LEADERSHIP AND LEADERSHIP DEVELOPMENT FOR HEAD OF PHARMACY DEPARTMENT: A CASE OF HOSPITALS UNDER THE MINISTRY OF PUBLIC HEALTH, THAILAND

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ABSTRACT

The purpose of this cross-sectional, survey and analytical research was to explore the effective leadership and leadership development for heads of pharmacy department in hospitals under the Ministry of Public Health. The Population of this study was 800 heads of pharmacy department in hospitals. Data was collected using postal mailed survey questionnaires. A number of 496 out of 800 questionnaires were received and that accounted for 62% response rate. Descriptive statistics including percentage, mean, and standard deviation were used to analyze data. The analytical statistics comprised of ANOVA and Pearson's Product-Moment Correlation Coefficient and Multiple Regression Analysis. The results revealed that the level of effective leadership by self-assessment was high. (Mean = 3.84, S.D. = 0.35). When comparing effective leadership by hospital size, it was found that the mean of effective leadership between large-sized hospitals and small-sized hospitals was different at a statistical significance of p-value < 0.01. The most frequently used development methods were; developmental activities, self-help activities, and formal training respectively. There were statistical significance of positive correlations between leadership development and effective leadership level of the heads of pharmacy departments. Educational background, formal training, and developmental activities significantly explained 9.4% of the effective leadership of heads of pharmacy department of hospitals under the Ministry of Public Health.

KEY WORDS: LEADERSHIP DEVELOPMENT / EFFECTIVE LEADERSHIP / HOSPITAL PHARMACIST / LEADERSHIP

109 pages

การศึกษาภาวะผู้นำและการพัฒนาภาวะผู้นำของหัวหน้ากลุ่มงานเภสัชกรรม โรงพยาบาล สังกัดกระทรวงสาธารณสุข

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บทคัดย่อ

การวิจัยครั้งนี้เป็นการวิจัยเชิงสำรวจ มีวัตถุประสงค์เพื่อศึกษาภาวะผู้นำประสิทธิผลและการพัฒนาภาวะผู้นำของหัวหน้ากลุ่มงานเภสัชกรรมโรงพยาบาล กลุ่มประชากร คือหัวหน้ากลุ่มงานเภสัชกรรมโรงพยาบาล สังกัดสำนักงานปลัดกระทรวงสาธารณสุข จำนวน 800 คน เก็บข้อมูลโดยใช้แบบสอบถาม ได้รับการตอบกลับร้อยละ 62 และวิเคราะห์ข้อมูลด้วยสถิติพรรณา ได้แก่ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน สถิติวิเคราะห์ความสัมพันธ์ได้แก่ การวิเคราะห์ความแปรปรวนทางเดียว (One-way ANOVA) สัมประสิทธิ์สหสัมพันธ์แบบเพียร์สันและสถิติถดถอยพหุคูณ ผลการศึกษาพบว่า ภาวะผู้นำประสิทธิผลของหัวหน้ากลุ่มงานเภสัชกรรม มีคะแนนเฉลี่ยอยู่ในระดับสูง และพบว่าคะแนนเฉลี่ยของภาวะผู้นำที่มีประสิทธิผล ระหว่าง โรงพยาบาลขนาดใหญ่กับ โรงพยาบาลขนาดเล็ก แตกต่างกันอย่างมีนัยสำคัญทางสถิติ ด้านการพัฒนาภาวะผู้นำพบว่าหัวหน้ากลุ่มงานเภสัชกรรมใช้วิธี พัฒนาภาวะผู้นำขณะปฏิบัติงานบ่อยที่สุด รองมาคือวิธีพัฒนาตนเองและอันดับสุดท้ายคือ วิธีการอบรม วิธีการพัฒนาภาวะผู้นำทั้ง 3 วิธีมีความสัมพันธ์กับระดับภาวะผู้นำที่มีประสิทธิผลอย่างมีนัยสำคัญทางสถิติ พบว่า ระดับการศึกษา การอบรม และการพัฒนาภาวะผู้นำขณะปฏิบัติงาน สามารถร่วมกันอธิบายภาวะผู้นำประสิทธิผลของหัวหน้ากลุ่มงานเภสัชกรรมได้ร้อยละ 9.40

109 หน้า

CONTENTS

CONTENTS (cont.)

CONTENTS (cont.)

LIST OF TABLES

LIST OF TABLES (cont.)

LIST OF TABLES (cont.)

LIST OF FIGURES

CHAPTER I
INTRODUCTION

Background and rationale

Thai health system has been affected by the transitions of macroeconomic and government policies and other contextual factors. The state of the expansion of private health facilities, resulting from Thailand's economic growth and government policy to promote Thailand as the medical hub of the region has made an impact on the Thai health system. Moreover, the universal coverage scheme implemented in 2001 has resulted in increasing service utilizations. The hospital under the Ministry of Public Health in Thailand is required to provide standard health care for people through high service quality, safety, and proper cost. (1) Therefore, all hospitals have to be responsible for improving service management, service design, and service delivery to achieve performance beyond expectations, and hospital need.

Since 1993, The Ministry of Public Health announced a quality assurance policy for development of regional hospitals and general hospitals under the office of the Permanent Secretary of the Ministry of Public Health. The policy required applying the concept of Total Quality Management (TQM) for improvement of hospital quality.

Then, in 1997 hospital accreditation program began (2). All hospitals have to conform to HA guideline of 1996 and quality management method, be evaluated and accredited by the Institute of hospital Quality Improvement and Accreditation (HQIA) Thailand. The Ministry of Public Health uses HA and TQM to improve service quality and accreditation in regional hospitals and general hospitals (3). Pharmacy department is one of the important parts of hospital that has to improve service quality and excellent performance for the best patient's outcome.

Head of pharmacy department is one of the important management team in the hospital. They are responsible for the management of facilities, equipment, supplies, and drug information; record-keeping and documentation; drug procurement

and inventory management; training and orientation; safe medication practices; and accountability for managers of accredited pharmacies.

The effective leadership has been linked to improved organizational performance (4) and has been recognized as a possible solution to the challenges in Health Care. The role of heads of pharmacy departments has become an influential leadership position in the hospitals and pharmacy leadership has been one of the factors in improving hospitals' overall status.

The need to develop heads of pharmacy department in hospitals is becoming more important in today's complex and rapidly changing health care environment. Effective leadership development will help preparing heads of pharmacy departments to operate at a high level of performance in the uncertain time in the future

Heads of pharmacy departments who have attended the development programs are able to use the new knowledge to develop and practice new skills and behaviors in challenging situations. They are more likely to sustain their development and their tasks have a positive long-term impact on improvements in patient care, medication safety, and pharmacy productivity.

According to Thai Public Sector Development in regard of the Strategic Plan for Public Sector Development B.E. 2556 - 2561 and the successful implementation of such strategic plan, it requires several factors and conditions for the achievement. Ones of those are to strengthen the leadership of the public sectors and public authorities to realize the serious ongoing perception of the context and change circumstance. They should be ready to be a leader who can coordinate across agencies and build a network in the workplace, be visionary thinking far outside the box with the ability to communicate and understand the modern information technology, be of political skills understanding of the policies, procedures and processes including with the ability to plan and drive the strategy into action as a substantial achievement. The key to the leadership is to be a moral and ethical leader who can integrate work systematically towards the ultimate goal for the benefit of the public. Therefore, the administration of public hospitals, Pharmacy department is a unit in a hospital which is full of administrative complexities and has many levels of personnel. Moreover, in order to improve the quality of work up to the pharmacy

professional standards, Heads of pharmacy departments have to modify their working styles in several areas. The problems and obstacles of development were as follows; heads of pharmacy departments did not understand or lack of the developmental concepts, so there were no leaders to start making changes, lack of plan to develop a process, and not even know where to start (5) lack of plan for leadership development, no preparation of necessary knowledge and skills in management and leadership before promoting to the position of heads of pharmacy departments as well (6). Besides, heads of pharmacy departments were responsible to conduct the policy of organization into practice, be a good exemplary role and follow up the evaluation of practitioners (7). Therefore, being effective leadership in the workplace is required by heads of pharmacy departments. The effective leadership refers to the leader who exercises the power or influence in an advantage way to make the organization achieve its goals and personnel's satisfaction (8) and consequently encourages personnel to willingly use their knowledge and skills. Heads of pharmacy departments, who are regarded as effective leadership, will inspire subordinates to fully work out as efficient output, build up moral support at work, and always seek for new approaches to improve work for higher efficiency of work and organization.

Leadership development is regarded as an important matter for every organization nowadays. For the reason that the leader is a person who has been recognized, appointed as an executive in the organization, and considered as a talent with appropriate experience for being leader, so the leader should be a person who always evolves (9). Thus, the researcher is interested in studying leadership and leadership development of heads of pharmacy departments, under the Ministry of Public Health, adopting the guideline to develop the effective leadership for Heads of pharmacy departments, and providing the information for the development and preparation of personnel's readiness in the position of heads of pharmacy department in the future.

General objective

This study aimed to explore leadership and leadership development for heads of pharmacy department of hospitals under the Ministry of Public Health, Thailand.

Specific objectives

1. To measure and compare the effective leadership level of heads of pharmacy department of hospitals under the Ministry of Public Health.

2. To survey the methods for developing leadership skills in heads of pharmacy department of hospitals under the Ministry of Public Health.

3. To find out the association between personal characteristic variables and the effective leadership of heads of pharmacy departments.

4. To find out the association between types of leadership development and the effective leadership level of heads of pharmacy department of hospitals under the Ministry of Public Health.

5. To identify factors that can be used to explain the variation in the effective leadership level of heads of pharmacy department of hospitals under the Ministry of Public Health.

Research Hypothesis

1. There were relationship between the personal characteristic and the effective leadership of heads of pharmacy departments.

1.1 There was positive relationship between age and the effective leadership of heads of pharmacy departments.

1.2 There was positive relationship between years of work experience and the effective leadership of heads of pharmacy departments.

1.3 There was positive relationship between working duration in the current position and the effective leadership of heads of pharmacy departments.

1.4 There was positive relationship between gender and the effective leadership of heads of pharmacy departments.

1.5 There was positive relationship between educational background and the effective leadership of heads of pharmacy departments.

1.6 There was positive relationship between training experience and the effective leadership of heads of pharmacy departments.

2. There was relationship between size of hospital and the effective leadership of heads of pharmacy departments.

3. There were relationship between types of leadership development and the effective leadership level of heads of pharmacy departments.

3.1 There was positive relationship between Formal training and the effective leadership of heads of pharmacy departments.

3.2 There was positive relationship between Developmental activities and the effective leadership of heads of pharmacy departments.

3.3 There was positive relationship between Self-help activities and the effective leadership of heads of pharmacy departments.

4. Personal characteristic and types of leadership development of heads of pharmacy departments could explain the effective leadership.

Definition of terms

1. Heads of Pharmacy department of hospitals

Heads of pharmacy department of hospitals are referred to a person who graduated from an accredited school of pharmacy and have been working in government hospital and currently working in a top administrative position at any pharmacy departments under the Office of the Permanent Secretary, Ministry of Public Health, Thailand.

2. General information

General information is referred to specific characteristics, which can transfer to the background of person. In this study, general information comprise of:

Gender is referred to the gender of the responding pharmacist that is male or female.

Age is referred to the present age of heads of pharmacy departments who work in the selected hospitals, counted in years.

Educational Background is referred to the highest degree/certificate of educational attainment of heads of pharmacy departments, including diploma, bachelor's degree, master's degree and doctoral's degree.

Years of hospital pharmacy experience are referred to the number of years that each heads of pharmacy departments has been working as a government official. (In case of more than six months, it is counted as a year.)

Working duration in the current position is referred to the number of years which head of pharmacy department has been working in the present head position at any pharmacy department.

Hospital size is referred to the number of available beds for patients that can be admitted in each hospital. In this study, hospital size will be categorized into three types, which are large, middle and small hospitals (10) as follows;

- Large hospitals (have a capacity of at least 500 beds and have a comprehensive set of specialists on staff) are divided into two groups; Advance – level hospitals (A) and Standard – level hospitals (S).
- Middle hospitals (have a capacity of 200 to 500 beds) are classified as follows; General hospital M1, General hospital M2.
- Small hospitals (have a capacity of 10 to 150 beds) and are classified by size as follows; Large community hospital (F1), Medium community hospital (F2), Small community hospital (F3).

3. Types of leadership development

Types of leadership development are referred to the methods for developing leadership skills in heads of pharmacy departments under the Ministry of Public Health. In this study, types of leadership development comprise of:

Formal training is referred to any programs provided by any organizations that are involved with leadership or leadership development that heads of pharmacy departments have participated during the past 5 years.

Developmental activities are referred to a number of activities that heads of pharmacy departments uses to facilitate learning of leadership skills from experience on the job that heads of pharmacy departments have participated during the past 5 years.

Self-help activities are referred to activities which are carried out by individual heads of pharmacy departments in order to develop leadership skills during the last 5 years.

CHAPTER II
LITERATURE REVIEW

The researcher had reviewed textbooks, theories, conceptual documents, and related researches in order to use those as this research's guideline. The review of the literature was presented in three parts as follows:

Part 1 Concept and theory of leadership

Part 2 Concept and theory of leadership development

Part 3 Related researches

Part 1: Concept and theory of leadership

1.1 Definition of Leadership

Leadership is an important factor for the organizational achievement. The research on leadership has defined leadership in different ways. Researcher studied and gathered the literatures as follows:

Bass (11) defined leadership as an individual's behaviors and ability to influence and direct a group, subordinates or followers to cooperate actively in the job towards the goal attainment.

Gibson et al (12) defined leadership as an interaction between members of a group. Leaders are agents of change; persons whose acts affect other people more than other people's acts affect them. Leadership occurs when one group member modifies the motivation or competencies of others in the group.

Greenberg (13) defined leadership as the process by which an individual influences others in ways that helps to attain group or organizational goals. The primary function of a leader is to create the essential purpose or mission of the organization and the strategy to attain it. By contrast, the job of the manager is to implement that vision.

Robbins (14) defined Leadership as the ability to influence a group toward the achievement of goals. The source of this influence may be formal, such as that provided by the possession of managerial rank in an organization

Yukl (15) defined leadership as the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives.

Northouse (16) defined leadership as "a process whereby an individual influences a group of individuals to achieve a common goal.

Conclusion: Leadership is the art of influencing other in order to achieve certain goals and objectives. Leadership is the ability to understand the situation and the ability to listen others. It is also the art of implementing the strategy into action.

1.2 The Theory of Leadership

Leadership theories are the statement of the related factors that predict, define, and prescribe effective behaviors. The main theories that are well known for study and research include:

Trait Theory of leadership

In the past, leadership was recognized as elusive by nature and not easily defined. Attempts to understand the fundamentals of leadership began with the trait approach. It determined the characteristics of successful leaders by studying the leader's personality.

Behaviors Theory of leadership

This theory emphasizes on leaders' behavior for an effective work and concerns with what a leader does rather than who the leader is. This theory refers to a variety of behavior that leaders may act to achieve goals.

Situational Theory of leadership

This theory emphasizes on the situation influencing on leaders' behaviors. The situations are classified into two groups. First group, situations that can be influential on leaders' behaviors. Second situations that can be a part of leader's characteristics and behaviors.

Transformational, Transactional Theory of leadership.

Transformational leaders create something new from something old by changing the basic political and cultural systems (17, 18). This differs from transactional managers who make adjustments to the organizational mission, structure, and human resources.

Transformational leadership accomplishes this by challenging and transforming individuals' emotions, values, ethics, standards, and long-term goals through the process of charismatic and visionary leadership (19).

Transactional leadership is a process that focused on exchanges between the leader and followers, such as promotions for performing excellent work or punishment for being late. On the other hand, transformational leaders engage with their followers to create a connection that raises the level of motivation and morale in not only the followers, but also the leaders themselves.

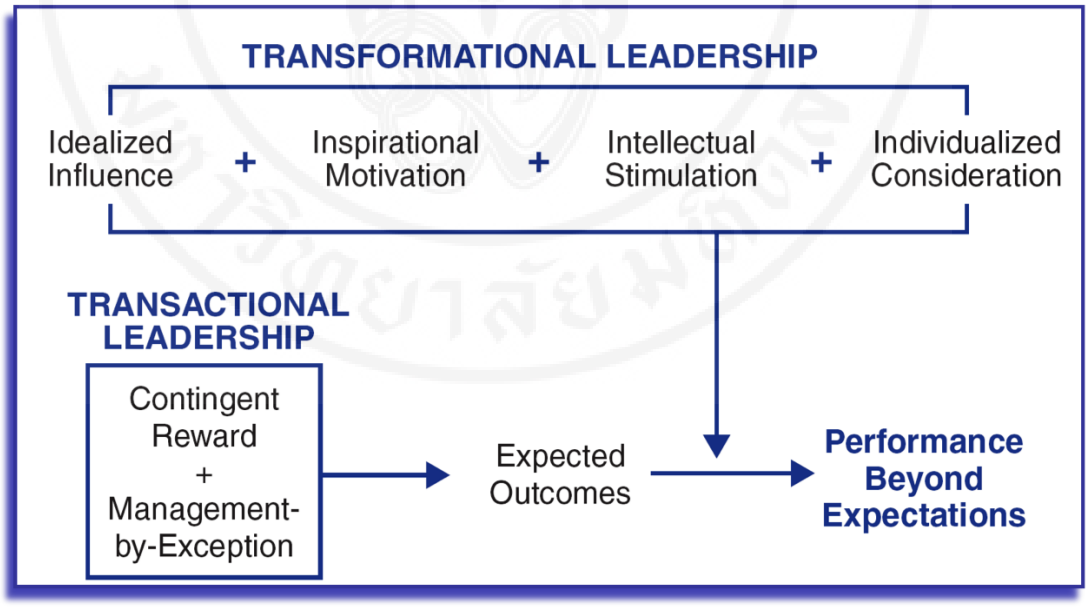


Figure 2.1 Transactional and Transformation Leadership styles (20)

This image demonstrates that while transactional leadership is needed, the addition of transformational leadership is what inspires follower performance to reach beyond expectations. According to this definition, there are four factors that a

transformational leader embodies: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

1.3 Leadership Styles

Leadership style is the manner and approach of providing direction, implementing plans, and motivating people. As seen by the employees, it includes the total pattern of explicit and implicit actions performed by their leader (21).

The first major study of leadership styles was performed in 1939 by Kurt Lewin who led a group of researchers to identify different styles of leadership (22). This early study has remained quite influential as it established the three major leadership styles:

- authoritarian or autocratic - the leader tells his or her employees what to do and how to do it, without getting their advice
- participative or democratic - the leader includes one or more employees in the decision making process, but the leader normally maintains the final decision making authority
- delegative or laissez-fair - the leader allows the employees to make the decisions, however, the leader is still responsible for the decisions that are made

A good leader uses all three styles, depending on what forces are involved between the followers, the leader, and the situation. Some examples include:

Using an authoritarian style on a new employee who is just learning the job. The leader is competent and a good coach. The employee is motivated to learn a new skill. The situation is a new environment for the employee.

Using a participative style with a team of workers who know their jobs. The leader knows the problem, but does not have all information. The employees know their jobs and want to become a part of the team.

Using a delegative style with a worker who knows more about the job than leader. Because leader cannot do everything so the employee needs to take ownership of his or her job. In addition, this allows leader to be more productive.

Using all three: Styles are a protective and promising way to get jobs done by other.

1.4 Effective Leadership

Leadership is about influencing the behavior of others. One cannot be a leader without followers. One key attribute of followers is that they must be willing to obey. Leadership is a property of the relationship between leader and follower.

An effective leader is one who is successful in attempting to influence other to work together in a productive and satisfying manner. The component of effective leadership as follows: (8)

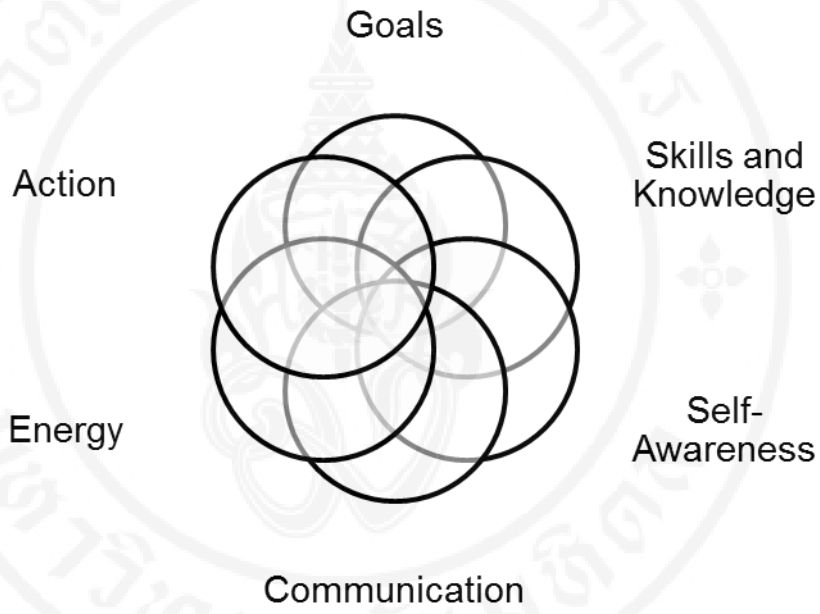


Figure 2.2 The component of effective leadership (8)

Goals: An effective leader set goals that are clear, congruent, and meaningful to group.

Skills and Knowledge: An effective leader has adequate knowledge and skills in leadership and professional fields of endeavor.

Self-Awareness: An effective leader possesses self-awareness and uses this understanding recognize personal needs and those of other human beings.

Communication: An effective leader communicates clearly and effectively.

Energy: An effective leader mobilizes adequate energy for leadership functions.

Action: An effective leader takes action.

According to the literature review, significant skills of effective leadership based on theoretical framework of Tappen, Yavirach , Kouzes et al, Trott , Goleman, Winter, Nunsupawat, Pongsriwat (8,9,23,24,25,26,27,28) as shown in Table 2.1.

Table 2.1 Significant skills of effective leadership

Significant skills / **Theory**	Robert House (1971)	Ttappen (1989)	Kouzes&Posner (1995)	Ttott (1997)	Polter (2000)	Goleman (2002)	Winter (2003)	Sue Hayes (2004)	Nunsupawat (1999)	Presertsri (2001)	Yavirach (2003)	Pongsriwat (2002)
1. Self-awareness		✓				✓			✓			✓
2. Accurate self-awareness						✓			✓			✓
3. Self-confidence				✓		✓			✓	✓	✓	✓
4. Emotional self-control						✓				✓		✓
5. Integrity						✓			✓		✓	✓
6. Adaptability to the situation		✓				✓						✓
7. Achievement	✓					✓						✓
8. Initiative	✓					✓	✓		✓	✓		
9. Optimism						✓						
10. Empathy						✓		✓				✓
11. Organizational						✓						✓
12. Leadership motivation			✓			✓						✓
13. Influence						✓					✓	
14. Developing other			✓			✓	✓					✓
15. Change catalyst					✓	✓	✓					
16. Conflict management						✓	✓					
17. Teamwork and collaboration				✓		✓	✓					✓
18. Challenging the process			✓			✓	✓					✓
19. Enable other to act			✓		✓	✓						✓
20. Model the way			✓		✓	✓						✓
21. Inspiration			✓			✓						✓
22. Direction setting	✓			✓	✓	✓		✓				✓

Table 2.1 Significant skills of effective leadership (cont.)

Significant skills / Theory	Robert House (1971)	Ttappen (1989)	Kouzes&Posner (1995)	Ttott (1997)	Polter (2000)	Goleman (2002)	Winter (2003)	Sue Hayes (2004)	Nunsupawat (1999)	Presertsri (2001)	Yavirach (2003)	Pongsriwat (2002)
23. Communicate		✓			✓	✓	✓					
24. Adaptability					✓	✓						
25. Action					✓	✓						✓
27. Performance coaching					✓		✓					
28. Creating a vision		✓					✓	✓				✓
29. Be believable								✓				
30. Development coaching					✓			✓				✓
31. Projector								✓				✓
32. Knowledge and skill		✓										
33. Inspiration		✓					✓				✓	✓
34. Facing problem				✓								
35. Concert building	✓			✓								
36. Humorous				✓						✓		
37. Flexibility to work				✓					✓			
38. Agile to work				✓								
39. Forgive other				✓								
40. Orienting other		✓		✓								
41. Mentor				✓								
42. Performance relationship		✓					✓		✓			
43. Personal relationship							✓		✓	✓		
44. Knowledge of the business										✓	✓	✓
45. Stability to performance									✓			
46. Openness to ideas									✓			
47. Assertiveness									✓	✓		
48. Accountability									✓			
49. Advocacy									✓			
50. Mental focus										✓		
51. Persistence										✓		
52. High performance standards	✓								✓			
53. Work ethics									✓			
54. Nurturing									✓			
55. Enterprising									✓			
56. Energetic									✓			

Table 2.1 Significant skills of effective leadership (cont.)

Significant factors / Theory	Robert House (1971)	Ttappen (1989)	Kouzes&Posner (1995)	Ttott (1997)	Polter (2000)	Goleman (2002)	Winter (2003)	Sue Hayes (2004)	Nunsupawat (1999)	Presertsri (2001)	Yavirach (2003)	Pongsriwat (2002)
57. Inquisitiveness									✓			
58. Assessing other									✓			✓
59. Planning		✓										✓
60. Good communication skills		✓										
61. Knowledge base		✓								✓		
62. Acumen										✓		
63. Understanding						✓				✓		✓
64. Judgment	✓					✓						✓
65. Organization awareness	✓		✓			✓	✓					✓
66. Character is number one									✓			✓
67. Building bonds						✓						✓
68. Conflict manager						✓						✓
69. Trustworthiness										✓		✓

According to the study of Junadung studies the effective leadership components of Head Nurses, Government University Hospitals. The objective was to investigate the components of effective leadership of head nurses at Governmental University Hospitals. Data collected from the sample consisting of 451 staff nurses from 6 government university hospitals who had at least 2 years' experience in professional nursing. The research instrument was an effective leadership of head nurses questionnaire, which was based on theoretical framework of Tappen, Yavirach, Kouzes and Posner, Trott, Goleman, Winter, Nunsupawat, Pongsriwat (8, 9, 23, 24, 25, 26, 27, 28). The findings were as follows: Seven significant components of effective leadership of head nurses in government hospitals were identified. There were 65 items that accounted for 70.3% which were identified respectively: Vision described by 16 items accounted for 16.8%, Exemplary leadership characteristic described by 19 items accounted for 16.1%, Innovation and information technology utilization for quality development described by 8 items accounted for 10.6%, Exemplary professional characteristics described by 8 items accounted for 9.1%,

Power and locus of control described by 5 items accounted for 7.8%, Support and promote followers' development described by 5 items accounted for 5.0%, Expertise in nursing described by 4 items accounted for 4.9% (29).

According to the mentioned concepts, researcher chose the effective leadership concept for this study because it has a similar context in government sector and professional relatedness between nurse and pharmacy. Effective leadership consists of six components as follows:

1. Leadership vision
2. Exemplary leadership characteristic
3. Quality innovation and information technology
4. Exemplary professional characteristic
5. Power and drive
6. Support and promote follower's development

Table 2.2 Action of leaders

Leadership components	Action of leaders
1) Leadership vision	• Communicate a clear vision of the future of the department • Indicate the importance of having obviously work target • Analyze cause of work problems by using the evidence base • SWOT the department • The set of standard in the department is possible to practice • Showing the strong confidence that subordinates will put forth effort and accomplish the goals • Determine the department's goals both long term and short term

Table 2.2 Action of leaders (cont.)

Leadership components	Action of leaders
1) Leadership vision	• Have a goal to fit to the environment change • Communicate clear plan and goals for the department • Have a handbook or the detail explanation of the work that can be guide to access the objective effectively • The subordinates are fit to the responsibility and might have a staff reform ,to put the right • Appropriately delegates responsibility • Good conflict resolution skills • Motivate subordinates to show the intention of ideas, beliefs, and value in working • Have negotiates effectively • Persuade subordinates to focus on work achievement
2) Exemplary leadership characteristic	• Treat subordinates with dignity and respect • Confidentiality , Flexibility • Administrate personal limitation and mistake • Are open to receiving criticism and challenge from others • Have a good relationship with subordinates • Treat the subordinates as individual more than only a group member • Always have empathy for subordinates • Act and make decision ethically • Find out opportunity of subordinates improvement • Have a good community skills • Encourage subordinates to express ideas during working

Table 2.2 Action of leaders (cont.)

Leadership components	Action of leaders
2) Exemplary leadership characteristic	• Demonstrate awareness of personal strengths and weakness • Listen and communicate effectively • Have a good sense of humour • Assertiveness orientation • Put the needs of subordinates ahead of their own • Maintain a network of contact for information sharing, personal development, monitoring • Multidisciplinary problem solving as well as relationship and consensus building
3) Quality innovation and information technology	• Become digitally fluent • Have a good English language communication skill • Would have financial competencies and pharmacoeconomics • Should initiate, participate in, and support medical and pharmaceutical research appropriate to the goals, objectives, and resources of the specific hospital • Should applies pharmaceutical research appropriate to the goals, objectives, and resources of the specific hospital • Search outside for innovative way to improve the job • Applies quality improvement techniques to improve the job

Table 2.2 Action of leaders (cont.)

Leadership components	Action of leaders
4) Exemplary professional characteristic	• Be physically and healthy • Have good spiritual and emotional health • A role model • Find ways to celebrate accomplishments • Have emotional control during the crisis situation • A leader praise subordinates for a job well done • Volunteering your time during the crisis situation
5) Power and drive	• Encourage the heart • Personal risk taking • Make confirm with subordinates to achieve all difficulties • Show strong attention for finish the job on time • Genuine passion and enthusiasm
6) Support and promote follower's development	• Provide the support and resource needed to help subordinates meet their goals • Sending the subordinates to job training • Challenge subordinates to try out new and innovative approach to their work • Give opportunity to subordinates to provide continuing education programs • Facilitate the building of community and team

Part 2: Concept and theory of leadership development Types of leadership development

Many different types of interventions have been used to facilitate leadership development. They vary in degree of intensity, organizational embeddedness, and temporal scope. An important distinction across various interventions is the extent to which they emphasize the development of intrapersonal skills (e.g., self-awareness, self-regulation, or other individual skills), interpersonal skills (e.g., social skills, social awareness, or other relational skills), or both. An especially important but often overlooked aspect of successful leadership development is linking the development of intrapersonal skills (human capital) with the development of interpersonal skills (social capital)

In this study, researcher used the concept of Yulk which covered 3 types of leadership development which are: formal training, developmental activities and self-help activities (15).

1) Formal training:

The most common approach to leadership development is the formal classroom program in which basic principles of leadership are presented, discussed, and reflected on. It has been estimated that approximately 85 percent of companies engaged in leadership development efforts using some version of classroom programs. Most formal training occurs during a defined time period, and it is usually conducted away from the manager's immediate work site by training professionals (e.g., postgraduate training in pharmacy administration, hospital pharmacy, residency program and established advanced training)

Training Concept

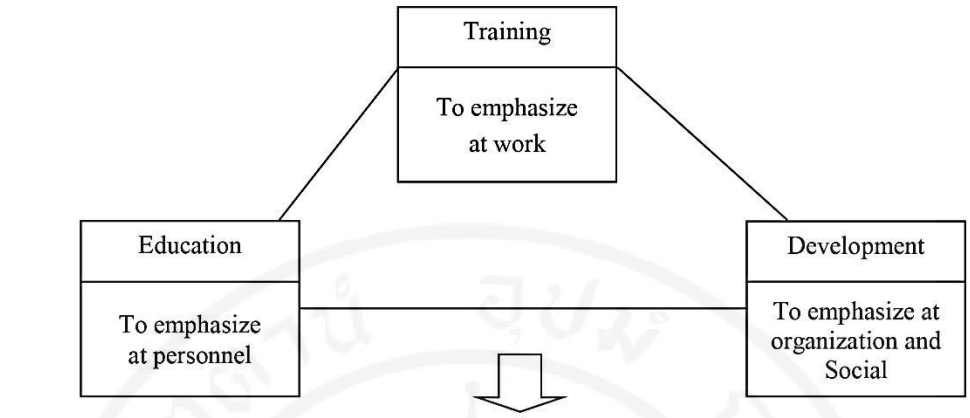
Nowadays, organizations have to improve and change themselves for survival and make progress and development in all aspects in order to be in line with changes and market competition. What most organizations have taken into consideration is human resources development.

There were 3 main important components of individual human resources development as follows (30).

- **Training** Focused on potentiality development necessary for work at present or activities that a new responsibility requires. It had clear goals with an emphasis to enable one to work in a certain position, a better and more complicated job, or to change their behaviors, as an organization desires.
- **Education** Focused on preparing the readiness for future works in which an organization would be developed. It was usually a long-term operation, which had to be defined as a clear development plan for its personnel. However, it was still related to their work.
- **Development** Focused on development of the potential in creativity and in making individuals completely social. It was related to providing learning programs and experience to personnel of an organization in order to contribute their efforts to the organization so that it could be competitive and be able to adapt themselves to rapid changes. In addition, they could participate in developing their society continuously.

Training was a part of human resources development, which played an important role in making personnel work more efficient with new skills, knowledge and information technology that could be applied to their work.

The three development activities were different in application, process, achievement, evaluation, and risk. Nevertheless, they were related to make an organization successful in the future, as shown in the following diagram:



Activity	Focus	Economic	Evaluation	Risk
Training	- Present work Position Holder	Expenditure	Present work operation	Low
Education	- Future work each must be prepared	Short-term	Future work operation	Medium
Development	- Potentiality in creativity and cooperation in development an organization	Investment Long-term Investment	Potentiality in competition or efficiency of an organization	High

Figure 2.3 Diagram Human resources development activities (31)

It could be summarized that training was a systematic learning management in order to increase work-related knowledge, ability, skills as well as change in behavior and attitude of operational personnel, resulting in being able to carry out their responsibilities more efficiently.

Objectives of training

Training must be conducted systematically with clear objectives. (32) Stated training objectives as follows:

- To improve the levels of self-awareness of individuals. Self-awareness was self-learning, which included understanding roles and responsibilities of oneself in an organization, awareness on the difference between actual practices and philosophy, understanding perspectives of others toward one-self, and learning how one's actions affected others.

- To increase job skills of an individual. It might be one or several skills.
- To raise motivation of an individual, resulting in good and efficient working operations that were crucial to the success of an organization.

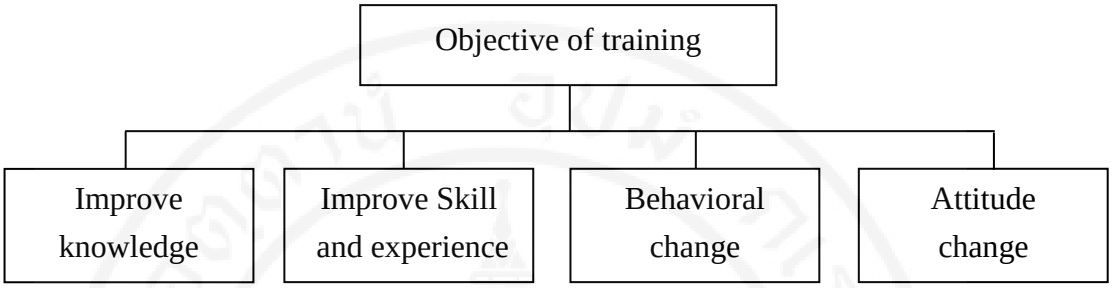


Figure 2.4 Diagram Objective of training (33)

It could be summarized that the aims of training were to develop the quality of personnel in an organization with regard to knowledge, skills and experience, to change their skills and attitude, and to strengthen their working potential.

The importance and the advantages of training

Training was a personnel development method aimed at helping them to work with better quality and efficiency. Thus, training was extremely crucial for every agency in the present circumstances, where changes were taking place all the time and competition was high (34).

In addition to enhancing working knowledge, skills, expertise, experience and better attitude for personnel, training could also help solve other problems in an organization, for instance, conflicts, mistrusts, relationship of workers, attitude and others which directly affected job performance and productivity. Moreover, training played a role in improving efficiency of an organization in several aspects as follows:

- To develop knowledge, skill, ability and attitude of personnel.
- To reduce labor costs and time spent.
- To lessen production costs and expenditure on personnel administration.

- To develop personnel for future replacement and preparing them for higher positions.
- To eliminate the laggard on skills, technology and working methods, and improve inter-personal relationship in an agency.

It could be seen that, in present circumstances, training was crucial for better quality of personnel, regular learning development and better working efficiency.

Type of training

Training is a method for employee development to work efficiently. The training consists of giving knowledge, ability and experience on skill in professional. A personnel training is classified by criteria as follows: (33, 34)

1. Training types according to objective were
    - Pre-service training
    - Induction or orientation.
    - In-service training
2. Training types according to venues were
    - On-the-job training
    - Off-the-job training
3. Training types according to characteristics of trainees were
    - Technical skills training.
    - Managerial skills training
    - Interpersonal skills training.
4. Training types according to level of trainees were
    - Employee training
    - Supervisory training
    - Managerial training
    - Executive training

2) Developmental activities:

A number of activities can be used to facilitate learning of relevant skills from experience on the job for example, multisource feedback, developmental assessment centers, developmental assignments, job rotation programs, action learning, mentoring, executive coaching, outdoor challenge programs, personal growth programs. These developmental activities can be used to supplement informal coaching by the boss or coworkers, and most of them can be used in conjunction with formal training programs. For example, multisource feedback from the workplace is provided to participants in some leadership training programs. Each type of activity or technique will be reviewed and evaluated briefly (35).

Multisource Feedback

Also known as 360-degree feedback, multisource feedback seeks to enhance self-knowledge of leadership ability and one's impact on others by providing leaders with multiple assessments of their performance from different role perspectives. In this method, ratings of a target's performance are systematically collected from multiple sources—including supervisors, peers, subordinates, and self-perceptions—in order to compile a comprehensive, "360-degree" picture of a target's ability and behaviors. The underlying philosophy of multisource feedback is that people in different reporting roles in relation to a target may experience different aspects of that person's personality and behavior. Widening the lens to include perspectives other than one's boss is thought to develop a more complete understanding of the impact of one's behavior on others across different role relationships. In a feedback program, managers receive information about their skills or behavior from standardized questionnaires filled out by other people such as subordinates, peers, superiors, and sometimes outsiders such as clients (see Figure 2.5).

The questionnaires used to provide feedback may be customized for a particular organization, but most feedback workshops still utilize standardized questionnaires.

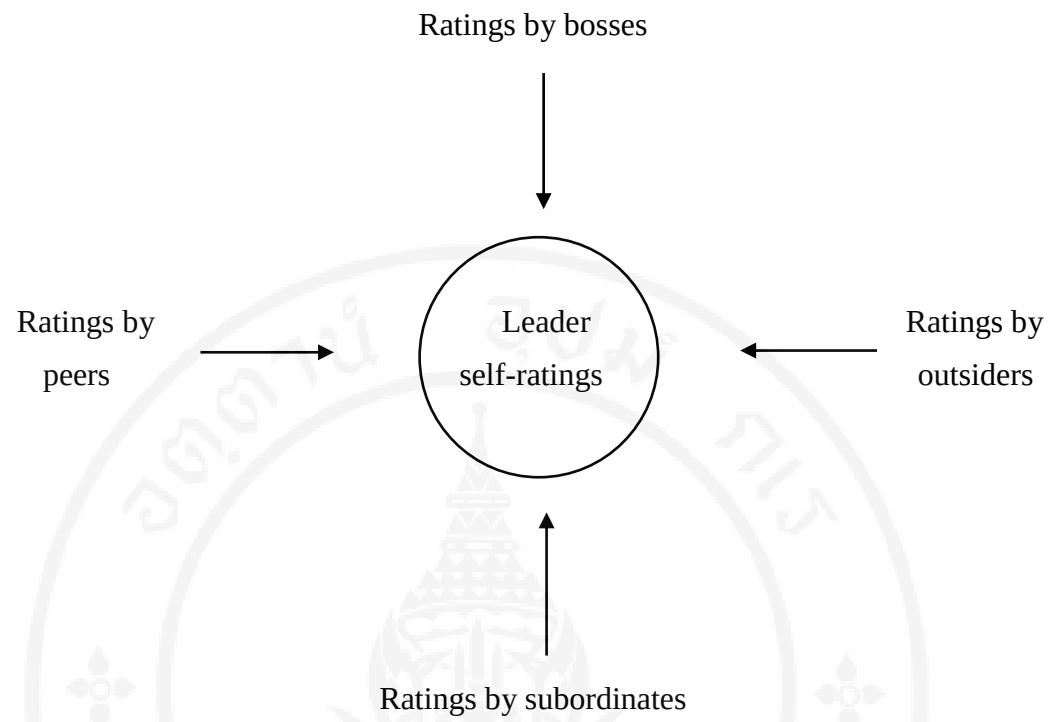


Figure 2.5 Sources of Information for 360-Degree Feedback (35)

Multisource feedback can help leaders to enhance the intrapersonal skill of self-awareness by illustrating the effects they have on others and by highlighting any discrepancies between various perceptions of performance. But simply providing feedback does not necessarily translate into enhanced leadership. In many cases, other elements are added to the process to help someone understand it in a better sense of the feedback and to use it to create and implement a developmental plan. An executive coach is often used for this purpose (35).

Mentoring

Whereas executive coaches are often hired as external consultants to help people develop necessary leadership competencies or address specific leadership challenges, developmental relationships (i.e., mentoring) can also be fostered formally or informally within organizations. Mentoring usually occurs as a more senior member interacts with a more junior protégé (typically at least two organizational levels below the mentor) to advice, share lessons learned, and enhance career development and advancement. Through observing and interacting with mentors,

developing leaders can expand their perceptions of key organizational challenges and strategies as well as enhance more microlevel interpersonal skills. Mentoring relations run the risk of failure, however, if the protégé becomes too dependent on the mentor. Other important components of effective mentoring are the quality of the mentor and the mentoring experiences (35).

Networking

To facilitate communication among functional areas and to build better social capital, organizations have implemented initiatives to foster the development and maintenance of work-related relationships. Initiatives such as regular lunches, electronic dialogue, and other social events at work can help individuals build their networks. Broad social networks are advantageous to leaders in expanding their resources with regard to knowing who have expertise in which particular domains (called trans-active memory).

Individuals can also develop broader and more complex ways of viewing problems and ways of working with others and can challenge basic assumptions through network relationships (35).

Outdoor Challenges

Outdoor challenges or wilderness training include challenging experiences, such as high and low-ropes courses, rappelling, and whitewater rafting. These experiences are designed to require collaboration, trust, and participation for successful performance and are aimed at encouraging individuals to overcome risk-taking fears (intrapersonal) while enhancing teamwork skills (interpersonal). As such, they have a heavy affective component in terms of their effects on participants. While these initiatives are popular, little empirical evidence exists of the effectiveness of enhanced leadership on the job. One important obstacle to successful transfer is the difference between a wilderness setting and typical business environments (35).

Challenging Job Assignments

Challenging assignments within one’s current role as well as expatriate assignments, job rotation, and cross-unit rotation encourage the development of new

skills, such as team building, strategic thinking, and social-influence skills. Complex cognitive and social skills can be developed when individuals are challenged or pushed beyond their comfort zones. These “stretch assignments” can facilitate self-awareness that can challenge how an individual learns, thinks, and interacts. Challenging job assignments are effective for development only when they are intentionally developmental and learning oriented, rather than solely focused on performance. An important consideration is to avoid potentially putting people “in over their heads,” resulting in feelings of helplessness, rather than encouraging development. Some attention should be given to the developmental readiness of the person to take on a new and significantly challenging job assignment, as well as helping the incumbent learn and develop from the challenge (35).

Action Learning

Often used in conjunction with challenging job assignments, action learning involves development through work-related organizational experiences. The approach is grounded in the assumption that people learn most effectively when dealing with work-related issues in real time, which heightens the relevance of the learning. Action learning is best described as a structured, continuous process of learning and reflection that also addresses a complex challenge of strategic importance to an organization. It is typically group or team based, includes aspects of coaching and mentoring, and has a specific focus on learning. The overall spirit of action learning is to help people learn and develop from their work, rather than taking them away from work to learn and develop. Techniques such as journaling are often used in conjunction with action learning to facilitate reflection and keep the learning process intentional (35).

Conclusion: Developmental activities are usually embedded with in operational job assignments or conducted in conjunction with those assignments. The developmental activities can take many forms, including coaching by the boss or an outside consultant, mentoring by someone at a higher level in the organization, and special assignments that provide new challenges and opportunities to learn relevant skills. (e.g., find one or more mentors outside of pharmacy management chain, work with the interdisciplinary team)

3) Self-help activities;

Self-help activities provide another approach to enhance leadership skills. Many self-help techniques are available for improving leadership, including practitioner books, instructional videotapes or compact disks, and interactive computer programs. Some of these techniques are intended to be a substitute for formal training programs, some are used to supplement training, and others are intended to facilitate learning from experience. Unfortunately, there is almost no empirical research on the effectiveness of self-learning techniques. We know little about the benefits derived from them or the extent to which they can substitute for formal instruction. Research is needed to evaluate how much self-help activities contribute to the development of leadership competencies, and the conditions under which these activities are most effective. A list of tentative recommendations for self-development of leadership skills are as follows:

- Develop a personal vision of career objectives.
- Seek appropriate mentors.
- Seek challenging assignments.
- Improve self-monitoring.
- Seek relevant feedback.
- Learn from mistakes.
- Learn to view events from multiple perspectives.
- Be skeptical of easy answers.

Conclusion: Self-help activities are carried out by individuals on their own. (e.g., widely reading and searching information to stimulate the strategic thinking, reading about leaders, viewing videos, listening to audiotapes, and using interactive computer programs) for skill building.

A Systems Perspective on Leadership Development

The distinction among formal training programs, developmental activities, and self-help activities is useful up to a point, but it implies that the categories are mutually exclusive. In fact, the different categories overlap and are interrelated in complex ways (see Figure 2.6).

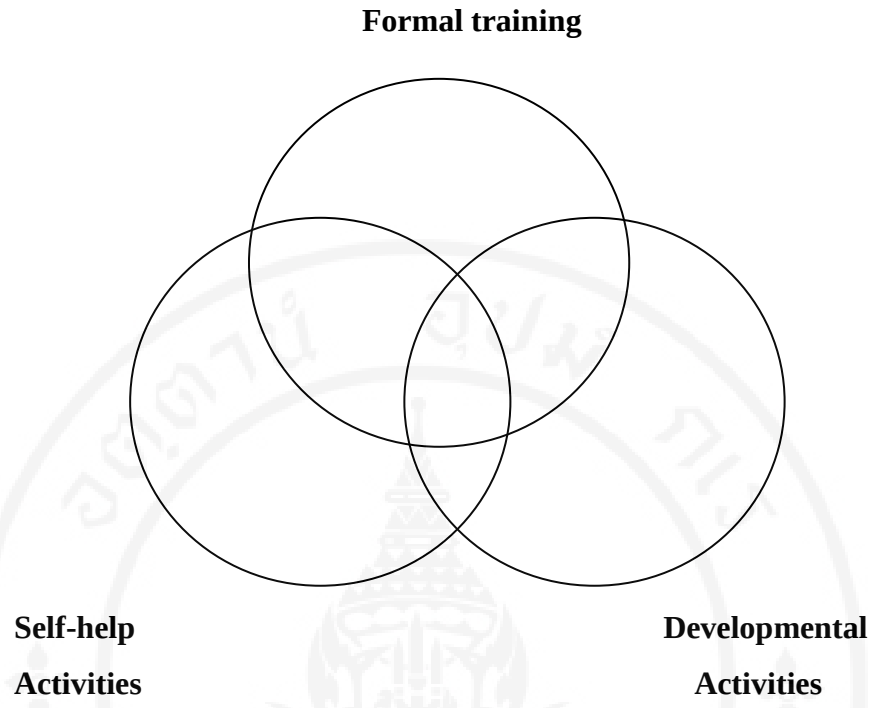


Figure 2.6 Three Ways to Acquire Leadership Competencies (15)

Sometimes the approaches are used in conjunction with each other. Action learning projects often combine formal training with learning from experience, and participants are encouraged to use self-help activities and peer coaching to acquire additional knowledge as needed for the project. Realistic simulations can be used as a self-contained development courses that now includes 360-degree feedback for participants from their coworkers. Personal growth activities are also included now in some leadership courses. Special mentors can be assigned to people who have developmental assignments, or designated resource people may be available on the internet to provide advice and coaching as needed.

There has been little research on the relative advantage of training, development, and self-help activities for different types of leadership skills. Likewise, little is known about the best way to combine training, development, and self-help activities to maximize their mutual effects. (15) There is clearly need for a more systematic approach to the study of leadership development activities.

Conclusion: A key to the effective development of leaders and leadership depends a great deal on implementation. All of the various developmental practices

have some evidences of effectiveness. Training and development are more effective when they are coordinated with each other, supported by a strong learning culture, and integrated with other human resource activities such as career counseling, staffing decisions, performance appraisal, and succession planning. It is essential to integrate these different elements to create and sustain favorable conditions for leadership development.

Part 3: Related research

Research in Thailand

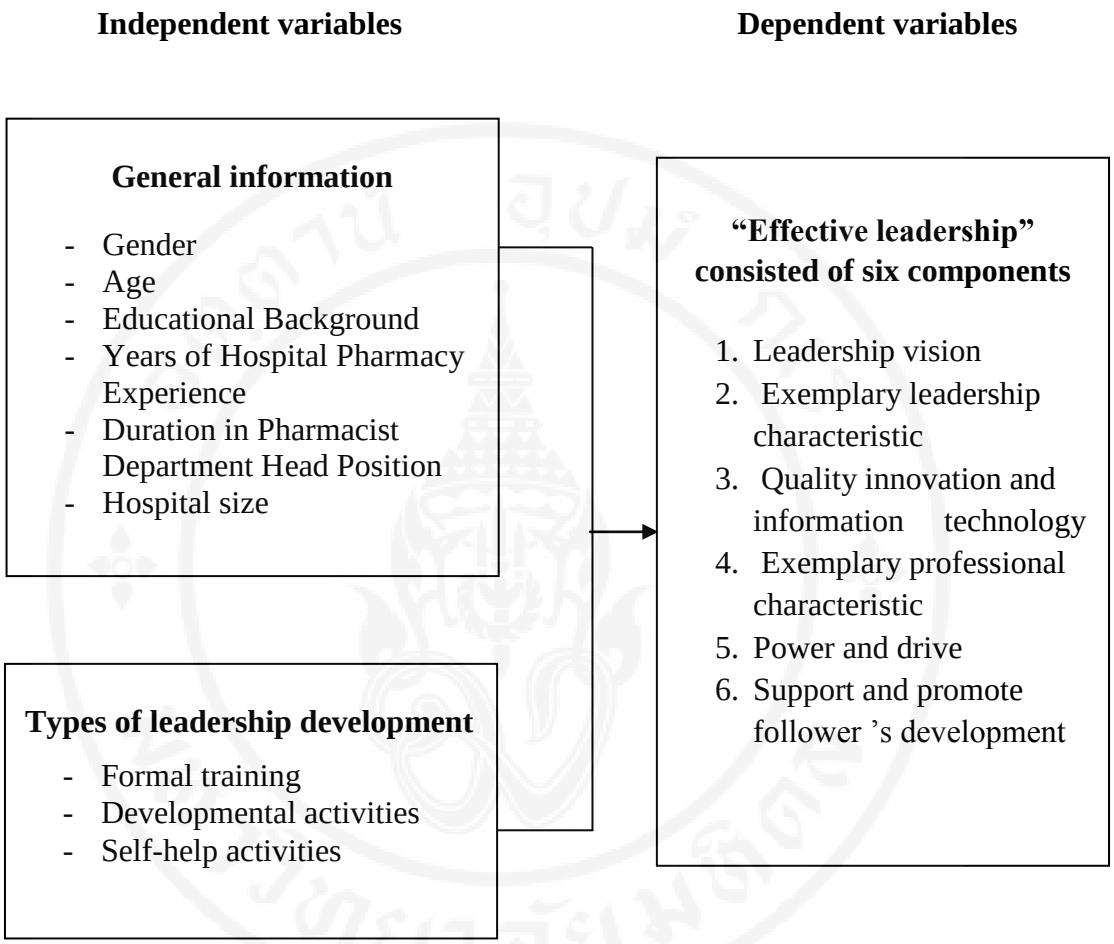
Sumethiwit, studied transformational leadership of heads of pharmacy department of hospitals under the Office of the Permanent Secretary, Ministry of Public Health. There were 2 sample groups: 1) heads of pharmacy departments in regional/general hospitals and community hospitals with 60 or more beds (325 persons); 2) pharmacists who were subordinates of the heads of department in regional/general hospitals and community hospitals (1,069 persons). This study developed a measure of the transformational leadership with theoretical framework of transformational leadership of Bass et al, The leadership questionnaire consisted of three components: 1) Charismatic – Inspirational Leadership; 2) Intellectual Stimulation and 3) Individualized Consideration. It was found that the level of transformational leadership assessed by the heads themselves and that assessed by subordinates were high ($x = 3.93$, S.D. = 0.36, $x = 3.74$, S.D. = 0.62) while self- rating of head is higher than subordinates ($P < 0.001$) In conclusion, self-assessed transformational leadership by heads of pharmacy departments in regional/general hospitals and community hospitals showed no significant difference. Most of the heads were interested in improving their leadership by means of training, self-study learning, field studies and formal studies in university. In addition, there should be continuous provision of leadership training after graduation, emphasizing on knowledge, personality and competency (36).

Thammawitkul, study on administration of pharmaceutical manufactures those received and non-received GMP certificate with the sample group of 176. The

research was made in analytical survey research by mailing questionnaires. The result was not significant difference between the managers of pharmaceutical manufacturers who received GMP certificate and those who have not. There were no differences of leadership level in term of sex, age, marital status, administrative experience, and length of working in their manufactures. However the level of education, number of personnel and administrative training of these two groups were found to be statistically different ($p < 0.001$, $p < 0.001$ and $p < 0.05$ respectively). The administrative practice mean score of those managers who receive GMP certificate was high ($X = 3.95$, $S.D. = 0.46$) while those who have not was in the middle ($X = 2.81$, $S.D. = 0.49$). The two means were found significantly different ($p < 0.001$) (37).

So far, the existing literature has insufficient information on leadership and leadership development of heads of pharmacy department of hospitals under the Ministry of Public Health, Thailand.

Conceptual Framework



CHAPTER III
METHODOLOGY

Research Design

This is a cross-sectional, survey and analytical research aimed to explore leadership and leadership development for heads of pharmacy department of hospitals under the Ministry of Public Health.

Population and samples

Population of this study was 833 heads of pharmacy department of hospitals under the Office of the Permanent Secretary, Ministry of Public Health (large, middle and small hospitals are 81, 126 and 626 respectively). We excluded 33 hospitals for a pilot test.

Research Instruments

The instrument used for data collection was a questionnaire which comprised of two parts as follows (Appendix C):

Part 1 General information questionnaires and the methods for developing leadership skills in heads of pharmacy departments

1.1 General information questionnaires consisted of six components as follow:

- Gender
- Age
- Educational background
- Years of hospital pharmacy experience

- Duration in pharmacist department head position
- Hospital size where study participants practice

1.2 The methods for developing leadership skills in heads of pharmacy departments consisted of three components as follow:

- Formal training
- Developmental activities
- Self-help activities

Part 2 The effective leadership self-evaluation questionnaires

The researcher modified an evaluation tool of the effective leadership by using the effective leadership questionnaire that was developed by Junadung (26). We have been approved to use this tool by Faculty of Nursing, Chulalongkorn University (Appendix B). This instrument consisted of six components which has 60 question items.

Effective leadership consists of six components as follows:

1)	Leadership vision	16 items
2)	Exemplary leadership characteristic	19 items
3)	Quality innovation and information technology	8 items
4)	Exemplary professional characteristic	7 items
5)	Power and drive	5 items
6)	Support and promote follower's development.	5 items

All of question items were a 5-point Likert-type scale. The scoring was described as 5 = strongly agree, 4 = agree, 3 = somewhat agree, 2 = disagree, and 1 = strongly disagree.

The higher scores indicated the higher effective leadership. Explanation of the average score was related to the level of leadership. (38)

$$\text{Width of class intervals} = \frac{\text{Next unit value after the largest value in data - Smallest value in data}}{\text{Total number of class intervals}}$$

According to the above consideration method, scores of question are considered as follows:

4.20 – 5.00 points are considered as very high effective leadership level

3.40 – 4.19 points are considered as high effective leadership level

2.60 – 3.39 points are considered as moderate effective leadership level

1.80 – 2.59 points are considered as low effective leadership level

1.00 – 1.79 points are considered as very low effective leadership level

Validity and Reliability

1. Content validity the researcher consulted 3 experts (Appendix A) about the questionnaires to check the completeness of the content, clarity of language, and relevance to the issues to be examined. The Index of the Item – Objective Congruence (IOC) was used for this purpose, the questions that obtain the IOC between 0.5 – 1.0 were deemed acceptable (39). Later, questionnaires were edited according to the experts' suggestions.

2. Reliability the questionnaire was tested among 33 heads of pharmacy department of the hospitals that were excluded from the population of this survey. The reliabilities of research instrument had used Cronbach's Coeffient of Alpha and reliability of this questionnaire is 0.93. In this study, reliability of the instruments higher than 0.7 was considered to be appropriate. (40)

Data Collection

The researcher sent the questionnaire with official letters explaining necessity and challenge of pharmacy leadership in the government hospital to all of heads of pharmacy department of hospitals under the Ministry of Public Health via postal mail. It took four weeks to receive 28 percent response. The researcher resent the same questionnaire to those Department's heads, who did not respond, and waited another 4 weeks, during the period of November-December 2014. Finally, there were total of 496 returned questionnaires (62%). And all of them were complete for analysis.

Data Analysis

After checking for the completeness of questionnaires, the data were interpreted and key in for statistical analysis by using a computer program. In this study, the data analysis was done as in the following:

1. Descriptive statistics were applied in order to explain the respondent's information (gender, age, educational background, years of hospital pharmacy experience, duration in pharmacist department head position, hospital size), and types of leadership development while data of effective leadership has been analyzed by arithmetic mean and standard deviation (S.D.).

2. T-test, One-way ANOVA, and Least Significant Difference were used for statistical analysis in term of association between the independent variables and the dependent variables.

3. Pearson's Product-Moment Correlation was performed to examine the association between types of leadership development (Formal training, Developmental activities, Self-help activities) and the effective leadership level of heads of pharmacy department of hospitals under the Ministry of Public Health.

Interpretation of degree of correlation was as following: (Munro & Page, 1993:181) (41).

r = 0.90-1.00 mean very high correlation

r = 0.70-0.89 mean high correlation

r = 0.50-0.69 mean moderate high correlation

r = 0.26-0.49 mean low correlation

r = 0.00-0.25 mean very low correlation

4. Multiple Regression Analysis was performed to identify factors affecting the effective leadership level of heads of pharmacy department of hospitals under the Ministry of Public Health.

Ethical Consideration

This study was conducted after final permission to perform the study which was granted by Faculty of Dentistry and Faculty of Pharmacy Mahidol University Institutional Review Board. (Appendix D).

CHAPTER IV
RESULTS

The study aims to examine leadership and leadership development for heads of pharmacy department of hospitals under the Ministry of Public Health. Data were collected from 800 heads of pharmacy departments using questionnaires. Completed questionnaires were analyzed. The results of this study are present as follows.

Part 1: Personal characteristics

Part 2: Leadership and leadership development for heads of pharmacy departments

Part 3: Association between personal characteristic variables and the effective leadership of heads of pharmacy departments

Part 4: Comparison of the difference among leadership of heads of pharmacy departments by size of hospital

Part 5: The relationships between types of leadership development and leadership of heads of pharmacy departments

Part 6: Factors affecting the effective leadership of heads of pharmacy departments

Part 1: Personal characteristics

There were 496 responses out of total 800 respondents. It is 62% response which is high response rate (42).The response rate in large hospitals are higher than middle and small hospitals (84.20, 67.20 and 58.20 percent respectively) (Table 4.1).

Table 4.1 Response rate of questionnaires

Hospital size	Sending	Receiving	Response rate
Large	76	64	84.20
Middle	119	80	67.20
Small	605	352	58.20
Total	800	496	62.00

The majority of heads of pharmacy departments were female (60.70%) and ages between 31-49 years old (80.80%). For the education of the respondents, 58.90% earned bachelor degree, 40.90% received master degree and 0.20% earned doctoral degree. The work experience was 11- 20 years (55.60%). Half of them had total duration of working in current position less than 10 years and half of them did not have any training experiences, while another 43.35% had undergone some training experiences. (Table 4.2)

Table 4.2 Number and percentage of heads of pharmacy departments classified by personal characteristics (n = 496)

Personal characteristics	Number	Percentage
Gender		
Male	195	39.30
Female	301	60.70
Age (years)		
≤ 30	20	4.00
31 - 49	401	80.80
≥ 50	75	15.10
Education Background		
Bachelor degree	292	58.90
Master degree	203	40.90
Doctoral degree	1	0.20

Table 4.2 Number and percentage of heads of pharmacy departments classified by personal characteristics (n= 496) (cont.)

Personal characteristics	Number	Percentage
Years of work experience (years)		
< 10	62	12.50
11 - 20	276	55.70
21 - 30	137	27.60
> 30	21	4.20
Mean = 17.87 S.D. = 7.00 Min = 6 months Max = 36		
Working duration in the current position (years)		
< 10	257	51.80
10 - 20	161	32.50
21 - 30	75	15.10
> 30	3	0.60
Mean = 11.56 S.D. = 7.88 Min = 6 months Max = 33		
Hospital sizes		
Large	64	12.90
Middle	80	16.20
Small	352	70.90
Training experience		
No training	281	56.65
Training	215	43.35

Part 2: Leadership and leadership development for heads of pharmacy departments

2.1 Leadership of heads of pharmacy departments

The result indicated that effective leadership of heads of pharmacy departments was at a high level, with the mean score of 3.84 (S.D. = 0.35). All of leadership components except "Quality innovation and information technology" are high level. "Power and drive" is the highest score among all of the leadership components (Table 4.3).

Table 4.3 Mean, Standard deviation and leadership level of heads of pharmacy departments by component

Leadership of heads of pharmacy departments	Mean (SD)	Leadership Level
Power and drive	4.07(0.49)	High
Exemplary leadership characteristic	4.03(0.37)	High
Support and promote follower 's development	3.99(0.49)	High
Exemplary professional characteristic	3.85(0.45)	High
Leadership vision	3.72(0.40)	High
Quality innovation and information technology	3.37(0.49)	Moderate
Leadership (Total)	**3.84(0.35)**	**High**

The results showed that heads of pharmacy departments have the effective leadership in 6 components by items as follows:

Power and drive of heads of pharmacy departments had shown "strong attention for finish the job on time" in a high level, with the highest mean score (Mean = 4.16), while "made a confirmation with subordinates to achieve all difficulties" was rated in the lowest behavior (Mean = 4.01) as show in Table 4.4.

Table 4.4 Mean, Standard deviation, and the effective leadership level of heads of pharmacy departments classified by item under *Power and drive component*

Leadership of heads of pharmacy departments	Mean	S.D.	Level
Power and drive	**4.07**	**0.49**	**High**
1.Encourage the heart	4.14	0.58	High
2.Personal risk taking	4.02	0.57	High
3.Make a confirmation with subordinates to achieve all difficulties	4.01	0.60	High
4.Show strong attention for finish the job on time	4.16	0.59	High
5.Genuine passion and enthusiasm	4.02	0.60	High

Exemplary leadership characteristic of heads of pharmacy departments "treated subordinates with dignity and respect", "had confidentiality", and "encouraged subordinates to express ideas during working" in a very high level, with the highest mean score (Mean = 4.35, 4.24, 4.22, respectively), while "had a good sense of humor" was rate in the lowest behavior (Mean = 3.74) as show in Table 4.5.

Table 4.5 Mean, Standard deviation, and the effective leadership level of heads of pharmacy departments classified by item under *Exemplary leadership component*

Leadership of heads of pharmacy departments	Mean	S.D.	Level
Exemplary leadership characteristic	**4.03**	**0.37**	**High**
1.Treat subordinates with dignity and respect	4.35	0.57	Very high
2.Confidentiality	4.24	0.68	Very high
3.Flexibility	4.03	0.56	High
4.Administrate personal limitation and mistake	4.14	0.56	High
5.Are open to receiving criticism and challenge from others	4.19	0.55	High
6.Have a good relationship with subordinates	4.00	0.70	High

Table 4.5 Mean, Standard deviation, and the effective leadership level of heads of pharmacy departments classified by item under *Exemplary leadership component* (cont.)

Leadership of heads of pharmacy departments	Mean	S.D.	Level
7.Treat the subordinates as individual more than only a group member	4.10	0.64	High
8.Always have empathy for subordinates	3.78	0.63	High
9.Act and make decision ethically	4.07	0.57	High
10.Find out opportunity of subordinates improvement	4.11	0.57	High
11.Have a good community skills	4.00	0.67	High
12.Encourage subordinates to express ideas during working	4.22	0.54	Very high
13.Demonstrate awareness of personal strengths and weakness	3.84	0.62	High
14.Listen and communicate effectively	3.91	0.55	High
15.Have a good sense of humor	3.74	0.71	High
16.Assertiveness orientation	4.07	0.57	High
17.Put the needs of subordinates ahead of their own	3.83	0.60	High
18.Maintain a network of contact for information sharing, personal development, monitoring	3.91	0.55	High
19.Multidisciplinary problem solving as well as relationship and consensus building	3.97	0.57	High

Support and promote follower's development of heads of pharmacy departments "provided the support and resource needed to help subordinates meet their goals" in a high level, with the highest mean score (Mean = 4.11), while "challenged subordinates to try out new and innovative approach to their work" was rated in the lowest behavior (Mean = 3.77) as shows in Table 4.6.

Table 4.6 Mean, Standard deviation, and the effective leadership level of heads of pharmacy departments classified by item under *Support and promote follower's development component*

Leadership of heads of pharmacy departments	Mean	S.D.	Level
Support and promote follower 's development	**3.99**	**0.49**	**High**
1.Provide the support and resource needed to help subordinates meet their goals	4.11	0.58	High
2.Sending the subordinates to job training	4.10	0.63	High
3.Challenge subordinates to try out new and innovative approach to their work	3.77	0.63	High
4.Give opportunity to subordinates to provide continuing education programs	3.96	0.68	High
5.Facilitate the building of community and team	4.04	0.61	High

Exemplary professional characteristic of heads of pharmacy departments "spent a time during the crisis situation" in a high level, with the highest mean score (Mean = 4.14) while "find the ways to celebrate accomplishments" was rate in the lowest behavior (Mean = 3.65) as show in Table 4.7.

Table 4.7 Mean, Standard deviation, and the effective leadership level of heads of pharmacy classified by item under *Exemplary professional characteristic component*

Leadership of heads of pharmacy departments	Mean	S.D.	Level
Exemplary professional characteristic	**3.85**	**0.45**	**High**
1.Be physically and healthy	3.97	0.64	High
2.Have good spiritual and emotional health	4.07	0.60	High
3.A role model	3.66	0.65	High
4.Find ways to celebrate accomplishments	3.65	0.76	High
5.Have emotional control during the crisis situation	3.81	0.69	High
6.A leader praise subordinates for a job well done	3.68	0.67	High
7.Volunteering time during the crisis situation	4.14	0.66	High

Leadership vision showed that heads of pharmacy departments "analyzed cause of work problems by using the evidence base approach", had "appropriately delegates responsibility", and could "SWOT the department" with the highest mean score (Mean = 3.87, 3.86, 3.84, respectively), while "determine the department's goals both long term and short term" was rate in the lowest behavior (Mean = 3.45) as show in Table 4.8.

Table 4.8 Mean, Standard deviation, and the effective leadership level of heads of pharmacy departments classified by item under *Leadership vision component*

Leadership of heads of pharmacy departments	Mean	S.D.	Level
Leadership vision	**3.72**	**0.40**	**High**
1.Communicate a clear vision of the future of the department	3.73	0.66	High
2.Indicate the importance of having obvious work target	3.82	0.60	High
3.Analyze cause of work problems by using the evidence base	3.87	0.60	High
4.SWOT the department	3.84	0.65	High
5.The set of standard in the department is possible to practice	3.73	0.60	High
6.Showing the strong confidence that subordinates will put forth effort and accomplish the goals	3.68	0.65	High
7.Determine the department's goals both long term and short term	3.45	0.65	High
8.Have a goal to fit to the environment change	3.73	0.61	High
9.Communicate clear plan and goals for the department	3.72	0.63	High
10.Have a handbook or the detail explanation of the work that can be guide to access the objective effectively	3.63	0.56	High
11.The subordinates are fit to the responsibility and might have a staff reform ,to put the right	3.78	0.60	High
12.Appropriately delegates responsibility	3.86	0.51	High
13.Good conflict resolution skills	3.60	0.67	High
14.Motivate subordinates to show the intention of ideas, beliefs, and value in working	3.66	0.62	High
15.Negotiates effectively	3.70	0.66	High
16.Persuade subordinates to focus on work achievement	3.72	0.58	High

Quality innovation and information technology of heads of pharmacy departments "become digitally fluent" in a high level, with the highest mean score (Mean = 3.84), while "had a good English language communication skill" was rate in the lowest behavior (Mean = 3.11) as show in Table 4.9.

Table 4.9 Mean, Standard deviation, and the effective leadership level of heads of pharmacy departments classified by item under *Quality innovation and information technology component*

Leadership of heads of pharmacy departments	Mean	S.D.	Level
Quality innovation and information technology	**3.37**	**0.49**	**Moderate**
1.Become digitally fluent	3.84	0.67	High
2. Should apply existing pharmaceutical research in the real situation	3.24	0.75	Moderate
3. Have a good English language communication skill	3.11	0.67	Moderate
4.Would have financial competencies and pharmacoeconomics	3.44	0.71	High
5.Should initiate, participate in, and support medical and pharmaceutical research appropriate to the goals, objectives, and resources of the specific hospital	3.30	0.65	Moderate
6.Should applies pharmaceutical research appropriate to the goals, objectives, and resources of the specific hospital	3.30	0.74	Moderate
7.Search outside for innovative way to improve the job	3.30	0.66	Moderate
8.Applies quality improvement techniques to improve the job	3.46	0.62	High

In conclusion, the results showed that heads of pharmacy departments had very good effective leadership behavior. "Treating subordinates with dignity and respect", "being confidentiality", and "encourage subordinates to express ideas during working" were the behavior performed highest. While "having a good English language communication skill" was lowest.

2.2 Leadership development for heads of pharmacy departments

Regarding the frequency or amount of incidents devoted by heads of pharmacy department for hospitals' leadership development, it was seen that developing methods ranked from the most frequently used to the least were Developmental activities (55.82%), Self-help activities (32.20%), and Formal training (11.98%) respectively as per Table 4.10.

Table 4.10 Frequency of leadership development received in five years

Leadership development methods	Mean (SD) (incidents / 5 years)	Percentage
Developmental activities	1,309 (3.69)	55.82
Self-help activities	755 (4.47)	32.20
Formal training	281 (4.42)	11.98

The analysis result showed that heads of pharmacy departments used leadership development methods in 3 ways as follows:

According to data from Table 4.11 shown highest frequency provider for leadership development are Ministry of Public Health (52.90%), and In house training (22.50%).

The most frequently used programs are First-Line Public Health Administrators Training Program (24.10%), Middle Level Public Health Administrators Training Program (22.50%), and In house training (13.60%) respectively (Appendix E).

Table 4.11 Leadership development methods for heads of pharmacy departments classified by Institute that provide knowledge *Formal training Method*

Institute	Frequency	Percentage
Ministry of Public Health	149	52.90
In house training	63	22.50
Khonkhan University	18	6.70
Sonkhlanakarin University	11	4.00

Table 4.11 Leadership development methods for heads of pharmacy departments classified by Institute that provide knowledge *Formal training Method* (cont.)

Institute	Frequency	Percentage
National Institute of Development and Administration (NIDA)	3	1.00
Faculty of Medicine Ramathibodi Hospital	3	1.00
Faculty of Medicine Siriraj Hospital	2	0.60
Faculty of Medicine Chulalongkorn University	2	0.60
Other	30	10.70
Total	**281**	**100.00**

From the Table 4.12, most frequently used Leadership development method for heads of pharmacy departments are Field Study (12.10%), Work with the Interdisciplinary Team (11.40%), and Action Learning (10.00%).

Table 4.12 Leadership development methods for heads of pharmacy departments classified by item *Developmental activities method*

Leadership development activities	Frequency	Percentage
Field Study	159	12.10
Work with the Interdisciplinary Team	149	11.40
Action Learning	131	10.00
Delegation	121	9.20
Coaching	125	9.60
Outdoor Challenge Programs	120	9.20
Mentoring	99	7.60
Networking	80	6.10
Multisource Feedback	75	5.70
Dept. head assistant role	73	5.60
Challenging Job Assignment	71	5.40
Outdoor Challenge Programs	120	9.20
Job Rotation	51	3.90
Total	**1,309**	**100.00**

From the Table 4.13, most frequently used self-help activities for heads of pharmacy departments are Book, Textbook (33.70%), Internet (30.40%), and Individual Development Plan (IDP) (9.40%).

Table 4.13 Leadership development methods for heads of pharmacy departments classified by item *Self-help activities method*

Leadership development activities	Frequency	Percentage
Read books, textbooks	255	33.70
Learn from Internet	229	30.40
Individual Development Plan (IDP)	71	9.40
Learn from E- Learning	64	8.50
Mind Development Activity	64	8.50
Learn from DVD, CD	41	5.40
Distance Learning	12	1.60
Learn from computer assisted Instruction	9	1.20
Other (Attended seminar, Morning talk)	10	1.30
Total	**755**	**100.00**

In regard to assessment of heads of pharmacy departments' leadership development time spent, there was 53.08% of the samples had been developed by formal training (= 31.10 days / five years), 28.21% of the samples had been developed by development activities (= 16.53 days / five years) and 18.71% of the samples had been developed by self-help activities (= 10.96 days / five years). (Table 4.14).

Table 4.14 Time rendered for leadership development (amount of days in five years)

Leadership development methods	Mean (SD) (days / 5years)	Percentage
Formal training	31.10 (32.06)	53.08
Developmental activities	16.53 (36.59)	28.21
Self-help activities	10.96 (19.01)	18.71

Association between time rendered for leadership development methods and the effective leadership of heads of pharmacy departments

The association between time rendered for leadership development methods such as formal training, developmental activities, self-help activities and the effective leadership were performed by using t-test. The results were displayed in Table 4.15.

Formal training: It was found that there is a little differences between the mean score of the effective leadership of those who had the formal training of days less than 31.10 days/5 years (group 1) and those who had the formal training of days more than and equal to 31.10 days/5 years (group 2). The mean score of group 1 was 3.98 and the mean score of group 2 was 4.11. The association between time rendered for leadership development by formal training and the effective leadership was statistically significant difference (p-value = 0.003).

Developmental activities: It was found that there are little differences between the mean score of the effective leadership of those who have been developed leadership by developmental activities method less than 16.53 days/5 years (group 1) and those who have been developed leadership by developmental activities method more than and equal to 16.53 days/5 years (group 2). The mean score of group 1was 3.99 and the mean score of group 2 was 4.10. The association between time rendered for leadership development by developmental activities method and the effective leadership was statistically significant difference (p-value = 0.013).

Self-help activities: It was found that there are quite similar leadership level between the mean score of the effective leadership of those who have been developed leadership by self-help activities method less than 10.96 days/5 years (group 1) and those who have been developed leadership by self-help activities method more than and equal to 10.96 days/5 years (group 2). The mean score of group 1 was 4.02 and the mean score of group 2 was 4.10. The association between time rendered for leadership development by self-help activities method and the effective leadership was not statistically significant difference (p-value = 0.880).

Table 4.15 The association between time rendered for leadership development methods and the effective leadership using t-test

Leadership development methods	N	Mean	SD	df	t	p-value
Formal training						
< 31.10 days/5 years	357	3.98	0.405	494	-2.959	0.003*
≥ 31.10 days/5 years	139	4.11	0.507			
Developmental activities						
< 16.53 days/5 years	371	3.99	0.418	494	-2.505	0.013*
≥ 16.53 days/5 years	125	4.10	0.488			
Self-help activities						
< 10.96 days/5 years	358	4.02	0.428	494	0.152	0.880
≥ 10.96 days/5 years	138	4.01	0.488			

* P < 0.05 at 95% CI

Comparison of the difference among time rendered for leadership development methods of heads of pharmacy departments by size of hospital

There are no differences in developmental activities and self-help activities, in the comparison of mean time rendered for leadership development methods of heads of pharmacy departments by size of hospital. The difference in the comparison is found in Formal training therefore, the post hoc test is conducted to find out the pair of difference.

From table 4.16, it shows that time rendered for leadership development by Formal training in large / middle hospitals and small hospitals showed significant difference. (P-value < 0.05). The LSD test showed that there was a significant difference with 0.05 level between large-middle hospitals, middle-small hospitals, and large-small hospitals (Table 4.17).

Table 4.16 Analysis of variance for the comparison between the mean of time rendered for leadership development by hospital size

Leadership development methods	Mean (SD)				p-value
	Total	Large	Middle	Small	
Formal training	31.10 (32.06)	48.09 (30.85)	30.23 (20.35)	14.99 (10.26)	0.001*
Developmental activities	16.53 (36.59)	20.29 (32.70)	13.34 (10.65)	16.00 (15.77)	0.247
Self-help activities	10.96 (19.01)	12.75 (7.07)	11.05 (6.02)	9.08 (6.08)	0.307

* P < 0.05 at 95% CI

Table 4.17 Pairwise comparison of time rendered for leadership development by hospital size

Formal training	Large	Middle	Small
Large	-	-	-
Middle	0.653*	-	-
Small	1.197*	0.544*	-

* P < 0.05 at 95% CI

Part 3: Association between personal characteristic variables and the effective leadership of heads of pharmacy departments

The associations of personal characteristic variables such as age, years of work experience, working duration in the current position, and the effective leadership were performed by using One-way ANOVA and Least Significant Difference test. The results are displayed in Table 4.18.

Age**:** Age was divided into 3 groups. The mean score of the respondents have more than and equal to 50 years old group was highest (4.08). The lowest mean

scores of (4.01) was the group of 31 - 49 years of age. The association between age and the effective leadership was not statistically significant difference (p-value = 0.410).

Years of work experience: The years of work experience were divided into 4 groups. It was found that group 4 (less than 30 years) had 4.17 score of leadership whereas the other groups had scores of 4.11, 4.02 and 3.99 for group 1 (more than 10 years), group 3 (21 - 30 years) and group 2 (11- 20 years) respectively. The association between years of work experience and the effective leadership was not statistically significant difference (p-value = 0.081).

Working duration in the current position: It was divided into 4 groups and it was found that group 2 (10-20 years) had the highest mean score (4.07) and similarly the other groups had scores of 4.00, 4.00 and 3.96 for group 1 (less than 10 years), group 4 (more than 30 years) and group 3 (11- 20 years), respectively. The association between working duration in the current position and the effective leadership was not statistically significant difference (p-value = 0.275).

Table 4.18 The association between the personal characteristic and the effective leadership using One-way ANOVA

Personal characteristics	**N**	**Mean**	**SD**	**df**	**F**	**p-value**
Age (years)						
≤ 30	20	4.05	0.22			
31 - 49	401	4.01	0.44	2	0.89	0.41
≥ 50	75	4.08	0.47			
Years of work experience (years)						
< 10	62	4.11	0.40			
11 - 20	276	3.99	0.44	3	2.255	0.08
21 - 30	137	4.02	0.43			
> 30	21	4.17	0.35			

Table 4.18 The association between the personal characteristic and the effective leadership using One-way ANOVA (cont.)

Personal characteristics	N	Mean	SD	df	F	p-value
Working duration in the current position (years)						
< 10	257	4.00	0.43			
10 - 20	161	4.07	0.40	3	1.295	0.27
21 - 30	75	3.96	0.50			
> 30	3	4.00	0.00			

* P < 0.05 at 95% CI

The association between personal characteristics variables such as gender, education background, training experience and the effective leadership were processed by using t-test. The results were displayed in Table 4.19.

Gender: The mean score was 4.06 for male and 3.99 for female and the association between gender and the effective leadership was not statistically significant difference (p-value = 0.12).

Education background: It was found that respondents with Master/ Doctoral degree had a higher mean score of the effective leadership than the ones with Bachelor degree. The mean score was 4.11 for Master/Doctoral degree group and 3.96 for Bachelor degree group. The association between education background and the effective leadership was statistically significant difference (p-value = < 0 .001).

Training experience: It was found that there are little differences between the mean score of the effective leadership of those who were trained on leadership and leadership development and those who were not. The mean score of those who were trained on leadership and leadership development was 4.10 and the mean score of those who were not was 3.91. The association between training experience and the effective leadership was statistically significant difference (p-value = < 0.001).

Table 4.19 The association between the personal characteristic and the effective leadership using t-test

Personal characteristics	N	Mean	SD	df	t	p-value
Gender						
Male	195	4.06	0.44	494	1.554	0.12
Female	301	3.99	0.43			
Education Background						
Bachelor degree	292	3.96	0.42	494	-3.802	< .001*
Master/ Doctoral degree	204	4.11	0.44			
Training experience						
No training	281	3.91	0.44	494	4.796	< .001*
Training	215	4.10	0.41			

* P < 0.05 at 95% CI

Part 4: Comparison of the difference among leadership of heads of pharmacy departments by size of hospital

From Table 4.20, There are no differences in Exemplary leadership characteristic and Power and drive component, in comparison between the mean of effective leadership by hospital size. The difference in the comparison is found in Leadership vision, Quality innovation and information technology, Exemplary professional characteristic, and Support and promote follower 's development component. Therefore, the post hoc test is conducted to find out the pair of difference and the result is shown in Table 4.21.

From Table 4.21, the difference is found in 5 components, Leadership vision, Quality innovation and information technology, Exemplary professional characteristic, Support and promote follower's development, and Total effective leadership. Mean score of effective leadership by heads of pharmacy departments in large hospitals is higher than mean score of effective leadership by heads of pharmacy departments in small hospitals.

Table 4.20 Analysis of variance for the comparison between the mean of effective leadership by hospital size

Leadership of heads of pharmacy departments of hospitals	**Mean (SD) of effective leadership**			**p-value**
	Large	**Middle**	**Small**	
Leadership vision	3.86 (0.36)	3.72 (0.45)	3.69 (0.39)	0.004*
Exemplary leadership characteristic	4.09 (0.37)	4.04 (0.40)	4.01 (0.37)	0.302
Quality innovation and information technology	3.51 (0.46)	3.42 (0.51)	3.34 (0.45)	0.011*
Exemplary professional characteristic	3.97 (0.41)	3.83 (0.46)	3.84 (0.45)	0.023*
Power and drive	4.15 (0.47)	4.07 (0.60)	4.05 (0.47)	0.342
Support and promote follower ’s development	4.14 (0.46)	4.02 (0.49)	3.97 (0.49)	0.030*
Total effective leadership	4.03 (0.37)	3.85 (0.45)	3.37(0.49)	0.011*

* P < 0.05 at 95% CI

Table 4.21 Pairwise comparison of effective leadership mean by hospital size

Leadership vision	**Large**	**Middle**	**Small**
Large	-	-	-
Medium	0.13926	-	-
Small	0.17871*	0.03945	-
Quality innovation and information technology	**Large**	**Middle**	**Small**
Large	-	-	-
Medium	0.08086	-	-
Small	0.18866*	0.08800	-

Table 4.21 Pairwise comparison of effective leadership mean by hospital size (cont.)

Exemplary professional characteristic	**Large**	**Middle**	**Small**
Large	-	-	-
Medium	0.14330	-	-
Small	0.13860*	-0.00471	-
Support and promote follower's development	**Large**	**Middle**	**Small**
Large	-	-	-
Medium	0.12062	-	-
Small	0.17301*	0.5239	-
Total effective leadership	**Large**	**Middle**	**Small**
Large	-	-	-
Medium	0.10275	-	-
Small	0.13913*	0.03637	-

* P < 0.05 at 95% CI

Part 5: The relationships between types of leadership development and leadership of heads of pharmacy departments

Pearson's product moment correlation coefficient was used for data analysis in this part. Results are as followers.

We found that formal training was positively related to the effective leadership of heads of pharmacy departments, and the level of relationship was at a very low level (r = 0.223*). This indicated that formal training has a significant effect on leadership skills of heads of pharmacy departments. When each component of leadership was considered, almost 6 components were positively related to formal training (Table 4.22).

Table 4.22 The Correlation Coefficients between leadership and the methods for developing leadership skills of heads of pharmacy departments *(Formal training)*

Variable	The Pearson's Product Moment Correlation (r)	p-value	Relationship level
Method for developing leadership skills (Formal training)			
1.Leadership vision	0.225*	0.000	Weak
2.Exemplary leadership characteristic	0.125*	0.005	Weak
3. Quality innovation and information technology	0.230*	0.000	Weak
4.Exemplary professional characteristic	0.156*	0.000	Weak
5.Power and drive	0.116*	0.001	Weak
6.Support and promote follower 's development	0.174*	0.000	Weak
Leadership (Total)	0.223*	0.001	Weak

* P < 0.01 at 95% CI

We found that Developmental activities was positively related to the effective leadership of heads of pharmacy departments, and the level of relationship was at a very low level (r = 0.133*). This indicated that Developmental activities has a significant effect on leadership skills of heads of pharmacy departments. When each component of leadership was considered, almost 6 components were positively related to Developmental activities (Table 4.23).

Table 4.23 The Correlation Coefficients between leadership and the methods for developing leadership skills of heads of pharmacy departments *(Developmental activities)*

Variable	The Pearson's Product Moment Correlation (r)	p-value	Relationship level
Method for developing leadership skills (Developmental activities)			
1.Leadership vision	0.178*	0.000	Weak
2.Exemplary leadership characteristic	0.131*	0.003	Weak
3.Quality innovation and information technology	0.179*	0.000	Weak
4.Exemplary professional characteristic	0.163*	0.000	Weak
5.Power and drive	0.162*	0.000	Weak
6.Support and promote follower 's development	0.129*	0.004	Weak
Leadership (Total)	0.133*	0.001	Weak

* P < 0.01 at 95% CI

We found that Self-help activities was positively related to the effective leadership of heads of pharmacy departments, and the level of relationship was at a very low level (r = 0.122*). This indicated that Self-help activities has a significant effect on leadership skills of heads of pharmacy departments. When each component of leadership was considered, Only Leadership vision component was positively related to Self-help activities.

Table 4.24 The Correlation Coefficients between leadership and the methods for developing leadership skills of heads of pharmacy departments *(Self-help activities)*

Variable	The Pearson's Product Moment Correlation (r)	p-value	Relationship level
Method for developing leadership skills (Self-help activities)			
1.Leadership vision	0.136*	0.002	Weak
2.Exemplary leadership characteristic	0.057		Weak
3.Quality innovation and information technology	0.045		Weak
4.Exemplary professional characteristic	0.042		Weak
5.Power and drive	0.040		Weak
6.Support and promote follower 's development	0.054		Weak
Leadership (Total)	0.122*	0.001	Weak

* P < 0.01 at 95% CI

Part 6: Factors affecting the effective leadership of heads of pharmacy departments

Multiple regression analysis was used to analyze variables for clear explanation of the effective leadership of heads of pharmacy departments of hospitals under the Ministry of Public Health. Results are summarized in Table 4.25.

Table 4.25 Multiple Regression analysis of variables explaining the effective leadership of heads of pharmacy departments

Variable	B	Beta	t	p-value
Educational background	0.094	0.132	2.964	0.003
Formal training	0.035	0.156	3.335	0.001
Developmental activities	0.023	0.171	3.694	0.000
Constant	61.509			

$R = 0.307$ $R^2 = 0.094$ $R^2adj = 0.081$ $F = 7.259$ Significant P-value ≤ 0.01

After using multiple regression model to find relation of the effective leadership with Gender, Age, Educational background , Years of hospital pharmacy Experience, Working duration in the current position, Hospital size it was found that these factors could explain variance of effective leadership 9.40 percent ($R^2 = 0.094$). It was also seen that Educational background, Formal training, and Developmental activities were three factors that had positive correlation with effective leadership. Therefore, the equation of regression for explaining the variation in the effective leadership of heads of pharmacy departments is:

$$Y = 0.132\ X1 + 0.156\ X2 + 0.171\ X3$$

When Y: The effective leadership of heads of pharmacy departments

X1: Educational background

X2: Formal training

X3: Developmental activities

CHAPTER V
DISCUSSION

This chapter focuses on the discussion and interpretation of the results earlier described in Chapter IV. The results of this research helped to examine leadership and leadership development for heads of pharmacy departments under the Ministry of Public Health, which will be further discussed in this chapter as follows:

Part 1: Personal characteristics

Part 2: Leadership and leadership development for heads of pharmacy departments

Part 3: Association between personal characteristic variables and the effective leadership of heads of pharmacy departments

Part 4: Comparison of the difference among leadership of heads of pharmacy departments by size of hospital

Part 5: The relationships between types of leadership development and leadership of heads of pharmacy departments

Part 6: Factors affecting the effective leadership of heads of pharmacy departments

Part 1: Personal characteristics

From Table 4.2 It was found from the study that majority of heads of pharmacy departments were female (60.70%) with ages between 31-49 years old (80.80%), this result was similar to the finding of Sumethiwit, which reported that 79.9% pharmacy department's head were 31-49 years old (36). This meant it take at least 7 years after entry to the hospital for working and developing until assume the position. The response from the large hospitals and middle hospital were 84.20% and 67.2% respectively. It meant the large hospital had more interested in this topic of survey than the small hospitals which the response rate of this hospitals was 58.2%

(Table 4.1). As a results, leadership and leadership development seems to have less interesting in the perspective of the heads of pharmacy departments in small hospitals.

Regarding educational background, the majority (58.90%) had the education level of Bachelor degree. 40.9% of the respondents are Master degree holders. This result was similar to the finding of Anuratpanich (6) and Sumethiwit (36).

Most of them had extensive work experience. The result shown that 87.50% had more than 10 years of experiences. Schwartz et al. mentioned that the experience allows one to use and constantly reinforce what one is learning through experience, managers meet people who may be able to help them get ahead. It provides a good working knowledge of practical situation. When a person knows from experience that he or she can do something and do it well, self-esteem is also increased (43).

Most of the respondents have the duration of work in current position less than 10 years. This result was similar to the finding of Sumethiwit (36). However, the result of this study was not similar to the study of Anuratpanich, which stated that at least 10 years in the position of heads of pharmacy who works in the government hospitals (44).

A half of them (56.7%) had no training experience. However, the result of this study was not similar to the finding of Anuratpanich, which reported that 28.6% had no training experience (44). And Rookkapan reported that 32.8% had no training experience (49). The conflict result from the study of Anuratpanich, and Rookkapan might be explained by difference in scope of the topic of formal training course, because Anuratpanich studied about HRM competency, Rookkapan studied about HRM competency, and managerial skills.

Part 2: Leadership and leadership development for heads of pharmacy departments

2.1 Leadership of heads of pharmacy departments

The result indicated that the effective leadership of heads of pharmacy departments was at a high level, with the mean score of 3.84 (S.D. = 0.35). This result was similar to the results of Sumethiwit, which reported that leadership of heads of pharmacy departments was at high level as well (36). Details of the results of this study on leadership were explained as follows as show in Table 4.3.

When 6 components of the effective leadership were considered, Power and drive was highest, with the mean score of 4.07 (S.D. =0.49). Following components were Exemplary leadership characteristic, Support and promote follower's development, Exemplary professional characteristic, Leadership vision and Quality innovation and information technology (M = 4.03, 3.99, 3.85, 3.72, 3.37 S.D. = 0.37, 0.49, 0.45, 0.40, 0.49 respectively). It could be explained that heads of pharmacy departments had abilities to stimulate or motivate their subordinates to put some more efforts toward developing pharmacy department by targeting some essential components of effective leadership such as Leadership vision, Exemplary leadership characteristic, Quality innovation and information technology, Exemplary professional characteristic, Power and drive, and Support and promote follower 's development.

Power and drive was the highest and indicated that majority of heads of pharmacy departments have shown strong attention to finish their job on time, encourage the heart, and made subordinates feel enthusiastic and confident to accomplish the work, as show in Table 4.4. Item analysis found that heads of pharmacy departments had highest score on showing strong attention for finishing their job on time. This result explained that, for the pharmacy department, the important goal was service quality development toward Hospital Accreditation. Heads of pharmacy departments should build encouragement and confidence on possible service quality development on time. This result was consistent with Seehom, who reported that overall Exemplary leadership and Encourage the heart aspect of head

nurse in general hospitals in the northern of Thailand were at high level (54). In this study, There are no differences in Power and drive component, in comparison between the mean of effective leadership by hospital size (Table 4.20). It might because all hospitals under the Ministry of Public Health are currently under the development system to the hospital accreditation thus; heads of pharmacy departments had willingness to overcome the obstacles of work, show contribution and strong determination to work for the achievement of organizations' measures and standards.

Exemplary leadership characteristic was at high level which indicated that heads of pharmacy departments practices according to the regulations that were being practiced in the same way and will help each other when the problem occurs in the work process, as show in Table 4.5. Item analysis found that heads of pharmacy departments had very high score on treating subordinates with dignity and respect, having confidentiality, and encouraging subordinates to express ideas during work. It may come from getting audited by external HA surveyors. Heads of pharmacy departments who received the policy from director to practice, then they must have Exemplary leadership and let others show their abilities in working. Moreover they have to contact with people both inside and outside pharmacy department, and must communicate effectively with doctors, nurses, and drug representatives in an effective manner. The necessity to communicate with many professionals makes heads of pharmacy departments to possess extensive human relationship skill.

In term of "having confidentiality" was rated very high score. It could be explained that heads of pharmacy departments wanted the subordinates trust in them. Subordinates fell happy, belonged and proud to work closely with them, and also believe that the leader is the sign of success for followers.

In this study most of heads of pharmacy departments rated their behavior on having a good sense of humor as the lowest behavior. Because of the characteristics of hospital pharmacist was perceived high professional status. They had to strictly work and supervisor other for the patient safety so they tend to lack of sense of humor and somewhat serious. Moreover, they had to do another job that was additional such as: financial, a lot of documentary work that cause them to feel uncomfortable. A sense of humor could help a supervisor be a more effective leader

(55). People felt comfortable around supervisors if they displayed a sense of humor which indicated that you could still have fun while living up to their job and responsibilities. Maintaining a sense of humor could also reduce stress around the office or in an important meeting. Stress could prevent people from being as productive and creative as they need to be in order to reach their goals. (55) Humor was an important tool that leaders could use to develop effective and congenial relationships with members to get things done (56). Therefore heads of pharmacy departments should be developed in terms of acquiring a healthy and a good sense of humor at workplace.

In this study, there were no differences in Exemplary leadership characteristic component, in comparison between the mean of effective leadership by hospital size (Table 4.20). It might be explained that heads of pharmacy departments in all hospitals had direct responsibilities to the activities within the pharmacy departments and were a core that lead to the accomplishments of the organizations and was able to build up the satisfaction to the subordinate in order to implement their job to achieve the target which needs Exemplary leadership characteristic leadership.

Support and promote follower's development was seen to be at high level and indicated that heads of pharmacy departments admire their colleagues accepts the opinion of subordinates and supports them to have skills and knowledge while working, as shown in Table 4.6. Item analysis found that heads of pharmacy departments had high score on providing the support and resource needed to help subordinates meet their goals. The Association of Hospital Pharmacy (Thailand) has recommended in Chapter 1 of the standard of practice for pharmacist and professional competencies of all pharmacists (Leadership and practice management) that the head of pharmacy department must developing their staff to meet that standard (7).

The term of "Challenging subordinates to try out new and innovative approach to their work" was rated the lowest. It could be explained that the change in management, organization structure and to answer to the innovation may have conflict obstacles in attitude or working methods. Problem might be the working standard was not clear, more obligations which cause heads of pharmacy departments felt that challenging subordinates to try out new and innovative approach to their work were difficult to practice. Therefore, heads of pharmacy department should be developed in

term of promoting followers to create new procedure for problem solving skills appropriate to changing situation.

Exemplary professional characteristic was at high level which, indicated that heads of pharmacy departments who had good spiritual and emotional health, praised subordinates for a job well done, as show in Table 4.7. Item analysis found that heads of pharmacy departments had high score on spending a time during the crisis situation.

It was found that heads of pharmacy departments who had good spiritual and emotional health might be due to the reason that pharmacy profession was respected by society. The needs of the society were the one that made the person felt valuable (54). It caused the love for the profession and had good feeling, good spiritual and emotional health. Moreover, Ministry of Public Health accomplished administrative reform A.D. 2003 by downsizing and restructuring the body with new mission to all hospital, major objective was to provide the good public health in all aspects: physical; mental; social; and spiritual health, so heads of pharmacy departments should practice as a role model for their subordinates and patients in the hospitals.

While "Finding the ways to celebrate accomplishment" was rated as the lowest behavior. This might be due to the reason that government system of hospitals under the Ministry of Public Health has a strict guideline of merit increase determination and promotion. Also, "Finding ways to celebrate accomplishments" were not in the department's head perception. This will be a big challenge to motivate young generation pharmacist.

Leadership vision was at high level, which indicated that heads of pharmacy departments had a clear vision for the future and transmit it to the subordinate to see the vision, as shown in Table 4.8. Item analysis found that heads of pharmacy departments had high score on "Analyzing the source of work problems by using proper evidence", "Having appropriately designating delegate's responsibility", and "Performing SWOT in the department". This might be due to the reason that root cause analysis used scientific method, while heads of pharmacy departments had knowledge, skills, and experiences in data analysis, and computer had been expansively using in hospital development.

In term of "determine the department's goals both long term and short term" was rate in the lowest behavior. Long term goal and vision was one of five topics that heads of pharmacy departments need managerial skill improvement (49). This might be due to the reason that government system of hospitals under the Ministry of Public Health being affected by change, administrative reform, and political policies so the policy is adopted differently.

Quality innovation and information technology was at moderate level and indicated that heads of pharmacy departments works moderately on developing the department, improving new things, and should apply existing pharmaceutical research in the real situation, as show in Table 4.9. It was found that effective leadership in the components of "Quality innovation and information technology" leader was at the lowest level. This might be due to heads of pharmacy departments might think that their English language skills, knowledge of finance and accounting, and the ability of performing pharmaceutical research were not good enough. This reason could be related to the study of Anuratpanich, which reported that Information Technology was a necessary skill needed for heads of pharmacy departments due to the growing in effective-efficient orientation to sustain organization (6). Moreover the global importance of English education has significantly influenced the entire society of Health Care, most of the drug and medical information is in English. Having a good English language communication skill will allow them to access an incredible amount of information which may be useful. From the study the item "Have a good English language communication skill" was rated the lowest. Therefore skills and ability to communicate in English was considered important and extremely necessary to practice a profession.

In term of "Should apply existing pharmaceutical research in the real situation" was rated in the moderate level, that is meant the ability of performing pharmaceutical research in heads of pharmacy departments were not good enough. This result similar to the results Hnujak, which reported that job performance in nursing research and education, was at the lowest level (4). The evidence based for making decision in health services organizations within various situations nowadays is necessary for quality control of health services organizations during rapid social change, so research methodology is a systematic ways for searching the reliable

answers for health services organizations that could be blend in the routine work finally. Heads of pharmacy departments should be realize to solve this problem because the main goal is to develop the quality of sustainability.

2.2 Leadership development for heads of pharmacy departments

The result indicated that there were 3 leadership development methods which heads of pharmacy departments had been attended or involved during the time of survey: 1) Formal training, 2) Developmental activities, and 3) Self-help activities. It was found that developing methods ranking from the most frequently used respectively were Developmental activities (55.82%), Self-help activities (32.20%), and Formal training (11.98%) respectively, as show in Table 4.10. The result of this study was similar to the study of Anuratpanich which reported that the most frequently used development methods in pharmacy department heads of the JCI accredited private hospitals in Thailand are On the Job training, Formal Training, Remember and Repeat Supervisor's approach (44).

The first top 3 leadership development activities that most frequently used by heads of pharmacy department for each leadership development methods were found as list below. All of results are displayed in Table 4.11-4.13.

Developmental activities method: (1) Field Study; (2) Work with the Interdisciplinary Team; (3) Action Learning.

Self-help activities method: (1) Read books, textbooks; (2) Learn from Internet; (3) Individual Development Plan (IDP).

Formal training Method: (1) Training from Ministry of Public Health (2) In house training (3) Other units.

The study result showed that *Developmental activities method*, a number of activities can be used to facilitate learning of relevant skills from experience on the job, most frequently used in heads of pharmacy departments which are Field Study (12.10%), Work with the Interdisciplinary (11.40%) and Action Learning (10.00%). This was similar to the study of Leadership development in Korea by Myungweon Choi et al., which indicated that Korean organizations have adopted many leadership development methods, and the Developmental activities methods (e.g. coaching, 360-

degree feedback) were considered to be more effective than the traditional methods (e.g. lecture, MBA program) (47).

The study result showed that many *Self-help activities* were available for improving leadership. Most frequently used in heads of pharmacy departments which are Read books, textbooks (33.70%), Learn from Internet (30.40%) and Individual Development Plan (IDP) (9.40%). Heads of pharmacy departments should be responsible for their own leadership development through continuous self-development efforts.

The study result showed that *Formal training method*, the most common approach to leadership development in which basic principles of leadership were presented, discussed, and reflected on 52.90% of the respondents had attended the course provided by Ministry of Public Health (Table 4.11). This result was similar to the finding of Anuratpanich, which reported that 65.50% of the respondents had attended the course provided by Ministry of Public Health; therefore Ministry of Public Health was an important institute for leadership development (6). It was found that 22.5% of the respondents had attended in house training. It might be in house training provided some of the advantages and benefits, training cost saving, travel cost saving, convenience, more specific, and team building (48).

It was found that developing methods ranking by time rendered for leadership development inducted by heads of pharmacy departments were Formal training (53.08%), Developmental activities (28.21%), and Self-help activities (18.71%) respectively. It was found that heads of pharmacy departments have learned leadership development methods ranking from most to least ones as in; Formal training about 6 days in 1 year period, Developmental activities about 3 days in 1 year, Self-help activities about 2 days in 1 year period, respectively. This may be the golden portion for leadership development which can be apply for developing the department's successor. However, Self-help activities was the lowest. This probably dued to their heavy responsibilities in managing the department, they were also responsible for various other duties, which caused stress and fatigue in workplace resulting in lesser tendency to involve in their own Self-help activities. The reasons were in accordance with research of Siwakanchana in Fatigue in works of hospital

pharmacist under the ministry of public health which was found that the majority of samples having workloads and emotional exhaustion were at moderate level (46).

Association between time rendered for leadership development methods and the effective leadership of heads of pharmacy departments

From Table 4.15, It was found the association between time rendered for leadership development by Formal training and the effective leadership was statistically significant difference (p-value = 0.003). It was found that there is a little differences between the mean score of the effective leadership of those who had the formal training of days less than 31.10 days/5 years (group 1) and those who had the formal training of days more than and equal to 31.10 days/5 years (group 2). The mean score of group 2 (mean = 4.11, S.D. = 0.50) was more than the mean score of group 1 (mean = 3.98, S.D. = 0.40). It means that heads of pharmacy departments who had more number of the formal training days tended to have higher mean score of the effective leadership than heads of pharmacy departments who had less number of the formal training days.

The association between time rendered for leadership development by Developmental activities method and the effective leadership was statistically significant difference (p-value = 0.013). It was found that there are little differences between the mean score of the effective leadership of those who have been developed leadership by developmental activities method less than 16.53 days/5 years (group 1) and those who have been developed leadership by developmental activities method more than and equal to 16.53 days/5 years (group 2). The mean score of group 2 (mean = 4.10, S.D. = 0.48) was more than the mean score of group 1 (mean = 3.99, S.D. = 0.41). It means that heads of pharmacy departments who had more time rendered for leadership development by Developmental activities tented to have higher mean score of the effective leadership than heads of pharmacy departments who had less time rendered for leadership development by Developmental activities.

It was found that there are quite similar leadership level between the mean score of the effective leadership of those who have been developed leadership by self-help activities method less than 10.96 days/5 years (group 1) and those who have been developed leadership by self-help activities method more than and equal to

10.96 days/5 years (group 2). The mean score of group 1was 4.02 and the mean score of group 2 was 4.10. The association between time rendered for leadership development by Self-help activities method and the effective leadership was not statistically significant difference (p-value = 0.880). It might be explained that heads of pharmacy departments have been developed leadership by self-help activities method too few (only 18.71 percent) so there was no differences in 2 groups.

Comparison of the difference among time rendered for leadership development methods of heads of pharmacy departments by size of hospital

From table 4.16, it showed that time rendered for leadership development by Formal training in large, middle hospitals and small hospitals showed statistically significant difference. (P-value < 0.05). The LSD test showed that there was a statistically significant difference with 0.05 level between large hospitals, middle hospitals, and small hospitals (Table 4.17). There were 3 differences in the pair of large-middle hospital, large-small hospital, and middle-small hospital. It could be explained that the large hospitals had more staff, budget, and facilities. So heads of pharmacy departments from large hospitals could attend Formal training more than heads of pharmacy departments from smaller hospitals. Moreover that heads of pharmacy departments from larger-hospitals had a good opportunity on education, training and promotion for individual development and growth more than smaller hospitals.

There were no differences in Developmental activities and Self-help activities, in the comparison of mean time rendered for leadership development methods of heads of pharmacy departments by size of hospital. Because Developmental activities and Self-help activities were less costs, could be conducted often, and taken not so much time comparing to Formal training method which could not be taken place more often and spent more time and budget. So that heads of pharmacy departments from all size of hospitals could be used Developmental activities and Self-help activities leadership development methods more often.

Therefore, the appropriate leadership development methods for heads of pharmacy departments under the Ministry of Public Health were the 3-combination-methods by emphasis on developmental activities because it could be done more often

and taken not so much time comparing to leadership development in Formal training method. By the way, leadership development methods should be significantly selected in consistent with the goals; vision and strategy of the hospital to enable leadership development carry out effectively and continuously. The result of this study was similar to that report by Anuratpanich, which stated that the variety of the development methods can fulfill the needs to develop the new department head in all aspects starting from the easiest way like remembering and repeat their supervisor's approach to more formal method like the classroom leadership training (44).

Part 3: Association between personal characteristic variables and the effective leadership of heads of pharmacy departments

The associations of personal characteristic variables such as age, years of work experience, working duration in the current position, and the effective leadership were performed by using One-way ANOVA test and Least Significant Difference test. The results are displayed in Table 4.18.

Hypothesis 1.1 The relationship between age and the effective leadership of heads of pharmacy departments.

Age: Age was divided into 3 groups. The mean score of the respondents have more than and equal to 50 years old group was highest (4.08). The lowest mean scores of (4.01) was the group of 31-49 years of age. The association between age and the effective leadership was not statistically significant difference (p-value = 0.410). This result rejects the hypothesis of the relationship between age and the effective leadership of heads of pharmacy departments. In addition, this result was similar to the result of Rookkapan, which stated that difference among age groups in hospital pharmacist did not make managerial skill used to be different (49). It might be explained that, age only was not the driver for leadership which meant younger head might have equal level of leadership to senior head.

Hypothesis 1.2 The relationship between years of hospital Pharmacy experience and the effective leadership of heads of pharmacy departments

Years of work experience: The years of work experience were divided into 4 groups. It was found that group 4 (more than and equal to 30 years) had the highest mean score ($\overline{X}$ = 4.17) whereas the other groups had scores of 4.11, 4.02 and 3.99 for group 1 (less than 10 years), group 3 (21 - 30 years) and group 2 (11 - 20 years) respectively. The association between years of work experience and the effective leadership was not statistically significant difference (p-value = 0.081). This result rejects the hypothesis of the relationship between years of work experience and the effective leadership of heads of pharmacy departments. The result of this study was similar to the study of Phouthlath, which stated that the association between years of work experience and leadership style was not statistically significant difference (58). It might be explained that, there was no difference in years of work experience. Therefore, it could not show the statistically significant difference relationship between years of work experience and the effective leadership in this study.

Hypothesis 1.3 The relationship between working duration in the current position and the effective leadership of heads of pharmacy departments

Working duration in the current position: It was divided into 4 groups and it was found that group 2 (10 - 20 years) had the highest mean score (4.07) and similarly the other groups had scores of 4.00, 4.00 and 3.96 for group 1 (less than 10 years), group 4 (more than 30 years) and group 3 (21 - 30 years), respectively. The association between working duration in the current position and the effective leadership was not statistically significant difference (p-value = 0.275). This result rejects the hypothesis of the relationship between working duration in the current position and the effective leadership of heads of pharmacy departments. The result of this study was similar to the study of Phouthlath, which stated that the association between working duration in the current position and leadership style was not statistically significant difference (58). It might be explained that, although the less time in the position did not mean the less leadership level. It implied that the head whose less year in position, might aware of this in the beginning so they tried to catch up with the assignments.

Hypothesis 1.4 The relationship between gender and the effective leadership of heads of pharmacy departments

The association between personal characteristics variables such as gender, education background, training experience and the effective leadership were processed using t-test. The results were displayed in Table 4.19.

Gender: The mean score was 4.06 for male and 3.99 for female and the association between gender and the effective leadership was not statistically significant difference (p-value = 0.12). This result did not accept the hypothesis of the relationship between gender and the effective leadership of heads of pharmacy departments. Normally it perceived that male had more leadership than female similar to the finding of Rookkapan (49). But in this study we found differently result. Currently female leaders developed themselves very fast consequently they assumed many position in the top of organization chart. Therefore, it was a new normal that female were as equal as effective leader similar to the finding of Anuratpanich (45).

It could be explained that, there was no difference in 2 groups. Therefore, it could not show the statistically significant difference relationship between gender and the effective leadership in this study. However, the result of this study was not similar to the study of Rookkapan, which stated that Male used managerial skills significantly more than female (49).

Hypothesis 1.5 The relationship between education background and the effective leadership of heads of pharmacy departments

Education background: It was found that respondents with Master/Doctoral degree had a higher mean score of the effective leadership than the ones with Bachelor degree. The mean score was 4.11 for Master/Doctoral degree group and 3.96 for Bachelor degree group. The association between education background and the effective leadership was statistically significant difference (p-value = < 0 .001). This result confirmed the hypothesis of the relationship between education background and the effective leadership of heads of pharmacy departments. Also, because heads of pharmacy departments had a deeper understanding of the leadership qualities and skills when they attended management/ leadership course while studying. As per the result of personal characteristics data analysis, it was 41.1% of them had graduated

higher than Bachelor degree. It assumed that education background of heads of pharmacy departments especially higher education was a key reason for their leadership knowledge and skills.

Hypothesis 1.6 The relationship between training experience and the effective leadership of heads of pharmacy departments

Training experience: It was found that there are little differences between the mean score of the effective leadership of those who were trained on leadership and leadership development and those who were not. The mean score of those who were trained on leadership and leadership development was 4.10 and the mean score of those who were not was 3.91. The association between training experience and the effective leadership was statistically significant difference (p-value = < 0.001). This result confirmed the hypothesis of the relationship between training experience and the effective leadership of heads of pharmacy departments. This finding was congruent with Phouthalath who found that there was a difference in leadership styles between those who had been trained in administration and those who had not (p-value = < 0.00) (58). Also, came from a deeper understanding of the leadership qualities and skills which they have gained from management/leadership training course. As per the result of personal characteristics data analysis, it was 56.7% of them had attended. It assumed that training history of heads of pharmacy departments was more likely to be a reason for them to be more aware about the leadership development skills and knowledge.

Part 4: Comparison of the difference among leadership of heads of pharmacy departments by size of hospital

Hypothesis 2 The relationship between size of hospital and the effective leadership of heads of pharmacy departments

From Table 4.21, the difference were found in 5 components, Leadership vision, Quality innovation and information technology, Exemplary professional

characteristic, Support and promote follower 's development, and Total effective leadership. Mean score of effective leadership by heads of pharmacy departments in large hospitals were higher than mean score of effective leadership by heads of pharmacy departments in small hospitals. The discussion of the finding in this part was presented as follows:

The result indicated that size of hospital was significantly related to the effective leadership at the statistical significance of 95% confidence level (p-value < 0.01 in individual and overall components). This result accepted the hypothesis of the relationship between size of hospital and the effective leadership of heads of pharmacy departments. Heads of pharmacy departments from large-sized hospitals had higher leadership than those from small-sized hospitals in 5 components. In addition, this result was similar to the results from the study of Anuratpanich for the study of Human Resources Management Competency of Pharmacy Department Heads under the Ministry of Public Health by the 360-degree assessment, it was found that competency level of human resource management was slightly different between the large-sized hospitals (regional hospitals and general hospitals) and small-sized hospitals (45). On the other hand, the result was disagree with the study of Sumethiwit, which found that self-assessed transformational leadership by heads of pharmacy departments in regional/general hospitals and community hospitals showed no significant difference. (36).

From such findings, it might be assumed that hospital size would affect the effective leadership. It could be explained with three reasons: firstly because, there were more staff, budget, and facilities in larger hospitals. The second reason could be that larger hospital has an important role in leading the potential development of services within the responsible network and being a center of health leaders and organizations and at the same time gaining faith from communities in health service (57). Moreover, they also need to develop themselves to strive for service excellence as a factor for promoting the competitive capabilities of health care market both nationwide and worldwide. The last reason was smaller hospitals had very few pharmacists; head of pharmacy department performed the jobs of lower administrative level so ultimately they would not be able to use their leadership skills as much as they should.

From Table 4.20, There were no differences in Exemplary leadership characteristic and Power and drive component, in comparison between the mean of effective leadership by hospital size.

In this study, There were no differences in Power and drive component, in comparison between the mean of effective leadership by hospital size. Because all hospitals under the Ministry of Public Health was currently under the development system to the hospital accreditation thus, heads of pharmacy departments had willingness to overcome the obstacles of work, show contribution and strong determination to work for the achievement of organizations' measures and standards.

In this study, there were no differences in Exemplary leadership characteristic component, in comparison between the mean of effective leadership by hospital size. It could be explained that heads of pharmacy departments in all hospitals had direct responsibilities to the activities within the pharmacy departments and were a core that lead to the accomplishments of the organizations and was able to build up the satisfaction to the subordinate in order to implement their job to achieve the target which needs Exemplary leadership characteristic leadership.

Part 5: The relationships between types of leadership development and leadership of heads of pharmacy departments

Hypothesis 3.1 The relationship between Formal training and the effective leadership of heads of pharmacy departments

The result indicated that formal training was positively related to the effective leadership of heads of pharmacy departments, and the level of relationship was at a very low level ($r = 0.223$ p-value < 0.01). This result confirmed the hypothesis of the relationship between Formal training and the effective leadership of heads of pharmacy department. This implied that formal training has a significant effect on leadership skills of heads of pharmacy departments. When each component of leadership was considered, almost 6 components were positively related to formal training (Table 4.22), which was in accordance with Day and Halpin's research (35).

It revealed that the most important system of leadership development was a formal program describing the fundamental theory, principles of leadership followed by a 360-degree assessment, coaching, learning from practice and facing external challenges and in consistent with the research of Hartley et al. which indicated that effective leadership development could be implemented in two methods : 1) formal activities such as training courses, development programs, and educational programs, 2) informal activities that support leadership development such as experience by actual practice (50). This result was consistent with Hnujak who reported that formal training could develop the competency in management and leadership (4).

Hypothesis 3.2 The relationship between Developmental activities and the effective leadership of heads of pharmacy departments

The result also indicated that leadership development by Developmental activities was positively correlated with the 6 components of effective leadership at statistical significance difference, and the level of relationship was at a very low level ($r = 0.133$ p-value < 0.01), as show in Table 4.23, This result confirmed the hypothesis of the relationship between Developmental activities and the effective leadership of heads of pharmacy department, which was in accordance with the research of Hartley et al. It disclosed that effective leadership development can be done in two ways: 1) formal activities such as training courses, development programs, and educational programs, 2) informal activities that supported leadership development such as experience by actual practice (50). These finding were consistent with research of Berman et al. which was found that the most popular tools for leadership development was 360-degree assessment, enabling the analysis of leader's image in strengths and weaknesses, and learning from practice as well as it helped driving people to develop skills and having their own unique views, and was ready to resume the role of leader (51). As agreeably mentioned in Punnitamai's research, it was found that training and talent development of organization should be used in conjunction with coaching and mentoring system including individual development plans (52). Also, it was in accordance with leadership development of Singapore public sector which introduced a mentoring system used in leadership development as the transfer of knowledge and leadership principles into practice (53).

Hypothesis 3.3 The relationship between Self-help activities and the effective leadership of heads of pharmacy departments

The result indicated that leadership development by learning from Self-help activities was positively correlated with effective leadership at lower level, ($r = 0.122$ p-value < 0.01), especially in the leadership vision component, as show in Table 4.24. This result confirmed the hypothesis of the relationship between Self-help activities and the effective leadership of heads of pharmacy department. It was probably because the heads of pharmacy departments focused only on the issues related to leadership vision development than other components when it comes to Self- help activities, and spent less time as well.

Part 6: Factors affecting the effective leadership of heads of pharmacy departments

Hypothesis 4 The relationship between personal characteristic, types of leadership development and the effective leadership of heads of pharmacy departments

Multiple regression analysis of general information, types of leadership development and effective leadership of heads of pharmacy departments, indicated that variables significantly explained the effective leadership of heads of pharmacy departments which were educational background, formal training, and developmental activities, as shown in Table 4.25. These variables were accounted for 9.40 percent of variation in the effective leadership of heads of pharmacy departments ($R^2 = .094$, p-value < 0.01). This result partly confirmed the hypothesis of the relationship between personal characteristic, types of leadership development and the effective leadership of heads of pharmacy departments. Developmental activities had the most effect on the effective leadership which was reasonable because as per the study of Seehom, it was found that the past working experiences affects the leadership development of each head nurse. Experience was a good source which provides knowledge in decision making technique, problem solving technique, and personal

management (54). Formal training was another influencing factor. Because seminar and formal training provided knowledge in acquiring long term goal and vision, and performing creatively (49).

The last factor was an educational background. In addition, this result was similar to the result from the studies of Thammawitkul who reported that the managers of pharmaceutical manufacturers who had higher administrative practice mean scores tended to have higher education level (37). This result was consistent with Dumham et al. which was found that head nurses who had higher transformational scores tented to have higher education degree (59).

Multiple regression model in this study explained the effective leadership of heads of pharmacy departments only 9.40 percent so there might have been other factors affecting effective leadership of heads of pharmacy departments. These factors might be personnel under responsibility, leadership skill practice in bachelor degree course, self- confidence at work, working environment, team work in pharmacy department, and self- esteem of heads of pharmacy departments. Hence, the future research should focus on studying and analyzing the importance of effective leadership affected by these factors.

CHAPTER VI
CONCLUSIONS AND RECOMMENDATIONS

This study was a descriptive survey research aimed to explore leadership and leadership development for heads of pharmacy department of hospitals under the Ministry of Public Health. The effective leadership of heads of pharmacy departments was at a high level, with the mean score of 3.84 (S.D. = 0.35). All of leadership components except "Quality innovation and information technology" were high level. "Power and drive" the highest score among all of the leadership components. When comparing effective leadership by hospital sizes, it was found that means of effective leadership between large-sized hospitals and small-sized hospitals were different at the statistical significance (p-value < 0.01). The most frequently used development methods were developmental activities, self-help activities, and formal training respectively, The ratio of leadership development was formal training 6: developmental activities 3: self-help activities 2. This might be the golden portion for leadership developments which could be apply for developing the department's successor. There were statistical significance of positive correlations between leadership development and effective leadership level of heads of pharmacy departments. Educational background, formal training, and developmental activities significantly explained 9.4% of the effective leadership of heads of pharmacy department of hospitals under the Ministry of Public Health.

Recommendations

From this research researcher has the following recommendations:

Recommendations for Operation

1. Heads of pharmacy departments could use the study finding to promote and develop their leadership competencies.

2. The result show that formal training was related to the effective leadership of heads of pharmacy departments, therefore training on development of leadership should be continuously provided.

3. Organization should support the development on leadership of heads of pharmacy departments by providing document, text books, and journals in the department.

4. It is important to address the impact of language barriers on health care disparities in the undergraduate pharmacy curriculum.

5. In order to prepare the successor of the pharmacy department head, leadership should be built up, motivated and should have a criterion to select the new heads of pharmacy departments to replace the retired.

6. The Ministry of Public Health should promote the development of knowledge and skills in the work of heads of pharmacy departments, such as continuing education and training.

Recommendations for Further Research

1. In assessing effective leadership, a 360-degree assessment should be added to evaluate the well-rounded results from one-self and the other relevant persons. Moreover, data collection by interviews should be used in the next research.

2. There should be a study on the variables or other factors that may affect the effective leadership of heads of pharmacy departments such as: organizational culture, span of control or personality, working environment, and team work.

Limitation of the Study

1. The research was limited only the heads of pharmacy department of hospitals under the Ministry of Public Health.

2. In the part of previous leadership development prior to the position, the study design relies mostly on memory of heads of pharmacy department. Therefore; the result is various and less accuracy in some of data.

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APPENDICES

APPENDIX A
LIST OF EXPERTS

1. Dr. Luerat Anuratpanich
   Department of Pharmacy
   Faculty of Pharmacy
   Mahidol University

2. Assoc. Prof. Cha-oncin Sooksriwong
   Department of Pharmacy
   Faculty of Pharmacy
   Mahidol University

3. Dr. Sarun Gorsanan Ph.D.
   Faculty of Pharmacy
   Huachiew Chalermprakiet University

APPENDIX B
DOCUMENTARY OF THE PERMISSION TO USE THE RESEARCH INSTRUMENT

ที่ ศธ 0512.11/ว346

คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
อาคารบรมราชชนนีศรีศตพรรษ ชั้น 11
ถนนพระราม 1 แขวงวังใหม่ เขตปทุมวัน
กรุงเทพฯ 10330

26 กุมภาพันธ์ 2558

เรื่อง อนุญาตให้ใช้เครื่องมือวิจัย

เรียน คณบดีบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล

อ้างถึง หนังสือ บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล ที่ ศธ 0517.02(วท)/3344 ลงวันที่ 25 ธันวาคม 2557
เรื่อง ขออนุญาตใช้เครื่องมือการวิจัยเพื่อวิทยานิพนธ์

ตามหนังสือที่อ้างถึง แจ้งว่า นางเยาวนันท์ ปัญญาประทีป นักศึกษาบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล หลักสูตรปริญญาโท สาขาวิชาเภสัชศาสตร์สังคม เศรษฐศาสตร์และการบริหาร กำลังอยู่ในระหว่างการทำวิทยานิพนธ์ เรื่อง "LEADERSHIP AND LEADERSHIP DEVELOPMENT FOR HEADS OF PHARMACY DEPARTMENTS: A CASE OF HOSPITAL UNDER THE MINISTRY OF PUBLIC HEALTH, THAILAND".(การศึกษาภาวะผู้นำและการพัฒนาภาวะผู้นำของหัวหน้ากลุ่มงานเภสัชกรรมโรงพยาบาล สังกัดกระทรวงสาธารณสุข) มีความประสงค์จะขออนุญาตใช้เครื่องมือวิจัย คือ แบบสอบถามภาวะผู้นำที่มีประสิทธิผลของหัวหน้าหอผู้ป่วย ซึ่งเป็นส่วนหนึ่งของวิทยานิพนธ์ เรื่อง "การวิเคราะห์ตัวประกอบภาวะผู้นำที่มีประสิทธิผลของหัวหน้าหอผู้ป่วย โรงพยาบาลมหาวิทยาลัยของรัฐ" ของ นางสาวทัศนีย์ จุลอดุง นั้น คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ยินดีและอนุญาตให้ใช้เครื่องมือวิจัยดังกล่าวได้ โดยขอให้ผู้ใช้แจ้งผลการวิจัยและข้อเสนอแนะในการปรับปรุงเครื่องมือให้คณะพยาบาลศาสตร์ทราบด้วย

จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ

สุรีพร ธนศิลป์

(รองศาสตราจารย์ ดร. สุรีพร ธนศิลป์)
คณบดีคณะพยาบาลศาสตร์

ฝ่ายวิชาการ
โทร. 0-2218-1129 โทรสาร. 0-2218-1130

APPENDIX C
THE RESEARCH INSTRUMENT

แบบสอบถามสำหรับหัวหน้ากลุ่มงานและหัวหน้าฝ่ายเภสัชกรรมโรงพยาบาล

ในงานวิจัยเรื่องการ พัฒนาภาวะผู้นำของหัวหน้ากลุ่มงานเภสัชกรรม โรงพยาบาล สังกัดกระทรวงสาธารณสุข

คำชี้แจงในการตอบแบบสอบถาม

1. แบบสอบถามชุดนี้ ประกอบด้วยข้อคำถาม 2 ส่วน คือ

ส่วนที่ 1 แบบสอบถามข้อมูลทั่วไป ประกอบด้วย ข้อคำถามเกี่ยวกับ เพศ, อายุ, ระดับการศึกษา, ประสบการณ์การทำงาน, ประเภทของโรงพยาบาล, จำนวนหัวหน้างาน, วิธีการพัฒนาเกี่ยวกับภาวะผู้นำ มีข้อคำถามทั้งหมด 10 ข้อ

ส่วนที่ 2 แบบสอบถามภาวะผู้นำที่มีประสิทธิผลของหัวหน้ากลุ่มงานเภสัชกรรม มีข้อคำถามทั้งหมด 60 ข้อ รวมทั้งหมด 70 ข้อคำถาม

2. โปรดอ่านคำแนะนำก่อนตอบแบบสอบถาม

3. แบบสอบถามนี้ไม่มีคำตอบใดผิดหรือถูก ข้อมูลที่ได้จะไม่มีผลต่อการปฏิบัติงานของท่านแต่อย่างใด แต่จะนำไปใช้ประโยชน์เพื่อการวิจัยเท่านั้น

4. โปรดตอบแบบสอบถามทุกข้อตามความเป็นจริงมากที่สุด โดยคำตอบข้อท่านจะถูกเก็บเป็นความลับส่วนบุคคล ผู้วิจัยจะนำเสนอผลการวิจัยในภาพรวมเท่านั้น

ขอขอบคุณทุกท่านที่ให้ความร่วมมือ

นาง เยาวนันท์ ปัญญาประทีป

ผู้วิจัย

ส่วนที่ 1 แบบสอบถามข้อมูลทั่วไปของ หัวหน้ากลุ่มงานเภสัชกรรมโรงพยาบาล สังกัดสำนักงานปลัดกระทรวงสาธารณสุข

คำชี้แจง โปรดทำเครื่องหมาย ✓ ลงใน ☐ หน้าข้อความหรือเติมข้อความลงในช่องว่างซึ่งตรงกับสถานภาพที่เป็นจริง ของท่าน

1) สถานภาพส่วนบุคคลของหัวหน้ากลุ่มงานเภสัชกรรม

1. เพศ ☐ ชาย ☐ หญิง

2. อายุ ☐ น้อยกว่าหรือเท่ากับ 30 ปี
☐ 31 – 49 ปี
☐ มากกว่าหรือเท่ากับ 50 ปี

3. ระดับการศึกษา ☐ ปริญญาตรี ☐ ปริญญาโท ☐ ปริญญาเอก
☐ หนังสืออนุมัติหรือวุฒิบัตรจากสภาเภสัชกรรม

4. ประสบการณ์ทำงาน (ระยะเวลาที่ท่านเริ่มปฏิบัติงานจนถึงในตำแหน่งปัจจุบัน)
(โปรดระบุ).....ปี (ถ้าเกิน 6 เดือนนับเป็น 1 ปี)

5. ระยะเวลาในการดำรงตำแหน่งหัวหน้า (ระยะเวลาตั้งแต่ท่านเริ่มปฏิบัติงานในตำแหน่งหัวหน้ากลุ่มงานหรือหัวหน้าฝ่ายเภสัชกรรมจนถึงปัจจุบัน)
(โปรดระบุ).....ปี (ถ้าเกิน 6 เดือนนับเป็น 1 ปี)

6. ประเภทของโรงพยาบาล
☐ โรงพยาบาลศูนย์ (A)
☐ โรงพยาบาลทั่วไป (S)
☐ โรงพยาบาลทั่วไปขนาดเล็ก (M1)
☐ โรงพยาบาลแม่ข่าย (M2)
☐ โรงพยาบาลชุมชนขนาดใหญ่ (F1)
☐ โรงพยาบาลชุมชน (F2)
☐ โรงพยาบาลชุมชนขนาดเล็ก (F3)

7. โปรดทำเครื่องหมาย (✓) หน้าช่องของตำแหน่งหัวหน้างานที่มีอยู่ในโรงพยาบาลของท่าน (ตอบได้มากกว่า 1 ข้อ)
☐ หัวหน้างานเภสัชกรรมบริการผู้ป่วยนอก
☐ หัวหน้างานเภสัชกรรมบริการผู้ป่วยใน
☐ หัวหน้างานเภสัชกรรมการผลิต
☐ หัวหน้างานบริหารเภสัชภัณฑ์หรือหัวหน้างานบริหารเวชภัณฑ์
☐ หัวหน้างานเภสัชกรรมชุมชนหรือหัวหน้างานคุ้มครองผู้บริโภค
☐ หัวหน้างานสารสนเทศ
☐ หัวหน้างานอื่นๆ โปรดระบุ.....

8. ท่านเคยได้รับการพัฒนาเกี่ยวกับภาวะผู้นำ โดยการได้รับการอบรม/สัมมนา/ประชุมวิชาการก่อนขึ้นรับตำแหน่งหรือไม่

☐ เคย (ทำข้อ 8.1) ☐ ไม่เคย (ข้ามไปทำข้อ 9)

8.1 โปรดเลือกเรื่องที่ท่านเคยได้รับการพัฒนาเกี่ยวกับภาวะผู้นำ โดยการได้รับการอบรม/สัมมนา/ประชุมวิชาการ (ภายในระยะเวลา 5 ปี ย้อนหลัง) (ตอบได้มากกว่า 1 ข้อ)

โปรดทำเครื่องหมาย ✓	ชื่อโปรแกรมหรือกิจกรรมที่เข้าร่วม	ระยะเวลาที่เข้าร่วม (วัน)
	ผู้บริหารการสาธารณสุขระดับต้น (ผบต.) จัดโดย วิทยาลัยนักบริหารสาธารณสุข สถาบันพระบรมราชชนก สำนักงาน ปลัดกระทรวงสาธารณสุข	
	ผู้บริหารการสาธารณสุขระดับกลาง (ผบก.) วิทยาลัยนักบริหารสาธารณสุข สถาบันพระบรมราชชนก สำนักงานปลัดกระทรวงสาธารณสุข	
	หลักสูตรผู้บริหารระดับสูง (ส.นบส.) วิทยาลัยนักบริหารสาธารณสุข สถาบันพระบรมราชชนก สำนักงานปลัดกระทรวงสาธารณสุข	
	หลักสูตรนักบริหารระดับสูง: ผู้นำที่มีวิสัยทัศน์และคุณธรรม (นบส.1) การพัฒนานักบริหารระดับสูงจัดโดย สำนักงาน ก.พ.	
	หลักสูตรพัฒนานักบริหารระดับสูง: ผู้บริหารส่วนราชการ (นบส.2) จัดโดย สำนักงาน ก.พ.	
	การพัฒนาผู้นำคลื่นลูกใหม่ในราชการไทย จัดโดย สำนักงาน ก.พ.	
	หลักสูตรการบริหารทรัพยากรบุคคลภาครัฐแนวใหม่ จัดโดย สำนักงาน ก.พ.	
	การพัฒนาผู้นำในวิชาชีพเภสัชกรรม: ความท้าทายใหม่ในศตวรรษหน้า จัดโดย มหาวิทยาลัยขอนแก่น	
	การประชุมเกี่ยวกับการพัฒนาภาวะผู้นำที่จัดโดย สำนักงานปลัดกระทรวงสาธารณสุข (Module System) ประจำปี	
	หลักสูตรผู้บริหารโรงพยาบาลจัดโดยคณะแพทย์ศาสตร์ รพ.รามาธิบดี	
	ธรรมาภิบาลของผู้บริหารระดับกลาง จัดโดยสถาบันพระปกเกล้า	
	หลักสูตร Mini MBA for Health Management จัดโดยคณะแพทย์ศาสตร์ศิริราชพยาบาล	
	หลักสูตรพัฒนาผู้บริหาร Mini MBA โดย สถาบันบัณฑิตพัฒนบริหารศาสตร์ (นิด้า)	

โปรดทำเครื่องหมาย ✓	ชื่อโปรแกรมหรือกิจกรรมที่เข้าร่วม	ระยะเวลาที่เข้าร่วม (วัน)
	หลักสูตรการบริหารงานบริการสาธารณสุขและโรงพยาบาล (Mini MBA in Health) จัดโดยคณะแพทย์ศาสตร์จุฬาลงกรณ์มหาวิทยาลัย	
	การอบรม/สัมมนา/ประชุมวิชาการเกี่ยวกับการพัฒนาภาวะผู้นำที่จัดขึ้นเองภายในหน่วยงานของท่าน(เช่นการอบรมทีมบริหารของโรงพยาบาล)	

9. โปรดเลือกเรื่องที่ท่านเคยได้รับการพัฒนาเกี่ยวกับภาวะผู้นำ โดยการพัฒนาในขณะปฏิบัติงาน (เช่น การสอนงาน, สอนแนะ, การมอบหมายงาน, การมีพี่เลี้ยง, การรักษาการแทน, การเรียนรู้จากการปฏิบัติงาน) ภายในระยะเวลา 5 ปี ย้อนหลัง (ตอบได้มากกว่า 1 ข้อ)

โปรดทำเครื่องหมาย ✓	ชื่อโปรแกรมหรือกิจกรรมที่เข้าร่วม	ระยะเวลาที่เข้าร่วม (วัน)
	การมอบหมายงาน (Delegation)	
	การสอนงาน (Mentoring)	
	การสอนแนะ (Coaching)	
	การหมุนเวียนงาน (Job Rotation)	
	การเลื่อนตำแหน่ง (Get a promotion)	
	การมอบหมายอำนาจหน้าที่, การให้รักษาการแทน (Deputy)	
	การขยายปริมาณงาน,การเพิ่มคุณภาพงาน (Challenging Job Assignments)	
	การเรียนรู้ด้วยการลงมือปฏิบัติ (Action Learning)	
	การได้รับการประเมินสมรรถนะแบบ 360 องศา (Multisource Feedback)	
	การทัศนศึกษาดูงาน (Field Study)	
	กิจกรรมนันทนาการนอกสถานที่ (Outdoor challenge programs)	
	การสร้างเครือข่าย (Networking)เพื่อพัฒนาภาวะผู้นำ	
	การทำงานร่วมกับสหสาขาวิชาชีพ (Work with the interdisciplinary team)	
	อื่นๆ (โปรดระบุ…….....……)	
	ท่าน ไม่เคย ได้รับการพัฒนาเกี่ยวกับภาวะผู้นำโดยการพัฒนาในขณะปฏิบัติงาน	

10. โปรดเลือกเรื่องที่ท่านเคยได้รับการพัฒนาเกี่ยวกับภาวะผู้นำ โดยการเรียนรู้จากตนเองและการพัฒนาตนเอง (เช่นการฝึกอบรมโดยสื่อทางไกล, หลักสูตรการเรียนรู้ผ่านสื่ออิเล็กทรอนิกส์, ศึกษาจากหนังสือ, DVD, CD, การจัดทำแผนพัฒนาตนเอง) (ภายในระยะเวลา 5 ปี ย้อนหลัง) (ตอบได้มากกว่า 1 ข้อ)

โปรดทำเครื่องหมาย ✓	ชื่อโปรแกรมหรือกิจกรรมที่ใช้ในการพัฒนาตนเอง	ระยะเวลาที่เข้าร่วม (วัน)
	การฝึกอบรมโดยสื่อทางไกล (Distance Learning)	
	หลักสูตรการเรียนรู้ผ่านสื่ออิเล็กทรอนิกส์ (E-Learning)	
	ศึกษาจากหนังสือ,ตำราเรียน,วารสารวิชาการต่างๆ	
	ศึกษาจาก DVD, CD	
	ศึกษาจาก Internet	
	การจัดทำแผนพัฒนาตนเอง (Individual Development Plan IDP)	
	กิจกรรมพัฒนาจิต (Mind Development Activity)สำหรับการเป็นผู้นำ	
	การใช้บทเรียนคอมพิวเตอร์ช่วยสอน (Computer assisted Instruction)	
	อื่นๆ (โปรดระบุ……) **(โปรดระบุ……)** **(โปรดระบุ……)**	
	ท่าน <u>ไม่เคย</u> ได้รับการพัฒนาเกี่ยวกับภาวะผู้นำ โดยการเรียนรู้จากตนเองและการพัฒนาตนเอง	

ส่วนที่ 2 แบบสอบถามภาวะผู้นำที่มีประสิทธิผลของหัวหน้ากลุ่มงานเภสัชกรรมโรงพยาบาลสังกัดสำนักงานปลัดกระทรวงสาธารณสุข

คำชี้แจง

โปรดทำเครื่องหมาย ✓ ลงในช่องว่างที่ท่านพิจารณาแล้วเห็นว่าตรงกับพฤติกรรมที่ท่านแสดงออกมากที่สุดเพียงคำตอบเดียว แบบสอบถามนี้เป็นการประเมินภาวะผู้นำของหัวหน้างาน โดยในแต่ละข้อ เป็นข้อความที่บ่งถึงพฤติกรรมของหัวหน้างาน ซึ่งแสดงออกทางด้านภาวะผู้นำที่มีประสิทธิผล คำตอบดังกล่าวไม่ได้ประเมินความผิดถูกของการปฏิบัติ แต่เป็นการศึกษาภาวะผู้นำของท่านที่ได้ปฏิบัติจริงในหน่วยงาน โดยแบ่งระดับความเป็นจริงของพฤติกรรม ออกเป็น 5 ระดับ คือ

มากที่สุด	ข้อความนั้นตรงกับตัวท่านมากที่สุดหรือได้มีการปฏิบัติตรงกับข้อความนั้นเป็นประจำทุกครั้งอย่างสม่ำเสมอ
มาก	ข้อความนั้นตรงกับตัวท่านมากหรือได้มีการปฏิบัติตรงกับข้อความนั้นเกือบทุกครั้ง
ปานกลาง	ข้อความนั้นตรงกับตัวท่านปานกลางหรือได้มีการปฏิบัติตรงกับข้อความนั้นเป็นบางครั้ง
น้อย	ข้อความนั้นตรงกับตัวท่านน้อยหรือได้มีการปฏิบัติตรงกับข้อความนั้นน้อยครั้ง
น้อยที่สุด	ข้อความในประโยคนั้นตรงกับตัวท่านน้อยที่สุดหรือได้มีการปฏิบัติตรงกับข้อความนั้นน้อยครั้งมากหรือไม่ได้ ปฏิบัติเลย

1) ด้านการมีวิสัยทัศน์ (Leadership vision)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1. ท่านได้ให้ข้อมูลแก่ผู้ใต้บังคับบัญชาถึงแนวโน้มการปฏิบัติงานในอนาคตของหน่วยงาน					
2. ท่านสามารถชี้แนะแนวทางการทำงานที่ดีแก่ผู้ใต้บังคับบัญชาอันจะทำให้บรรลุเป้าหมายของหน่วยงานที่กำหนดได้					
3. ท่านสามารถวิเคราะห์ปัญหาสำคัญที่เกิดขึ้นของหน่วยงานได้					
4. ท่านสามารถวิเคราะห์จุดแข็ง จุดอ่อนของหน่วยงานได้					
5. ท่านสามารถวางแผนการปฏิบัติงานได้สอดคล้องกับวิสัยทัศน์ขององค์การ					
6. ท่านสามารถโน้มน้าวผู้ใต้บังคับบัญชาให้ร่วมกันทำงานเพื่อดำเนินการไปสู่เป้าหมายที่กำหนดไว้ร่วมกัน					
7. ท่านเป็นผู้ที่มองการณ์ไกล คาดการณ์อนาคตในการทำงานทั้งระยะสั้น และระยะยาวได้					
8. ท่านมีเป้าหมายในการทำงานที่เหมาะสมกับการเปลี่ยนแปลงที่เกิดขึ้น					

1) ด้านการมีวิสัยทัศน์ (Leadership vision)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
9. ท่านสามารถถ่ายทอดนโยบายการดูแลผู้ป่วยด้านยาให้กับลูกน้องของท่านได้เป็นอย่างดี					
10. ท่านได้กำหนดวิธีการปฏิบัติงานในหน่วยงานได้อย่างเหมาะสม					
11. ท่านสามารถมอบหมายงานให้ผู้ใต้บังคับบัญชาได้อย่างเหมาะสมทั้งในภาวะปกติและภาวะขาดแคลนบุคลากร					
12. ท่านมอบหมายงานได้เหมาะสมตามความรู้ความสามารถของบุคลากรในหน่วยงาน					
13. ท่านสามารถจัดการกับความขัดแย้งได้เมื่อเกิดปัญหาระหว่างผู้ร่วมงานและหน่วยงาน					
14. ท่านสามารถจูงใจให้ผู้ใต้บังคับบัญชาเห็นความสำคัญและคุณค่าของงานที่ทำได้					
15. ท่านสามารถเจรจาต่อรองให้ได้ในสิ่งที่หน่วยงานต้องการตามความเหมาะกับสภาวการณ์					
16. ท่านสามารถโน้มน้าวให้ผู้ร่วมงานให้ปฏิบัติตามในสิ่งที่ต้องการได้					

2) ด้านคุณลักษณะผู้นำที่เป็นแบบอย่าง (Exemplary leadership characteristic)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1. ท่านให้เกียรติผู้ร่วมงานอยู่เสมอ					
2. ท่านไม่เปิดเผยความลับของผู้ใต้บังคับบัญชา					
3. ท่านมีความยืดหยุ่นในการทำงานอย่างเหมาะสม					
4. ท่านรู้จักให้อภัยผู้ใต้บังคับบัญชาเมื่อทำงานผิดพลาด					
5. ท่านยอมรับฟังข้อมูลป้อนกลับจากผู้ร่วมงาน					
6. ท่านยิ้มแย้มแจ่มใส มีมนุษยสัมพันธ์ดี					
7. ท่านมีความเป็นกันเองกับผู้ร่วมงานอย่างสม่ำเสมอ					

2) ด้านคุณลักษณะผู้นำที่เป็นแบบอย่าง (Exemplary leadership characteristic)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
8. ท่านเอาใจใส่ ดูแล ผู้ใต้บังคับบัญชาอย่างสม่ำเสมอและทั่วถึง					
9. ท่านประเมินผลการปฏิบัติงานของผู้ใต้บังคับบัญชาได้อย่างยุติธรรม					
10. ท่านรับฟังความคิดเห็นของผู้ใต้บังคับบัญชาก่อนตัดสินใจแก้ไขปัญหาเสมอ					
11. ท่านพูดจาไพเราะ ใช้คำสุภาพกับผู้ใต้บังคับบัญชาอย่างสม่ำเสมอ					
12. ท่านเปิดโอกาสให้ผู้ใต้บังคับบัญชาแสดงความคิดเห็นในการปฏิบัติงานได้ตลอดเวลา					
13. ท่านรู้จุดอ่อนของตนเอง และพยายามปรับปรุงตนเองให้ดีขึ้นอยู่เสมอ					
14. ท่านสามารถสื่อสารให้ผู้อื่นเข้าใจได้ถูกต้องตามข้อเท็จจริง					
15. ท่านมีความร่าเริงแจ่มใส อารมณ์ขันในขณะปฏิบัติงานได้อย่างเหมาะสม					
16. ท่านพิทักษ์สิทธิประโยชน์แก่ผู้ป่วยและผู้ใต้บังคับบัญชาได้อย่างถูกต้องเหมาะสม					
17. ท่านเข้าใจและตอบสนองความต้องการของผู้ใต้บังคับบัญชาในขอบเขตที่เหมาะสม					
18. ท่านสามารถประสานงานระหว่างหน่วยงานได้อย่างมีประสิทธิภาพ					
19. ท่านสามารถทำงานร่วมกับทีมสหสาขาได้เป็นอย่างดี					

3) ด้านการเป็นผู้นำทางนวัตกรรมคุณภาพและเทคโนโลยีสารสนเทศ (Quality innovation and information technology)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1. ท่านสามารถใช้คอมพิวเตอร์และเทคโนโลยีสารสนเทศในการปฏิบัติงานได้อย่างเหมาะสม					
2. ท่านมีความรู้ ความสามารถในการทำวิจัยทางเภสัชกรรม					
3. ท่านมีทักษะการใช้ภาษาอังกฤษ ในการปฏิบัติงานเป็นอย่างดี					
4. ท่านสามารถประยุกต์ใช้ความรู้ด้านธุรกิจ เช่น การเงิน, การบัญชี,การบริหารจัดการ ในการปฏิบัติงานได้					
5. ท่านนำความรู้ที่ได้จากผลการวิจัยทางการสาธารณสุขมาปรับใช้ในการปฏิบัติงานได้อย่างเหมาะสม					
6. ท่านสามารถเสนอแนวทางจากการทำวิจัยทางเภสัชกรรมพัฒนาคุณภาพงานในหน่วยงานได้					
7. ท่านสามารถค้นคิดหรือนำนวัตกรรมใหม่ๆ มาปรับปรุงการปฏิบัติงานในหน่วยงานได้					
8. ท่านนำแนวคิดการพัฒนางานคุณภาพใหม่ๆ มาประยุกต์ใช้ในการปฏิบัติในหน่วยงานได้					

4) ด้านคุณลักษณะทางวิชาชีพที่เป็นแบบอย่าง (Exemplary professional characteristic)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1. ท่านเป็นผู้แต่งกายสุภาพ เรียบร้อยเหมาะสมกับการทำงานในวิชาชีพ					
2. ท่านมีสุขภาพกาย จิต แข็งแรงเหมาะสมกับการปฏิบัติงานในวิชาชีพ					
3. ท่านมีบุคลิกสง่างาม เหมาะสมกับการเป็นผู้นำของวิชาชีพ					
4. ท่านจัดงานเลี้ยง สังสรรค์หรือกิจกรรมอื่นๆ ในหน่วยงานตามวาระหรือเทศกาลต่างๆ ได้อย่างเหมาะสมเพื่อสร้างขวัญกำลังใจในการทำงาน					

4) ด้านคุณลักษณะทางวิชาชีพที่เป็นแบบอย่าง (Exemplary professional characteristic)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
5. ท่านไม่แสดงความรำคาญเมื่อผู้ป่วยและญาติเรียกร้องการบริการเพิ่มขึ้นจากที่กำหนดไว้					
6. ท่านให้รางวัลแก่ผู้ใต้บังคับบัญชาที่ปฏิบัติงานได้บรรลุผลสำเร็จ					
7. ท่านสละเวลามาทำงานให้กับหน่วยงานเสมอเมื่อมีเหตุจำเป็น					

5) ด้านการมีพลังและแรงขับในตน (Power and drive)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1. ท่านมีความตั้งใจและมีความพยายามที่จะเอาชนะอุปสรรคของการปฏิบัติงาน					
2. ท่านกล้าตัดสินใจแก้ปัญหาการปฏิบัติงานได้อย่างเหมาะสม					
3. ท่านกล้าเผชิญสถานการณ์การทำงานที่ยากลำบากได้อย่างเหมาะสม					
4. ท่านมีความมุ่งมั่นในการปฏิบัติงานให้บรรลุเป้าหมาย					
5. ท่านมีความใส่ใจ กระตือรือร้นในการปฏิบัติงานตลอดเวลา					

6) ด้านสนับสนุนส่งเสริมการพัฒนาผู้ตาม (Support and promote follower's development)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
1. ท่านสนับสนุนให้ผู้ใต้บังคับบัญชาได้ ค้นคว้าหาความรู้อยู่เสมอ					
2. ท่านส่งบุคลากรในหน่วยงานไปอบรมวิชาการที่เกี่ยวข้องกับการปฏิบัติงานอยู่เสมอ					
3. ท่านสามารถกระตุ้นให้ผู้ใต้บังคับบัญชาค้นหาวิธีการทำงานที่เหมาะสมมาพัฒนาการทำงาน					

6) ด้านสนับสนุนส่งเสริมการพัฒนาผู้ตาม (Support and promote follower's development)	ระดับความเป็นจริง				
	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
4. ท่านสนับสนุนให้ผู้ใต้บังคับบัญชาได้ศึกษาต่อเนื่องในสาขาที่เกี่ยวข้องกับการปฏิบัติงาน					
5. ท่านส่งเสริมการทำงานเป็นทีมในหน่วยงานได้อย่างเหมาะสม					

APPENDIX D

DOCUMENTARY PROOF OF ETHICAL CLEARANCE

Certificate of Exemption

COE. No. MU-DT/PY-IRB 2014/039.1710

Documentary Proof of Faculty of Dentistry/Faculty of Pharmacy, Mahidol University, Institutional Review Board

Title of Project:	Leadership and Leadership Development for Head of Pharmacy Department: A Case of Hospitals under the Ministry of Public Health, Thailand.
Project Number:	MU-DT/PY-IRB 2014/PY089 .
Principle Investigator:	Mrs.Yaowanun Punyaprateep
Name of Institution:	Faculty of Pharmacy
Date of Recommendation:	October 17, 2014

Faculty of Dentistry/Faculty of Pharmacy, Mahidol University, Institutional Review Board is in full compliance with International Guidelines for Human Research Protection such as Declaration of Helsinki, the Belmont Report, CIOMS Guidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

Signature of Chair:

(Associate Professor Dr.Choltacha Harnirattisai)

Chair

Office of Faculty of Dentistry/Faculty of Pharmacy, Mahidol University, Institutional Review, Board
The 50th Anniversary of HRH Princess Mahachakri Sirindhorn Building, 11st Floor, Faculty of Dentistry,
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APPENDIX E

THE MEANS PER ITEMS

Table Appendix E1 Number and percentage of Leadership development classified by item Formal training method

Leadership development methods	Frequency	Percentage
1.First-Line Public Health Administrators Training Program	68	24.10
2. Middle Level Public Health Administrators Training Program	27	9.60
3. Chief Information Officer	1	0.40
4. The Civil Service Executive Development Program: Visionary and Moral Leadership	0	0.00
5. Senior Executive Development Program	2	0.60
6. New Wave Leadership Development Program	3	1.00
7. New Public Management: NPM	10	3.60
8. Systems Thinking in Pharmacy Management: Power By Pharm KKU	18	6.70
9. Module System: Leadership Development in Pharmacy Management	38	13.60
10. Leadership Forum for Health Professional Education Development	11	4.00
11 Mini MBA Courses Power by Faculty of Medicine Ramathibodi Hospital	3	1.00
12. Good Governance Courses Power By King prajadhipok's Institute	1	0.40

Table Appendix E1 Number and percentage of Leadership development classified by item Formal training method (cont.)

Leadership development methods	Frequency	Percentage
13. Mini MBA for Health Management Courses Power by Faculty of Medicine Siriraj Hospital	2	0.60
14. Mini MBA Courses Power by NIDA	3	1.00
15. .Mini MBA in Health Courses Power by Faculty of Medicine Chulalongkorn University	2	0.60
16. Leadership Development Programs in each hospitals	63	22.50
17.Other	29	10.30
Total	281	100.00

Table Appendix E2 Mean and standard deviation of Leadership development classified by item Formal training method

Leadership development methods	Mean	SD
1.First-Line Public Health Administrators Training Program	7.88	14.64
2. Middle Level Public Health Administrators Training Program	3.89	12.50
3. Chief Information Officer	0.03	0.50
4. The Civil Service Executive Development Program: Visionary and Moral Leadership	0.00	0.00
5. Senior Executive Development Program	0.43	8.19
6. New Wave Leadership Development Program	0.12	2.05
7. New Public Management: NPM	0.75	10.95
8.Systems Thinking in Pharmacy Management: Power By Pharm KKU	0.40	1.63
9. Module System: Leadership Development in Pharmacy Management	0.97	3.15

Table Appendix E2 Mean and standard deviation of Leadership development classified by item Formal training method (cont.)

Leadership development methods	Mean	SD
10. Leadership Forum for Health Professional Education Development	0.22	1.35
11. Mini MBA Courses Power by Faculty of Medicine Ramathibodi Hospital	0.35	5.60
12.Good Governance Courses Power By King prajadhipok's Institute	0.00	0.04
13.Mini MBA for Health Management Courses Power by Faculty of Medicine Siriraj Hospital	0.19	2.95
14. Mini MBA Courses Power by NIDA	0.04	0.52
15. Mini MBA in Health Courses Power by Faculty of Medicine Chulalongkorn University	0.26	5.40
16. Leadership Development Programs Power by each hospitals	1.08	3.07
17.Other	0.92	4.67

Table Appendix E3 Mean and standard deviation of Leadership development classified by item Developmental activities method

Leadership development methods	Mean	SD
1.Delegation	1.22	3.69
2.Mentoring	1.64	6.29
3.Coaching	1.69	0.41
4.Job Rotation	0.78	5.32
5.Get a promotion	0.41	1.96
6.Deputy	0.98	4.63
7.Challenging Job Assignment	0.68	2.73
8.Action Learning	2.44	6.52

Table Appendix E3 Mean and standard deviation of Leadership development classified by item Developmental activities method (cont.)

Leadership development methods	Mean	SD
9.Multisource Feedback	0.52	1.72
10.Field Study	1.60	3.46
11.Outdoor Challenge Programs	1.14	2.90
12.Networking	0.82	2.91
13.Work with the Interdisciplinary Team	2.01	4.88

Table Appendix E4 Mean and standard deviation of Leadership development classified by item Self-help activities method

Leadership development methods	Mean	SD
1.Distance Learning	0.12	1.12
2.E- Learning	1.26	7.96
3.Book, Textbook	3.81	7.33
4.DVD, CD	0.31	1.41
5.Internet	3.73	7.88
6.Individual Development Plan IDP	0.62	2.46
7.Mind Development Activity	0.57	2.34
8.Computer assisted Instruction	0.06	0.51
9.Other	0.10	1.07

BIOGRAPHY

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