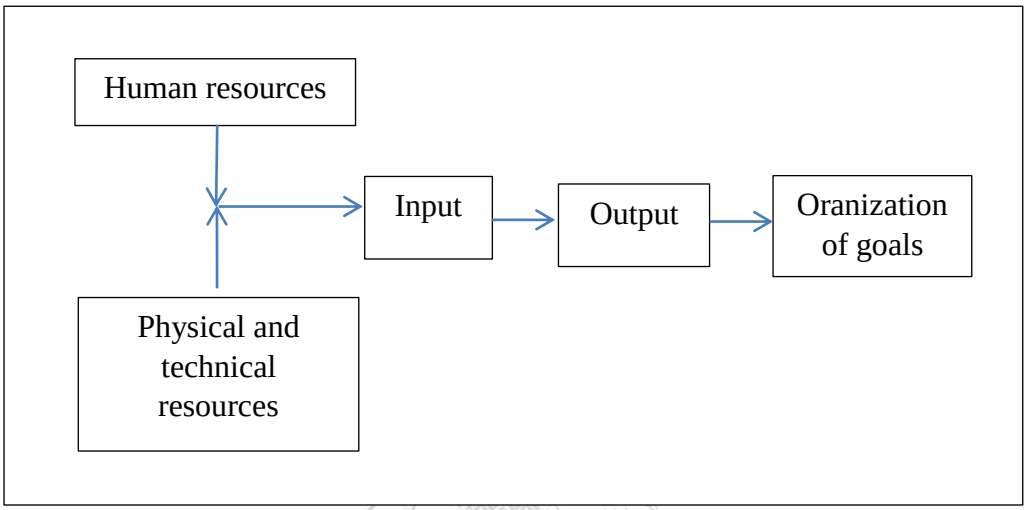
Nursing management defines as the condition of nursing resources by applying the management process to accomplish nursing care and service goals and objectives (Huber, 2010). Nursing management in healthcare organizations has

focused on human beings' behavior as a function of an individual. Management applied to organizations. The achievement of organizational goals through leadership and manipulation of the environment is managed systematically by the management system.

Figure 2: The systems view of management (Huber, 2010, p.31)



An organization can provide any institution, agency, or facility; working to achieve an organization's goals involves the process of management. The management process has principles that guide the process of management. Fayol (1949) developed his principles for management practice for managers. The four steps of the management process are as follows (Fayol, 1946): 1) planning, 2) organizing, 3) coordinating or directing, 4) controlling. These functions make up the scope of a manager’s major effort. Planning involves determining the long-term objectives and corresponding actions that must be taken. Organizing means mobilizing human and material resources to accomplish what is needed. Directing relates to methods of motivating, guiding, and leading people through work processes. Controlling has a specific meaning closer to the monitoring and evaluating actions that are familiar to nurses.

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1) Human Resources Management and Human Capital Management

According to the management function in nursing, human resource (HR) management is a nursing management process. Managing people in changing organizations is a part of what is currently being done by supervisors, managers, and executives. People as human assets are the “glue” that holds all the other assets, such as financial and physical ones, together and guides their use to achieve results better. HR is a vital role that involves how effectively people contribute to organizational outcomes is part of the challenge. Human resource (HR) management is designing management systems to ensure that human talent is used effectively and efficiently to accomplish organizational goals.

Managing people as human resources is essential in organizations of all sizes and types. The human resources are a necessary part of successfully competing in the marketplace, then, a different level of thinking about HR management is essential. Productive, creative people working in flexible, effective organizations that provide rewarding work for individuals is important for all managers, not just those in HR departments. People in organizations can be a core competency and need for investment with an organization and call them human capital (Mathis et al., 2017).

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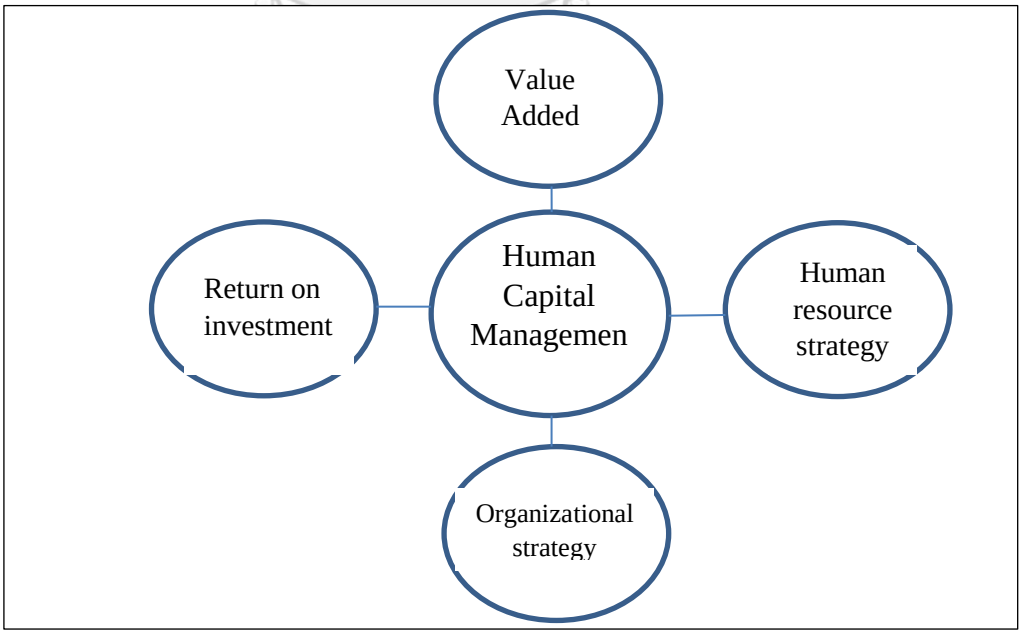
Human capital is not solely the people in organizations—it is what those people bring and contribute to organizational success. Human capital has defined the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social, and economic well-being (The United Nations, 2016). Human capital is the collective value of an organizational workforce's capabilities, knowledge, skills, life experiences, and motivation. Occasionally, human capital is called ‘intellectual capital’ to reflect the thinking, knowledge, creativity, and decision-

making that people in organizations contribute (Mathis et al., 2017). HR management activities can be grouped as follows: strategic HR management; equal employment opportunity; staffing; talent management; compensation and benefits; health, safety, and security; and employee and labor relations. This capital is the constantly renewable source of creativity and innovativeness in the organization but is not reflected in its financial statements. Revenue per employee is a basic measure of human capital effectiveness. The formula is Revenue/Head Count (full-time employee equivalents). It is a measure of employee productivity and shows the sales revenue generated by each full-time employee. This measure is commonly used in government reporting (see Bureau of Labor Statistics, BLS) and organizations to track productivity over time. If revenues increase but employee headcount remains constant, productivity will increase. The concept of human capital management exhibits in figure 3

Figure 3: The concept of human capital management (Boonsin, 2017)



The 20-Year National Strategy (2018- 2037) is a long-term national development plan, setting out frameworks and directions for all public sectors to follow. This strategy needs to be completed to achieve the vision of Thailand, a nation of Stability, Prosperity, and Sustainability, is a developed nation according to the economic philosophy with the ultimate goal being all Thai people's happiness and well-being, or to achieve as the slogan of "Stability, prosperity, sustainability". The 20-Year National Strategy has been publicized consists of six key strategies are (1) national security; (2) national competitiveness enhancement; (3) human capital development and strengthening; (4) social cohesion and just society; (5) eco-friendly development and growth; and (6) public sector rebalancing and development.

The human capital development strategy aims to develop Thai people of all ages in a multidimensional manner to become profitable, skillful, and quality citizens. Following this strategy will help promote modern innovators, thinkers, entrepreneurs, farmers, etc., based on personal skills and abilities. The Strategy for Human Capital Development and Strengthening has fundamental development guidelines as 1) Transforming social values and culture of Thai people by encouraging all social institutions to unite in instilling desirable values and culture, 2) Promoting human development at all stages of life, 3) Improving learning processes to accommodate changes in the 21st century; 4) Realizing multiple intelligences; 5) Enhancing well-being among Thai people, including physical and mental health, wisdom, and social aspects 6) Promoting conditions that encourage human capacity development including (1) enhancing well-being and happiness of Thai families; (2) promoting involvement of public and private sectors, local administrative organizations, families, and communities in human capital development; (3) embedding and developing skills

outside of the school; and (4) developing database systems to facilitate human capital development; 7) Strengthen the capacity of sports to generate social values and promotes.

The nursing intellectual capital theory uses the theory derivation strategies outlined by Walker and Avant (2010). Derived from intellectual capital theory, which is grounded in economics and accounting, the nursing intellectual capital theory conceptualizes nursing knowledge stocks in an acute care organization. It delineates its relationships with patient and organizational outcomes. Nursing knowledge is embedded in two concepts: nursing human capital and nursing structural capital. The nursing intellectual capital theory proposes two environmental factors that affect nursing human capital: nurse staffing and employer support for continuing professional development.

The nursing intellectual capital theory defines nursing human capital as the nursing knowledge that resides in the nursing staff. It encompasses the theoretical and practical experience needed for the delivery of care. Nurses acquire theoretical and practical knowledge from obtaining academic degrees, participating in continuing education, in-service education, and specialty training. Nurses refine their practical knowledge through experience, working as a nurse (Covell 2008). Nurses' academic preparation and experience have been significantly associated with a better quality of patient care or lower rates of adverse events (Tourangeau et al. 2007, Aiken et al. 2011, Duffield et al., 2011). Nurse participation in continuing education has been found to increase knowledge and change professional practice behaviors associated with improving the quality of care provided to patients (Brunt 2000, Umble et al. 2000).

Nursing structural capital is knowledge converted into information structures that nurses can use to assist with their clinical decision-making and care planning (Covell, 2008). Nursing structural capital in the form of practice guidelines, care maps, or protocols is believed to provide relevant information to nurses for improving the quality of care they deliver (Miller & Kearney 2004, Ring et al. 2005). Care maps, practice guidelines, and protocols have been found to contribute to improved patient outcomes and reduce the rate of adverse events (Tourangeau et al. 2007, Duffield et al. 2011).

Nurse staffing is the available supply of nurses who possess the theoretical and practical knowledge to competently care for patients on the unit (American Nurses Association, 2012). Nurse staffing is conceptualized for the nursing intellectual capital theory, reflects a stable base of nurses with the capabilities and expertise to provide the care required by the patients hospitalized on the unit (Covell, 2008). High levels of nurse staffing have been significantly related to lower adverse events, including hospital-acquired infections (Kovner & Gergen 1998), mortality rates (Sales et al. 2008), medication errors (Blegen & Vaughn 1998), and patient falls (Duffield et al. 2011).

In summary, nursing, human capital is related to career advancement (Tukham, 2013), and skill development regarding developing knowledge, skills, estimation, and determining the group to be formed. The hospital plans to create an in-house network for promoting human capital (human cost) planning at the unit.

Career advancement uses to interchange career progression, career success, managerial advancement, or career outcome (Arthur, Khapova & Wilderom, 2005). Career advancement in nursing is established in any form of professional promotion

that recognizes and rewards talent in clinical and administrative nursing practice (Walker, 2005). The individual has his/her outcomes from a career differently. Career advancement provides opportunities for nurses to enhance their competencies by participating in ongoing professional development. Baruch (2004) classifies the personal outcomes into four types: 1) Advancement refers to get promotions such as in higher position, to be a specialist, 2) learning refers to get skill development, knowledge, and competent in career, 3) psychological refers to satisfaction in career, self-actualization, and 4) physiological refers to satisfy for pay and benefits from the organization.

Thus, career advancement serves as a tool that supports nursing excellence through the conferment of higher clinical status to those nurses who meet the requirements. Evidence suggests that career advancement programs retain expert, highly motivated, and effective nurses at the sharp end of nursing care delivery, serving as an effective mechanism for developing nurse leaders in clinical practice. Hsu et al. (2014) reported that career advancement programs promote learning and quality patient care environments. Nurse leaders concur that well-educated nurses who participate in ongoing professional development and career advancement programs are invaluable in achieving nursing goals for improving the quality of patient care. Consequently, nursing can leverage career advancement to strengthen leadership development for clinical nurses. In the nursing field, career advancement proposes as a nursing career ladder.

The nursing career ladder is a grading structure that facilitates career progression and links the differentiation of pay by defining different levels of clinical and professional practice in nursing (Buchan, 1997). The concept of a career ladder

was developed by Dreyfus and Dreyfus (1980). Dreyfus Model (1980) has initially proposed the five stages of novice, competent, proficient, expertise, and mastery. In both structures, each level builds on the previous level as the learner advances from a beginner level and then gains knowledge, skills, perceptions, intuition, wisdom, and, most importantly, experience in their given field of practice. The Dreyfus model posits that in acquiring and developing a skill, a learner passes through five levels of proficiency from novice through expert. These different levels reflect changes in three general aspects of skilled performance. There are as followed:

Level1: Novice (0-1 year), A novice does not know anything about the subject he/she is approaching and has to memorize its context-free features. The novice is then given rules for determining action based on these features. Improving this level, the novice needs monitoring, either by self-observation or instructional feedback.

Level2: Advanced Beginner (1-2 years), An advanced beginner is still dependent on rules, but as (s)he gains more experience with real-life situations, (s)he begins to notice additional aspects applicable to related conditions.

Level3: Competent (2-3 years), At this level, the competent person grasps all the relevant rules and facts of the field and is, for the first time, able to bring his/her judgment to each case. The level of learning is often characterized by the term “problem-solving.” A competent level nurse would use a hospital information system with ease and know-how to solve technical difficulties or interpret conflicting data.

Level4: Proficient (3-4 years), the fourth level is called fluency and is characterized by the learner's progress from the step-by-step analysis and solving of the situation to the holistic perception of the situation's entirety. The proficient

hospital information system learner would know how to interpret all departmental information and provide guidance to other disciplinary members as needed.

Level5: Expert (>5 years), an expert's repertoire of experienced situations is so vast that typically each specific position immediately dictates an intuitively appropriate action. After a great deal of experience using a system in everyday situations, the expert nurse discovers that situations simply elicit from him or her proper responses without consciously using any rules. The proficient performer, immersed in the world of his skillful activity, sees what needs to be done, and decides how to do it. The expert not only knows what needs to be achieved, thanks to the well-refined ability to exercise situational discrimination, s/he knows how to achieve his or her goal.

(1) Operations to enhance the human capital potential

According to the 20-Year National Strategy (2018- 2037), a long-term national development plan, the Ministry of Public Health proposed "the People Excellence Strategy," that one of the four (The PP&P Excellence, Governance Excellence, Service Excellence). The People Excellence Strategy aims to driven Thailand to the ultimate future (the People Excellence Strategy, 2017). People Excellence Strategy consists of 4 strategies: 1) Human Resource for Health (HRH) and Organization Strategy, 2) HRH Development, 3) HRH Management, and 4) HRH Network. This policy was started from 2017 to 2036 to promote Global Strategy on Human Resources for Health: Workforce 2030 that includes Availability, Accessibility, Quality and, Acceptability (WHO, 2018). The indicators of the implementation of this policy are the proportion of health personnel between the health areas.

So, the operations to enhance human capital potential refers to the implementation of this promoting human capital regarding the organization’s plan for human capital development, the nursing service department plan for nursing unit activity, and finally, the nursing unit implementation followed by their establishing plans to achieve the organizational goals. Therefore, career development for the nurse professional is flexible for the context of each healthcare organization. Career development is a great motivation point for nurses and can sustain the employees in an organization.

In this study, career advancement refers to the organizational plan followed by MOPH policy to promote people's excellence by establishing career advancement criteria with manual for an employee to overlook and develop themselves toward organizational goals.

(2) The measurement of human capital

To fulfil an organization's success, HR must quantify things that traditional accounting does not account for. Human resources often provide for both the most significant value and the highest cost to organizations. So, assessing human resources' value demonstrates the importance of implementing effective HR practices to maintain a high-quality, engaged workforce. The revenue per employee is a basic measure of human capital effectiveness. The formula is Revenue/Head Count (full-time employee equivalents). It is a measure of employee productivity and shows the sales revenue generated by each full-time employee. This measure is commonly used in government reporting (see Bureau of Labor Statistics, BLS) and organizations to track productivity over time. If revenues increase but employee headcount remains constant, productivity will increase.

Promoting Human Capital Potential Subscale of Management Factors Questionnaire was developed by Chutchawanchunchanakij, (2017). Therefore, this concept measures by a subscale of The Management Factors Questionnaires that consists of 11 items with 5 points Likert scale. This instrument was modified from the Management Factors Questionnaires (Chutchawanchanchanakij, 2017). The instrumental modification process provides the details in chapter III.

In sum up, this study, human capital refers to career advancement that Registered Nurse's perception to the determination of professional progress, skill development of nurse individual based on the hospital criteria of the professional plan, clear operation enhance human capital potential strategy forward the hospital implemented plans to the development of knowledge, competencies, and skills used in the operation of professional nurses at the nursing unit. This concept measures by a subscale of the Management Factors Questionnaires that consists of 11 items with 5 points scale. This instrument was modified from the Management Factors Questionnaires (Chutchawanchanchanakij, 2017). The instrumental modification process provides the details in chapter III.

2) Leadership: Transformational leadership

The manager plays a vital role in leadership characteristics, including Leadership. The evidence showed that leadership behavior and various leadership styles are related to nurses' intention to stay in both negative and positive ways (Boyle et al., 1999; Cowden, 2011; Cowden, Cummings, & Profetto-McGrath, 2011; Tourangeau, McGillis Hall, Doran, & Petch, 2006). However, leadership styles are essential for an organization to achieve its goals and success. According to Cummings et al. (2010), a systematic review was conducted of leadership styles and outcomes

patterns for the nursing workforce and work environment. They found the distinctive patterns between relational and task-focused leadership styles and their outcomes for nurses and their work environments. They claimed that 24 studies reported that leadership styles focused on people and relationships (transformational, resonant, supportive, and consideration) were associated with higher nurse job satisfaction, whereas ten studies found that leadership styles focused on tasks (dissonant, instrumental, and management by exception) were associated with lower nurse job satisfaction.

Similarly, Cowden (2011) conducted a systematic review of leadership and intention to stay. She investigated the relationship between managers' leadership practices and nurses' intention to stay in their current position. These resulted from a critical review of 23 studies. The findings identified a positive relationship between transformational leadership, supportive work environments, and staff nurses' intention to stay current. Besides, nurse leaders in Saudi's transformational leadership styles had been demonstrated more satisfied with their jobs and intention to stay as nurses (Abalrub et al., 2012).

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The integrative literature review demonstrates the managerial characteristics: leadership style (Bolye et al., 1999; Cowden & Cummings, 2012, 2015; Liang et al., 2016; Taunton et al., 1997), power (Bolye et al., 1999; Cowden & Cummings, 2015; Taunton et al., 1997), Supervisor support (Cowden & Cummings, 2012, 2015; Gilles, 2012). Others were work activities, personal resources, motivation for management, praise and recognition, shared decision-making, availability, and respect.

Managerial characteristics are nurses' perception of leadership (Cowden et al., 2011; Taunton, Boyle, Woods, Hansen, & Bott, 1997). The transformational

leadership style is a leadership style that focuses on collective purpose and mutual growth and development. Transformational leadership is the most effective leadership style because it influences the followers to be committed, having a vision, empowering others to heighten motivation to attain extra effort beyond performance expectations (Huber, 2018). Transformational leadership is used for higher-order change and to change the organization's culture. This leadership style is a crucial element in developing a culture of excellence among Magnet hospitals (McClure et al., 1983), and the American Nurses Credentialing Center (ANCC) emphasized transformational leadership in the Magnet Model of Magnet Recognition Program (ANCC, 2008). Benis and Naus (1985) identified the following four activities for transformational leadership: 1) Creating a vision; 2) Building a social architecture that provides meaning for employees; 3) Sustaining organizational trust, and 4) Recognizing the importance of building self-esteem.

Transformational leaders have been characterized by four separate components or characteristics designated as the four factors of transformational leadership by Avolio, Waldman, and Yammarino (1991). These four factors are 1) idealized influence, 2) inspirational motivation, 3) intellectual stimulation, and 4) individualized consideration. Transformational leaders integrate creative insight, persistence, energy, intuition, and sensitivity to others' needs to "forge the strategy culture alloy" for their organizations. Bass & Avolio, 1994 describe transformational leadership characteristics as follows:

(1) Idealized influence implies that followers respect, admire, and trust the leader and emulate their behavior, assume their values, and are committed to achieving their vision and making sacrifices in this regard. The leader shows

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dedication, a strong sense of purpose and perseverance, and confidence in the group's purpose and actions to ensure the group's success and gives followers a sense of empowerment and ownership. He or she behave morally and ethically.

(2) Inspirational motivation refers to the leader(s enthusiasm and optimism in creating a vision of the future, thus stimulating similar feelings with followers. The leader is seen to commit to the vision, specific goals and expectations are communicated, and confidence is expressed in followers' ability to achieve these expectations.

(3) Intellectual stimulation implies a leader who values followers' intellectual ability, encourages innovation, and develops creativity. Others are encouraged to reframe problems, use a holistic perspective in understanding problems, question the status quo, and approach problems from different angles, thus creating readiness for change and developing the ability to solve current and future issues.

(4) Individualized consideration implies that the leader considers followers' ability and their level of maturity to determine their need for further development. He or she acts as a mentor giving personal attention, listening to others' concerns, and providing feedback, advice, support, and encouragement. Furthermore, the leader designs appropriate strategies to develop individual followers to achieve higher motivation, potential, and performance. Support is provided, and progress is monitored.

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Leadership was measured by the transformational leadership style subscale of the Management Factors Questionnaire (Chutchawanchanchanakij, 2017). It consisted of 18 items with 5 Likert scale. This instrument was modified for the current study. The detail was described in chapter III.

In conclusion, leadership refers to leadership style, in particular, the transformational leadership style of a head nurse who you are working with; she behaves as an idealist, good role model in the workplace, inspiration motivation, creativity, a good relationship with a follower, respect to individualize, and a mentorship. This concept measures by a subscale of the Management Factors Questionnaires that consists of 18 items with 5 points Likert scale. This instrument was modified from the Management Factors Questionnaires (Chutchawanchanchanakij, 2017). The instrumental modification process provided details in chapter III.

3) Justice

Organizational justice has been seen to enhance the individual and group level results of employees in their organizations. Organizational justice has been observed to affect employees' job satisfaction, extra-role behaviors, citizenship behavior (Ansari, Kee, Aafaqi, 2007). Ansari MA, Kee Mui Hung D, Aafaqi R (2007). Leader-member exchange and attitudinal outcomes: role of procedural justice climate. Leadership and Organization Development Journal 28: 690-709. [13). The concept of justice refers to organizational justice that has been further divided into three main dimensions, namely distributive justice, procedural justice, and interactional justice. 1) Distributive justice means the perceived fairness of results and outcomes along with how the decisions are undertaken at the end of the appraisal process 2) Procedural justice means fairness of procedures concerning the processes and methods adopted to reach the point of how these results have been achieved as well as what ways and procedures have been adopted to reach the final decisions. Likewise, procedural justice describes the fairness of procedures used in the allocation

process. Procedural justice also reflects the degree of fairness in the procedures adopted to determine how individuals are treated and how respective benefits are given. 3) Interactional justice relates to how people interact and communicate with one another. Interactional justice also refers to the quality and fairness of interpersonal treatment during enacting organizational decisions and procedures. It also highlights the human aspects of interaction expressed in respect, politeness, honesty, dignity. Justice plays an exceptional role as a binding force in reducing opportunism and enhancing relationships between individuals.

Similarly, organizational justice has been observed to affect employees' job satisfaction, extra-role behaviors, citizenship behavior [13]. Its various dimensions have been under study in different fields, with the strength of the relationship between different dimensions varying in each area. Moorman pointed out that a good perception of employees for different organizational justice types results in better citizenship behaviors. Moorman and Niehoff also highlighted that if employees perceive unfairness, they balance it out by decreasing their outputs.

To sum up, justice refers to recognizing justice in the standard of compensation, the equality of assignment, and promoting personal promotion within an organization. This concept measures by a subscale of the Management Factors Questionnaires that consists of 11 items with 5 points Likert scale. This instrument was modified from the Management Factors Questionnaires (Chutchawanchanchanakij, 2017). The instrumental modification process provided details in chapter III.

4) Professional growth

Professional growth is about gaining new skills and work experience that can help the employee reach their goals in their career. It means RN development is related to the current role or the role someone wants to do next. Personal development fits alongside professional growth, so the employee will progress in her career. The employee needs to develop personally, as well.

Professional growth refers to career advancement within the organization working, the plans to rise to a higher position, and human development promotion. This concept measures by a subscale of the Management Factors Questionnaires that consists of 6 items with 5 points Likert scale. This instrument was modified from the Management Factors Questionnaires (Chutchawanchanchanakij, 2017). The instrumental modification process provides details in chapter III.

5) Work happiness

Most adult life spends at work and, thus, work has become one of the critical determinants of human health and happiness. Happiness in the workplace is beneficial not only to the employees but also to the employers, organizations, our community, and our society. Work happiness is one of the key desirable of both employee and employer of an organization. It is a part of a successful organization related to nurses' intention to stay (Chitpakdee et al., 2014). The evidence reveals that happiness at work is a significant factor influencing the intention to stay among nurses. Stress, unhappiness, and psychological distress in the workplace have been associated with lost productivity, decreased work performance, increased risk of accidents, relationship conflicts at work, increased absenteeism, increased presenteeism, sick leave, short term or long term disability, burnout, increased job

turnover rates, various health conditions, and increased disability and health care costs (Warr, 2007). Warr (2007) Vitamin Model proposed that, like some vitamins, increasing amounts of some job characteristics improve well-being until deficiencies are overcome, and one reaches the 'recommended daily allowance.' Beyond that point, additional amounts are thought to have limited beneficial effects on happiness. Further, some job characteristics may reduce happiness in high quantities, just as it is possible to overdose on some vitamins. For instance, Warr suggests that it is possible to have too much personal control, too much variety, and too much clarity (Warr, 2007). Opportunity for personal control opportunity for skill use externally generated goals variety environmental clarity contact with others, availability of money, physical security, valued social position supportive supervision, career outlook equity. Moving away from work itself is to consider other job-level attributes; there is evidence that leader behavior is related to employee happiness. Charismatic leadership is strongly associated with subordinate job satisfaction (corrected population correlation = 0.77, DeGroot et al. 2000). A leader-member exchange is also reasonably strongly related to job satisfaction and organizational commitment (Gerstner & Day, 1997). Likewise, trust in the leader is a strong predictor of satisfaction and commitment (Dirks & Ferrin 2002). Autonomy support displayed by leaders also appears to be essential for follower satisfaction, well-being, and engagement (Baard et al. 2004; Deci et al. 1989). A stream of research on abusive supervision by Tepper (2007)

According to the work happiness definition, intention to stay among nurses is an important issue that nurse administrators must enhance to maintain their organizations' personnel. Happiness at work is a significant factor influencing the

intention to stay among nurses. This correlational descriptive study aimed to describe the joy at work and intent to stay among professional nurses and examine relationships between happiness at work and intention to stay among nurses in public hospitals.

In conclusion, work happiness refers to the workplace climate that promotes the employees' work quality; the employee works together with a co-worker. This concept measures by a subscale of The Management Factors Questionnaires that consists of 6 items with 5 points Likert scale. This instrument was modified from the Management Factors Questionnaires (Chutchawanchanchanakij, 2017). The instrumental modification process provided details in chapter III

6) Work-life balance

For many employees around the world, balancing their work and personal lives is a significant concern. Work-life balance (WLB) is an essential concept of human resource management that receives increasing attention from policymakers, organizations, management, employees, and their representatives globally. Work-life balance is the general term used to describe organizational initiatives to enhance employee work and non-work domains. Essentially, work-life balance initiatives are offered by organizations to assist staff in managing the demands of work and personal life (Grady, McCarthy, Darcy, & Kirrane, 2008; McCarthy, 2004 cited in McCarthy et al., 2010. Work-life balance is a factor that has the potential to affect workplace issues such as employee turnover, stress, job satisfaction, and productivity (Bloom & Van Reenen, 2006; Frone, Russell, & Cooper, 1992; Parasuraman, Purohit, Godshaulk, & Beutell, 1996; Parris, Vickers, & Wilkes, 2008; Thomas & Ganster, 1995; Veiga, Baldridge, & Eddleston, 2004 cited in McCarthy et al., 2010). The

implications of sometimes contrary work and personal life responsibilities for people management and work structures are wide-ranging (Fisher, 2000). The existing evidence argued that the highly competitive labor market, where highly valued employees' attraction and retention are difficult, calls for greater awareness of employee work-life balance concerns (De Cieri, Holmes, Abbott, & Pettit, 2005 cited in McCarthy, 2007). (Patthapong & Volrathongchai, 2018)As a result, many organizations are exploring how they can help employees achieve more balance by offering a range of family or work-life balance policies and programs.

The impact of line managers on employee attitudes and performance is borne out by longitudinal research conducted by Purcell et al. (2003). They conducted a longitudinal study of twelve organizations in the UK, exploring the link between human resource management practice and performance. A significant finding from the research is that front line managers or supervisors play in the actual implementation of HR policies and practices. They argue that "line managers have discretion the way they practice good people management

Several employees' and executives' surveys showed that work-life balance is one of the top ten concerns in most countries (Heinen& Mulvaney, 2008, cited in Marthis & Jackson, 2013). Another survey found that work-life balance is the second most crucial item for executives, with only compensation being more critical. More than 40% of surveyed employees cited a lack of sufficient work-life balance, and almost half said they might quit their current employers to get better work-life balance (Koster, 2009; Moore &. Lockwood, 2009 cited in Marthis & Jackson, 2; (Patthapong & Volrathongchai, 2018).

Thousands of employees, both in large global firms like IBM and Hewlett-Packard and in many smaller firms, have flexible work schedules and use technology to work from locations away from the workplace as a way to help balance work and personal lives. Firms such as Xerox and J.M. Smucker give employees paid time off for community volunteer work. Numerous health care firms allow employees to adjust their work schedules to address personal, family, health, and other issues (Sullivan & Mainiero, 2006; Babcock, 2008).

To assess work-life balance, it can evaluate the extent to which workers feel successful in balancing work and personal or family life and the amount of conflict they face in balancing work and family or personal experience. In the workplace climate that promotes the employees' work quality, they work together with a co-worker. In conclusion, work-life balance refers to the organization's support for balancing better employees' personal and family life quality. Work-life balance is measured by the Work-Life Balance Scale of the Management Factor Questionnaire (Chutchawanchanchanakij, 2017). It consists of three items subscale on 5 points Likert scale. This instrument was modified, and the instrumental modification process provided details in chapter III.

4.3 Work characteristics

Work design is an antecedent of organizational behavior that substantiates the relationship between employees' welfare and organizational effectiveness. (Hernaus, 2013). Subsequently, human resource management theories primarily focus on achieving compatibility between individual employees and corporate goals to ensure organizational equilibrium (Ahmad, 2018). Therefore, it is essential to understand how organizational offerings contribute to the workplace,

whether intrinsic and extrinsic. Workplace characteristics of importance to the model include incidence or threat of abuse (Roche, Diers, Duffield, &Catling-Paul, 2010), presence of autonomy (Boyle et al., 1999; Estryn-Behar et al., 2010; Taunton et al., 1997), and workgroup cohesion (Boyle et al., 1999; Tourangeau & Cranley, 2006). These elements of the work environment are reported to influence the development of intention to stay.

These specify the conditions under which individuals will become internally motivated to perform effectively in their jobs. So, the interaction among employees must be present for internally motivated work behavior to develop. Also, the characteristics of jobs that can create these psychological states, including individuals' attributes, determine how positively a person will respond to a complex and challenging job (Hackman et al., 1976).

Work characteristics' specific characteristics of work. The existing literature interchange this concept with job characteristics. Job characteristics developed for the emerging area of organizational development and planned change. The organization has to design the organization for the best outcomes of management properly. Human resource planning and career development have become an increasingly important element in the organization's comprehensive planning. Many believe that many people and organizations would be better off if jobs and work systems were redesigned to specify the conditions under which individuals will become internally motivated to perform effectively in their careers. Job characteristics related to the interaction among the psychological states of employees that must be present for internally

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motivated work behavior to develop and the aspects of jobs that can create these psychological states of individuals that determine how positively a person will respond to a complex and challenging job (Ali, 2014; Hackman, 1976).

The previous study indicates that work characteristics are related to employee nurses' satisfaction and intention to stay. The existing research stated that
Job characteristics mean that a permanent job recognizes the work's nature as a job suitable for a quality job. The job characteristics describe below.

1) Skill variety refers to nurses perceive workplaces as multicellular activities, with varying degrees of skill, expertise, competence, nursing practice skills, communication skills to Help the work succeed, some things come, and our fair evaluation.

2) Task identity refers to the perception that active nurses who have a good job should behave towards the job and are essential to others, agencies, and hospitals to achieve their goals.

3) Task significance refers to the importance of active nurses' perception towards the work performed that the work outcome is essential to others' work, departments and hospitals to achieve their goals are to see their importance and value.

4) Autonomy refers to the opportunity of nurses doing a job by their judgment with the government prompts nurses to use creativity, prosperity, and safety in coordination and problem-solving.

5) Feedback refers to getting information together, evaluating the outstanding work of Kasikorn, how to do it to be clear, transparent communication that success and every wrist, in writing and specified by both agencies and individuals.

According to the measurement of work characteristics, the Job Diagnostic Survey (JDS) (Boonmung, 2009) Thai version was translated from the original English language to the Thai language by Boonmung (2009). Hackmann and Oldham developed the original instrument in 1976 and 1980 to measure job characteristics related to employee task conditions, producing positive outcomes on the part of employees. The JDS consists of 5 domains for measuring job characteristics that initiate different employees' attitudes and behaviors. The theory-based on this instrument also includes individual difference, as growth need strength, knowledge and skills, and contextual satisfaction as moderators of relationships between job characteristics and outcomes variables. JDS consists of five job characteristics with skill variety (6 items), task identity (4 items), task significance (4 items), autonomy (6 items), and job feedback (6 items). Boonmung's (2009) JDS Thai version consists of 26 items with each item are rated along a 5-point Likert scale, 5 = Highly agree, 4 = Agree, 3 = Quite agree, 2= Not very agree, 1 = Very litter to agree. The reliability of this scale is presented by internal consistency (α) = 0.89.

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In conclusion, in this study, work characteristics define job enrichment as job enrichment that provides skill variety, task identity, task significance, autonomy, and feedback regarding the job. Job characteristics measure by the Job Diagnostic Survey (Boonmung, 2009) that was translated from Hackmann & Oldham, 1980. It consists of 26 items with a 5 points Likert scale. The detail of the adaption of the instrument can be the detail in chapter III.

4.4 Organizational characteristics

Organizational characteristics are the characteristics of an organization defined, followed by the Ministry of Public Health. The organizational characteristics are clustered into three levels of healthcare service delivery.

1) First - level Hospital (F) is responsible for forwarding patients from the primary care network are divided into three groups, as follows:

(1) Small community hospital (F3) refers to a less than 30 beds community hospital equipped with a general practitioner or a family practice physician. No uncomplicated patient care. The network supports primary care in each district is not a surgical procedure, such as major surgery. Moreover, it does not require a full inpatient service in each community to support each district's primary care network.

(2) Medium size community hospital (F2) refers to the hospital providing 30-90 beds. There are none specialized doctors who offer inpatient services. There is an operating room and a delivery room to accommodate patients and patients.

(3) Large community hospital (F1) refers to a community hospital that provides 90-120 beds capacity with practitioners or family physicians and specialists in the major areas of Internal Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Orthopedic, and Anesthesiologists. There are the Operation Room, Labor Room, and support district primary care networks.

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2) The Middle-level Hospital is responsible for transporting the patient from the secondary care network is divided into two levels as follows:

(1) Referral community hospital (M2) refers to a community hospital of more than 120 beds capacity that provides care in six main fields (Internal Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Orthopedic Surgery

Anesthesiologist).more advanced service delivery for the patients. Other communities and reduce referral to general hospitals and support the primary care network of each district.

(2) A small General Hospital (M1) refers to a hospital providing 150-200 beds capacity to support patients who need treatment in complex, expert-level consisting of specialist doctors. All significant branches and sub-branches in individual components require designating as a referral hospital medium level.

3) The High-level Hospital has to transfer patients from medium-sized hospital to tertiary hospitals that are divided into two levels as follows:

(1) General hospital refers to the province's service network (Level S: Standard - level Hospital). This hospital provides 200-500 beds capacity can support the patients requiring specialized treatment at a complicated story. This level consists of doctors specialists in primary, secondary, and some sub-fields and designated as a referral hospital standard patients care.

(2) Regional Hospital, the center for a referral from the Provincial Service Network (Level A: Advanced-level hospital), refers to a hospital provide more than 500 beds capacity that can support the patient in complex treatment, proficient and technologically advanced, and expensive (Advance and Sophisticate Technology). A regional hospital designate is a high-level referral hospital (Haruthai et al., 2017).

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To sum up, the service plan can operate effectively based on registered nurses' adequacy to provide care for the patients regarding each service plan's objectives. The healthcare organizational structure's functionality clusters the distribution of registered nurses' human capital at the nursing service delivery level. Each healthcare

service delivery is different from others based on the purpose, policy, and size of a hospital. Hospital resource is to the treatment of disease, rehabilitation, and the sophisticate of curative care.

Chapter summary

By examining the previous studies from abroad and Thailand, an investigator found several studies that demonstrated variables enhance intention to stay, including nurse characteristics, managerial characteristics, work characteristics, and organizational characteristics. The existing instruments were also chosen regarding the quality of those instruments, and they fit in the current study concepts. Nurses' characteristics including sex, age, generation, marital status, education level, working experience, nurse' level, income, employment status, year inexperience, and working units, Then, the managerial characteristics consist of six subcategories of human capital, leadership (Transformational leadership), justice, professional growth, work happiness and work-life balance. Furthermore, work characteristics consist of five sub-categories of skill variety, task identity, task significance, autonomy, and feedback. In addition, organizational characteristics consist of 6 hospital levels/types: 1. High-level Hospital with Advanced-level (A) provides more than 500 beds capacity; 2. High-level Hospital with Standard level (S) provides 200- 500 beds capacity; 3. The Middle-level Hospital or M1 referral hospital offers 120-200 beds capacity; 4. The Middle-level Hospital at M2 referral hospital provides more than 120 beds capacity; 5. First - level Hospital at a large-size community hospital (F1) provides 90-120 beds; 6. First - level Hospital at a medium-size community hospital (F2) provides 60-120 beds; nurses' intention to stay consists of 2 sub-categories; intention to stay in the profession and intention to stay in the current workplace

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Besides, in some studies, researchers did not report the reliability and validity of the instrument. The investigator chose the Managerial Factors Questionnaire to measure managerial characteristics that consist of 55 items with a 5 points Likert scale. Also, work characteristics were measured by the Job Diagnostic Survey (Boonmung, 2009) Thai version. It consists of 26 items with a 5 points Likert scale. Moreover, nurses' intention to stay in the profession was measured by McCain's Intention to Stay Scale (cited in McCloskey, 1990) that consists of 5 items scale of 5 points Likert scale. Finally, nurses' intention to stay in the current workplace was measured by three items of the Intent to Stay Scale (Price & Mueller, 1986), items with a 5 points Likert scale. The detail of the modification of the instruments has been described the details in chapter III.

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CHAPTER III

METHODOLOGY

This chapter describes the methodology used in this study. The methodology includes research design, population, and sample, instrumentation, protect the rights of human subjects, data collection, and data analysis as follows:

1. Research design

This study uses a cross-sectional descriptive survey design to investigate the phenomenon of nurses' intention to stay in public hospitals under the Ministry of Public Health in Thailand, and to compare the intention to stay among nurses with hospital types of care delivery of organization characteristics, nurse characteristics, managerial characteristics, and work characteristics. The researchers do not manipulate or control the independent variable (McEwen & Wills, 2011). The literature review guides this study's conceptual framework.

2. Setting

This study's setting is 897 public hospitals under the Ministry of Public Health (Ministry of Public Health, 2019) in Thailand that offer primary, secondary and tertiary levels of care delivery, including 24-hour emergency, critical care, medical and surgical, obstetrics, and operation room. It supported data from a cross-section of nursing specialty areas and was accessible to the researcher.

3. Population

Population: The target population was 110,463 Registered Nurses (RNs) who worked in public hospitals under the Minister of Public Health from hospital level F2, F1, M2, M1, S, and A across the Health Area 1 through Health Area 12 of Thailand,

respectively (Health Data and Information Unit, 2018). The participants were recruited from Registered Nurses (RNs) who performed direct care in the In-Patient Department.

4. Sample

Sample: The participants were recruited from RN) who performed direct care to the patients in the In-patient Department. The criteria were used to determine the samples in this study as follows:

1. Male and female who earned a baccalaureate nursing program and become the Registered Nurses of Thailand Nurses and Midwifery Council's most current registration year.

2. Registered nurses who have been worked for at least one year in the In-Patient Department

3. Be willing to participate in this study.

4. These RNs provide direct nursing care to patients in public hospitals under the Ministry of Public Health.

5. Be able to read and write the Thai Language

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4.1 The sample Size

4.1.1 The sample size calculation

The current study sample was involved in selecting a group of participants that met the sampling criteria. The sample size can calculate by using the number of variables under the study as well. It can increase by a factor of 5 to 10 if the selected variables are uncorrelated with the dependence variables; still, if the variables are highly correlated to dependence variables, the sample size can reduce. According to this study, the sample of potential participants drowned from the RNs of Thailand

Nurses and Midwifery Council most current registration year. As a self-regulation body of approximately, the sample consisted of RNs in 12 Health Areas under the Ministry of Public Health in Thailand. The sample size for a try-out and the main studies were 100 and 1,500 RNs, respectively. To warrant a sufficient sample size and that was representative of the given population, this study used a sample size formula follows by Kanchanawassi's table of the mean of a population (μ) (2016, p.151) at the confidence intervals at 95% and acceptable sampling error, the level of precision or error of sampling method = 0.05. So, Let's assume that the target population is 110,463 RNs. An acceptable sampling error is 5% or .05 (Levy & Lemeshow, 1980) in this table is estimated at 1,500. However, additional aspects need to be considered in the final sample size, which may include the possibility of refusals and/or losses in the study an additional 10-15% and the need for adjustments for confounding factors should an additional 10-20%, applicable to observational studies (Martínez-Mesa, González-Chica, Bastos, Bonamigo, & Duquia, 2014). Therefore, this study was added at 15% of the sample size, and it came to be the final sample size of 1,725. To sum up, the corrected sample size was determined using the confidence intervals in a finite population. This current study decided to use 1,725 as a sufficient sample size from 110,463 participants in the study.

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4.2 Sampling technique

The multi-stage sampling technique was used to select a sample of Registered Nurses (RN) who worked in public hospitals under the Minister of Public Health (MOPH) of Thailand to achieve the representativeness of nurses' intention to stay. To ensure that every element has an equal chance of being selected, and the sample size is adequate for this study. Then, the process of sample technique was created through

the multi-stage sampling technique (stratified two-stage cluster sampling) (Vosapngsathron, 2015). The step by step of the sampling technique was as followed:

4.2.1 Step1: Primary Sampling Unit (PSU). This step cluster the population from 12 Health Areas (HA) as authorized by the Provincial administration, the MOPH. According to the service plan, all public hospitals under MOPH have been assigned to 12 Health Areas (HA) to provide health networks from community hospitals through general hospitals and regional hospitals. Seven hundred eighty-one community hospitals were covered in all districts; eighty-two general hospitals and 34 regional hospitals covering all the provinces of Thailand. Seven hundred ninety-nine hospitals exclude 98 community hospitals that do not provide an Inpatient unit under the Office of Permanence Secretary (Ministry of Public Health, 2019). Then, the hospitals under 12 HAs were selected by the simple random sampling technique operated by lucky-draw to select hospitals from HAs. The lucky-draw technique was assigned by writing down all the hospitals' names, putting them in the box, and then pulling the names out. The result showed that the four Health Areas were recruited in this step, as showed in figure 2.

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4.2.2 Step2: The Secondary Sampling Unit (SSU). This step used the simple random sampling technique to get the provinces under each Health Areas by using lucky draw technique as well. Eight provinces were selected. It indicated five regional hospitals, eight general hospitals, and 47 community hospitals were selected in this step.

4.2.3 Step3: The Third Sampling Unit (TSU). Using the output from step 2, a purposive sampling technique was used to select the inpatient units. This step came

out with selected inpatient units including Medical, Surgical, Pediatrics, Intensive Care Unit, Ob-Gyn unit, Operating and Anesthesia unit, and Special Ward.

However, the criteria for calculating the sample size from each hospital was followed by Singchongchai et al. (1996) formula:

Number of samples of each hospital = Number of hospital population x Total sample size ÷ Total number of hospitals in the sample group

To get a good representative of the population, it requires a sample of at least 30 Registered Nurses (RN) (Polit & Hunger, 1999). Therefore 1) consider the population of each hospital. If any hospital has a population of fewer than 30 RNs, then choose the total population of that hospital as a sample. 2) If any hospital can calculate the sample size of fewer than 30 RNs, the sample group of that hospital will be increased to 30 people; then, the sample distribution is a standard curve representing the population (Karnasutra, 1999). Then, 1725 e-questionnaires were distributed to the target population. The e-questionnaires responded with 1,530 . After conducting data cleaning, finally, 1,524 participants were accessed for data analysis.

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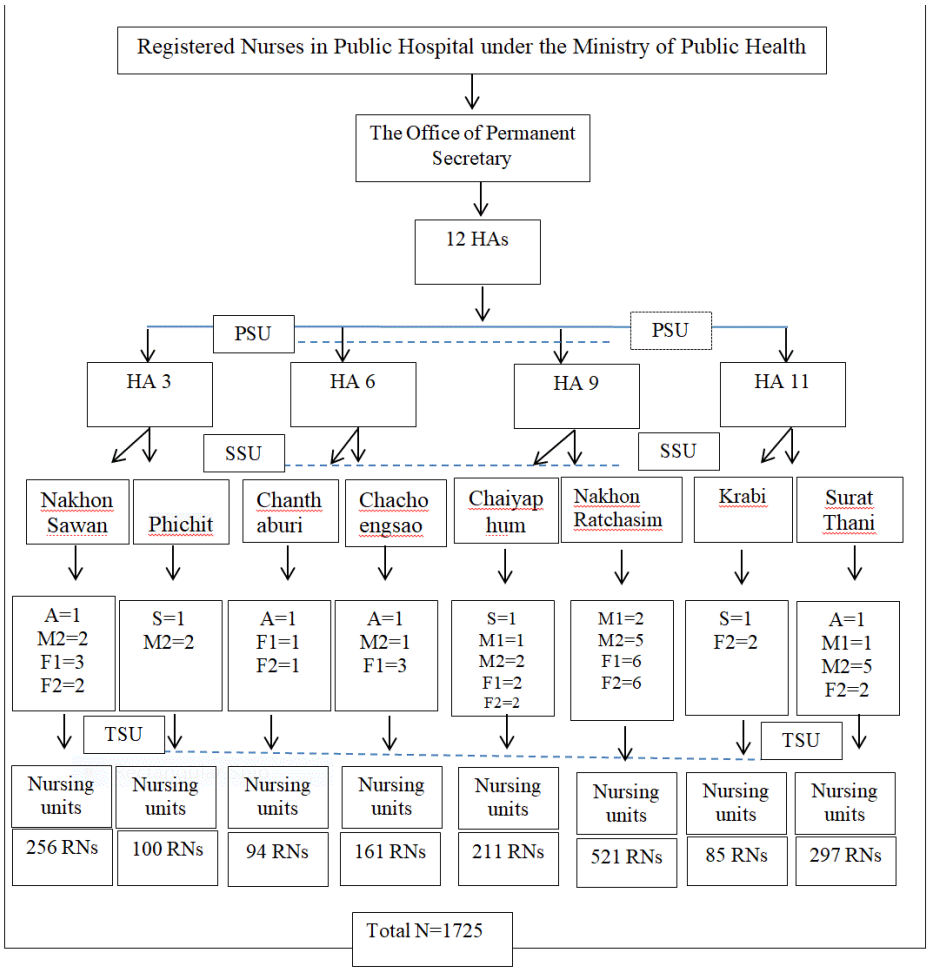
Figure 4: The multi-stage sampling technique



Remark: HA (Health Area), A(advanced-level hospital), S(Standard-level hospital), M1(Middle-level hospital), M2(Middle-level-community referral hospital), F1(First-level with the large-size hospital, F2 (=First-level with the medium-size hospital)

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4.3 Recruitment for participation

It will conduct this study from April to July 2020. The inclusion criteria included: 1) male and female nurses who graduated from a baccalaureate nursing program, 2) provide direct nursing care to the patients at least one year in the public hospitals under the Ministry of Public Health, and 3) willing to participate in this study. The details for recruitment appeared on page 108, in which sample 1,530 as a final result in 1,524 with response rate at 88.3%.

4.4 Research instruments

The four research instruments were used to measure the constructs of interest in the study. There were 1) Nurse's Characteristics and Socio-demographic Data Form, 2) the Management Factors Questionnaire (Chutchawanchanakij, 2017), 3) the Job Diagnostic Survey (Boonmung, 2009) and 4) the Nurses' Intention to Stay Scale (McCain's Intention to Stay Scale (McCloskey, 1990); and the Intent to Stay Scale, (Price & Mueller, 1986). For those instruments, two instruments were adapted and modified from the original versions, one instrument was translated from the original version (English language) to the Thai version, then adapted and modified it for this study, and the Nurses Personal Characteristics and Socio-demographic Data Form was developed by the researcher. The translation process and the psychometric properties for testing the translated instruments were required to perform. The translated instrument process and modification, items selection of each instrument, and content validity and reliability were described as follows:

4.4.1 The Nurses' Intention to Stay Scale. The Nurses' Intention to Stay Scale consists of two dimensions: the Nurses' Intention to Stay Scale (McCain's Intention to Stay Scale (McCloskey, 1990) and the Intent to Stay Scale, (Price & Mueller, 1986). This instrument was used to measure nurses' intention to stay in public hospitals under the Ministry of Public Health. The details were as follows:

1) The first dimension, the Nurses' Intention to Stay Scale was translated, then adapted and modified from McCain's Intent to Stay Scale (cited in McCloskey, 1990) to measure nurses' intention to stay in the profession. This instrument was developed by McCloskey and McCain (1987) as a part of their instruments. In their study, nurse commitment was measured by McCain's Behavioral Commitment Scale

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(McCloskey & McCain 1987) that consisted of 38-items. In 1990, McCain's Behavioral Commitment Scale extracted five items from this scale to measure nurses' intent to stay (cited in McCloskey, 1990). McCain's Intent to Stay Scale was a 5-point scale rated as: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The total scale could range from 5 to 25 by total sum score. And it was computing the mathematical mean across all items yielding a possible mean score range from 1 to 5 with higher mean scores indicating high McCain's Intent to Stay Scale. In McCloskey (1990), Cronbach's alpha of the Nurse Intention Scale was 0.90 (McCloskey, 1990). A total of five items, three items were positively worded, and two items were negatively worded. The scoring and interpretation in each level of scale defined the range from 4.50-5.00 = the highest, 3.50-4.49 = high, 2.50-3.49 = fair, 1.50-2.49 = low, and 1.00-1.49 = lowest**.** However, for data analysis, McCain's Intent to Stay Scale (cited in McCloskey, 1990) scoring and interpretation were modified in each level of scale defined the range from 3.50-5.00 = a high level and interpreted as "Sure to stay", 2.50-3.49 = a moderate level or "Not sure", and 1.00-2.49 = a low level or "Not stay" in order to make sure that all small cases can calculate for the levels of this scale.

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2) The second dimension**,** the Nurses' Intention to Stay Scale, was translated and adapted from the Intent to Stay Scale (ITSS) that was developed by Price and Mueller in 1986. Price (1977; Price & Mueller, 1986) developed an Intent to Stay Model based on Vroom's (1964) Expectancy theory. Vroom's theoretical model was supported by empirical evidence, was commonly accepted by scholars, and was influential in the development of other management theories of motivation. Price (1977; Price & Mueller, 1986) found that perceptions of an employee's current work

environment and perceptions of the external work environment explained intent to stay. So, this instrument was used to measure nurses' intention to stay in the current workplace. The scale consists of three items, which could be interpreted in both ways (intention to stay/leave). It was a standard five-point Likert scale to interpret the scores for which 1= strongly agree, 2 = agree, 3 = neutral, and 4 = Disagree; 5 = strongly disagree. The total score of this scale range from 3 to 15 by total sum score. And it was computing the mathematical mean across all items yielding a possible mean score range from 1 to 5 with higher mean scores indicating high the Intent to Stay Scale. The Cronbach's alpha of this instrument has ranged from .85 to .90 (Kim, Price, Mueller, & Watson, 1996; Price & Kim, 1993).

The total of three items was all negatively worded. Before analyzing data, the researcher recoded scores. The scoring and interpretation in each level of scale defined the range from 4.50-5.00 = the highest, 3.50-4.49 = high, 2.50-3.49 = fair, 1.50-2.49 = low, and 1.00-1.49 = lowest. The total score on a scale for a respondent was the mean of the scores on the individual items. This dimension of the Nurses' Intention to Stay Scale focuses on intention to stay in the current workplace. However, for data analysis, the Nurses' Intention to Stay Scale scoring and interpretation were modified in each level of scale defined the range from 3.50-5.00 = a high level and interpreted as "Sure to stay", 2.50-3.49 = moderate level or "Not sure", and 1.00-2.49 = low level or "Not stay" in order to make sure that all small cases can calculate for the levels of this scale.

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The Nurses' Intention to Stay Scale was translated from the original English version into the Thai language version. The instrument translation process was followed by Brislin's back-translation Model (Brislin, 1970, 1986). This translation

model is a well-known method for translating research instruments in cross-cultural environments (Truonga, 2019). This model is regarded as a reliable option for translating tools in international study and it is also appropriate for translating established questionnaires that have long been used in the source language (Cha, et al., 2007; Sousa & Rojjanasrirat, 2011; Squires, 2013). The translation involved four steps: 1) Forward translation, 2) Backward translation, 3) Comparison of the original and the backward-translated version of the inventory and, 4) An expert panel reviewed of the target language version for content validity.

According to process of scale translation, the researcher proceeds were as follows: First of all, the original instruments had to get permission from the authors. Then, the translation procedures would be employed from step1 Forward translation through step 4 expert panel reviewed. The instrument translation procedure was described as four steps:

Step1: Forward translation. The translation process was started with translating the original instrument, English language version, into Thai language versions. This step got the forward translated version1.

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Step2: Backward translation. Then, another independent translator had been undertaken back-translation of the document from version 1 to get the similarity of the meaning between the original version and the Thai language versions. This step got the backward translation version 2.

Step3: Comparison of the original and the backward-translated version of the Inventory. In this step, the backward-translated version (version 2: English language) was compared with the original (English language version) versions. In this step, the investigators compared both versions in the original language for accuracy by

checking with the translators to detect meaning errors and modify these items with apparent differences in translation included words and grammar, and formed a pre-final version. Finally, this instrument was modified by adding two opened-end questions to ask.

Step4: An expert panel reviewed the target language version for content validity. The five experts who worked in high positions in clinical and education in nursing areas to examine the content validity of the Thai version of the instrument while comparing it with the English version. Modifications would be made where needed. After this, the final of the Thai version was achieved, and translation validity had been established. A study for a try-out of the instrument was conducted with 100 participants to determine the clarity of the instruments. According to the feedback of the participants, further modifications were made. The instruments were acceptable and reflected the meaning of each item. Besides, with a process of back-translation, content validity and construct validity were tested.

4.4.2 The Management Factors Questionnaire

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The Management Factors Questionnaire was developed by Chutchawanchanchanakij (2017). This instrument was used to measure Managerial Factors influencing nurse retention in healthcare organizations under the Ministry of Public Health. The instrument was developed based on the literature review and in-depth interviews with the Ministry of Public Health administration, hospital administrators, nurses educators, nurses, and nurses who leave organizations. This instrument consisted of 55 items from six domains. The six domains of this instrument consist of:

1) Human capital, this domain consists of 11 items within three sub-domain: professional progress (3 items), skill development (4 items), and operational strategy (4 items).

2) Leadership (Transformational leadership) consists of 18 items within four sub-domain: idealist (4 items), inspiration motivation (5 items), stimulate intelligence (4 items), and respect to an individual (5 items).

3) Justice consists of 11 items within three sub-domain: compensation (4 items), equality in job assignment (4 items), and promotion (3 items).

4) Professional growth consists of 6 items within two sub-domain: plan to rise higher position (3 items) and personal development (3 items).

5) Work happiness consists of 6 items within two sub-domain: working atmosphere (3 items) and an appropriate workload (3 items).

6) The work-life balance consists of 3 items.

A total of 55 items of this version of the Management Factors Questionnaire (MFQ) which each item was rated along a 5- point Linkert scale. The answers were ranged from strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, and strongly disagree = 1. The Cronbach's alpha of this instrument was 0.966.

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This instrument was an adaptation by adjusting and rewriting some items scale to fit with the study's target population. Of the total of 55 items, there are 50 items that were positively worded, and five items were negatively worded. The Management Factors Questionnaire scoring and interpretation in each level of scale defined the range from 4.50-5.00 = the highest, 3.50-4.49 = high, 2.50-3.49 = fair, 1.50-2.49 = low, and 1.00-1.49 = lowest. The total scale could range from 5 to 25 by total sum score. And it was computing the mathematical mean across all items

yielding a possible mean score range from 1 to 5 with higher mean scores indicating high managerial characteristics. However, for data analysis, the Management Factors Questionnaire scoring and interpretation was modified in each level of scale defined the range from 3.50-5.00 = the high, 2.50-3.49 = moderate, 1.00-2.49 = low in order to make sure that all small cases can calculate for levels of this scale.

4.4.3 The Job Diagnostic Survey (JDS)

The Job Diagnostic Survey (JDS) was translated from the original English language to the Thai language by Boonmung (2009). The original instrument was developed by Hackmann and Oldham in 1976 and 1980 to measure job characteristics related to employee task conditions, which can produce positive outcomes on the part of employees. The JDS consists of 5 domains for measuring job characteristics that initiate three psychological states, which in turn give different attitudes and behaviors. The theory-based on this instrument also includes individual difference, as growth need strength, knowledge and skills, and contextual satisfaction as moderators of relationships between job characteristics and outcomes variables.

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Boonmung (2009) (Hackman & Oldham, 1976, 1980) created five job characteristics, Thai version consists of:

1) Skill variety (6 items)
2) Task identity (4 items)
3) Task significance (4 items)
4) Autonomy (6 items)
5) Job feedback (6 items)

Boonmung (2009) JDS Thai version consists of 26 items with each item were rated along a 5-point Likert scale, 5 = Highly agree, 4 = Agree, 3 = Quite agree, 2=

Not very agree, 1 = Very litter to agree. The total scale could range from 5 to 25 by total sum score. And it was computing the mathematical mean across all items yielding a possible mean score range from 1 to 5 with higher mean scores indicating high work characteristics. The reliability of this scale was presented by internal consistency, the Cronbach's alpha of this instrument was = 0.89.

This instrument was an adaptation by adjusting and rewriting some items scale to fit with the target population of this study after getting permission for adaptation of this instrument. A total of 26 items were positively worded. The JDS scoring and interpretation in each level of scale defined the range from 4.50-5.00 = the highest, 3.50-4.49 = high, 2.50-3.49 = fair, 1.50-2.49 = low, and 1.00-1.49 = lowest. However, for data analysis, the Job Diagnostic Survey Thai version scoring and interpretation were modified in each level of scale defined the range from 3.50-5.00 = the high, 2.50-3.49 = moderate, 1.00-2.49 = low in order to make sure that all small cases can calculate for levels of this scale.

4.4.4 Validity and Reliability Testing of Study Instruments

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The psychometric testing comprised the validity and reliability test on the four instruments of this study. According to those instruments were developed and testing with a good quality regarding acceptable Cronbach’s Alpha. Therefore, this section consisted of two steps: content validity and reliability.

1) Content validity

Content validity should be built into scale both through careful efforts to conceptualize the construct and through content validation procedures by a panel of experts, including calculation of a quantitative index such as the content validity index (CVI) to summarize the experts’ judgments of the relevance of scale

items (Polit & Beck, 2017). Therefore, after the final version of the translation instrument was accomplished, it was necessary to approve that the translated instruments attain relevance and represent the targeted construct for a specific assessment purpose. Thus, the content validity had been established from the content validity index (CVI) method. The CVI method was the most widely used to quantifying content validity for multi-item scales based on expert ratings of relevance. All elements of an assessment instrument were judged by various experts. This current study, the content validity, was established by a panel of five experts who specialize in the nursing administration area. These experts were chosen following established criteria and represented excellence in the nursing administrative field. The qualifications of the experts for validating the research instrument were included 1) One expert was the professional nurse who worked as a nurse administrator in governmental hospitals and highly experienced in the research area of nursing administration and graduated with at least a Master's degree in the nursing administrative field. 2) Two professional nurses with a Ph.D. in nursing and working in the Nursing Division with highly experienced in nursing workforce research conducting 3) Two nurse instructors with Ph.D. in the nursing administrative field and experienced in the research area of nursing administration.

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The experts were instructed to rate each scale item in terms of its relevance to the underlying construct as the definition of the concepts represented. The standard four-point CVI rating scale was used to evaluate the items for their content, construct, and conceptual relevance. This 4-point rating scale was the interval scale to get away from having a neutral and ambivalent midpoint, ranging from 1 (not relevant), 2 (somewhat relevant), 3 (quite relevant), 4 (highly relevant) (Polit & Beck, 2017).

Also, the experts were invited to suggest revised wordings for any items that seemed ambiguous, unclear, or inappropriate by using open suggestions. The instrument measure's content validity depended on the expert concurrence using the content validity index (CVI), calculated for category evaluation and item evaluation. The CVI was calculated based on the number of experts giving a rating of either 3 or 4, divided by the number of experts. Moreover, the experts were asked to clarify their reasons if they did not agree with any of the items. The author had gathered all suggestions from experts and revision the items for the final version of the study's instruments. In this study, the CVI was calculated regarding the Management Factors Questionnaire (Chutchawanchanchanakij, 2017; the Job Diagnostic Survey (Boonmung, 2009), the Nurses' Intention to Stay Scale (McCloskey, 1990; Price & Mueller, 1986), the CVI were .873, 1.00 and 1.00 respectively. The scoring and explanation of the content validity of instruments are as follows:

(1) Nurses Characteristic and Demographic Data Form

Nurses Characteristics and Demographic Data Form consisted of twelve initiative questions; after reviewing through the content validation process, five questions were revised to clarify and add up two more questions. Finally, there were fourteen questions as a total.

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(2) The Management Factors Questionnaire

The Management Factors Questionnaire (MFQ), the original questionnaire, consists of 55 items. After the author was adapting the instrument by revising the statement of the items, this instrument was tested content validity by five experts. Following the review by the experts, one item was deleted was item 39 "The nursing department has promoted nursing staff promotion equally throughout the

organization. (S-CVI=.60)" because this item was redundant with another item statement (Item 36). Then, the new item (Item 37), "Your unit manager/supervisor allows you to ask questions on the assignment to confirm your understanding," was created to relevant to the construct. The content validity index (CVI) and the scale's content validity index (S-CVI) were calculated on the scales of .873 and 0.923, respectively.

(3) The Job Diagnostic Survey

The Job Diagnostic Survey (JDS) consists of 26 items. This instrument was adapted similarly to the Management Factors Questionnaire, as has been explained above. The content validity index (CVI) and the scale's content validity index (S-CVI) were calculated with the value of the instrument was 1.00 and 1.00, respectively.

(4) The Nurses' Intention to Stay Scale

This instrument was translated from the original (English language version) to the Thai version by the back-translation method, as explained previously. The instrument was adapted by revised the wording and adding two opened-end questions. The scale's content validity index (S-CVI) was 1.00 as well as CVI was 1.00.

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2) Reliability

The instrument reliability is crucial in indicating the repeatable and consistent instrument (Ferketich, 1990). The present study focused on internal consistency, a significant criterion for assessing its quality and adequacy. It described estimates of reliability based on the average correlation among items within a test (Nunnally & Bernstein, 1994). The internal consistency was tested by Coefficient

alpha (Cronbach's alpha). This reliability index estimated the internal consistency or homogeneity of a measure composed of several items or subparts (Shadish et al., 2002). Cronbach's alpha coefficient must be above the 0.70 standards required for a newly developed instrument, while Cronbach's alpha coefficient must be above the 0.80 standards required for an existing instrument (Nunnally & Bernstein, 1994). For this study, the samples used for try-out were 100 nurses working at Samutprakarn hospital, a regional hospital, for at least one year before collecting data. The Cronbach's alpha coefficient of each instrument is displayed in Table 1.

Table 1 Cronbach's alpha of study instruments

Study instruments	Cronbach's alpha	
	Try-out group (n=100)	**Study group** (n=1,524)
Management Factors Questionnaire	**.980**	**.978**
Human capital	.964	.961
Leadership	.983	.959
Justice	.969	.954
Professional growth	.964	.953
Work happiness	.813	.825
Work-life-balance	.767	.734
Job Diagnostic Survey	**.965**	**.966**
Skill variety	.964	.943
Identity	.871	.915
Significance	.889	.913
Autonomy	.931	.918
Feedback	.843	.948

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4.5 Data collection procedure

The following section describes procedures of data collection for this study was presented as these follows:

4.5.1 Prior to data collection, this study was approved by the Ethics Review Committee for Involving Human Research Subjects, Health Science Group, Chulalongkorn University (COA No.180/2563) and approved by IRB of the settings. The letters asking for permission to collect data from the faculty of Nursing,

Chulalongkorn University, were sent to responsible are related offers of the target population.

4.5.1 After approval from the Ethics Review Committee for Involving Human Research Subjects, Health Science Group, Chulalongkorn University, a letter requesting for collecting data was sent from the Faculty of Nursing, Chulalongkorn University to the hospital for official approval before starting data collection.

For community hospitals and some general hospitals, a letter requesting for collecting data was sent from the Faculty of Nursing, Chulalongkorn University to the Provincial Public Health Offices for official approval before starting data collection in the hospitals under supervision as the examples of the letter asking permission to perform the data collection as appeared in appendix C.

4.5.2 After the letter of approval was received from responsible and related officers, and the researcher made personal contact with the Chief Nurse Officer (CNO) or research coordinator in each setting to inform them about this study and the data collection procedure.

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4.5.3 The CNO or research coordinator of each hospital distributed a survey package to the sample recruited from nurses who worked at each inpatient unit on the collecting data. The survey packages included participant information sheets, informed consent, and QR Code to access the electronic questionnaires. Then, the sample who met the inclusion criteria received the written information that described the purpose, the content, benefit, and risk of the study. Moreover, the information of a questionnaire package that consisted of the four parts of questionnaires: 1) the demographics and socioeconomic data form consisted of fourteen questions, 2) The Management Factors Question consisted of 55 items, 3) The Job Diagnostic Survey

consisted of 26 items, and the Nurses' Intention to Stay Scale consisted of 10 questions. A total of 105 questions could be asked. Simultaneously, the head nurse/research assistant described verbally to the participant with the same information content.

4.5.5 Participation in the study was voluntary, and those who agreed to give informed consent were eligible to participate in this study. The head nurse/research assistant would then provide the electronic scanning form for data entry (QR Code) of the electronic questionnaires to the participant for scanning to open access without using the email address and complete the electronic questionnaires. A total of 1,725 e-questionnaires were distributed to the target population, and 1,530 participants entered e-questionnaires. After the researcher examined and selected only completed questionnaires and deleted outliers, the questionnaires used for analysis were 1,524.

4.5.6 After completed the electronic questionnaire anonymously, the head nurse/ research coordinator would collect the written signed informed consent and put it in the stamped addressed envelope, then sealed the envelope, lastly, return it to the researcher. A souvenir (a pen) was given to all participants for their time contribution after completed the questionnaire.

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4.5.7 Finally, each electronic questionnaire was assigned a numerical code to maintain confidentiality. Moreover, the reminder letter/telephone call was done two weeks after the questionnaire's mailed package.

4.6 Protection of human subjects

The Ethics Review Committee has approved the proposal for Involving public hospitals would give human Research Subjects, Health Science Group,

Chulalongkorn University, and permission for collecting data under the Ministry of Public Health in Thailand. In the term of confidentially, all acquired in this study should be held confidential.

Participation in this study was voluntary and based on the registered nurses' (RN) ability to give informed consent, and RNs invited to participate. The participants have explained the purpose of the study, benefits, risks, the types of electronic questionnaires and tasks to be completed, and the length of time to complete the questionnaires. The potential risks to participants were minimal, such as emotional discomforts when answering some questions. Participants were encouraged that if they felt discomfort, they would discuss the importance of the question with the researcher and refused to answer any question. Their names were not addressed in the data; a code number was used to ensure confidentiality. There was no harm to participants in this study, and it would take approximately 45-60 minutes to complete a packet of the electronic questionnaires. The participant has accessed the electronic questionnaires by scanning the QR code without using an email address. Also, the participant could access only one time to complete the questionnaires. The electronic questionnaires were created with the limitations of accessing the public to protect the participant's rights. The username of participants was not appeared to belong to the score. After completing the electronic questionnaire, data were computerized and accessible only by the researcher. The results of the study would report as a whole picture. Any personal information was not appearing in the report. All master lists containing names were locked up for storage and destroyed upon the completion of the study.

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4.7 Data analysis

After getting data from samples via Excel format, the researcher transformed it into SPSS format and then cleaned data by deleting each sample's redundant answer. Before analyzing inferential statistics, the researcher used descriptive analysis to test for the normality of the data. When data were normal distribution, the researcher analyzed data by inferential statistics for the study findings.

4.7.1 Descriptive statistics (means, standard deviations, and frequency distribution) were used to describe the questionnaires' sample and results.

4.7.2 Cross tabulation was used for grouping variables before analyzing means difference of study variables and maps out relations between categorical variables; researchers could gain better and more in-depth insights

4.7.3 Inferential statistics, including Independent-Sample t-tests and One-way ANOVA, were used to compare means of intention to stay among subgroups of study variables. Before data analysis, assumptions of one-way ANOVA were tested. Levene' test was performed to test the homogeneity of variances. If it was non-significant, Fisher's Least Significant Difference (LSD) Post Hoc test was used to compare the means among groups. However, Games–Howell post hoc tests were used to perform testing the assumption of homogeneity of variances, suppose the result has been violated because its significance was considerably smaller than the criterion of .05. In these situations, the author has to correct this problem, and it can either transform the data or choose the Game-Howell.

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According to the variables of management characteristics and job characteristics, the interpretation of the means scores was set as five levels, including the highest, high, medium, low, and lowest. When the researcher used those five groups to compare the average means of intention to stay, the researcher found that the number of samples in the highest and lowest samples were 0-5 samples that were not appropriately analyzed means comparison. Thus, the researcher decided to divide into only three groups: high, moderate, and low, for comparing the means among these three groups using One-Way ANOVA.

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CHAPTER IV

RESULTS

This chapter reports the findings of the study. The results illustrated 1) Nurses' characteristics and demographic data of the participants, 2) Intention to stay including intention to stay in the profession (ITSP) and the current workplace (ITSW) as perceived by nurses, and 3) comparison of intention to stay of nurses in both ITSP and ITSW among nurses having different personal demographic characteristics or personal factors, perceptions of managerial characteristics, job characteristics and hospital settings.

1. Demographic characteristics of the participants

A total of 1524 from 1,725 electronic questionnaires (88.7%) were determined to be used for data analysis. Of the 1,524 participants, 277 (18.2%) RNs employed in regional hospitals (A), 149, 9.8% RNs employed in general hospitals (S), 119 (7.8%) RNs employed in a small-size general hospital (M1), 402 (26.4%) RNs employed in referral community (M2), 303 (19.9%) RNs employed in large-size community hospitals (F1), and 274 (18.0%) RNs employed in a medium-sized community hospital (F2), respectively.

The demographic characteristics of the participants in this study were exhibited in Table 2 as follows.

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Table 2 Demographic characteristics of the study samples (n=1,524)

Types of Characteristic	n	%	Types of Characteristic	n	%
Sex			**Income**		
Male	24	1.6	≤ 20,000 B	288	18.9
Female	1500	98.4	20,001 -30,000 B	583	38.3
Marital status			30,001 -40,000 B	342	22.4
Single	762	50.00	40,001– 50,000 B	182	11.9
Married	682	44.80	> 50,000 B	129	8.5
Widow/ Divorce/ Separate	80	5.20			
Educational level			**Nursing position**		
Bachelor's degree	1445	94.81	Staff nurse	840	55.1
Master's degree	78	5.12	Professional	676	44.4
Doctoral degree	1	0.07	Senior professional	8	.5
Working experience			**Working unit**		
1-5 years	515	33.8	Medical unit	604	39.6
6-10 years	285	18.5	Surgical unit	117	7.7
11-15 years	197	12.9	Ob-Gyn unit	202	13.3
16-20 years	209	13.7	ICU	125	8.2
21-25 years	135	8.9	OR/Anesthesia	113	7.4
> 25 years	186	12.2	Special unit	104	6.8
Employed status			General unit	259	17.0
Civil servant	1261	82.7	**Hometown**		
Not civil servant	263	17.3	Same area	1347	88.4
Hospital level			Nearby hospital	64	4.2
Level A	277	18.2	Out of area	113	7.4
Level S	149	9.8	**Generation**		
Level M1	119	7.8	Baby bloom (≥56-year-old)	53	3.5
Level M2	402	26.4	Gen X (44-55 year-old)	308	20.2
Level F1	303	19.9	Gen Y (43-29 year-old)	904	59.3
Level F2	274	18.0	Gen Z (≤28 year-old)	259	17.0

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Table 2 illustrated the nurse participants' demographic characteristics that most participants were female (n=1,500, 98.40%). The majority of the participants had the marital status was nearly equal between single (n=762, 50.00%) and married (n=682, 44.80%), widow/divorce/separate (n=80, 5.20%). Most participants graduated in bachelor's degree (n= 1445, 94.81%). Almost Thirty-four percent of participants have work experience less than six years (n=515). The civil servant was the majority of their employed status (n=1,261, 82.70%). Most participants had income between

20,001-30,000 baht (n=583,38.3%). The majority of participants was staff nurse (n=840, 55.10%). Almost forty percent of the participants were worked in the Medical unit (n=604, 39.6%). The majority stay in the same area of their workplace. The majority was Generation Y (n=904, 59.3%).

2. Intention to stay

This part examined the level of intention to stay in the profession and intention to stay in the current workplace of nurses by using descriptive statistics including percentage, means, and standard deviations as displayed in Table 3 - 8

Table 3: The number and percentage of intention to stay in the profession of the sample surveyed classify by the item (n = 1,524)

Factors	5	4	3	2	1	Level
	%(n)	%(n)	%(n)	%(n)	%(n)	
1. Nurse plan to keep this job for at least two or three years	16.3 (248)	15.4 (234)	27.3 (416)	26.4 (402)	14.7 (224)	Fair
2. Even if this job does not meet all their expectations, nurses will not quit	19.2 (293)	34.9 (532)	30.7 (468)	10.2 (156)	4.9 (75)	High
3. Nurses will probably spend the rest of their careers in this job	14.9 (229)	32.2 (490)	36.9 (563)	11.6 (177)	4.4 (6.7)	Fair
4. Nurses plan to work at their present job as long as possible	21.6 (329)	39.1 (596)	29.3 (446)	7.0 (107)	3.0 (46)	High
5. nurses would not leave their present jobs	20.3 (309)	24.4 (372)	32.0 (488)	17.2 (262)	6.1 (93)	Fair

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Table 3 revealed the intention to stay in the profession descriptive analysis at all hospital levels. The study showed that nurses planned to keep this job for at least two or three years at a moderate level (n=416, 27.3%). Then, nurses wanted to stay at the job at a high level (n=532, 34.9%). Also, nurses perceived that they would probably spend the rest of their careers in this job at a moderate level (n=563, 36.9%). Moreover, nurses planned to work at their present job as long as possible at a high

level (n=596, 39.1%). Finally, nurses would not leave the present job at a moderate level (n=488, 32%).

Table 4: The number and percentage of intention to stay in the current workplace of the sample surveyed classify by the item (n = 1,524)

Factors	5	4	3	2	1	Level
	%(n)	%(n)	%(n)	%(n)	%(n)	
1. Nurse expected to stay in the hospital within the next year.	43.6 (665)	25.3 (386)	19.7 (300)	8.8 (134)	2.6 (39)	5
2. Nurse would not like to work somewhere other than this hospital	32.4 (494)	28.3 (432)	24.0 (365)	11.0 (168)	4.3 (65)	5
3. Nurse would like to stay in this hospital.	41.5 (632)	25.1 (382)	21.5 (327)	8.7 (133)	3.3 (50)	5

Table 4 illustrated nurses expected to stay in the hospital within the next year at a high level (n=665, 43.6%). Also, nurses' opinioned would not like to work somewhere other than this hospital at a high level (n=494 32.4%). Moreover, nurses would like to stay in this hospital at a high level (n=632, 41.5%).

Table 5: The mean scores of total intention to stay in the profession and the profession scale (n=1,524)

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Variable	**n**	**Mean**	**SD**	**Minimum**	**Maximum**
ITSP	1524	3.3648	.72256	1.00	5.00
ITSW	1524	3.8937	1.05924	1.00	5.00

Table 5 showed nurses' perceived intention to stay in the profession overall at a moderate level (Mean=3.364, SD=0.722). Moreover, nurses perceived intention to stay in the current workplace at a high level (Mean=3.894, SD= 1.0592).

Table 6: The number and percentage of intention to stay in the profession and the current workplace scores (n=1,524)

Level of ITS	Intention to stay in profession		Intention to stay in workplace	
	N	%	N	%
Highest	95	6.2	**557**	**36.5**
High	479	31.4	444	29.1
Moderate	**850**	**55.4**	356	23.4
Low	87	5.7	138	9.1
Lowest	13	0.9	29	1.9

Table 6 displayed intention to stay in the profession and intention to stay in the current workplace scores of five levels rank from the highest to the lowest. The results showed nurses' perceived intention to stay in the profession at a moderate level (n=850, 55.4%). And nurses perceived intention to stay in the current workplace at a highest level (n=557, 36.5%).

3. Comparison Intention to Stay in the Profession and the Current Workplace were Classified by Hospital Levels

3.1 Comparison intention to stay in the profession and the workplace classified by hospital level.

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The comparison of intention to stay in the profession and the current workplace were classified by the hospital levels. The details described in Table 7 and 8, respectively.

Table 7: Intention to stay in the profession classified by the hospital levels

Hospital level	**Level A**	**Level S**	**Level M1**	**Level M2**	**Level F1**	**Level F2**
ITS level	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Highest	16(5.8)	9(6.0)	9(6.0)	26 (6.5)	20(6.6)	19(6.9)
High	93(33.6)	51(34.2)	51(34.2)	121(30.1)	86(28.4)	94(34.3)
Moderate	152(54.9)	83(55.7)	73 (61.3)	227(56.5)	169(55.8)	146(53.3)
Low	15(5.4)	5(3.4)	7(5.9)	24(6.0)	24(7.9)	12(4.4)
Lowest	1(0.5)	1(0.7)	0(0)	4(1.0)	4(1.4)	3(1.1)

Table 7, the results showed that nurses perceived intention to stay in the profession at the highest level at hospital level F2 (n=19,6.9%), a high level also at hospital level F2 (n=94, 34.3%), a moderate level at hospital M1 (n=3, 61.3%), a low level at hospital F1(n=24,7.9%), and the lowest level at hospital F1 (n=4, 1.4%), respectively.

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Table 8 : Intention to stay in the current workplace classified by the hospital levels

Hospital level	**Level A**	**Level S**	**Level M1**	**Level M2**	**Level F1**	**Level F2**
ITS level	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Highest	103(37.2)	63(42.8)	35(29.4)	140(34.8)	109(36.0)	107(39.1)
High	68(24.5)	38(25.5)	41(34.5)	113(28.1)	92(30.4)	92(33.6)
Moderate	68(24.5)	27(18.1)	23(19.3)	100(24.9)	86(28.4)	52(19.0)
Low	30(10.8)	18(12.1)	16(13.4)	41(10.2)	14(4.6)	19(6.9)
Lowest	8(2.9)	3(2.0)	4(3.4)	8(2.0)	2(0.7)	4(1.5)
Total	277(100)	149(100)	119(100)	402(100)	303(100)	274(100)

Table 8 revealed nurses' intention to stay in the current workplace descriptive analysis at the hospital levels from the hospital level A through the hospital level F2, respectively. The results showed that nurses perceived intention to stay in the current workplace at the highest level at hospital level S (n=63,42.8%), a high level at hospital level M1 (n=41, 34.5%), a moderate level at hospital F1 (n=86, 28.4%), a low level at hospital M1(n=16,13.4%), and the lowest level at also hospital M1 (n=4, 3.4%), respectively.

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Moreover, according to the qualitative data from asking participants about the reasons to stay in the profession and the current workplace, these data were grouped as showed in Table 9 and 10 as follows.

4. Reasons for intention to stay in the profession and the current workplace

Table 9: Frequency and percentage of reasons for the intention to stay in the profession

No.	Reasons	Frequency	Percent
1	Job security	428	28.10
2	Having income for family expenditures	315	20.70
3	Love to be a nurse	208	13.60
4	Getting a career after graduation	133	8.70
5	Job value	129	8.50
6	Work for paying off debt	44	2.90
7	Want to be a civil servant	39	2.60
8	Cannot find other jobs	38	2.50
9	Waiting for official retirement	33	2.20
10	Be able to work in the hospital near home	21	1.40
11	Happiness	17	1.10
12	use benefits / medical costs	14	.90
13	working with a scholarship after graduation	11	.70
14	Professional advancement	9	.60
15	Family request	3	.20
16	No answer	68	4.50
	Sub Total	1510	99.10
	Missing	14	.90
Grand Total		**1524**	**100**

Table 9 illustrated the top five reasons of intention to stay in the profession were job security (28.10%), having income for family expenditures (20.70%), Love to be a nurse (13.60%), getting a career after graduation (8.70%) and job value (8.50%), respectively.

Table 10: Frequency and percentage of the reasons for the intention to stay in the current workplace

No.	Reasons	Frequency	Percent
1	Being able to work in a hospital near home	947	62.10
2	Working contract under study scholarship	278	18.20
3	Getting a position of civil servant here	93	6.10
4	Being with family	70	4.60
5	Like to work at a big hospital	29	1.90
6	Gaining new experiences	23	1.50
7	Job security	21	1.40
8	Being recommended by someone	14	.90
9	Used to training here	3	.20
10	Like to work at a small hospital	2	.10
11	Working with a good team	1	.10
12	No answer	38	2.50
Total		**1524**	**100**

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Table 10 revealed the top five reasons of intention to stay in the current workplace were Being able to work in a hospital near home (62.10%), Working contract understudy for a scholarship (18.20%), Getting a position of a civil servant in the current workplace (6.10%), being with the family (4.60%), and Like to work at a big hospital (1.90%), respectively.

Table 11: The number and percentage of intention to stay in the current workplace classified by nurse characteristics (n=1,524)

Variables	Total n	Level of intention to stay in the current workplace					
		Sure to stay		Not sure		Not stay	
		n	%	n	%	n	%
Total	1524	1001	**65.70**	356	23.40	167	11.00
Sex							
Male	24	13	**54.17**	7	29.17	4	16.66
Female	1500	988	**65.87**	349	23.27	163	10.86
Education level							
Bachelor's degree	1445	535	37.02	814	**56.33**	96	6.64
Higher than BS	79	39	**49.37**	36	45.57	4	5.06
Employed status							
Civil servant	1261	826	**65.50**	303	24.03	132	10.47
Not civil servant	263	175	**66.54**	53	20.15	35	13.31
Generation							
Baby boomer	53	42	**79.24**	4	7.55	7	13.21
Gen X	308	207	**67.21**	67	21.75	34	11.04
Gen Y	904	590	**65.26**	225	24.89	89	9.85
Gen Z	259	162	**62.54**	60	23.17	37	14.29
Marital status							
Single	762	490	**64.30**	176	23.10	96	12.60
Married	682	446	**65.40**	166	24.30	70	10.26
Divorce/Separate	80	59	**73.75**	15	18.75	6	7.50
Working experience							
1-5 years	515	332	**64.47**	118	36.51	65	12.62
6-10 years	285	175	**61.40**	75	26.32	32	18.28
11-15 years	197	141	**71.58**	40	20.30	16	08.12
16-20 years	209	142	**68.93**	55	26.44	12	5.73
21-25 years	135	80	**59.26**	40	29.63	15	11.11
> 25 years	186	131	**70.43**	28	15.05	27	14.52
Nursing unit							
Medical unit	604	373	**61.75**	150	24.84	81	13.41
Surgical unit	117	76	**64.96**	32	27.35	9	7.69
Ob-Gyn unit	202	142	**70.30**	40	19.80	20	9.90
ICU	113	69	**61.06**	29	25.67	15	13.27
OR/Anes	125	81	**64.80**	29	23.20	15	12.00
Special unit	104	71	**68.27**	19	18.27	14	13.46
General unit	259	185	**1.44**	57	22.01	17	6.56

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Variables	Total n	Level of intention to stay in the current workplace					
		Sure to stay		Not sure		Not stay	
		n	%	n	%	n	%
Nursing position							
Practitioner	840	535	**63.69**	202	24.05	103	12.26
Professional	676	458	**67.75**	154	22.78	64	9.47
Senior professional	8	8	**100.00**	0	0	0	0
Income							
≤ 20,000 B	288	177	**61.46**	69	23.96	42	14.58
20,001 -30,000 B	583	367	**62.95**	152	26.07	64	10.98
30,001 -40,000 B	342	235	**68.72**	80	23.39	27	7.89
40,001– 50,000 B	182	130	**71.43**	36	19.78	16	8.79
> 50,000 B	129	92	**71.31**	19	14.73	18	13.95
Hometown							
Same area	1347	900	**66.82**	309	22.94	138	10.24
Nearby hospital	64	38	**59.37**	13	20.32	13	20.31
Out of area	113	63	**55.75**	34	30.09	16	14.16
Hospital levels							
Level A	227	171	**61.70**	68	24.50	38	13.70
Level S	149	101	**67.80**	27	18.10	21	14.10
Level M1	119	76	**63.90**	23	19.30	20	16.80
Level M2	402	253	**62.90**	100	24.90	49	12.20
Level F1	303	201	**66.30**	86	28.40	16	5.30
Level F2	274	199	**72.60**	52	19.00	23	8.40

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The majority of nurses with any nurse characteristics reported that they perceived intend to stay in the current workplace with a high level, except nurses with bachelor's degrees (56.33%) reported that they would not be sure to intend to stay in the current workplace.

The top three nurses' groups sure to stay in the current workplace were nurses holding the position of senior professional (100%), Baby boomer generation (79.24%), having the marital status of divorce/separate (73.75%), and nurses working in the F2 hospital level (72.60%), respectively.

5. Comparison of the mean differences of intention to stay in the profession and intention to stay in the current workplace

Using an alpha level of .05, a one-way ANOVA conducted to investigate whether the mean of intention to stay on ITSP and ITSW among subgroups of generation, marital status, working experience, nursing position, income, working unit, and hometown differed significantly or not. The findings are as follows:

5.1 comparison the mean differences of ITSP and ITSW classified by nurse characteristics

Table12: Comparison means of intention to stay among subgroups of nurse characteristics by using t-test

Factors (n=1524)		**ITS in profession**				**ITS in current workplace**			
	n	Mean	SD	t-test	*p*	Mean	SD	t-test	*p*
Sex				**-.06**	**.95**			**-.71**	**.48**
1.Male	24	3.38	.54			3.74	1.10		
2.Female	1500	3.38	.68			3.90	1.02		
Education level				**-1.79**	**.075**			**-.98**	**.33**
1.Bachelor's degree	1145	3.38	.67			3.87	1.02		
2.Higher than BS	79	3.52	1.02			4.08	1.09		
Employed status				**-.61**	**.54**			**-.46**	**.64**
1.Civil servant	1261	3.39	.70			3.88	1.02		
2.Not civil servant	263	3.36	.59			3.91	1.06		

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Table 12 showed that there was no significant mean difference of intention to stay in the profession among subgroups of sex, educational level, and employed status. It indicated that nurses of different sex, education level, and employed status perceived intention to stay in the profession and the workplace in the same direction.

Table 13: Comparison mean of intention to stay among subgroups of each study Variables by using F-test

Factors (n =1524)		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**F-test**	***p***	**Mean**	**SD**	**F-test**	***p***
Generation				1.53	.21			1.28	.28
1.Baby boomer	53	3.53	0.51			4.09	1.06		
2.Gen X	309	3.41	0.82			3.90	1.04		
3.Gen Y	635	3.38	0.67			3.89	1.00		
4.Gen Z	533	3.33	0.57			3.80	1.10		
Marital status				**6.83**	**.001**			**.87**	**.42**
1. Single	762	3.33	0.63		**3>1**	3.87	1.05		
2. Married	682	3.43	0.72		**2>1**	3.88	1.01		
3. Divorce/Separate	80	3.56	0.70			4.03	0.91		
Working experience				**5.34***	**<.001**			**2.15**	**.057**
1. 1-5 years	515	3.32	0.56		**3>1**	3.86	1.05		
2. 6-10 years	285	3.33	0.70		**3>2**	3.83	1.04		
3. 11-15 years	197	3.51	0.68		**3>5**	3.98	0.94		
4. 16-20 years	209	3.49	0.73			4.00	0.91		
5 21-25 years	135	3.26	0.81			3.70	1.01		
6. > 25 years	186	3.48	0.74			3.96	1.13		
Nursing position				**7.919**	**<.001**			4.156	**.016**
1. Practitioner	840	3.34	0.63		**2>1**	3.84	1.04		**3>1**
2. Professional	676	3.43	0.74		**3>1**	3.93	1.01		**3>2**
3. Senior profession	8	4.08	0.63			4.71	0.49		
Income				**4.60**	**.001**			**2.76**	**.049**
1. ≤ 20,000 B	288	3.26	0.52		**3>1**	3.75	1.04		**3>1**
2. 20,001 -30,000 B	583	3.37	0.53		**5>1**	3.87	1.02		**4>1**
3. 30,001 -40,000 B	342	3.43	0.73			3.94	1.02		**5>1**
4.40,001– 50,000 B	182	3.44	0.78			3.96	0.97		
5.> 50,000 B	129	3.53	0.81			4.02	1.07		
Working unit				**1.231**	**.287**			**2.849**	**.009**
1. Medical unit	604	3.36	0.65			3.78	1.04		**3>1**
2. Surgical unit	117	3.32	0.61			3.85	0.99		**7>1**
3. Ob-Gyn unit	202	3.39	0.70			3.98	1.02		
4. ICU	125	3.44	0.61			3.89	0.96		
5. OR/Anesthesia	113	3.32	0.81			3.84	1.13		
6. Special unit	104	3.48	0.65			3.96	1.08		
7. General unit	259	3.44	0.74			4.06	0.95		
Home town				**1.301**	**.273**			**4.990**	**.007**
1.Same area	1347	3.39	0.68			3.91	1.00		**1>3**
2.Nearby hospital	64	3.41	0.67			3.72	1.17		
3.Out of area	113	3.28	0.70			3.63	1.16		

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Table 13 showed the comparison of the mean score of intention to stay among subgroups of each study variables by using F-test as describe below:

a. 1 The findings of intention to stay in the profession (ITSP) are as follows:

1) The mean score of ITSP between males and females was **not significantly different**.

2) The means score of ITSP of marital status groups, including single, married, and divorce /separate, was different at a significant level of .05. The post hoc test results revealed that the married group (Mean = 3.43, SD = 0.72) and divorce/separate group (Mean = 3.56, SD = 0.70) have higher mean score than single group, (Mean = 3.33, SD = 0.63) at significant level of .05.

3) The mean score of ITSP among working experience groups was **different** at a significant level of .05. The post hoc test results revealed that the group of working experience with 11-15 years (Mean = 3.51, SD = 0.68) has higher mean score than group of working experience with 1-5 years (Mean = 3.32, SD = 0.56), 6-10 years (Mean = 3.33, SD = 0.70), and 21-25 years (Mean = 3.26, SD = 0.81) at the significant level of .05.

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4) The mean score of ITSP among nursing positions was different at a significant level of .05. The post hoc test results revealed that the nursing position with senior professionals (Mean = 4.08, SD = 0.63) has a higher mean score than the nursing position with the staff nurse (Mean = 3.34, SD = 0.63) at the significant level of .05. In addition, the group of nursing position with professional (Mean = 3.43, SD = 0.74) has a higher mean score than group of nursing position with staff nurse (Mean = 3.34, SD = 0.63) at the significant level of .05.

5) The means score of ITSP among groups of income were significantly **different** at a significant level of .05. The post hoc test results revealed that the group of income with 30,001-40,000 baht (Mean = 3.43, SD = 0.73) and with greater than 50,000 baht (Mean = 3.53, SD = 0.81) have a higher mean score than group of income with less than 20,000 baht (Mean = 3.26, SD = 0.52) at the significant level of .05.

6) The means score of ITSP among working units was **not significantly different**.

7) The means score of ITSP among hometown locations were **not significantly different**.

3.1.2 The findings of intention to stay in the current workplace (ITSW) as were follows:

1) The means score of ITSW between males and females was **not significantly different**.

2) The means score of ITSW among groups of marital status were **not significantly different**

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3)The means score of ITSW among groups of working experience was **not significantly different.**

4) The means score of ITSW among nursing positions was **significantly different** at a significant level of .05. The post hoc test results revealed that the group of nursing position with senior professional (Mean = 4.71, SD = 0.49) has a higher means score than groups of nursing position with staff nurse (Mean = 3.84, SD = 1.04) and with professional (Mean = 3.93, SD = 1.01) at the significant level of .05

5) The means score of ITSW among groups of income were **significantly different** at significant level of .05. The post hoc test results revealed that the group of income with 30,001-40,000 baht (Mean = 3.94, SD = 1.02), 40,001-50,000 baht (Mean = 3.96, SD = 0.97) and greater than 50,000 baht (Mean = 4.02, SD = 1.07) have a higher mean score than group of income with less than 20,000 baht (Mean = 3.75, SD = 1.04) at the significant level of .05.

6) The means score of ITSW among working units was **significantly different**. The post hoc test results revealed that nurses working at Ob-Gyn unit (Mean = 3.98, SD = 1.02) and general unit (Mean = 4.06, SD = .95) have a higher mean score than nurses working at medical unit (Mean = 3.78, SD = 1.04) at the significant level of .05.

7) The means score of ITSW among hometown locations was **significantly different**. The post hoc test results revealed that nurses living in the same hospital area (Mean = 3.91, SD = 1.00) have a higher mean than nurses living out of the area where the hospital is located (Mean = 3.63, SD = 1.16) at a significant level of .05.

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5.2 Compare the mean differences of ITSP and ITSW classified by managerial characteristics

Using an alpha level of .05, a one-way ANOVA conducted to investigate whether the mean of intention to stay on ITSP and ITSW among subgroups of managerial characteristics.

Table 14: Comparison of intention to stay classified by managerial characteristics (n =1,524)

Factors		ITS in profession				ITS in current workplace			
	n	Mean	SD	F-test	*p*	Mean	SD	F-test	*p*
Managerial characteristics				58.27	<.001			24.32	<.001
1.Low	34	2.77	.88		3>1	3.42	1.00		3>1
2. Moderate	620	3.19	.67		2>1	3.67	.97		2>1
3. High	853	3.52	.64		3>2	4.02	1.03		3>2
Human capital				51.71	<.001			13.90	<.001
1.Low	56	2.84	.78		3>1	3.61	1.05		3>1
2.Moderate	523	3.22	.67		2>1	3.72	.96		3>2
3. High	945	3.51	.64		3>2	3.99	1.05		
Leadership				37.42	<.001			23.76	<.001
1.Low	80	3.10	.89		3>1	3.51	1.09		3>1
2.Moderate	383	3.17	.66		3>2	3.64	.96		3>2
3. High	1061	3.48	.64			4.00	1.02		
Justice				**41.79**	**<.001**			**18.18**	**<.001**
1.Low	69	2.97	.87		3>1	3.54	1.11		3>1
2.Moderate	517	3.22	.67		3>2	3.70	.95		3>2
3. High	938	3.50	.64			4.00	1.04		
Professional growth				**58.61**	**<.001**			**19.63**	**<.001**
1.Low	57	2.86	.90		3>1	2.85	.70		3>1
2.Moderate	501	3.20	.64		2>1	3.19	.64		3>2
3. High	966	3.51	.65		3>2	3.51	.65		
Work happiness				**75.28**	**<.001**		**73.54**		**<.001**
1.Low	21	2.41	.72		3>1	3.16	.98		3>1
2.Moderate	1031	3.30	.61		2>1	3.71	1.05		2>1
3. High	472	3.60	.75		3>2	4.30	.83		3>2
Work-life balance				**55.84**	**<.001**			**63.38**	**<.001**
1.Low	186	3.25	.79		3>1	3.65	1.18		3>1
2.Moderate	987	3.29	.60		3>2	3.74	1.00		3>2
3. High	351	3.71	.73			4.40	.81		

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5.2.1 The findings of comparison of mean of ITSP

The meana score of ITSP among subgroups of overall managerial characteristics was significantly different at the level of .05. The post hoc test showed that nurses who perceived moderate and high managerial characteristics have a higher mean than nurses who perceived low managerial characteristics. In addition, nurses

who perceived high managerial characteristics have a higher mean score than nurses who perceived moderate managerial characteristics.

Look at the subscales of managerial characteristics, and the findings showed that nurses who perceived high and moderate human capital, professional growth, and work happiness have a higher mean score than nurses who perceived low human capital, professional growth, and work happiness at the significant level of .05. Moreover, nurses who perceived high human capital, professional growth, and work happiness have a higher mean score than nurses who perceived a moderate human capital, professional growth, and work happiness at the significant level of .05

Nurses who perceived high leadership, justice, and work-life balance have a higher mean than nurses who perceived low leadership, justice, and work-life balance at a significant level of .05

5.2.2 The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived moderate and high managerial characteristics have a higher mean than nurses who perceived low managerial characteristics. In addition, nurses who perceived high managerial characteristics have a higher mean than nurses who perceived moderate managerial characteristics.

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When considering the subscales of managerial characteristics, the findings showed that nurses who perceived high and moderate human capital, professional growth, and work happiness have higher mean than nurses who perceived low human capital, professional growth, and work happiness at the significant level of .05. Moreover, nurses who perceived high human capital,

professional growth, and work happiness have a higher mean than nurses who perceived moderate human capital, professional growth, and worked happiness at a significant level of .05.

Nurses who perceived high leadership, justice, and work-life balance have a higher mean score than nurses who perceived low leadership, justice, and work-life balance at a significant level of .05.

5.3 Compare the mean differences of ITSP and ITSW classified by job characteristics

Using an alpha level of .05, a t-test conducted to investigate whether the mean of intention to stay on ITSP and ITSW among subgroups of managerial characteristics.

Table 15: Comparison of intention to stay classified by job characteristics (n =1,524)

Factors		**ITS in profession**				**ITS in current workplace**			
(n =1524)	**n**	**Mean**	**SD**	**t-test**	***p***	**Mean**	**SD**	**t-test**	***p***
Job characteristics				**-10.37**	**<.001**			**-7.78**	**<.001**
1 Moderate.	305	3.04	.65		2>1	3.48	.95		2>1
2. High	1219	3.47	.66			3.98	1.02		
Skills				**-9.41**	**<.001**			**-7.45**	**<.001**
1 Moderate.	253	3.06	.57		2>1	3.49	.91		2>1
2. High	1271	3.45	.91			3.96	1.03		
Identity				**-9.70**	**<.001**			**-7.23**	**<.001**
1 Moderate.	237	3.02	.62		2>1	3.49	.88		2>1
2. High	1287	3.45	.67			3.96	1.03		
Significance				**-10.52**	**<.001**			**-7.45**	**<.001**
1 Moderate.	271	3.04	.58		2>1	3.47	.96		2>1
2. High	1253	3.46	.68			3.97	1.02		
Autonomy				**-9.77**	**<.001**			**-7.39**	**<.001**
1 Moderate.	432	3.12	.69		2>1	3.58	.95		2>1
2. High	1092	3.49	.65			4.00	1.03		

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Factors (n =1524)	n	ITS in profession				ITS in current workplace			
		Mean	SD	t-test	*p*	Mean	SD	t-test	*p*
Feedback				**-10.37**	**<.001**			**-7.78**	**<.001**
1 Moderate.	458	3.15	.69		2>1	3.62	.95		2>1
2. High	1066	3.48	.65			4.00	1.03		

According to table 15, the findings showed the means difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 5.3.1 and 5.3.2.

5.3.1 The findings of a comparison of the mean score of ITSP

The means of ITSP among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher mean score of ITSP than nurses who perceived moderate job characteristics. When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, identity, significance, autonomy, and feedback have a higher mean score of ITSP than nurses who perceived moderate levels of those subscales at the significant level of .05.

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5.3.2 The findings of a comparison of the mean of ITSW

The means score of ITSW among subgroups of overall job characteristics was significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher mean of ITSW than nurses who perceived moderate job characteristics. When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, identity, significance, autonomy, and feedback have a higher mean score of ITSW

than nurses who perceived moderate levels of those subscales at the significant level of .05.

5.4. Comparison of nurse intention to stay classify by hospital levels

Table 16: Comparison of intention to stay classified by hospital levels (n =1,524)

Variable		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**F-test**	***p***	**Mean**	**SD**	**F-test**	***p***
Hospital levels				**.733**	**.599**			**2.513**	**.028**
1.Level A	277	3.40	.65			3.81	1.10		5>3
2.Level S	149	3.43	.68			3.95	1.10		6>1
3.Level M1	119	3.33	.60			3.72	1.06		6>3
4.Level M2	402	3.38	.70			3.82	1.05		6>4
5.Level F1	303	3.34	.71			3.94	.89		
6.Level F2	274	3.42	.68			4.02	.96		

According to Table 17, the findings showed the mean differences of ITSP and ITSW classified by organizational types (hospital levels) The mean score of ITSP among subgroups of hospital levels were not different, while the means score of ITSW among subgroups of hospital levels was significantly different at the level of .05. The post hoc test showed that nurses working at a hospital with F2 level have a higher mean than nurses working at a hospital with A, M1, and M2 levels. In addition, nurses working at a hospital with a hospital level F1 have a higher mean score than nurses working at a hospital with a hospital level M1 level.

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5.4.1 Comparison of nurses' intention to stay as perceived by nursing working in different hospital levels

1) Hospital level A

Table 11-13 showed the means score and SD of ITSP and ITSW as perceived by nurses working in Hospital level A. In addition, t-test and F-test were used to compare the mean of ITSP and ITSW classified by personal, managerial, and job characteristics.

Table 17: Compare Means and SD of ITSP and ITSW classified by personal characteristics

Factors (n=277)		**ITS in profession**				**ITS in current workplace**			
	n	Mean	SD	t-test/ F-test	*p*	Mean	SD	t-test/ F-test	*p*
Sex				**.42**	**.677**			**-.154**	**.878**
1.Male	5	3.52	.39			3.73	1.30		
2.Female	272	3.40	.65			3.81	1.10		
Education level				**-2.99**	**.003**			**-5.56**	**<.001**
1.Bachelor's degree	262	3.37	.64		2>1	3.76	1.10		**2>1**
2.Higher than BS	15	3.88	.67			4.64	.56		
Employed status				-	-			-	-
1.Civil servant	256	3.40	.67			3.80	1.10		
2.Not civil servant	1*	3.20	-			2.00	-		
Generation				**2.03**	**.109**			**.85**	**.467**
1.Baby boomer	10	3.34	0.55			3.97	1.30		
2.Gen X	65	3.57	0.74			3.98	1.01		
3.Gen Y	159	3.34	0.65			3.73	1.10		
4.Gen Z	43	3.39	0.45			3.80	1.20		
Marital status				**.47**	**.625**			**3.15**	**.045**
1.Single	142	3.40	0.64			3.94	1.11		1>2
2.Married	124	3.38	0.66			3.63	1.08		
3.Divorce/Separate	11	3.58	0.54			4.15	0.87		
Working experience				**1.56**	**.172**			**.51**	**.771**
1.1-5 years	85	3.35	0.48			3.84	1.13		
2. 6-10 years	50	3.34	0.69			3.68	1.13		
3.11-15 years	25	3.17	0.84			3.67	1.24		
4.16-20 years	46	3.50	0.63			3.86	0.97		

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Factors (n=277)		**ITS in profession**				**ITS in current workplace**			
	n	Mean	SD	t-test/ F-test	*p*	Mean	SD	t-test/ F-test	*p*
5.21-25 years	31	3.48	0.60			3.74	1.00		
6. > 25 years	40	3.54	0.78			4.00	1.16		
Nursing position				**-1.79**	**.074**			**-1.79**	**.074**
1.Practitioner	145	3.33	0.59			3.70	1.14		
2.Professional	132	3.47	0.70			3.93	1.04		
Income				**2.02**	**.092**			**2.05**	**.088**
1. ≤ 20,000 B	29	3.32	0.37			3.46	1.34		
2. 20,001 -30,000 B	110	3.30	0.60			3.68	1.09		
3. 30,001 -40,000 B	66	3.43	0.69			4.01	1.01		
4.40,001– 50,000 B	41	3.50	0.69			4.01	0.98		
5.> 50,000 B	31	3.63	0.80			3.90	1.16		
Working unit				**.63**	**.677**			**.181**	**.970**
1.Medical unit	80	3.38	0.62			3.79	1.13		
2.Surgical unit	58	3.34	0.66			3.74	1.10		
3.Ob-Gyn unit	45	3.48	0.57			3.90	1.10		
4.OR/Anesthesia	28	3.46	0.73			3.75	1.02		
5.ICU	50	3.34	0.74			3.88	1.16		
6.Special unit	16	3.58	0.47			3.77	1.05		
7.General unit	-	-	-			-	-		
Home town				**1.91**	**.150**			**10.17**	**<.001**
1.Same area	235	3.42	0.64			3.92	1.06		
2.Nearby hospital	14	3.53	0.62			3.52	1.08		
3.Out of area	28	3.19	0.69			2.99	1.10		1>3

* Some category has > 5 cases; they can not perform analysis by one-way ANOVA

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Table 17 revealed that ITSP and ITSW were classified by hospital level. The details are as follows:

1.1) ITSP and ITSW classified by hospital level A.

Acceding to tables 18, the findings showed the means a significant difference of ITSP and ITSW classified by hospital level A. The findings of intention to stay in profession (ITSP) as are follows:

1) The means score of ITSP between males and females were **not significantly different**.

2) The means score of ITSP among groups of marital status, including single, married, and divorce /separate, were **not significantly different.**

3) The means of ITSP among groups of the educational level were **significantly different** at a significant level of .05. The t-test results revealed that the higher education group (Mean = 3.88, SD =.67) have higher means than Bachelor's degree group (Mean = 3.37, SD = 0.64) at a significant level of .05.

4) The means of ITSP among groups of generation were **not significantly different.**

5) The means of ITSP among groups of working experience were **not significantly different.**

6) The means of ITSP among groups of nursing positions were **not significantly different.**

7) The means of ITSP among groups of income were **not significantly different.**

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8) The means score of ITSP among working units were **not significantly different**.

9) The means score of ITSP among hometown locations were **not significantly different**.

1.2) The findings of intention to stay in the current workplace (ITSW) at hospital level A as are follows:

1) The means score of ITSW between males and females was **not significantly different**.

2) The means score of ITSW among groups of marital status were **different** at a significant level of .05. The post hoc test results revealed that the group of single status (Mean = 3.94, SD = 1.11) has a higher means score than a group of marital status (Mean = 3.63, SD = 1.08) at the significant level of .05.

3) The means of ITSP among groups of educational level **not significantly different.**

4) The means of ITSP among groups of generation were **not significantly different**

5) The means of ITSP among groups of working experience were **not significantly different**

6) The means of ITSP among groups of nursing positions were **not significantly different.**

7) The means of ITSP among groups of income were **not significantly different.**

8) The means of ITSP among working units were **not significantly different**.

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9) The mean of ITSW among hometown locations were **significantly different**. The post hoc test results revealed that nurses living in the same area of the hospital (Mean = 3.92, SD = 1.06) have a higher mean than nurses residing out of the area where the hospital located (Mean = 2.99, SD = 1.10) at the significant level of .05.

Table 18: Compare Mean and SD of ITSP and ITSW classified by managerial characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**t-test/ F-test**	***p***	**Mean**	**SD**	**t-test/ F-test**	***p***
Managerial characteristics				**-2.68**	**.008**			**-1.75**	**.082**
2. Low-Moderate	69	3.23	0.76		3>2	3.62	1.08		
3. High	205	3.46	0.59			3.88	1.09		
Human capital				**5.39**	**.005**			**1.71**	**.183**
1.Low	7	2.69	0.45		2>1	3.10	0.71		
2.Moderate	70	3.33	0.78		3>1	3.76	1.09		
3. High	200	3.45	0.59			3.85	1.11		
Leadership				**3.09**	**.047**			**3.04**	**.049**
1.Low	11	3.24	0.86		3>2	3.52	1.22		3>2
2.Moderate	47	3.21	0.78			3.49	1.10		
3. High	219	3.45	0.60			3.89	1.08		
Justice				**4.23**	**.016**			**1.15**	**.318**
1.Low	13	3.11	0.84		3>1	3.44	1.34		
2. Moderate	74	3.26	0.73		3>2	3.73	1.08		
3. High	190	3.47	0.58			3.86	1.09		
Professional growth				**6.72**	**.001**			**3.02**	**.050**
1.Low	7	2.77	0.62		3>1	2.86	1.00		2>1
2.Moderate	70	3.25	0.68		3>2	3.75	1.00		3>1
3. High	200	3.47	0.62			3.86	1.12		3>2
Work happiness				**19.43**	**<.001**			**22.07**	**<.001**
1.Low	6	2.73	0.69		2>1	3.28	1.56		3>1
2.Moderate	198	3.29	0.60		3>1	3.57	1.12		3>2
3. High	73	3.76	0.62		3>2	4.49	0.62		
Work-life balance									
1.Low	43	3.23	0.72	**9.49**	**<.001**	3.52	1.24	**9.81**	**<.001**
2.Moderate	160	3.32	0.59			3.67	1.10		3>1
3. High	74	3.67	0.66			4.27	0.86		3>2

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According to table 18, at the hospital level A, it revealed that means score differences of ITSP and ITSW that classified by overall and subscales of managerial characteristics as explained at 1.3) and 1.4)

1.3) The findings of the comparison of the means of ITSP

The means of ITSP among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher mean scores than nurses who perceived low to moderate managerial characteristics.

Look at the subscales of managerial characteristics; the findings showed that nurses who perceived high and moderate human capital, professional growth, and work happiness have higher mean than nurses who perceived low human capital, professional growth, and work happiness at the significant level of .05. Moreover, nurses who perceived high leadership, professional growth, justice, and work happiness have a higher mean than nurses who perceived moderate human capital, professional growth, justice and work happiness at the significant level of .05.

Nurses who perceived high human capital, leadership, justice, work happiness, and work-life balance have higher mean than nurses who perceived low leadership, justice, work happiness, and work-life balance at the significant level of .05

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1.4) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were not a significantly different level of .05. When considering the subscales of managerial characteristics, the findings showed that nurses who perceived human capital and justices also were not significantly different.

However, looking at the other subscales of managerial characteristics, the findings presented that nurses who perceived high and moderate leadership, professional growth, work happiness, and work-life balance have higher mean than

nurses who perceived low human capital, professional growth, and work happiness at the significant level of .05.

Moreover, nurses who perceived high leadership, professional growth and justice, and work happiness have a higher mean than nurses who perceived moderate professional growth, work happiness, and work-life balance at the significant level of .05.

Nurses who perceived high leadership, professional growth, happiness, and work-life balance have a higher mean than nurses who perceived low leadership, professional growth, work happiness, and work-life balance at the significant level of .05.

Table 19: Comparison of intention to stay classified by job characteristics

Factors (n =277)		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**t-test**	***p***	**Mean**	**SD**	**t-test**	***p***
Job characteristics				**-2.65**	**.010**			**-1.25**	**.211**
1 Moderate.	46	3.12	0.83		2>1	3.62	1.11		
2. High	231	3.46	0.59			3.85	1.10		
Skills				**-1.81**	**.072**			**-1.12**	**.264**
1 Moderate.	32	3.21	0.65			3.60	0.94		
2. High	245	3.43	0.64			3.84	1.12		
Identity				**-3.74**	**<.001**			**-1.87**	**.063**
1 Moderate.	31	31	3.00	0.70	2>1	3.46	1.01		
2. High	246	246	3.45	0.62		3.85	1.11		
Significance				**-2.67**	**.008**			**-1.44**	**.151**
1 Moderate.	38	3.14	0.66		2>1	3.57	1.07		
2. High	239	3.44	0.64			3.85	1.10		
Autonomy				**-3.26**	**.002**			**-2.68**	**.009**
1 Moderate.	64	3.49	1.06		2>1	3.49	1.06		2>1
2. High	213	3.90	1.10			3.90	1.10		
Feedback				**-1.20**	**.049**			**-1.34**	**.181**
1 Moderate.	59	3.23	0.77		2>1	3.64	1.04		
2. High	218	3.45	0.61			3.85	1.11		

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According to table 19, at the hospital level A, the findings showed the means difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 1.5) and 1.6)

1.5) The results of the comparison of the mean of ITSP

The means score of ITSP among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means of ITSP than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived skills varieties did not significantly differ. Other the subscales of job characteristics, the findings revealed that nurses who perceived high identity, significance, autonomy, and feedback have a higher mean score of ITSP than nurses who perceived moderate levels of those subscales at the significant level of .05.

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1.6) The findings of the comparison of the mean of ITSW

The means of ITSW among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher mean of ITSW than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived skills, identity, significance, and feedback were not a significant difference. It was only nurses who perceived autonomy have a higher

mean score of ITSW than nurses who perceived moderate levels of those subscales at the significant level of .05.

2) Hospital level S

Table 20-21 showed means and SD of ITSP and ITSW as perceived by nurses working in Hospital level S. In addition, t-test and F-test were used to compare the means of ITSP and ITSW classified by personal, managerial, and job characteristics.

Table 20: Compare Means and SD of ITSP and ITSW classified by personal characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n=149)				t-test/				t-test/	
	n	Mean	SD	F-test	*p*	Mean	SD	F-test	*p*
Sex				-	-			-	-
1.Male	4*	3.35	0.57			2.58	0.69		
2.Female	145	3.43	0.68			3.99	1.09		
Education level				**-1.35**	**.178**			**-0.96**	**.339**
1.Bachelor's degree	131	3.40	0.70			3.92	1.11		
2.Higher than BS	18	3.63	0.48			4.19	1.05		
Employed status				**0.31**	**.760**			**-1.74**	**.085**
1.Civil servant	135	3.45	0.70			3.93	1.11		
2.Not civil servant	8	3.38	0.38			4.63	0.63		
Generation				**3.45**	**.018**			**1.11**	**.349**
1.Baby boomer	9	3.76	0.37		1>4	4.59	0.64		
2.Gen X	42	3.63	0.79		2>4	3.87	1.16		
3.Gen Y	73	3.36	0.70			3.93	1.12		
4.Gen Z	25	3.18	0.30			3.91	1.06		
Marital status				**1.43**	**.242**			**0.70**	**.500**
1.Single	84	3.35	0.59			3.96	1.10		

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Factors		**ITS in profession**				**ITS in current workplace**			
(n=149)				t-test/				t-test/	
	n	Mean	SD	F-test	*p*	Mean	SD	F-test	*p*
2.Married	57	3.52	0.78			3.88	1.16		
3.Divorce/Separate	8	3.65	0.76			4.38	0.74		
Working experience				**4.57**	**.001**			**1.43**	**.216**
1.1-5 years	45	3.21	0.48		3>1	3.91	1.00		
2. 6-10 years	19	3.11	0.61		3>2	3.61	1.35		
3.11-15 years	12	4.00	0.58			4.67	0.57		
4.16-20 years	21	3.54	0.76			3.92	0.97		
5. 21-25 years	17	3.47	0.72			3.86	1.32		
6. > 25 years	35	3.61	0.73			4.00	1.15		
Nursing position				**-1.48**	**.141**			**.193**	**.847**
1.Practitioner	67	3.34	0.61			3.97	1.03		
2.Professional	82	3.50	0.73			3.93	1.17		
Income				**3.62**	**.008**			**.060**	**.993**
1. ≤ 20,000 B	26	3.08	0.37		4>1	3.87	0.99		
2. 20,001 -30,000 B	41	3.35	0.60		5>1	3.93	1.09		
3. 30,001 -40,000 B	27	3.42	0.78			3.99	1.38		
4.40,001– 50,000 B	20	3.65	0.67			4.00	0.87		
5.> 50,000 B	35	3.66	0.76			3.98	1.14		
Working unit				**2.16**	**.062**			**1.017**	**.410**
1.Medical unit	45	3.60	0.72			3.88	1.14		
2.Surgical unit	21	3.30	0.59			3.84	0.96		
3.Ob-Gyn unit	38	3.20	0.57			3.98	1.09		
4.OR/Anesthesia	10	3.76	0.75			4.23	1.31		
5.ICU	18	3.48	0.55			4.35	0.90		
6.Special unit	17	3.41	0.85			3.61	1.27		
7.General unit				**2.79**	**.065**			**1.35**	**.262**

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Factors (n=149)		ITS in profession				ITS in current workplace			
				t-test/				t-test/	
	n	Mean	SD	F-test	*p*	Mean	SD	F-test	*p*
Home town	127	3.48	0.69			3.99	1.05		
1.Same area	8	3.03	0.39			4.13	1.22		
2.Nearby hospital	14	3.19	0.59			3.50	1.43		
3.Out of area									

* The category has > 5 cases; it cannot perform analysis by one-way ANOVA

According to table 20, the findings showed the means have a significant difference in ITSP and ITSW classified by hospital level S.

2.1) The findings of intention to stay in the profession (ITSP) as are follows:

1) The means score of ITSP among groups of marital status, including single, married, and divorce /separate, were **not significantly different**.

2) The means score of ITSP among groups of educational level including Bachelor's degree and a higher than BS were **not significantly different.**

3) The means of ITSP among groups of employed status, including civil servant and not civil servant, were **not significantly different**.

4) The means of ITSP among groups of generation were were different at significant level of .05. The post hoc test results revealed that the group of baby boomer (Mean = 3.76, SD = 0.37) has higher means than group of Gen X (Mean = 3.63, SD = 0.798), Gen Y(Mean = 3.36, SD = 0.70), and Gen Z (Mean = 3.18, SD = 0.30) at the significant level of .05. In addition, the groups of Baby boomer (Mean = 3.76, SD = 0.37) has higher means than group with Gen Z (Mean = 3.18, SD = 0.30), and Gen X (Mean = 3.63, SD = 0.798) has higher means than Gen Z (Mean = 3.18, SD = 0.30) at significant level of .05.

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5) The means of ITSP among groups of working experience were **different** at a significant level of .05. The post hoc test results revealed that the group of working experience with 11-15 years (Mean = 4.00, SD = 0.58) has a higher mean than group of working experience with 1-5 years (Mean = 3. 21, SD = 0.48), and 6-10 years (Mean = 3.11, SD = 0.61) at the significant level of .05.

6) The means score of ITSP among groups of nursing position were **not significantly different.**

7) The means score of ITSP among groups of income were **significantly different** at a significant level of .05. The post hoc test results revealed that the group of income with ≤ 20,000 baht (Mean = 3.08, SD = 0.37) and with greater than 50,000 baht (Mean = 3.66, SD = 0.76) have higher mean score than group of income with less than 20,000 baht (Mean = 3.08, SD = 0.37) at the significant level of .05.

8) The means of ITSP among working units were **not significantly different.**

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9) The means of ITSP among hometown locations were **not significantly different.**

2.2) The findings of intention to stay in the current workplace (ITSW) as are follows:

1) The mean of ITSW among groups of marital status were **not significantly different.**

2) The means of ITSP among groups of marital status **not significantly different.**

3) The means of ITSP among groups of educational level **not significantly different.**

4) The means of ITSP among groups of generation were **not significantly different**.

5) The means of ITSP among groups of working experience were **not significantly different**.

6) The means score of ITSP among groups of nursing positions were **not significantly different.**

7) The means score of ITSP among groups of income were **not significantly different**.

8) The means score of ITSP among working units were **not significantly different**.

9) The mean score of ITSW among hometown locations were **not significantly different.**

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Table 21: Compare Mean and SD of ITSP and ITSW classified by managerial characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**t/F-test**	***p***	**Mean**	**SD**	**t/F-test**	***p***
Managerial characteristics				**-2.59**	**.011**			**-1.77**	**.079**
2. Low-Moderate	54	3.25	0.77			3.76	1.12		
3. High	93	3.54	0.60			4.09	1.07		
Human capital				**-1.52**	**.133**			**-1.83**	**.070**
2.Low-Moderate	50	3.30	0.81			3.72	1.16		
3. High	99	3.50	0.59			4.07	1.06		
Leadership				**2.89**	**.059**			**2.97**	**.054**

Factors		ITS in profession				ITS in current workplace			
	n	Mean	SD	t/F-test	*p*	Mean	SD	t/F-test	*p*
1.Low	6	3.17	1.08			4.06	1.41		
2.Moderate	40	3.25	0.74			3.59	1.13		
3. High	103	3.52	0.61			4.08	1.06		
Justice				**1.80**	**.169**			**1.48**	**.231**
1.Low	6	3.47	1.02			3.78	1.29		
2.Moderate	47	3.28	0.73			3.74	1.10		
3. High	96	3.50	0.62			4.07	1.09		
Professional growth				**-2.76**	**.006**			**-1.90**	**.060**
2.Low-Moderate	49	3.22	0.78		3>2	3.71	1.11		
3. High	100	3.54	0.60			4.07	1.09		
Work happiness				**3.70**	**.027**			**13.13**	**<.001**
1.Low	8	2.85	0.64		2>1	2.88	0.96		3>1
2.Moderate	114	3.44	0.63		3>1	3.84	1.12		3>2
3. High	27	3.58	0.81			4.74	0.43		
Work-life balance				**3.31**	**.039**			**7.09**	**.001**
1.Low	20	3.37	0.71		3>2	3.60	1.25		3>1
2.Moderate	100	3.36	0.62			3.83	1.10		3>2
3. High	29	3.72	0.78			4.60	0.74		

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According to table 21, at the level S, the findings revealed the mean differences of ITSP and ITSW classified by overall and subscales of managerial characteristics as explained at 2.3) and 2.4)

2.3) The findings of the comparison of the means of ITSP

The means score of ITSP among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means than nurses who perceived low to moderate managerial characteristics.

Look at the subscales of managerial characteristics, the findings showed that nurses who perceived human capital, leadership, and justice were not different. Otherwise, nurses who perceived higher professional growth, work happiness, and work-life balance have higher means than nurses who perceived low professional growth, work happiness, and work-life balance at a significant level of .05.

Moreover, nurses who perceived high professional growth, work happiness, and work-life balance have a higher mean than nurses who perceived moderate professional growth, work happiness, and work-life balance at a significant level of .05.

2.4) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were not significantly different. When considering the subscales of managerial characteristics, the findings showed that nurses who perceived human capital, leadership, justice, and professional growth were not significantly different.

However, looking at the other subscales of managerial characteristics, the findings showed that nurses who perceived high work happiness and work-life balance have a higher mean than nurses who perceived moderate work happiness and work-life balance at the significant level of .05.

Nurses who perceived high work happiness and work-life balance have a higher mean than nurses who perceived low work happiness and work-life balance at a significant level of .05.

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Table 22: Comparison of intention to stay classified by job characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n =149)	**n**	**Mean**	**SD**	**t-test**	***p***	**Mean**	**SD**	**t-test**	***p***
Job characteristics				**-4.03**	**<.001***			**-3.45**	**.001**
1 Moderate.	21	2.90	.64		2>1	**3.21**	**1.13**		2>1
2. High	128	3.52	.65			4.07	1.06		
Skills				**-2.91**	**.008**			**-3.66**	**<.001**
1 Moderate.	18	3.02	0.63		2>1	3.09	1.07		2>1
2. High	131	3.49	0.67			4.07	1.06		
Identity				**-1.81**	**.072**			**-3.26**	**<.001**
1 Moderate.	13	3.11	0.51			3.03	1.13		2>1
2. High	136	3.46	0.69			4.04	1.06		
Significance				**-4.27**	**<.001**			**-3.61**	**<.001**
1 Moderate.	21	2.88	0.58		2>1	3.17	1.19		2>1
2. High	128	3.52	0.65			4.08	1.04		
Autonomy				**-3.45**	**.001**			**-2.54**	**.012**
1 Moderate.	35	3.10	0.71		2>1	3.54	1.12		2>1
2. High	114	3.53	0.64			4.08	1.07		
Feedback				**-1.92**	**.057**			**-1.41**	**.162**
1 Moderate.	43	3.27	0.77			3.75	1.12		
2. High	106	3.50	0.63			4.03	1.09		

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According to table 22, at the level S, the findings showed the means difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 2.5) and 2.6)

2.5) The findings of a comparison of the mean of ITSP

The means of ITSP among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means score of ITSP than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived task identity and feedback not different. Otherwise, the subscales of job characteristics, the findings revealed that nurses who perceived high skills, significance, and autonomy have a higher means score of ITSP than nurses who perceived moderate levels of those subscales at the significant level of .05.

2.6) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means score of ITSW than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived feedback were not significantly different. Otherwise, nurses' perceived skills, identity, significance, and feedback were significantly different levels of .05. The post hoc test showed that nurses who perceived high skills, identity, significance, and autonomy have higher means than nurses who perceived moderate skills, identity, significance, and autonomy at the significant level of .05.

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3) Hospital level M1

Table 23-25 showed the mean and SD of ITSP and ITSW as perceived by nurses working in Hospital level M1. In addition, t-test and F-test were used to compare the mean of ITSP and ITSW classified by personal, managerial, and job characteristics.

Table 23: Compare Mean and SD of ITSP and ITSW classified by personal characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n=119)	**n**	Mean	SD	t/F-test	*p*	Mean	SD	t/F-test	*p*
Sex				**-**	**-**			**-**	**-**
1.Male	3	3.40	0.53			3.78	1.07		
2.Female	116	3.33	0.60			3.72	1.07		
Education level				**0.94**	**.349**			**2.15**	**.034**
1.Bachelor's degree	114	3.34	0.59			3.77	1.05		1>2
2.Higher than BS	5	3.08	0.94			2.73	1.12		
Employed status				**0.36**	**.721**			**-1.27**	**.240**
1.Civil servant	84	3.38	0.63			3.72	1.12		
2.Not civil servant	5	3.28	0.41			4.00	0.41		
Generation				**0.68**	**.565**			**0.13**	**.951**
1.Baby boomer	7	3.63	0.57			3.57	0.96		
2.Gen X	15	3.25	0.81			3.62	1.16		
3.Gen Y	73	3.31	0.60			3.76	1.05		
4.Gen Z	24	3.34	0.45			3.72	1.13		
Marital status				**3.704**	**.028**			**.625**	**.537**
1.Single	72	3.21	0.59		2>1	3.80	1.06		
2.Married	41	3.53	0.60			3.63	1.11		
3.Divorce/Separate	6	3.33	0.55			3.39	0.95		
Working experience				**1.04**	**.399**			**.284**	**.921**
1.1-5 years	53	3.20	0.51			3.79	1.06		
2.6-10 years	25	3.38	0.61			3.55	1.26		
3.11-15 years	9	3.51	0.65			3.74	0.74		
4.16-20 years	12	3.50	0.57			3.81	0.96		
5 21-25 years	7	3.31	0.62			3.48	0.86		
6. > 25 years	13	3.48	0.86			3.82	1.20		
Nursing position				**-1.69**	**.095**			**-1.29**	**.200**
1.Practitioner	82	3.27	0.57			3.64	1.13		
2.Professional	37	3.46	0.65			3.91	0.90		

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Factors (n=119)	n	ITS in profession				ITS in current workplace			
		Mean	SD	t/F-test	*p*	Mean	SD	t/F-test	*p*
Income				**1.83**	**.128**			**1.69**	**.157**
1. ≤ 20,000 B	27	3.09	0.43			3.27	0.97		
2. 20,001 -30,000 B	48	3.33	0.60			3.91	1.12		
3. 30,001 -40,000 B	28	3.50	0.58			3.83	0.87		
4.40,001– 50,000 B	10	3.42	0.80			3.73	1.32		
5.> 50,000 B	6	3.47	0.79			3.72	1.20		
Working unit				**0.98**	**.440**			**1.58**	**.161**
1.Medical unit	22	3.47	0.59			3.59	1.23		
2.Surgical unit	31	3.30	0.54			4.17	0.70		
3.Ob-Gyn unit	25	3.24	0.73			3.65	0.98		
4.OR/Anesthesia	15	3.40	0.53			3.47	1.26		
6.Special unit ,ICU	20	3.40	0.53			3.59	1.28		
7.General unit	6	2.87	0.74			3.11	0.69		
Home town				**0.48**	**.622**			**1.29**	**.280**
1.Same area	105	3.31	0.61			3.53	1.45		
2.Nearby hospital	5	3.56	0.62			4.26	0.98		
3.Out of area	9	3.40	0.53			3.72	1.07		

* The category has > 5 cases; it cannot perform analysis by one-way ANOVA

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According to table 23, the findings showed the means a significant difference of ITSP and ITSW classified by Hospital level M1.

3.1) The findings of intention to stay in the profession (ITSP) as are follows:

1) The means score of ITSP among groups of marital status, including single, married, and divorce /separate, were **not significantly different**.

2) The means score of ITSP among groups of educational level including Bachelor's degree and a higher than BS were **not significantly different.**

3) The means of ITSP among groups of employed status, including civil servant and not civil servant, were **not significantly different**.

4) The means of ITSP among groups of generation were **not significantly different.**

5) The means of ITSP among groups of working experience were **not significantly different**

6) The means of ITSP among groups of nursing position were **not significantly different.**

7) The means of ITSP among groups of income were not **significantly different.**

8) The means of ITSP among working units were **not significantly different.**

9) The means of ITSP among hometown locations were **not significantly different.**

3.2) The findings of intention to stay in the current workplace (ITSW) as are follows:

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1) The mean of ITSW among groups of marital status was **not significantly different.**

2) The means of ITSW among groups of marital status **not significantly different.**

3) The means of ITSW among groups of the educational level were **different** at a significant level of .05. The t-test results revealed that the Bachelor's degree group (Mean = 3.77, SD =1.05) have higher means than the higher education group (Mean = 2.73, SD = 1.12) at a significant level of .05.

4) The means of ITSW among groups of generation were **not significantly different**.

5) The means of ITSW among groups of working experience were **not significantly different**.

6) The means of ITSW among groups of nursing positions were **not significantly different.**

7) The means of ITSW among groups of income were **not significantly different**.

8) The means of ITSW among working units were **not significantly different**.

9) The mean of ITSW among hometown locations were **not significantly different.**

Table 24: Compare Mean and SD of ITSP and ITSW classified by managerial characteristics

Factors (n =119)		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**t/F-test**	***p***	**Mean**	**SD**	**F-test**	***p***
Managerial characteristics				**9.53**	**<.001**			**1.13**	**.33**
2. Moderate	60	3.08	0.56		3>2		3.89	0.92	
3. High	59	3.56	0.57				3.59	1.19	
Human capital				**12.80**	**<.001**			**.44**	**.64**
2.Moderate	50	3.01	.54		3>2	3.84	.89		
3. High	69	3.53	.55			3.65	1.19		
Leadership				**6.05**	**.003**			**1.46**	**.24**
1.Low	6	3.80	0.33		1>2	4.00	0.99		
2.Moderate	42	3.10	0.63		3>2	3.91	0.89		
3. High	71	3.42	0.56			3.59	1.16		
Justice				**4.03**	**.02**			**1.34**	**.27**
2.Moderate	54	3.18	0.61		3>2	3.77	0.89		
3. High	65	3.46	0.57			3.64	1.20		
Professional growth				**6.09**	**.003**			**1.95**	**.15**
2.Moderate	52	3.10	0.57		3>2	3.87	0.92		
3. High	67	3.48	0.58			3.58	1.16		

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Factors (n =119)		ITS in profession				ITS in current workplace			
	n	Mean	SD	t/F-test	*p*	Mean	SD	F-test	*p*
Work happiness				**2.22**	**.028**			**4.28**	**<001**
2.Moderate	97	3.57	1.09		3>2	3.27	0.59		3>2
3. High	23	4.35	0.69			3.57	0.60		
Work-life balance				**.90**	**.41**			**8.12**	**.001**
1.Low	7	3.09	.445			2.67	1.36		3>1
2.Moderate	87	3.32	.622			3.64	1.02		2>1
3. High	25	3.42	.561			4.29	.84		3>2

According to table 24, at the hospital level M1, the findings revealed the means differences of ITSP and ITSW classified by overall and subscales of managerial characteristics as explained at 3.3) and 3.4)

3.3) The findings of the comparison of the means of ITSP

The means of ITSP among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means than nurses who perceived low to moderate managerial characteristics.

Look at the subscales of managerial characteristics, and the findings showed that nurses who perceived work-life balance were not different. Otherwise, nurses who perceived higher human capital, leadership, justice, professional growth, and work happiness have higher means than nurses who perceived moderate leadership at a significant level of .05.

Moreover, nurses who perceived high human capital, leadership, justice, professional growth, and work happiness have higher mean than nurses who perceived low to moderate human capital, justice, professional growth, and work happiness at the significant level of .05.

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3.4) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were not significantly different. When considering the subscales of managerial characteristics, the findings showed that nurses who perceived human capital, leadership, justice, and professional growth were not different.

However, looking at the other subscales of managerial characteristics, the findings showed that nurses who perceived high work happiness and work-life balance have higher mean than nurses who perceived moderate work happiness and work-life balance at the significant level of .05.

Nurses who perceived high work happiness and work-life balance have a higher mean than nurses who perceived low to moderate work happiness and work-life balance at a significant level of .05.

Table 25: Comparison of intention to stay classified by job characteristics

Factors (n =119)		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**t-test**	***p***	**Mean**	**SD**	**t-test**	***p***
Job characteristics				**-9.12**	**<.001**			**-8.19**	**<.001**
1 Moderate.	36	3.02	.61		3>2	3.43	.89		3>2
2. High	83	3.47	.69			4.04	.97		
Skills				-8.43	**<.001**			-6.82	**<.001**
1 Moderate.	35	3.05	.54		3>2	3.46	.87		3>2
2. High	84	3.45	.707			4.01	.98		
Identity				**-8.36**	**<.001**			**-7.56**	**<.001**
1 Moderate.	27	3.01	.61		3>2	3.46	.82		3>2
2. High	92	3.45	.69			4.01	.99		
Significance				**-8.62**	**<.001**			**-7.60**	**<.001**
1 Moderate.	29	3.04	.56		3>2	3.43	.90		3>2
2. High	90	3.46	.70			4.03	.97		
Autonomy				**-7.55**	**<.001**			**-7.07**	**<.001**
1 Moderate.	36	3.13	.69		3>2	3.59	.91		3>2
2. High	83	3.49	.67			4.06	.98		
Feedback				**-7.89**	**<.001**			**-7.28**	**<.001**
1 Moderate.	45	3.13	.68		3>2	3.59	.91		3>2
2. High	74	3.49	.67			4.07	.98		

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According to table 25, at the Hospital level M1, the findings showed the mean difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 3.5) and 3.6)

3.5) The findings of a comparison of the mean of ITSP

The means score of ITSP among subgroups of overall job characteristics was significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher mean of ITSP than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, task identity, significance, autonomy, and feedback have higher differences in means group than nurses who perceived moderate skills, task identity, significance, autonomy, and feedback at the significant level of .05.

3.6) The findings of a comparison of the mean of ITSW

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The means of ITSW among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means of ITSW than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses' perceived skills, identity, significance, autonomy, and feedback were significantly different levels of .05. The post hoc test showed that nurses who perceived high skills, identity, significance, and autonomy and feedback have higher

means than nurses who perceived moderate skills, identity, significance, autonomy, and feedback at the significant level of .05.

4) Hospital level M2

Table 20-22 showed the means and SD of ITSP and ITSW as perceived by nurses working in Hospital level M2. In addition, t-test and F-test were used to compare the mean of ITSP and ITSW classified by personal, managerial, and job characteristics.

Table 26: Compare Mean and SD of ITSP and ITSW classified by personal characteristics

Factors (n=402)		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**t/F-test**	***p***	**Mean**	**SD**	**t/F-test**	***p***
Sex				**-1.36**	**.173**			**-1.33**	**.185**
1.Male	5	2.96	0.38			3.20	0.77		
2.Female	397	3.39	0.70			3.83	1.05		
Education level				**-1.89**	**.075**			**-0.98**	**.329**
1.Bachelor's degree	390	3.37	0.69			3.81	1.04		
2.Higher than BS	12	3.73	0.73			4.11	1.29		
Employed status				**0.42**	**.676**			**-0.27**	**.792**
1.Civil servant	330	3.39	0.71			3.81	1.02		
2.Not civil servant	72	3.35	0.60			3.85	1.18		
Generation				**0.66**	**.579**			**0.17**	**.915**
1.Baby boomer	17	3.48	0.52			3.82	1.20		
2.Gen X	80	3.30	0.87			3.83	1.04		
3.Gen Y	243	3.41	0.67			3.84	0.99		
4.Gen Z	62	3.35	0.59			3.73	1.26		
Marital status				**4.71**	**.010**			**3.45**	**.033**
1.Single	189	3.28	0.62		2>1	3.69	1.13		3>1
2.Married	197	3.46	0.72			3.90	0.97		
3.Divorce/Separate	16	3.66	0.96			4.27	0.84		

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Factors (n=402)		ITS in profession				ITS in current workplace			
	n	Mean	SD	t/F-test	*p*	Mean	SD	t/F-test	*p*
Working experience				**2.59**	**.025**			**0.71**	**.617**
1.1-5 years	128	3.31	0.59		3>1	3.75	1.18		
2.6-10 years	71	3.37	0.70		3>5	3.85	1.02		
3.11-15 years	61	3.58	0.67			3.96	0.94		
4.16-20 years	58	3.50	0.73			3.92	0.81		
5 21-25 years	40	3.15	0.92			3.63	1.00		
6. > 25 years	44	3.37	0.65			3.82	1.17		
Nursing position				**-1.54**	**.123**			**-0.41**	**.685**
1.Practitioner	218	3.33	0.63			3.80	1.09		
2.Professional	184	3.44	0.76			3.84	1.00		
Income				**1.56**	**.185**			**2.49**	**.043**
1. ≤ 20,000 B	69	3.20	0.51			69	3.59	1.12	2>1
2. 20,001 -30,000 B	158	3.42	0.68			158	3.90	1.09	5>1
3. 30,001 -40,000 B	91	3.39	0.72			91	3.71	0.95	5>3
4.40,001– 50,000 B	52	3.42	0.85			52	3.83	1.03	
5.> 50,000 B	32	3.49	0.73			32	4.22	0.86	

According to table 26, at the hospital level F1, the findings revealed the mean differences of ITSP and ITSW classified by overall and subscales of nurse characteristics as explained at 4.1) and 4.2)

4.1) The findings of intention to stay in the profession (ITSP) as are follows:

1) The means of ITSP between males and females were **not significantly different**.

2) The means of ITSP between education levels were **not significantly different**.

3) The means of ITSP between generations were **not significantly different**.

4) The means of ITSP between employed status were **not significantly different**.

5) The mean of ITSP among groups of marital status, including single, married, and divorce /separate, were **significantly different** at a significant level of .05. The post hoc test results revealed that the married group (Mean = 3.46, SD = 0.72) and divorce/separate group (Mean = 3.566, SD = 0.96) have higher mean than single group, (Mean = 3.28, SD = 0.62) at significant level of .05.

6) The means of ITSP among groups of working experience were **significantly different** at significant level of .05. The post hoc test results revealed that the group of working experience with 11-15 years (Mean = 3.58, SD = 0.67) has higher mean than group of working experience with 1-5 years (Mean = 3.31, SD = 0.59), 6-10 years (Mean = 3.37, SD = 0.70), and 21-25 years (Mean = 3.15, SD = 0.92) and more than 25 years (Mean = 3.37, SD = 0.65) at the significant level of .05.

4) The means of ITSP among groups of nursing position were not **significantly different**

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5) The means of ITSP among groups of income were not **significantly different.**

6) The mean of ITSP among working units were **significantly different** at a significant level of .05.

7) The mean of ITSW among working units were **significantly different**. The post hoc test results revealed that nurses working at Ob-Gyn unit (Mean = 3.66, SD = 0.74) and special unit (Mean = 3.63, SD = 0.69) have higher mean than nurses working at medical-surg unit (Mean = 3.34, SD = 0.65), OR/Anes (Mean = 3.38, SD = 0.54) and general unit (Mean = 3.33, SD = 0.64) at the significant level of .05.

. 8) The means score of ITSP among hometown locations were **not significantly different**.

4.2) The findings of intention to stay in the current workplace (ITSW) as are follows:

1) The means score of ITSW between male and female were **not significantly different**.

2) The means score of ITSW among groups of marital status including single, married, and divorce /separate were different at a significant level of .05. The post hoc test results revealed that the married group (Mean = 3.90, SD = 0.97) and divorce/separate group (Mean = 4.27, SD = 0.84) have higher mean than single group, (Mean = 3.69, SD = 1.13) at significant level of .05.

3) The means score of ITSW among groups of education level was **not significantly different**

4) The mean score of ITSW among groups of employed status were **not significantly different**

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5) The means score of ITSW among groups of generation were **not different**

6) The means score of ITSW among groups of working experience were **not significantly different**

7) The means score of ITSW among groups of nursing position were **not significantly different.**

8) The mean of ITSW among groups of income were different at significant level of .05. The post hoc test results revealed that the group of income with grater than 50,000 baht (Mean = 4.22, SD = 0.86) have higher mean than group

of income ≤ 20,000 baht (Mean = 4.22, SD = 0.86) and with income between 30,001– 40,000 baht (Mean = 3.71, SD = 0.95) and the group of income with 20.001-30,000 baht (Mean = 3.90, SD = 1.09) have higher mean than group of income with less than 20,000 baht (Mean = 3.08, SD = 0.37) at the significant level of .05.

9) The mean of ITSW among hometown locations were not **significantly different**.

Table 27: Compare Mean and SD of ITSP and ITSW classified by managerial characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n=402)	**n**	**Mean**	**SD**	**F-test**	**p**	**Mean**	**SD**	**F-test**	**p**
Managerial characteristics				**17.84**	**<.001**			**8.76**	**<.001**
1.Low	11	2.80	0.87		3>1	3.88	0.95		3>2
2. Moderate	149	3.18	0.63		3>2	3.54	0.93		
3. High	240	3.54	0.68			3.99	1.09		
Human capital				**9.29**	**<.001**			**4.53**	**.011**
1.Low	13	2.97	0.80		3>1	3.85	1.09		3>2
2.Moderate	141	3.23	0.65		3>2	3.61	0.94		
3. High	248	3.49	0.69			3.94	1.09		
Leadership				**15.01**	**<.001**			**9.56**	**<.001**
1.Low	27	2.99	0.70		3>1	3.32	1.06		3>1
2.Moderate	108	3.16	0.67		3>2	3.56	0.91		3>2
3. High	267	3.51	0.67			3.97	1.07		
Justice				**11.70**	**<.001**			**5.74**	**.003**
1.Low	19	2.95	0.92		3>1	3.44	0.95		3>1
2.Moderate	148	3.23	0.66		3>2	3.64	0.95		3>2
3. High	235	3.51	0.67			3.96	1.10		
Professional growth				**18.17**	**<.001**			**6.86**	**.001**
1.Low	17	3.00	0.95		3>2	3.33	1.29		3>1
2.Moderate	142	3.15	0.61			3.62	0.92		3>2
3. High	243	3.54	0.68			3.97	1.08		

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Factors (n=402)	n	ITS in profession				ITS in current workplace			
		Mean	SD	F-test	p	Mean	SD	F-test	p
Work happiness				**19.82**	**<.001**			**9.06**	**<.001**
1.Low	20	3.05	0.93		3>1	3.57	0.96		3>1
2.Moderate	292	3.29	0.62		3>2	3.71	1.04		3>2
3. High	90	3.76	0.73			4.22	1.02		
Work-life balance				**17.15**	**<.001**			**14.59**	**<.001**
1.Low	54	3.26	0.77		3>1	3.58	1.20		3>1
2.Moderate	268	3.29	0.61		3>2	3.71	1.01		3>2
3. High	80	3.77	0.76			4.36	0.89		

According to table 27, at the level M2, the findings revealed the mean differences of ITSP and ITSW classified by overall and subscales of managerial characteristics as explained at 4.3) and 4.4)

4.3) The findings of the comparison of the means of ITSP

The means score of ITSP among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means scores than nurses who perceived low and moderate managerial characteristics.

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Look at the subscales of managerial characteristics, the findings showed that nurses who perceived high and moderate human capital, leadership, justice, professional growth work happiness, and work-life balance have higher mean than nurses who perceived low human capital, leadership, justice, work happiness and work-life balance at the significant level of .05.

Nurses who perceived high human capital, leadership, justice, work happiness, and work-life balance have higher mean than nurses who perceived low human

capital, leadership, justice, work happiness, and work-life balance at the significant level of .05

4.4) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means than nurses who perceived low and moderate managerial characteristics. In addition, nurses who perceived high managerial characteristics have higher means than those who perceived moderate managerial characteristics.

When considering the subscales of managerial characteristics, the findings showed that nurses who perceived high and moderate leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived low leadership, justice, professional growth, and work happiness and work-life balance at the significant level of .05.

Moreover, nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived moderate human capital, leadership, justice, professional growth, work happiness, and work-life balance at the significant level of .05.

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Nurses who perceived high leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived low leadership, justice, professional growth, work happiness, and work-life balance at the significant level of .05.

Table 28: Comparison of intention to stay classified by job characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n =402)	**n**	**Mean**	**SD**	**t-test**	**p**	**Mean**	**SD**	**t-test**	**p**
Job characteristics				**-6.12**	**<.001**			**-5.47**	**<.001**
1 Moderate.	80	3.01	0.58		2>1	3.35	0.81		2>1
2. High	322	3.47	0.69			3.94	1.07		
Skills				-6.54	<.001			-4.26	<.001
1 Moderate.	67	3.00	0.48		2>1	3.43	0.75		2>1
2. High	335	3.46	0.71			3.90	1.09		
Identity				**-4.35**	**<.001**			**-3.26**	**.001**
1 Moderate.	68	3.08	0.62		2>1	3.52	0.77		2>1
2. High	334	3.44	0.69			3.88	1.09		
Significance				**-5.22**	**<.001**			**-4.63**	**<.001**
1 Moderate.	78	3.08	0.54		2>1	3.40	0.85		2>1
2. High	324	3.45	0.71			3.92	1.07		
Autonomy				**-5.27**	**<.001**			**-3.88**	**<.001**
1 Moderate.	122	3.11	0.70		2>1	3.52	0.91		2>1
2. High	280	3.50	0.66			3.95	1.08		
Feedback				**-5.23**	**<.001**			**-3.79**	**<.001**
1 Moderate.	127	3.12	0.68		2>1	3.55	0.88		2>1
2. High	275	3.50	0.67			3.94	1.10		

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According to table 28, at the Hospital level M2, the findings showed the means difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 4.5) and 4.6)

4.5) The findings of a comparison of the mean of ITSP

The mean of ITSP among subgroups of overall job characteristics, there are significant differences between the group means at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher mean of ITSP than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills variety, task identity, task significance, autonomy, and feedback have higher means of ITSP than nurses who perceived moderate levels of those subscales at the significant level of .05.

4.6) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means of ITSW than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, identity, significance, autonomy, and feedback than nurses who perceived moderate skills, identity, significance, and autonomy at the significant level of .05.

5) Hospital level F1

Table 29-31 showed the mean and SD of ITSP and ITSW as perceived by nurses working in Hospital level F1. In addition, t-test and F-test were used to compare the means score of ITSP and ITSW classified by personal, managerial, and job characteristics.

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Table 29: Compare Mean and SD of ITSP and ITSW classified by personal Characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n=303)	**n**	Mean	SD	t/F-test	p	Mean	SD	t/F-test	p
Sex				**-**	**-**			**-**	**-**
1.Male	2	3.20	0.28			4.50	0.71		
2.Female	301	3.34	0.72			3.94	0.90		
Education level				**0.59**	**.559**			**0.52**	**.613**
1.Bachelor's degree	287	3.34	0.70			3.95	0.87		
2.Higher than BS	16	3.24	0.91			3.79	1.23		
Employed status				**-0.05**	**.964**			**-0.45**	**.651**
1.Civil servant	240	3.34	0.72			3.93	0.90		
2.Not civil servant	63	3.34	0.68			3.99	0.89		
Generation				**0.80**	**.496**			**1.35**	**.258**
2.Babyboom-Gen X*	64	3.44	0.82			4.02	1.04		
3.Gen Y	184	3.31	0.69			3.91	0.85		
4.Gen Z	55	3.30	0.69			3.90	0.89		
Marital status				**3.42**	**.034**			**0.80**	**.451**
1.Single	152	3.24	0.70		2>1	3.89	0.90		
2.Married	133	3.41	0.73		3>1	3.97	0.91		
3.Divorce/Separate	18	3.61	0.65			4.15	0.68		
Working experience				**0.50**	**.779**			**1.11**	**.353**
1.1-5 years	106	3.28	0.61			3.92	0.85		
2.6-10 years	71	3.30	0.75			3.89	0.76		
3.11-15 years	40	3.43	0.65			4.23	0.80		
4.16-20 years	37	3.38	0.88			3.84	0.93		
5 21-25 years	17	3.39	0.78			4.04	1.20		
6. > 25 years	32	3.44	0.80						
Nursing position				**-1.67**	**.097**			**-1.46**	**.147**
1.Practitioner	183	3.20	0.67			3.88	0.88		
2.Professional	120	3.42	0.77			4.04	0.92		
Income				**0.86**	**.491**			**1.96**	**.100**
1. ≤ 20,000 B	75	3.34	0.69			3.89	0.88		

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Factors (n=303)	n	ITS in profession				ITS in current workplace			
		Mean	SD	t/F-test	p	Mean	SD	t/F-test	p
2. 20,001 -30,000 B	124	3.26	0.59			3.83	0.85		
3. 30,001 -40,000 B	63	3.44	0.89			4.17	0.90		
4.40,001– 50,000 B	25	3.44	0.68			4.15	0.90		
5.> 50,000 B	16	3.36	0.96			3.92	1.15		
Working unit				**1.09**	**.359**			**3.84**	**.005**
1.Med-Surg unit**	141	3.26	0.65			3.76	0.84		3>1
3.Ob-Gyn unit	41	3.30	0.73			4.31	0.65		
4.OR/Anesthesia	18	3.44	0.64			3.89	0.87		
6.Special unit	16	3.35	0.58			4.13	0.81		
7.General unit	87	3.46	0.83			4.05	1.03		
Home town				**0.621**	**.538**			**0.172**	**.842**
1.Same area	269	3.35	0.70			3.94	0.89		
2.Nearby hospital	14	3.31	0.79			3.83	1.12		
3.Out of area	20	3.17	0.85			4.02	0.87		

*only four nurses were baby boomer **only one nurse worked at the surgical unit and no ICU nurse * Some categories have > 5 cases; they cannot perform analysis by one-way ANOVA

According to table 29, at the Hospital level F1, the findings showed a mean difference of ITSP and ITSW classified by the overall and subscales of nurse characteristics as explained at 5.1) and 5.2)

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5.1) The findings of intention to stay in the profession (ITSP) as are follows:

1) The means score of ITSP among groups of marital status, including single, married, and divorce /separate, were **significantly different** at a significant level of .05. The post hoc test results revealed that the married group (Mean = 3.41, SD = 0.73) and divorce/separate group (Mean = 3.61, SD = 0.65) have higher mean than single group, (Mean = 3.24, SD = 0.70) at significant level of .05.

2) The means score of ITSP among education level groups were **not significantly different.**

3) The means score of ITSP among generation groups were **not significantly different.**

4) The means score of ITSP among groups of working experience were **not significantly different.**

5) The means score of ITSP among groups of nursing positions were **not significantly different.**

6) The means score of ITSP among groups of income were **not significantly different.**

7) The means score of ITSP among working units were **not significantly different**.

8) The mean score of ITSP among hometown locations were **not significantly different**.

5.2) The findings of intention to stay in the current workplace (ITSW) as are follows:

1) The mean score of ITSW between males and females were **not significantly different**.

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2) The mean score of ITSW among groups of marital status were **not significantly different**

3) The means of ITSW among groups of working experience were **not significantly different**

4) The means score of ITSW among groups of nursing position was **not significantly different**

5) The means score of ITSW among groups of income was **not significantly different.**

6) The means score of ITSW among working units was **not significantly different**.

7) The means score of ITSW among hometown locations was **not significantly different**.

Table 30: Compare Mean and SD of ITSP and ITSW classified by managerial characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
	n	Mean	SD	F-test	*p*	Mean	SD	F-test	*p*
Managerial characteristics				**23.90**	**<.001**			**18.47**	**<.001**
1.Low	7	2.17	0.78		2>1	2.71	1.11		2>1
2. Moderate	107	3.12	0.67		3>1	3.66	0.82		3>1
3. High	183	3.52	0.65		3>2	4.15	0.86		3>2
Human capital				**20.76**	**<.001**			**9.05**	**<.001**
1.Low	20	2.57	0.76		2>1	3.70	1.01		3>1
2.Moderate	115	3.22	0.68		3>1	3.71	0.87		3>2
3. High	168	3.51	0.65		3>2	4.13	0.86		
Leadership				**15.70**	**<.001**			**11.77**	**<.001**
1.Low	14	2.50	1.13		3>1	3.21	1.01		3>1
2.Moderate	82	3.19	0.58		3>2	3.69	0.85		3>2
3. High	207	3.46	0.68			4.10	0.86		
Justice				**18.56**	**<.001**			**12.60**	**<.001**
1.Low	13	2.48	0.83		2>1	3.26	1.26		3>1
2.Moderate	113	3.19	0.70		3>1	3.72	0.81		3>2
3. High	177	3.50	0.65		3>2	4.14	0.86		
Professional growth				**20.36**	**<.001**			**8.87**	**<.001**
1.Low	16	2.50	0.86		2>1	3.63	1.13		3>1
2.Moderate	112	3.20	0.67		3>1	3.71	0.86		3>2
3. High	175	3.51	0.65		3>2	4.12	0.85		
Work happiness				**25.39**	**<.001**			**16.91**	**<.001**
1.Low	10	2.30	0.69		2>1	3.37	0.79		3>1
2.Moderate	232	3.28	0.65		3>1	3.83	0.90		3>2
3. High	61	3.75	0.69		3>2	4.49	0.66		

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Factors		ITS in profession				ITS in current workplace			
	n	Mean	SD	F-test	*p*	Mean	SD	F-test	*p*
Work-life balance				**16.52**	**<.001**			**14.04**	**<.001**
1.Low	31	3.05	1.07		3>1	3.88	0.94		3>1
2.Moderate	194	3.24	0.57		3>2	3.78	0.87		3>2
3. High	78	3.71	0.73			4.38	0.79		

According to table 30, at the Hospital level F1, the findings revealed the mean differences of ITSP and ITSW classified by overall and subscales of managerial characteristics as explained at 5.3) and 5.4).

5.3) The findings of the comparison of the means of ITSP

The means score of ITSP among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means than nurses who perceived low and moderate managerial characteristics.

Look at the subscales of managerial characteristics, the findings showed that nurses who perceived high and moderate human capital, justice, professional growth, and work happiness have higher means than nurses who perceived low means of human capital, justice, professional growth, and work happiness at the significant level of .05.

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Moreover, nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived moderate human capital, professional growth, justice, work happiness, and work-life balance at the significant level of .05.

Nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who

perceived low human capital, leadership, justice, professional growth, work happiness, and work-life balance at the significant level of .05

5.4) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means than nurses who perceived low and moderate managerial characteristics.

When considering the subscales of managerial characteristics, the findings showed that nurses who perceived high to moderate human capital, leadership, justice, professional growth, work happiness, and work-life balance were significantly different at a level of .05.

However, looking at the other subscales of managerial characteristics, the findings presented that nurses who perceived high and moderate leadership, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived low human capital, professional growth, and work happiness at the significant level of .05. Moreover, nurses who perceived high leadership, justice, professional growth work happiness, and work-life balance have higher mean than nurses who perceived moderate leadership, justice, professional growth work happiness, and work-life balance at the significant level of .05.

Nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived low human capital, leadership, justice, professional growth, work happiness, and work-life balance at the significant level of .05.

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Table 31: Comparison of intention to stay classified by job characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n =303)	**n**	**Mean**	**SD**	**t-test**	**p**	**Mean**	**SD**	**t-test**	**p**
Job characteristics				**-4.37**	**<.001**			**-5.20**	**<.001**
1 Moderate.	67	3.02	0.68		2>1	3.46	0.86		2>1
2. High	236	3.43	0.70			4.08	0.86		
Skills				**-3.92**	**<.001**			**-4.86**	**<.001**
1 Moderate.	61	3.07	0.58		2>1	3.46	0.88		2>1
2. High	242	3.41	0.73			4.06	0.86		
Identity				**-4.83**	**<.001**			**-4.73**	**<.001**
1 Moderate.	57	2.95	0.66		2>1	3.46	0.82		2>1
2. High	246	3.43	0.70			4.06	0.88		
Significance				**-4.66**	**<.001**			**-3.93**	**<.001**
1 Moderate.	56	2.99	0.59		2>1	3.53	0.87		2>1
2. High	247	3.42	0.72			4.04	0.87		
Autonomy				**-4.06**	**<.001**			**-4.88**	**<.001**
1 Moderate.	95	3.10	0.70		2>1	3.59	0.84		2>1
2. High	208	3.45	0.69			4.11	0.87		
Feedback				**-4.70**	**<.001**	0.90		**-5.40**	**<.001**
1 Moderate.	97	3.07	0.70		2>1	0.83	0.90		2>1
2. High	206	3.47	0.68			4.13	0.83		

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According to table 315, at the level S, the findings showed the mean difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 5.5) and 5.6)

5.5) The findings of a comparison of the mean of ITSP

The means score of ITSP among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher mean score of ITSP than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, task identity, significance, autonomy, and feedback have higher than moderate means than nurses who perceived skills, identity, significance, autonomy, and feedback at the significant level of .05.

5.6) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means of ITSW than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, task identity, significance, autonomy, and feedback have higher than moderate means than nurses who perceived skills, identity, significance, autonomy, and feedback at the significant level of .05.

6) Hospital level F2

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Table 32-34 showed the mean and SD of ITSP and ITSW as perceived by nurses working in hospital F2 level. In addition, t-test and F-test were used to compare the mean of ITSP and ITSW classified by personal, managerial, and job characteristics.

Table 32: Compare Mean and SD of ITSP and ITSW classified by personal characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n=274)	**n**	Mean	SD	t/F-test	p	Mean	SD	t-test	p
Sex				**1.00**	**.317**			**8.57**	**<.001**
1.Male	5	3.72	0.73			4.87	0.18		1>2
2.Female	269	3.41	0.68			4.00	0.97		
Education level				**0.76**	**.447**			**-0.52**	**.607**
1.Bachelor's degree	261	3.42	0.67			4.01	0.97		
2.Higher than BS	13	3.28	0.85			4.15	0.80		
Employed status				-	-			-	-
1.Civil servant	216	3.38	0.67			4.01	0.97		
2.Not civil servant	3***	3.33	0.85			4.15	0.80		
Generation				1.98	.116			2.35	0.73
1.Baby boomer	6	3.47	0.52			4.44	0.81		
2.Gen X	46	3.22	0.82			3.88	0.93		
3.Gen Y	172	3.48	0.65			4.11	0.94		
4.Gen Z	50	3.37	0.63			3.77	1.04		
Marital status				**0.67**	**.515**			**1.09**	**.339**
1.Single	123	3.47	0.58			4.02	0.92		
2.Married	130	3.37	0.77			4.06	0.98		
3.Divorce/Separate	21	3.45	0.64			3.73	1.09		
Working experience				**3.64**	**.003**			**1.12**	**.352**
1.1-5 years	98	3.46	0.56	0.06		4.02	0.96	0.10	
2. 6-10 years	46	3.38	0.74	0.11		4.04	0.96	0.14	
3.11-15 years	50	3.53	0.58	0.08	3>5	4.09	0.93	0.13	
4.16-20 years	35	3.54	0.73	0.12	4>5	4.16	1.04	0.18	
5. 21-25 years	23	2.88	0.86	0.18		3.59	0.95	0.20	
6. > 25 years	22	3.43	0.76	0.16		4.05	0.92	0.20	
Nursing position				**1.01**	**.315**			**0.20**	**.850**
1.Practitioner	145	3.46	0.63			4.03	0.95		
2.Professional	129	3.37	0.74			4.01	0.98		
Income				**1.46**	**.219**			**0.13**	**.973**

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Factors (n=274)	n	ITS in profession Mean	SD	t/F-test	p	ITS in current workplace Mean	SD	t-test	p
1. ≤ 20,000 B	62	3.35	0.40			4.04	0.94		
2. 20,001 -30,000 B	102	3.52	0.69			4.02	0.94		
3. 30,001 -40,000 B	67	3.44	0.67			3.99	1.07		
4.40,001– 50,000 B	34	3.27	0.88			4.01	0.86		
5.> 50,000 B	9	3.16	1.11			4.22	1.11		
Working unit				**1.30**	**.274**			**2.13**	**.097**
1.Med &Surg unit *	143	3.36	0.64			3.93	1.00		
3.Ob-Gyn unit	11	3.24	0.92			3.61	1.38		
6.Special /ICU/OR**	12	3.47	0.76			4.14	0.85		
7.General unit	108	3.51	0.70			4.17	0.85		
Home town				**0.18**	**.839**			**0.16**	**.848**
1.Same area	255	3.41	0.68			4.02	0.97		
2.Nearby hospital	8	3.55	0.79			4.13	0.89		
3.Out of area	11	3.45	0.79			3.88	0.81		

* only two nurses worked in the surgical unit
** only four nurses worked at OR, and two nurses worked in ICU
*** The category has > 5 cases; they cannot perform analysis by one-way ANOVA

According to table 32, at the Hospital level F2, the findings showed the mean difference of ITSP and ITSW classified by the overall and subscales of nurse characteristics as explained at 6.1) and 6.2)

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6.1) The findings of intention to stay in the profession (ITSP) as are follows:

1) The means score of ITSP among gender groups were **not significantly different.**

2) The means score of ITSP among groups of marital status, including single, married, and divorce /separate, were **not significantly different.**

3) The means score of ITSP among education level groups were **not significantly different.**

4) The means score of ITSP among generation groups were **not significantly different.**

5) The means score of ITSP among groups of working experience **were significantly different** at a level of .05. the post hoc test revealed that the groups of working experience with 16-20 years (Mean = 3.54, SD = 0.73) has higher means score than the group with 21-25 years (Mean = 2.88, SD = 0.86). Also, the groups of working experience with 11-15 years (Mean = 3.53, SD = 0.58) has higher means than the group with 21-25 years (Mean = 2.88, SD = 0.86) at significant level of .05.

. 6) The means score of marital status, including single, married, and divorce /separate, were **not significantly different.**

7) The means score of ITSP among groups of nursing position were **not significantly different.**

8) The means score of ITSP among groups of income were **not significantly different.**

9) The means score of ITSW among hometown locations was **not significantly different**.

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6.2) The findings of intention to stay in the current workplace (ITSW) as are follows:

1) The mean score of ITSW between males and females was **significantly different** at a significant level of .05. The t-test revealed that the groups' gender of male (Mean = 4.87, SD = 0.18) has higher means than female group (Mean = 4.00, SD = 0.97) significant level of .05.

2) The means score of ITSW among groups of education level were **not significantly different.**

3) The means score of ITSW among groups of marital status were **not significantly different**

4) The means score of ITSW among groups of working experience were **significantly different**

5) The means score of ITSW among groups of the working unit were **significantly different**

6) The means score of ITSW among groups of nursing position were **not significantly different**

7) The means score of ITSW among groups of income was **not significantly different.**

8) The means score n of ITSW among working units was **not significantly different**.

9) The means score of ITSW among hometown locations was **not significantly different**.

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Table 33: Compare Mean and SD of ITSP and ITSW classified by managerial characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
	n	**Mean**	**SD**	**F-test**	**Sig**	**Mean**	**SD**	**F-test**	**sig**
Managerial characteristics				**8.38**	**<.001**			**9.69**	**<.001**
1.Low	9	2.76	0.66		2>1	3.48	0.69		3>1
2. Moderate	83	3.27	0.66		3>1	3.69	1.04		3>2
3. High	182	3.52	0.66		3>2	4.19	0.89		
Human capital				**12.99**	**<.001**			**6.23**	**.002**
1.Low	9	3.07	0.78		3>1	3.78	1.00		3>2
2.Moderate	104	3.19	0.60		3>2	3.78	0.96		
3. High	161	3.59	0.68			4.19	0.93		

Factors		ITS in profession				ITS in current workplace			
	n	Mean	SD	F-test	Sig	Mean	SD	F-test	sig
Leadership				**6.76**	**.001**			**7.78**	**.001**
1.Low	16	3.45	0.78		3>2	3.71	0.99		3>2
2.Moderate	64	3.15	0.61			3.66	0.97		
3. High	194	3.50	0.67			4.16	0.93		
Justice				**6.14**	**.002**			**6.98**	**.001**
1.Low	14	3.13	0.81		3>1	3.67	0.99		3>1
2.Moderate	85	3.25	0.63		3>2	3.75	0.97		3>2
3. High	175	3.52	0.68			4.18	0.93		
Professional growth				**7.61**	**.001**			**12.93**	**<.001**
1.Low	10	2.98	0.94		3>1	3.90	0.77		3>2
2.Moderate	83	3.24	0.58		3>2	3.60	0.98		
3. High	181	3.52	0.68			4.22	0.91		
Work happiness				**-3.98**	**<.001**			**-5.90**	**<.001**
2.Moderate	202	3.31	0.61		3>2	3.85	1.00		3>2
3.High	72	3.71	0.77			4.48	0.68		
Work-life balance				**13.52**	**<.001**			**15.29**	**<.001**
1.Low	31	3.43	0.72		3>1	3.96	1.07		3>1
2.Moderate	178	3.28	0.59		3>2	3.83	0.98		3>2
3. High	65	3.78	0.78			4.56	0.62		

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According to table 33, at the level F2, the findings revealed the mean differences of ITSP and ITSW classified by overall and subscales of managerial characteristics as explained at 6.3) and 6.4)

6.3) The findings of the comparison of the means of ITSP

The means of ITSP among subgroups of overall managerial characteristics were significantly different at the level of .05. The post hoc test showed that nurses who perceived high managerial characteristics have higher means than nurses who perceived low to moderate managerial characteristics.

Look at the subscales of managerial characteristics, and the findings showed that nurses who perceived high and moderate human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived low human capital, leadership, justice, professional growth, work happiness and work-life balance at the significant level of .05.

Moreover, nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who perceived moderate human capital, professional growth, justice, and work happiness at the significant level of .05.

Nurses who perceived high human capital, justice, and work-life balance have a higher mean than nurses who perceived low human capital, justice, and work-life balance at a significant level of .05

6.4) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall managerial characteristics were not significantly different at the level of .05. When considering the subscales of managerial characteristics, the findings showed that nurses who perceived high and moderate justice and work-life balance have a higher mean than nurses who perceived low justice and work-life balance at the significant level of .05.

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Moreover, nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean scores than nurses who perceived moderate human capital, leadership, justice, professional growth, work happiness, and work-life balance at the significant level of .05.

Nurses who perceived high human capital, leadership, justice, professional growth, work happiness, and work-life balance have higher mean than nurses who

perceived low high human capital, leadership, justice, professional growth, work happiness, and work-life balance at the significant level of .05.

Table 34: Comparison of intention to stay classified by job characteristics

Factors		**ITS in profession**				**ITS in current workplace**			
(n =227)	**n**	**Mean**	**SD**	**t-test**	**p**	**Mean**	**SD**	**t-test**	**p**
Job characteristics				**-5.33**	**<.001**			**-4.67**	**<.001**
1 Moderate.	55	3.03	0.58		2>1	3.50	1.03		2>1
2. High	219	3.51	0.67			4.15	0.90		
Skills				**-4.10**	**<.001**			**-4.06**	**<.001**
1 Moderate.	46	3.09	0.57		2>1	3.51	1.04		2>1
2. High	228	3.48	0.68			4.12	0.92		
Identity				**-5.64**	**<.001**			**-4.97**	**<.001**
1 Moderate.	41	2.97	0.53		2>1	3.36	0.92		2>1
2. High	233	3.50	0.67			4.14	0.92		
Significance				**-5.01**	**<.001**			**-5.50**	**<.001**
1 Moderate.	49	3.03	0.58		2>1	3.37	1.02		2>1
2. High	225	3.50	0.67			4.16	0.89		
Autonomy				**-3.56**	**<.001**			**-3.74**	**<.001**
1 Moderate.	81	3.20	0.68		2>1	3.69	0.98		2>1
2. High	193	3.51	0.66			4.16	0.93		
Feedback				**-3.61**	**<.001**			**-4.21**	**<.001**
1 Moderate.	87	3.20	0.67		2>1	3.20	0.67		2>1
2. High	187	3.52	0.67			3.52	0.67		

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According to table 34, at the level F2, the findings showed the mean difference of ITSP and ITSW classified by the overall and subscales of job characteristics as explained at 6.5) and 6.6).

6.5) The findings of a comparison of the mean of ITSP

The mean of ITSP among subgroups of overall job characteristics was significantly different at the level of .05. The t-test showed that nurses who perceived

high job characteristics have a higher mean of ITSP than nurses who perceived moderate groups of job characteristics.

When considering the subscales of job characteristics, the findings showed that nurses who perceived high skills, identity, significance, autonomy, and feedback have higher means than groups who perceived moderate skills, identity, significance, autonomy, and feedback at the significant level of .05.

6.6) The findings of a comparison of the mean of ITSW

The means of ITSW among subgroups of overall job characteristics were significantly different at the level of .05. The t-test showed that nurses who perceived high job characteristics have a higher means of ITSW than nurses who perceived moderate job characteristics.

When considering the subscales of job characteristics, the findings from the post hoc test showed that nurses who perceived high means in groups of skills, identity, significance, autonomy, and feedback have than the groups of moderate skills, identity, significance, autonomy, and feedback have higher means than nurses who perceived moderate skills, identity, significant, and autonomy at the significant level of .05.

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CHAPTER V

DISCUSSION, IMPLICATION, AND RECOMMENDATION

This chapter provides a discussion of the study findings, and it includes a discussion of the characteristics of the study sample, tentative hypothesis testing, conclusion, implications for nursing, and recommendations for future research.

Research summary

This cross-sectional survey study aims to investigate intention to stay of nurses in public hospitals under the Ministry of Public Health and compares intention to stay of nurses and hospital types of care delivery regarding organization characteristics, nurses' characteristics, managerial characteristics, and work characteristics. A total of 1,524 participants were recruited from 59 public hospitals' inpatient units under the Ministry of Public Health. The data collection was carried out from April 2020 to July 2020. The research instrument was an electronic questionnaire used to measure the major variables and demographic data. The e-questionnaires consist of four parts: Part one was the Nurse's Characteristics and Socio-demographic Data Form, a researcher-developed consists of 14 questions. Part two was the Management Factors Questionnaires (MFQ) (Chutchawanchanakij, 2017), which consisted of 55 items. Part three was the Job Diagnostic Survey (JDS) (Boonmung, 2009), which consisted of 26 items. Part Four was the Nurses' Intention to Stay Scale (McCain's Intention to Stay Scale (McCloskey, 1990)), which consisted of five items, and the Intent to Stay Scale (Price & Mueller, 1986), which consisted of three items. The validity and reliability of the questionnaires were examined. Descriptive statistics, Independent-

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Samples t-test, and one-way ANOVA under the SPSS for Windows Release 22 version program were used for data analysis and tested the tentative hypotheses.

The results showed that the participants 277 (18.2%) employed in regional hospitals (Hospital level A), 149(9.8%) employed in general hospitals (Hospital level S), 119 (7.8%) employed in small-size general hospitals (Hospital level M1), 402 (26.4%) employed in referral community hospitals (Hospital level M2), 303 (19.9%) RNs employed in large-size community hospitals (Hospital level F1), and 274 (18.0%) employed in medium-sized community hospitals (Hospital level F2), respectively.

The overall nurse participant's demographic characteristics showed a means age of 35.32 (SD=9.86) with a range of 22 to 59 years. In other words, the majority were Generation Y (n=904, 59.3%) employees. Most participants were female in 1500 (98.4%) and held a Bachelor's degree in nursing (n= 1445, 94.81%). The marital status was nearly equal between single (n=762, 50.00%) and married (n=682, 44.80%), widow (n=66, 4.33%), and divorce/separate (n=14, 0.87%). Nurses employed status mostly was a civil servant (n=1261, 82.70%), then temporary employee (n=191, 12.50%), Permanent employee (n=49, 3.20%), and Governmental employee (n=23, 1.50%) respectively. Most of them have working experience with a mean of 11.60 (SD=9.58) and years of working experience between 1-5 years (n=515, 33.8%). The majority of nurses were working at Medical units (n=604, 39.60%) and the General units (mixed patients unit) (n=259, 17.00%). The majority of nursing position was practitioner (n=840, 55.10%) and then, professional nurses (n=676, 44.40%). The majority of participants had income between 20,001-30,000

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Baht/month (n=583, 38.3%). Most participants lived nearby their current workplace (n=1347, 88.40%).

Comparing six hospital levels found that RNs perceived ITSP at a moderate level range from 53.30-61.30%. The highest percentage of ITSP was at hospital level M1 (61.30%), and the lowest of ITSW at hospital level F2. Moreover, RNs perceived ITSW at a high-level range from 61.7-72.6%. The highest percentage of ITSW was at hospital level F2 (72.60%) and lowest at hospital level A (61.70%).

Moreover, the results from Independent-Samples T-Test (*t*-test) and one-way ANOVA revealed the means difference at all hospital levels. Also, post hoc test showed that the overall of nurses' perceived ITSP and ITSW according to the managerial characteristics and job characteristics have a statistically significant level at .05.

1. Demographic characteristics of the participants

The results revealed that the participants 277 (18.2%) employed in regional hospitals (Hospital level A), 149(9.8%) employed in general hospitals (Hospital level S), 119 (7.8%) employed in a small-size general hospital (Hospital level M1), 402 (26.4%) employed in referral community hospitals (Hospital level M2), 303 (19.9%) RNs employed in large-size community hospitals (Hospital level F1), and 274 (18.0%) employed in a medium-sized community hospital (Hospital level F2), respectively.

The nurse participant's demographic characteristics showed a means age of 35.32 (SD=9.86) with a range of 22 to 59 years old. Most of nurse participants were female (n=1,500, 98.40%). The majority of the participants had marital status nearly

equal between single (n=762, 50.00%) and married (n=682, 44.80%). Most participants graduated in bachelor's degree (n= 1445, 94.81%). Almost thirty-four percent of participants have work experience less than six years (n=515). The civil servant was the majority of their employed status (n=1,261, 82.70%). Most participants had income between 20,001-30,000 baht (n=583, 38.3%). The majority of participants with the nursing position was as staff nurse (n=840, 55.10%). Nearly forty percent of the participants were worked in the Medical unit (n=604, 39.6%). The majority stay in the same area of their workplace. The majority was Generation Y (n=904, 59.3%).

The nurse demographic characteristics similar to the previous study showed that the majority had working experience 0.5-5 years (Gizaw et al., 2018). The other existing studies revealed that most employment status was a civil servant (78.65%). The marital status was different from the current research that suggested married status was the majority of that study, with 54.4% (Nasornjai, Nuysri, & Lemsawasdikul, 2016). The study also mentioned income was an important variable related to nurses' intention to stay and impact the decision-making to leave or remain in the employees (Chen, Rasdi, Ismail, & Asmuni, 2017; Sohaba, 2012). The previous study stated that nurses with a higher income have a higher chance of 1.5 times of staying in the job more than those with less income (Tangchatchai et al., 2011). Moreover, another study suggested RNs (51.56%) stay nearby their workplace (Pongsuwan, Noimuenwai, & Maruo, 2019).

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2. Level of nurses intention to stay in the profession and the current workplace

2.1 Level of nurses intention to stay in the profession

The participants perceived their plan to keep this job for at least two or three years at a moderate level (n=416, 27.3%). Then, nurses wanted to stay at the job at a high level (n=532, 34.9%). Also, nurses perceived that they would probably spend the rest of their careers in this job at a moderate level (n=563, 36.9%). Moreover, nurses planned to work at their present job as long as possible at a high level (n=596, 39.1%). Finally, nurses would not leave the current job at a moderate level (n=488, 32%). These results similar to the previous study that found that nurses planned to work at their present job as long as possible at a high level, and nurses would not leave the current job at a moderate level (Sornpho, 2010).

According to nurses perception of intention to stay in the profession (ITSP) classified by nurse's demographic characteristics, the study found at a moderate level that refers to they are not sure to stay in the profession. Nurse demographic characteristics promote ITSP include marital status at the groups of single, married, and divorcé. The working experience was a significant difference among groups with experience in 1-5 years, 6-10 years, and 21-25 years. The nursing position also was a significant difference among groups with staff nurse, profession, and senior profession. Finally, income was significantly different among groups, specifically in the groups of 30,001-40,000 and income less than 20,000 bath, and groups income more than 50,000 bath and income less than 20,000 bath. The results were confirmed by the reasons to stay in the profession that disclosed that job security, having incomes for family expenditure, love to be a nurses, getting a career after graduation,

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and job value promoted intention to stay in the profession. These results should be an alarm for the nurse manager to close up and investigate deeper to motivate them to stay in the profession by creating a good career plan for them.

In addition, nurse (demographic) characteristics or personal factors play a vital role in decision-making to stay or leave the organization (Lee, 1966). Moreover, intention to stay as perceived by nurses regarding demographics characteristics. It indicated that the mean of ITSP was ranging from 3.26 - 4.08. Nurse characteristics have a highest mean score of ITSP were perceived by nurses with higher education than BS (Mean =3.52, SD =1.02) , baby boomer generation (Mean =3.53, SD =0.51), having marital status of divorce/separate senior (Mean =3.56, SD =0.70) , working experience of 11-15 years (Mean =3.51, SD =0.68), working at special unit (Mean =3.48, SD =0.65, having position of staff nurse (Mean =4.08, SD =0.63), earning income more than 50,000 baht (Mean =3.53 SD =0.81), living nearby hospital (Mean =3.41, SD =0.67) and working at hospital of level S (Mean =3.43, SD =0.68).

Nurse characteristics or personal factors play a vital role in decision-making to stay or leave the organization regarding their self-evident, such as income, marital status (married and divorced), family (parent, wife, husband, children), and geographical locations (rural-urban) (Lee, 1966). In the current study, nurse demographic characteristics were some similarities and differences to existing studies. The previous studies indicated that nursing positions, age, and years of employment significant toward nurses' intention to stay in nursing (Wang et al., 2012). In contrast, a South African study argued that increasing age was found to less intention to stay. This study further stated that educational level was significantly and negatively associated with ITSP in those higher educated nurses were more than twice as likely

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to consider leaving the profession (Engeda et al., 2014). A study in Japan revealed that lower levels of education and a less year of experience were associated with less intention to stay (Kudo, 2006).

However, in Thailand, nurses who earned higher than BSN get more income and higher nursing positions. Moreover, RNs, who worked in a public hospital, pursued a civil servant status, and were more experienced in nursing were positively retained in the current workplace and the profession (Sawangdee, 2018). For the geological location, it is significant for RNs to stay nearby the workplace, similar to other studied by Chutchawanchanakij (2017) and Sawaengdee (2017). These geographical locations might promote ITSW, and then the profession, especially in community hospitals.

Besides, investigated intention to stay in the profession (ITSP), the results showed that the overall results of the nurses' intention to stay exhibited that ITSP was at a moderate level, The results congruence with the previous studies showed the level of ITSP in the community hospitals at the Health Area 9, 11, and regional hospitals in the Eastern region have a moderate level (Chupan, Khumyu, Vatanasin, & Vatanasin, 2017; Sornpho, 2010; Thongiran, 2015). Also, nurses perceived ITPW at a moderate level (Chitpakdee, Nansupawat, & Wichaikhum, 2013; Kaewboonchoo, Yingyuad, Rawiworrakul, & Jinayon, 2014; Khaowphong, 2013).

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Comparing six hospital levels found that RNs perceived ITSP at a moderate level range from 53.30-61.30%. Of this level, the highest percentage of ITSP was at hospital level M1 (61.30%), and the lowest of ITSP at hospital level F2 (53.3%). Moreover, the results from Independent-Samples t-test and one-way ANOVA revealed the means difference at all hospital levels. Also, post hoc test showed that the

overall of nurses' perceived ITSP according to the managerial characteristics and job characteristics have a statistically significant level at .05. The results similar to previous study suggested that

Moreover, the study showed that job and management variables had a moderate level to promote nurse satisfaction and organizational climate (Maihom, 2015). The existing studies demonstrated managerial characteristics enhance intention to stay in the current workplace and the profession (Chutchawanchanakij, 2017; Nasornjai, 2016). The study indicated human capital promoted nurses' perception of intention to stay. Transformational leadership also influence nurses' intention to stay in the current workplace (Liang, Tang, Wang, Lin, & Yu, 2016). Moreover, justice, professional growth, work happiness, work-life balance promoted intention to stay (Patthapong & Volrathongchai, 2018). Job characteristics included skill variety, task identity, task significance, autonomy, and feedback found allied with intention to stay in the current workplace (Khaowphong, 2013).

2.2 Level of nurses intention to stay in the current workplace

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The study showed nurses perception of intention to stay in the current workplace at a highest level. The study also indicated that nurses thought that they would to stay in the hospital within the next year at a high level (n=665, 43.6%). Also, nurses would like to work in the current workplace other than another hospital at the highest level (n=494 32.4%). Moreover, nurses would like to stay in this hospital at a high level (n=632, 41.5%). This study's results opposed the previous study that they found intention to stay in the current workplace at tertiary level in the Maldives at a moderate level (Moosa, Chontawan, & Akkadechanunt, 2016).

The study also exhibited nurses' perceived intention to stay in the current workplace at a high level based on their demographic characteristics, including gender, education level at a higher than Bachelor's degree, employed status, generation, marital status, working experience, nursing position, income, and hometown.

The evidence indicated that nurse demographic characteristics or personal factors as push or pull factors. These factors play a vital role in decision-making to stay or leave the organization based on their condition, such as income, marital status (married and divorced), family (parent, wife, husband, children), and geographical locations (rural-urban) (Lee, 1966). Likewise, in this current study, nurses' perception of intention to stay in the current workplace was classified by demographic characteristics, means difference, including income, nursing position, working unit, hometown. The top three nurses' groups sure to stay in the current workplace were nurses holding the position of senior professional (100%), Baby boomer generation (79.24%), having the marital status of divorce/separate (73.75%), and nurses working in the F2 hospital level (72.60%), respectively.

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In addition, the study in Thailand showed that nurses who earned higher than BSN get more income and higher nursing positions. Moreover, RNs, who worked in a public hospital, pursued a civil servant status, and were more experienced in nursing, were positively retained in the current workplace (Sawangdee, 2018). For the geological location, it is significant for RNs to stay nearby the workplace, similar to other studied by Chutchawanchanakij (2017) and Sawaengdee (2017). These geographical locations might promote ITSW, especially in community hospitals. The results congruence with the previous studies showed the level of ITSW at a moderate

level (Chitpakdee, Nansupawat, & Wichaikhum, 2013; Kaewboonchoo, Yingyuad, Rawiworrakul, & Jinayon, 2014; Khaowphong, 2013).

According to the comparison among six hospital levels showed that RNs perceived ITSW at a highest level. At this level, the highest percentage of ITSW found at hospital level F2 (72.60%) and lowest at hospital level A (61.70%). Moreover, the results from Independent-Samples t-test and one-way ANOVA revealed the means difference at all hospital levels. Also, post hoc test showed that the overall of nurses' perceived ITSW according to the managerial characteristics and job characteristics have a statistically significant level at .05.Similarly, job characteristics, and organizational characteristics were a moderate level to promote nurse intention to stay in community hospitals in Phetabon province (Nasornjai, & Limdsawasdikul, 2015).

The previous studies confirmed managerial characteristics enhance intention to stay in the current workplace (Chutchawanchanakij, 2017; Nasornjai, 2016). The study indicated human capital promoted nurses' perception of intention to stay. Transformational leadership also influence nurses' intention to stay in the current workplace (Liang, Tang, Wang, Lin, & Yu, 2016). Moreover, justice, professional growth, work happiness, work-life balance promoted intention to stay (Patthapong & Volrathongchai, 2018). Job characteristics included skill variety, task identity, task significance, autonomy, and feedback found allied with intention to stay in the current workplace (Khaowphong, 2013).

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3. Compare intention to stay of nurses with various personal characteristics, managerial characteristics, organizational characteristics, and work characteristics through hospital types of care delivery.

3.1 compare ITSP and ITSW based on demographic characteristics and hospital levels

There were differences in nurses' perceptions of managerial characteristics, work characteristics, and intention to stay in the profession, and the current workplace was analyzed according to their demographics characteristics.

Nurses perceived intention to stay in the profession (ITSP) differently in education level in groups of BS and higher than BS in the hospital level A and M1. The higher education level than BS group has higher means than BS groups statistically significant at .05. The results indicated that the nurses who earned higher than BS required at hospital level A and M1 to promote better care quality. Similarly, nurses' perceived intention to stay in the current workplace (ITSW) according to their education levels is higher than that of the BS groups. Therefore, professional growth promoted nurses' career path followed by the people excellence policy (The Ministry of Public Health, 2017).

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Moreover, nurses perceived ITSP and ITSW differences in the marital status between single and married status groups, working unit between the medical unit, surgical unit, Ob-Gyn unit, ICU, OR/Anes unit, a special unit, and the general unit at hospital level M2. This community referral hospital has specifics characteristics for referral community hospital that can support other hospitals within the health network and reduce referral to general hospital as well as support the primary care network of

each district. Therefore, the capacity of this hospital level has to be effective for services.

3.2 Compare ITSP and ITSW classified by managerial characteristics

Nurses perceived ITSP overall at a moderate level according to the managerial characteristics at all hospital levels (A, t(277) = -2.68, p= .008; S, t(119) = -2.59, p=.011; M1 t(117) = -3.96, p<.001); M2, f(2, 116) = 17.84, p<.001; F1, f(2, 116) = 23.90, p<.001; F2 f(2, 116) = 8.38, p<.001. There were differences between the groups of low, moderate, and high groups. These results indicate that nurses perceived managerial characteristics based on human capital, leadership, justice, professional growth, work happiness, and work-life balance at the hospital level or organizational characteristics. The results congruence with Taunton et al., (1997) suggested that managerial characteristics(leadership, work activity), organizational characteristics (justice, promotion opportunity), nurses characteristics promote nurses retention (Taunton, Boyle, Woods, Hansen, & Bott, 1997). Similar to a study in Thailand revealed that organizational characteristics predicted job retention of nurses in Regional hospitals in the Northeast region (Tangchatchai, Siritarungsri, Sripunworasakul, & Rungkawat, 2011). This result, similar to the previous study, suggested that professional development promotes nurses' nurse retention (Chutchawanchanakij, 2017). The participant also reported their reasons to stay in the profession by supporting professional growth with career development. Also, work happiness, and work-life balance were significant differences (p<.05).

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In addition, Nurses perceived ITSW overall at a high level according to the managerial characteristics at hospital levels (M2, f(2, 116) = 8.76, p<.001; F1, f(2, 116) = 18.47, p<.001; F2 f(2, 116) = 9.69, p<.001) with statistically significant level

at .05. But there were no significant differences in the means among hospital level A, S, and M1. It might be those three hospital levels are similar in the organizational characteristics as the MOPH policy.

3.3 Compare ITSP and ITSW classified by job characteristics

Nurses perceived ITSP and ITSW according to job characteristics differently. The mean of ITSP among subgroups of overall job characteristics was significantly different at the level of .05. at all hospital level (A $t(227)=-2.65$, $p =.010$; S, $t(149)=-4.03$, $p<.001$; M1 $t(119)=-2.51$, $p=.013$; M2, $t(116) = -6.12$, $p<.001$; F1, $t(303) = 1-4.37$, $p<.001$; F2 $t(274) = -5.33$, $p<.001$). Nurses who perceived a high level of job characteristics have a higher mean than nurses who perceived moderate job characteristics based on nurses who perceived high means different in skills, identity, significance, autonomy, and feedback. The results of the current study, similar to the previous study, stated that job characteristics promote intention to stay of nurses who work in a tertiary hospital (Muneerat, Suwannapong, Tipayamongkholgul, & Manmee, 2019). This study further stated that autonomy plays a great role, with significant differences in all hospitals. Many previous studies also indicated that autonomy is significant to ITSP. (Muneerat, Suwannapong, Tipayamongkholgul, & Manmee, 2019).

There were means difference among groups and nurses' perceptions of work characteristics, and intention to stay in the current workplace. Nurses perceived overall at a moderate level at all hospital levels (A $(277)=-1.25$, $p=.001$; S, $t(149)=-3.45$, $p<.001$; M2, $t(116) = -5.47$, $p<.001$; F1, $t(303) = -5.20$, $p<.001$; F2 $t(274) = -4.67$, $p<.001$) statistics significant level at .05 except there was not different among group in hospital level M1.

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This study confirms that job characteristics promote ITSW, similar to Malaysia's study suggested that job autonomy, job feedback, task identity, and task significance are important .variables to promote work engagement. The findings of this study highlighted the need to incorporate these core dimensions in nursing management to foster ITSW (Othman, 2019).

Nurses perceived ITSW overall at a high level according to managerial characteristics at all hospital levels . The results of this current study were confirmed by previous studies that organizational characteristics relevant effect related to intrinsic motivation on employees to stay in the organizations. This current study was similar to Boyle's intention to stay model, confirmed that the managerial characteristics explained nurses' intention to stay in the current workplace with 52% (Boyle et al., 1999). Also, this study further stated leadership style influenced nurses' intention to stay in the current workplace.

For work characteristics, the findings showed nurses perceived an overall means difference among groups at all hospital levels level of ITSP and ITSW classified by organizational types (hospital levels). The results indicated ITSP among subgroups of hospital levels were not different, while the mean of ITSW among subgroups of hospital levels was significantly different at the level of .05. The post hoc test showed that nurses working at a hospital with F2 level have a higher mean than nurses working at a hospital with A, M1, and M2 levels. Besides, nurses working at a hospital with F1 level have a higher means score than nurses working at a hospital with M1 level. These study findings indicates that organizational characteristics, specifically – structure, membership, relationship, and strategy, affect management strategies, especially at each hospital level.

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4. Reasons to stay in the profession and the current workplace

Moreover, the top five reasons of intention to stay in the profession were job security (28.10%), having income for family expenditures (20.70%), Love to be a nurse (13.60%), getting a career after graduation (8.70%), and job value (8.50%), respectively.

Meanwhile, the top five reasons of intention to stay in the current workplace were being able to work in a hospital near home (62.10%), Working with a scholarship after graduation (18.20%), Getting a position of civil servant here (6.10%), Getting a position of civil servant here(4.60%) and Like to work at the big hospital (1.90%), respectively.

Even though the reasons for ITSP and ITSW are a liter bit different. Nurses' intention to stay in the profession focuses on job security related to their opinion to have security in their lives. They love to be nurses and having job value. These reasons indicate characteristics of nurses' intention to stay in the profession specifically. So, life situations influenced nurses' decision to remain or end employment (Abel, 2014). While nurses' intention to stay in the current workplace focus on geographical location near their workplace and desire to get civil servant status. Also, they want to get challenging work in a bigger workplace to get more experience as their thought.

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Limitations of the study

This study is a cross-sectional survey design. The accessibility of this study was nurses working with in-patient in public hospitals only Also, the study was conducted during widespread COVID-19 and used e-questionnaire. The participant might not like to answer the question regarding the small letter and could not see the

full screen of the questionnaire very well. The research coordinator performed the data collection process on this study with randomly select participants who met the inclusion criteria. These limitations might impact the result of the current study as confounding factors. However, the sample size at 1,524 could large enough to strengthen the generalization of these findings.

The implication of this study

1. Satisfactory conditions of job security, income, civil servant status, love to be a nurse, job value, and scholarship should be an essential strategy for nursing workforce planning in Thailand.

2. Scholarship for the project "One nurse One sub-district" to cultivate the high school students to get in the nursing profession and stay at their hometown after graduation, specifically in community hospitals.

3. Nurse's managers and policymakers should catch up with the groups of nurses who perceived with both "not sure to stay in the profession" and "not to stay in the profession and the current workplace" to prevent them from leaving the current workplace and the profession.

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4. A civil servant status is an excellent tool for motivation nurses to employ in the profession and the current workplace of the public hospital.

5. The geographical location (live in the same area of the workplace) plays a vital role to stay in the current workplace. So, the facility and household to support nurses are expectation for the future of nurses who stay at the current workplace.

6. These findings are useful for workforce planning at the hospitals and Healthcare policy.

Recommendation for further study

1) The study showed the level of intention to stay in the profession was at a moderate level, indicating not sure to stay in the profession. Therefore, a future study could dig deeper to investigate factors influencing intention to stay in the profession.

2) Creating the project using experimental intervention to promote intention to stay of nurses in the profession and in the workplace that focuses on leadership style, work happiness, work-life balance, and job security. It is the best way for recommendation to study further.

3) This study's finding indicated nurse characteristics, such as educational level and working unit, to formulate strategies to promote nurses and human resources in healthcare to prevent early departure from the hospital level A and the nursing profession.

4) The top three reasons for nurses' intention to stay in the profession was "love to be a nurse." Therefore, nurse managers, and policymakers should create a recognition program in Thailand to be recognized those nurses by an organization and Thailand Nursing and Midwifery Council.

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5) The future study suggests nurses' intention to stay in the current workplace and the profession and compare private hospitals and government hospitals.

6) The future study can conduct an intervention to promote intention to stay in the profession and the current workplace.

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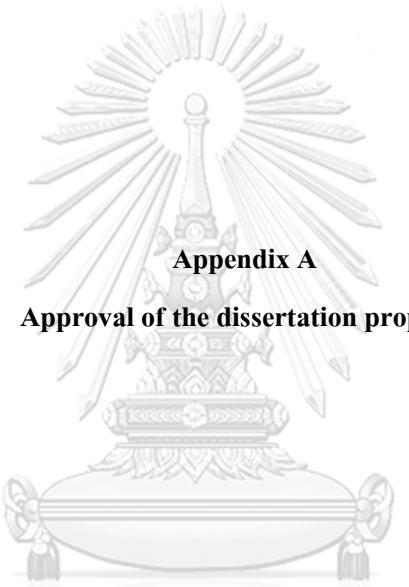
จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

APPENDICES

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY



Appendix A

Approval of the dissertation proposal

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

ประกาศ

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

เรื่อง การอนุมัติหัวข้อดุษฎีนิพนธ์ ครั้งที่ 1/2562 ประจำปีการศึกษา 2562

ตามที่คณะพยาบาลศาสตร์ ได้มีประกาศ เรื่อง การอนุมัติหัวข้อดุษฎีนิพนธ์ ครั้งที่ 6/2559 ประจำปีการศึกษา 2559 ประกาศ ณ วันที่ 1 มิถุนายน 2560 แล้วนั้น เนื่องจากมีการปรับแก้บางส่วน จึงขอยกเลิกประกาศหัวข้อวิทยานิพนธ์ฉบับดังกล่าว และใช้ประกาศฉบับนี้แทนดังนี้

นิสิตผู้ทำวิจัยและอาจารย์ที่ปรึกษาดุษฎีนิพนธ์

รหัสนิสิต	5777401836
ชื่อ-นามสกุล	นางรตา ศรีสอาด
สาขาวิชา	พยาบาลศาสตร์ (นานาชาติ)
ประธานกรรมการ	**รองศาสตราจารย์ ดร. วราภรณ์ ชัยวัฒน์**
อาจารย์ที่ปรึกษาหลัก	**รองศาสตราจารย์ ดร. จินตนา ยูนิพันธุ์**
อาจารย์ที่ปรึกษาร่วม	**รองศาสตราจารย์ ดร. อารีย์วรรณ อ่วมตานี**
อาจารย์ที่ปรึกษาร่วม	**ผู้ช่วยศาสตราจารย์ ดร. ชนกพร จิตปัญญา**
กรรมการ	รองศาสตราจารย์ ดร. จิราพร เกศพิชญวัฒนา
กรรมการ	รองศาสตราจารย์ ดร. โชติกา ภาษีผล
กรรมการภายนอก	ดร. กฤษดา แสวงดี
ชื่อหัวข้อดุษฎีนิพนธ์	ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย UNDERSTANDING NURSES' INTENTION TO STAY: A CROSS-SECTIONAL SURVEY IN THAILAND
ครั้งที่อนุมัติ	1/2562
ระดับ	ปริญญาเอก

จากมติคณะกรรมการบริหารคณะพยาบาลศาสตร์ ครั้งที่ 19/2562 วันที่ 22 ตุลาคม 2562

ประกาศ ณ วันที่ 9 ธันวาคม พ.ศ. 2562

(รองศาสตราจารย์ ดร. วราภรณ์ ชัยวัฒน์)

คณบดีคณะพยาบาลศาสตร์

Appendix B

Approval of ethical review board

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

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

COA No. 108/2563

ใบรับรองโครงการวิจัย

โครงการวิจัยที่ 036.1/63	:	ความเข้าใจในการตั้งใจอยู่ในงานของพยาบาลวิชาชีพ : การศึกษาภาคตัดขวางในประเทศไทย
ผู้วิจัยหลัก	:	นางรตา ศรีสอาด
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.....
(รองศาสตราจารย์ นายแพทย์ปรีดา ทัศนประดิษฐ)
ประธาน

ลงนาม นันทรี ชัยชนะวงศาโรจน์
(รองศาสตราจารย์ ดร.นันทรี ชัยชนะวงศาโรจน์)
กรรมการและเลขานุการ

วันที่รับรอง : 24 เมษายน 2563 **วันหมดอายุ** : 23 เมษายน 2564

เอกสารที่คณะกรรมการรับรอง

1) โครงการวิจัย
2) เอกสารข้อมูลสำหรับผู้มีส่วนร่วมในการวิจัยและหนังสือแสดงความยินยอมของผู้มีส่วนร่วมในการวิจัย
3) ผู้วิจัย
4) แบบสอบถาม

เลขที่โครงการวิจัย 036.1/63
วันที่รับรอง 24 เม.ย. 2563
วันหมดอายุ 23 เม.ย. 2564

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. โครงการวิจัยไม่เกิน 1 ปี ส่งแบบรายงานสิ้นสุดโครงการวิจัย (AF 02-14) และบทคัดย่อผลการวิจัยภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น สำหรับโครงการวิจัยที่เป็นวิทยานิพนธ์ให้ส่งบทคัดย่อผลการวิจัย ภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น

หนังสือรับรองการพิจารณาจริยธรรมการวิจัยในมนุษย์ จังหวัดจันทบุรี/เขตสุขภาพที่ 6

สำนักงานคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ จังหวัดจันทบุรี/เขตสุขภาพที่ 6
โรงพยาบาลพระปกเกล้า อำเภอเมือง จังหวัดจันทบุรี
เอกสารรับรองเลขที่ CTIREC 037 วันที่ 30 เมษายน 2563
ชื่อโครงการวิจัยเรื่อง

ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย
UNDERSTANDING NURSES' INTENTION TO STAY: A CROSS-SECTIONAL SURVEY IN THAILAND

เลขที่โครงการ	CTIREC 031/63
ชื่อหัวหน้าโครงการ	นางรตา ศรีสอาด
หน่วยงานที่สังกัด	คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
วิธีการทบทวน	การพิจารณาโครงการวิจัยแบบเร่งด่วน
รายงานความคืบหน้า	เมื่อดำเนินการเสร็จสิ้นแต่ไม่เกิน 1 ปี

เอกสารที่ได้การรับรอง

1. โครงร่างงานวิจัยเรื่อง ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย Version 1 Date 30/04/63
2. แบบเอกสารชี้แจงข้อมูลสำหรับอาสาสมัคร (Participant information sheet) Version 1 Date 30/04/63
3. แบบเอกสารแสดงความยินยอมโดยได้รับการบอกกล่าว (Informed consent form) Version 1 Date 30/04/63
4. เครื่องมือที่ใช้ในการวิจัย
   - แบบสอบถามความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย Version 1 Date 30/04/63
   - ส่วนสอบถามความสมัครใจเข้าร่วมกับโครงการนี้และยินยอมตอบแบบสอบถาม Version 1 Date 30/04/63
5. แบบอัตตประวัตินักวิจัย Version 1 Date 30/04/63

คณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ จังหวัดจันทบุรี/เขตสุขภาพที่ 6 ขอรับรองว่าโครงการดังกล่าวข้างต้นได้ผ่านการพิจารณาเห็นชอบโดยสอดคล้องกับแนวทางที่เป็นมาตรฐานสากลได้แก่ Declaration of Helsinki, The Belmont Report, CIOMS Guideline และ International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

ลงนาม .....
(ดร.พรทิพย์ สุขอดิศัย)
เลขานุการคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ จังหวัดจันทบุรี/เขตสุขภาพที่ 6

ลงนาม .....
(นายแพทย์ธีรยุทธ นัมคณิสรณ์)
ประธานคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ จังหวัดจันทบุรี/เขตสุขภาพที่ 6

เอกสารรับรองจริยธรรมทางการวิจัย

เอกสารฉบับนี้ เพื่อแสดงว่า โครงการวิจัย
เรื่อง ความเข้าใจการตั้งอยู่ในงานของพยาบาล การศึกษาภาคตัดขวางในประเทศไทย

ผู้วิจัย คือ นางรตา ศรีสอาด
หน่วยงาน คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ได้ผ่านการพิจารณาจากคณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลสุราษฎร์ธานีแล้ว และเห็นว่า ผู้วิจัยต้องดำเนินการตามโครงการวิจัยที่ได้กำหนดไว้แล้ว หากมีการปรับเปลี่ยนหรือแก้ไขใด ๆ ควรผ่านความเห็นชอบหรือแจ้งต่อคณะกรรมการจริยธรรมทางการวิจัยอีกครั้ง

ออกให้ ณ วันที่ ๒๔ เดือนมิถุนายน พ.ศ. ๒๕๖๓

ลงชื่อ
(นายตามพ์ มุกต์มณี)
นายแพทย์ ระดับชำนาญการ
ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์

ลำดับที่๕๘/๒๕๖๓

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลสุราษฎร์ธานี ถ.ศรีวิชัย อ.เมือง จ.สุราษฎร์ธานี ๘๔๐๐๐
โทร. (๐๗๗) ๙๑๕๖๐๐ ต่อ ๗๔๐๘, โทรสาร (๐๗๗) ๙๑๕๖๔๒

เอกสารรับรองโครงการวิจัย เลขที่ BSH-IRB ๐๒๙/๒๕๖๓
โดย
คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน โรงพยาบาลพุทธโสธร

ชื่อโครงการ : โครงการวิจัยเรื่อง "ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย"

ผู้วิจัยหลัก : นางรตา ศรีสอาด

คณะกรรมการจริยธรรมการวิจัยในคน โรงพยาบาลพุทธโสธร พิจารณาแล้ว มีมติเอกฉันท์ให้การรับรอง โครงร่างการวิจัยตามขอบข่ายที่เสนอขอดำเนินการวิจัย

วันที่รับรอง : ๘ มิถุนายน ๒๕๖๓

วันหมดอายุ : ๗ มิถุนายน ๒๕๖๔

โดยผู้วิจัยจะดำเนินการวิจัยในโรงพยาบาลพุทธโสธร ดังนี้

๑. มีกระบวนการคุ้มครองอาสาสมัครงานวิจัย ตามรายละเอียดที่เสนอขออนุมัติจริยธรรมวิจัย
๒. ดำเนินการเก็บรวบรวมข้อมูลตามกระบวนการวิจัยที่ขอรับการรับรองทุกขั้นตอน
๓. รายงานเหตุการณ์ไม่พึงประสงค์ที่เกิดขึ้นกับอาสาสมัครเข้าร่วมการวิจัยต่อคณะกรรมการฯ
๔. รายงานความก้าวหน้า/การยุติโครงการวิจัยต่อคณะกรรมการฯ
๕. ส่งรายงานวิจัย ฉบับสมบูรณ์แก่โรงพยาบาลพุทธโสธร จำนวน ๑ เล่ม

ลงนาม.....
(นายเวทิส ประทุมศรี)
ประธานคณะกรรมการพิจารณาจริยธรรมการวิจัยในคน
โรงพยาบาลพุทธโสธร

ลงนาม.....
(นางสาวสมบัติ ชุติมานุกูล)
ผู้อำนวยการโรงพยาบาลพุทธโสธร

Scanned with CamScanner

ที่ อว 64.11/ 0573

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

17 มีนาคม 2563

เรื่อง ขอเสนอโครงการวิจัยเพื่อขอรับการพิจารณาจริยธรรมการวิจัย

เรียน ผู้อำนวยการโรงพยาบาลสวรรค์ประชารักษ์

สิ่งที่ส่งมาด้วย 1. โครงร่างวิจัย จำนวน 3 ชุด
2. เครื่องมือที่ใช้ในการวิจัย จำนวน 3 ชุด
3. เอกสารข้อมูลสำหรับผู้ที่มีส่วนร่วมในการวิจัย จำนวน 3 ชุด
4. หนังสือแสดงความยินยอมเข้าร่วมวิจัย จำนวน 3 ชุด

เนื่องด้วย นางรตา ศรีสอาด นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาดุษฎีนิพนธ์ เรื่อง "ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล การศึกษาภาคตัดขวางในประเทศไทย" โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาดุษฎีนิพนธ์ รองศาสตราจารย์ ดร.อารีย์วรรณ อ่วมตานี และผู้ช่วยศาสตราจารย์ ดร.ชนกพร จิตปัญญา เป็นอาจารย์ที่ปรึกษาดุษฎีนิพนธ์ร่วม ประสงค์จะขอเสนอรับการพิจารณาจริยธรรมการวิจัย ทั้งนี้โครงการวิจัยได้ผ่านการคัดกรองการวิจัย เพื่อเข้ารับการพิจารณาจริยธรรมโดยกลไกที่เกี่ยวข้องระดับคณะแล้ว

จึงเรียนมาเพื่อโปรดพิจารณาอนุเคราะห์ให้ นางรตา ศรีสอาด เสนอโครงการวิจัยเพื่อขอรับการพิจารณาจริยธรรมการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.วราภรณ์ ชัยวัฒน์)
คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 0-2218-1131 E-mail : fonbox@chula.ac.th
อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ โทร. 0-2218-1153
อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ดร.อารีย์วรรณ อ่วมตานี โทร. 0-2218-1363
ผู้ช่วยศาสตราจารย์ ดร.ชนกพร จิตปัญญา 0-2218-1366
ชื่อนิสิต นางรตา ศรีสอาด โทร. 086-337-7956

ผ่านการพิจารณาจริยธรรมการวิจัย
ในคนเรียบร้อยแล้ว
- เห็นควรแจ้ง ก. การพยาบาล

(แพทย์หญิงชนิญญา พัชนพักตร์ภิญโญ)
ประธานคณะกรรมการจริยธรรมการวิจัยในคน
โรงพยาบาลสวรรค์ประชารักษ์

AF 09-10
CPH.REC No 26/63.

ชื่อหน่วยงานคณะกรรมการจริยธรรมการวิจัยในมนุษย์โรงพยาบาลชัยภูมิ
กระทรวงสาธารณสุข
ที่อยู่.โรงพยาบาลชัยภูมิ ถนนบรรณาการ ตำบลในเมือง อำเภอเมือง จังหวัดชัยภูมิ
โทร. 044-837100ต่อ2410 2411

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

ชื่อโครงการ : ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล:การศึกษาภาคตัดขวางในประเทศไทย

เลขที่โครงการวิจัย : 26 / 63

ผู้วิจัยหลัก : นางรตา ศรีสอาด

สังกัดหน่วยงาน : ตำแหน่งนิสิตระดับดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

วิธีทบทวน : คณะกรรมการ 3 ท่าน (Expedited review)

รายงานความก้าวหน้า : ส่งรายงานความก้าวหน้าอย่างน้อย 1 ครั้ง/ปี หรือส่งรายงานฉบับสมบูรณ์หากดำเนินโครงการเสร็จสิ้นก่อน 1 ปี / ส่งรายงานความก้าวหน้าอย่างน้อยทุก 6 เดือน / ส่งรายงานความก้าวหน้าอย่างน้อยทุก 3 เดือน

เอกสารรับรอง : 1. แบบเสนอโครงการวิจัย
2. แบบเก็บรวบรวมข้อมูล
3. หนังสือยินยอมเข้าร่วมโครงการวิจัย
4. แบบเก็บรวบรวมข้อมูล/โปรแกรมกิจกรรม

ลงนาม.....
(นางมรกต ภัทรพงศ์สินธุ์)
ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์

วันที่รับรอง : 20 มิถุนายน 2563
วันหมดอายุ : 19 มิถุนายน 2564

หนังสือรับรองจริยธรรมการวิจัยในมนุษย์
โรงพยาบาลสมุทรปราการ

การวิจัยนี้และเอกสารประกอบของการวิจัยตามรายการแสดงด้านล่าง ได้รับการพิจารณาจากคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลสมุทรปราการแล้ว มีความเห็นว่าการวิจัยที่จะดำเนินการมีความสอดคล้องกับหลักจริยธรรมสากล ตลอดจนกฎหมายข้อบังคับและข้อกำหนดภายในประเทศ จึงเห็นสมควรให้ดำเนินการวิจัยตามข้อเสนอการวิจัยนี้ได้

ชื่อการวิจัย (ไทย) : ความเข้าใจการตั้งใจอยู่ในงานของการพยาบาล : การศึกษาภาคตัดขวางในประเทศไทย

ชื่อการวิจัย (อังกฤษ) : Understanding nurses' Intention to stay : A cross – sectional survey in Thailand.

ผู้วิจัย : นางรตา ศรีสะอาด

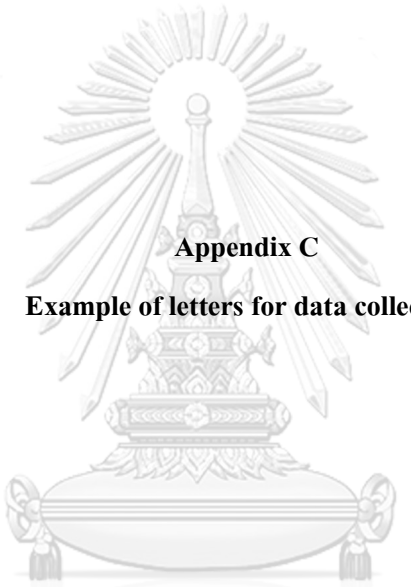
หน่วยงานที่สังกัด : นิสิตหลักสูตรพยาบาลศาสตรดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ลงนาม.....
(นายประภากร จำนงประสาทพร)
ประธานคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์
โรงพยาบาลสมุทรปราการ

ลงนาม.....
(นางกัลยา ตีระวัฒนานนท์)
ประธานคณะกรรมการพัฒนางานวิจัย
โรงพยาบาลสมุทรปราการ

หมายเลขรับรอง : Oq00663
วันที่รับรอง : 16 เมษายน 2563
วันที่รับรองหมดอายุ : 17 เมษายน 2564

HRD2/D/PAN5/งานวิจัย/รับรองจริยธรรม



Appendix C

Example of letters for data collection

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

ที่ อว 64.11/0638

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

18 มิถุนายน 2563

เรื่อง ขอความอนุเคราะห์ให้นิสิตดำเนินการเก็บรวบรวมข้อมูลการวิจัย

เรียน นายแพทย์สาธารณสุขจังหวัดนครราชสีมา

สิ่งที่ส่งมาด้วย 1. โครงร่างวิทยานิพนธ์ 1 ชุด
2. เครื่องมือที่ใช้ในการวิจัย 1 ชุด

เนื่องด้วย นางรตา ศรีสอาด นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาวิทยานิพนธ์ เรื่อง “ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย” โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ รองศาสตราจารย์ ดร.อารีย์วรรณ อ่วมตานี และ ผู้ช่วยศาสตราจารย์ ดร.ชนกพร จิตปัญญา เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม ในการนี้ใคร่ขอความอนุเคราะห์ให้นิสิตดำเนินการเก็บรวบรวมข้อมูลการวิจัย ในพยาบาลประจำการที่ทำงานในแผนกผู้ป่วยใน โรงพยาบาลเทพรัตน์นครราชสีมา 30 คน โรงพยาบาลปากช่องนา 30 คน โรงพยาบาลครบุรี 30 คน โรงพยาบาลโชคชัย 30 คน โรงพยาบาลด่านขุนทด 30 คน โรงพยาบาลบัวใหญ่ 30 คน โรงพยาบาลพิมาย 30 คน โรงพยาบาลจักราช 29 คน โรงพยาบาลชุมพวง 30 คน โรงพยาบาลประทาย 24 คน โรงพยาบาลปักธงชัย 30 คน โรงพยาบาลสีคิ้ว 30 คน โรงพยาบาลสูงเนิน 30 คน โรงพยาบาลคง 19 คน โรงพยาบาลโนนไทย 29 คน โรงพยาบาลโนนสูง 30 คน โรงพยาบาลวังน้ำเขียว 15 คน โรงพยาบาลหนองบุญมาก 22 คน และโรงพยาบาลห้วยแถลง 22 คน รวมทั้งสิ้นจำนวน 520 คน โดยใช้แบบสอบถามข้อมูลส่วนบุคคล แบบสอบถามคุณลักษณะการบริหารจัดการ แบบสอบถามคุณลักษณะงาน และแบบสอบถามความตั้งใจอยู่ในงาน ทั้งนี้นิสิตจะประสานงานเรื่อง วัน และเวลาในการเก็บรวบรวมข้อมูลการวิจัยอีกครั้งหนึ่ง

จึงเรียนมาเพื่อโปรดพิจารณาอนุเคราะห์ให้ นางรตา ศรีสอาด ดำเนินการเก็บรวบรวมข้อมูลการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.วราภรณ์ ชัยวัฒน์)
คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 08-1933-9791 E-mail: fonbox@chula.ac.th
อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร.จิตนา ยูนิพันธุ์ โทร. 08-1922-5863
อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ดร.อารีย์วรรณ อ่วมตานี โทร. 09-2516-9650
อาจารย์ที่ปรึกษาร่วม ผู้ช่วยศาสตราจารย์ ดร.ชนกพร จิตปัญญา โทร. 08-4003-1257
ชื่อนิสิต นางรตา ศรีสอาด โทร. 08-6337-7956

ที่ อว 64.11/0634

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

18 มิถุนายน 2563

เรื่อง ขอความอนุเคราะห์ให้นิสิตดำเนินการเก็บรวบรวมข้อมูลการวิจัย

เรียน นายแพทย์สาธารณสุขจังหวัดกระบี่

สิ่งที่ส่งมาด้วย 1. โครงร่างวิทยานิพนธ์ 1 ชุด
2. เครื่องมือที่ใช้ในการวิจัย 1 ชุด

เนื่องด้วย นางรตา ศรีสอาด นิสิตชั้นปริญญาดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังดำเนินการพัฒนาวิทยานิพนธ์ เรื่อง “ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย” โดยมี รองศาสตราจารย์ ดร.จินตนา ยูนิพันธุ์ เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ รองศาสตราจารย์ ดร.อารีย์วรรณ อ่วมตานี และ ผู้ช่วยศาสตราจารย์ ดร.ชนกพร จิตปัญญา เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม ในการนี้ใคร่ขอความอนุเคราะห์ให้นิสิตดำเนินการเก็บรวบรวมข้อมูลการวิจัย ในพยาบาลประจำการที่ทำงานในแผนกผู้ป่วยใน โรงพยาบาลกระบี่ 50 คน โรงพยาบาลคลองท่อม 18 คน และโรงพยาบาลอ่าวลึก 18 คน รวมทั้งสิ้นจำนวน 86 คน โดยใช้แบบสอบถามข้อมูลส่วนบุคคล แบบสอบถามคุณลักษณะการบริหารจัดการ แบบสอบถามคุณลักษณะงาน และแบบสอบถามความตั้งใจอยู่ในงาน ทั้งนี้นิสิตจะประสานงานเรื่อง วัน และเวลาในการเก็บรวบรวมข้อมูลการวิจัยอีกครั้งหนึ่ง

จึงเรียนมาเพื่อโปรดพิจารณาอนุเคราะห์ให้ นางรตา ศรีสอาด ดำเนินการเก็บรวบรวมข้อมูลการวิจัยดังกล่าว คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.วราภรณ์ ชัยวัฒน์)
คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ โทร. 08-1933-9791 E-mail: fonbox@chula.ac.th
อาจารย์ที่ปรึกษา รองศาสตราจารย์ ดร.จิตนา ยูนิพันธุ์ โทร. 08-1922-5863
อาจารย์ที่ปรึกษาร่วม รองศาสตราจารย์ ดร.อารีย์วรรณ อ่วมตานี โทร. 09-2516-9650
อาจารย์ที่ปรึกษาร่วม ผู้ช่วยศาสตราจารย์ ดร.ชนกพร จิตปัญญา โทร. 08-4003-1257
ชื่อนิสิต นางรตา ศรีสอาด โทร. 08-6337-7956

Appendix D

Lists of the experts

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

List of experts

1. Associate Professor Marisa Krairiksh, Ph.D., RN.

   Faculty of Nursing, Khonkaen University

2. Associate Professor Apiradee Nantsupawat, PhD, RN

   Faculty of Nursing, Chiang Mai University

3. Dr. Rasee Leenakul, Ph.D., RN

   General Administrative Advisor, Thailand Nursing and Midwifery Council

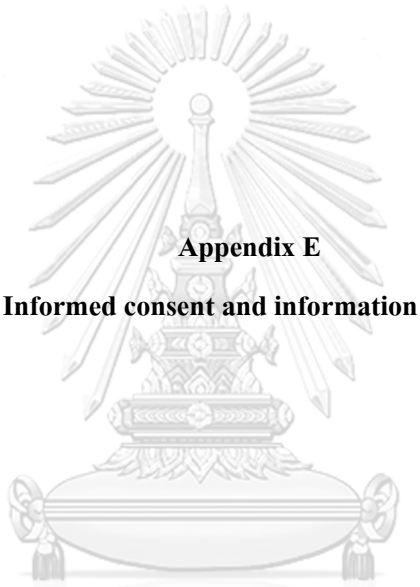
4. Mrs. Sirima Leelawong, RN

   Director of the Division of Nursing, the Ministry of Public Health

5. Dr.Teeraporn Sathirakoon, Ph.D.,RN

   Senior advisor of Ministry of Public Health

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY



Appendix E

Informed consent and information sheets

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

เอกสารข้อมูลสำหรับผู้มีส่วนร่วมในการวิจัย

ชื่อโครงการวิจัย ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย

ชื่อผู้วิจัย นางรตา ศรีสอาด

ตำแหน่ง นิสิตระดับดุษฎีบัณฑิต คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

สถานที่ติดต่อผู้วิจัย คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อาคารบรมราชชนีศรีศตพรรณ ชั้น11 ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน กรุงเทพฯ 10330 โทรศัพท์ 02-2181128 โทรสาร 02-2181130 **หรือ (**ที่ทำงาน) วิทยาลัยเซนต์หลุยส์ เลขที่ 19 ถนน สาทรใต้ แขวง ยานนาวา เขตสาทร กรุงเทพฯ 10120 **หรือ** (ที่บ้าน) เดอะเพรสซิเด้นท์สาทรราชพฤกษ์ เลขที่ 285/141 ถนน เพชรเกษม แขวง ปากน้ำภาษีเจริญ เขตภาษีเจริญ กรุงเทพฯ 10160

โทรศัพท์ที่บ้าน – **โทรศัพท์มือถือ** 0863377956 E-mail : rata@slc.ac.th

ข้าพเจ้า นางรตา ศรีสอาด นิสิตปริญญาเอก คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย กำลังทำวิจัยเรื่องความเข้าใจการตั้งใจอยู่ในงานของพยาบาล เป็นการศึกษาภาคตัดขวางในประเทศไทย เนื่องจากปัญหาการขาดแคลนพยาบาลวิชาชีพโดยเฉพาะอย่างยิ่งในสังกัดสำนักงานปลัดกระทรวงสาธารณสุข เป็นปัญหาวิกฤติที่ต้องได้รับการแก้ไขและป้องกัน ซึ่งเกิดจากหลายสาเหตุ รวมทั้งเกิดจากการเปลี่ยนแปลงทางสังคม เศรษฐกิจ การเกิดโรค นโยบายสุขภาพแห่งชาติที่ต้องการให้ประชาชนเข้าถึงการบริการสุขภาพมากขึ้น การเข้าสู่สังคมผู้สูงอายุจากปัจจัยเหล่านี้ทำให้ความต้องการพยาบาลมีเพิ่มมากขึ้น รวมทั้งพยาบาลเองก็ลาออก หรือย้ายงานเนื่องจากหลายสาเหตุ เช่น ภาระงานที่หนัก ขาดความก้าวหน้าในวิชาชีพ ไม่มีความสุขในการทำงาน เป็นต้น ดังนั้นองค์ความรู้เรื่องความตั้งใจอยู่ในงานซึ่งถือเป็นปัจจัยสำคัญที่เกี่ยวข้องกับการคงอยู่ในงานของพยาบาลที่จะช่วยลดภาวะการขาดแคลนพยาบาล จึงจำเป็นที่ต้องศึกษาเพื่อแก้ปัญหาดังกล่าว ด้วยเหตุนี้ผู้วิจัยจึงทำวิจัยเรื่องนี้

ก่อนที่ผู้เข้าร่วมวิจัยจะตัดสินใจเข้าร่วมในการวิจัยนี้ มีความจำเป็นที่จะต้องทราบว่า งานวิจัยนี้ ทำเพราะเหตุใด และเกี่ยวข้องกับอะไร ดังนั้น ผู้วิจัยจึงจัดทำเอกสารฉบับนี้ขึ้นเพื่อชี้แจงข้อมูลของผู้วิจัย และการดำเนินการวิจัย ซึ่งผู้เข้าร่วมวิจัยสามารถนำข้อมูลในเอกสารฉบับนี้ไปใช้ประกอบการตัดสินใจว่าจะ เข้าร่วมหรือไม่เข้าร่วมในการวิจัยครั้งนี้ กรุณาอ่านข้อมูลต่อไปนี้โดยละเอียด และผู้เข้าร่วมวิจัยสามารถสอบถามข้อมูลเพิ่มเติมจากผู้วิจัยได้ตลอดเวลาหากท่านมีข้อสงสัยหรือได้รับข้อมูลไม่ชัดเจน โดยรายละเอียดเกี่ยวกับการวิจัย มีดังนี้

1.งานวิจัยนี้ต้องการศึกษาเกี่ยวกับความเข้าใจการตั้งใจอยู่ในงานของพยาบาลวิชาชีพ เพื่อเข้าใจเกี่ยวกับความเข้าใจการตั้งใจอยู่ในงานของพยาบาลวิชาชีพ ที่ทำงานอยู่ในโรงพยาบาลรัฐสังกัดสำนักงานปลัดกระทรวง

สาธารณสุข และศึกษาคุณลักษณะของพยาบาลวิชาชีพ คุณลักษณะของการบริหารงานของหัวหน้ากลุ่มงานกิจการด้านการพยาบาล/หัวหน้ากลุ่มงานพยาบาล คุณลักษณะขององค์การ และคุณลักษณะของงานที่มีความเกี่ยวข้องกับการตั้งใจอยู่ในงานของพยาบาลวิชาชีพหรือไม่ อย่างไร

2.ประโยชน์ที่จะได้รับจากงานวิจัยนี้ คือ จะช่วยให้พยาบาลวิชาชีพ ตลอดจนบุคลากรทางสุขภาพสามารถเข้าใจถึงความคิด ความคาดหวังของพยาบาลวิชาชีพของประเทศไทยที่จะทำงานต่อไปในโรงพยาบาลที่กำลังทำงานอยู่และจะตั้งใจอยู่ในวิชาชีพพยาบาลต่อไปหรือไม่ รวมทั้งลักษณะเฉพาะบุคคลของพยาบาล ลักษณะการบริหารงานของหัวหน้างาน ลักษณะองค์การ และลักษณะงานในปัจจุบันมีความเกี่ยวข้องกับการตั้งใจอยู่ในงานปัจจุบัน หรือในวิชาชีพหรือไม่ อย่างไร ซึ่งผลการศึกษาจะมีประโยชน์อย่างยิ่งต่อการบริหารทุนมนุษย์ด้านวิชาชีพพยาบาล และสามารถนำมาวางแผนกำลังคน วางแผนกลยุทย์เพื่อธำรงรักษาพยาบาลวิชาชีพ และสนับสนุนคุณภาพการบริการพยาบาลให้สำเสร็จตามเป้าหมายของหน่วงงานและของประเทศต่อไป

3. **ผู้เข้าร่วมการวิจัยในครั้งนี้คือ** พยาบาลวิชาชีพที่จบหลักสูตรพยาบาลศาสตรบัณฑิตและได้รับการอนุญาตเป็นผู้ประกอบการวิชาชีพพยาบาลและการผดุงครรภ์ชั้นหนึ่ง ที่กำลังปฏิบัติงานในกลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาลผู้ป่วยใน โรงพยาบาลรัฐสังกัดสำนักงานปลัดกระทรวงสาธารณสุข กระทรวงสาธารณสุข *และทำงานในสถานที่ทำงานปัจจุบันไม่น้อยกว่า 1 ปี และยินดีเข้าร่วมการวิจัย* หากผู้เข้าร่วมการวิจัยถอนตัวระหว่างตอบแบบสอบถาม จะไม่มีผลกระทบใดๆ ทั้งสิ้น แค่ถือว่าผู้นั้นไม่ได้เป็นผู้เข้าร่วมในการวิจัย

สำหรับการเก็บข้อมูลแบ่งเป็น 2 ขั้นตอน คือ ขั้นตอนที่ 1 การพัฒนาเครื่องมือวิจัย และ ขั้นตอนที่ 2 คือการเก็บรวบรวมข้อมูลวิจัยความตั้งใจอยู่ในงานของพยาบาล

สำหรับการศึกษาของผู้เข้าร่วมวิจัยในครั้งนี้อยู่ในขั้นตอนที่ 2 การเก็บข้อมูลโดยใช้แบบสอบถามความเข้าใจการตั้งใจอยู่ในงานของพยาบาล ใช้วิธีการสุ่มเลือกกลุ่มตัวอย่าง จำนวน 559 คน ที่ทำงานในแผนกผู้ป่วยใน โรงพยาบาลรัฐสังกัดสำนักงานปลัดกระทรวงสาธารณสุข กระทรวงสาธารณสุข

หลังจากได้รับอนุมัติจากคณะกรรมการพิจารณาจริยธรรมการวิจัยในคนแล้ว ผู้วิจัยจะทำหนังสือถึงผู้อำนวยการโรงพยาบาล เพื่อขอเข้าเก็บรวบรวมข้อมูล เมื่อได้รับอนุมัติให้เข้าเก็บข้อมูลได้ ผู้วิจัยจึงประสานงานไปยังหัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล หรือ บุคคลที่หัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาลมอบหมายให้ทำหน้าที่เป็นผู้ช่วยวิจัย เพื่อนัดหมายการชี้แจงขั้นตอนการดำเนินการเก็บข้อมูล จากนั้นเก็บข้อมูลตามวิธีการและสถานที่ที่สถาบันกำหนด โดยหัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล/ผู้ช่วยวิจัย มิได้มีส่วนร่วมใดๆ ระหว่างการเก็บข้อมูล การสุ่มเลือกพยาบาลวิชาชีพเข้าร่วมโครงการวิจัยนี้ ไม่ได้เลือกจากลักษณะ/พฤติกรรมรายบุคคลของพยาบาลที่เกี่ยวข้องกับหัวข้อของโครงการวิจัยนี้

4. ผู้เข้าร่วมวิจัยจะได้รับการชี้แจงจาก*หัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล/*ผู้ช่วยวิจัยถึงวัตถุประสงค์ ขั้นตอนการเก็บข้อมูล และสิทธิต่างๆ และอธิบายรายละเอียดของแบบสอบถามอิเล็กทรอนิกส์จำนวน 4 ตอน

ประกอบด้วย 1) แบบสอบถามข้อมูลส่วนบุคคล จำนวน 14 ข้อ 2) แบบสอบถามการบริหารจัดการ จำนวน 55 ข้อ 3) แบบสอบถามคุณลักษณะงาน จำนวน 26 ข้อ และ 4) แบบสอบถามความตั้งใจอยู่ในงาน จำนวน 10 ข้อ รวมทั้งสิ้น 105 ข้อ ใช้เวลาในการตอบแบบสอบถามประมาณ 45-60 นาที

หลังจากผู้เข้าร่วมวิจัยได้รับทราบข้อมูลจากหัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล/ผู้ช่วยวิจัยครบถ้วนแล้ว หัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล/ผู้ช่วยวิจัยจะถามความสมัครใจ และให้ผู้สมัครใจเข้าร่วมวิจัย ลงนามยินยอมในหนังสือแสดงความยินยอมเข้าร่วมวิจัยไว้เป็นสำคัญ หัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล/ผู้ช่วยวิจัย จึงเริ่มให้ QR Code แก่ผู้เข้าร่วมวิจัยเพื่อสแกน เพื่อ เข้าถึงและตอบแบบสอบถาม โดยไม่ต้องระบุอีเมล์ของตน และสามารถเข้าทำแบบสอบถามได้ครบถ้วนเพียงครั้งเดียวเท่านั้น เมื่อผู้เข้าร่วมวิจัยตอบแบบสอบถามเสร็จ หัวหน้ากลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล/ผู้ช่วยวิจัยจะเก็บรวบรวมหนังสือแสดงความยินยอมเข้าร่วมการวิจัยที่ผู้เข้าร่วมวิจัยได้เซ็นใส่ในซองสีน้ำตาลที่เตรียมไว้ ซึ่งได้จ่าหน้าซองถึงผู้วิจัยพร้อมติดอากรแสตมป์ และปิดผนึกเพื่อส่งคืนที่ผู้วิจัยโดยตรง

*5. การศึกษาครั้งนี้เป็นการตอบแบบสอบถามอิเล็กทรอนิกส์ที่เกี่ยวข้องกับความคิดเห็นการตั้งใจอยู่ในงานของผู้เข้าร่วมวิจัย ผู้เข้าร่วมวิจัยอาจมีความเสี่ยงที่อาจมีผลกระทบต่อการทำงานเล็กน้อย ซึ่งผู้วิจัยตระหนักถึงประเด็นนี้ หากผู้เข้าร่วมวิจัยรู้สึกไม่สบายใจ หรือกังวลในขณะตอบแบบสอบถาม ผู้วิจัยจะดำเนินการช่วยเหลือเบื้องต้น โดยให้ท่านได้ระบายความไม่สบายใจ และอธิบายถึงความสำคัญของข้อคำถามที่ใช้ในการวิจัย และผู้ร่วมวิจัยปฏิเสธการตอบแบบสอบถามข้อนั้นหรือยุติการตอบแบบสอบถามได้ทันที ชื่อของผู้เข้าร่วมวิจัยจะไม่ถูกบันทึกไว้ในแบบสอบถามและ*การตอบแบบสอบถามของผู้ร่วมวิจัยจะถือเป็นความลับแม้ผู้วิจัยเองก็ไม่สามารถระบุตัวผู้ตอบแบบสอบถามได้

การเข้าร่วมในการวิจัยครั้งนี้เป็นโดย**สมัครใจ ผู้เข้าร่วมการวิจัยมีสิทธิที่จะปฏิเสธการตอบแบบสอบถาม หรือถอนตัวออกจากการศึกษาได้ทุกเวลาที่ต้องการ โดยไม่ต้องให้เหตุผล ทั้งนี้การปฏิเสธหรือถอนตัวออกจากการวิจัยนั้น จะไม่ก่อให้เกิดอันตราย หรือผลกระทบใด ๆ ต่อผู้เข้าร่วมวิจัย รวมถึงสิทธิ์ประโยชน์ที่พึงจะได้รับ**

6. หากผู้เข้าร่วมวิจัยมีข้อสงสัย โปรดสอบถามเพิ่มเติมจากผู้วิจัยได้ตลอดเวลา หรือติดต่อผู้วิจัยได้โดยตรงที่ **นางรตา ศรีสอาด** โทรศัพท์ 08-637-7956 หรือ ติดต่อตามที่อยู่ในหน้าแรกของเอกสารฉบับนี้

7. ข้อมูลที่ได้รับจากการตอบแบบสอบถามของผู้เข้าร่วมวิจัย จะถูกนำไปรวมกับข้อมูลของผู้เข้าร่วมวิจัยท่านอื่นๆ ที่เข้าร่วมในการศึกษาครั้งนี้ทั่วประเทศไทย โดยข้อมูลจะถูกเก็บเป็นความลับ **ซึ่งแม้แต่ตัวผู้วิจัยก็ไม่มีโอกาสทราบว่าแบบสอบถามนี้ตอบโดยผู้ร่วมวิจัยท่านใด** หากผู้วิจัยตีพิมพ์ผลการศึกษา การรายงานผลการวิจัยจะเป็นการนำเสนอข้อมูลการวิจัยในภาพรวมเท่านั้น ไม่มีข้อมูลใดในการรายงานที่จะ**นำไปสู่การระบุตัวตนของผู้เข้าร่วมวิจัยหรือชื่อโรงพยาบาล** ส่วนการเปิดเผยผลการวิจัยต่อหน่วยงานที่เกี่ยวข้อง จะกระทำได้เฉพาะในกรณีจำเป็นด้วยเหตุผลอันเป็นประโยชน์ต่อการวางแผนกำลังคนทางการพยาบาลและการวางแผนเพื่อพัฒนา ส่งเสริม

บุคลากรวิชาชีพพยาบาลในประเทศไทย หรือเหตุผลทางวิชาการเท่านั้น ***และผู้วิจัยจะทำลายแบบสอบถามทุกฉบับด้วยตนเองภายหลังเสร็จสิ้นการวิจัยครั้งนี้***

8. เพื่อเป็นการแสดงความขอบคุณผู้มีส่วนร่วมในการวิจัย ผู้วิจัยจะมอบปากกาเป็นของที่ระลึกแก่ผู้เข้าร่วมในการวิจัยเมื่อสิ้นสุดการตอบแบบสอบถาม รวมถึงผู้ที่ถอนตัวระหว่างการศึกษา

9. **หากข้าพเจ้าไม่ได้รับการปฏิบัติตรงตามที่ได้ระบุไว้ในเอกสารชี้แจงผู้มีส่วนร่วมในการวิจัย** ข้าพเจ้าสามารถร้องเรียนได้ที่คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย 254 อาคารจามจุรี1 ชั้น 2 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ10330 โทรศัพท์/โทรสาร 0-2218-3202, 0-2218-3049 E-mail: eccu@chula.ac.th

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

หนังสือแสดงความยินยอมเข้าร่วมการวิจัย

ทำที่.....

วันที่.....เดือน.....พ.ศ. .....

เลขที่ ประชากรตัวอย่างหรือผู้มีส่วนร่วมในการวิจัย.....

ข้าพเจ้า ซึ่งได้ลงนามท้ายหนังสือนี้ ขอแสดงความยินยอมเข้าร่วมโครงการวิจัย

ชื่อโครงการวิจัย ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย

ชื่อผู้วิจัย นางรตา ศรีสอาด

ตำแหน่ง นิสิตคณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

สถานที่ติดต่อผู้วิจัย คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11 ถนนพระราม1 แขวงวังใหม่ เขตปทุมวัน กรุงเทพฯ 10330 หรือ คอนโดเดอะเพรสซิเด้นส์สาทร-ราชพฤกษ์ เลขที่ 285/141 แขวงปากน้ำภาษีเจริญ เขตภาษีเจริญ กรุงเทพมหานคร 10160

โทรศัพท์มือถือ 086-337-7956 E-mail: rata@slc.ac.th

ข้าพเจ้า**ได้รับทราบ**รายละเอียดเกี่ยวกับที่มาและวัตถุประสงค์ในการทำวิจัย รายละเอียดของขั้นตอนต่างๆที่จะต้องปฏิบัติ ความเสี่ยง/อันตราย และประโยชน์ซึ่งเกิดขึ้นจากการวิจัยเรื่องนี้ โดยได้อ่านรายละเอียดในเอกสารชี้แจงผู้มีส่วนร่วมในการวิจัยโดยตลอด และ**ได้รับคำอธิบาย**จากผู้วิจัย**จนเข้าใจเป็นอย่างดีแล้ว**

ข้าพเจ้าจึงสมัครใจเข้าร่วมในโครงการวิจัยนี้ ตามที่ระบุไว้ในเอกสารชี้แจงผู้มีส่วนร่วมในการวิจัย โดยข้าพเจ้ายินยอมตอบแบบสอบถาม เพื่อศึกษาความตั้งใจอยู่ในงานในโครงการวิจัยเรื่อง “ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย” จำนวน 105 ข้อ ซึ่งรวมระยะเวลาในการตอบแบบสอบถามประมาณ 45-60 นาที ข้าพเจ้า**มีสิทธิถอน**ตัวออกจากการวิจัยเมื่อใดก็ได้ตามความประสงค์ โดยไม่ต้องแจ้งเหตุผล ซึ่งการถอนตัวออกจากการวิจัยนั้น จะไม่มีผลกระทบใดๆ ต่อข้าพเจ้าทั้งสิ้น

ข้าพเจ้าได้รับคำรับรองว่า ผู้วิจัยจะปฏิบัติต่อข้าพเจ้าตามข้อมูลที่ได้ระบุไว้ในเอกสารชี้แจงผู้มีส่วนร่วมในการวิจัยและข้อมูลใดๆที่เกี่ยวข้องกับข้าพเจ้า ผู้วิจัยจะ**เก็บรักษาข้อมูลเป็นความลับ** โดยจะนำเสนอข้อมูลการวิจัยเป็นภาพรวมเท่านั้น ไม่มีข้อมูลใดในการรายงานที่จะนำไปสู่การระบุตัวข้าพเจ้า หากข้าพเจ้ามีข้อสงสัยสามารถสอบถามเพิ่มเติมจากผู้วิจัยได้ตลอดเวลา

หากข้าพเจ้าไม่ได้รับการปฏิบัติตรงตามที่ได้ระบุไว้ในเอกสารชี้แจงผู้มีส่วนร่วมในการวิจัย ข้าพเจ้าสามารถร้องเรียนได้ที่ คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1

จุฬาลงกรณ์มหาวิทยาลัย 254 อาคารจามจุรี 1 ชั้น 2 ถนนพญาไท เขตปทุมวัน กรุงเทพมหานคร 10330
โทรศัพท์/โทรสาร 02-2183202 E-mail: eccu@chula.ac.th

ข้าพเจ้าได้ลงลายมือชื่อไว้เป็นสำคัญต่อหน้าพยานทั้งนี้ข้าพเจ้าได้รับสำเนาเอกสารชี้แจงผู้เข้าร่วมการวิจัย และสำเนาหนังสือแสดงความยินยอมไว้แล้ว

ลงชื่อ.....

(.....)ผู้วิจัยหลัก

ลงชื่อ .....

(.....) ผู้มีส่วนร่วมในการวิจัย

ลงชื่อ.....

(.....)พยาน

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Appendix F

Research instruments

(Example)

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

คำชี้แจง

แบบสอบถาม

เรื่อง ความเข้าใจการตั้งใจอยู่ในงานของพยาบาล: การศึกษาภาคตัดขวางในประเทศไทย

คำชี้แจง

1. แบบสอบถาม*อิเล็กทรอนิกส์* ประกอบด้วย แบบสอบถาม ทั้งหมด 4 ตอน ได้แก่

ตอนที่ 1 แบบสอบถามข้อมูลส่วนบุคคล จำนวน 14 ข้อ

ตอนที่ 2 แบบสอบถามคุณลักษณะการบริหารจัดการ จำนวน 55 ข้อ

ตอนที่ 3 แบบสอบถามคุณลักษณะงาน จำนวน 26 ข้อ

ตอนที่ 4 แบบสอบถามความตั้งใจอยู่ในงาน จำนวน 10 ข้อ

2. โปรดอ่านคำแนะนำก่อนตอบแบบสอบถามในตอนนั้นๆ

3. *โปรดตอบแบบสอบถามทุกตอนและทุกข้อตามความเป็นจริง* เพื่อสามารถนำคำตอบของท่านมาใช้เป็นข้อมูลที่สมบูรณ์และเป็นประโยชน์ในการวิจัยครั้งนี้ ซึ่งผลการวิจัยครั้งนี้มีคุณค่า สามารถนำไปใช้เพื่อพัฒนาวิชาชีพพยาบาลต่อไป

4. *โปรดแสกน QQ code เพื่อเข้าถึง แบบสอบถามอิเล็กทรอนิกส์ โดยไม่ต้องใส่อีเมล์ของท่าน และท่านสามารถเข้าถึง แบบสอบถามอิเล็กทรอนิกส์นี้ เพื่อตอบแบบสอบถามครบทุกตอนได้เพียงครั้งเดียว*

5. การเก็บรวบรวมข้อมูลในครั้งนี้ ผู้วิจัยขอรับรองว่าคำตอบของท่านจะไม่ถูกเปิดเผยในที่ใดๆ ถือเป็นความลับและผลการวิจัยจะนำเสนอในภาพรวม ซึ่งจะไม่มีผลกระทบใดๆต่อท่าน และจะนำไปใช้เพื่อประโยชน์ทางวิชาการเท่านั้น

6 ผู้วิจัยหวังเป็นอย่างยิ่งว่าจะได้รับความร่วมมือจากท่านเป็นอย่างดี และขอขอบพระคุณสำหรับความร่วมมือและข้อมูลจากท่านที่ตรงกับความเป็นจริงมากที่สุด ไว้ ณ โอกาสนี้

นางรดา ศรีสอาด

นิสิตหลักสูตรพยาบาลศาสตรดุษฎีบัณฑิต (นานาชาติ)

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ส่วนสอบถามความสมัครใจเข้าร่วมกับโครงการนี้และยินยอมตอบแบบสอบถามนี้

ข้าพเจ้าทำงานที่โรงพยาบาล (โปรดระบุชื่อ) .....

ข้าพเจ้าได้รับทราบรายละเอียดเกี่ยวกับที่มา วัตถุประสงค์ในการวิจัย รายละเอียดที่ต้องปฏิบัติ ความเสี่ยง และประโยชน์ที่เกิดจากการวิจัยนี้ โดยอ่านรายละเอียดในเอกสารชี้แจง ผู้มีส่วนร่วมในการวิจัยและรับคำอธิบายจากผู้วิจัยจนเข้าใจดีแล้ว

ข้าพเจ้าสมัครใจเข้าร่วมกับโครงการนี้และยินยอมตอบแบบสอบถามนี้

[ ] ยินยอม
[ ] ไม่ยินยอม

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ตอนที่ 1 แบบสอบถามข้อมูลส่วนบุคคลของผู้ตอบแบบสอบถาม

คำชี้แจง ข้อความต่อไปนี้เกี่ยวข้องกับข้อมูลส่วนตัวท่าน กรุณาโปรดตอบแบบสอบถามทุกข้อ โดยพิจารณาเลือกคำตอบตามความเป็นจริงและทำเครื่องหมาย √ ลงในช่อง [ ] หน้าข้อความหรือตอบคำถามที่ตรงกับความเป็นจริงเกี่ยวกับตัวท่านมากที่สุด *ท่านสามารถปฏิเสธการตอบแบบสอบถามหากท่านไม่สะดวกในการตอบข้อมูลส่วนบุคคล*

ข้อ	ข้อคำถาม
1	เพศ* [ ] 1) ชาย [ ] 2) หญิง
2	อายุ (ปี)* คำตอบ.....
3	วุฒิการศึกษาสูงสุด* [ ] 1) ปริญญาตรี หรือเทียบเท่า [ ] 2) ปริญญาโท สาขา(โปรดระบุในข้อ 3.1)..... [ ] 3) ปริญญาเอก สาขา(โปรดระบุในข้อ3.1)..... 3.1 สาขาที่ท่านศึกษา คำตอบ.....
4	สถานภาพสมรส* [ ] 1) โสด [ ] 2) คู่ [ ] 3) หม้าย/หย่า [ ] 4) แยกกันอยู่
5	ระยะเวลาในการทำงานในสถานที่นี้ ตั้งแต่เริ่มปฏิบัติงานจนปัจจุบันกี่ปี* คำตอบ.....
6	สถานภาพการจ้างงาน* [ ] 1) ข้าราชการ [ ] 2) พนักงานราชการ

ข้อ	ข้อคำถาม
	[ ] 3) ลูกจ้างประจำ [ ] 4) ลูกจ้างชั่วคราว [ ] 5) พนักงานกระทรวงสาธารณสุข
7	
8	
.....	
.....	
.....	
.....	
13	การอบรมเฉพาะทาง* [ ] 1) เคย [โปรดระบุ] หลักสูตร [ ] 2) ไม่เคย จากข้อ 13 ถ้า "เคย" โปรดระบุหลักสูตรที่ท่านอบรม คำตอบ .....
14	เหตุผลที่ท่านเข้าทำงานในโรงพยาบาลนี้* คำตอบ .....

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ตอนที่ 2 แบบสอบถามเกี่ยวกับคุณลักษณะการบริหารจัดการ

คำชี้แจง ข้อความต่อไปนี้เป็นข้อมูลเกี่ยวกับความคิดเห็นของท่านต่อคุณลักษณะการบริหารจัดการในโรงพยาบาลที่ท่านปฏิบัติ โปรดตอบคำถามทุกข้อ และทำเครื่องหมาย √ ลงในช่องที่ตรงกับความเป็นจริงเกี่ยวกับตัวท่านมากที่สุดเพียงข้อเดียว โดยมีหลักเกณฑ์ในการเลือกดังนี้

5	เห็นด้วยมากที่สุด	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นมากที่สุด
4	เห็นด้วยมาก	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นมาก
3	เห็นด้วยปานกลาง	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นปานกลาง
2	เห็นด้วยน้อย	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นน้อย
1	เห็นด้วยน้อยที่สุด	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นน้อยที่สุด

	ข้อคำถามคุณลักษณะการบริหารจัดการ	ระดับความคิดเห็น				
		5	4	3	2	1
1.	มิติการส่งเสริมศักยภาพทุนมนุษย์					
	1.1 ความก้าวหน้าในวิชาชีพ					
	1. โรงพยาบาลมีการกำหนดความก้าวหน้าของพยาบาลวิชาชีพ(People excellence) ตามนโยบายของกระทรวงสาธารณสุข					
	2. โรงพยาบาลมีเกณฑ์การกำหนดความก้าวหน้าของพยาบาลวิชาชีพอย่างเป็นรูปธรรม เช่น กำหนดหลักเกณฑ์เป็นลายลักษณ์อักษร มีคู่มือเส้นทางความก้าวหน้าของพยาบาลวิชาชีพ					
	3. โรงพยาบาลมีการวางแผนส่งเสริมให้พยาบาลพัฒนาตนเองอยู่เสมอ เพื่อให้บรรลุเป้าหมายขององค์การ					
	1.2 การพัฒนาด้านทักษะในงาน					
	4. โรงพยาบาลมีแผนงานพัฒนาทักษะการปฏิบัติงานของพยาบาลวิชาชีพ					
	5. โรงพยาบาลมีงบประมาณในการพัฒนาทักษะการปฏิบัติงานของพยาบาลวิชาชีพ					
	6. โรงพยาบาลมีการพัฒนาทักษะการปฏิบัติงานของพยาบาลวิชาชีพให้สามารถทำทดแทนกันได้					

	ข้อคำถามคุณลักษณะการบริหารจัดการ		ระดับความคิดเห็น				
			5	4	3	2	1
	7.	โรงพยาบาลสนับสนุนการสร้างเครือข่ายทั้งภายในและภายนอกองค์การ เพื่อพัฒนาทักษะที่ใช้ในการปฏิบัติงาน					
	1.3 การดำเนินงานส่งเสริมศักยภาพทุนมนุษย์						
	8.	โรงพยาบาลเห็นชอบกับแผนพัฒนาศักยภาพ (ความรู้ ทักษะ ความสามารถ) ของพยาบาลวิชาชีพที่กลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาลกำหนดไว้					
	9.	กลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาล มีการดำเนินการปฏิบัติตามแผนพัฒนาศักยภาพ (ความรู้ ทักษะ ความสามารถ) ของพยาบาลวิชาชีพไปปฏิบัติในระดับหน่วยงาน					
	10.	กลุ่มภารกิจด้านการพยาบาล/กลุ่มงานการพยาบาลมีการประเมินผลการปฏิบัติงานตามแผนการพัฒนาศักยภาพของพยาบาลวิชาชีพในระดับหน่วยงาน					
	11.	หน่วยงานพยาบาลมีการปรับปรุงกลยุทธ์ในการปฏิบัติงานตามแผนการพัฒนาศักยภาพของพยาบาลวิชาชีพ					
2. ภาวะผู้นำการปลี่ยนแปลง							
	2.1 การเป็นผู้ที่มีอุดมการณ์						
	12.	หัวหน้างานของท่านปฏิบัติตนเป็นแบบอย่างที่ดีในการทำงาน					
	13.	หัวหน้างานของท่านมีความเสียสละประโยชน์ส่วนตนเพื่อประโยชน์ต่อส่วนรวม					
	14.	หัวหน้างานของท่านมีความเสียสละประโยชน์ส่วนตนเพื่อประโยชน์ขององค์การ					
	15.	ท่านรู้สึกว่าหัวหน้างานของท่านให้ข้อเสนอแนะที่เป็นประโยชน์ต่อการทำงานของท่าน					
	2.2 สร้างแรงบันดาลใจ						
	16.	หัวหน้างานของท่านเป็นผู้มีเทคนิคในการผลักดันให้ผู้ร่วมงานทำงานอย่างมีจุดหมาย					

	ข้อคำถามคุณลักษณะการบริหารจัดการ		ระดับความคิดเห็น				
			5	4	3	2	1
	17.	หัวหน้างานของท่านสนับสนุนให้ท่านมีเป้าหมายในการทำงานที่ชัดเจนเพื่อให้งานบรรลุวัตถุประสงค์ขององค์การ					
	18.	หัวหน้างานของท่านเป็นผู้นำในการสร้างขวัญกำลังใจในการปฏิบัติงาน					
	19.	หัวหน้างานของท่านมีวิธีจูงใจให้ผู้ร่วมงานทำงานอย่างเต็มกำลังความสามารถ					
	20.	การทำงานของหัวหน้างานของท่านเป็นแรงบันดาลใจในการทำงานของท่าน					
	2.3 กระตุ้นปัญญา						
	21.	หัวหน้างานของท่านสนับสนุนการคิดสร้างสรรค์ของท่าน					
	22.	หัวหน้างานของท่านมองปัญหาที่พบเป็นสิ่งท้าทาย					
	23.	หัวหน้างานของท่านเป็นผู้นำในการฝ่าฟันแก้ไขปัญหาอุปสรรคที่พบในระหว่างการปฏิบัติงาน					
	24.	หัวหน้างานของท่านมีการกระตุ้นให้ผู้ใต้บังคับบัญชาร่วมกันแสดงความคิดเห็นเกี่ยวกับการปฏิบัติงานอย่างสร้างสรรค์					
	2.4 คำนึงถึงความเป็นปัจเจกบุคคล						
	25.	หัวหน้างานของท่านมีความเข้าใจลักษณะพื้นฐานของผู้ใต้บังคับบัญชาแต่ละคน					
	26.	หัวหน้างานของท่านเป็นตัวกลางในการสร้างสัมพันธภาพที่ดีเพื่อการทำงานร่วมกันในองค์การ					
	27.	หัวหน้างานของท่านให้คำปรึกษาในการแก้ปัญหาต่างๆตรงตามความต้องการของผู้ร่วมงาน					
	28.	หัวหน้างานของท่านมีการยกย่องชื่นชมต่อผู้ใต้บังคับบัญชาต่อความสำเร็จในการปฏิบัติงาน					
	29.	หัวหน้างานของท่านนำพาผู้ใต้บังคับบัญชาในองค์การเพื่อทำงานให้ประสบความสำเร็จ					
3.							

	ข้อคำถามคุณลักษณะการบริหารจัดการ		ระดับความคิดเห็น				
			5	4	3	2	1
	3.1						
	30.	....					
	31.	....					
	32.	....					
	33.	....					
6. คุณภาพชีวิตที่สมดุล							
	53.	งานที่ท่านรับผิดชอบในปัจจุบันรบกวนชีวิตความเป็นส่วนตัวของท่าน					
	54.	งานที่ท่านรับผิดชอบในปัจจุบันรบกวนชีวิตครอบครัวของท่าน					
	55.	การทำงานในองค์การปัจจุบันส่งผลให้คุณภาพชีวิตของท่านดีขึ้นกว่าเดิม					

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ตอนที่3: แบบสอบถามเกี่ยวกับคุณลักษณะงาน

คำชี้แจง: ข้อความต่อไปนี้เป็นข้อมูลเกี่ยวกับความคิดเห็นของท่านต่อคุณลักษณะงานในโรงพยาบาลที่ท่านปฏิบัติ โปรดตอบคำถามทุกข้อ และทำเครื่องหมาย √ ลงในช่องที่ตรงกับความเป็นจริงเกี่ยวกับตัวท่านมากที่สุดเพียงข้อเดียว โดยมีหลักเกณฑ์ในการเลือกดังนี้

5 เป็นจริงที่สุด หมายถึง ท่านคิดว่าข้อความนั้นเป็นความจริงที่สุด

4 เป็นจริง หมายถึง ท่านคิดว่าข้อความนั้นเป็นความจริง

3 ไม่แน่ใจ หมายถึง ท่านไม่แน่ใจว่าข้อความนั้นเป็นจริงหรือไม่เป็นจริง

2 ไม่เป็นจริง หมายถึง ท่านคิดว่าข้อความนั้นไม่เป็นความจริง

1 ไม่เป็นจริงที่สุด หมายถึง ท่านคิดว่าข้อความนั้นไม่เป็นความจริงที่สุด

ลำดับที่	ข้อคำถามคุณลักษณะงาน	ระดับความคิดเห็น				
		5	4	3	2	1
1. ความหลากหลายของทักษะ						
1	งานที่ท่านทำประกอบด้วยกิจกรรมที่หลากหลาย					
2.	งานที่ท่านได้ทำต้องใช้ทักษะหลายด้านเพื่อให้งานสำเร็จ					
3.	งานที่ท่านทำเป็นงานที่ต้องพัฒนาความรู้ใหม่ๆอยู่เสมอ					
4.	งานที่ท่านทำต้องใช้ทักษะความชำนาญหลายด้าน					
5.	การปฏิบัติงานแต่ละกิจกรรมของท่านต้องใช้ทักษะที่แตกต่างกัน					
6.	กิจกรรมต่างๆที่ท่านรับผิดชอบมีความท้าทาย					
2.						
8.	.....					
9.	.....					
10.	.....					
24.	ผลการประเมินของท่านสะท้อนให้เห็นการทำงานได้อย่างชัดเจน					
25.	ท่านรับทราบผลการประเมินอย่างเป็นลายลักษณ์อักษร					
26	ท่านรับทราบผลการประเมินทุกครั้งจากหน่วยงานที่ท่านปฏิบัติงาน					

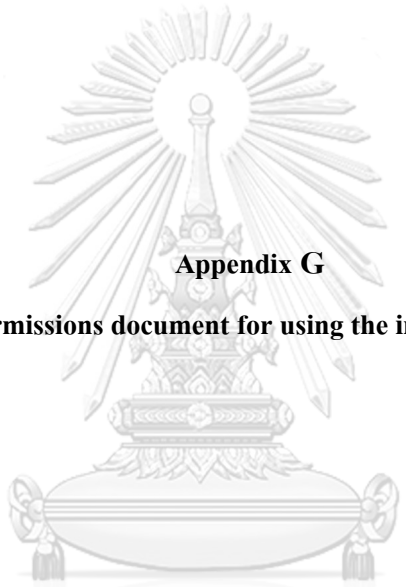
ตอนที่ 4 แบบสอบถามเกี่ยวกับความตั้งใจอยู่ในงาน

ชี้แจง: ข้อความต่อไปนี้เป็นข้อมูลเกี่ยวกับความคิดเห็นของท่านต่อความตั้งใจอยู่ในงาน โปรดตอบคำถามทุกข้อ และทำเครื่องหมาย √ ลงในช่องที่ตรงกับความเป็นจริงเกี่ยวกับตัวท่านมากที่สุดเพียงข้อเดียว โดยมีหลักเกณฑ์ในการเลือกดังนี้

5	เห็นด้วยมากที่สุด	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นมากที่สุด
4	เห็นด้วยมาก	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นมาก
3	เห็นด้วยปานกลาง	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นปานกลาง
2	เห็นด้วยน้อย	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นน้อย
1	เห็นด้วยน้อยที่สุด	หมายถึง	ท่านเห็นด้วยกับข้อความนั้นน้อยที่สุด

ข้อ	ข้อคำถามความตั้งใจอยู่ในงาน	ระดับความคิดเห็น				
		5	4	3	2	1
	1. ความตั้งใจอยู่ในวิชาชีพพยาบาล					
1	ท่านวางแผนทำงานพยาบาลอีก 2-3 ปี					
2	แม้ว่างานพยาบาลไม่ได้เป็นไปตามความคาดหวังทั้งหมด แต่ท่านก็จะไม่ลาออก					
3	.....					
4	.....					
5	.....					
6	เหตุผลที่ทำให้ท่านตั้งใจคงอยู่ในวิชาชีพพยาบาล (โปรดระบุ) คำตอบ.....					
	2. ความตั้งใจอยู่ในโรงพยาบาลที่ปฏิบัติงานในปัจจุบัน					
7	ท่านคิดจะลาออกจากโรงพยาบาลนี้ภายในปีหน้า					
8	.....					
9	.....					
10	เหตุผลที่ท่านต้องการลาออกจากโรงพยาบาลนี้ (โปรดระบุ) คำตอบ.....					

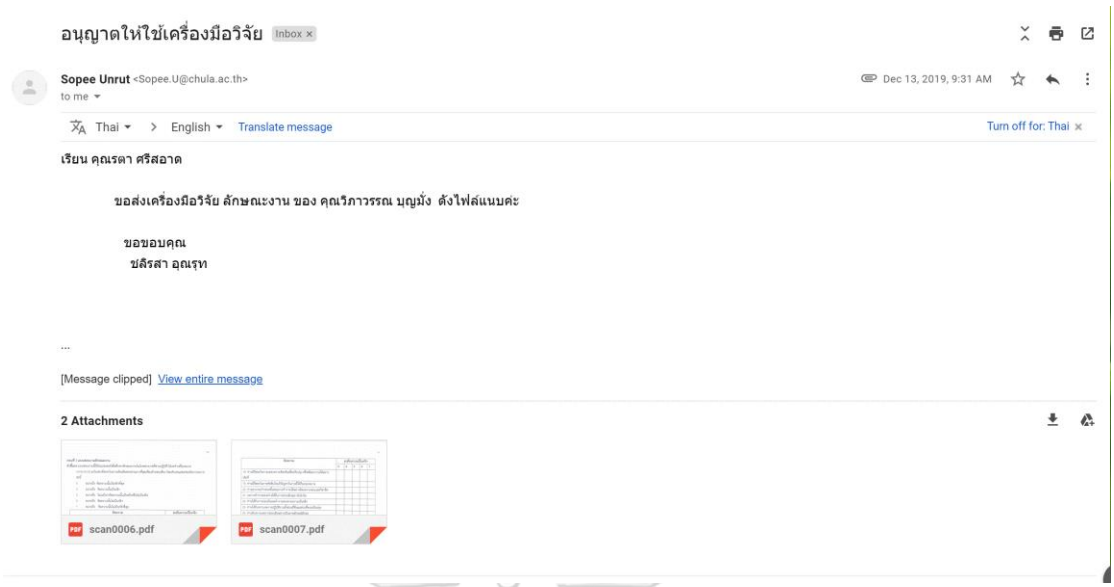
ขอขอบพระคุณอย่างสูงค่ะ



Appendix G

Permissions document for using the instruments

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University



อนุญาตให้ใช้เครื่องมือวิจัย Inbox ×

Sopee Unrut <Sopee.U@chula.ac.th> Dec 13, 2019, 9:31 AM
to me

Thai › English Translate message Turn off for: Thai ×

เรียน คุณรดา ศรีสอาด

ขอส่งเครื่องมือวิจัย ลักษณะงาน ของ คุณวิภาวรรณ บุญมั่ง ดังไฟล์แนบค่ะ

ขอขอบคุณ
ชลิรสา อุณรุท

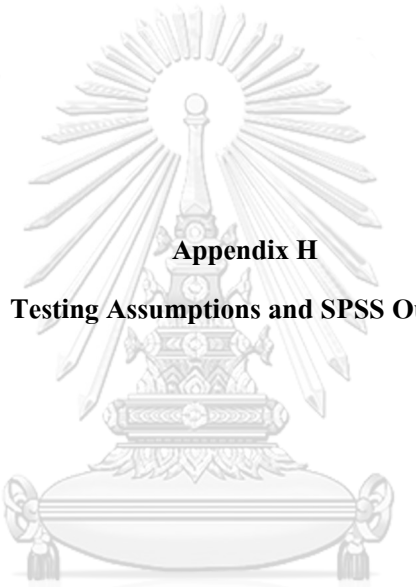
...

[Message clipped] View entire message

2 Attachments

scan0006.pdf scan0007.pdf

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University



Appendix H

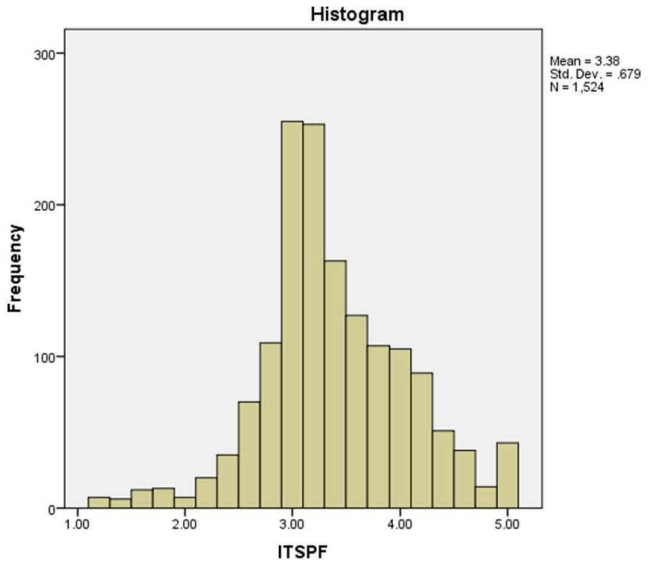
Testing Assumptions and SPSS Output

จุฬาลงกรณ์มหาวิทยาลัย
Chulalongkorn University

Testing assumptions of Independent-Samples T-Test and one-way ANOVA

1. Intention to stay in the current workplace

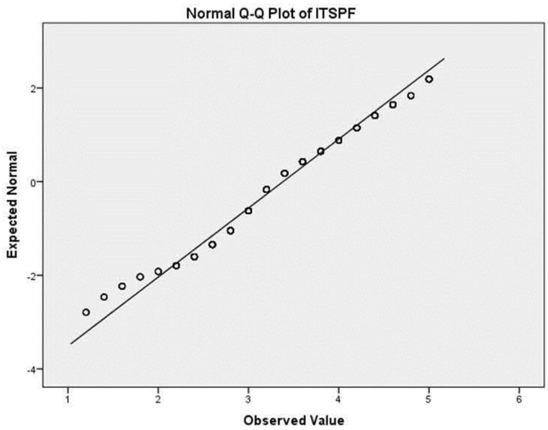
   1.1 Histogram



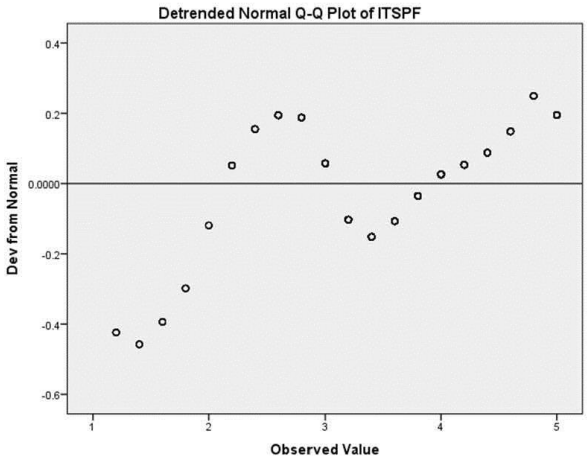
1.2 Stem-and-Leaf-Plot

```
AVITSPF Stem-and-Leaf Plot

 Frequency    Stem &  Leaf

   38.00 Extremes    (=<1.80)
    7.00      20 .  00
     .00      21 .
   20.00      22 .  0000000
     .00      23 .
   35.00      24 .  000000000000
     .00      25 .
   70.00      26 .  00000000000000000000000
     .00      27 .
  109.00      28 .  000000000000000000000000000000000000
     .00      29 .
  255.00      30 .  0000000000000000000000000000000000000000000000000000000000000000000000000000000000000
     .00      31 .
  253.00      32 .  000000000000000000000000000000000000000000000000000000000000000000000000000000000000
     .00      33 .
  163.00      34 .  000000000000000000000000000000000000000000000000000000
     .00      35 .
  127.00      36 .  000000000000000000000000000000000000000000
     .00      37 .
  107.00      38 .  000000000000000000000000000000000000
     .00      39 .
  105.00      40 .  00000000000000000000000000000000000
     .00      41 .
   89.00      42 .  000000000000000000000000000000
     .00      43 .
   51.00      44 .  00000000000000000
     .00      45 .
   38.00      46 .  0000000000000
     .00      47 .
   14.00      48 .  00000
   43.00 Extremes    (>=5.00)

 Stem width:       .10
 Each leaf:       3 case(s)
```

1.3 Normal Probability: Normal Q-Q Plot



1.4 Detrended Normal Plot



1.4 Test of normal distribution

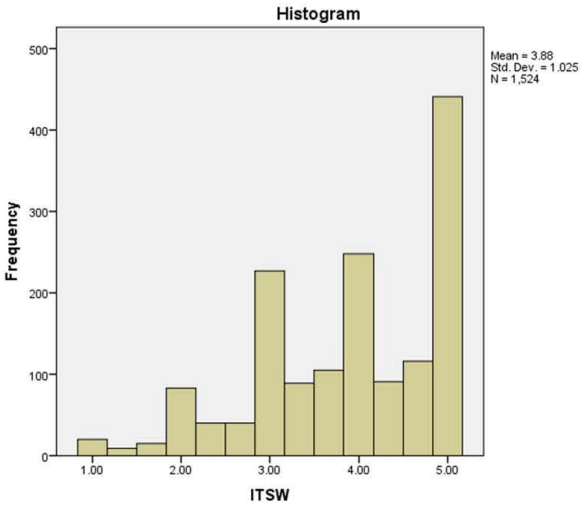
Tests of Normality

	Kolmogorov-Smimov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AVITSPF	.123	1524	.000	.971	1524	.000
AVITSW	.151	1524	.000	.897	1524	.000

a. Lilliefors Significance Correction

2. Intention to stay in the current workplace

2.1 Histogram

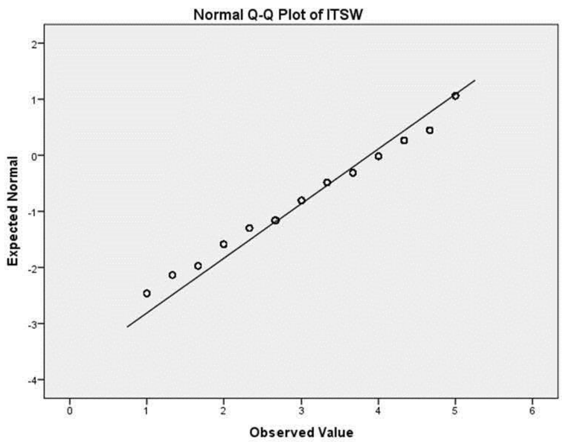


2.2

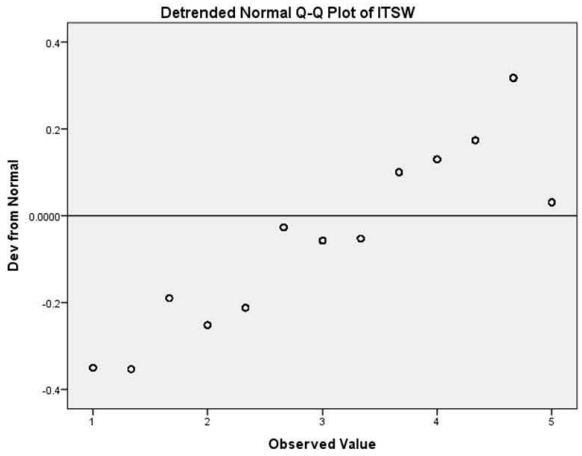
AVITSW Stem-and-Leaf Plot

```
 Frequency    Stem &  Leaf

    20.00        1 .  0000
     9.00        1 .  33
      .00        1 .
    15.00        1 .  666
      .00        1 .
    83.00        2 .  00000000000000000
    40.00        2 .  33333333
      .00        2 .
    40.00        2 .  66666666
      .00        2 .
   227.00        3 .  000000000000000000000000000000000000000000000
    89.00        3 .  333333333333333333
      .00        3 .
   105.00        3 .  666666666666666666666
      .00        3 .
   248.00        4 .  00000000000000000000000000000000000000000000000000
    91.00        4 .  333333333333333333
      .00        4 .
   116.00        4 .  66666666666666666666666
      .00        4 .
   441.00        5 .
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000

 Stem width:      1.00
 Each leaf:       5 case(s)
```

2.3 Q-Q Plot

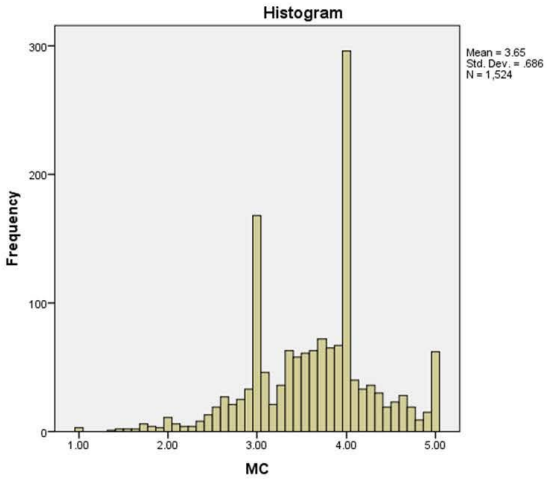


2.4 Detrended normal Q-Q plot



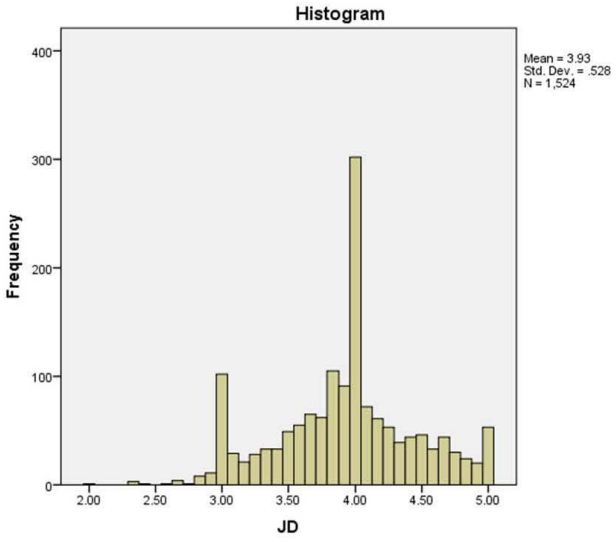
3. Managerial characteristics

3.1 Histogram



4. Job Characteristics

4.1 Histogram



Example of the outcomes of data analysis by using

Independent-Samples t-test and one-way ANOVA

Hospital Level F2: Independent-Samples T-Test

1. Gender

Statistics

N	Valid	274
	Missing	0

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
AVR_ITSPF	Male	5	3.7200	.72938	.32619
	Female	269	3.4119	.68033	.04148
AVR_ITSW	Male	5	4.8667	.18257	.08165
	Female	269	4.0037	.96518	.05885

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AVR_ITSPF	Equal variances assumed	1.702	.193	-1.564	272	.119	-.15712	.10046	-.35489	.04065
	Equal variances not assumed			-1.732	104.915	.086	-.15712	.09073	-.33702	.02278
AVR_ITSW	Equal variances assumed	3.362	.068	.787	272	.432	.11218	.14259	-.16855	.39291
	Equal variances not assumed			.709	79.573	.480	.11218	.15822	-.20272	.42707

2. Education and ITSP, ITSW

Group Statistics

	Edu	N	Mean	Std. Deviation	Std. Error Mean
AVR_ITSW	Bachelor's degree	261	4.0128	0.97174	0.06015
	Higher than BSC	13	4.1538	0.80064	0.22206
AVR_ITSPF	Bachelor's degree	261	3.4245	0.67278	0.04164
	Higher than BSC	13	3.2769	0.85064	0.23593

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AVR_ITSW	Equal variances assumed	0.568	0.452	-0.515	272	0.607	-0.14107	0.27418	-0.68086	0.39871
	Equal variances not assumed			-0.613	13.822	0.55	-0.14107	0.23006	-0.6351	0.35295
AVR_ITSPF	Equal variances assumed	0.563	0.454	0.762	272	0.447	0.1476	0.19369	-0.23373	0.52893
	Equal variances not assumed			0.616	12.759	0.549	0.1476	0.23957	-0.37096	0.66616

3. One-way ANOVA

Generation and ITSP, ITSW

Descriptive

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
AVR_ITSPF	Baby boomer	6	3.4667	0.5164	0.21082	2.9247	4.0086	3	4.4
	Gen X	46	3.2174	0.8174	0.12052	2.9747	3.4601	1.2	4.8
	Gen Y	172	3.4837	0.65389	0.04986	3.3853	3.5821	1.6	5
	Gen Z	50	3.368	0.62904	0.08896	3.1892	3.5468	1.2	4.6
	Total	274	3.4175	0.68108	0.04115	3.3365	3.4985	1.2	5
AVR_ITSW	Baby boomer	6	4.4444	0.80737	0.32961	3.5972	5.2917	3	5
	Gen X	46	3.8841	0.93285	0.13754	3.607	4.1611	2	5
	Gen Y	172	4.1124	0.94089	0.07174	3.9708	4.254	1	5
	Gen Z	50	3.7733	1.04206	0.14737	3.4772	4.0695	1	5
	Total	274	4.0195	0.96353	0.05821	3.9049	4.1341	1	5

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	1.414	3	270	0.239
AVR_ITSW	0.476	3	270	0.699

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
AVR_ITSPF	Between Groups	2.733	3	.911	1.985	.116
	Within Groups	123.903	270	.459		
	Total	126.636	273			
AVR_ITSW	Between Groups	6.442	3	2.147	2.347	.073
	Within Groups	247.010	270	.915		
	Total	253.452	273			

Post Hoc

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Baby boomer	Gen X	.24928	.29404	.397	-.3296	.8282
			Gen Y	-.01705	.28134	.952	-.5709	.5368
			Gen Z	.09867	.29268	.736	-.4776	.6749
		Gen X	Baby boomer	-.24928	.29404	.397	-.8282	.3296
			Gen Y	-.26633*	.11245	.019	-.4877	-.0449
			Gen Z	-.15061	.13840	.277	-.4231	.1219
		Gen Y	Baby boomer	.01705	.28134	.952	-.5368	.5709
			Gen X	.26633*	.11245	.019	.0449	.4877
			Gen Z	.11572	.10884	.289	-.0986	.3300
		Gen Z	Baby boomer	-.09867	.29268	.736	-.6749	.4776
			Gen X	.15061	.13840	.277	-.1219	.4231
			Gen Y	-.11572	.10884	.289	-.3300	.0986
AVR_ITSW	LSD	Baby boomer	Gen X	.56039	.41517	.178	-.2570	1.3778
			Gen Y	.33204	.39723	.404	-.4500	1.1141
			Gen Z	.67111	.41325	.106	-.1425	1.4847
		Gen Z	Baby boomer	-.56039	.41517	.178	-1.3778	.2570

Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		Gen X	Gen Y	-.22835	.15877	.152	-.5409	.0842
			Gen Z	.11072	.19541	.571	-.2740	.4954
		Gen Y	Baby boomer	-.33204	.39723	.404	-1.1141	.4500
			Gen X	.22835	.15877	.152	-.0842	.5409
			Gen Z	.33907*	.15367	.028	.0365	.6416
		Gen Z	Baby boomer	-.67111	.41325	.106	-1.4847	.1425
			Gen X	-.11072	.19541	.571	-.4954	.2740
			Gen Y	-.33907*	.15367	.028	-.6416	-.0365

*. The mean difference is significant at the 0.05 level.

One-way ANOVA

Descriptive									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
AVR_ITSPF	Low	9	2.7556	.66165	.22055	2.2470	3.2641	1.20	3.40
	Moderate	83	3.2747	.66458	.07295	3.1296	3.4198	1.20	5.00
	High	182	3.5154	.66290	.04914	3.4184	3.6123	1.20	5.00
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00
AVR_ITSW	Low	9	3.4815	.68943	.22981	2.9515	4.0114	2.33	4.67
	Moderate	83	3.6948	1.03621	.11374	3.4685	3.9210	1.00	5.00
	High	182	4.1941	.89411	.06628	4.0634	4.3249	1.00	5.00
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	.078	2	271	.925
AVR_ITSW	3.285	2	271	.039

Post Hoc Tests

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	-.51914*	.23280	.027	-.9775	-.0608
			High	-.75983*	.22652	.001	-1.2058	-.3139
		Moderate	Low	.51914*	.23280	.027	.0608	.9775
			High	-.24069*	.08786	.007	-.4137	-.0677
		High	Low	.75983*	.22652	.001	.3139	1.2058
			Moderate	.24069*	.08786	.007	.0677	.4137
	Games-Howell	Low	Moderate	-.51914	.23230	.114	-1.1577	.1194
			High	-.75983*	.22596	.021	-1.3932	-.1265
		Moderate	Low	.51914	.23230	.114	-.1194	1.1577
			High	-.24069*	.08795	.019	-.4488	-.0326
		High	Low	.75983*	.22596	.021	.1265	1.3932
			Moderate	.24069*	.08795	.019	.0326	.4488
AVR_ITSW	LSD	Low	Moderate	-.21330	.32787	.516	-.8588	.4322
			High	-.71266*	.31903	.026	-1.3407	-.0846
		Moderate	Low	.21330	.32787	.516	-.4322	.8588
			High	-.49936*	.12374	.000	-.7430	-.2557
		High	Low	.71266*	.31903	.026	.0846	1.3407
			Moderate	.49936*	.12374	.000	.2557	.7430
	Games-Howell	Low	Moderate	-.21330	.25641	.691	-.8949	.4683
			High	-.71266*	.23917	.036	-1.3754	-.0499
		Moderate	Low	.21330	.25641	.691	-.4683	.8949
			High	-.49936*	.13164	.001	-.8112	-.1875
		High	Low	.71266*	.23917	.036	.0499	1.3754
			Moderate	.49936*	.13164	.001	.1875	.8112

*. The mean difference is significant at the 0.05 level.

Descriptive									
					95% Confidence Interval for Mean		Minimum	Maximum	
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound			
AVR_ITSPF	Low	9	3.0667	.78102	.26034	2.4663	3.6670	1.20	3.80
	Moderate	104	3.1885	.60086	.05892	3.0716	3.3053	1.20	5.00
	High	161	3.5851	.67770	.05341	3.4796	3.6906	1.20	5.00
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00
AVR_ITSW	Low	9	3.7778	1.00000	.33333	3.0091	4.5464	2.33	5.00
	Moderate	104	3.7788	.96050	.09419	3.5921	3.9656	1.00	5.00
	High	161	4.1884	.93302	.07353	4.0432	4.3336	1.00	5.00
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	1.327	2	271	.267
AVR_ITSW	.565	2	271	.569

Post Hoc

Multiple Comparisons								
				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	-.12179	.22688	.592	-.5685	.3249
			High	-.51843*	.22366	.021	-.9588	-.0781
		Moderate	Low	.12179	.22688	.592	-.3249	.5685
			High	-.39663*	.08215	.000	-.5584	-.2349
		High	Low	.51843*	.22366	.021	.0781	.9588
			Moderate	.39663*	.08215	.000	.2349	.5584
	Games-Howell	Low	Moderate	-.12179	.26693	.893	-.8696	.6260
			High	-.51843	.26576	.182	-1.2654	.2285
		Moderate	Low	.12179	.26693	.893	-.6260	.8696
			High	-.39663*	.07952	.000	-.5842	-.2091
		High	Low	.51843	.26576	.182	-.2285	1.2654
			Moderate	.39663*	.07952	.000	.2091	.5842
AVR_ITSW	LSD	Low	Moderate	-.00107	.32855	.997	-.6479	.6458
			High	-.41063	.32389	.206	-1.0483	.2270
		Moderate	Low	.00107	.32855	.997	-.6458	.6479
			High	-.40956*	.11896	.001	-.6438	-.1754
		High	Low	.41063	.32389	.206	-.2270	1.0483
			Moderate	.40956*	.11896	.001	.1754	.6438
	Games-	Low	Moderate	-.00107	.34638	1.000	-.9620	.9599

Multiple Comparisons								
	Howell		High	-.41063	.34135	.481	-1.3677	.5465
		Moderate	Low	.00107	.34638	1.000	-.9599	.9620
			High	-.40956*	.11949	.002	-.6916	-.1276
		High	Low	.41063	.34135	.481	-.5465	1.3677
			Moderate	.40956*	.11949	.002	.1276	.6916
*. The mean difference is significant at the 0.05 level.								

Justices and ITSP and ITSW

Descriptive									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
AVR_ITSPF	Low	14	3.1286	.80997	.21647	2.6609	3.5962	1.20	4.20
	Moderate	85	3.2494	.62557	.06785	3.1145	3.3843	1.20	5.00
	High	175	3.5223	.67697	.05117	3.4213	3.6233	1.20	5.00
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00
AVR_ITSW	Low	14	3.6667	.98710	.26381	3.0967	4.2366	2.00	5.00
	Moderate	85	3.7490	.97033	.10525	3.5397	3.9583	1.00	5.00
	High	175	4.1790	.92624	.07002	4.0409	4.3172	1.00	5.00
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	1.179	2	271	.309
AVR_ITSW	.228	2	271	.797

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
AVR_ITSPF	Between Groups	5.492	2	2.746	6.143	.002
	Within Groups	121.144	271	.447		
	Total	126.636	273			
AVR_ITSW	Between Groups	12.416	2	6.208	6.980	.001
	Within Groups	241.036	271	.889		
	Total	253.452	273			

Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	-.12084	.19285	.531	-.5005	.2588
			High	-.39371*	.18570	.035	-.7593	-.0281
		Moderate	Low	.12084	.19285	.531	-.2588	.5005
			High	-.27287*	.08839	.002	-.4469	-.0988
		High	Low	.39371*	.18570	.035	.0281	.7593
			Moderate	.27287*	.08839	.002	.0988	.4469
AVR_ITSW	LSD	Low	Moderate	-.08235	.27202	.762	-.6179	.4532
			High	-.51238	.26194	.051	-1.0281	.0033
		Moderate	Low	.08235	.27202	.762	-.4532	.6179
			High	-.43003*	.12468	.001	-.6755	-.1846
		High	Low	.51238	.26194	.051	-.0033	1.0281
			Moderate	.43003*	.12468	.001	.1846	.6755

Professional growth and ITSP, ITSW

Descriptive										
						95% Confidence Interval for Mean				
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum	
AVR_ITSPF	Low	10	2.9800	.94493	.29881	2.3040	3.6560	1.20	5.00	
	Moderate	83	3.2361	.58280	.06397	3.1089	3.3634	1.20	4.60	
	High	181	3.5249	.68320	.05078	3.4247	3.6251	1.20	5.00	
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00	
AVR_ITSW	Low	10	3.9000	.77060	.24369	3.3487	4.4513	3.00	5.00	
	Moderate	83	3.5984	.97636	.10717	3.3852	3.8116	1.00	5.00	
	High	181	4.2192	.90634	.06737	4.0862	4.3521	1.00	5.00	
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00	

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	1.844	2	271	.160
AVR_ITSW	.787	2	271	.456

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
AVR_ITSPF	Between Groups	6.730	2	3.365	7.606	.001
	Within Groups	119.906	271	.442		
	Total	126.636	273			
AVR_ITSW	Between Groups	22.076	2	11.038	12.928	.000
	Within Groups	231.376	271	.854		
	Total	253.452	273			

Multiple Comparisons								
							95% Confidence Interval	
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	-.25614	.22266	.251	-.6945	.1822
			High	-.54486*	.21608	.012	-.9703	-.1195
		Moderate	Low	.25614	.22266	.251	-.1822	.6945
			High	-.28872*	.08818	.001	-.4623	-.1151
		High	Low	.54486*	.21608	.012	.1195	.9703
			Moderate	.28872*	.08818	.001	.1151	.4623
AVR_ITSW	LSD	Low	Moderate	.30161	.30930	.330	-.3073	.9105
			High	-.31915	.30016	.289	-.9101	.2718
		Moderate	Low	-.30161	.30930	.330	-.9105	.3073
			High	-.62076*	.12249	.000	-.8619	-.3796
		High	Low	.31915	.30016	.289	-.2718	.9101
			Moderate	.62076*	.12249	.000	.3796	.8619

Work happiness

Descriptive									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
AVR_ITSPF	Low	3	2.6667	.94516	.54569	.3188	5.0146	1.60	3.40
	Moderate	199	3.3216	.60493	.04288	3.2370	3.4062	1.20	5.00
	High	72	3.7139	.77411	.09123	3.5320	3.8958	1.20	5.00
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00
AVR_ITSW	Low	3	2.8889	1.71053	.98758	-1.3603	7.1381	1.00	4.33
	Moderate	199	3.8693	.98343	.06971	3.7319	4.0068	1.00	5.00
	High	72	4.4815	.67573	.07964	4.3227	4.6403	2.00	5.00
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00

Test of Homogeneity of Variances				
	Levene' Statistic	df1	df2	Sig.
AVR_ITSPF	4.127	2	271	.017
AVR_ITSW	8.233	2	271	.000

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
AVR_ITSPF	Between Groups	11.492	2	5.746	13.523	.000
	Within Groups	115.144	271	.425		
	Total	126.636	273			
AVR_ITSW	Between Groups	25.693	2	12.847	15.286	.000
	Within Groups	227.758	271	.840		
	Total	253.452	273			

Post Hoc

Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	.14799	.12686	.244	-.1018	.3977
			High	-.34313*	.14228	.017	-.6232	-.0630
		Moderate	Low	-.14799	.12686	.244	-.3977	.1018
			High	-.49111*	.09447	.000	-.6771	-.3051
		High	Low	.34313*	.14228	.017	.0630	.6232
			Moderate	.49111*	.09447	.000	.3051	.6771
	Games-Howell	Low	Moderate	.14799	.13646	.529	-.1851	.4811
			High	-.34313	.16147	.093	-.7306	.0443
		Moderate	Low	-.14799	.13646	.529	-.4811	.1851
			High	-.49111*	.10630	.000	-.7444	-.2379
		High	Low	.34313	.16147	.093	-.0443	.7306
			Moderate	.49111*	.10630	.000	.2379	.7444
AVR_ITSW	LSD	Low	Moderate	.12553	.17842	.482	-.2257	.4768
			High	-.60711*	.20010	.003	-1.0011	-.2132
		Moderate	Low	-.12553	.17842	.482	-.4768	.2257
			High	-.73264*	.13286	.000	-.9942	-.4711
		High	Low	.60711*	.20010	.003	.2132	1.0011

			Moderate	.73264*	.13286	.000	.4711	.9942
	Games-Howell	Low	Moderate	.12553	.20516	.815	-.3742	.6252
			High	-.60711*	.20668	.015	-1.1101	-.1041
		Moderate	Low	-.12553	.20516	.815	-.6252	.3742
			High	-.73264*	.10646	.000	-.9843	-.4810
		High	Low	.60711*	.20668	.015	.1041	1.1101
			Moderate	.73264*	.10646	.000	.4810	.9843
*. The mean difference is significant at the 0.05 level.								

Work-life balance and ITSP, ITSW

Descriptive									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
AVR_ITSPF	Low	31	3.4323	.71944	.12921	3.1684	3.6962	1.60	5.00
	Moderate	178	3.2843	.58520	.04386	3.1977	3.3708	1.20	5.00
	High	65	3.7754	.78063	.09683	3.5820	3.9688	1.20	5.00
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00
AVR_ITSW	Low	31	3.9570	1.06716	.19167	3.5656	4.3484	1.00	5.00
	Moderate	178	3.8315	.97633	.07318	3.6870	3.9759	1.00	5.00
	High	65	4.5641	.62340	.07732	4.4096	4.7186	2.00	5.00
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	4.127	2	271	.017
AVR_ITSW	8.233	2	271	.000

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
AVR_ITSPF	Between Groups	11.492	2	5.746	13.523	.000
	Within Groups	115.144	271	.425		
	Total	126.636	273			
AVR_ITSW	Between Groups	25.693	2	12.847	15.286	.000
	Within Groups	227.758	271	.840		
	Total	253.452	273			

Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	.14799	.12686	.244	-.1018	.3977
			High	-.34313*	.14228	.017	-.6232	-.0630
		Moderate	Low	-.14799	.12686	.244	-.3977	.1018
			High	-.49111*	.09447	.000	-.6771	-.3051
		High	Low	.34313*	.14228	.017	.0630	.6232
			Moderate	.49111*	.09447	.000	.3051	.6771
	Games-Howell	Low	Moderate	.14799	.13646	.529	-.1851	.4811
			High	-.34313	.16147	.093	-.7306	.0443
		Moderate	Low	-.14799	.13646	.529	-.4811	.1851
			High	-.49111*	.10630	.000	-.7444	-.2379
		High	Low	.34313	.16147	.093	-.0443	.7306
			Moderate	.49111*	.10630	.000	.2379	.7444
AVR_ITSW	LSD	Low	Moderate	.12553	.17842	.482	-.2257	.4768
			High	-.60711*	.20010	.003	-1.0011	-.2132
		Moderate	Low	-.12553	.17842	.482	-.4768	.2257
			High	-.73264*	.13286	.000	-.9942	-.4711
		High	Low	.60711*	.20010	.003	.2132	1.0011
			Moderate	.73264*	.13286	.000	.4711	.9942
	Games-Howell	Low	Moderate	.12553	.20516	.815	-.3742	.6252
			High	-.60711*	.20668	.015	-1.1101	-.1041
		Moderate	Low	-.12553	.20516	.815	-.6252	.3742
			High	-.73264*	.10646	.000	-.9843	-.4810
		High	Low	.60711*	.20668	.015	.1041	1.1101
			Moderate	.73264*	.10646	.000	.4810	.9843

*. The mean difference is significant at the 0.05 level.

Job characteristics and ITSP, ITSW

Autonomy

Descriptive									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
AVR_ITSPF	Low	2	2.9000	.14142	.10000	1.6294	4.1706	2.80	3.00
	Moderate	79	3.2025	.68200	.07673	3.0498	3.3553	1.20	5.00
	High	193	3.5109	.66327	.04774	3.4167	3.6051	1.20	5.00
	Total	274	3.4175	.68108	.04115	3.3365	3.4985	1.20	5.00
AVR_ITSW	Low	2	4.0000	1.41421	1.00000	-8.7062	16.7062	3.00	5.00
	Moderate	79	3.6835	.97387	.10957	3.4654	3.9017	1.00	5.00
	High	193	4.1572	.92674	.06671	4.0256	4.2887	1.00	5.00
	Total	274	4.0195	.96353	.05821	3.9049	4.1341	1.00	5.00

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
AVR_ITSPF	1.036	2	271	.356
AVR_ITSW	.533	2	271	.588

ANOVA						
	Sum of Squares		df	Mean Square	F	Sig.
AVR_ITSPF	Between Groups	5.869	2	2.935	6.585	.002
	Within Groups	120.767	271	.446		
	Total	126.636	273			
AVR_ITSW	Between Groups	12.575	2	6.287	7.074	.001
	Within Groups	240.877	271	.889		
	Total	253.452	273			

Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
AVR_ITSPF	LSD	Low	Moderate	-.30253	.47797	.527	-1.2435	.6385
			High	-.61088	.47447	.199	-1.5450	.3232
		Moderate	Low	.30253	.47797	.527	-.6385	1.2435
			High	-.30835*	.08916	.001	-.4839	-.1328
		High	Low	.61088	.47447	.199	-.3232	1.5450
			Moderate	.30835*	.08916	.001	.1328	.4839
AVR_ITSW	LSD	Low	Moderate	.31646	.67504	.640	-1.0125	1.6454
			High	-.15717	.67010	.815	-1.4764	1.1621
		Moderate	Low	-.31646	.67504	.640	-1.6454	1.0125
			High	-.47362*	.12592	.000	-.7215	-.2257
		High	Low	.15717	.67010	.815	-1.1621	1.4764
			Moderate	.47362*	.12592	.000	.2257	.7215

*. The mean difference is significant at the 0.05 level.

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