

STRUCTURAL MODEL OF ENGAGEMENT AND TURNOVER INTENTION
IN THAI PHARMACIST



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จุฬาลงกรณ์มหาวิทยาลัย

บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
เป็นแฟ้มข้อมูลของนิสิตเจ้าของวิทยานิพนธ์ ที่ส่งผ่านทางบัณฑิตวิทยาลัย

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are the thesis authors' files submitted through the University Graduate School.

A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Social and Administrative Pharmacy
Department of Social and Administrative Pharmacy
Faculty of Pharmaceutical Sciences
Chulalongkorn University
Academic Year 2017
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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรดุษฎีบัณฑิต

สาขาวิชาเกษตรศาสตร์สังคมและบริหาร ภาควิชาเกษตรศาสตร์สังคมและบริหาร

คณะเกษตรศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2560

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

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CONTENTS

	Page
THAI ABSTRACT	iv
ENGLISH ABSTRACT.....	v
ACKNOWLEDGEMENTS	vi
CONTENTS.....	vii
LIST OF TABLES	xi
LIST OF FIGURES	xii
ABBREVIATIONS	xiii
CHAPTER I INTRODUCTION.....	1
1.1 Rationale of the study	1
1.2 Study objectives.....	5
1.3 Significance of the study	5
CHAPTER II LITERATURE REVIEWS	6
2.1 Turnover and turnover intention.....	6
2.2 Theoretical framework of factors related to turnover intention.....	7
2.3 Work engagement.....	9
2.4 The relationship of work engagement with turnover intention.....	11
2.5 Job resources.....	11
2.5.1 Organizational resources	12
2.5.2 Job characteristics.....	12
2.5.3 Social supports	14
2.6 The relationship between job resources and work engagement	14
2.6.1 Organizational resources and work engagement.....	14
2.6.2 Job characteristics and work engagement	15
2.6.3 Social supports and work engagement	15
2.7 The relationship between job resources and turnover intention	16
2.7.1 Organizational resources and turnover intention.....	16
2.7.2 Job characteristics and turnover intention	16
2.7.3 Social supports and turnover intention.....	17

	Page
2.8 Conceptual model and hypotheses of the study	18
CHAPTER III METHODOLOGY	19
3.1 Study design.....	19
3.2 Population, Sample size and Sampling.....	20
3.3 Development and assessment of measurement scales.....	21
3.3.1 Conceptualization and operationalization	21
3.3.2 Assessment of content validity of measurement scales.....	27
3.3.3 Assessment of the reliability of the measurement scales	28
3.4 Data collection	29
3.5 Data analysis	30
3.5.1 Descriptive data.....	30
3.5.2 Missing data	30
3.5.3 Construct reliability and construct validity of the measurement scales ...	30
3.5.4 Measurement model testing.....	32
3.5.5 Structural model testing.....	33
3.5.4.1 Model specification	35
3.5.4.2 Model identification	36
3.5.5.4 Model evaluation.....	37
3.5.5.5 Model modification	38
3.6 Ethical approval	38
CHAPTER IV RESULTS OF THE STUDY.....	39
4.1 Response rate	39
4.2 Demographic data	40
4.3 Descriptive data of variables	42
4.3.1 Pharmacist turnover intention	42
4.3.2 Pharmacist engagement.....	45
4.3.3 Organizational resources	46
4.3.4 Job characteristics.....	47

	Page
4.3.5 Social supports.....	48
4.4 Missing data management	49
4.5 Reliability of the measurement scales	50
4.6 Measurement model testing	56
4.7 Proposed hypothesized model testing and model modification	57
4.8 The final model.....	60
4.9 Post-hoc analysis	63
4.9.1 Model for female community pharmacists.....	64
4.9.2 The model for the group of age equal and less than 35 years old	66
4.9.3 The model for community pharmacists who worked in multiple branch	68
CHAPTER V DISCUSSIONS AND CONCLUSIONS	70
Appendix A : List of experts for measurement validation	74
Appendix B : Ethical committee approval paper	75
Appendix C : English questionnaire.....	81
Appendix D : Permission letter for community pharmacy name list	84
Appendix E : List of lucky draw respondents	85
Appendix F : Results of IOC	87
Appendix G : Results of reliability test in measurement scale development	91
Appendix H : Additional results of path regressions in each step of model modification.....	93
REFERENCES	98
VITA.....	105

LIST OF TABLES

Table 1 : Fit indices criteria.....	38
Table 2 : Demographic data.....	41
Table 3 : Means, standard deviations of pharmacist turnover intention measurement scales.....	42
Table 4 : Percentage of pharmacist turnover intention in each level.....	43
Table 5 : Means, standard deviations and of pharmacist engagement measurement scales.....	45
Table 6 : Means, standard deviations of organizational resources dimensions.....	46
Table 7 : Means, standard deviations of job characteristics dimensions.....	47
Table 8 : Means, standard deviations of social supports dimensions.....	49
Table 9 : Factor loading (λ), square multiple correlation (λ^2) and model-based reliability (ρ_η) of pharmacist turnover intention measurement.....	50
Table 10 : Factor loading (λ), square multiple correlation (λ^2), and model-based reliability (ρ_η) of pharmacist engagement.....	51
Table 11 : Factor loading (λ), square multiple correlation (λ^2), and model-based reliability (ρ_η) of organizational resources.....	52
Table 12 : Factor loading (λ), square multiple correlation (λ^2), and model-based reliability (ρ_η) of job characteristics scales.....	53
Table 13 : Factor loading (λ), square multiple correlation (λ^2) and model-based reliability (ρ_η) of social supports.....	55
Table 14 : Steps of model modification.....	58
Table 15 : Factor loadings, square multiple correlations, and standardized residual covariances of proposed hypothesized model.....	59
Table 16 : Factor loadings, square multiple correlations, and standardized residual covariances of the final model.....	62

LIST OF FIGURES

Figure 1 : Job Demands-Resources (JD-R) model of work engagement (Source: Bakker AB, 2008)	8
Figure 2 : Conceptual framework	18
Figure 3 : Proposed hypothesized model	33
Figure 4 : Model specification.....	36
Figure 5 : Pharmacist most interesting job if they had the intention to quit their current job (n=192)	44
Figure 6 : CFA of established measurement models	56
Figure 7 : Result of proposed hypothesized model testing	57
Figure 8 : Final model.....	61
Figure 9 : Model for female community pharmacists	65
Figure 10 : Model for community pharmacist who had age equal or less than 35 years old model	67
Figure 11 : Model for community pharmacists who worked at multiple branch pharmacies	69

ABBREVIATIONS

DF	Degree of freedom
CFI	Comparative Fit Index
GFI	Goodness of Fit Index
GPP	Good pharmacy practice
IOC	Item-Objective Congruence
JD-R	Job Demands-Resources
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
ε_i	Standardized error variance
λ	Factor loading
λ_i	Standardized factor loading
ρ_η	Model-based reliability
χ^2	Chi-square
χ^2/DF	normed Chi-square

CHAPTER I

INTRODUCTION

1.1 Rationale of the study

The separation of drug prescribing and dispensing policy is not fully applied in Thailand. Majority of Thai people (60-80%) has been to a community pharmacy to get self-medications when they get a common illness¹. Most of the medication can be dispensed by pharmacists without a prescription except some medications.

Psychotropic substance schedule 2, 3 and 4, narcotic drug schedule 2, and the special controlled drug must be prescribed by physicians and dispensed at the hospital².

Thus, community pharmacists serve as one of the major healthcare providers who patients can get medications and drug information from. Good pharmacy practice (GPP) in community pharmacies is very important and necessary for ensuring the quality of patient care.

To improve the good pharmacy practice (GPP) in community pharmacy, the Thai-FDA needs to use legal intervention for community pharmacies by revising “The Ministerial Regulation on Application and Issuance of License to Modern Community Pharmacy” in order to get all pharmacies to comply with GPP. The newly revised regulation has been implemented since June 26th, 2014³. Before the new regulation, the majority of pharmacy owners who are not a pharmacist must have a registered pharmacist on duty during the opening hours. The problem exists similar to other developing country⁴. The registered pharmacists are rarely available to dispense the medications because they had other full-time jobs.

Under the new regulation, community pharmacies must have a full-time community pharmacist-in-charge working during the opening hours. If there are no pharmacists during the opening hour, these community pharmacies would not be able to renew their community pharmacy license in the next year. The revised regulation makes the need of community pharmacists. There would be more full-time pharmacists to work in the community pharmacies⁵. There are a lot of mentions about the problem of a shortage of community pharmacist and high turnover rate of community pharmacists⁶. Turnover of the pharmacist in community pharmacies is not only affected the cost of a pharmacy^{7,8} but also affect continuity of patient care and most importantly the quality of care. There is no empirical evidence showing the extent of this problem in full-time community pharmacist workforce in Thailand. It has been proved that turnover intention influenced turnover^{9,10}. Therefore, this study was conducted to examine the extent of turnover intention to reflect this problem and explain the influencing factors on turnover intention. Pharmacy managers and business owners, including those involved in the policy, can apply the results of the current study to retain pharmacists in community pharmacies and finally cope with the community pharmacist shortage situation.

Job Demands-Resources (JD-R) model of work engagement¹¹ was used as the theoretical framework for this study. It includes many possible both negative and positive working conditions on employee well being. The model can be applied to a wide range of occupations¹². The model assumes that every occupation has its own risk factors associated with job stress. These factors can be classified into two general categories which are job demands and job resources. Job demands¹¹ correspond with job stressors such as work pressure, emotional, mental, and physical demands. Job

resources have a positive impact on work engagement when job demands are high.

Work engagement, in turn, has a positive impact on job performance. Job resources¹¹ refer to those physical, psychological, social, or organizational aspects of the job such as social supports from colleagues and supervisors, skill variety, autonomy, and learning opportunities.

In this study, job resources refer to the resources that may stimulate personal growth and development of the community pharmacists and affect work engagement as in the model. It includes 3 dimensions which were 1) organizational resources, 2) job characteristics, and 3) social supports. Organisational resources include training and development¹³⁻¹⁹, payment and recognition^{18, 20-24}, physical working conditions^{14, 18, 24, 25}. Job characteristics includes autonomy^{13, 14, 16, 20, 23, 26-33}, job skill variety^{9, 32-35}, task significance^{9, 32, 33, 36}, task identity^{9, 32, 33, 37}. Social supports is characterized by supervisory support^{38, 39} and peer support³⁸⁻⁴⁰.

Organizational resources, physical aspects of the organization, were characterized by training and development, payment and recognition and physical working conditions¹⁴. These could stimulate personal growth and development of the community pharmacist. It included training and development¹³⁻¹⁹, payment and recognition^{18, 20-24}, and physical working conditions^{14, 18, 24, 25}. Training and development referred to the opportunities for community pharmacists to acquire knowledge and skills from organizations¹⁴. Payment and recognition referred to regular pay and fringe benefits, which community pharmacists earned from the organization, and praise which provided by the organization's staff or clients³⁷. Physical working conditions referred to tangible resources that supported task performance of the community pharmacist²⁴.

Job characteristics included autonomy^{13, 14, 16, 20, 23, 26-33}, job skill variety^{9, 32-35}, task significance^{9, 32, 33, 36}, and task identity^{9, 32, 33, 37}. Autonomy referred to the degree that community pharmacists were allowed to manage their work at the pharmacy⁴¹. Job skill variety referred to the variety of different skills that the community pharmacist was capable of performing their job responsibilities at the community pharmacy⁴¹. Task significance referred to the degree to which the community pharmacist's professional duties had a substantial impact on the lives of clients or the goals of an organization⁴¹. Task identity referred to the degree to which a task or set of tasks was able to be completed by one pharmacist without depending on other staffs in the pharmacy⁴¹.

Social supports, the assistance that the community pharmacist receives from an organization's staff in coping with any situations, especially for work-related conditions, were characterized by supervisory support^{38, 39} and peer support³⁸⁻⁴⁰. Supervisory support referred to the assistance that the community pharmacists received from any supervisors such as store manager, regional manager, upper management personnel in coping with any situations, especially for work-related situations⁴². Peer support referred to the assistance that pharmacists received from co-workers, subordinates, or other colleagues in the same and other departments, in any coping situations, especially for work-related situations⁴².

Work engagement has a relationship with turnover intention^{37, 43, 44}. Work engagement is defined as a continuous positive mental overall state mental satisfaction with work⁴⁵. This study called work engagement as pharmacist engagement. Previous studies found that employee engagement was a factor associated with turnover intention^{37, 43, 44, 46-48}. Therefore, pharmacist engagement

could be the mediator between the relationship of influencing factors and turnover intention of the community pharmacist. As defined by Schaufeli, Salanova, González-Romá, Bakker⁴⁵, employee engagement was a continuous and persistent state of overall positive mental satisfaction with work.

Based on an intensive reviewed the literature, organizational resources, job characteristics, and social supports had a direct effect on both engagement and turnover intention; and engagement had a negative relationship with turnover intention.-The current study aimed to explore the path relationship among these constructs in the area of community pharmacists to understand the turnover intention of community pharmacists in Thailand.

1.2 Study objectives

The main objective of this study was to develop the model to explain the relationship among organizational resources, job characteristics, social supports, pharmacist engagement and turnover intention. The second objective was to investigate turnover intention in Thai community pharmacists.

1.3 Significance of the study

This research was useful to pharmacy managers and business owners to understand the situation of turnover intention in Thai community pharmacists and factors related to pharmacist engagement and turnover intention. This information could be used to create interventions or strategies to increase engagement at work and reduce turnover intention of community pharmacists in organizations which finally affected the quality of patient care and cost saving for the organization.

CHAPTER II

LITERATURE REVIEWS

The objectives of this study were to develop the proposed hypothesized model of the relationship among organizational resources, job characteristics, social supports, pharmacist engagement and turnover intention in Thai community pharmacists. This chapter provided an overview of the related literature of the constructs in the model and related research. The details presented as follows:

2.1 Turnover and turnover intention

Turnover intention was used as a proxy for turnover in this research. Therefore, this section also reviewed turnover and related research. Employee turnover could be divided into 2 main types, organizational turnover, and professional turnover⁴⁹⁻⁵³. Organizational turnover means that employees changed or left their organizations or employers to other employers⁵⁰. It also includes moving to a similar position or a different position within the same career path⁵¹. While, professional turnover refer to moving to a new profession, or occupation which does not in the same career path⁵¹, or quit from their profession⁵². Turnover intention refers to the deliberate and conscious intention to quit from organization or profession of the employees^{54, 55}. It is a voluntarily quit and not forcing from the organization⁵⁶. In this study, we included both types of turnover because there are many fields in the pharmacist career, for example, pharmacists move from their current job to other community pharmacies, pharmacist job or non-pharmacist job.

Numerous studies have demonstrated that turnover intention is a reliable

predictor of employee turnover^{9, 10, 57-60}. Michaels, Spector⁵⁹ indicated that desire to leave a position influenced by actual turnover rates in 112 permanent community mental health center employees in the next 6 months after collecting data. The 2-year study of Thatcher, Stepina, Boyle⁹ in information technology workers showed that turnover intention linked to actual turnover. DeConinck, Johnson¹⁰ found a similar relationship between turnover intention and actual turnover in 384 salespeople. Two meta-analyses on employee turnover intention revealed a positive correlation with actual employee turnover^{58, 60}. Additionally, the Theory of Planned Behavior⁵⁷ supports the relationship between turnover intention and actual turnover. Since the limitation of time, therefore, this study used turnover intention as a proxy for a turnover.

There was no empirical evidence showing the extent of this problem in full-time community pharmacist workforce in Thailand. Therefore, this study was conducted to examine the extent of turnover intention to reflect this problem and explain the influencing factors on turnover intention.



2.2 Theoretical framework of factors related to turnover intention

Job Demands-Resources (JD-R) model of work engagement¹¹(Figure 1) includes many possible both negative and positive working conditions on employee well being. The model can be applied to a wide range of occupations¹². The model assumes that every occupation has its own risk factors associated with job stress. These factors can be classified into two general categories which are job demands and job resources. Job demands¹¹ correspond with job stressors such as work pressure, emotional, mental, and physical demands. Job resources¹¹ refer to those physical,

psychological, social, or organizational aspects of the job such as social supports from colleagues and supervisors, skill variety, autonomy, and learning opportunities. Also, personal resources which include optimism, self-efficacy, resilience and etc. is a part of job resources. Job resources have a positive impact on work engagement when job demands are high. Work engagement, in turn, has a positive impact on job performance. Organizational outcome can be considered as job performance. One of organizational outcome is employee turnover. Thus, work engagement has an impact on turnover. This study adapted turnover intention to proxy turnover which was the outcome of work engagement.

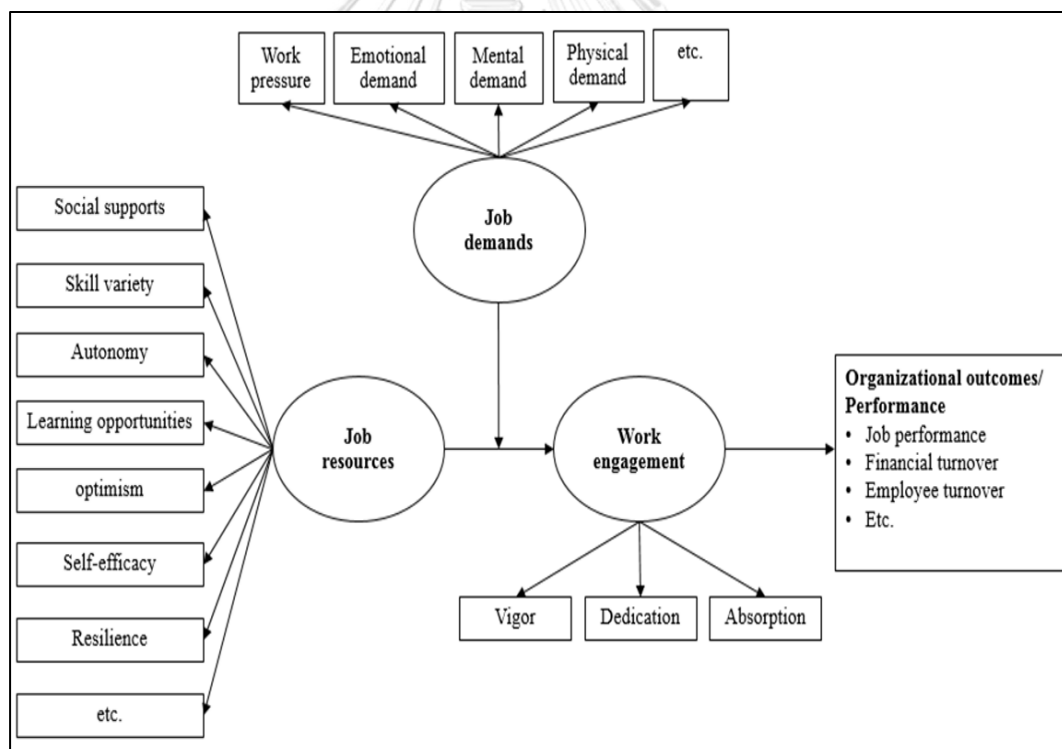


Figure 1 : Job Demands-Resources (JD-R) model of work engagement (Source: Bakker AB, 2008)

2.3 Work engagement

There are a lot of psychological concepts which may be similar to work engagement such as burnout, job satisfaction, and organizational commitment. Although work engagement and burnout may be a simultaneous phenomenon, it has to be differentiated. Work engagement is a positive, fulfilling, and work-related mental state demonstrated by vigor, dedication, and absorption⁴⁵ while burnout is a prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy⁶¹. Therefore, work engagement is the opposite approach to job burnout. The study of “work engagement” was conducted in 2002 by Schaufeli, Salanova, González-Romá, Bakker⁴⁵ to differentiate this concept from “burnout” concept. The assumption was an employee who was not burned-out might get a low or high score on work engagement. In contrast, they hypothesized that an engaged employee might get a low or high score on burnout. The result showed that work engagement concept and burnout concept are independent of each other⁴⁵.

Work engagement is different from job satisfaction. Job satisfaction refers to “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values”⁶². Job satisfaction is one’s perception of what the job offering and what one wants while work engagement focuses only on what the job offering.

Work engagement also differentiates from organizational commitment. Mowday, Steers, Porter⁶³ indicated that organizational commitment is “the relative strength shown by an individual’s identification with one’s participation in a particular organization.” That means organizational commitment associate to the

relationship of a person to the organization as an entity, while work engagement relates to the perception of a person on the job.

The term “work engagement” is widely used by both business practitioners and academic researchers. Two words associate with the work engagement are “personal engagement”⁶⁴ and “employee engagement”^{37, 65}. In 1990, the first research in engagement by Kahn was published in the academic journal¹³. He established the term “personal engagement” to explain employees of an architectural organization and camp counselors⁶⁶ behavior in relation to their work. The personal engagement refers to the behaviors by which people bring in or leave out their personal selves during role performance. In engagement, people express cognitively, physically, and emotionally during their work. In 1992, Gallup Organization, a business organization introduced the term “employee engagement” which mean “individual’s involvement, enthusiasm, and satisfaction for work”⁶⁵. In 2006, Saks³⁷ also stated that employee engagement consisted of behavioral, cognitive, and emotional components related to individual role performance. In addition, engagement concept represents a more pervasive and persistent affective-cognitive condition rather than a short and definite state which does not focus on any particular event, object, behavior, or individual⁴⁵.

This research was conducted in community pharmacist; therefore, the term of ‘pharmacist engagement’ was used instead of work engagement. The definition of pharmacist engagement in this study was a positive, fulfilling, and work-related mental state of pharmacist demonstrated by dedication, absorption, and vigor. Vigor was defined as the high energy level and mental resilience of pharmacists during working in the community pharmacy, the willingness to put effort into their work, and persistence although there may be difficulties in pharmacy work⁴⁵. Dedication was

defined as having a high involvement in their work in a community pharmacy while having an experience of a sense of significance, challenge, pride, inspiration, and enthusiasm⁴⁵. Absorption referred to being fully concentrated and happily engrossed in work in a community pharmacy, so time quickly passes and one experience difficulties about detachment from pharmacy work⁴⁵.

2.4 The relationship of work engagement with turnover intention

Several studies revealed that work engagement has a relationship with turnover intention. Jones, Harter⁴⁶ examined the effect of work engagement on intention to stay in 1,617 employees. They found that work engagement influenced on remaining to work in the same career and the current organization. Saks³⁷. Bhatnagar⁴³ indicated that work engagement related to intention to leave the current workplace in a variety of jobs and organizations. Shuck, Twyford, Reio, Shuck⁴⁸ discovered a negative relationship between work engagement and organizational turnover in healthcare workers. Takawira, Coetzee, Schreuder⁴⁴ revealed that work engagement influenced on an organizational turnover in academic institution workers.

2.5 Job resources

Job resources refer to those physical, social, or organizational aspects of the job that may reduce job demands, for example, work pressure, emotional, mental, and physical demands and reduce the associated physiological and psychological costs. It also may be functional in achieving work goals and stimulate personal growth, learning, and development¹¹. It included 3 dimensions which were 1) organizational resources, 2) job characteristics, and 3) social supports. Organizational resources

included training and development¹³⁻¹⁹, payment and recognition^{18, 20-24}, physical working conditions^{14, 18, 24, 25}. Job characteristics included autonomy^{13, 14, 16, 20, 23, 26-33}, job skill variety^{9, 32-35}, task significance^{9, 32, 33, 36}, task identity^{9, 32, 33, 37}. Social supports was characterized by supervisory support^{38, 39} and peer support³⁸⁻⁴⁰.

2.5.1 Organizational resources

Organizational resources refer to any assets including tangible and intangible assets that organization used to develop and implement the strategies to improve and achieve organizational goals^{14, 67-69}. The example of organizational resources are personnel resources, financial resources, and organizational structure, physical assets and technologies, human resources and organizational capabilities, and the intangible resources of reputation and political acumen^{14, 67-69}. This study focused on financial resources, physical asset, intangible resources of reputation and human resources. Intangible resources of human resources were training and development, financial resources and intangible resources of reputation was payment and recognition and physical asset was physical working conditions in this study.

Training and development are a part of the intangible organizational resource. It is defined that the chances for employees to get knowledge, abilities, and skills to satisfy the objectives of an organization⁷⁰. Payment and recognition refer to both regular pay and fringe benefits that employees earn from work, and praise which they are given by organization's staffs and clients.⁷¹ Physical working conditions refer to tangible resources, which support the task performance of employees⁷².

2.5.2 Job characteristics

Brief⁷³ defined job characteristics as the amount of variety, task identity, task significance, autonomy, and feedback, that recognized by a person to exist in a job.

McKnight, Phillips, Hardgrave³² referred to “worker perceptions regarding their tasks: their content and nature, which included job feedback, skill variety, autonomy and etc.” Job characteristics included job identity, individual job differences, job opportunity, job importance, and job independence; which affect employees’ willingness to carry out their careers⁷⁴. Another researcher separated job characteristics into five dimensions which were skill variety, feedback, task identity, task significance, and autonomy⁷⁵. Job characteristics in this study included autonomy, skill variety, task identity and task significance.

Autonomy refers to the extent to which a job ensures persons’ attentiveness, substantial freedom, and independent discretion in their work scheduling and in determining procedures for carrying it out⁴¹. Skill variety means the degree that a job requires a variety of activities in doing work, which involves the use of persons’ different skills and talents⁴¹. Task significance is the extent to which a job substantially impacts on the work or lives of others, whether in their immediate employment or the external environment⁴¹. Task identity means the extent to which a job needs achievement of an identifiable amount of work which involves completing a job from start to finish with a visible outcome⁴¹.

2.5.3 Social supports

Social supports is a wider term which refers to the social relationship between the giver and the receiver. It is defined as “the overall level of helpful social interaction which can be obtained from both supervisors, and co-workers on the job.”

⁴² Social supports means the level of the positive outcome of social interaction at work which an employee receives from supervisors and colleagues, which includes peer support and supervisory support ⁴². Thus, social supports in this study were adapted from the idea of Karasek ⁴². It consisted of peer support and supervisory support.

2.6 The relationship between job resources and work engagement

2.6.1 Organizational resources and work engagement

Several studies about the effect of training and development on work engagement in many occupations such as teachers¹³, electrical engineers¹⁵, police officer¹⁶, front desk and restaurant waiter¹⁴ showed that training and development had positive relationship with work engagement.

Payment and recognition related positively to employee work engagement in many studies²⁰. Studies about the relationship between payment and recognition and work engagement in educators in South Africa⁷⁶ and members of faculty of medicine in Thailand⁷⁷ also showed the same results.

A study¹⁴ in hotel front desk and restaurant waiter staffs showed the relationship of work engagement and technology which was one of physical working conditions.

2.6.2 Job characteristics and work engagement

A few studies^{20,28} showed that autonomy positively related to work engagement in many occupations such as elementary¹³, secondary, and vocational teachers¹²; college teachers¹³, elementary, lower secondary, upper secondary, and vocational school teachers²⁶, telecommunications company executives and middle managers²⁷, hotel receptionists and waiters/waitresses in a restaurant¹⁴.

The studies conducted in various occupations such as dentistry, information and communication technologies (ICT) staff, teachers, and blue collar workers^{34,35} found that job skill variety positively related to work engagement. Christian, Garza, Slaughter³⁶ conducted a meta-analysis study found a relationship which was statistically significant between work engagement and task significance even though the effect was quite weak. A study about the antecedents and consequences of employee engagement³⁷ showed that job characteristics which included task identity positively related to employee engagement.

2.6.3 Social supports and work engagement

Social supports included both supervisory and peer support. Many studies showed relationship between social supports and work engagement²⁰. Studies in the primary, secondary and vocational school teachers¹², telecommunications company executives and middle managers²⁷, employees in an insurance company⁷⁶ showed that supervisory support correlated positively with work engagement. It also found that peer or co-worker support correlated with work engagement in the studies in telecommunications company executives and middle managers²⁷, and employees in an insurance company⁷⁶.

2.7 The relationship between job resources and turnover intention

2.7.1 Organizational resources and turnover intention

Training and development was found to have positively indirect association with turnover intention in previous studies in public sector's employees¹⁷ and in Social Security Institution's employees¹⁸. However, a study in police officers showed negatively direct association with turnover intention¹⁹.

A couple studies^{21 22} in social workers showed that an annual salary was negatively associated with leaving organization intention. In addition, pay equity and recognition affected nurses' intention to quit a facility²³.

The relationship between of physical working conditions and turnover intention was found in several studies^{18 24}. Physical working conditions had indirect effect on intention to continue working in the same institution of Social Security Institution employees¹⁸. Some physical working conditions, task facilitation and noise in the workplace, were related to intention to quit the job in nurses who were employed in a leukemia unit²⁴.

2.7.2 Job characteristics and turnover intention

A negative relationship between autonomy and turnover intention was found in previous studies^{31 23 29 30}. State civil employees' autonomy had a negative relationship with intention to quit their job³¹. Studies in IT road warriors²³ and banking officers²⁹ found that autonomy negatively affected turnover intention. An indirect effect of autonomy on intention to move to another hospital and intention to change from the current unit to another unit at the same hospital was also found in a study in nurses³⁰.

Job skill variety had negative impact on intention to quit of IT workers⁷⁷. A couple studies in IT workers showed that task significance had a negative relationship with intention of leaving a job^{31 9}. Task identity also indirectly influenced intention to leave of IT workers⁹.

2.7.3 Social supports and turnover intention

Many studies found that social supports influenced turnover intention^{38-40, 78}. Brough, Frame³⁸ concluded that colleague support and supervisory support had indirect effects on police turnover intention. Robison, Pillemer³⁹ found that social supports were associated with quitting employment of frontline nurses in a nursing home. A study in nurses and nurse aide's also showed the similar trend that co-worker supports influenced on changing practice location⁴⁰.

2.8 Conceptual model and hypotheses of the study

Based on the literature reviews, it was hypothesized in this study that organizational resources, job characteristics, and social supports had a direct effect on pharmacist turnover intention and indirect effect on pharmacist turnover intention via pharmacist engagement. The conceptual framework is illustrated in Figure 2.

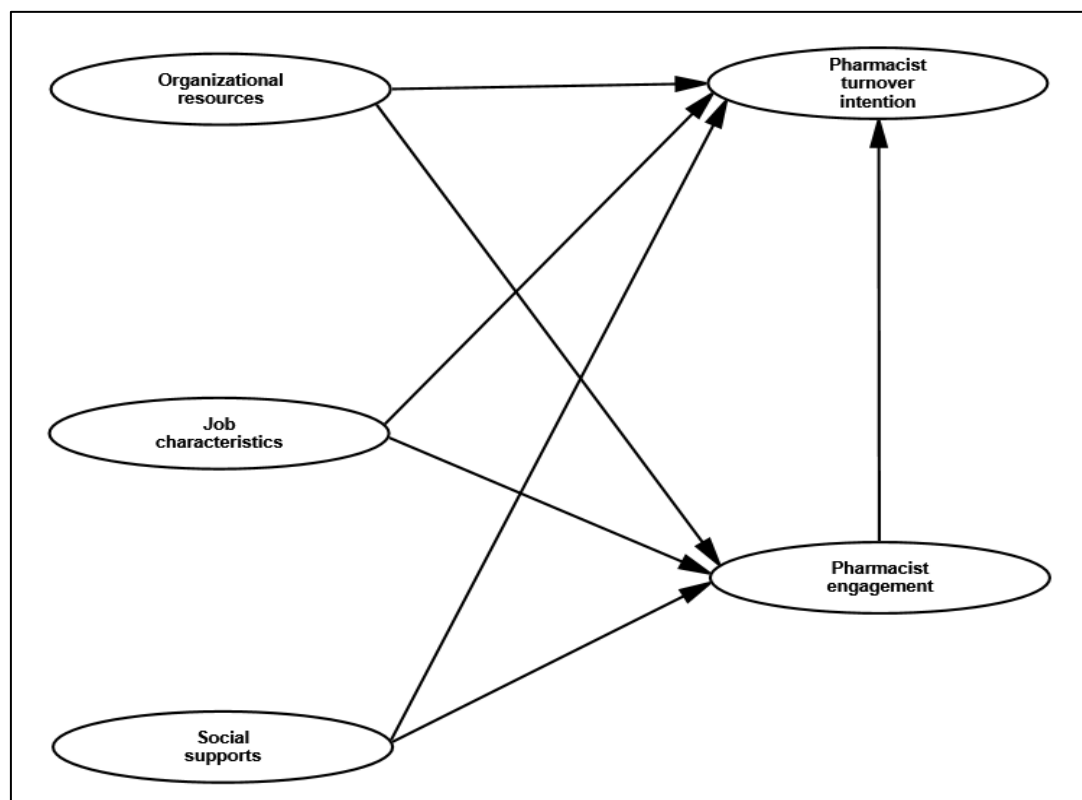


Figure 2 : Conceptual framework

CHAPTER III

METHODOLOGY

This chapter provided an overview of the methodology of the study. The objectives of this study were to develop the model to explain the relationship among organizational resources, job characteristics, social supports, pharmacist engagement and turnover intention and to investigate turnover intention in Thai community pharmacists. The topics included the study design, population, sample size and sampling, development and assessment of measurement scales, data collection, data analysis, and ethical approval. The details were described as follows:

3.1 Study design

A cross-sectional study design was conducted to survey Thai community pharmacists about their turnover intention and their influencing factors. Due to limitations of time, this research studied turnover intention as a proxy for an actual turnover. If the researcher conducted a prospective study design, it would be necessary to wait for turnover behaviors to occur. In addition, if the researcher carried out a retrospective study design, there were limitations of sample size and recall bias about the causes that lead to respondent's resignation. Each of them would have a different timeline after quitting the job, which may affect the ability to remember information or recall bias. For these reasons, the researcher chose to study turnover intention instead of an actual turnover.

3.2 Population, Sample size and Sampling

The population of this study was community pharmacists who self-identified as a full-time employee and had age less than 60 years old. At the time of collecting data, there was no sample frame of all community pharmacists who working full time at the pharmacies. The only available list was the name list of community pharmacy and names of community pharmacists who registered with Thai FDA as an in-charge pharmacist of each community pharmacy. Thai FDA provided us the outside Bangkok pharmacy database of the year 2011 and Bangkok pharmacy database of the year 2016. A total number of community pharmacies were 14,631.

We had created our sample frame from the available data from FDA. If names of community pharmacy owners and pharmacist-in-charge were the same, we excluded them from the sample frame. The pharmacists-in-charge who worked less than 8 hours per day were also excluded from sample frame. Therefore, there were 1,959 community pharmacists who were full-time pharmacists and not the owners of our sample frame.

The sample size calculation was estimated based on the number of parameters to be estimated multiplied by 5 that suggested by Hair⁷⁹. The number of parameters to be estimated in this study was 40 (see the details in topic 3.5). Therefore, the required sample size was 200.

To achieve the sample size of 200 community pharmacists, the response rate was projected about 10%. So, the number of distributed questionnaires would be 2,000. This number was near the number of population in our sample frame. Therefore, all 1,959 identified community pharmacists-in-charge were contacted without sampling.

3.3 Development and assessment of measurement scales

The conceptualizations and preliminary measurement models were developed from the published literature, and then, the experts evaluated for content validity. After that, the pilot test was conducted in 23 community pharmacists to assess the reliability of the measurements. The details of the measurement developments were described as follows.

3.3.1 Conceptualization and operationalization

There were five constructs or latent variables in this study which were pharmacist turnover intention, pharmacist engagement, organizational resources, job characteristics, and social supports. The definitions of the all constructs and measurable variable or observed variable were described as follows.

Pharmacist turnover intention referred to the intention of community pharmacists to quit their current job within one year⁸⁰. It was measured by 3 items

- Sometimes, I thought about quitting the job from this pharmacy.
- I intended to quit the job at this pharmacy within one year.
- If there was an interesting job offered me, I intended to switch to that job immediately.

Pharmacist engagement referred to a positive, fulfilling, and work-related mental state of pharmacist demonstrated by dedication, absorption, and vigor⁴⁵.

Vigor referred to a high level of energy and mental resilience while working at the pharmacy; and the willingness to invest efforts; and persistence even in the face of difficulties⁴⁵. It was assessed by 3 items

- At the pharmacy, I felt full of energy while working.
- In my job at the pharmacy, I felt strong and vigorous.
- When I got up in the morning, I felt like going to work at the pharmacy.

Dedication referred to being strongly involved at work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge while working at the community pharmacy⁴⁵. It was evaluated by 3 items

- I found the work that I did at this pharmacy full of meaning and purpose.
- I was enthusiastic about my job at this pharmacy.
- I was proud of the work I did at this pharmacy.

Absorption referred to a mental state of being fully concentrated on and happily engrossed in community pharmacy works, whereby time passed quickly and one had difficulties with detaching oneself from a work⁴⁵. It was measured by 3 items.

- Time flew when I was working at this pharmacy.
- I felt happy when I was working at this pharmacy.
- I was immersed in my work at this pharmacy.

Organizational resources referred to any assets including tangible and intangible assets that organization used to develop and implement the strategies to improve and achieve community pharmacy goals, which were characterized by training and development, payment and recognition and physical working conditions¹⁴.

Training and development referred to the opportunities for community pharmacists to acquire knowledge and skills from community pharmacies¹⁴. It was assessed by 3 items.

- Managers or business owner had invited me to attend training activities.
- I had got continuing training class from this pharmacy throughout the year.
- I had got self-development from this pharmacy.

Payment and recognition referred to regular pay and fringe benefits, which community pharmacists earned from the community pharmacy, and praise provided by the community pharmacy's staff or clients³⁷. It was evaluated by 5 items.

- I had got adequate pay from this pharmacy.
- I had got fringe benefit from this pharmacy.
- This pharmacy provided rewards of appreciation.
- This pharmacy provided me some form of public recognition such as an employee of the month.
- Working in this pharmacy made me recognized by the public.

Physical working conditions referred to tangible resources that support task performance of the community pharmacist²⁴. It was evaluated by 3 items.

- The work area in this pharmacy sufficiently facilitated my work tasks.
- The material in this pharmacy was sufficient for me to do my job.
- There was a private area in this pharmacy for providing patient counseling.

Job characteristics referred to community pharmacist perception on the task, content and nature of their job, which were characterized by autonomy, job skill variety, task significance, and task identity³².

Autonomy referred to the degree that community pharmacists were allowed to manage their work at the community pharmacy⁴¹. It was assessed by 3 items.

- How much autonomy was there in your job at this pharmacy? That was, to what extent did your job permit you to decide on your own how to go about doing the work?
- I have flexibility in the execution of my job.
- I had an opportunity to have freedom doing a different thing at this pharmacy.

Job skill variety referred to the variety of different skills that the community pharmacist was capable of performing at work, as related to the job responsibilities of the community pharmacist⁴¹. It was evaluated by 3 items.

- How much variety was there in your job at this pharmacy? That was, were to what extent did the job require you to do many different things at work, using a variety of your skills and talents?

- The job that I did at this pharmacy used a variety of skills.
- The job that I did at this pharmacy was a repeated and simple job.

Task significance referred to the degree to which the community pharmacist's duties had a substantial impact on the lives of clients or the goals of their community pharmacy⁴¹. It was measured by 3 items.

- In general, how significant or important was in your job at this pharmacy? That were the results of your work likely to significantly affect the lives or well-being of other people?
- My job at this pharmacy would affect the well-being of clients depending on how well of my performance.
- In general, the job that I did at this pharmacy was not important.

Task identity referred to the degree to which a task or set of tasks was able to be completed by one pharmacist without depending on other staff in the community pharmacy⁴¹. It was assessed by 3 items.

- To what extent did your job involve doing a “whole” and identifiable piece of work at this pharmacy? That was, was the job a complete piece of work that had an obvious beginning and ends? Or was it only a small part of the overall piece of work, which was finished by other people?
- The job at this pharmacy had prepared. Therefore I had no chance to do from the beginning until the end.
- The job at this pharmacy gave me a chance to do from the beginning until the end.

Social supports referred to the assistance that the community pharmacist receives from an organization's staff in coping with any situations, especially for work-related conditions, which are characterized by supervisory supports and peer supports⁴².

Supervisory support referred to the assistance that the community pharmacists received from any supervisors such as store manager, regional manager, and upper management in coping with any situations, especially for work-related situations⁴². It was measured by 3 items.

- If necessary, I could ask my supervisor at work for help/advice.
- I could rely on my supervisor while working.
- I got important work-related information and advice from my supervisor which made performing my job easier.

Peer support referred to the assistance that pharmacists received from co-workers, subordinates, or other colleagues in the same and other departments, in any coping situations, especially for work-related situations⁴². It was evaluated by 3 items.

- My co-workers had a well co-operation while working.
- I could rely on my co-worker while working.
- I got important work-related information and advice from my co-worker which made performing my job easier.

3.3.2 Assessment of content validity of measurement scales

The Index of Item-Objective Congruence (IOC) technique by the experts was applied for evaluation of the content validity of the measurement. The criteria for selection of the experts were a doctoral degree in philosophy with more than 10 years of teaching experience and keen on the areas of academic instrumental development, pharmacy practice, and business administration. Three experts accepted to evaluate the measurements. The evaluation forms of the measurements were sent to the experts with an evaluation instruction and the proposed model. The evaluation form consisted of the definition of the concepts and the measurements. They were asked to rate range from +1=congruence, 0=not sure, and -1 = incongruence. Also, they were asked to provide additional comment. The IOC formulation was calculated by total score/ number of the experts. IOC score greater than 0.5 were retained and some of the questions were considered to amend the sentence.

The results of content validity of the measurements were shown in Appendix F. There was only one item passed IOC index. The other 2 items for measuring intention were suggested to reword., All 6 items of vigor and all 5 items of dedication measurements in pharmacist engagement passed IOC index while 5 out of 6 items of absorption passed the IOC criteria., One of 5 items of autonomy measurements in job characteristics was suggested to delete because it was a repetition item. All three experts were not sure one item of job skill variety. All 3 items of task significance, and all 3 items of task identity passed the IOC criteria.

For organizational resources measurements, all 3 items of training and development, all 5 items of payment and recognition, and all 3 items of physical working conditions passed IOC index 4 out of 5 items of supervisory support, and all 4 items of peer

support in social supports measurements passed the IOC criteria. Some questions were amended as suggested by the experts before testing in a pilot study.

3.3.3 Assessment of the reliability of the measurement scales

The pilot test was conducted to test the reliability of the measurements and to simulate the situation of the data collection like in the main survey. The pilot test was proposed to those 23 community pharmacists who worked in Bangkok. This step simulated the situation as similar to the real data collection. The participants were conveniently approached at the community pharmacy to complete the paper questionnaire with a package of instructions, and a return envelope. If any participants were not convenient to do the paper-based questionnaire, they could fill the electronic form via the web link's addressed in the instruction. They had to select only one option to avoid the duplication. After an appointment 2 or 3 days, the researcher came back to get the complete questionnaire from the participants. If some of them could not finish the questionnaire at the first time, they were asked for the second appointment in the next 2 or 3 days. Finally, 23 community pharmacists completed the questionnaire. Five participants responded via electronic based questionnaire and 18 participants respond via paper-based questionnaire. Some items were eliminated to improve the reliability of the measurement. Taking account for the low response rate because of the high number of questions, some items appearing redundant were deleted. The results were shown in Appendix G.

3.4 Data collection

The paper-based self-administered questionnaire, a covered letter with study objectives and instructions, and a return envelope were sent to 1,959 community pharmacists-in-charge via the address of each community pharmacy in early November 2016. If any participants were not convenient for doing the paper-based questionnaire, they could fill the electronic form via the web link's addressed in the instruction with informing to select only one option to avoid duplication. The 2 follow-up postal mailings were sent in late November 2016 and mid-December 2016. After the second follow up, the response rate was very low. Therefore, in early January 2017, the web link to the electronic-based questionnaire was distributed to the community pharmacists via Line mobile application with informing not to answer if they had responded to the questionnaire. The gift vouchers prized of 1,000 Baht were randomly awarded to 3 lucky draw respondents. The respondents were anonymous, so those interested in joining the lucky draw activity had to fill their name, contact address and telephone number in the questionnaire.

The questionnaire (Appendix C) was used to collect the data consisted of 3 sections. The first section was 4 items of job characteristics which was evaluated on a 5-point semantic differential scale. The second section consisted of 5 parts which were 12 items for measuring job characteristics measurement, 11 items for measuring organizational resources, 6 items for measuring social supports, 9 items for measuring pharmacist engagement, and 3 items for measuring pharmacist turnover intention. The items in the second part were assessed on a 5-point Likert's scale ranging from 'Strongly agree' to 'Strongly disagree.' The third section was the pharmacist demographic information which included gender, age, graduation year, number of

experienced workplaces, community pharmacist tenure, current workplace tenure, type of pharmacy, number of responsibilities at work, and pharmacy sales target.

3.5 Data analysis

3.5.1 Descriptive data

SPSS version 22 was employed for analyzing the descriptive data. Response rate was reported in percentage. Age, years after the graduation, community pharmacist tenure, current workplace tenure, working hours, all observed and latent variables were analyzed in mean and standard deviation (S.D.). Gender, type of pharmacy, nationality of pharmacy, sales target, number of past workplaces, and other duties of responsibility were analyzed in frequency or percentage.

3.5.2 Missing data

This study employed Structural Equation Modeling technique (SEM). SEM did not allow a missing value in the data. Therefore, imputation of the missing value into the data was necessary. The pattern of missing data was evaluated by Little's MCAR test in the Statistical Package for Social Sciences (SPSS version 22). The evaluation result showed missing completely at random. Therefore, expectation-maximization (EM) approach was employed to imputed missing data⁸¹.

3.5.3 Construct reliability and construct validity of the measurement scales

Construct reliability was conducted to assess the reliability of measurement scales. There were 13 measurement scales in this study including 1) pharmacist turnover intention, 2) vigor, 3) dedication, 4) absorption, 5) training and development, 6) payment and recognition, 7) physical working condition, 8) autonomy, 9) job skill

variety, 10) task significant, 11) task identity, 12) supervisory support and 13) peer support.

In general, measurement reliability coefficient including Cronbach alpha \geq 0.90 was considered as an excellent reliability, Cronbach alpha between 0.80 -0.90 was a very good reliability, and Cronbach alpha between 0.70 -0.80 was considered as a satisfactory value⁸². In SEM, the model-based reliability (ρ_η) or composite reliability (CR) was used to measure the internal consistency of the measurements instead of Cronbach alpha because this technique estimates of true reliability better than Cronbach alpha⁸³. For large models with many latent constructs and observed variable, composite reliability (CR) equal 0.50 was considered as a satisfactory value of reliability coefficient⁸⁴. The formula to calculate model-based reliability was shown below⁸⁵.

$$\rho_\eta = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \varepsilon_i}$$

Pooled-CFA by IBM® SPSS® Amos™ Version22 program was performed to analyze standardized factor loading (λ_i) for calculating model-based reliability.

Standardized error variance (ε_i) was calculated by $1-\lambda^2$.

The criteria for a valid observed variable for the latent construct were 1) each factor loading should be greater than 0.3. Factor loadings greater than 0.7 were considered as a good indicator⁷⁹, 2) the square multiple correlation should be greater than 0.1. It was consider as a good indicator if the square multiple correlation greater than 0.5.

Construct validity of the measurement this study was not assessed because most of the measurement scales had the number of item less than 4 which could not analyze by the program.

3.5.4 Measurement model testing

Based on the proposed hypothesized model in Figure 3, this study comprised 5 measurements model (see in dash line rectangle) including organizational resources, job characteristics, social supports, pharmacist engagement, and pharmacist turnover intention. Pharmacist turnover intention was measured by 3 observed variables. Pharmacist engagement was measured by 3 dimensions of vigor, dedication, and absorption. Organizational resources were assessed by 3 indicators, including training and development, payment and recognition, and physical working condition. Job characteristics were measured with 4 dimensions, including autonomy, job skill variety, task significance, and task identity. Social supports was measured by supervisory support, and peer support.

The average scores of vigor, dedication, and absorption dimension were treated as the observed variables of pharmacist engagement. The average scores of training and development, payment and recognition, and physical working condition were treated as a dimension of organizational resources. The average scores of autonomy, job skill variety, task significance, and task identity were treated as the observed variables of job characteristics. The average scores of supervisory support, and peer support were treated as the observed variables of social supports. While the raw data value treated to 3 observed variables was treated to pharmacist turnover intention. Pooled-CFA by IBM® SPSS® Amos™ Version22 program was performed

to evaluate the overall construct validity of measurement model ⁷⁹ because some latent construct had observed variable less than 4 items ⁸⁶.

3.5.5 Structural model testing

The structural model explained the relationship among latent variables (see in dash line rectangle). It was hypothesized that organizational resources, job characteristics, and social supports had a direct effect on pharmacist turnover intention and indirect effect on pharmacist turnover intention via pharmacist engagement (see in straight line rectangle). Structural Equation Modeling (SEM) by IBM® SPSS® Amos™ Version22 program was use to explore these relationships among the latent variable.

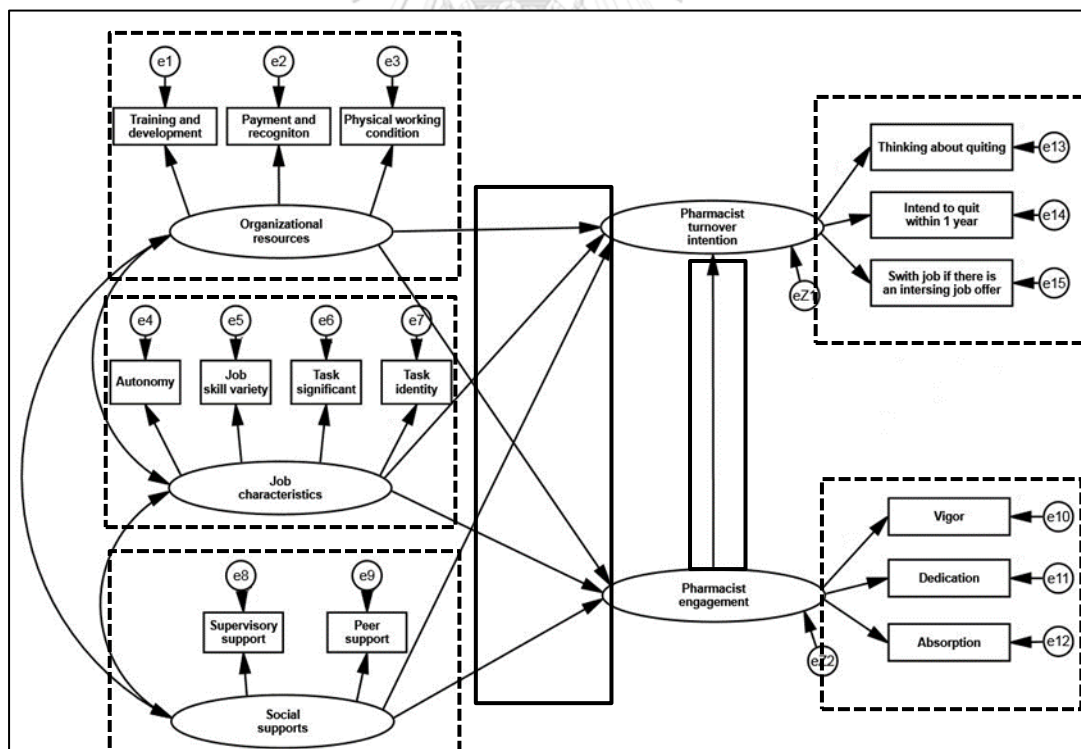


Figure 3 : Proposed hypothesized model

The symbols using in AMOS program for explaining the relationship among parameters in this study are described as follows:

- Ellipses (or circles) represented unobserved latent variables.
- Rectangles (or squares) represented observed variables.
- Single-headed arrows represented the impact of one variable on another.
- ↔ Two-headed arrows represented correlations between pairs of variables.
- → □ The arrow from the ellipses to rectangles was path regression of an observed variable onto an unobserved latent variable (or factor loading).
- → ○ The arrow from the ellipses to ellipses was regression path of one latent variable onto another latent variable.
- ⊙ → □ The circle with e connected to arrow heading to the square was measurement error associated with an observed variable.
- ⊙ → ○ The circle with z connected to arrow heading to the ellipse was a residual error associated with an unobserved variable.

There were 5 steps to develop the structural model to explain the relationship among variables in this study including model specification, model identification, model estimation, model evaluation, and model modification.

3.5.4.1 Model specification

Figure 4 illustrated the relationship among parameters that were proposed in the hypothesized model. All parameters were drawn in the path diagram to show the relationship among variables⁸⁷⁻⁸⁹. Relationships among variables were represented by parameters or paths. Parameters to be specified for estimating the value contain directional effects, variances, and covariances.

Directional effect parameters included 10 factor loadings (excluding factor loadings that fixed with 1), and 7 regression paths of the latent variables onto another latent variable. Variance parameters comprised 15 measurement errors of all observed variables, 3 variances of external latent variables (organizational resources, job characteristics, and social supports), and 2 residual errors associated with a latent variable (pharmacist engagement and pharmacist turnover intention). Covariance parameters contained 3 covariances of external latent variables (organizational resources, job characteristics, and social supports). Thus, the total number of parameters to be estimated was 40.

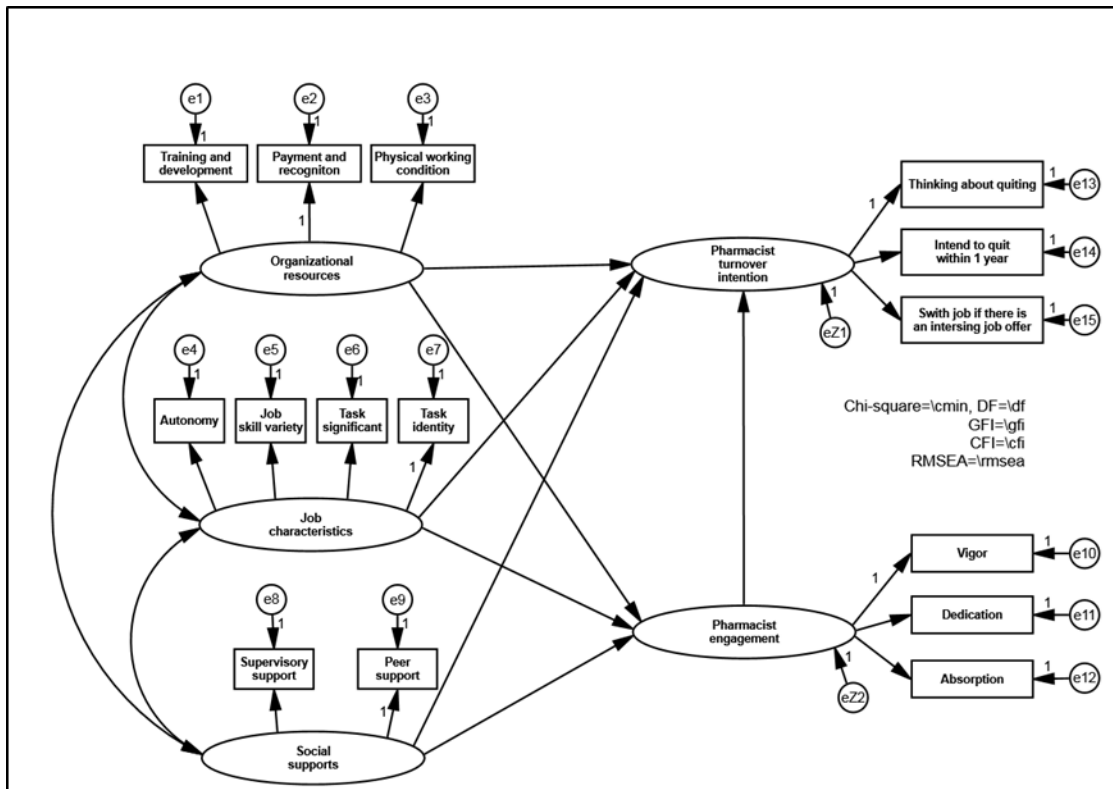


Figure 4 : Model specification

3.5.4.2 Model identification

Before estimating the value of the parameters, the model needed to meet model identification criteria. The number of free parameters to be estimated must be equal or less to the number of distinct sample moments or distinct value in the matrix. Distinct sample moments were calculated by $p(p+1)/2$, where p was the number of observed variables. There were 15 observed variables as mentioned in the model specification. Therefore, a number of distinct sample moments were equal to $15(15+1)/2 = 120$. A number of parameters to be estimated was 40 from the calculation above⁸⁷. Therefore, the number of parameters to be estimated was less than the number of distinct sample moment. Consequently, the value of the

parameters in the proposed hypothesized model can be estimated with SEM technique.

3.5.5.3 Model estimation

There were many estimation methods include unweighted or ordinary least squares (ULS or OLS), generalized least squares (GLS), and maximum likelihood (ML). This study used ML as the estimation method because it was consistency and efficiency technique and a number of samples were not concerning⁸⁸.

3.5.5.4 Model evaluation

Fit indices were used to assess how well empirical data fit with structural hypothesized model. The fit of structural mode was assessed in term of absolute fit and incremental fit. Absolute fit was assessed by Chi-square (χ^2/DF), Goodness of Fit Index (GFI) and Root Mean Square Error of Approximation (RMSEA). Incremental fit was assessed by Comparative Fit Index (CFI). The criteria for evaluating the level of fit data to the structural model^{90, 79, 91} were described in Table 1.

The absolute value of standardized residual was used to evaluate the validity of observed variables in the structural model. The value less than 2.5^{79, 92} indicated that the variable could be remain in the structural model. Based on literature review, construct validity of the structural model is achieved when p-value of the model Chi-square is greater than 0.05⁷⁹. However in relatively large model the model Chi-square tend to be less than 0.05 therefore normed Chi-square is normally used to assess construct validity. In this study the structural model was said to achieve its construct validity when normed Chi-square was below 3.

Table 1 : Fit indices criteria

Fit indices	Satisfactory fit	Good fit
χ^2/DF	3 - 5	1- < 3
GFI	0.9 - < 0.95	≥ 0.95
CFI	0.9 - < 0.95	≥ 0.95
RMSEA	0.05 - 0.10	< 0.05

3.5.5.5 Model modification

This step aimed to improve the fit indices of the proposed hypothesized model. The model was modified based on the theory incorporated with modification indices that suggested from the analysis. The final model would explain the results among all variables.

3.6 Ethical approval

This study was approved by The Ethical Review Committee for Research Involving Human Research Subjects, Health Science Group, Chulalongkorn University.

CHAPTER IV

RESULTS OF THE STUDY

The relationships among organizational resources, job characteristics, social supports, pharmacist engagement and turnover intention in Thai community pharmacists were investigated using the structural equation modeling technique. This chapter provided the results including response rate, demographic data, descriptive data of variables, missing data management, reliability of the measurement scales, measurement model testing, the final model and post-hoc analysis.

4.1 Response rate

The postal mailing questionnaires and covered letters were distributed to 1,959 community pharmacists via community pharmacy addresses. Some mails were bounced back. After deduction of the mail bounced, the actual number of distributed questionnaires was 1,784. There were 223 questionnaires replied via postal mail and 6 questionnaires replied via electronic mail by Google Forms. Thus, the number of the returned questionnaire at the first round was 229. The invitation via Line application to response the Google Form questionnaire was also conducted to increase the response rate. There were 30 returned questionnaires from the invitation via Line application. Therefore, the response rate was 14.52%. However, the number of usable questionnaires for the analysis was 209.

4.2 Demographic data

The average age of respondents was 32.3 years old. Three-quarter of them were female (74.16 %). The median number of years after graduation was 7 years. About 29% had changed their workplace one time and 21.5% had changed their workplace more than 4 times. The mean of working years in community pharmacist profession and in the current workplace was 6.08 and 4.83 years, respectively. Most of them worked in multiple branches pharmacy (78.95%) and in Thai nationality (81.34%). The respondents worked 48 hours per week. Beside client services, 89% of them had to do other documents that were not related to client services. The results showed that 48.8%, 48.3%, and 39.2% of them had to do inventory management, human resources management, and procurement, respectively. There was 2.9% of community pharmacists who had only patient care service responsibility. Most of the community pharmacies (73.68%) set the sales target for community pharmacists. The details of demographic data were shown in Table 2.

Table 2 : Demographic data

Variables	Frequency (%)
Gender (n=209)	
Male	54 (25.84%)
Female	155 (74.16%)
Type of pharmacy(n=209)	
Single branch	44 (21.05%)
Multiple branches	165 (78.95%)
Nationality of pharmacy (n=209)	
Thai	170 (81.34%)
International	39 (18.66%)
Sales target (n=209)	
Yes	154 (73.68%)
No	55 (26.32%)
Number of past workplaces (n=202)	
Never	6 (2.97%)
1 workplace	61 (30.2%)
2 workplaces	44 (21.78%)
3 workplaces	53 (26.24%)
>4 workplaces	35 (17.33%)
Other duties of responsibility (non client service) (n=209)	
No any other duty	6 (2.87%)
Non patient documentation	186 (89%)
Human resources management	101 (48.33%)
Inventory management	102 (48.8%)
Procurement	82 (39.23%)
Other	22 (10.53%)
	Mean ± (S.D.)
Age (n=200)	32.33 years ± (6.72)
Years after the graduation (n=203)	8.93 years ± (6.96)
Community pharmacist tenure (n=199)	6.08 years ± (4.5)
Current workplace tenure (n=198)	4.83 years ± (5.37)
Working hours (n=180)	47.46 hours ± (25.77)

4.3 Descriptive data of variables

4.3.1 Pharmacist turnover intention

Pharmacist turnover intention was measured by 3 items with a 5 point Likert's scale ranging from 'Strongly agree' to 'Strongly disagree.' Means \pm S.D. of pharmacist turnover intention was 2.81 ± 1.01 (Table 3). About 30% community pharmacists thought about quitting the job and intended to switch from the current job immediately if they were offered an interesting job, about 20% of them intended to quit from the current workplace (Table 4).

Table 3 : Means, standard deviations of pharmacist turnover intention measurement scales

Measurement/items	Means	S.D.	n
Pharmacist turnover intention	2.82	1.01	208
Sometimes, I think about quitting the job from this pharmacy.	2.97	1.10	208
I intend to quit the job at this pharmacy within one year.	2.54	1.20	208
If there is an interesting job offered me, I intend to switch to that job immediately.	2.95	1.15	208

Table 4 : Percentage of pharmacist turnover intention in each level

Pharmacist turnover intention	No intention		Neutral	Intention	
	SD	D	N	A	SA
Sometimes, I think about quitting the job from this pharmacy.(n=208)	10.6%	20.2%	40.9%	18.2%	10.1%
I intend to quit the job at this pharmacy within one year.(n=208)	20.2%	35.6%	23.6%	11.5%	9.1%
If there is an interesting job offer me, I intend to switch from that job immediately.(n=208)	10.6%	24.5%	35.6%	17.3%	12.0%

SD= Strongly disagree, D = Disagree, N = Neutral, A= Agree, SA = Strongly agree

If community pharmacists intended to change the job, 50.52% of them were interested in being a pharmacy owner, 11.46 % and 7.29% of them would do non-pharmacy jobs and going to work with other community pharmacies. Almost half (42.19%) of the respondents were interested in non-community pharmacist job (Figure 5).

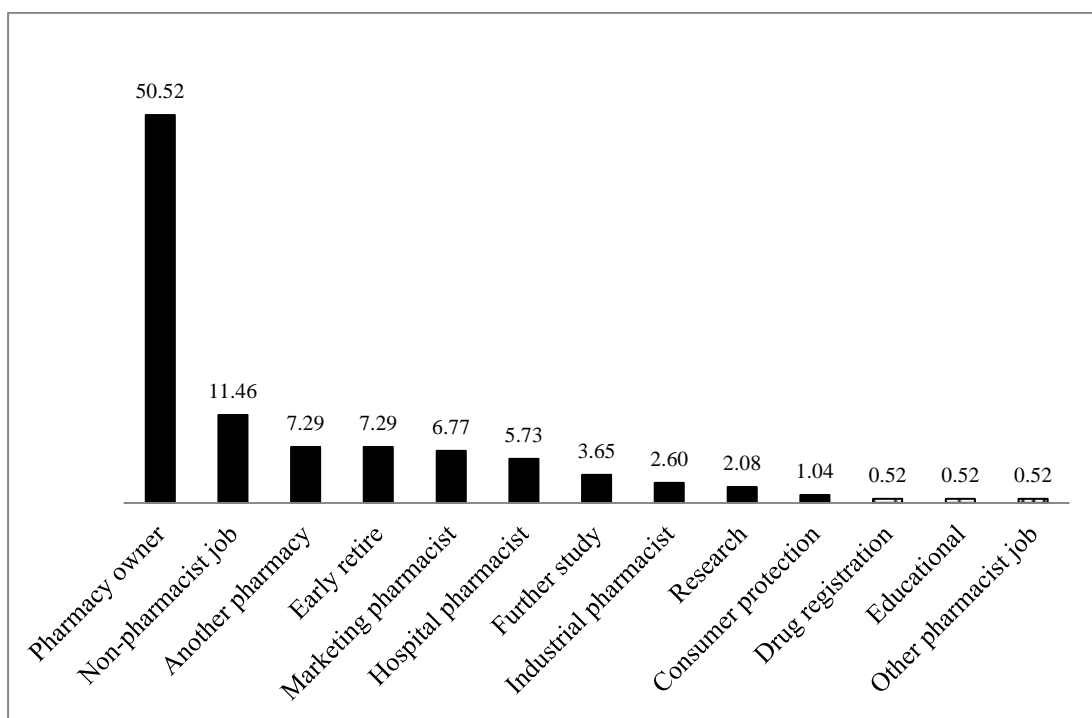


Figure 5 : Pharmacist most interesting job if they had the intention to quit their current job (n=192)

4.3.2 Pharmacist engagement

Pharmacist engagement comprised 3 dimensions, including vigor, dedication, and absorption. The means \pm S.D. of each dimension were 3.81 ± 0.67 , 4.01 ± 0.68 and 3.80 ± 0.68 , respectively. These average scores of all dimensions were treated as indicative variables for pharmacist engagement (Table5).

Table 5 : Means, standard deviations and of pharmacist engagement measurement scales

Measurements/Items	Means	S.D.	n
Vigor	3.81	0.67	208
At the pharmacy, I feel full of energy while working.	3.90	0.77	208
In my job at the pharmacy, I feel strong and vigorous.	3.70	0.86	208
When I get up in the morning, I feel like going to work at the pharmacy.	4.10	0.69	208
Dedication	4.01	0.68	208
I find the work that I do at this pharmacy full of meaning and purpose.	3.89	0.74	208
I am enthusiastic about my job at this pharmacy.	4.04	0.81	208
I am proud of the work I do at this pharmacy.	3.74	0.87	208
Absorption	3.80	0.68	207
Time flies when I am working at this pharmacy.	3.87	0.73	208
I feel happy when I am working at this pharmacy.	3.78	0.71	208
I am immersed in my work at this pharmacy.	2.97	1.10	207

4.3.3 Organizational resources

Organizational resources contained 3 dimensions, including training and development, payment and recognition, physical working conditions. The mean \pm S.D. of each dimension were 4.2 ± 0.76 , 3.44 ± 0.73 and 3.76 ± 0.79 respectively. These average scores of all dimensions were treated as indicative variables for organizational resources (Table 6).

Table 6 : Means, standard deviations of organizational resources dimensions

Measurements/Items	Means	S.D.	n
Training and development	4.24	0.76	208
Managers or business owner have invited me to attend training activities.	4.23	0.99	208
I've got continuing training class from this pharmacy throughout the year.	4.28	0.77	209
I've got self-development from this pharmacy.	3.82	0.86	209
Payment and recognition	3.44	0.73	206
I've got adequate pay from this pharmacy.	3.69	0.93	209
I've got fringe benefit from this pharmacy.	3.06	1.10	209
This pharmacy provides rewards of appreciation.	2.76	1.07	206
This pharmacy provides me some form of public recognition such as an employee of the month.	3.86	0.88	209
Working in this pharmacy makes me recognized by the public.	3.91	0.89	209
Physical working condition	3.76	0.79	209
The work area in this pharmacy sufficiently facilitates	3.90	0.80	209

my work tasks.			
The material in this pharmacy is sufficient for me to do my job.	3.47	1.11	209
There is a private area in this pharmacy for providing patient counseling.	4.18	0.82	209

4.3.4 Job characteristics

Job characteristics consisted of 4 dimensions including autonomy, job skill variety, task significance and task identity. The means \pm (S.D.) score of each measurement were 3.89 ± 0.66 , 4.05 ± 0.62 , 4.28 ± 0.51 and 3.75 ± 0.67 , respectively). These average scores of all dimensions were treated as indicative variables for job characteristics (Table 7).

Table 7 : Means, standard deviations of job characteristics dimensions

Measurements/Items	Means	S.D.	n
Autonomy	3.89	0.66	208
How much autonomy is there in your job at this pharmacy? That is, to what extent does your job permit you to decide on your own how to go about doing the work?	3.84	0.84	208
I have flexibility in the execution of my job.	4.22	0.66	209
I have an opportunity to have freedom doing a different thing at this pharmacy.	3.88	0.90	208
Job skill variety	4.05	0.62	206
How much variety is there in your job at this pharmacy? That is, to what extent does the job require you to do	3.74	1.04	208

Measurements/Items	Means	S.D.	n
many different things at work, using a variety of your skills and talents?			
The job that I do at this pharmacy uses a variety of skills.	3.95	0.77	209
The job that I do at this pharmacy is a repeated and simple job.	3.88	0.86	206
Task significance	4.28	0.51	208
In general, how significant or important in your job at this pharmacy? That is, are the results of your work likely to significantly affect the lives or well-being of other people?	4.21	0.74	208
My job at this pharmacy will affect the well-being of clients depend on how well of my performance.	3.35	0.99	208
In general, the job that I do at this pharmacy is not important.	4.2	0.85	209
Task identity	3.75	0.67	207
To what extent does your job involve doing a “whole” and identifiable piece of work at this pharmacy? That is, is the job a complete piece of work that has an obvious beginning and ends? or is it only a small part of the overall piece of work, which is finished by other people?	4.00	0.84	208
The job at this pharmacy have prepared. Therefore I have no chance to do from the beginning until the end.	4.05	0.83	208
The job at this pharmacy gives me a chance to do from the beginning until the end.	4.41	0.57	207

4.3.5 Social supports

Supervisory support and peer support were the dimensions of social supports.

The means score of each dimension were 4.06 ± 0.79 and 3.92 ± 0.79 and respectively.

These average scores of all dimensions were treated as indicative variables for social supports (Table 8).

Table 8 : Means, standard deviations of social supports dimensions

Measurements/Items	Means	S.D.	n
Supervisory support	4.06	0.79	208
If necessary, I can ask my supervisor at work for help/advice.	4.05	0.89	208
I can rely on my supervisor while working.	3.95	0.88	208
I get important work-related information and advice from my supervisor which makes performing my job easier.	4.01	0.86	208
Peer support	3.92	0.79	208
My co-workers have a well co-operation while working.	3.97	0.86	208
I can rely on my co-worker while working.	3.78	0.86	208
I get important work-related information and advice from my co-worker which makes performing my job easier.	3.84	0.82	208

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4.4 Missing data management

Little's MCAR test was used to test the pattern of missing data of 209 questionnaires. The results showed non-significance (p-value = 0.90). The type of missing data was missing completely at random. To estimate the missing value, this study employed the expectation maximization (EM) technique.

4.5 Reliability of the measurement scales

To be considered a valid observed variable for the latent construct. The criteria were 1) each factor loading should be greater than 0.3. Factor loadings around 0.7 were considered as a good indicator⁷⁹, 2) the square multiple correlation (λ^2) should be greater than 0.1 and 0.5 were considered as a good indicator.

Table 9 showed factor loading and model-based reliability of pharmacist turnover intention. All factor loadings were above 0.7 and square multiple correlation were above 0.5. The results showed that each item was a good measurement of pharmacist turnover intention. Model-based reliability was 0.86 which indicated that this was very good internal consistency measurement.

Table 9 : Factor loading (λ), square multiple correlation (λ^2) and model-based reliability (ρ_η) of pharmacist turnover intention measurement

Measurement scale/Items	λ	λ^2	ρ_η
Pharmacist turnover intention			0.86
Sometimes, I think about quitting the job from this pharmacy.	0.88	0.77	
I intend to quit the job at this pharmacy within one year.	0.76	0.58	
If there is an interesting job offered me, I intend to switch to that job immediately.	0.82	0.67	

There were 3 dimensions of pharmacist engagement, including vigor, dedication, and absorption. All factor loadings of these dimensions were above 0.7 and square multiple correlation were greater than 0.5. These indicated that each item was a good measurement of all three dimensions. Model-based reliability of all dimensions were greater than 0.8. This showed very good internal consistency measurement for all dimensions (Table 10).

Table 10 : Factor loading (λ), square multiple correlation (λ^2), and model-based reliability (ρ_η) of pharmacist engagement

Measurements/Items	λ	λ^2	ρ_η
Vigor			0.88
At the pharmacy, I feel full of energy while working.	0.85	0.72	
In my job at the pharmacy, I feel strong and vigorous.	0.79	0.62	
When I get up in the morning, I feel like going to work at the pharmacy.	0.88	0.77	
Dedication			0.86
I find the work that I do at this pharmacy full of meaning and purpose.	0.75	0.56	
I am enthusiastic about my job at this pharmacy.	0.87	0.76	
I am proud of the work I do at this pharmacy.	0.84	0.71	
Absorption			0.85
Time flies when I am working at this pharmacy.	0.74	0.55	
I feel happy when I am working at this pharmacy.	0.90	0.81	
I am immersed in my work at this pharmacy.	0.80	0.64	

Organizational resources were classified into 3 dimensions including training and development, payment and recognition, and social supports. All factor loadings in training and development and social supports dimensions had factor loadings greater than 0.7 and square multiple correlation were more than 0.5. Therefore, these 2 dimensions had a good measurement item. There were 3 factor loadings of items for measuring payment and recognition were greater than 0.7. The other 2 factor loadings were 0.66 and 0.52. However, they were accepted as the value above 0.3⁷⁹. The trend of square multiple correlation of these items were also following the trend of factor loadings. The model-based reliability values of three dimensions were more than 0.8. These indicated very good internal consistency of these measurements (Table 11).

Table 11 : Factor loading (λ), square multiple correlation (λ^2), and model-based reliability (ρ_η) of organizational resources

Measurements/Items	λ	λ^2	ρ_η
Training and development			0.85
Managers or business owner have invited me to attend training activities.	0.84	0.71	
I've got continuing training class from this pharmacy throughout the year.	0.86	0.74	
I've got self-development from this pharmacy.	0.73	0.53	
Payment and recognition			0.81
I've got adequate pay from this pharmacy.	0.70	0.49	
I've got fringe benefit from this pharmacy.	0.79	0.62	
This pharmacy provides rewards of appreciation.	0.72	0.52	

This pharmacy provides me some form of public recognition such as an employee of the month.	0.66	0.44	
Working in this pharmacy makes me recognized by the public.	0.52	0.27	
Physical working condition			0.80
The work area in this pharmacy sufficiently facilitates my work tasks.	0.81	0.66	
The material in this pharmacy is sufficient for me to do my job.	0.77	0.59	
There is a private area in this pharmacy for providing patient counseling.	0.69	0.48	

There were 4 dimensions including autonomy, job skill variety, task significant, and task identity in job characteristics. There was a wide range of factor loadings in these 4 dimensions. However, all factors loading were greater than 0.32. As mentioned above, they were accepted as at least minimal acceptable of factor loadings value. The trend of square multiple correlation of these items were also following the trend of factor loadings. All dimensions had the value of model-based reliability around 0.7 which showed an adequate reliable of the measurements (Table 12).

Table 12 : Factor loading (λ), square multiple correlation (λ^2), and model-based reliability (ρ_η) of job characteristics scales

Measurements/Items	λ	λ^2	ρ_η
Autonomy			0.74
How much autonomy is there in your job at this	0.68	0.46	

pharmacy? That is, to what extent does your job permit you to decide on your own how to go about doing the work?			
I have flexibility in the execution of my job.	0.58	0.34	
I have an opportunity to have freedom doing a different thing at this pharmacy.	0.81	0.66	
Job skill variety			0.67
How much variety is there in your job at this pharmacy? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?	0.57	0.32	
The job that I do at this pharmacy uses a variety of skills.	0.95	0.90	
The job that I do at this pharmacy is a repeated and simple job.	0.32	0.10	
Task significance			0.66
In general, how significant or important in your job at this pharmacy? That is, are the results of your work likely to significantly affect the lives or well-being of other people?	0.57	0.32	
My job at this pharmacy will affect the well-being of clients depend on how well of my performance.	0.53	0.28	
In general, the job that I do at this pharmacy is not important.	0.76	0.58	
Task identity			0.61
To what extent does your job involve doing a “whole” and identifiable piece of work at this pharmacy? That is, is the job a complete piece of work that has an obvious beginning and ends? Or is it only a small part of the overall piece of work, which is finished by other people?	0.49	0.24	
The job at this pharmacy have prepared. Therefore I have	0.39	0.15	

no chance to do from the beginning until the end.			
The job at this pharmacy gives me a chance to do from the beginning until the end.	0.85	0.72	

Social supports in this study was classified into 2 dimensions including supervisory support and peer support. All factor loadings in these 2 dimensions were above 0.7 and square multiple correlation were higher than 0.5, which showed that each item was a good measurement of social supports. Model-based reliability of all dimensions was greater than 0.6 which showed a good internal consistency of the items in these dimensions (Table 13).

Table 13 : Factor loading (λ), square multiple correlation (λ^2) and model-based reliability (ρ_η) of social supports

Measurements/Items	λ	λ^2	ρ_η
Supervisory support			0.90
If necessary, I can ask my supervisor at work for help/advice.	0.80	0.64	
I can rely on my supervisor while working.	0.95	0.90	
I get important work-related information and advice from my supervisor which makes performing my job easier.	0.85	0.72	
Peer support			0.91
My co-workers have a well co-operation while working.	0.89	0.79	
I can rely on my co-worker while working.	0.94	0.88	
I get important work-related information and advice from my co-worker which makes performing my job easier.	0.81	0.66	

4.6 Measurement model testing

Pooled CFA using AMOS program was applied to evaluate the construct validity of these 5 measurement models⁷⁹ because some latent construct had observed variable less than 4 items. The results (Figure 6) showed satisfactory fit of the established measurement model ($\chi^2 = 175$, $DF = 80$, $\chi^2/DF = 2.19$, $GFI = 0.895$, $CFI = 0.94$, and $RMSEA = 0.076$). Therefore, without model modification, these measurement models could be used for further analysis.

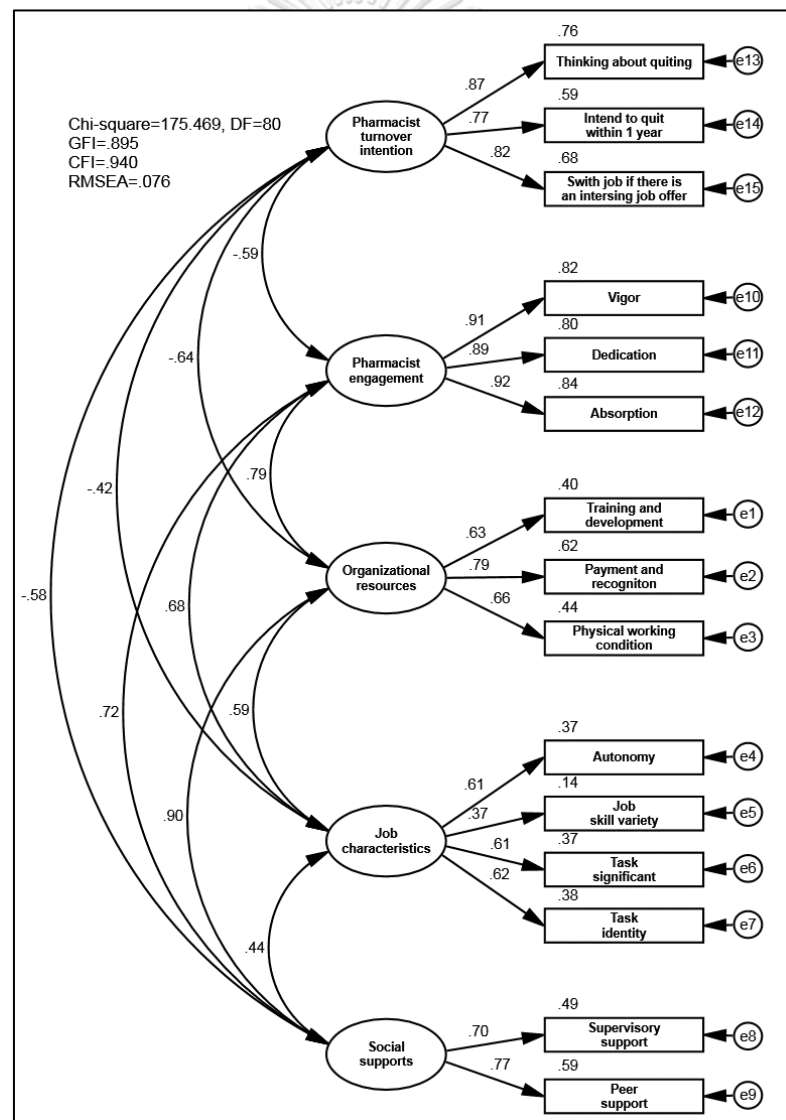


Figure 6 : CFA of established measurement models

4.7 Proposed hypothesized model testing and model modification

As shown in Figure 7, the proposed hypothesized model fit at satisfactory level ($\chi^2/DF = 2.19$, GFI= 0.895, CFI = 0.94, and RMSEA = 0.076). To identify factors statistically significantly affected pharmacist engagement and turnover intention, the model was further re-specified. The steps of model modification were explained in table 14.

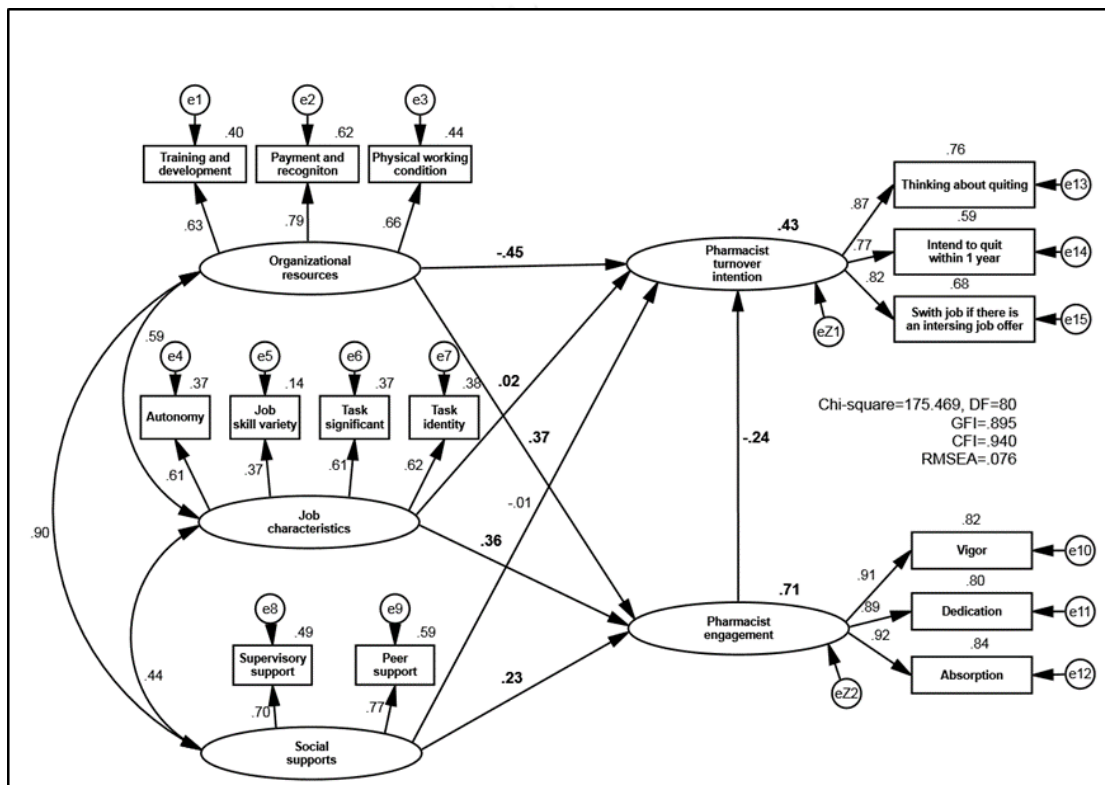


Figure 7 : Result of proposed hypothesized model testing

Table 14 : Steps of model modification

	χ^2	χ^2/DF	GFI	CFI	RMSE A
Cut off point of the fit indices		1-5	> 0.9	> 0.9	< 0.08
Proposed hypothesized model	175.46	2.193	0.895	0.940	0.076
Step 1: Remove path regression of social supports → pharmacist turnover intention	175.47	2.116	0.895	0.941	0.075
Because this path regression was not statistically significant and had highest p-value (p-value=0.967) in the model (Appendix H).					
Step 2: Remove path regression of job characteristics → pharmacist turnover intention	175.51	2.140	0.895	0.941	0.074
Because this path regression was not statistically significant and had highest p-value (p-value=0.837) in the model (Appendix H).					
Step 3: Remove path regression of organizational resources → pharmacist engagement	176.65	2.128	0.894	0.941	0.074
The p-value of path regression of organizational resources → pharmacist engagement (0.204) was lower than path regression of social supports → pharmacist engagement (0.405), however if path regression of social supports → pharmacist engagement was removed, it made the relationship between pharmacist engagement and turnover intention to be a non-statistically significant path (Appendix H).					

Table 15 : Factor loadings, square multiple correlations, and standardized residual covariances of proposed hypothesized model

	Factor loading	Square multiple correlation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Absorption	0.916	0.839	0														
2.Dedication	0.894	0.799	0.143	0													
3.Supervisory support	0.698	0.487	0.101	0.059	0												
4.Peer support	0.771	0.594	-0.274	-0.55	0	0											
5.Training and development	0.63	0.397	-0.577	-0.005	-0.016	1.172	0										
6.Payment and recognition	0.789	0.623	-0.296	-0.33	-0.051	-0.394	0.599	0									
7.Physical working condition	0.662	0.438	0.15	0.037	0.079	-0.287	-1.631	0.258	0								
8.Pharmacist turnover intention3	0.822	0.676	0.346	-0.244	-0.189	0.506	0.743	-0.073	-0.932	0							
9.Pharmacist turnover intention2	0.766	0.587	-0.052	0.13	0.718	0.581	-0.536	0.437	0.03	-0.007	0						
10.Pharmacist turnover intention1	0.87	0.757	0.794	0.436	-0.517	-0.45	-0.308	0.126	0.152	-0.016	0.028	0					
11.Vigor	0.906	0.821	-0.031	-0.122	0.067	0.631	-0.485	0.366	1.28	-0.605	-0.702	-0.66	0				
12.Autonomy	0.609	0.371	-0.498	-0.181	1.905	0.721	-0.766	0.526	2.837	-1.454	-0.578	-1.481	-0.13	0			
13.Job skill variety	0.374	0.140	0.3	1.203	0.583	-1.304	0.15	-1.102	-0.714	1.432	1.384	1.857	-0.699	-1.012	0		
14.Task significant	0.611	0.373	0.408	1.381	-0.038	-0.088	0.901	-1.335	-0.251	1.202	0.409	1.267	-0.333	-0.283	1.402	0	
15.Task identity	0.62	0.384	0.09	-0.993	-0.647	-1.049	-1.093	0.116	0.641	-0.413	0.097	-0.836	0.002	0.861	-0.393	-0.58	0

4.8 The final model

After modified the proposed hypothesized model until remained only the statistically significant path regressions, the results revealed that final model fit to the data as a satisfactory level ($\chi^2 = 176$, $DF = 83$, $\chi^2/DF = 2.12$, $GFI = 0.894$, $CFI = 0.941$, and $RMSEA = 0.074$). None of the absolute standardized residual covariance (Table 16) indicated lower than 3. Construct validity was achieved as the normed Chi – square less than 3.

Path analysis demonstrated that organizational resources had a significant negative direct effect on pharmacist turnover intention ($\beta = -0.45$), but job characteristics and social supports had no direct effect on pharmacist turnover intention. Organizational resources had no significant relationship with pharmacist engagement. Therefore, organizational resources had no indirect effect on pharmacist turnover intention via pharmacist engagement. Job characteristics and social supports had a significant positive relationship with pharmacist engagement ($\beta = 0.44$ and 0.55 respectively). Pharmacist engagement had significant negative relationship with pharmacist turnover intention ($\beta = -0.24$). Thus, job characteristics and social supports had a significant negative indirect effect on turnover intention via pharmacist engagement ($\beta = -0.11$ and -0.13 , respectively). Job characteristics and social supports can explain 72% ($R^2=0.72$) in the variances of pharmacist engagement. Organizational resources, job characteristics, social supports, and pharmacist engagement can explain 43% ($R^2=0.43$) in the variances of pharmacist turnover intention (Figure 8).

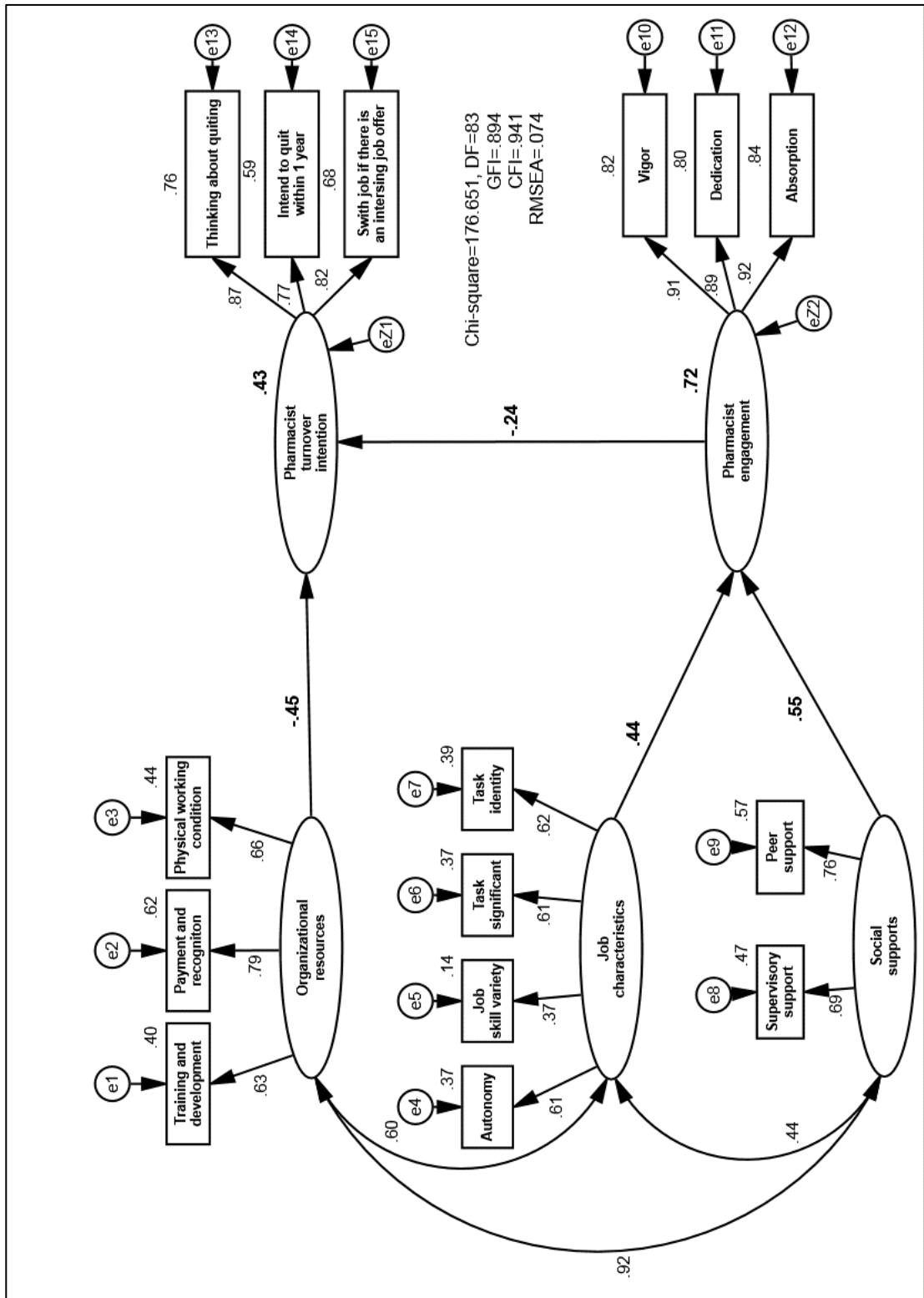


Figure 8 : Final model

Table 16 : Factor loadings, square multiple correlations, and standardized residual covariances of the final model

	Factor loading	Square multiple correlation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Absorption	0.917	0.841	0														
2.Dedication	0.894	0.799	0.138	0													
3.Supervisory support	0.686	0.471	-0.013	-0.049	0												
4.Peer support	0.757	0.573	-0.384	-0.653	0.245	0											
5.Training and development	0.632	0.399	-0.491	0.084	-0.103	1.084	0										
6.Payment and recognition	0.788	0.621	-0.16	-0.192	-0.126	-0.463	0.581	0									
7.Physical working condition	0.661	0.437	0.271	0.159	0.014	-0.346	-1.645	0.271	0								
8.Pharmacist turnover intention3	0.822	0.676	0.323	-0.271	-0.163	0.525	0.729	-0.115	-0.971	0.004							
9.Pharmacist turnover intention2	0.766	0.587	-0.074	0.105	0.741	0.599	-0.55	0.397	-0.006	0.002	0.004						
10.Pharmacist turnover intention1	0.871	0.759	0.775	0.413	-0.487	-0.426	-0.319	0.086	0.116	-0.013	0.052	0.005					
11.Vigor	0.905	0.819	-0.033	-0.118	-0.039	0.525	-0.394	0.511	1.411	-0.634	-0.73	-0.686	0				
12.Autonomy	0.607	0.368	-0.522	-0.203	1.971	0.797	-0.81	0.489	2.804	-1.323	-0.457	-1.34	-0.149	0			
13.Job skill variety	0.37	0.137	0.306	1.211	0.634	-1.246	0.136	-1.109	-0.719	1.499	1.446	1.929	-0.69	-0.967	0		
14.Task significant	0.605	0.366	0.414	1.39	0.042	0.005	0.876	-1.348	-0.262	1.31	0.511	1.384	-0.321	-0.216	1.468	0	
15.Task identity	0.623	0.388	0.018	-1.058	-0.606	-0.999	-1.166	0.043	0.579	-0.254	0.245	-0.665	-0.063	0.854	-0.376	-0.556	0

4.9 Post-hoc analysis

Post-hoc analysis was conducted to explain whether the model would be vary in different demographic groups such as different gender, different age group, and different types of community pharmacy. Basically, invariance testing of the final model was used to test the difference between the sub-groups. The number of sample in each sub-group had to reach the minimum required sample size which calculated by parameters to be estimated in the final model multiplied by 5 which should be equal 185 ($37 \times 5 = 185$). However, there were 54 males and 165 females. One hundred fifty-seven persons had age equal and less than 35 years old and 43 persons had age above 35 years old. There were 165 pharmacists working in multiple branch pharmacies and 44 pharmacists working in single branch pharmacies. The number of sample size in the groups was not enough to conduct an invariance testing. However, the number of sample in the female group, in the group of age equal and less than 35 years old, or in the group of a pharmacist working in multiple branch pharmacies were nearly to the required sample sized number. Therefore, we sub-group analyzed the model of these groups and compared the results to the final model (total sample model).

4.9.1 Model for female community pharmacists

The finding of the female model (Figure 9) showed that the model fit to the data at a satisfactory level ($\chi^2 = 153$, $DF = 83$, $\chi^2/DF = 1.85$, $GFI = 0.88$, $CFI = 0.94$, and $RMSEA = 0.074$). Path analysis demonstrated that organizational resources had a significant negative direct effect on pharmacist turnover intention ($\beta = -0.50$), but job characteristics and social supports had no direct effect on pharmacist turnover intention. Organizational resources had no significant relationship with pharmacist engagement. Therefore, organizational resources had no indirect effect on pharmacist turnover intention via pharmacist engagement. Job characteristics and social supports had a significant positive relationship with pharmacist engagement ($\beta = 0.44$ and 0.62 respectively). Pharmacist engagement had no relationship with pharmacist turnover intention ($\beta = -0.19$, $p\text{-value} = 0.16$). Thus, job characteristics and social supports had no indirect effect on turnover intention via pharmacist engagement. Job characteristics and social supports can explain 75% ($R^2 = 0.75$) in the variances of pharmacist engagement. Organizational resources, job characteristics, social supports, and pharmacist engagement can explain 43% ($R^2 = 0.43$) in the variances of pharmacist turnover intention.

Overall, the model in female group was similar to the total sample model except the regression of pharmacist engagement on pharmacist turnover intention was not significant ($p\text{-value} = 0.16$) at $\alpha 0.05$. Since the sample size in the female group ($n = 165$) was less than the minimum requirement ($n = 185$). There was a possibility that this regression path would be statistically significant, if we increased the sample size.

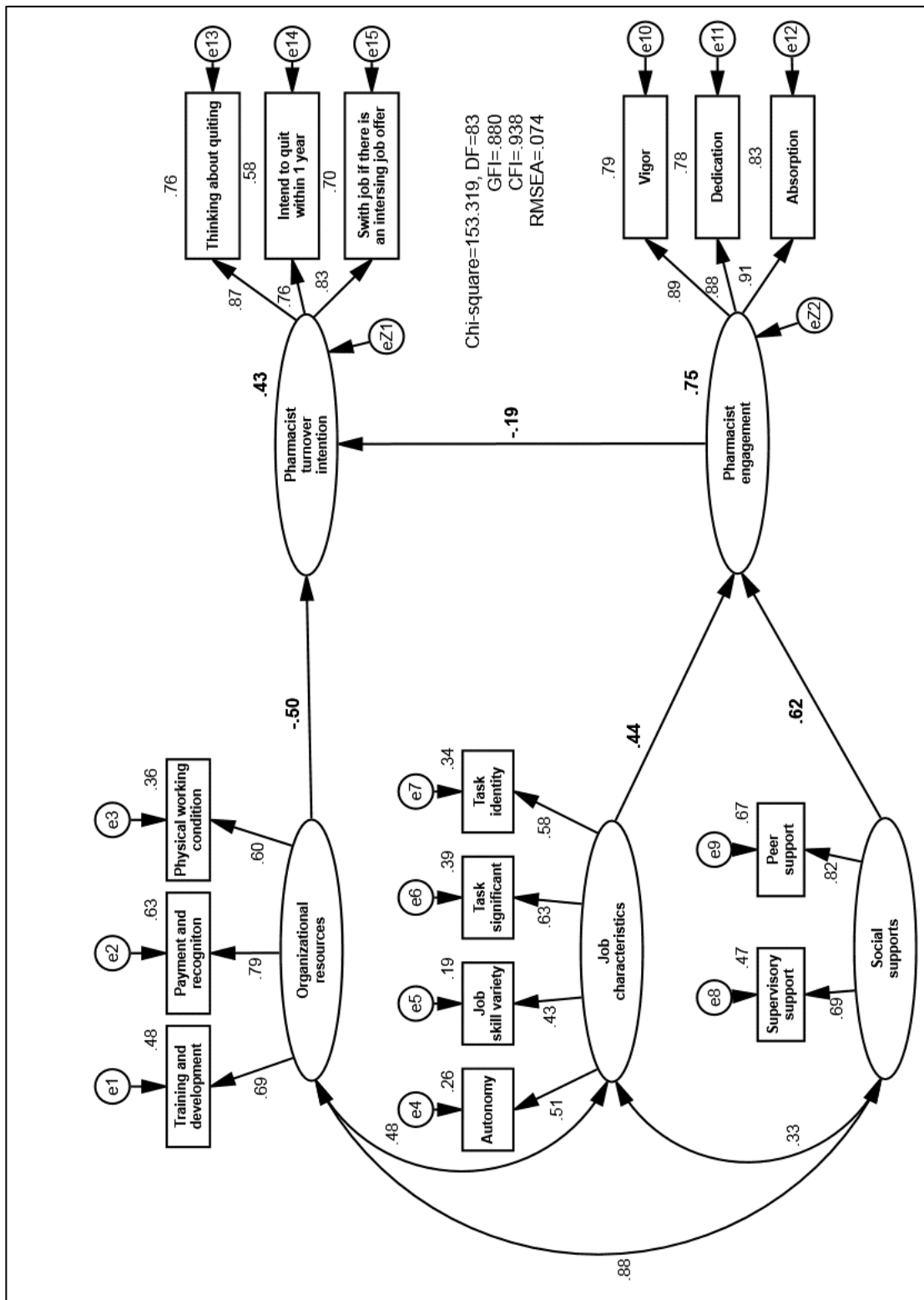


Figure 9 : Model for female community pharmacists

4.9.2 The model for the group of age equal and less than 35 years old

The results (Figure 10) revealed that the model fit to the data at a satisfactory level ($\chi^2 = 163$, $DF = 83$, $\chi^2/DF = 1.97$, $GFI = 0.88$, $CFI = 0.93$, and $RMSEA = 0.078$). Path analysis demonstrated that organizational resources had a significant negative direct effect on pharmacist turnover intention ($\beta = -0.39$), but job characteristics and social supports had no direct effect on pharmacist turnover intention. Organizational resources had no significant relationship with pharmacist engagement. Therefore, organizational resources had no indirect effect on pharmacist turnover intention via pharmacist engagement. Job characteristics and social supports had a significant positive relationship with pharmacist engagement ($\beta = 0.32$ and 0.62 respectively). Pharmacist engagement had no relationship with pharmacist turnover intention ($\beta = -0.25$, $p\text{-value} = 0.06$). Thus, job characteristics and social supports had no indirect effect on turnover intention via pharmacist engagement. Job characteristics and social supports can explain 65% ($R^2=0.65$) in the variances of pharmacist engagement. Organizational resources, job characteristics, social supports, and pharmacist engagement can explain 36% ($R^2=0.36$) in the variances of pharmacist turnover intention

The model in the community pharmacist who had age equal or less than 35 years group was similar to the model in the total sample. The p-value of the relationship between pharmacist engagement and pharmacist turnover intention was 0.06 which was nearly significant. It could be claimed that the model of the total sample can be applied to use in the community pharmacist who had age equal or less than 35 years group.

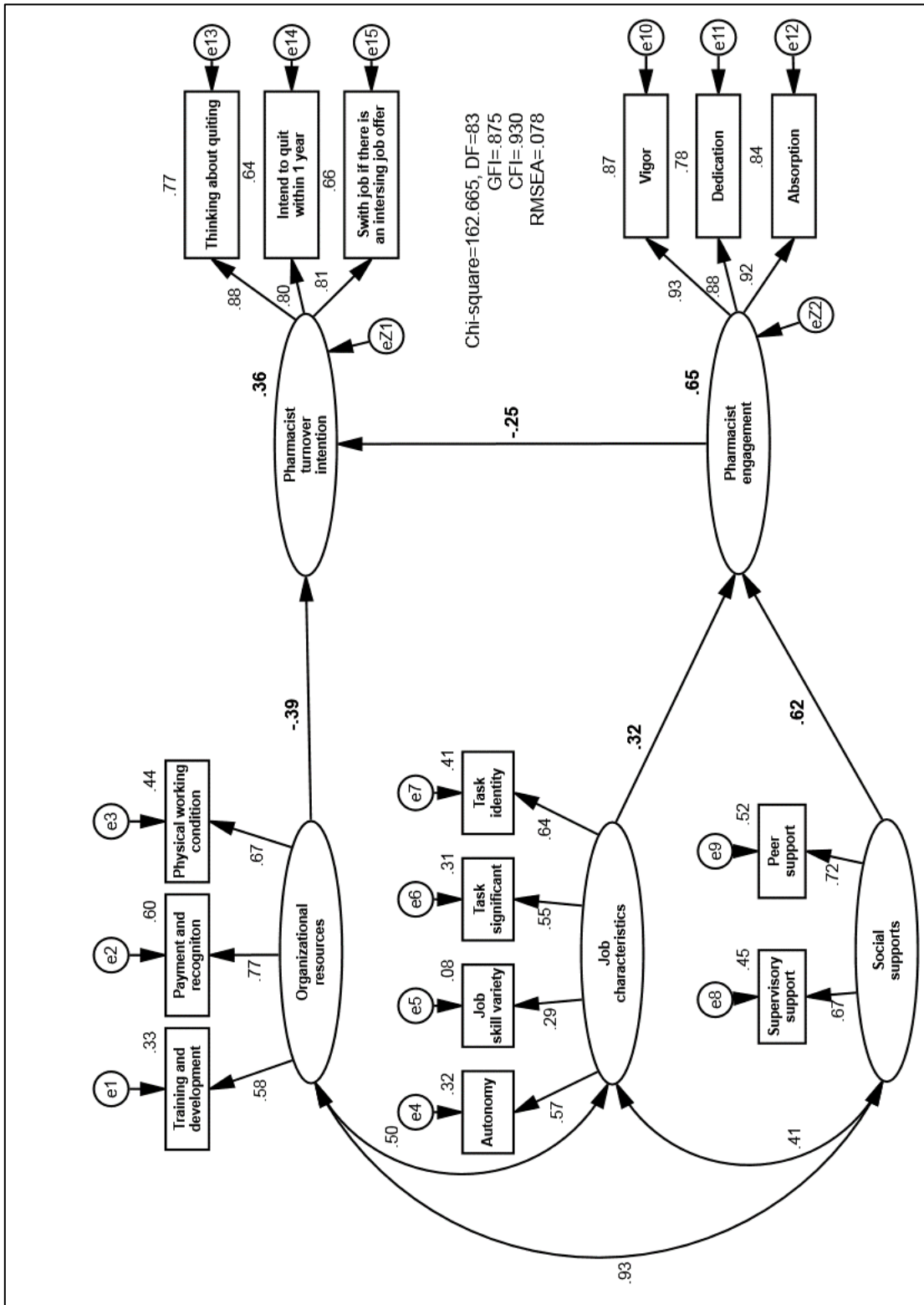


Figure 10 : Model for community pharmacist who had age equal or less than 35 years old model

4.9.3 The model for community pharmacists who worked in multiple branch

The results (Figure 11) showed that the model fit to the data at a satisfactory fit ($\chi^2 = 165$, $DF = 83$, $\chi^2/DF = 1.99$, $GFI = 0.88$, $CFI = 0.93$, and $RMSEA = 0.078$). Path analysis demonstrated that organizational resources had a significant negative direct effect on pharmacist turnover intention ($\beta = -0.42$), but job characteristics and social supports had no direct effect on pharmacist turnover intention. Organizational resources had no significant relationship with pharmacist engagement. Therefore, organizational resources had no indirect effect on pharmacist turnover intention via pharmacist engagement. Job characteristics and social supports had a significant positive relationship with pharmacist engagement ($\beta = 0.48$ and 0.51 respectively). Pharmacist engagement had no relationship with pharmacist turnover intention ($\beta = -0.24$, $p\text{-value} = 0.08$). Thus, job characteristics and social supports had no indirect effect on turnover intention via pharmacist engagement. Job characteristics and social supports can explain 69% ($R^2=0.69$) in the variances of pharmacist engagement. Organizational resources, job characteristics, social supports, and pharmacist engagement can explain 39% ($R^2=0.39$) in the variances of pharmacist turnover intention

The model in the community pharmacists who worked in multiple branch pharmacies was similar to the model in the total sample. The p-value of the relationship between pharmacist engagement and pharmacist turnover intention was = 0.08 which was close to $\alpha 0.05$. Therefore, the final model of the total sample can be applied to use in the community pharmacists who worked in multiple branch pharmacies.

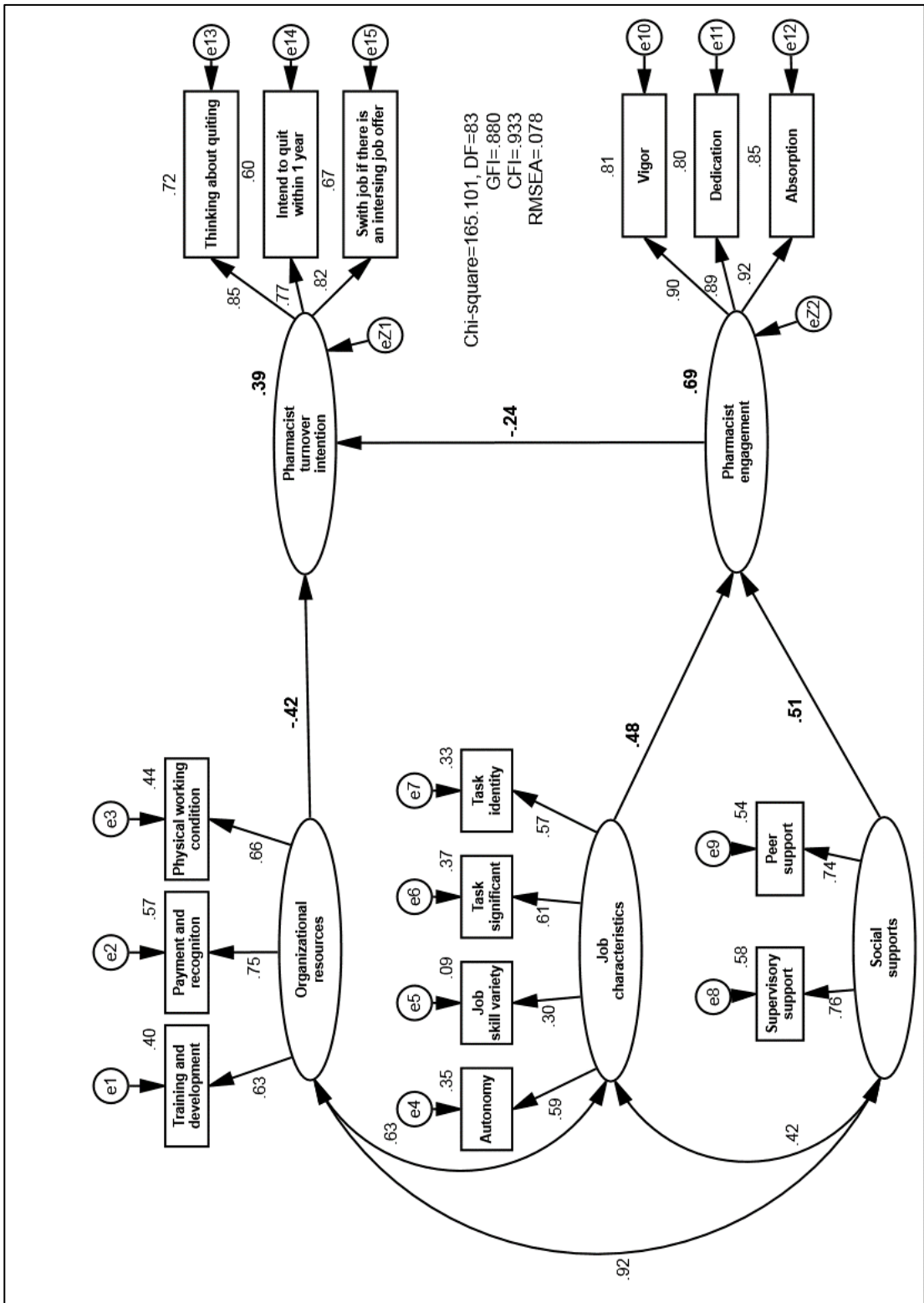


Figure 11 : Model for community pharmacists who worked at multiple branch pharmacies

CHAPTER V

DISCUSSIONS AND CONCLUSIONS

The aims of this study were to develop the model explained the relationship among organizational resources, job characteristics, social supports on pharmacist engagement and pharmacist turnover intention. The results found that organizational resources had negative directly on pharmacist turnover intention, while job resources and social supports had negative indirect on pharmacist turnover intention via pharmacist engagement. Training and development, payment and recognition, and physical working condition were the most important factor to retain pharmacists with the community pharmacy because these organizational resources had a significant negative effect on pharmacy turnover intention. Job characteristics and social supports had no direct effect on pharmacist turnover intention but they had a negative indirect effect on pharmacist turnover intention via pharmacist engagement. Thus, pharmacist perception that they had autonomy, variety of skills and talents were needed, overall piece of work from the beginning until the end was finished by them, their job's performance at work was important to lives or well-being of clients, and increase of their supervisory and peer support would decrease community pharmacist turnover intention.

Our study showed the percentage of turnover intention in Thai community pharmacists (20-30%) was higher than the study in US community pharmacist (16%)⁹³ and in UK pharmacist (9%)²⁵. This might because the average age of pharmacists in this study was 32.3 years old whereas the average age of pharmacists in the study in the UK was 40 years old²⁵. The average working year as a pharmacist

in the current study was 8.9 years whereas the average working year as a pharmacist in the study in the US was 19.8 years⁹³. Younger people had more possibility to change their works than older people.

The current study found that pharmacist engagement with work had a significant negative relationship with pharmacist turnover intention similar to numerous previous researches^{37, 43, 44, 46, 47, 94} about employee turnover intention from the current job in community pharmacist. Community pharmacy owners and managers should pay attention to whether pharmacists feel full of energy, strong and vigorous, and want to come to work in the morning. Moreover, they need to make pharmacists feel happy, meaningful, proud, and enthusiastic, immersed in and feel time fly fast while working at their community pharmacy.

Organizational resources did not have a direct effect on pharmacist engagement. But, it had a negative direct effect on pharmacist turnover intention. This result is consistent with previous studies^{17-19, 21-24}. Thus, an increase of training and development, payment and recognition, and physical working condition can directly reduce turnover intention in community pharmacist without mediation effect of pharmacist engagement. Providing adequate pay, fringe benefit, rewards of appreciation, public recognition, and continuing training activities throughout the year would decrease pharmacist turnover intention. Not only payment and recognition, but also sufficient working area and material to facilitate work in the pharmacy could also help decrease turnover intention.

Job characteristics including autonomy, job skill variety, task significance, and task identity had a direct positive effect on pharmacist engagement which was similar to many previous studies^{12-14, 20, 26-28}. Therefore, permission to decide to do the work

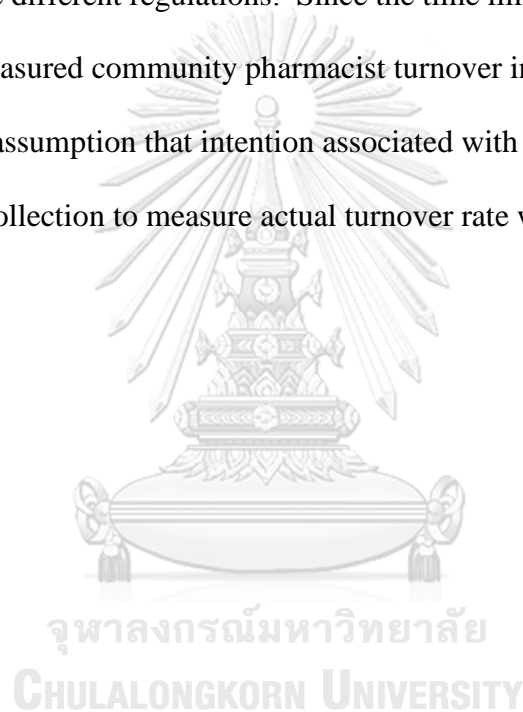
on their own, having freedom doing a different thing and making a decision about job's execution at their pharmacy would make pharmacist engage to their job in the pharmacy. Our study found that the more variety of skills and talents needed in their work, the more pharmacists would engage in work at their community pharmacy. Pharmacy engagement also increased if pharmacist perceived that he/she was the one who finished an overall piece of work from the beginning until the end. Making pharmacists felt that their jobs and performance at work was important to lives or well-being of clients and other people would increase pharmacist engagement.

Social supports had a positive direct effect on pharmacist engagement. This finding was similar to previous studies³⁸⁻⁴⁰ in another setting. Thus, supervisor and peer were the important persons who made pharmacists engage in their work if they could rely on their co-workers and supervisors. Helping and advising from a supervisor, co-operating by a co-worker, and providing work-related information which makes pharmacists perform the job easier by them would make pharmacists more engage with their work.

Even though, both job characteristics and social supports had no direct relationship with pharmacist turnover intention. But, both had a positive relationship with pharmacist engagement and pharmacist engagement had a significant negative relationship with pharmacist turnover intention. Thus, both had an indirect negative effect on turnover intention via pharmacist engagement. Therefore, it can be implied that increase of job characteristics and social supports can decrease pharmacist turnover intention.

There were some limitations of the current study. The usable questionnaires were adequate only to test the model but not enough to validate the model. The

address of community pharmacy in the database was still outdated especially in the upcountry at the period of data collection. Most of the respondents were from Thai chain pharmacy, therefore, the result may not be generalized to an international chain pharmacy. Community pharmacists in Thailand and other countries such as the USA, UK may have some different working regulation such as Thai pharmacist can sell some medicine without a prescription, so, the result may not be generalized to some countries that have different regulations. Since the time limitation, this cross-sectional study measured community pharmacist turnover intention to proxy actual turnover with the assumption that intention associated with behavior⁵⁷. The prospective data collection to measure actual turnover rate was recommended for future researches.



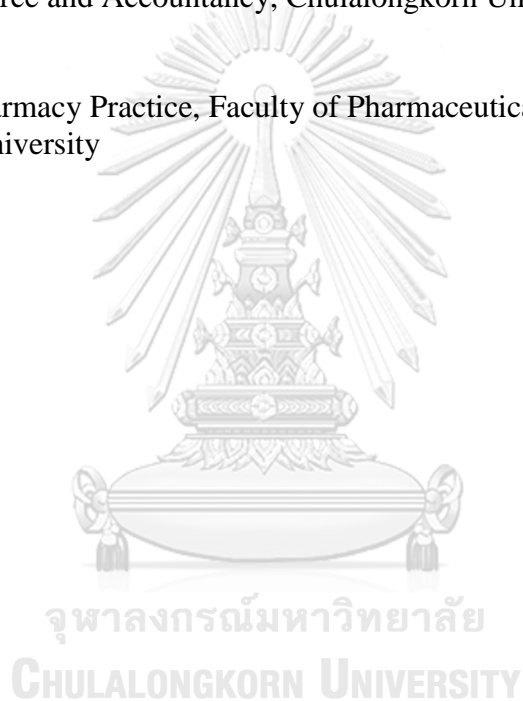
APPENDIX

Appendix A : List of experts for measurement validation

Assoc. Prof. Dr.Wanee Kamkate
Department of Educational Research and Psychology, Faculty of Education,
Chulalongkorn University

Assoc. Prof. Dr.Kanlaya Vanichbuncha
Faculty of Commerce and Accountancy, Chulalongkorn University

Dr.Saksit Sripa
Department of Pharmacy Practice, Faculty of Pharmaceutical Sciences,
Ubonratchatani University



Appendix B : Ethical committee approval paper

๒๐๑๕

คณะเภสัชศาสตร์
 วิทยาลัยการแพทย์มหาวิทาลัย
 รับวันที่ 12 ตุลาคม ๒๐๑๕ น.
 เลขที่รับ 6722

บันทึกข้อความ

ส่วนงาน คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 โทร.0-2218-3202
 ที่ จว ๕๘๘/2559 วันที่ 5 ตุลาคม 2559
 เรื่อง แจ้งผลผ่านการพิจารณาจริยธรรมการวิจัย

เรียน คณบดีคณะเภสัชศาสตร์

สิ่งที่ส่งมาด้วย เอกสารแจ้งผ่านการรับรองผลการพิจารณา

ตามที่นิสิต/บุคลากรในสังกัดของท่านได้เสนอโครงการวิจัยเพื่อขอรับการพิจารณาจริยธรรมการวิจัยในคนจากคณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย นั้น ในการนี้ กรรมการผู้ทบทวนหลักได้เห็นสมควรให้ผ่านการพิจารณาจริยธรรมการวิจัยได้ ดังนี้

โครงการวิจัยที่ 063.1/59 เรื่อง รูปแบบสมการโครงสร้างของความผูกพันและความตั้งใจในการเปลี่ยนงานของเภสัชกรไทย (STRUCTURAL EQUATION MODEL OF ENGAGEMENT AND TURNOVER INTENTION IN THAI PHARMACIST) ของ นายตุลาการ นาคพันธ์ นิสิตระดับดุษฎีบัณฑิต

จึงเรียนมาเพื่อโปรดทราบ

Dr. Pichan
 (ผู้ช่วยศาสตราจารย์ ดร.นันทรี ชัยชนะวงศาโรจน์)
 กรรมการและเลขานุการ
 คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน
 กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย

Dr. Pichan
 13 ตุลาคม 2559
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Dr. Pichan
 13 ตุลาคม 2559

Dr. Pichan
 13 ตุลาคม 2559

AF 01-12



คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสถาบัน ชุมชนที่ 1 จุฬาลงกรณ์มหาวิทยาลัย
 254 อาคารจามจุรี 1 ชั้น 2 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330
 โทรศัพท์/โทรสาร: 0-2218-3202 E-mail: eccu@chula.ac.th

COA No. 170/2559

ใบรับรองโครงการวิจัย

โครงการวิจัยที่ 063.1/59 : รูปแบบสมการ โครงสร้างของความผูกพันและความตั้งใจในการเปลี่ยน
 งานของเกษตรกรไทย

ผู้วิจัยหลัก : นายตุลาการ นาคพันธ์

หน่วยงาน : คณะเภสัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสถาบัน ชุมชนที่ 1 จุฬาลงกรณ์มหาวิทยาลัย
 ได้พิจารณา โดยใช้หลัก ของ The International Conference on Harmonization – Good Clinical Practice
 (ICH-GCP) อนุมัติให้ดำเนินการศึกษาวิจัยเรื่องดังกล่าวได้

ลงนาม.....
 (รองศาสตราจารย์ นายแพทย์ปริดา ทักนประดิษฐ)
 ประธาน

ลงนาม.....
 (ผู้ช่วยศาสตราจารย์ ดร.นันทรี ชัยชนะวงศาโรจน์)
 กรรมการและเลขานุการ

วันที่รับรอง : 30 กันยายน 2559

วันหมดอายุ : 29 กันยายน 2560

เอกสารที่คณะกรรมการรับรอง

- 1) โครงการวิจัย
- 2) ข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย
- 3) ผู้วิจัย เลขที่โครงการวิจัย..... 063.1/59
- 4) แบบสอบถาม วันที่รับรอง..... 30 ก.ย. 2559
- วันหมดอายุ..... 29 ก.ย. 2560

เงื่อนไข

1. ข้าพเจ้ารับทราบว่าเป็นการคิดจริยธรรม 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 03-12) และบทคัดย่อผลการวิจัยภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น สำหรับโครงการวิจัยที่เป็นวิทยานิพนธ์ให้ส่งบทคัดย่อผลการวิจัย ภายใน 30 วัน เมื่อโครงการวิจัยเสร็จสิ้น

ข้อมูลสำหรับกลุ่มประชากรหรือผู้มีส่วนร่วมในการวิจัย

ชื่อโครงการวิจัย รูปแบบสมการโครงสร้างของความผูกพันและความตั้งใจในการเปลี่ยนงานของเภสัชกรไทย
 ชื่อผู้วิจัย นายตุลาการ นาคพันธ์ ตำแหน่ง นิสิตปริญญาเอก
 ที่อยู่ทำงาน คณะเภสัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย 254 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330
 ที่อยู่ที่บ้าน 350 ถ.ประชาสงเคราะห์ 2 ซ.สุทธิพร 1 ดินแดง ดินแดง กรุงเทพฯ 10400
 โทรศัพท์มือถือ 087-7086661 E-mail: tula.nak@gmail.com

- ขอเรียนเชิญท่านเข้าร่วมในการวิจัยก่อนที่ท่านจะตัดสินใจเข้าร่วมในการวิจัย มีความจำเป็นที่ท่านควรทำความเข้าใจว่างานวิจัยนี้ทำเพราะเหตุใด และเกี่ยวข้องกับอะไร กรุณาใช้เวลาในการอ่านข้อมูลต่อไปนี้อย่างละเอียดรอบคอบ และสอบถามข้อมูลเพิ่มเติมหรือข้อมูลที่ขัดแย้งไม่ได้ตลอดเวลา
- งานวิจัยนี้เป็นการศึกษาเพื่อหาปัจจัยที่ส่งผลต่อความผูกพันในงานและความตั้งใจในการเปลี่ยนแปลงงานของเภสัชกรซึ่งจะมีประโยชน์ต่อองค์ความรู้และเป็นแนวทางในการพัฒนาให้เภสัชกรมีความผูกพันกับงานมากขึ้นอันจะส่งผลให้การลาออกจากงานลดลงและจะส่งผลกระทบต่อคุณภาพการบริการต่อผู้รับบริการจากร้านยาดีขึ้น
- ผู้มีส่วนร่วมในการวิจัยนี้เป็นเภสัชกรร้านยาที่ปฏิบัติงานเต็มเวลาและมีสถานะเป็นลูกจ้าง หากผู้มีส่วนร่วมในงานวิจัยไม่มีคุณสมบัติดังกล่าวจะถูกคัดออกผู้มีส่วนร่วมในการวิจัยมีจำนวนทั้งสิ้น 3,000 ราย โดยทำการสุ่มจากทะเบียนรายชื่อร้านยาที่ได้มาจากการขออนุญาตจากสำนักงานคณะกรรมการอาหารและยา
- งานวิจัยนี้เป็นการศึกษาแบบสอบถามโดยใช้เวลาประมาณ 10 นาที โดยแบบสอบถามจะแบ่งออกเป็น 3 ส่วนรวมคำถามทั้งสิ้น 52 ข้อ ได้แก่
 - ประกอบไปด้วยคำถามความคิดเห็นเกี่ยวกับลักษณะงาน คำถาม 4 ข้อ
 - ประกอบไปด้วยคำถาม 37 แบ่งออกเป็น 5 ตอนดังนี้
 - ตอนที่ 1 ความคิดเห็นเกี่ยวกับลักษณะงาน
 - ตอนที่ 2 ความคิดเห็นเกี่ยวกับทรัพยากรองค์การ
 - ตอนที่ 3 ความคิดเห็นเกี่ยวกับการสนับสนุนทางสังคม
 - ตอนที่ 4 ความคิดเห็นเกี่ยวกับความผูกพันในงานของเภสัชกร
 - ตอนที่ 5 ความคิดเห็นเกี่ยวกับความตั้งใจในการเปลี่ยนแปลงงานของเภสัชกร
 - เป็นคำถามเกี่ยวกับข้อมูลทั่วไปของเภสัชกรจำนวน 11 ข้อ
- ผู้มีส่วนร่วมในงานวิจัยสามารถเลือกวิธีการตอบแบบสอบถามโดย การตอบลงบนกระดาษแบบสอบถาม หรือ การตอบผ่าน Website ซึ่งให้เลือกตอบเพียง 1 วิธีเท่านั้น รายละเอียดการทำแบบสอบถามสามารถดูได้จากคู่มือการทำแบบสอบถามที่แนบมาด้วยนี้
- งานวิจัยนี้อาจมีความเสี่ยงทางด้านจิตใจหากมีคำถามที่ท่านอาจไม่สบายใจหรือไม่อยากตอบท่านมีสิทธิ์ที่จะไม่ตอบคำถามข้อนั้นๆได้
- การเข้าร่วมในการวิจัยของท่านเป็นโดยสมัครใจ การปฏิเสธไม่เข้าร่วมคือการไม่ตอบแบบสอบถามนี้ ท่านไม่จำเป็นต้องให้เหตุผลและไม่สูญเสียประโยชน์ที่พึงได้รับ
- ข้อมูลที่เกี่ยวข้องกับท่านจะเก็บเป็นความลับ หากมีการเสนอผลการวิจัยจะเสนอเป็นภาพรวม ข้อมูลใดที่สามารถระบุถึงตัวท่านได้จะไม่ปรากฏในรายงาน
- ผู้วิจัยจัดให้มีการสุ่มจับรางวัลให้แก่ผู้มีส่วนร่วมในการวิจัยนี้ ผู้โชคดีจะสุ่มจับรางวัลด้วยการสุ่มจากชื่อผู้เข้าร่วมวิจัยที่ประสงค์จะร่วมชิงรางวัล เช็คของขวัญมูลค่า 1,000บาท จำนวน 3 รางวัล โดยจะแจ้งให้ผู้มีส่วนร่วมการวิจัยที่ได้รับรางวัลทราบโดยการติดต่อกลับจากผู้วิจัยโดยตรง หากติดต่อผู้ได้รางวัลไม่ได้ภายใน 2 สัปดาห์จะมีการสุ่มจับรางวัลใหม่จนกว่าจะหาผู้โชคดีที่สามารถติดต่อรับรางวัลได้ ค่าตัดสินของผู้ทำวิจัยถือเป็นที่สุด
- หากท่านไม่ได้รับการปฏิบัติตามข้อมูลดังกล่าวสามารถร้องเรียนได้ที่ คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย 254 อาคารจามจุรี 1 ชั้น 2 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330 โทรศัพท์/โทรสาร 0-2218-3202 E-mail: eccu@chula.ac.th



เลขที่โครงการวิจัย..... 063.1/59
 วันที่รับรอง..... 30 ก.ย. 2559
 วันหมดอายุ..... 29 ก.ย. 2560

แบบสอบถาม

ส่วนที่ 1 กรุณาวางกลม บนตัวเลขที่ตรงกับความเป็นจริงเกี่ยวกับงานปัจจุบันที่ทำมากที่สุด

- ท่านมีอิสรภาพในการทำงานในร้านยานี้มากน้อยเพียงใด งานของท่านเปิดโอกาสให้ท่านได้ตัดสินใจเองเกี่ยวกับการทำงานในร้านยานี้มากน้อยขนาดใด
 5-----4-----3-----2-----1
 มือสปรากมาก; ฉันสามารถตัดสินใจได้เองโดยเกือบสมบูรณ์ในการทำงานและระยะเวลาที่จะทำงานให้เสร็จสิ้น
 มือสปรากปานกลาง; หลายๆสิ่งได้มีการกำหนดมาตรฐานเอาไว้และไม่ได้อยู่ภายใต้การควบคุมของฉัน แต่ฉันสามารถตัดสินใจ
 มือสปรากน้อย; งานในร้านยานี้ไม่เอื้อให้ฉันได้ตัดสินใจว่าจะทำงานอย่างไรและงานเสร็จเมื่อไร
- งานของท่านในร้านยานี้มีความหลากหลายมากน้อยเพียงใด ท่านต้องทำอะไรหลายๆอย่างที่แตกต่างกันในงานของท่านโดยใช้ทักษะและความสามารถที่หลากหลายมากน้อยขนาดใด
 5-----4-----3-----2-----1
 มีความหลากหลายมากที่สุด; ฉันต้องทำอะไรหลายๆอย่างที่แตกต่างกันและต้องใช้ทักษะและความสามารถที่หลากหลายมาก
 มีความหลากหลายปานกลาง
 มีความหลากหลายน้อยที่สุด; งานที่ฉันทำเหมือนและซ้ำๆกันทุกวัน
- โดยทั่วไปแล้วงานของท่านในร้านยานี้มีความสำคัญอย่างไร นั่นคือผลลัพธ์จากการทำงานนี้ของท่านมีผลกระทบต่อชีวิตหรือความอยู่ดีมีสุขของผู้อื่นหรือไม่
 5-----4-----3-----2-----1
 มีความสำคัญมาก; ผลลัพธ์จากการทำงานของฉันมีผลสำคัญต่อผู้อื่นอย่างมาก
 มีความสำคัญปานกลาง
 ไม่มีความสำคัญมาก; ผลลัพธ์จากการทำงานของฉันจะไม่สำคัญต่อผู้อื่นอย่างมาก
- งานในร้านยานี้ของท่านเกี่ยวข้องกับงานทั้งหมดมากน้อยเพียงใด นั่นคืองานของท่านสามารถทำให้เสร็จสมบูรณ์ได้อย่างชัดเจนตั้งแต่เริ่มต้นจนจบหรือไม่ หรืองานของคุณเป็นเพียงส่วนเล็กๆ โดยชิ้นงานทั้งหมดต้องทำให้สำเร็จด้วยบุคคลอื่น
 5-----4-----3-----2-----1
 งานของฉันเกี่ยวข้องกับงานตั้งแต่ต้นจนจบ; ผลลัพธ์จากการทำงานของฉันถูกเห็นได้ง่ายๆในผลงานหรือการบริการที่เสร็จสมบูรณ์แล้ว
 งานของฉันเกี่ยวข้องกับงานทั้งหมดในระดับปานกลาง; ฉันมีส่วนร่วมในผลงานหรือการบริการที่เสร็จสมบูรณ์แล้ว
 งานของฉันเกี่ยวข้องกับงานทั้งหมดเพียงเล็กน้อย; ผลลัพธ์จากการทำงานของฉันไม่สามารถเห็นได้ในผลงานหรือการบริการที่เสร็จสมบูรณ์แล้ว

ส่วนที่ 2 กรุณาทำเครื่องหมายถูก ลงในช่องคำตอบที่ตรงกับความเป็นจริงเกี่ยวกับงานปัจจุบันที่ทำมากที่สุด

ตอนที่ 1: ลักษณะงานในร้านยา

ความคิดเห็นเกี่ยวกับลักษณะงานปัจจุบันที่ทำอยู่ในร้านยานี้	เห็นด้วยที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยที่สุด
1. งานที่ฉันทำในร้านยานี้ต้องใช้ทักษะหลากหลายอย่าง					
2. งานที่ฉันทำในร้านยานี้มีความยืดหยุ่นในการปฏิบัติ					
3. งานในร้านยานี้จะมีผลต่อความอยู่ดีมีสุขของลูกค้ายิ่งกว่าคนอื่นที่ทำงานของอื่น					
4. งานในร้านยานี้ได้มีการจัดเตรียมไว้ตั้งแต่ต้นฉันไม่มีโอกาสได้ทำตั้งแต่ต้นจนจบ					
5. งานที่ฉันทำในร้านยานี้เป็นงานง่ายๆซึ่งไม่ต้องใช้ทักษะอะไร					
6. งานที่ฉันทำในร้านยานี้เปิดโอกาสอย่างมากให้ฉันมีอิสระในการดำเนินการเกี่ยวกับกิจกรรมงานต่างๆในร้านยานี้					
7. งานในร้านยานี้เปิดโอกาสให้ฉันได้ทำเองตั้งแต่เริ่มต้นจนจบ					
8. โดยภาพรวมแล้วงานที่ฉันทำในร้านยานี้มีความสำคัญ					



เลขที่เครื่องการวิจัย..... 063-1/59
 วันที่รับรอง..... 30 ก.ย. 2559
 วันหมดอายุ..... 29 ก.ย. 2560

ตอนที่ 2: ทรัพยากรองค์กร

ความคิดเห็นเกี่ยวกับร้านยาที่ทำอยู่ในปัจจุบันนี้	เห็นด้วยที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยที่สุด
1. ผู้จัดการหรือเจ้าของกิจการแนะนำให้ฉันไปเข้าร่วมกิจกรรมการฝึกอบรมต่างๆ					
2. ฉันได้รับการฝึกอบรมที่จากร้านยาเป็นอย่างดีเสมอทุกๆปี					
3. ฉันได้รับการพัฒนาตนเองจากร้านยา					
4. ฉันได้รับคำตอบแทนที่เพียงพอจากร้านยา					
5. ฉันได้รับสวัสดิการที่เพียงพอจากร้านยา					
6. ร้านยามีการให้รางวัลเชิดชูเกียรติในการทำงาน					
7. ร้านยามีการประชาสัมพันธ์ให้สาธารณะได้รับทราบ เช่น เป็นพนักงานดีเด่นของเดือน					
8. การทำงานในร้านยาทำให้ฉันได้รับการยอมรับจากสาธารณชน					
9. ร้านยามีพื้นที่เพียงพอต่อความสะดวกในการทำงาน					
10. วัสดุอุปกรณ์ในร้านยาเพียงพอสำหรับการปฏิบัติงานของฉัน					
11. ร้านยามีพื้นที่เป็นส่วนตัวสำหรับให้คำปรึกษาผู้ป่วย					

ตอนที่ 3: การสนับสนุนทางสังคม

ความคิดเห็นเกี่ยวกับการสนับสนุนทางสังคมจากร้านยา	เห็นด้วยที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยที่สุด
1. ถ้ามีความจำเป็นฉันสามารถขอความช่วยเหลือ/คำแนะนำจากหัวหน้างานของฉันได้					
2. ฉันสามารถพึ่งพาหัวหน้างานในขณะปฏิบัติหน้าที่ได้					
3. ฉันได้รับข้อมูลสำคัญและคำแนะนำที่ทำให้การปฏิบัติงานของฉันง่ายขึ้นจากหัวหน้างาน					
4. เพื่อนร่วมงานของฉันให้ความช่วยเหลือมากในการทำงาน					
5. ฉันสามารถพึ่งพาเพื่อนร่วมงานขณะปฏิบัติหน้าที่ได้					
6. ฉันได้รับข้อมูลสำคัญและคำแนะนำที่ทำให้การปฏิบัติงานของฉันง่ายขึ้นจากเพื่อนร่วมงาน					

ตอนที่ 4: ความผูกพันต่องานปัจจุบันที่ทำอยู่ในร้านยา

ความคิดเห็นเกี่ยวกับความผูกพันต่องานที่ทำอยู่ในร้านยาปัจจุบัน	เห็นด้วยที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยที่สุด
1. ฉันรู้สึกเต็มไปด้วยพลังในขณะที่ทำงานในร้านยา					
2. ฉันรู้สึกแข็งแกร่งและมีความกระตือรือร้นในการทำงานในร้านยา					
3. เมื่อฉันตื่นขึ้นมาในตอนเช้าฉันรู้สึกอยากจะไปทำงานในร้านยา					
4. ฉันรู้สึกได้ว่างานที่ทำอยู่ในร้านยาเต็มไปด้วยความหมายและมีประโยชน์					
5. ฉันกระตือรือร้นเกี่ยวกับงานในร้านยา					
6. ฉันมีความภูมิใจในการทำงานในร้านยา					
7. เวลาผ่านไปอย่างรวดเร็วในขณะที่ฉันทำงานในร้านยา					
8. ฉันรู้สึกมีความสุขเมื่อได้ทำงานในร้านยา					
9. ฉันจดจ่อกับงานที่ทำในร้านยา					

ตอนที่ 5: การเปลี่ยนงาน

ความคิดเห็นเกี่ยวกับความตั้งใจในการเปลี่ยนงานที่ทำอยู่ในปัจจุบัน	เห็นด้วยที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยที่สุด
1. บางครั้งฉันก็คิดอยากลาออกจากงานที่ทำอยู่ในร้านยา					
2. ฉันตั้งใจที่จะลาออกจากงานที่ทำอยู่ในร้านยาภายใน 1 ปีข้างหน้า					
3. ถ้าหากมีงานใหม่ที่น่าสนใจเสนอให้แทนงานปัจจุบัน ฉันตั้งใจว่าจะเปลี่ยนไปทำงานนั้นโดยทันที					



เลขที่โครงการวิจัย..... 063-1/57
วันที่รับรอง..... 30 ก.ย. 2559
วันหมดอายุ..... 29 ก.ย. 2560

ส่วนที่ 3: กรุณาทำเครื่องหมายถูก ✓ ลงในช่องคำตอบและกรอกรายละเอียดลงบนช่องว่าง

ข้อมูลทั่วไปของเภสัชกร

เพศ ชาย หญิง อายุ.....ปี จบการศึกษาเภสัชศาสตร์ ปี พ.ศ..... ท่านเปลี่ยนงานมาแล้ว.....แห่ง

อายุการทำงาน: ในสาขาเภสัชกรรมชุมชน.....ปี.....เดือน ในสถานที่ทำงานปัจจุบัน.....ปี.....เดือน

ประเภทของร้านยาที่ท่านทำอยู่ในปัจจุบัน ร้านยาเดี่ยว
 ร้านยาที่มีหลายสาขา

สัญชาติร้านยา ไทย
 ต่างชาติ

สถานภาพการจ้างงาน พนักงานประจำเต็มเวลา (Full time) จำนวนชั่วโมงทำงานรวมสัปดาห์เฉลี่ยต่อสัปดาห์.....ชั่วโมง
 พนักงานรายคาบ (Part time) จำนวนชั่วโมงทำงานเฉลี่ยต่อสัปดาห์.....ชั่วโมง

ท่านมีงานอื่นที่ต้องรับผิดชอบนอกเหนือจากการบริการลูกค้าด้วยหรือไม่

งานเอกสารร้านยา งานคลัง งานบริหารบุคคล งานจัดซื้อยา อื่นๆ โปรดระบุ

ไม่มี

งานที่ท่านทำอยู่ในร้านยานี้ต้องมีการถ่ายทอดขายให้ได้ตามเป้าหมายหรือไม่

ต้อง
 ไม่ต้อง

หากท่านมีความตั้งใจในการเปลี่ยนงาน โปรดระบุงานที่ท่านสนใจมากที่สุด (เพียง1งานเท่านั้น) ครอบเพียงข้อเดียวทุกคน

เปิดร้านยาเอง ไปร้านยาอื่น เภสัชกรโรงพยาบาล เภสัชกรโรงงาน

เภสัชกรคุ้มครองผู้บริโภค เภสัชกรขึ้นทะเบียนยา เภสัชกรการตลาด เภสัชกรงานวิจัย

เภสัชกรด้านการศึกษา เภสัชกรด้านอื่นๆ โปรดระบุ.....

ศึกษาคือ เกษียณอายุก่อนกำหนด งานที่ไม่เกี่ยวข้องกับวิชาชีพเภสัชกร โปรดระบุ.....

เลขที่โครงการวิจัย..... 063-1/59

วันที่รับรอง..... 30 ก.ย. 2559

วันหมดอายุ..... 29 ก.ย. 2560

กรุณาระบุ ชื่อ-สกุล, ที่อยู่ และเบอร์โทรศัพท์หากท่านประสงค์ที่จะร่วมชิงรางวัล

ชื่อ-สกุล.....

ที่อยู่.....

เบอร์โทรศัพท์.....

Appendix C : English questionnaire

Part I

1. How much autonomy is there in your job at this pharmacy? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

5-----4-----3-----2-----1

Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

Moderate autonomy; many things are standardized and not under the control of me, I can make some decisions about the work

Very little; the job in this pharmacy gives me almost no personal "say" about how and when the work is done.

2. How much variety is there in your job at this pharmacy? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

5-----4-----3-----2-----1

Very much, the job required me to do many different things, using a many different skill and talent

Moderate variety

Very little, the job required me to do the same routine things over and over again

3. In general, how significant or important in your job at this pharmacy? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

5-----4-----3-----2-----1

Highly significant; the outcomes of my work can affect other people in very important ways.

Moderately significant

Not very significant, the outcomes of my work are not likely to have important effects on other people.

4. To what extent does your job involve doing a "whole" and identifiable piece of work at this pharmacy? That is, is the job a complete piece of work that has an obvious beginning and ends? Or is it only a small part of the overall piece of work, which is finished by other people?

5-----4-----3-----2-----1

My job involves the whole piece of work from start to finish; the result of my activities can be easily seen in the final product or service.

My job involves moderate size of the whole piece of work. I involve in the final product or service.

My job only a tiny part of the piece of work; the results of activities cannot be seen in the final product or service.

Part II

Section I Job characteristics

Opinion about job characteristics at the current community pharmacy	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The job that I do at this pharmacy uses a variety of skills.					
2. I have flexibility in the execution of my job.					
3. My job at this pharmacy will affect the well-being of clients depend on how well of my performance.					
4. The jobs at this pharmacy have prepared. Therefore I have no chance to do from the beginning until the end.					
5. The job that I do at this pharmacy is so simple which no need any skills.					
6. I have an opportunity to have freedom doing a different thing at this pharmacy.					
7. The job at this pharmacy gives me a chance to do from the beginning until the end.					
8. In general, the job that I do at this pharmacy is important.					

Section 2: Organizational resources

Opinion about organizational resources from the current community pharmacy	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Managers or business owner invited me to attend training activities.					
2. I've got consistency training class from this pharmacy throughout the year.					
3. I've got self-development from this pharmacy.					
4. I've got adequate pay from this pharmacy.					
5. I've got fringe benefit from this pharmacy.					
6. This pharmacy provides a reward of appreciation.					
7. This pharmacy provides me some form of public recognition such as an employee of the month.					
8. Working in this pharmacy makes me recognized by the public.					
9. The work area in this pharmacy sufficiently facilitates my work tasks.					
10. The material in this pharmacy is sufficient for me to do my job.					
11. There is a private area in this pharmacy for providing patient counseling.					

Section 3: Social support

Opinion about social support from this pharmacy	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. If necessary, I can ask my supervisor at work for help/advice.					
2. I can rely on my supervisor while working.					
3. I get important work-related information and advice from my supervisor which makes performing my job easier.					
4. I find my co-workers very helpful in performing my duties.					
5. I can rely on my co-worker while working.					
6. I get important work-related information and advice from my co-worker which makes performing my job easier.					

Section 4: Engagement at work in the current pharmacy

Opinion about engagement at work in the current pharmacy	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. At the pharmacy, I feel full of energy while working.					
2. In my job at the pharmacy, I feel strong and vigorous.					
3. When I get up in the morning, I feel like going to work at the pharmacy.					
4. I find the work that I do at this pharmacy full of meaning and purpose.					
5. I am enthusiastic about my job at this pharmacy.					
6. I am proud of the work I do at this pharmacy.					
7. Time flies when I am working at this pharmacy.					
8. I feel happy when I am working at this pharmacy.					
9. I am immersed in my work at this pharmacy.					

Section 5: Turnover intention

Opinion about turnover intention from the current job	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Sometimes, I think about quitting the job from this pharmacy.					
2. I intend to quit the job at this pharmacy within one year.					
3. If there is an interesting job offer me, I intend to switch from that job immediately.					

Part III: General information

Gender Male Female Age..... Graduation year..... No. experienced work place.....

Tenure: Community pharmacist tenureYear.....Month Current workplace tenure.....Year.....Month

Type of pharmacy Single pharmacy \

Multiple pharmacies

Pharmacy nationality

Thai

International

Hiring status

Full time

Working hours per week including overtime.....hr.

Part time)

Working hours per week.....hr.

Responsibility other than client services

Pharmacy documentation

Inventory

Human resources

Procurement

Other

No

Is there sales target that you have to achieve?

Yes

No

If you intend to change job, please select the most interesting job (Only 1 job)

Pharmacy owner

Another community pharmacy

Hospital pharmacist

Industrial pharmacist

Consumer protection pharmacist

Drug registration pharmacist

Marketing pharmacist

Research pharmacist

Pharmacy education staff

Other pharmacist job


Studying

Early retirement

Non-pharmacist job

Appendix D : Permission letter for community pharmacy name list

๑๗ มิถุนายน ๒๕๖๑



กรมส่งเสริมการค้าระหว่างประเทศ
 ๒๒ ก.ย. ๒๕๖๑
 เลขที่ ๖๐๑๔

ที่ สธ ๑๐๐๙.๒.๖/ ๑๕๘๒

: ๒ ก.ย. ๒๕๕๙


เรื่อง การขอรายชื่อร้านขายยา ขย.๑
 เรียน คณบดีคณะเภสัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ตามที่ ผศ.ดร.รุณัญญา กิตติโสภิ อธิการบดีภาควิชาเภสัชศาสตร์สังคมและการบริหาร
 ในฐานะอาจารย์ที่ปรึกษาวิทยานิพนธ์ของ นายตุลาการ นาคพันธ์ นิสิตปริญญาเอก ประสานขอข้อมูล
 รายชื่อและที่อยู่ร้านยา ขย.๑ เพื่อประกอบการทำวิจัยเรื่อง “รูปแบบสมการโครงสร้างของความผูกพันและ
 ความตั้งใจในการเปลี่ยนงานของเภสัชกรไทย” ความละเอียดแจ้งแล้ว นั้น

ในการนี้ สำนักงาน ขอจัดส่งข้อมูลร้านขายยาแผนปัจจุบันในเขต กทม. มาเพื่อใช้ในการ
 ประโยชน์เพื่อการศึกษาวิจัย ทั้งนี้ หากได้ผลการศึกษาวิจัยเป็นประการใด สำนักงาน ขอความอนุเคราะห์
 โปรดจัดส่งเล่มวิทยานิพนธ์ฉบับสมบูรณ์ จำนวน ๒ เล่ม ให้แก่สำนักงานคณะกรรมการอาหารและยาด้วย

จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ



(นายสุชาติ จงประเสริฐ)
 ภาสกรชำนาญการพิเศษ
 รักษาการแทนผู้อำนวยการสำนักงาน

กลุ่มพัฒนาระบบ (งานเทคโนโลยีสารสนเทศด้านยา)
 โทร ๐ ๒๕๙๐ ๗๑๙๑
 โทรสาร ๐ ๒๕๙๐ ๗๑๖๕

12 มิถุนายน ๒๕๖๑
 ๑๗ มิถุนายน ๒๕๖๑
 ๑๒ มิถุนายน ๒๕๖๑

๑๖ มิถุนายน ๒๕๖๑
 รักษาการแทน

Appendix E : List of lucky draw respondents

ธนาคารกสิกรไทย KASIKORN BANK **ใบเสร็จรับเงิน 收据 Receipt** วันที่ 日期 Date 16-12-2016
0026-สาขาเขตนครหลวง 430.6-10 ถนนพระรามที่ 1 แขวงปทุมวัน เขตปทุมวัน กทม.

จ่าย 付给 Pay **หรือตามคำสั่ง หรือ指定人 or order**

บาท 泰铢 Baht **หนึ่งพันบาทถ้วน** 1,000.00

Account : 4001002602 Chg. No. : 11065330 ลายมือชื่อผู้รับมอบอำนาจ 授权签名 Authorized Signature
Kitayanee Bcd (0501)

๔๒๙ ๙๙ ๑๐๖๕๓๓๐๙๐๐๐๔๙๐๐๒๕๑๒ ๐๒

รับเงินจาก นาย ตลากร นวลนอ
ความร่วมมือในการขอสินเชื่อเลขที่ 11065330
- ชี้อย่างถาวร -

เช็คของขวัญ Gift Cheque A/C PAYEE ONLY วันที่ 日期 Date 22-12-2016
00068962 หรือผู้ถือ หรือ bearer

จ่าย 付给 Pay **หรือผู้ถือ หรือ bearer**

จำนวนเงิน Amount ***หนึ่งพันบาทถ้วน******* 1,000.00

Bangkok Bank 盘谷銀行 ธนาคารกรุงไทย
สาขาถนนเอกนคร (0152)
394 ถนนพระราม 1 แขวงปทุมวัน เขตปทุมวัน กรุงเทพฯ
ชื่อกิ่งในธนาคาร จาก

ธนาคารกรุงไทย จำกัด (มหาชน)

ใบเสร็จรับเงิน / Receipt NO. 00068962
ธนาคารกรุงไทย จำกัด (มหาชน) 333 ถนนสีลม เขตบางรัก กรุงเทพฯ 10000 โทร. (66) 2231 4333
สาขาประจำตัวผู้ถือเช็ค/การสมัครเช็คที่ 0107536000374

มูลค่าเช็คของขวัญ *****1,000.00* บาท
Value of the gift cheque บาท
ค่าธรรมเนียม 15.00 C บาท
Fee บาท

ได้รับเช็คของขวัญตามรายการข้างบนแล้ว
Received the gift cheque indicated above

ได้รับชำระเงินตามมูลค่าเช็คของขวัญและค่าธรรมเนียมในใบเสร็จรับเงินแล้ว
Received full value of the gift cheque and issued fee in this receipt

S=[] R1=[] R2=[]

ผู้รับเช็คของขวัญ The receiver of gift cheque
ใบเสร็จรับเงินฉบับนี้จะสมบูรณ์ เมื่อเจ้าหน้าที่ของธนาคารผู้มีหน้าที่รับเงินลงนาม
The receipt is not valid unless signed by an authorized bank officer.

11 22 DEC 2016
เจ้าหน้าที่รับเงิน Authorized Bank Officer
SQUARE 010100

ธนาคารกสิกรไทย KASIKORN BANK **ใบเสร็จรับเงิน 收据 Receipt** วันที่ 日期 Date 1 0 9 1 2 0 1 7
 0026-สาขาสยามเสแควร์ 430/6-10 ถนนพระรามที่ 1 แขวงปทุมวัน เขตปทุมวัน กทม.

จ่าย 付給 Pay XXXXXXXXXX หรือตามคำสั่ง
 หรือตามคำสั่ง 或指定人 or order

จำนวนเงิน 金額 Baht **หนึ่งพันบาทถ้วน**

B *****1,000.00

ชื่อบริษัท/ห้าง/ร้านค้า
 Account : 4001002602 Chq. No. : 11283054 ลายมือชื่อผู้รับมอบอำนาจ 授权签名 Authorized Signature
Patchorn Thu.

เลขที่เช็ค/ใบเสร็จ Cheque No. สาขา/สาขาย่อย Branch No. สำหรับเจ้าหน้าที่ 仅供 For Official Only

⑆ 28 ⑆ ⑆ 28 30 5 ⑆ ⑆ 00 ⑆ ⑆ 00 2 6 ⑆ 0 2

ทะเบียนเลขที่ (S.N.) Registration No. 0107536000315
 เลขประจำตัวผู้เสียภาษี (Tax ID) 0107536000315
 ได้รับแจ้งจาก นาย พงศ์กร มาตย์
 คุ้มครองข้อมูลข่าวสารขอชี้แจงเช็คเลขที่ 11283054
 - ยึดขาดแล้ว - *****20.00

แคชเชียร์เช็ค Cashier's Cheque A/C PAYEE ONLY วันที่ 日期 Date 0 1 0 2 2 0 1 7
 00216380

จ่าย Pay XXXXXXXXXX

จำนวนเงิน Amount **หนึ่งพันบาทถ้วน**

B *****1,000.00

Bangkok Bank 曼谷銀行
ธนาคารกรุงเทพ
 สาขาเขตสาทร (0152)
 394 อ.พระราม 1 แขวงปทุมวัน เขตปทุมวัน กรุงเทพฯ

ธนาคารกรุงเทพ จำกัด (มหาชน)

เลขที่ Chq. No. สาขา Branch No. บัญชี Account No. จำนวนเงิน Amount

ชำระมูลค่าแคชเชียร์เช็คโดย
 Value of the cashier's cheque paid by
 เงินสด Cash
 เช็ค / หักบัญชีเช็ค Cheque / Debit from the A/C No.

ได้รับแคชเชียร์เช็คตามรายการข้างบนแล้ว
 Received the cashier's cheque indicated above

ผู้รับแคชเชียร์เช็ค
 The receiver of the cashier's cheque

มูลค่าแคชเชียร์เช็ค บาท
 Value of the cashier's cheque *****1,000.00 Baht

ค่าธรรมเนียม 20.00 C บาท
 Fee Baht

ได้รับชำระเต็มมูลค่าแคชเชียร์เช็คและค่าธรรมเนียมใบการออกตราสารแล้ว
 Received full value of the cashier's cheque and issuance fee

S=[] R1=[] R2=[]

ใบเสร็จรับเงินฉบับนี้จะสมบูรณ์ เมื่อเจ้าหน้าที่ของธนาคารผู้มีหน้าที่รับเงินลงนาม
 The receipt is not valid unless signed by an authorized bank officer.

เจ้าหน้าที่ผู้รับเงิน
 Authorized bank officer

RECEIPT 1

Appendix F : Results of IOC

Measurement	Questions	Exp.1	Exp.2	Exp.3	IOC
Pharmacist turnover intention	I intend to resign from the current community pharmacy job within one year.	1	1	1	1
	I plan to find a new job within one year.	-1	0	1	0.00
	I intend to stay at this community pharmacy job for at least one year.	0	1	0	0.33

Measurement	Questions	Exp.1	Exp.2	Exp.3	IOC
Vigor	At the pharmacy, I feel full of energy while working.	1	1	1	1
	In my job at the pharmacy, I feel strong and vigorous.	1	1	1	1
	When I get up in the morning, I feel like going to work at the pharmacy.	1	1	1	1
	I can continue working for very long periods at a time at the pharmacy.	-1	1	1	0.33
	In my job at the pharmacy, I am mentally very resilient.	1	1	1	1
	At the pharmacy, I always persevere, even when things do not go well.	1	1	1	1
Dedication	I find the work that I do full of meaning and purpose.	1	1	1	1
	I am enthusiastic about my job.	1	1	n.a.	1
	My job inspires me.	1	0	1	0.67
	I am proud of the work I do.	1	1	1	1
	I find my job challenging.	1	1	1	1
Absorption	Time flies when I am working at the pharmacy.	1	1	1	1
	When I am working at the pharmacy, I forget everything else around me.	1	1	1	1
	I feel happy when I am working intensely.	0	1	1	1

	I am immersed in my work.	1	0	1	1
	I get carried away when I am working in the pharmacy.	0	0	1	0.33
	It is difficult to detach myself from my job.	1	1	1	1

Measurement	Questions	Exp.1	Exp.2	Exp.3	IOC
Training and development	Managers have invited me to attend training activities.	1	1	1	1
	Learning has helped to overcome work obstacles.	1	1	1	1
	Sufficient training has been provided.	1	1	1	1
Payment and recognition	This pharmacy provides me adequate pay.	1	1	1	1
	This pharmacy provides me adequate fringe benefits.	1	1	1	1
	This pharmacy provides a reward or token of appreciation.	1	1	1	1
	This pharmacy provides me some form of public recognition such as employee of the month.	1	0	1	0.67
	Working in this pharmacy makes me recognized by the public.	1	1	1	1
Physical working condition	The work area in this pharmacy sufficiently facilitates my work tasks.	1	1	1	1
	The material in this pharmacy is sufficient for me to do my job.	1	1	1	1
	There is a private area in this pharmacy for providing patient counseling.	1	1	1	1
Measurement	Questions	Exp.1	Exp.2	Exp.3	IOC
Autonomy	I can decide on my own how to go about doing my work.	1	1	1	1
	I have freedom in carrying out my work activities.	1	1	1	1
	I am able to decide myself how to execute my work.	1	1	1	1
	I can choose my way of working.	1	0	1	0.6

					7
	I have flexibility in the execution of my job.	1	1	1	1
Job skill variety	I do many different things at work, using a variety of my skills and talents.	1	1	1	1
	I repeat that same things on my duty.	1	1	1	1
	I perform similar tasks in a typical workday.	0	0	0	0.0 0
	I have an opportunity to do a number of different things.	0	1	1	0.6 7
Task significance	In general, I am significant or important in my job.	1	1	1	1
	I feel that my work is likely to significantly affect the organization.	1	1	1	1
	I feel that my work is likely to significantly affect the well-being of clients.	1	1	1	1
Task identity	I am involved in doing a “whole” and identifiable piece of work in my job.	1	1	1	1
	I do the job as a complete piece of work that has an obvious beginning and end.	1	1	1	1
	I do a small part of the overall piece of work, which is finished by other people.	1	1	1	1

Measurement	Questions	Exp.1	Exp.2	Exp.3	IOC
Supervisory support	If necessary, I can ask my supervisor at work for help/advice.	1	1	1	1
	I find my supervisor very helpful in performing my customer service duties.	1	1	1	1
	When performing my service duties, I rely heavily on my supervisor.	1	1	-1	0.3 3
	I get important work-related information and advice from my supervisor which makes performing my job easier.	1	1	1	1

	I can count on my supervisor at work.	1	1	1	1
Peer support	If necessary, I can ask my co-workers for help/advice.	1	1	1	1
	I find my co-workers very helpful in performing my customer service duties.	1	1	1	1
	When performing my service duties, I rely heavily on my co-workers.	1	1	0	0.67
	My co-workers provide me with important work-related information and advice, which makes performing my job easier.	1	1	1	1



Appendix G : Results of reliability test in measurement scale development

Measurement	Question	Cronbrach's α
Pharmacist turnover intention	Sometime, I was thinking about quitting from the current job.	0.65
	I intend to resign from the current community pharmacy job within one year.	
	If there is an interesting job offered to me, I intend to switch to that job immediately.	
Vigor	I feel full of energy while working.	0.86
	I feel strong and vigorous.	
	When I get up in the morning, I feel like going to work.	
Dedication	I find the work that I do full of meaning and purpose.	0.85
	I am enthusiastic about my job.	
	I am proud of the work I do.	
Absorption	Time flies when I am working	0.76
	I feel happy when I am working intensely.	
	I am immersed in my work.	
Training and development	Managers or business owners have invited me to attend training activities.	0.94
	I've got continuing training class from this pharmacy throughout the year.	
	I've got self-development from this pharmacy	
Payment and recognition	This pharmacy provides me adequate pay.	0.83
	This pharmacy provides me adequate fringe benefits.	
	This pharmacy provides rewards of appreciation.	
	This pharmacy provides me some form of public recognition such as employee of the month.	
	Working in this pharmacy makes me recognized by the public.	
Physical working condition	The work area in this pharmacy sufficiently facilitates my work tasks.	0.87
	The material in this pharmacy is sufficient for me to do my job.	
	There is a private area in this pharmacy for providing patient counseling.	
Autonomy	How much autonomy is there in your job at this pharmacy? That is, to what extent does your job permit you to decide on your own how to go about doing the work?	0.67

	I have not got an opportunity to initiate or make a decision about job's execution.	
	I have an opportunity to have freedom doing a different thing at this pharmacy.	
Job skill variety	How much variety is there in your job at this pharmacy? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?	0.55
	The job that I do at this pharmacy uses a variety of skills.	
	The job that I do at this pharmacy is a repeated and simple job.	
Task significance	In general, how significant or important in your job at this pharmacy? That is, are the results of your work likely to significantly affect the lives or well-being of other people?	0.4
	My job at this pharmacy will affect the well-being of clients depend on how well of my performance.	
	In general, the job that I do at this pharmacy is not important.	
Task identity	To what extent does your job involve doing a "whole" and identifiable piece of work at this pharmacy? That is, is the job a complete piece of work that has an obvious beginning and ends? Or is it only a small part of the overall piece of work, which is finished by other people or the machine?	0.42
	The job at this pharmacy have prepared. Therefore I have no chance to do from the beginning until the end.	
	The job at this pharmacy gives me a chance to do from the beginning until the end.	
Supervisory support	If necessary, I can ask my supervisor at work for help/advice.	0.95
	I can count on my supervisor at work.	
	I get important work-related information and advice from my supervisor which makes performing my job easier.	
Peer support	I find my co-workers very helpful in performing my duties.	0.97
	I can count on my co-worker at work.	
	My co-workers provide me with important work-related information and advice, which makes performing my job easier.	

Appendix H : Additional results of path regressions in each step of model modification

Modification step 1			Estimate	S.E.	C.R.	P
Pharmacist engagement	←	Job characteristics	0.574	0.172	3.341	***
Pharmacist engagement	←	Social supports	0.249	0.291	0.853	0.394
Pharmacist engagement	←	Organizational resources	0.434	0.348	1.247	0.212
Pharmacist turnover intention	←	Pharmacist engagement	-0.349	0.215	-1.623	0.105
Pharmacist turnover intention	←	Organizational resources	-0.753	0.637	-1.181	0.237
Pharmacist turnover intention	←	Job characteristics	0.049	0.324	0.151	0.88
<u>Pharmacist turnover intention</u>	<u>←</u>	<u>Social supports</u>	<u>-0.021</u>	<u>0.521</u>	<u>-0.041</u>	<u>0.967</u>
INT1: Thinking about quitting	←	Pharmacist turnover intention	1			
INT2: Intention quit within 1 year	←	Pharmacist turnover intention	0.958	0.078	12.266	***
INT3: Switch job if there is interesting job offer	←	Pharmacist turnover intention	0.986	0.074	13.27	***
Vigor	←	Pharmacist engagement	1			
Dedication	←	Pharmacist engagement	0.883	0.045	19.631	***
Absorption	←	Pharmacist engagement	0.938	0.045	20.752	***
Training and development	←	Organizational resources	0.838	0.095	8.855	***
Payment and recognition	←	Organizational resources	1			
Physical working condition	←	Organizational resources	0.908	0.097	9.346	***
Autonomy	←	Job characteristics	0.97	0.156	6.215	***
Job skill variety	←	Job characteristics	0.559	0.13	4.298	***
Task significant	←	Job characteristics	0.741	0.119	6.225	***
Task identity	←	Job characteristics	1			
Supervisory support	←	Social supports	0.903	0.1	9.029	***
Peer support	←	Social supports	1			

Modification step 2			Estimate	S.E.	C.R.	P
Pharmacist engagement	←	Job characteristics	0.574	0.172	3.331	***
Pharmacist engagement	←	Social supports	0.247	0.293	0.846	0.398
Pharmacist engagement	←	Organizational resources	0.436	0.35	1.246	0.213
Pharmacist turnover intention	←	Pharmacist engagement	-0.35	0.215	-1.624	0.104
Pharmacist turnover intention	←	Organizational resources	-0.778	0.233	-3.341	***
<u>Pharmacist turnover intention</u>	←	<u>Job characteristics</u>	<u>0.056</u>	<u>0.274</u>	<u>0.205</u>	<u>0.837</u>
INT1: Thinking about quitting	←	Pharmacist turnover intention	1			
INT2: Intention to quit within 1 year	←	Pharmacist turnover intention	0.958	0.078	12.266	***
INT3: Switch job if there is interesting job offer	←	Pharmacist turnover intention	0.987	0.074	13.269	***
Vigor	←	Pharmacist engagement	1			
Dedication	←	Pharmacist engagement	0.883	0.045	19.631	***
Absorption	←	Pharmacist engagement	0.938	0.045	20.752	***
Training and development	←	Organizational resources	0.838	0.095	8.857	***
Payment and recognition	←	Organizational resources	1			
Physical working condition	←	Organizational resources	0.909	0.097	9.348	***
Autonomy	←	Job characteristics	0.97	0.156	6.215	***
Job skill variety	←	Job characteristics	0.559	0.13	4.299	***
Task significant	←	Job characteristics	0.741	0.119	6.226	***
Task identity	←	Job characteristics	1			
Supervisory support	←	Social supports	0.903	0.1	9.029	***
Peer support	←	Social supports	1			

Model modification step 3			Estimate	S.E.	C.R.	P
Pharmacist engagement	←	Job characteristics	0.571	0.17	3.348	***
Pharmacist engagement	←	Social supports	0.243	0.291	0.833	0.405
<u>Pharmacist engagement</u>	←	<u>Organizational resources</u>	<u>0.442</u>	<u>0.347</u>	<u>1.271</u>	<u>0.204</u>
Pharmacist turnover intention	←	Pharmacist engagement	-0.327	0.186	-1.761	0.078
Pharmacist turnover intention	←	Organizational resources	-0.774	0.232	-3.339	***
INT1: Thinking about quitting	←	Pharmacist turnover intention	1			
INT2: Intention to quit within 1 year	←	Pharmacist turnover intention	0.958	0.078	12.266	***
INT3: Switch job if there is interesting job offer	←	Pharmacist turnover intention	0.987	0.074	13.27	***
Vigor	←	Pharmacist engagement	1			
Dedication	←	Pharmacist engagement	0.883	0.045	19.629	***
Absorption	←	Pharmacist engagement	0.938	0.045	20.754	***
Training and development	←	Organizational resources	0.838	0.095	8.86	***
Payment and recognition	←	Organizational resources	1			
Physical working condition	←	Organizational resources	0.908	0.097	9.346	***
Autonomy	←	Job characteristics	0.971	0.156	6.234	***
Job skill variety	←	Job characteristics	0.555	0.13	4.283	***
Task significant	←	Job characteristics	0.737	0.119	6.222	***
Task identity	←	Job characteristics	1			
Supervisory support	←	Social supports	0.902	0.1	9.029	***
Peer support	←	Social supports	1			

Final model			Estimate	S.E.	C.R.	P
Pharmacist engagement	←	Job characteristics	0.701	0.147	4.767	***
Pharmacist engagement	←	Social supports	0.617	0.092	6.716	***
Pharmacist turnover intention	←	Pharmacist engagement	-0.35	0.176	-1.986	0.047
Pharmacist turnover intention	←	Organizational resources	-0.752	0.22	-3.415	***
INT1: Thinking about quitting	←	Pharmacist turnover intention	1			
INT2: Intention to quit within 1 year	←	Pharmacist turnover intention	0.957	0.078	12.26	***
INT3: Switch job if there is interesting job offer	←	Pharmacist turnover intention	0.986	0.074	13.264	***
Vigor	←	Pharmacist engagement	1			
Dedication	←	Pharmacist engagement	0.884	0.045	19.609	***
Absorption	←	Pharmacist engagement	0.939	0.045	20.753	***
Autonomy	←	Job characteristics	0.962	0.154	6.25	***
Job skill variety	←	Job characteristics	0.55	0.129	4.278	***
Task significant	←	Job characteristics	0.73	0.117	6.237	***
Task identity	←	Job characteristics	1			
Training and development	←	Organizational resources	0.841	0.095	8.879	***
Payment and recognition	←	Organizational resources	1			
Physical working condition	←	Organizational resources	0.908	0.097	9.321	***
Supervisory support	←	Social supports	0.904	0.1	9.031	***
Peer support	←	Social supports	1			



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APPENDIX



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