Original Article

Developing institutional capacity of health service system management at the district level in rural Cambodia

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Summary   The implementation of decentralization policies in the health sector of many developing countries has been a major issue in international health. The objectives were to focus on health sector reform, health financing system, and human resource development. However, less attention has been paid to the institutional capacity development of health systems. In this paper, institutional capacity refers to the abilities of organizations to make effective management in order to build local capacity and to achieve goals with local ownership. The aims of this paper were to explore the developmental process of districts institutional capacity by assistance of an NGO in Cambodia, and to identify the key factors influencing this development. We chose five operational districts (ODs) and two of them were contracted to NGO for management assistance. We conducted semi-structured in-depth interview to 17 managers and 16 key informant interviews. For analysis, we used qualitative analysis based on a grounded theory approach to clarify a conceptual framework for understanding management practices at district health institutions. There is a 4-stage capacity developmental process at the district-level institution. Supportive supervision and widening of decision-making authority were identified as key factors for sustainable institutional capacity development. They have complementary function each other. External agencies such as NGOs can use these key factors to develop local management capacities, and also this capacity development can be done internally within institutions such as OD health offices and by upper authorities such as the PHD.

Keywords: Institutional capacity, decentralization, supportive supervision, decision-making authority, Cambodia

1. Introduction

In the past decade, implementing a decentralization policy in the health sector in many developing countries has been one of the most emphasized development issues (*1-3*). This implementation has tended to focus on health sector reform, changes in the health financing system, and human resource development (*4*), but less attention has been paid to the institutional development of health systems undergoing decentralization (*3,4*). Without institutional capacity, health facilities do not function well by themselves, especially at the district level, where they provide primary health care to communities (*4-6*). However, the decentralization is not always helpful to strengthen the health systems in developing countries (*1*), and it is not clear yet what are the key factors for developing institutional capacities to strengthen health systems. In this article, institutional capacity refers to the ability of

organizations, as aggregations of individual personnel, to make effective management in order to build local capacity, and to achieve institutional goals through enhancing local ownership (*7*), and we reviewed the institutional capacity development processes in the several districts in Cambodia.

In 1996, after more than 20 years of conflict, the Ministry of Health (MOH) of the Royal Government of Cambodia implemented its health sector reform and developed its strategies (*8,9*). Administrative responsibilities were initially assigned to 69 operational health districts (ODs) nationwide to cover the similar population size. Each OD had a referral hospital and several health centers according to their population. The MOH also introduced user fees as the health financing scheme at hospitals and health centers, and they were able to decide how to use their income according to their needs in 1996 (*10,11*). The MOH contracted the management of pre-selected ODs on a pilot basis to external agencies such as foreign non-governmental organizations (NGOs) (*12*). It remains to be seen whether these ODs will continue to function after the external supports end.

One of the authors had participated in the Japanese NGO which had been contracted to strengthen district health management of ODs in Cambodia, and observed several positive changes on institutional capacities there. The objectives of this study were to analyze the developmental process of the institutional capacity of OD health offices, to identify the key factors for developing the institutional capacity to find out the appropriate approach to strengthen the district management in the countries which introduced decentralization policy.

2. Materials and Methods

2.1. *Study site*

All 5 ODs in the Takeo Province in Cambodia, located in the south of the country, were examined. Each OD has a population of about 120,000-220,000, and the areas are mostly agricultural. There is a referral hospital in each OD and a health center for every 10,000-15,000 people.

Table 1 shows the profiles of the 5 ODs. Since 1999, 2 of the 5 ODs had external contractual management support of foreign NGOs at their workplaces. Another 2 were managed by the MOH and the Provincial Health Department (PHD). One OD had been supported in its management by a foreign governmental organization and an international NGO.

2.2. *Data collection*

Data were collected from October 2004 to February 2007 to analyze the development of the institutional capacity of the OD health offices, and to identify the factors that influence the process.

1) Semi-structured in-depth interviews based on questionnaires were conducted with 17 managers from the 5 ODs who agreed to participate. These managers included 11 medical doctors, 4 medical assistants, a pharmacist, and a secondary nurse. They were asked about their experiences developing institutional capacity over time, since they began working with the ODs. The interviews were focused on 5 major management areas, *i.e.*, general administration, personnel, finance, materials, and external relations.

2) Six periods of observation were conducted during the study. The average duration was about 2 weeks, the longest being 2 months.

3) Key informant interviews were conducted with 16 relevant personnel from the MOH, the PHD, and the NGOs as contractors for 2 ODs.

2.3. *Data analysis*

The development of institutional capacity is clearly a process rather than a static factor. Therefore, we used qualitative techniques based on a grounded theory approach. The analysis was performed through four stages. The first stage was coding. A total of 178 quotes

Table 1. Background of ODs in Takeo (2005)

OD	A	B	C	D	E
Estimated population for 2005	129,244	216,529	190,924	191,927	160,264
Number of Administrative Districts*	1	4	4	2	3
Number of Communes	13	31	20	20	21
Number of Villages	186	289	236	245	161
Number of Referral Hospitals	1	1	1	1	1
Number of Health Centers	9	20	15	13	13
Total number of OD staff	85	132	269	120	96
Outpatient utilization rate**	0.95	0.57	0.42	0.44	0.53
Deliveries with health staff rate***	0.32	0.34	0.29	0.24	0.17
EPI completion rate under one year old****	0.74	0.61	0.59	0.65	0.35
External management support at the workplace	+	+	current–/past+	–	–

* Operational districts for health are not completely equal to administrative districts; ** per total population per year; *** per estimated number of pregnant women per year (3.8% of total population); **** per estimated number of children less than one year old (3.4% of total population).

were extracted from the interview data, following which, key phrases and expressions were coded by authors and checked by the faculty.

The second one was conceptualization. After the open coding procedure, similar contents were collected and grouped, and then preliminary categories were formed by structuring the groups of similar concepts (the third stage). In these analyses, we focused on the changing process of what actually occurred on institutional capacities from time to time, and also what influenced positively and negatively on this changing process. After this analysis, the data were reanalyzed by putting new data until overriding concepts appeared. These concepts were condensed and saturated from a variety of management aspects, and a series of core concepts and categories emerged as the first draft framework as the theory to explain the process and key factors of institutional capacity development (the fourth stage).

For the confirmation of the appropriateness of the framework, the participants were given the emerging framework to determine whether it matched their responses after drafting the conceptual framework. Key informant interviews were also conducted to clarify the legitimacy of the health policy and common procedures at the OD level. The final framework was determined at the end of this revision process.

The study protocol was reviewed and approved by the Ethics Review Committee of Nagoya University School of Medicine and the Ethics Committee of the MOH in Cambodia.

3. Results

The interview results were organized by axial coding into Figure 1. According to the intervention, the staff behavior and mentality were changing gradually from passive to active. Based on Figure 1, the qualitative data were categorized into 3 types for conceptualization; the managers' perceptions and experiences and the interventions that influence the managers' activities. The data on the managers' perceptions and experiences were obtained as the status of the institution, and were classified and arranged according to the developmental process of institutional management capacity from premature to advanced levels. The developmental process was categorized into 4 stages: [1] Unawareness, [2] Awareness, [3] Empowerment, and [4] Consolidation (Table 2). However, the development process did not proceed with the same speed in different ODs. The data on the interventions that influenced the managers' activities were divided into 2 factors of promoting and constraining the development of institutional capacity.
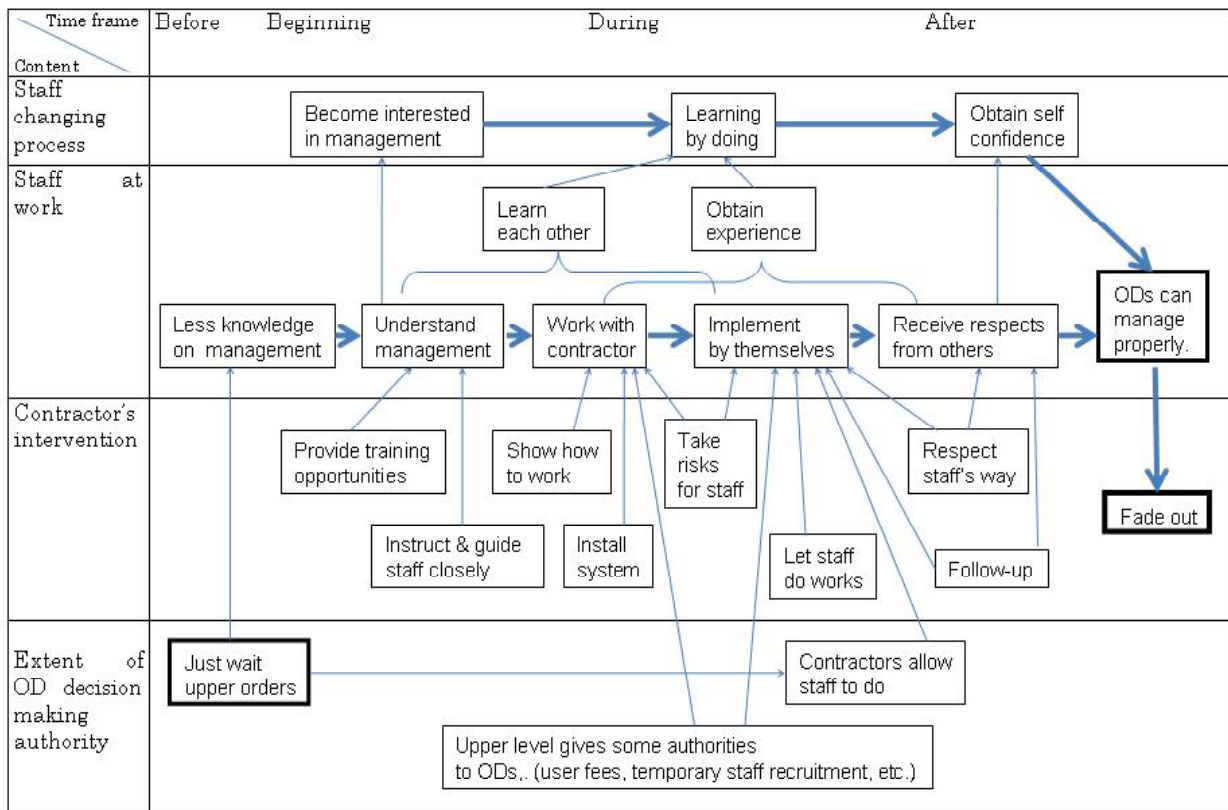

Figure 1. Process of change.

Table 2. Summary of example quotes

Stages	Example quotes
Consolidation Stage	**OD managers manage the institution and get feedback:** *Key phrases: 'share knowledges and experiences each other', 'create partnership with community and others'*
	"…regarding training, it is important that they can share the learnings from each other at the job site…now we can have internal sessions to learn and teach by ourselves" (anonymous 2, 15). Also, "…now, I know that management is something we need for betterment by ourselves with experiences under our circumstance. We have learned so many things which were good ways and not during seven years of contract" (anonymous 5, 1).
	"…through regular committee meetings, community representatives are giving us good feedback and tied cooperation…this makes us more responsible and confident…and we can work together for the community" (anonymous 5, 7, 15). Also, "…now we can recognize NGOs are good partners, we can discuss and resolve the problem together…" (anonymous 4, 2).
Empowerment Stage	**OD managers continuously gain experience:** *Key phrases: 'know how to do tasks' and 'be gaining experiences', 'need back up supports', 'there are some things we can do nothing about'*
	"…resource allocation is becoming OK,…now our health facilities can open twenty-four hours and can fully provide the services…"(anonymous 2, 3, 8). "We learned how to do the tasks everyday from the external managers who showed us many examples of how to manage in realistic situations and let us try new things with our idea" (anonymous 4), and "…what we need to do is having experiences with learning by doing, then we can manage better and better" (anonymous 4, 5). Also, "…working with communities' representatives especially local government officers was difficult…It requires very advanced communication abilities like coordinating and negotiating with the upper level officials…it was something that we could not do by ourselves" (anonymous 8, 2).
	"I was discouraged by the fact that I could not penalize a staff member's misbehaviour, frequent absenteeism at workplace on their duty, especially when those who misbehaved had close connections with the upper-level officials, relatives and friends" (anonymous 10, 12).
Awareness Stage	**OD managers recognize the importance of management:** *Key phrases: 'interested in management' and 'follow instruction'*
	"…when new policy guideline appeared, we were usually invited for training…(anonymous 16) and "after I leaned management, I was fascinated to apply new management into my OD…" (anonymous 13), also "…after learned management theory, I realized what they (external managers) were doing were 'management'. Then I started to participate in management with willingness…" (anonymous 3, 7, 8, 10, 16).
	"...I remembered that they (external managers) guided us (the OD managers) how to conduct a measles campaign that we have never done before…" (anonymous 3), and "…at the very beginning, they (external managers) taught us (the OD managers) very important practical management such as creating our organizational chart and delegating work…" (anonymous 2, 3).
Unawareness Stage	**OD managers are unaware of proper management:** *Key phrases: 'do not know' and 'await orders'*
	"…we (all) did not know even the word 'management' or no one knew what was one's responsibility clearly…so it was difficult to ask the staff to work properly…(anonymous 4, 16). Also, "…we (the OD managers) just waited until we heard what the upper level said as usual manner, and I thought that following orders from above was the way to work without any doubt" (anonymous 4, 10, 11 and 13).

3.1. *The developmental process of institutional capacity at the OD level*

[1] Unawareness Stage

This stage mostly occurred before the start of the MOH's health sector reform and the introduction of the scheme of management contract to NGOs. It was characterized by the fact that the OD managers had no clear management concept and were unaware of the necessity of proper management techniques. The OD managers frequently used expressions such as "do not have knowledge" and "do not know what to do".

[2] Awareness Stage

This stage mostly occurred with the introduction of new guidelines and management systems. The OD managers recognized the importance of management and began to show willingness to manage in new ways; however, the OD managers, tended to only passively follow the instructions from the upper level, including the PHD and the external-contract managers, because they did not have enough experience. They often used expressions such as "are interested in management" and "await order and instruction".

[3] Empowerment Stage

This stage emerged at institutions supported by external management. The OD managers mainly managed by themselves and continuously gained experience. Through the series of the experiences, the OD managers began recognizing that their institutions became organized and moving forwards as functioning institutions. "Try to do tasks" and "need back up supports" were the representative expressions, thus indicating that the institutions were gradually managing their initiatives; however, they still felt limited management capacity, and thus needed external support.

[4] Consolidation Stage

This stage appeared in OD health offices assisted by external management supports for more than 5 years. The OD managers managed OD health offices and their health facilities by themselves, with some degree of confidence. They were willing to create partnerships with external agencies as local resources. The characteristic expressions were "share experiences with each other" and "create locally appropriate ways".

3.2. *Influences on the developmental process of institutional capacity*

Figure 2 shows the relationship between the developmental process of the institutional capacity of OD health offices and the interventions such as promoters and constraints. Certain promoters existed between stages, whereas 2 major constraints existed throughout the overall process.

[1] Promoters

1) *Between the Unawareness and Awareness Stages*: Regardless of the ODs, there were 3 major promoters. First, providing theories and concepts on institutional management promoted the progress, especially general management training, which provides ideas that meet the needs of management at their workplaces. Second, clarifying organizational function, such as making an organizational chart, and individual staff responsibilities. For example, the roles

of individuals were unclear during the Unawareness Stage. Once each job description became clear, some staff tried to fulfill their responsibilities because of self-discipline and peer pressure. This was especially observed when their performances were monitored by other staff. Third, inducing mutual communication among staff within an OD was considered an important component. This was attractive to the staff because their opinions were not reflected in the decision making of health offices under traditional bureaucratic management, and because teamwork and participatory management within an OD were uncommon at their workplace.

2) *Between the Awareness and Empowerment Stages*: There were 2 types of interventions at the workplace. First, the importance of close instructions by external supports was emphasized by managers of the ODs and external agencies. The OD managers struggled during the Awareness Stage, during which, they participated in management tasks and were less confident in themselves, although they were interested in the new management. All the OD managers encountered difficulties while applying new policies and procedures, such as the application for a health financing scheme into a real-life situation, after acquiring some management knowledge through training. While all the managers who were interviewed welcomed this scheme, several OD managers mentioned that they had difficulties replacing the informal financial management strategy with the new; these difficulties were solved by timely advice from
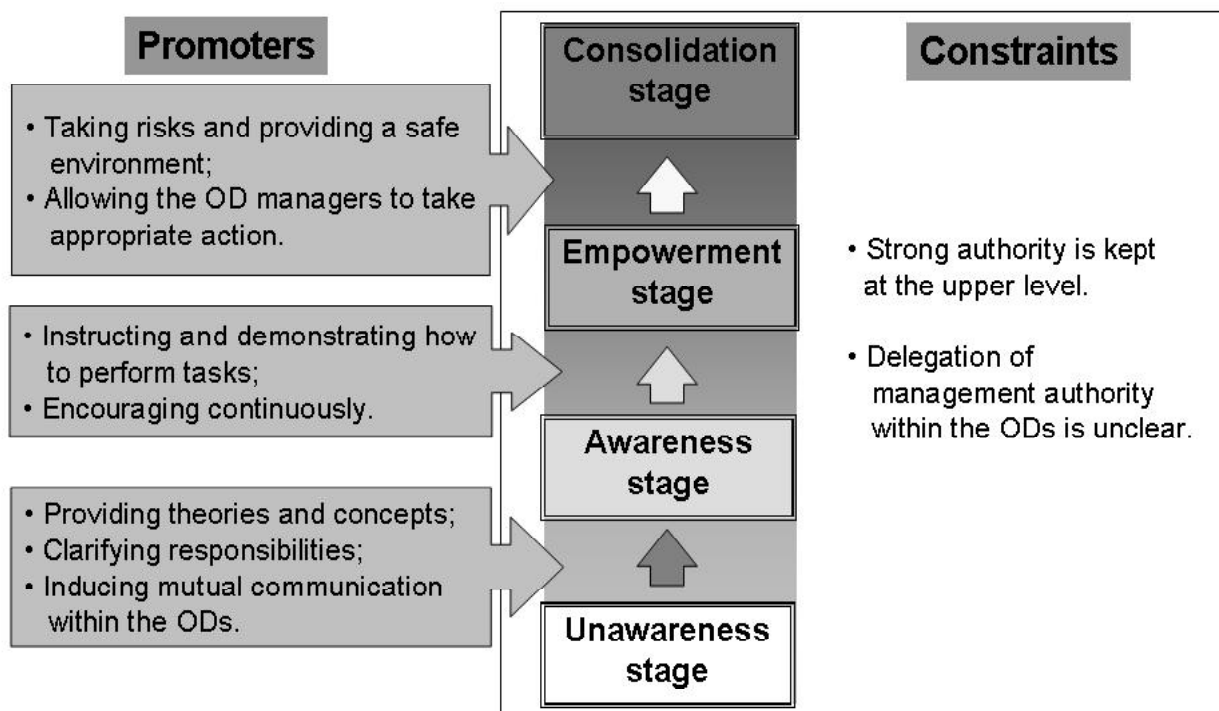

Figure 2. Influences on the developmental process: promoters and constraints.

external support agencies.

Second, continuous encouragement by external agencies had a positive influence on the OD managers at their workplace. For instance, the OD and external managers had the same goals for better health service provision, and shared the process of moving forward to improve.

3) *Between the Empowerment and Consolidation Stages*: There were 2 promoters between these stages. First, the external managers took risks by providing a safe environment, so that the OD managers could initiate new activities. At the Empowerment Stage, the OD managers needed to gain experience through trial and error; they were expected to be blamed if they made an error. One of the OD managers said that making errors could be a good learning opportunity, as taught to them by the external manager. Therefore, supervisors, as guardians, should take certain risks in the process of trials, so that the OD managers can acquire their experiences without such risks.

Second, while the OD managers took more initial actions, the external managers did not pay attention to check whether their actions were appropriate. Once the OD managers dispelled their fear of administering tasks by themselves, the supervisory role of the external managers gained importance. According to the external managers, it was necessary to review performances and correct mismanagement in a timely manner when the OD managers made errors; these were recognized as important roles by the external managers. Thus, the OD managers could take more initial actions as well as foster a sense of appropriateness.

[2] Constraints

This study also showed that there were 2 major constraints throughout the development of the institutional capacity of the OD health offices.

First, strong authority was kept at the upper level, including the PHD, the MOH, and even the external agencies that worked on-site. Thus, the OD managers were not given wide decision-making authority. In general, the substantial roles and functions were centrally managed. For instance, the allocation of personnel on the work site and the selection of candidates for training were decided by the upper level. Therefore, the decision was not matched with the peripheral needs.

Second, the range of delegated management authority was unclear at the OD level. Therefore, even the ODs were assigned substantial roles, such as community participation, internal disciplinary management, and the health financing scheme. OD managers usually stated "cannot decide" and "cannot enforce" at the earlier stages. Bridging the gap between policy guidelines and the real situation on site without support was very difficult for OD managers.

4. Discussion

The developmental process of the ODs' institutional capacity was observed to progress through 4 stages. This is similar to the developmental process of the Institutional Development Framework developed by Renzi M, and used by the United States Agency for International Development (USAID) (*13,14*). According to this framework, quality services can be improved using the concept of total quality management (*13*).

4.1. *Supportive supervision for promoting institutional capacity development*

The promoters of progress in the development of institutional capacity had specific characteristics in this study, as shown in Figures 1 and 2. The institutes needed support at their workplace to build management structures and to gain experience on a daily basis. As a result, the OD managers gradually showed their confidence by recognizing that the number of clients at health centers increased.

Progression through the process was subjected to much trial-and-error. Institutional capacity was developed by repeating the process, which bridged the gap between what is known and what gets done or the "know-do gap", as mentioned by Landry *et al.* (*15*). In order to bridge the gap, it was important that support authorities provided an environment that allowed OD managers to try by themselves, without fear of failure. These management supports, which were characterized as the promoters in this study, focused on participatory management and empowerment of local managers, but not inspection; they were similar to "supportive supervision" by Marquez and Kean (*16*) and were also synonymous with "facilitative supervision" (*17*) and "team supervision" (*18*).

In the developmental process of the ODs, supportive supervision insured new management policies, according to the MOH guidelines and values for the benefit of the public. Thus, supportive supervision played a crucial role in the development of institutional capacity.

4.2. *Widening decision-making authority to promote institutional capacity development*

According to the constraints of OD management, the degree of decision-making authority was one of the crucial factors necessary for gaining practical experience (*4,6*). A strong bureaucracy still remained a reality in the case of Cambodia. Also, the effective use of delegated power at the district and provincial levels was still questionable (*19*). However, the health financing scheme brought some positive effects by widening the decision-making authority, even though this was still a part of power delegation from the MOH.

Wider decision-making authority in a health financing scheme provides a positive influence on

resource generation and proper utilization, including the supplementation of staff salaries and purchase of supplies, even the poor salary is an explicit issue to make the staff motivation lower among developing countries (*20*). That is, the OD health offices use their user fee income relatively properly, even they can use all of them for their staff salary compensation instead of necessary supplies for their health service provision, because they can decide what should be purchased and how to use the income from user fee scheme on local needs bases.

Also, wider decision-making authority contributes to practical management experience, because the OD managers are permitted to handle issues. This gives opportunities to the OD managers to learn while doing (*21*), whether or not external supports exist, and hence, the "know-do gap" is fulfilled. This can also promote institutional capability to respond to immediate needs. Consequently, the OD managers become more confident in their management by generating motivation and ownership (*15*). Furthermore, change in decision-making authority indicates progress towards decentralization, as suggested by several studies of Bossert. in several countries (*22-24*).

4.3. *Complementary relationship between supportive supervision and decision-making authority*

There is a complementary relationship between supportive supervision and decision-making authority (Table 3).

[1] Widening decision-making authority alone

When an institution has wide decision-making authority without any supportive supervision, it can make decisions on management issues based on its own locally appropriated and acceptable criteria, without any delay by waiting upper level decision. However, this can lead to the development of private interests, which may have an adverse effect on rational management or public interests, such as ignoring pro-poor value or seeking more profitable activities including corruption (*25*). This situation is observed in other developing countries, and not only in Cambodia (*4,6,24*).

[2] Providing only supportive supervision

The progression of institutional capacity may be limited in cases in which an institution has supportive supervision without wide decision-making authority, because supportive supervision can provide a practical model of how to perform tasks. However, OD managers cannot exercise practical management without wider decision-making authority, and would be unable to continuously develop their capacity to progress through the advanced stages of institutional capacity development (*7*); *i.e.*, narrow decision-making authority could delay the progress of institutional capacity development.

Table 3. Relationship between 2 major factors

		Decision-making authority	
		Wide	Narrow
Supportive	(+)	Progress	Limited progress
supervision	(−)	Inappropriate progress	Stagnation

[3] Risk avoidance by the wider authority

Supportive supervision can play a role in encouraging rational management in order to avoid the risks of wide decision-making authority (*16*). Rational management includes insuring a transparent accounting system, strengthening the discipline and mutual communication within an institution, and focusing primarily on public interests. Once the rational management systems are installed, they are supervised until they are fully functioning.

[4] Necessity for both wide decision-making and supportive supervision

That is, both supportive supervision and amount of decision-making authority are complementary factors in the development of institutional capacity at the decentralized level of management, as demonstrated in Table 3.

4.4. *For sustainable institutional capacity development*

Limited resources at the peripheral level in Cambodia as well as other developing countries make management difficult (*19,26*). However, corruption and dependency occur not only due to a shortage of resources, but also because of a shortage in management capacity (*26*), and thus, a combination of supportive supervision and wider decision-making authority can contribute in the development of institutional capacity.

It remains to be determined how long and to what extent external agencies should intervene during the interim period. Dependency on supportive supervision is also an important concern for sustainable institutional capacity development. Relying on external power and resources are concerns of many developing countries because they represent dependency (*26*).

To avoid these matters, supportive supervision should not be implemented by foreigners or external agencies, because developmental supports may not be retained after the external agencies withdraw (*26*). Supportive supervision can be done internally within the institutions, such as OD health offices, and by upper authorities such as the PHD. They can train their own juniors according to an appropriate pace of change that is matched to the reality of local circumstances. As a result, it becomes possible to develop management capacity within their own institution, and also to accelerate decentralization in their health system in order to function as a peripheral health service provider for their communities.

5. Conclusions

Decentralization of public health administration has been implemented in many developing countries. Effective interventions are needed to build institutional capacity, especially at the peripheral level, such as the district. As shown by this study, there are 4 stages to the development of institutional OD health office capacity. This approach focuses on strengthening district management institutional capacities and building teamwork for field administration rather than simply improving an individual's knowledge base. Developing institutional capacity may enhance service quality. Supportive supervision and widening of decision-making authority are complementary at the district level, and have been identified as key factors for sustainable institutional capacity development in a decentralized setting in Cambodia. Through this developmental process, the OD health offices develop greater institutional capacity, and can directly respond to the communities' health needs.

However, this framework and key factors should be confirmed in other settings, because this framework is structured by single case in Cambodia, and methodology itself is not popular in the field of health research except on nursing.

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