

## The Importance of Organizational Support for the Management of Health Projects by the Chiefs of Health Centers at Chaiyaphum Province.

### การสนับสนุนจากองค์กรที่มีผลต่อการบริหารโครงการสุขภาพของหัวหน้าสถานีนอามัย ในจังหวัดชัยภูมิ

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#### บทคัดย่อ

การวิจัยเชิงพรรณนาแบบภาคตัดขวาง (Cross - Sectional Descriptive Research) มีวัตถุประสงค์เพื่อศึกษาคูณลักษณะส่วนบุคคลและการสนับสนุนจากองค์กรที่มีผลต่อการบริหารโครงการสุขภาพของหัวหน้าสถานีนอามัยในจังหวัดชัยภูมิ ตัวอย่างที่ใช้ในการศึกษาค้นคว้าครั้งนี้ คือ หัวหน้าสถานีนอามัย จำนวน 16 อำเภอ ในจังหวัดชัยภูมิ จำนวน 100 คน โดยการสุ่มตัวอย่างแบบเป็นระบบ (Systematic Random Sampling) เครื่องมือที่ใช้ในการวิจัย คือ แบบสอบถามสำหรับเชิงปริมาณ และแบบสัมภาษณ์เจาะลึกสำหรับเชิงคุณภาพ กับกลุ่มตัวอย่างที่มีผลงานเด่นและสามารถให้ข้อมูลเกี่ยวกับการบริหารโครงการสุขภาพของผู้ที่เกี่ยวข้อง เช่น สาธารณสุขอำเภอ ผู้ช่วยสาธารณสุขอำเภอ และหัวหน้าสถานีนอามัย จำนวน 9 คน ดำเนินการเก็บรวบรวมข้อมูลระหว่างวันที่ 15 พฤศจิกายน 2552 ถึงวันที่ 30 ธันวาคม 2552 วิเคราะห์ข้อมูลด้วยโปรแกรมคอมพิวเตอร์สำเร็จรูป สถิติที่ใช้ในการวิเคราะห์ ได้แก่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ค่ามัธยฐาน ค่าต่ำสุด ค่าสูงสุด ค่าสัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน และการวิเคราะห์ถดถอยพหุคูณแบบขั้นตอน (Stepwise Multiple Regression Analysis)

ผลการศึกษาพบว่า ส่วนใหญ่เป็นเพศหญิง (ร้อยละ 54.0) ซึ่งจากตัวอย่างทั้งหมด ร้อยละ 52.0 มีอายุระหว่าง 41-50 ปี และมีอายุเฉลี่ย 46.0 ปี (S.D.= 6.23) อายุต่ำสุด 33 ปี อายุสูงสุด 59 ปี สถานภาพสมรสคู่ ร้อยละ 85.0 ระดับการศึกษา ระดับปริญญาตรีหรือเทียบเท่า ร้อยละ 86.0 รายได้ระหว่าง 20,001-30,000 ร้อยละ 66.0 ระยะเวลาดำรงตำแหน่งของหัวหน้าสถานีนอามัย 1 - 10 ปี ร้อยละ 49.0 เฉลี่ย 11.67 ปี (S.D. = 8.97) ระยะเวลาดำรงตำแหน่งของหัวหน้าสถานีนอามัย ต่ำสุด 1 ปี สูงสุด 38 ปี

การสนับสนุนจากองค์กร พบว่า ในภาพรวมกลุ่มตัวอย่างมีการสนับสนุนจากองค์กรอยู่ในระดับระดับมาก ค่าเฉลี่ย 3.66 (S.D. = 0.42) ผลการดำเนินงานการบริหารโครงการสุขภาพภาพรวมอยู่ในระดับมาก ค่าเฉลี่ย 3.97 (S.D. = 0.47) การสนับสนุนจากองค์กร มีความสัมพันธ์ระดับปานกลางทางบวกกับการบริหารโครงการสุขภาพอย่างมีนัยสำคัญทางสถิติ ( $r=0.684$ ,  $p\text{-value}<0.001$ ) และตัวแปรที่สามารถร่วมพยากรณ์การบริหารโครงการสุขภาพ ได้แก่ ปัจจัยด้านข้อมูลข่าวสาร และปัจจัยด้านงบประมาณ อย่างมีนัยสำคัญทางสถิติ ที่ระดับ 0.05 ซึ่งปัจจัยทั้ง 2

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ด้าน สามารถร่วมกันพยากรณ์การบริหารโครงการสุขภาพของหัวหน้าสถานีนอมนัย ในจังหวัดชัยภูมิ ได้ร้อยละ 56.5 ปัญหาและอุปสรรคที่พบส่วนใหญ่ ร้อยละ 71.64 เรื่อง การสนับสนุนจากองค์กรด้านบุคลากร

## ABSTRACT

This study was a cross-sectional descriptive research. Its objective was to investigate demographic characteristics and effects of supports from the upper organizations on health program management of the chiefs of health centers located in Chaiyaphum province. The population of this study was chiefs of 16 health centers in Chaiyaphum province, for the total of 167 persons. Sample size was calculated from Cohen's multiple regression calculation and 100 subjects were drawn by systematic random sampling. The research tool included the developed quantitative questionnaire and in-depth qualitative interview form. The validity of the content was approved by 3 experts and tried out in 30 sample subjects residing in Khon Kaen province. The coefficient of the developed questionnaire was measured for validity by Cronbach's Alpha and gained 0.96. The data were collected by the questionnaire from 100 subjects and by in-dept interview of 9 subjects, who had outstanding performance in the management and were eligible to provide information about the health program of the chiefs of health centers. Data collection was carried out during November 15 - December 30, 2009. Hundred questionnaires were responded. And, the data were analyzed by a computer package program and statistically expressed by percentage, means, standard deviation, median, minimal value, maximal value, and Pearson's coefficient of correlation. Multiple regression analysis was conducted.

According to the study, the majority of the subjects (54.0%) were female. They were between 41-50 years old (52.0%). Their average age was 46.0 years (S.D. = 6.23), in which the youngest subject was 33 years old, while the oldest one was 59 years old. Most of the subjects (85.0%) were married. They completed bachelor's degree or equivalent (86.0%). The average income was 20,001 - 30,000 baht (66.0%). The service term as chief of a health station varied from 1-10 years (49.0%) with an average of 11.67 years (S.D. = 5.76). The shortest term of being the chief was one year, while the longest term was 38 years.

It was found from the study that the level of effect of support from the organizations was high, accounting for 3.66 (S.D. = 0.42). The performance of the health program management was leveled high, accounting for 3.97 (S.D. = 0.47). The supports from the organizations had positive effect on health program management at moderate level with statistical significance of 0.05 ( $r = 0.684$ ,  $p\text{-value} < 0.001$ ). Moreover, the co-variables that could predict health program management included information and budget with statistical significance of 0.05. The percentage of these factors that could somehow predict performance of health program management of the subjects was 56.5%. However, problems and obstacles found in the management involved personnel supports from the organizations.

**คำสำคัญ:** การสนับสนุนจากองค์กร, การบริหารโครงการสุขภาพ

**Keywords:** Effects of Supports from Organizations, The Management of Health Projects.

## Introduction

During the past decade, project management has played a vital role in the operation system of both public and private organizations. It has been one of the most powerful tools for organization development in terms of planning, organization management, governing and controlling procedures, as well as maximizing human resources utility. Organization management method was first developed in the United States, aiming to concurrently accomplish objectives of various projects which were impossible through conventional methods. This new method was, thus, adopted by a wide range of organizations, public and private, to be able to achieve maximum efficiency and effectiveness (Suwat, 1996).

Several plans have been developed in Thailand for many years at the macro level, with projects in accordance to those plans either at the national or local level (Suranart, 1990). During the Nation Economic Development Plan No.10 (2007-2011), Thailand expected to become the "Green and Happiness Society". Therefore, plans and projects during the period has been to utilize all kinds of resources, e.g. human, funds, and materials at its maximum and evenly distribute throughout the country (Ministry of Public Health, 2009)

Currently, project management methods have commonly been implemented in many organizations and societies, aiming to better achieve their objectives compared to the routine management. This is because project management is the most powerful and effective tool which, when applied to complicated or technology-related processes, yields maximum outcome from the given limited resources under certain constraints. Some of the constraints are time, internal, inter-departmental and external environments. Its effectiveness has been proven throughout organizations

in industrial sector, private sector, as well as public sector (Mayuree, 2008). Project management is a systematic process consisting of three major phases: project initiation, project implementation, and project completion. Under each step, there are standard procedures designed to make each of the step complete (Prachak, 2007).

Health centers are the primary medical and public health service units responsible for providing basic continuous healthcare service to the people, as well as continuously connecting several healthcare activities together. It operates in A holistic mic with easy access for the people. The services provided are mostly consultancy for patients to seek further specialists, in order to promote good health and prevent physical, mental, and social problems, with involvement from the locals. Chiefs of health centers play an important role in locally implementing the policy of the Ministry of Public Health (Ministry of Public Health, 2007). There are, in fact, many factors influencing the performance of the chiefs. According to Schermerhorn et al. (Schermerhorn and Osborn, 2003), the Individual Performance Factors consisted of: 1) Individual Attributes; 2) Work Effort; 3) Organizational Support. Other than those factors, administrative resources or basic managerial input were also considered to be influencing an individual performing these following 4 activities: 1) Human resources, 2) Financial resources, 3) Physical resources, and 4) Information resources, which are information used for decision making (Griffin, 1993).

From the standard performance evaluation, it was found that, during the fiscal year of 2008, evaluated health centers did not prepare any project summary reports and did not report any problems or issues from the projects (Public Health Office, Chaiyaphum, 2008). In addition, interviews regarding health projects management of chiefs of health centers

revealed that the projects were done without any systematic procedures. There was also no evaluation before or after the project completion (Surat, 2009).

Given the background situation mentioned above, along with the fact that we were currently working in these health centers, the authors were interested in studying the influence of individual attributes and organizational supports on the health project management in Chaiyaphum province. Moreover, it is also important to realize and acknowledge current problems and obstacles during the project operation.

## Objective

To study the individual attributes and organizational supports which influence the management of health projects by chiefs of health centers in Chaiyaphum province.

## Methodology

The data for this research represented the total of 167 chiefs of health centers in Chaiyaphum province during fiscal year 2009, October 2008 - September 2009 Chaiyaphum Provincial Health Office(2009)

Sample size in the multiple regression analysis was done according to the method by Cohen (1988) as follow

Formula

$$n = \frac{\lambda(1-R^2_{Y/X})}{(R^2_{Y/X})}$$

Where  $n$  = Sample Size

$\lambda$  = Value in Cohen's Table, determined by

- Power of Test assumed at 0.80
- $\alpha$  assumed at 0.05

-  $v$  from  $n = N - u - 1$

Then use  $v$  to determine  $\lambda$  in Cohen's Table

Where  $N$  = Population Size = 167 persons

$u$  = Number of Variables in Focus = 10 variables

Use  $v$  to look up Cohen's Table (Power of Test = 0.08,  $\alpha$  = 0.05,  $v$  = 167 or  $\infty$ ) We get  $\lambda$  = 17.8

$R^2_{Y/X}$  = The Coefficient in the regression equation. This variable can be based on previous similar research or researcher's assumption. It determines, at the very least, how all the independent variables in the equation can explain the variation of dependent variables. For example,  $R^2 = 0.01$  means the independent variable in the equation can explain the variation of dependent variables at least 10%. In this research study, the  $R^2$  represents the overall variables of the management of health projects from studying health project management by chiefs of health center in the Public Health District 10, which yielded  $R^2 = 0.51$ (Prachak, 2007)

Calculation

$$\begin{aligned} n &= \frac{17.8(1-0.51)}{0.51} \\ &= 17 \end{aligned}$$

The sample size suggested by the calculation was 17 samples which was rather small, thus insufficient and inappropriate for this research. Therefore, we use the sample size calculation by Nunnally & Bernstein (Arun, 2004) using In the calculation of sample size using multiple regression models by Nunnally & Bernstein suggested that, for each of the independent variable, there should be at least 10 samples. In this research, there were 10 independent variables. The individual attributes consist of sex, age, marital status, education, income, term of service as chief of health center, while the

organizational supports consist of support in human resources, budget, equipments and supplies, and information. Consequently, the appropriate sample size would be 100 samples.

**Randomization** The quantitative samples were the group of chiefs of health centers from the systematic random sampling method of 100 samples. The qualitative sample group was through purposive selection method and through an in-depth interview. This group of samples was selected from the key informants, e.g. Public Health, Public Health Assistant for Academic Affairs, The Chiefs of Health Centers by selecting 3 samples in each position, for the total of 9 samples.

**Data Collection Equipments** Questionnaires were given to 100 samples and in-depth interview were conducted on 9 samples. The data collection was during November 15<sup>th</sup>, 2009 to December 30<sup>th</sup>, 2009.

the data were analyzed by a computer package program and statistically expressed by percentage, means, standard deviation, median, minimal value, maximal value, and Pearson's coefficient of correlation. Multiple regression analysis was conducted.

**Data Interpretation**

1. Organizational supports, i.e. human resources, budget, equipments and supplies, and

information supports, can be rated into 5 levels: Highest, High, Moderate, Low, Lowest. These rates were based on the following average score range (Samroeng & Suwan, 2004):

Definition	Average Score Range
Highest Level of Performance	4.50-5.00
High Level of Performance	3.50-4.49
Moderate Level of Performance	2.50-3.49
Low Level of Performance	1.50-2.49
Lowest Level of Performance	1.00-1.49

2. Health project management, i.e. project initiation, project implementation, and project completion, can also be rated into 5 levels: Highest, High, Moderate, Low, Lowest. These rates were based on the following average score range (Samroeng & Suwan, 2004):

Definition	Average Score Range
Highest Level of Performance	4.50-5.00
High Level of Performance	3.50-4.49
Moderate Level of Performance	2.50-3.49
Low Level of Performance	1.50-2.49
Lowest Level of Performance	1.00-1.49

3. Relationship with health project management by chiefs of health center in Chaiyaphum province can be rated according to the score of Coefficient of Correlations (r) by Elifson (1990), ranging from -1 to +1 as follow:

r = 0	means	No Correlation
r = - 0.01 to - 0.30 or + 0.01 to + 0.30	means	Weak Correlation
r = - 0.31 to - 0.70 or + 0.31 to + 0.70	means	Moderate Correlation
r = - 0.71 to - 0.99 or + 0.71 to + 0.99	means	Strong Correlation
r = - or + 1	means	Perfect Correlation

## Results & Discussions

### 1. Individual Attributes

The collected individual attributes of heads of health centers in Chaiyaphum Province included sex, age, marital status, income, and term of service as chief of health center. According to the study, as shown in Table 1, the majority were female (54 samples, 54.0%) with the age ranging between 41-50 years old (52 samples, 52.0%). The average age was 46.0 years old (S.D. = 6.23), while the

minimum age was 33 years old and the maximum age was 59 years old. There were 85 samples who were married (85.0%) and 86 samples with bachelor's degree (86.0%). The income ranged from 20,001-30,000 baht in 66 samples (66.0%), whereas the term of service as chief of health center ranged from 1-10 years in 49 samples (49.0%), with an average of 11.67 years (S.D. = 8.97). The shortest term of service as the chief was one year, while the longest was 38 years.

**Table 1.** Number of Samples, Percentage, Mean, and Standard Deviation of Individual Attributes of Chiefs of Health Centers in Chaiyaphum Province, categorized by Sex, Age, Marital Status, Education, Income, and Term of Service as Chief of Health Center

Individual Attributes	No. of Samples (n=100)	Percent
Sex		
Female	54	54.0
Male	46	46.0
Age (Years)		
33-40 years	23	23.0
41-50 years	52	52.0
51-59 years	25	25.0
Mean = 46.0 years, S.D. = 6.23 years, Minimum = 33 years, Maximum = 59 years		
Marital Status		
Single	1	1.0
Married	85	85.0
Widow/Divorced/Separated	14	14.0
Education		
Lower than Undergraduate Degree	12	12.0
Undergraduate Degree or Equivalent	86	86.0
Graduate Degree or higher	2	2.0
Income		
15,460 - 20,000	11	11.0
20,001 - 30,000	66	66.0
30,001 - 40,000	21	21.0
40,001 - 42,480	2	2.0
Mean = 27,709.50 Baht, S.D. = 5,500.09 Baht, Minimum = 15,460 Baht, Maximum = 42,480 Baht		

**Table 1.** Number of Samples, Percentage, Mean, and Standard Deviation of Individual Attributes of Chiefs of Health Centers in Chaiyaphum Province, categorized by Sex, Age, Marital Status, Education, Income, and Term of Service as Chief of Health Center (Cont.)

Individual Attributes	No. of Samples (n=100)	Percent
Term of Service as Chief of Health Center		
1-10 years	49	49.0
11-20 years	35	35.0
21- 30 years	14	14.0
31- 38 years	2	2.0
Mean = 11.67 years, S.D. = 8.97 years, Median = 11.0 years, Minimum = 1 year, Maximum = 38 years		

**2. Organizational Support on Health Project Management of Chiefs of Health Centers in Chaiyaphum Province**

The study revealed that the level of effect of support from organizations was high, accounting for 3.66 (S.D. = 0.42). When comparing each type of support, Information Support was leveled high

with the highest average of 3.79 (S.D. = 0.48), followed by Human Resources Support, Budget Support, and Supplies and Equipments Support with an average of 3.67 (S.D. = 0.47), 3.66 (S.D. = 0.45), and 3.52 (S.D. = 0.53), respectively. See details shown in Table 2.

**Table 2.** Mean, Standard Deviation, and Data Interpretation of Organizational Support for Health Project Management of Chiefs of Health Centers in Chaiyaphum Province, shown by type of support (n=100)

Organizational Support	Mean	S.D.	Result
1. Human Resources Support	3.67	0.47	High
2. Budget Support	3.66	0.45	High
3. Supplies and Equipments Support	3.52	0.53	High
4. Information Support	3.79	0.48	High
<b>Total</b>	<b>3.66</b>	<b>0.42</b>	<b>High</b>

**3. Health Project Management of Chiefs of Health Centers in Chaiyaphum Province**

The overall performance of health project management by selected samples was rated high, with an average of 3.97 (S.D. = 0.47). Most of the aspects were leveled high, with the highest average

in Project Initiation at 4.05 (S.D. = 0.53), followed by Project Completion at 3.96 (S.D. = 0.52), respectively. The aspect with the lowest average was Project Implementation at an average of 3.90 (S.D. = 0.50). See details in Table 3.



**Table 3.** Means, Standard Deviations, and Interpreted Results of Health Project Management by Chiefs of Health Centers in Chaiyaphum Province, by project phase (n=100)

Health Project Management	Mean	S.D.	Result
1. Project Initiation	4.05	0.53	High
2. Project Implementation	3.90	0.50	High
3. Project Completion	3.96	0.52	High
<b>Total</b>	<b>3.97</b>	<b>0.47</b>	<b>High</b>

#### 4. Individual Attributes and Organizational Support Influencing the Management of Health Projects by the Chiefs of Health Centers in Chaiyaphum Province

The analysis results showed that, at 0.05 significance level, factor influencing the health project management of chiefs of health centers in Chaiyaphum Province was the Organizational Support, as the details shown below.

There were no correlations between individual attributes - sex, age, marital status, education, income, and term of service as chief of

health center - and health project management of chiefs of health centers in Chaiyaphum Province.

The overall results, on the contrary, showed that the organizational support had a moderately positive effect on health project management with statistical significance ( $r=0.684$ ,  $p\text{-value}<0.001$ ). Specifically, influences of all of the support factors were moderately positive with statistical significance, i.e. human resources support ( $r=0.478$ ,  $p\text{-value}<0.001$ ), budget support ( $r=0.591$ ,  $p\text{-value}<0.001$ ), and supplies and equipments support ( $r=0.580$ ,  $p\text{-value}<0.001$ ). See details in Table 4.

**Table 4.** Pearson's Coefficient of Correlations between Independent Variables and Health Project Management of Chiefs of Health Centers in Chaiyaphum Province

Individual Attributes & Organizational Support	Performance		
	Pearson's Coefficient of Correlations (r)	p-value	Level of Correlation
<b>Individual Attributes</b>			
Sex	-0.067	0.509	No Correlation
Age	-0.098	0.332	No Correlation
Marital Status	0.126	0.210	No Correlation
Education	-0.049	0.625	No Correlation
Income	-0.038	0.708	No Correlation
Term of Service as Chief of Health Center	-0.088	0.386	No Correlation
<b>Operational Support</b>			
Human Resources Support	0.684**	<.001	Moderate
Budget Support	0.478**	<.001	Moderate
Supplies & Equipments Support	0.591**	<.001	Moderate
Information Support	0.580**	<.001	High

\*\* Correlation is significant at the 0.01 level (2-tailed).



### 5. The Organization Support Influencing Health Project Management of Chiefs of Health Centers in Chaiyaphum Province

The Stepwise Multiple Regression Analysis was used to analyze the effects of organizational support on health project management of chiefs of

health centers in Chaiyaphum Province. The analysis results indicated that, at 0.05 level of significance, the independent variables remaining in the equation were Information Support (p-value<0.001) and Budget Support (p-value=0.007), respectively. See details in Table 5.

**Table 5.** The Stepwise Multiple Regression Analysis of Health Project Management of Chiefs of Health Centers in Chaiyaphum Province

Variables	B	Beta	t	P-value	R	R <sup>2</sup>
1. Information Factors	0.581	0.586	6.930	<0.001	0.728	0.530
2. Budget Factors 0.247	0.234	2.768	0.007	0.751	0.565	
Constant = 0.868, F = 62.892 , P-value < 0.001						

Therefore, it can be concluded that these two independent variables were able to partially predict the outcome of the health project management of chiefs of health centers in Chaiyaphum Province at 56.50%. The prediction equation for the health project management is shown below.

The linear multiple regression equation which was the prediction equation in terms of raw score is

$$Y = a + b_1x_1 + b_2x_2$$

Where Y = Health Project Management of Chiefs of Health Centers in Chaiyaphum Province

a = Constant

b<sub>1</sub> = Regression Coefficients in terms of raw score of independent variable No.1

x<sub>1</sub> = Independent Variable No.1: Information Support

b<sub>2</sub> = Regression Coefficients in terms of raw score of independent variable No.2

x<sub>2</sub> = Independent Variable No.2: Budget Support

Hence, the equation below:

$$Y = 0.868 + (0.581) (\text{Information Support}) + (0.247) (\text{Budget Support})$$

### Discussions

The analysis results showed that information support (p-value<0.001) and budget support (p-value=0.007) from organizations were factors influencing the outcome of health project management at statistically significant level of 0.05. This was in accordance to the study by Apsorn Wongsiri (Wongsiri, 2009), which indicated that there were three variables in the prediction equation for the management information system of staffs in the community health center, Amphur Muang, Udonthani Province. Those three variables included organizational support in time allocation, human resources, and budget. The prediction ability of the equation was 69.5%. Similarly, the study by Sittiporn Namma (Sittiporn, 2009) indicated that the two influential variables, in the prediction equation for Performance protected Vector Borne Disease Control of Head Community Health Center. Khon Kaen Province were support on human resources and budget. The prediction ability was 55.9%, respectively.

## Conclusions & Comments

### 1. Individual Attributes

According to the study, the majority of the subjects (54.0%) were female. They were between 41-50 years old (52.0%). The youngest subject was 33 years old, while the oldest one was 59 years old. Most of the subjects were married (85.0%). They completed bachelor's degree or equivalent (86.0%). The average income was 20,001 - 30,000 baht (66.0%). The service term of being the chief of a health center varied from 1-10 years (49.0%). The shortest term of being the chief was one year, while the longest term was 38 years.

### 2. Organizational Support

The overall result regarding the organizational support showed that the samples were highly supported by the organizations, whereas the information support received the highest average, followed by the support in human resources, budget, then supplies and equipments, respectively.

### 3. Health Project Management

The overall result regarding the health project management showed that the performance of the sample group was high. The project initiation had the highest average, followed by project completion and project implementation, respectively.

### 4. Effects of Individual Attributes and Organizational Support on Health Project Management of Chiefs of Health Centers in Chaiyaphum Province

At the statistical significant level of 0.05, the analyzed data indicated that the factors affecting health project management of chiefs of health centers in Chaiyaphum Province was the organizational supports, with details as follow:

4.1 Individual Attributes: there were no correlation between individual attributes and the

performance of health project management of chiefs of health centers in Chaiyaphum Province. Those individual attributes included in the study were sex, age, marital status, education, income, and term of service as chief of health center.

4.2 Organizational Support: the overall organizational support had a moderately positive effect on health project management with statistical significance ( $r=0.684$ ,  $p\text{-value}<0.001$ ). Specifically, influences of all of the support factors were moderately positive with statistical significance, i.e. human resources support ( $r=0.478$ ,  $p\text{-value}<0.001$ ), budget support ( $r=0.591$ ,  $p\text{-value}<0.001$ ), and supplies and equipments support ( $r=0.580$ ,  $p\text{-value}<0.001$ ).

4.3 Effects of Organizational Support on Health Project Management: the analysis results indicated that, at level of significance of 0.05, the independent variables remaining in the equation were Information Support ( $p\text{-value}<0.001$ ) and Budget Support ( $p\text{-value}=0.007$ ), respectively. These two independent variables were able to predict the performance of the health project management at the accuracy of 56.5%.

## Suggestions

### 1. Suggestions from the Research

1) The Public Health Office, Chaiyaphum Province, is suggested to support and promote the usage of information on health project management among chiefs of health centers, in order to successfully implement the projects.

2) The Public Health Office, Chaiyaphum Province, Public primary key, and Tambon Administration Organization. are suggested to provide sufficient budget for the health project management, in order to maximize the project efficiency.

3) Tambon Administration Organization and related organizations are suggested to support the budget allocation for the project planning, which would encourage problem solving.

4) Responsible staff or health project leader should be assigned and the results from each health project should be used as guidelines for future health projects.

5) The Public Health Office, Chaiyaphum Province, Public primary key and Tambon Administration Organization are suggested to provide sufficient supplies and equipments for the health project implementation, in order to maximize the project efficiency.

## 2. Suggestions for Further Studies

1) There should be a study to develop guidelines for management information systems in health centers to maximize the effectiveness and efficiency of their operation.

2) There should be a study on guidelines for budget allocation for health centers, provided for relating organizations, in order to promote and support their operations.

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