

Core Competencies to Prevent and Control Chronic Diseases of Tambol Health Centers' Head in Thailand

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Objective: To assess the core competencies to prevent and control chronic diseases of the head of Tambol Health Centers (THC) in Thailand.

Material and Method: This cross-sectional survey research was carried out with 2,049 heads of THC from the total population of 9,985. The samples were selected randomly from all provinces of every region. The data were collected through mail questionnaires and the reliability values of the three competency domains questionnaire were found to be between 0.75-0.93. Data analysis was done by computing frequency, percentage, arithmetic mean, Independent's t-test and One-way ANOVA.

Results: The total core competency values of prevention and control of diabetes and hypertension of the THC heads were found at the high and moderate level (3.0% and 78.7%) respectively. The similar finding was found in the competency domains in regard to "personal attribution", "intellectual capacity" while 8.0 percent and 46.2 percent of the respondents had the high and moderate level of "work skill" domain respectively. In addition, the differences of competency domains were found in accordance with the regions where the THC located, ability to develop a plan for disease prevention and readiness for changing behaviors of the risk groups. But the personal attributions with regard to gender, age, family's economic status, and the location of the THC were not found to affect every competency domain. Except for the intellectual capacity domain found that the male THC heads had the higher level than the females and work skill domain of those THC heads working in the municipal areas had the higher level than those who worked outside the municipal areas.

Conclusion: Core competencies of the heads of THC in chronic disease prevention and control were found at the "somewhat good" level except for the work skill domain which needed to be developed. Thus, the Ministry of Public Health should establish a specific policy and strategy on human resource development by using core competencies on chronic disease prevention and control as the core performance indicators.

Keywords: Core competencies, Chronic disease, Tambol Health Center (THC)

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At present, the chronic/non-communicable diseases, for example, diabetes, hypertension, heart disease, etc., are the most severe diseases of the country, with their increasing rates of morbidity and mortality and the tendency of higher severity⁽¹⁻⁵⁾. In the present situation, the Thai population are at-risk to contract these chronic diseases due to unhealthy eating behavior, inadequate exercise, too much stress. This includes being in the environment that is not conducive to health especially the social environment of the

country that is being in the development of capitalism in which people identified with consumerism. Through advertisement and selling products that stimulate demand. As well as creating value for people who enjoy the consumption of as much as possible. Due to the complexity of the situations and the causes of the chronic/non-communicable diseases cause the concept and process to prevent and control disease, different from the main system⁽⁶⁾ with which the public health personnel have acquainted from their learning experiences and practices for a long time.

Tambol Health Centers (THC) that are mainly responsible for implementing chronic/non-communicable disease prevention and control activities for people and communities in their responsible areas. There are many factors affecting the outcome of these activities. Personal factors include the work system,

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health problems of the people and community's environments which form the context of the health problems. There is a need to set goals for improving and developing various factors to be conducive to and harmonized with the program implementation. Therefore, public health personnel are the most important mechanism in terms of training and development. The purpose of this research project was to assess the situation of chronic disease prevention and control programs of THC in order to reveal whether or not public health personnel are ready to perform the tasks utilizing chronic disease prevention competency indicators developed by the researchers⁽⁷⁻¹¹⁾. These include the indicators regarding socio-demographic characteristics, workplaces and environments as the conceptual framework for assessment. The outcomes of this research project will help create guidelines for setting a plan for human resource development of the THC's to prepare them to take charge of non-communicable disease prevention and control effectively.

Material and Method

This cross-sectional survey research was aimed to assess the core competencies for chronic disease prevention and control of the THC heads of the country. The population of this research were 9,985 heads of all types⁽¹²⁾. The sample size were 1,936 THC heads⁽¹³⁾. The literature review showed that the return rate of the mail questionnaires should be at least 60 percent, therefore, the sample size has been increased to 50%. In order to make the data collection administration more convenient, the total of 3,000 copies of questionnaire were mailed out. In selecting the samples, the sampling covered all geographical regions of the country, northern, northeastern, central and southern. The sample size of each region and each selected province was computed by employing the proportion to size concept. After the sample size of each province has been set, the researchers set up the sampling⁽¹²⁾ and simple random sampling method was employed. This research project has been approved by the Ethical Clearance Ethics Committee for Human Research (Document Number MUPH 2010-075)⁽¹⁴⁾.

'Core competencies in chronic disease prevention and control' stands for the ability to prevent and control non-communicable diseases/chronic disease of the new public health approach. It was divided into three competency domains, namely, personal attribution, intellectual capacity and work skills. The questionnaire used for data collection was

developed in accordance with the related concepts/theories⁽⁷⁻¹¹⁾, with the following steps: drafting the questions in accordance with the studied variables/indicators, interviewing the experts, pre-testing the drafted questionnaire, revising the questionnaire in order to make the questions clear, with appropriate sequences. Discrimination analysis was made with the questions concerning the assessment of competencies in chronic disease prevention and control by employing Total-Item⁽¹⁵⁾ and reliability analysis was made by computing Cronbach's alpha coefficient correlation⁽¹⁶⁾. The reliability values of the sections on personal attribution, intellectual capacity and work skills were 0.75, 0.93 and 0.82 respectively. The level of readiness of core competencies and competency domains were divided into five levels, including 'ready high', 'ready moderate', 'uncertain', 'not ready high' and 'not ready moderate'. The tabulation and analysis of the data were made by using the statistics concerning frequency, percentage, arithmetic mean, Independent's t-test and One-way ANOVA.

Results

Socio-demographic characteristics of the sampled THC heads and locations of the sampled THC are shown in Table 1. It was found that the highest percentage of the respondents were females; almost all of them aged over 30 years; about half of them aged between 41-50 years; 80.2 percent were married and 85.3 percent have worked with the THC for more than 10 years. With regard to economic status, 63.2 percent indicated that they did not have any financial problem while one-fourth of them had some financial problems. Regarding their worry about financial problems of their families, only 16.5 percent did not worry about their families' finances while the rest had "low" "moderate" and "high" level of worry respectively (42.3%, 32.3% and 8.9%). In regard to the location of the THCs, 41.3 percent were located in the north-eastern region and the rest were almost equally spread among the other regions. Of these sampled, 78.1 percent were found to be located in the areas of Tambol Administration Organizations or outside the municipal areas while 21.9 percent were located in the municipal areas.

With regard to the main activities of the prevention and control of diabetes and hypertension in the sampled areas, it was found that almost all of the respondents have carried out the "chronic disease screening activities" while only 0.3 percent failed to 30.8, 41.6 and 27.3 percent carried out the activities "once a year", "twice a year" and "more than two times

Table 1. Distribution of number and percentage of the heads of Tambol Health Centers by socio-economic characteristics and location of the THC's (n=2049)

Socio-demographic	n (%)
Gender	
Male	889 (43.4)
Female	1,160 (56.6)
Age (year) (n = 1,990)	
21-30	28 (1.4)
31-40	560 (28.1)
41-50	1,077 (54.1)
51-60	325 (16.4)
(Mean = 44.5, SD = 6.7, Min = 29, Max = 60)	
Marital status	
Single	224 (10.9)
Married	1,643 (80.2)
Widowed/Divorce/Separated	182 (8.9)
Duration of working at the THC's (year) (n = 2,044)	
1-5	148 (7.3)
6-10	152 (7.4)
> 10	1,744 (85.3)
Current family's financial status (n = 2,031)	
Have high level of financial problem	188 (9.3)
Have some financial problem	558 (27.5)
Have no problem	1,285 (63.2)
Worry about family's financial status (n = 2,024)	
High	179 (8.9)
Moderate	654 (32.3)
Low	857 (42.3)
No worry	334 (16.5)
Geographical region of workplace	
Northern	279 (13.6)
Central	394 (19.2)
Northeastern	846 (41.3)
Southern	530 (25.9)
Location of the sampled areas (n = 1,999)	
Inside the municipality	438 (21.9)
Outside the municipality	1,561 (78.1)

a year" respectively. For the "risk people" detected, 98.6 percent of the respondents have implemented "the activities aiming to change behaviors". Variations of the educational methods have been used, for example, individual methods with the risk group (80.5%), dissemination of information through printed materials and books (61.5%), dissemination of information through a village voice system (39.9%) and organization of a training program. Regarding the training programs organized, 28.5 percent organized a half-day-training program, while 38.0 percent organized a one-day-training program and 17.9 percent organized a camp-training program or longer than one-day-training program. In relation to the roles of the THC heads for

curing diabetic and hypertensive patients, 20.8 and 10.7 percent of the THC's could not provide the treatment for the diabetic and hypertensive patients respectively. For the THC's that could provide the treatments for diabetic and hypertensive patients, 29.0 and 28.4 percent was provided by physicians while 56.0 and 63.8 percent was provided by professional nurses respectively and 35.3 and 46.5 percent was provided by public health personnel/public health academics respectively. After the consideration has been made about the readiness to implement "the activities aiming at changing behaviors" of the risk group, it was found that most of the respondents (63.2%) held a 'moderate' level of readiness. With regard to "setting a plan for

chronic disease prevention and control plan”, 78.1 percent indicated that they have set the plan and put the plan into practice while the rest indicated that “they have set the plan but have not used it” and “have not set the plan”, as presented in Table 2.

Table 3 showed the competencies in chronic disease prevention and control of the THC heads. It was found that 81.7 percent of the sampled heads indicated that they were ready to perform the total core competencies, of this, 78.7 percent and 3.0 percent had

core competencies at the “moderate” and “high” level respectively, while 18.0 percent and 0.3 percent indicated that they were “uncertain” and had a “moderate” level of “non-readiness” respectively. Where the consideration was made regarding three domains of competencies it was found that the intellectual capability domain was quite similar to the levels of the total core competencies while the competencies regarding personal attribution and work skills were found to be different from the levels of the

Table 2. Distribution of number and percentage of the heads of THC’s by implementing activities of campaigns for finding/screening, changing behaviors of the risk group and providing treatment for diabetic/hypertensive patients

Main Responsibilities	n (%)
1. Campaigns for finding/screening per year (n = 2,029)	
Never done	6 (0.3)
Ever done once	625 (30.8)
Ever done twice	844 (41.6)
Ever done more than twice	554 (27.3)
2. Changing behavior of the risk group (n = 2,042)	
Never done	29 (1.4)
Ever done	2,013 (98.6)
Methods used*	
- Individual health education method for every member of the risk group	1,620 (80.5)
- Disseminating information through printed materials/books	1,237 (61.5)
- Dissemination of information through the village voice system	803 (39.9)
- Organizing a one-day training program	765 (38.0)
- Organizing a half-day training program	574 (28.5)
- Organizing a one-night camp	361 (17.9)
3. Providing Treatments* (n = 2,045)	
3.1 Diabetes	
Never provided any treatment	425 (20.8)
Ever done	1,620 (79.2)
- Provided treatment by physicians	594 (29.0)
- Provided treatment by professional nurses of THC	1,145 (56.0)
- Provided treatment by public health personnel of THC	721 (35.3)
3.2 Hypertension	
Never provided any treatment	219 (10.7)
Ever done	1,826 (89.3)
- Provided treatment by physicians	580 (28.4)
- Provided treatment by professional nurses of THC	1,305 (63.8)
- Provided treatment by public health personnel of THC	951 (46.5)
4. Readiness for changing health behaviors (n = 2,021)	
High level of readiness	455 (22.5)
Moderate level of readiness	1,277 (63.2)
Low level of readiness	265 (13.1)
Non-readiness	24 (1.2)
5. Setting the plan for chronic disease prevention and control (n = 2,010)	
Set the plan and put into practice	1,570 (78.1)
Set the plan but did not put into practice	315 (15.7)
Never done	125 (6.2)

* Can answer more than 1 choice

total core competencies. The increase of the “high” levels and the decrease of the “moderate” levels of the readiness regarding the two competencies were found. Besides, the uncertainty about the readiness of having work skills was found 45.3 percent of the respondents which was higher than other domains; particularly in management skills and communication. In regard to the “moderate” and the “high” levels of non-readiness of the three domains, non-different proportions were found as related to the total core competencies.

The comparison of the core competencies and each of the three domains of the THC heads showed that gender and age of the samples did not affect the core competencies and the competency domains. Except for the intellectual capacity domain found that the male THC heads had the higher level than the females and work skill domain of those THC heads working in the municipal areas had the higher level than those who worked outside the municipal areas. Economic status of family was found to be related to all domains of competencies of the sampled THC heads. The THC heads who rated their economic status as “no problem”, “less problem” and “high problem” were found to have the competency levels of “high”, “moderate” and “low” respectively apart from the intellectual capability which was not different in accordance with family’s economic status. Among the samples who worked in different regions, their core competencies and competency domains were found to be different. The four sampled

regions were ranked from the highest level to the lowest level of the core competencies of the THC heads: northern, southern, northeastern and central regions respectively. The rank orders of the geographical region in accordance with the intellectual capacity of the THC heads were the northeastern, northern, southern and central regions and in accordance with the work skills were northern, northeastern, southern and central regions respectively (see Table 4).

Table 5 shows that the different capabilities of the THC heads in terms of “readiness to perform activities aiming to change behaviors of the risk groups” and “setting the operation plan for controlling diabetes and hypertension” were found to relate with the total core competencies and the three competency domains. The THC heads that had a higher level of readiness to perform the activities aiming to change risk behaviors and to set the operation plan were found to have a higher level of the total core competency and all three competency domains than those who had lower level of readiness.

Discussion

Job performance in chronic disease prevention and control of THC heads

Regarding the implementation of the activities aiming to prevent and control chronic diseases of the THC heads (screening the risk group, changing health behaviors of the risk group and providing treatment

Table 3. Distribution of number and percentage of the heads of THC’s by levels of competency domains and the core competencies (n = 2,049)

Competency	Level of Readiness				
	Ready		Uncertain	Not Ready	
	High	Moderate		High	Moderate
Core Competencies (n = 1,961)	59 (3.0)	1,543 (78.7)	353 (18.0)	6 (0.3)	0 (0.0)
Competency Domains					
Personal Attribution	250 (12.2)	1,451 (70.8)	340 (16.6)	8 (0.4)	0 (0.0)
Academic Values	298 (14.6)	1,401 (68.4)	343 (16.7)	7 (0.3)	0 (0.0)
Personality traits	417 (20.4)	1,234 (60.2)	383 (18.7)	15 (0.7)	0 (0.0)
Intellectual Capacity	69 (3.4)	1,608 (78.5)	347 (16.9)	21 (1.0)	4 (0.2)
Problem analysis	46 (2.2)	1,357 (66.3)	593 (28.9)	47 (2.3)	6 (0.3)
Problem solving strategies/methods	273 (13.3)	1,598 (78.0)	153 (7.5)	20 (1.0)	5 (0.2)
Problem management	91 (4.4)	1,485 (72.5)	442 (21.6)	26 (1.3)	5 (0.2)
Work Skills (n = 1,995)	160 (8.0)	921 (46.2)	905 (45.3)	9 (0.5)	0 (0.0)
Community skills (n = 1,993)	317 (15.9)	871 (43.7)	706 (35.4)	97 (4.9)	2 (0.1)
Management skills (n = 2,001)	221 (11.0)	779 (38.9)	976 (48.8)	24 (1.2)	1 (0.1)
Communication (n = 2,008)	161 (8.0)	954 (47.5)	886 (44.1)	7 (0.4)	0 (0.0)

Table 4. Comparison of the competency means of chronic disease activities of heads of THC by socio-demographic characteristics and locations of the THC's

Socio-demographic characteristics	Competency	p-value*	
1. Sex (Male/Female)	Core Competencies	0.346	
	Competency Domains		
	Personal Attribution		0.757
	Intellectual Capability		0.001
2. Age (years) (21-30, 31-40, 41-50, 51-60)	Core Competencies	0.259	
	Competency Domains		
	Personal Attribution		0.070
	Intellectual Capability		0.140
3. Family's Financial Status (High level, Some problems, No problem)	Core Competencies	< 0.001	
	Competency Domains		
	Personal Attribution		< 0.001
	Intellectual Capability		0.819
4. Location of THC's (Inside municipality/Outside municipality)	Core Competencies	0.187	
	Competency Domains		
	Personal Attribution		0.552
	Intellectual Capability		0.247
5. The Region that the THC's Located (Northern, Central, Northeastern, and Southern Regions)	Core Competencies	< 0.001	
	Competency Domains		
	Personal Attribution		< 0.001
	Intellectual Capability		< 0.001
	Work skill	0.017	

* The confidence level of 95%

Table 5. Comparison of the competency means of chronic disease activities of heads of THC by their readiness to perform the activities

Readiness to Perform the Activities	Competency	p-value*	
1. Readiness for Changing Behaviors of the Risk Group (High, Moderate, Low, Non-readiness)	Core Competencies	< 0.001	
	Competency Domains		
	Personal Attribution		< 0.001
	Intellectual Capability		< 0.001
2. Readiness for Setting a Plan for Prevention and Control in the Responsible Areas (Never done, Set the plan but never put into practice, Set the plan and put into practice)	Core Competencies	< 0.001	
	Competency Domains		
	Personal Attribution		< 0.001
	Intellectual Capability		< 0.001
	Work skill	< 0.001	

* The confidence level of 95%

for diabetic and hypertensive patients) which was the policy of the Ministry of Public Health, most of the sampled THC's were found to have carried out most or almost all activities that they were responsible for. However, after the consideration has been made about

the work processes or the quality of their performances, it was revealed that some problems still existed. For example, screening activities have been emphasized on organizing campaigns. Most of the respondents (72.4%) have done this activity no more than two times

while the activities about changing health behaviors were emphasized on individual health education method and disseminating of information through various media. It was academically evidenced that these methods were not effective in changing food consumption behavior and exercise which were the complicated behaviors⁽¹⁷⁻¹⁹⁾. It was also found that training was one of the methods used by THC heads but the training implemented was not appropriate. For examples, a half-day training program (28.5%) and a one-day training program (38.0%) including camping-training program, was recognized as an intensive training program but only 17.9 percent of the THC's have implemented this method. With regard to the medical treatment, it is based on the situation and the conditions. The THC's had some limitations because the medical treatment was quite new for them. It is the government's policy. The present study was found that 20.8 percent and 10.7 percent of the sampled THC's that have not provided medical treatment for diabetic and hypertensive patients respectively. However, the mentioned activities of THC's under the policy of "producing outcomes for getting money" of the National Health Security Office (NHSO) are the motivators and monitors of carrying on the activities in accordance with the policy set⁽²⁰⁾. In general, it can be said the expected outcomes were emphasized on quantity, for example, number of the risk people that have been detected, number of the risk persons who have changed their behaviors and number of the patients who received medical treatment. Therefore, the lack of motivation or the "push force" of the mentioned policy may affect the decrease of the quantity outcome as well as the higher level of decreased quality of performances. The core jobs of chronic disease prevention and control should be concerned with proactive activities in a community by the community and the people themselves with the support of public health personnel^(19,21,22). This concept has found to be done to some extent, although with some limitations, since it has only been done in some show-cases or a research development project in some areas. In order to extend these concepts and practices across the country. The policy needs to be explicit to promote and support with a fully seriousness.

Competencies in chronic disease prevention and control of THC heads

On average, the sampled THC heads hold a 'moderate' level of readiness. A low percentage of the heads of THC had a 'high' level of readiness of which

was found that 3.0 percent had the total competencies and the levels of the competency domains were found to decrease respectively as follows: personal attribution (12.2%), work skills (8.0%) and intellectual capability (3.4%). However, the consideration made about the 'moderate' level of the competency domains showed that "work skills" was the competency that created the most problems, because only 46.2 percent had a 'moderate' level of readiness while no less than 70 percent of the THC heads had a 'moderate' level of the "personal attribution" and "intellectual capacity" domains. Moreover, there were 45.3 percent of the heads of THC had 'low' and 'uncertain' levels of work skills while 16.0 percent of the samples had a 'low' and 'uncertain' levels of the other two competency domains⁽²³⁾. These conditions, although the overall core competencies to prevent and control chronic disease of the head of THC are enough to work. But still needs further development⁽²⁴⁾. This development should be emphasized on work skills which included skills with regard to community, management and communication. It has been realized that these skills are the problem areas of public health personnel. Even though, community skills are the main job that the heads of THC have to do regularly and have done for a long period of time, this issue still emphasizes the need to train public health personnel. Through informal communication with public health personnel, work skills have been found to be the important issue that the personnel needed to be improved as a self-development need, especially the technique to approach and work with the community, in accordance with the concept of community participation and self-reliance.

Social background of THC heads and their competencies

Family's economic status was an important issue affecting job performance. It was found that 36.8 percent of the respondents (more than one third of the respondents) had problems with their financial status, which is quite a high percentage. This group also had a 'moderate' and a 'high' level of worry about their financial status while 63.2 percent had 'no problem' about family's financial status, of this, 42.3 percent had 'somewhat' worry about family's financial problem. This finding revealed that the heads of THC were facing an insecure financial status or it could be said that the high percentage of the heads of THC (83.5%) still worried about this matter. In addition, the comparison analysis made between financial status and competen-

cies of chronic disease prevention and control showed the relationship between the two factors. It was found that the higher competencies of every domain were found among those who did not have financial problem compared to those who had financial problems. This finding revealed that the performance of heads of THC have been affected by their financial situation. It is evidence that the heads of THC with financial problems have reduced performance. However, an important issue that has arisen was that in order to develop work competencies of the personnel-besides developing academic and work experiences-it is necessary to develop quality of life of the personnel as well. This issue is very important and sensitive and thus, a clear supporting policy must be established which includes the appropriate planning of strategies and methods that can be put into practice.

Job performance and the THC heads competencies

The comparative analysis of the heads of THC's in chronic disease prevention, control and work capabilities with regard to planning and readiness to change health behaviors of the risk group showed the differences in every issue. The heads of THC who hold a 'high' level of planning were found to have higher levels of the total core competencies and all competency domains than those who had limitations in setting a plan and putting the plan into practice. The heads of THC who had a higher level of readiness to change health behaviors of the risk group were found to have higher levels of the total core competencies and all competency domains than those who had lower level of readiness to change health behaviors of the risk group. This finding not only led to a clear understanding of work situation of heads of THC but also revealed the construct validity of the instrument⁽⁷⁻¹¹⁾ used for measuring competencies of chronic disease prevention and control. Besides, the comparative analysis between work competencies and the geographical regions where the THCs are located showed that their core competencies and three competency domains, namely, personal attribution, intellectual capacity and work skills were found to be different. However, it should be noted, that the heads of THC's of the central region hold the lowest levels of all competency domains. This finding revealed only a rough overview of heads of THC' competencies, therefore, systematic and specific study is required in order to verify and confirm the meanings and explanations of strengths and weaknesses of heads of THC in each geographical region. Therefore, the

development of heads of THC should be done with different models and contents in accordance with their real problems and needs. For example, the content of the training for the health personnel of central and southern regions should consist of the community skill, management skill and communication skill which they need to be developed.

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Potential conflicts of interest

None.

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สมรรถนะหลักในการป้องกันและควบคุมโรคเรื้อรังของหัวหน้าสถานบริการสุขภาพระดับตำบลในประเทศไทย

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วัตถุประสงค์: เพื่อประเมินสมรรถนะหลักในการป้องกันและควบคุมโรคเรื้อรังของหัวหน้าสถานบริการสุขภาพระดับตำบลในประเทศไทย

วัตถุประสงค์และวิธีการ: การวิจัยเชิงสำรวจภาคตัดขวาง ดำเนินการศึกษาในหัวหน้าสถานบริการสุขภาพระดับตำบลทุกประเภท จำนวน 2,049 คน จากประชากรทั้งหมด 9,985 คน กลุ่มตัวอย่างได้รับการสุ่มแบบง่ายกระจายครอบคลุมทุกภูมิภาคและทุกจังหวัด เก็บรวบรวมข้อมูลด้วยแบบสอบถามทางไปรษณีย์ แบบสอบถามมีค่าความเที่ยงของแบบวัดสมรรถนะย่อยทั้ง 3 ด้านอยู่ระหว่าง 0.75-0.93 วิเคราะห์ข้อมูลด้วยสถิติจำนวน ร้อยละ ค่าเฉลี่ย Independent's t-test และ One-way ANOVA

ผลการศึกษา: สมรรถนะหลักโดยรวมในการป้องกันและควบคุมโรคเบาหวานและความดันโลหิตของหัวหน้าสถานบริการสุขภาพระดับตำบล มีความพร้อมระดับมากและปานกลางร้อยละ 3.0 และ 78.7 ตามลำดับ ส่วนสมรรถนะย่อย ด้านคุณลักษณะส่วนบุคคล และด้านความสามารถทางปัญญามีความพร้อมในลักษณะใกล้เคียงกับสมรรถนะหลักโดยรวม สำหรับสมรรถนะด้านทักษะการทำงานพบมีความพร้อมระดับมากและปานกลางคิดเป็นร้อยละ 8.0 และ 46.2 ตามลำดับ นอกจากนี้ยังพบว่าสมรรถนะย่อยแต่ละด้านมีความแตกต่างกันตามภูมิภาคที่ตั้งของสถานบริการสุขภาพระดับตำบล ตามความสามารถในการทำแผนป้องกัน และความพร้อมในการปรับเปลี่ยนพฤติกรรมกลุ่มเสี่ยง ในขณะที่คุณลักษณะที่แตกต่างกันของหัวหน้าสถานบริการสุขภาพระดับตำบล เรื่องเพศ อายุ สถานะเศรษฐกิจครอบครัว และเขตที่ตั้งของสถานบริการสุขภาพระดับตำบลพบว่าไม่มีความไม่แตกต่างกันของสมรรถนะย่อยแต่ละด้าน ยกเว้นด้านความสามารถทางปัญญาที่พบว่าผู้ชายดีกว่าผู้หญิง และทักษะการทำงานของผู้ที่อยู่ในเขตเทศบาลดีกว่านอกเขตเทศบาล

สรุป: สมรรถนะในการป้องกันและควบคุมโรคเรื้อรังของหัวหน้าสถานบริการสาธารณสุขระดับตำบล ยังอยู่ในระดับที่ค่อนข้างดี ยกเว้นสมรรถนะด้านทักษะการทำงานที่ส่วนใหญ่ควรได้รับการพัฒนา โดยกระทรวงสาธารณสุขควรมีนโยบายและกลยุทธ์ที่เฉพาะเจาะจงในการพัฒนาบุคลากรสาธารณสุข ด้วยการให้สมรรถนะในการป้องกันและควบคุมโรคเรื้อรังเป็นตัวชี้วัดหลัก
