

การดูแลต่อเนื่องและการประสานงานในชุมชนของการเจ็บป่วยเรื้อรัง โดยใช้แนวคิดบูรณาการในการให้บริการด้านสุขภาพ ขององค์การอนามัยโลกในประเทศไทยและอินโดนีเซีย

Continuing and Coordinating Care in Communities of Chronic Illness by using WHO Concept of Integrated Centered Health Services in Thailand and Indonesia

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บทคัดย่อ

การวิจัยแบบผสมผสานเพื่อสำรวจการดูแลอย่างต่อเนื่องและประสานงานในชุมชนสำหรับการเจ็บป่วยเรื้อรังโดยใช้แนวคิดขององค์การอนามัยโลก (WHO) เกี่ยวกับบริการด้านการรักษาผู้ป่วยแบบเป็นศูนย์กลางและเพื่อกระตุ้นชุมชนให้เข้มแข็งเพื่อความยั่งยืน ความสมดุลของการดูแลต่อเนื่อง และการประสานการดูแล กลุ่มตัวอย่างคือผู้ป่วยโรคเรื้อรังและบุคลากรทางการแพทย์รวม 160 คน มาจากประเทศไทยและอินโดนีเซียอย่างละ 80 คน ซึ่งประกอบด้วยผู้เข้าร่วมวิจัยที่มีการเจ็บป่วยด้วยโรคเรื้อรังจำนวน 50 คน และ 30 คน เป็นตัวแทนของผู้ให้บริการด้านสุขภาพในชุมชน การรวบรวมและวิเคราะห์ข้อมูลเริ่มต้นด้วยข้อมูลเชิงปริมาณ จากนั้นจึงค่อยเป็นข้อมูลเชิงคุณภาพในระยะที่สอง แบบสอบถามสำหรับผู้ป่วยและผู้ให้บริการด้านสุขภาพได้ผ่านผู้ทรงคุณวุฒิ 3 ท่าน และผ่านการแปลย้อนกลับทางภาษาได้ค่าความตรงทางเนื้อหา .96 และค่าความเชื่อมั่นของฉบับผู้ป่วยและบุคลากรทางการแพทย์ที่ 98, .87 ตามลำดับ สถิติที่ใช้ในการวิจัยเชิงปริมาณเป็นสถิติเชิงพรรณนา และข้อมูลเชิงคุณภาพเป็นการวิเคราะห์เนื้อหาวิเคราะห์เนื้อหาของข้อมูลที่เก็บรวบรวม ผลการวิจัยเชิงปริมาณพบว่า การดูแลต่อเนื่องของไทยและอินโดนีเซียตามลำดับดังนี้ 1) การรักษาพยาบาลเบื้องต้นมีค่าเฉลี่ย $3.82 \pm .74$ vs. $4.15 \pm .83$, 2) การทำงานร่วมกันในการดูแลและแบ่งปัน $3.84 \pm .79$ และ $4.25 \pm .75$ 3) การจัดการกรณีที่มีความต้องการที่ซับซ้อนมีค่าเฉลี่ยที่ $3.83 \pm .75$ และ $4.21 \pm .74$ 4) การบริการการเข้าถึงแบบรวมกลุ่มได้รับค่าเฉลี่ยที่ $3.67 \pm .87$ และ $4.23 \pm .74$ 5) การดูแลในระยะเปลี่ยนผ่านค่าเฉลี่ยที่ 3.66 ± 1.48 และ $4.16 \pm .73$ 6) การดูแลแบบครบวงจรตลอดเส้นทางค่าเฉลี่ยที่ $3.78 \pm .78$ และ $4.20 \pm .78$ 7) เทคโนโลยีด้านความต่อเนื่อง และการประสานงานของการดูแลค่าเฉลี่ยที่ $3.54 \pm .86$ vs. $4.24 \pm .74$, 8) ชีตความสามารถด้านกำลังคน ค่าเฉลี่ยที่ $3.76 \pm .84$ vs. $4.24 \pm .74$ ผลเชิงคุณภาพพบว่า การดูแลชุมชนเข้มแข็งเพื่อความยั่งยืนและสมดุลของการต่อเนื่องและการประสานงานนั้นพบว่าควรมีระบบการดูแลที่ดี มีการจัดจากบนลงล่างและจากล่างขึ้นบน มีอาสาสมัครด้านสุขภาพที่มีจิตวิญญาณในการทำงานที่สูง และงบประมาณเพื่อสนับสนุนระบบจะทำให้มีความเข้มแข็งในชุมชนยิ่งขึ้น

สรุปได้ว่าการดูแลต่อเนื่องและการประสานงานในชุมชนควรมีระบบที่ดี องค์กรที่ดี การสนับสนุนทางการเงิน จิตวิญญาณของผู้ให้บริการด้านสุขภาพ และการใช้เทคโนโลยีเพื่อให้ข้อมูลสนับสนุนการดูแลและเพิ่มโปรแกรมการดูแลที่ยั่งยืนสำหรับผู้ป่วย ความพึงพอใจและความเป็นอยู่ที่ดี นอกจากนี้ แนวคิดของบริการสุขภาพแบบบูรณาการขององค์การอนามัยโลกจะชี้นำผู้ให้บริการด้านสุขภาพให้ตระหนักเพื่อสร้างคุณภาพชีวิตที่ยั่งยืนในชุมชน

คำสำคัญ: การดูแลต่อเนื่องและการประสานงาน, โรคเรื้อรัง, แนวคิดบูรณาการในการให้บริการด้านสุขภาพขององค์การอนามัยโลก

ABSTRACT

A sequential explanatory design of mixed-method research explored continuing and coordinating care in communities of chronic illness by utilizing the World Health Organization (WHO) concept of centered patient healthcare services and to stimulate a strong community for sustainable and equilibrium of continuing and coordination of care. The target population was people with chronic illness and healthcare professionals, 160 samples came from 80 of each site. Each site was composed of 50 Participants with chronic illnesses and 30 people were representing community healthcare providers. Data collection and analysis started with quantitative data, then qualitative data in a second phase. The questionnaires for patients and healthcare providers were proposed to 3 expertise for content validity was .96 and reliability for Cronbach's Alpha at .98, .87 respectively. The content of the collected data was analyzed 1) in quantitative data; descriptive analysis; 2) Content analysis was used in qualitative data. Quantitative research results showed that continuing and coordination of care in Thailand and Indonesia were composed following 1. Continuing with a primary care professional had an average score of $3.82 \pm .74$ vs. $4.15 \pm .83$, 2) Collaboration in care and sharing decision-making scored on average $3.84 \pm .79$ and $4.25 \pm .75$, 3) Case management with complex needs was rated at $3.83 \pm .75$ compared to $4.21 \pm .74$; 4) Collocated services of access were rated at $3.67 \pm .87$ compared to $4.23 \pm .74$ 5) Transitional or intermediate care had an average score of 3.66 ± 1.48 vs. $4.16 \pm .73$, 6) Comprehensive care along the entire pathway had an average score of $3.78 \pm .78$ vs. $4.20 \pm .78$, 7) Technology in continuity and coordination of care had an average score at $3.54 \pm .86$ vs. $4.24 \pm .74$, 8) Building workforce capability had an average score at $3.76 \pm .84$ vs. $4.24 \pm .74$. Qualitative Research results showed the strengthened community for sustainability and equilibrium of continuing and coordination of care found that the system of caring was well-organized top to bottom and bottom to top, health volunteers with a high level of spirit, and a budget was to support the system.

It can be concluded that continuing and coordinating care in the community should have good systems, good organizations, financial support, the spirit of healthcare providers and the use of technology to provide information supporting care will increase sustainable programs for patients' satisfaction and wellbeing. Moreover, the WHO concept of integrated health services will guide the healthcare providers to awareness to create a sustainable quality of life in the community.

Keywords: Continuity and coordination of care, Chronic illness, WHO concept of integrated centered health services

INTRODUCTION

From situation analysis of the continuing care for the elderly, an aging baby boomer population had led to an increase in the number of chronic illness patients and the need for more healthcare resources. Non-communicable diseases (NCD) had two-thirds of the deaths in the world, the NCD had major problems and challenges to solve global health problems. In the USA, NCD was the major problem of unhealthy, discomfort, disability, and death, and accounts for healthcare expenses. The chronic illness burden had resulted from many risk factors.^{1,2} Chronic illnesses are long-term diseases that develop slowly but sometimes they might be often progressing in severity, and are difficult to be controlled. Moreover, it can be reduced one's capability to perform activities of daily living of people.³ So, the continuing and coordination of care should have more active in healthcare systems. The existing patterns of care for the elderly with chronic illnesses are not enough for Quality of life (QoL). Chronic care management needs more activities that can conduct by healthcare providers to support patients with chronic illnesses. The work or health activities should involve motivating patients and caregivers to make sure that therapies and interventions will be helping them to achieve a reasonable quality of life.⁴

The gap in health service needs to integrate the care of healthcare providers that should have the systems of care for patients. A comprehensive primary care system can reach everyone by achieving universal health care coverage. Many models of integrated care explained an opportunity to focus service around the population needs to improve health and longevity care. Primary health care concept is a fundamental approach to basic care of people in the community to have the quality of life in three parts: 1) primary care concept should work as the core of health care services, 2) multilevel policy and caring

practice of action, and 3) empowerment of people in the communities.⁵ So primary health care should have equitable care, effective treatment, and cost-effective ways to cover the health of people. The integrated health services should respond to the needs of individuals and populations by sharing the interdisciplinary teams who work together across settings, sharing ideas, and using evidence and feedback to continue care to improve competency. Integrated health services will be strong in the caring process, need primary care concept and essential public health care functions, and strengthen people-centered health care systems to support success factors of working in continuing and coordinating care⁶. So, in this research would like to study more in the continuing and coordinating care in the community for the elderly as prestige humanists in Thailand and Indonesia to support the whole life of the elderly, and study more about the health problems, obstacles, and the real needs of elderly in healthcare systems of both communities by using WHO concept on integrated people-centered health service system in Thailand and Indonesia.

Research objective:

1. To study the situation of the Continuity and coordination of care in communities of chronic illness by using the WHO Framework on integrated people-centered health services in Thailand and Indonesia
2. To stimulate the strengthened community for sustainable and equilibrium of continuing and coordination of care in Thailand and Indonesia

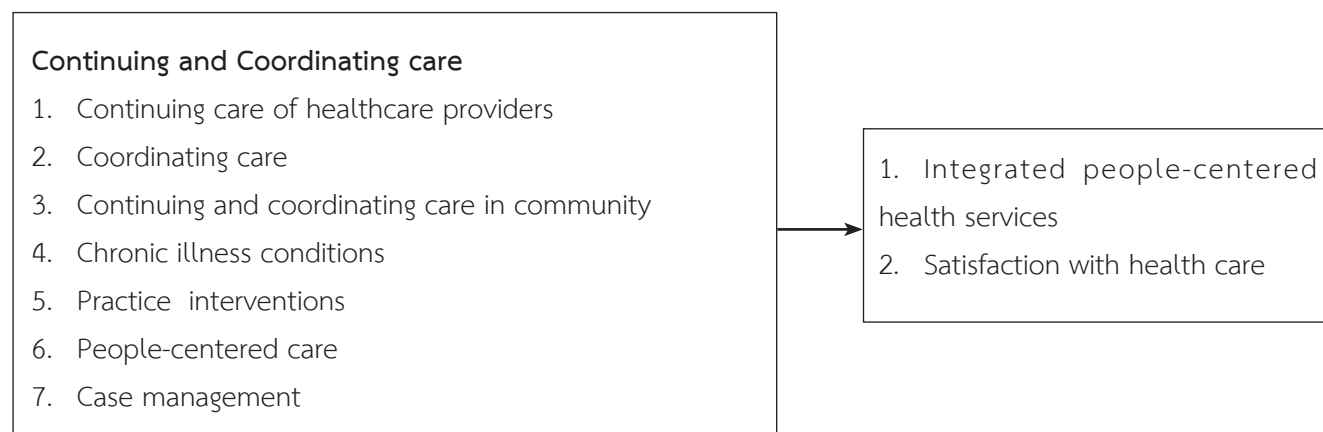
Conceptual framework

The principles set out for primary health care (WHO, 2018) adopt a health system perspective that has been acknowledged in health system functions and is effective in the management of change for care

integration (WHO 2016, WHO, 2018). In this study focus on Continuing and Coordinating care and

Integrated people-centered health services, and satisfaction following this framework.

3. RESEARCH METHODS



Methodology

The research design was a mixed-method study; the explanatory sequential design started with quantitative data and then followed by qualitative data in a second phase. The setting was the community in Bangkok and Bali. The target population was the chronic illness people, and healthcare providers, 80 Participants of chronic illness in each site(total160) with inclusion and exclusion criteria, in the quantitative collection, and 30 people were representing community healthcare providers (total 60) in the second phase of qualitative collection.

Calculate sample size from Daniel formula with $z = 1.96$, $\sigma = 0.72$, $d = 0.2$. 7

1) Quantitative data collection; to Assess the continuing and coordinating of care in the community by using WHO 2018 framework.

Research instruments were composed of questionnaires about continuing and coordinating care in the community following the concept of WHO 2018, and the guideline in qualitative data collection. The questionnaires were proposed for content validity (IOC) for patients with .98, for healthcare providers with Reliability of the questionnaire was .96.

2) Qualitative data collection; to study more Needs, facilitators, and obstacles at the present to continuing and coordinating care in the community of chronic illness by focus group and in-depth interview. The questionnaires were proposed for content validity (IOC) for patients with .98

Data analysis

1. Quantitative data analysis: Descriptive analysis was used to identify demographic characteristics; the frequency and percentage calculation of the results for summarizing all data

2. Qualitative data analysis; Seek to explore phenomena, clarify, extend, qualify or challenge data collected, and stimulate the strong community for sustainable and equilibrium of continuing and coordination of care through other methods by using content analysis and triangulation in the needs assessment.

Ethical Considerations

The proposal research procedures were approved by the ethics committee of Saint Louis College. E.007/2563 was issued on January 18, 2020. Participants were given information and benefits in this study; written consent forms were obtained

before conducting interviews with all participants. The participants had the opportunity to refuse and to ask questions to participate in the study and sign a consent form. This project is not harmful. The

activities were composed of interviews and focus groups. If participants feel uncomfortable with the questions, they could say “don’t want to answer”.

Quantitative Research results

Continuing and coordinating care in the community (WHO,2018)

Table 1: Continuing and coordinating care in community aspects of healthcare providers in Bangkok and rural areas, Thailand and Bali, Indonesia

Topic	In Bangkok			In Bali		
	Mean	SD	Result	Mean	SD	Result
1: Continuing primary care for the healthcare providers	3.82	0.74	fair	4.15	0.83	good
2. Collaborative planning care and sharing making decisions	3.84	0.79	fair	4.25	0.75	good
3. Case management with needs	3.83	0.75	fair	4.21	0.74	good
4. Collocated services	3.67	.87	fair	4.23	.74	good
5. Intermediate care	3.66	1.48	fair	4.16	0.73	good
6. Comprehensive care along the entire pathway	3.78	0.78	fair	4.20	0.78	good
7. Technology to support care system	3.54	0.86	fair	4.18	0.79	good
8. Building workforce capability	3.76	.84	fair	4.24	0.74	good

From table1 1) Continuing and coordinating care in the community in aspects of healthcare providers in Bangkok, Thailand, and Bali, Indonesia found that 1) Continuity with a primary care providers in Thailand had the average score at 3.82, SD .74 whereas Bali had the average score at 4.15, SD.83, 2) Collaborative planning of care and sharing making decision in Thailand had the average score at 3.84, SD .79 whereas in Bali had the average score at 4.25, SD.75, 3) Case management with complex needs in Thailand had the average score at 3.83, SD .75 whereas in Bali had the average score at 4.21, SD.74, 4) Collocated services of access in Thailand had the average score at 3.67, SD .87 whereas in Bali had the average score at 4.23, SD.74, 5) Transitional or intermediate care in Thailand had the average score at 3.66, SD1.48 whereas in Bali had the average score

at 4.16, SD.73, 6) Comprehensive care along the entire pathways in Thailand had the average score at 3.78, SD .78 whereas in Bali had the average score at 4.20, SD.78, 7) Technology to support care coordination in Thailand had the average score at 3.54,SD .86 whereas in Bali had the average score of 4.24, SD.74, 8) Building workforce capability in Thailand had the average score at 3.76, SD .84 whereas in Bali had the average score of 4.24, SD.74

Table 2: The level of care that people perceived in Thailand (Bangkok) and Indonesia (Bali)

Topics	In Bangkok			In Bali		
	Mean	SD	Result	Mean	SD	Result
1. Integrated people-centered health care services	4.07	1.36	good	4.21	0.74	good
2. satisfaction with health care	4.21	.74	good	4.38	.71	good

From the table 2, the level of care that people perceived in Thailand (Bangkok) and Indonesia (Bali) found that 1) Integrated people-centered health services had an average score of 4.07, SD1 .36 whereas in Bali had the average score at 4.21, SD.74 2). satisfaction with health care had the average score at 4.21, SD .74 whereas in Bali had the average score at 4.38, SD.71

Qualitative research result: The strengthen community for sustainability and equilibrium of continuing and coordination of care in Thailand (Bangkok) and Indonesia (Bali).

Strong system in administration

Thailand surveyed the models of home care and community-based care models many years ago. Continuing care in Thailand has a strong policy when someone gets severely sick or ill, the people went to the hospital and then recovery symptoms go home for rehabilitation, the nurse has a discharge plan and refers them from hospital to community. The system still has an application for health information recordings. It is a program for home health care, volunteers can record basic health information including blood pressure, blood sugar level, and heart rate. “The system has the policy to control that we must follow because the health care system has set everything. I think it is good so just follow and report” One officer (O1), Oct 28.2020.

Good monitoring in the system

Good monitoring referred to good quality in monitoring and control that refers to the extent service

increases and desired health outcomes and reduces the undesired health outcomes, existing knowledge and search more the obstacle in management. In monitoring system was clarified by the division of responsibilities for community care coordination which was the key government officers monitoring and coordinating between the central and local authorities of the community. “In working it is not difficult we have health volunteer in the community help us, we trained them to help and them help us a lot in taking care the patients in the community. We have a caregiver program in the community too” Officer O2, O3, Oct 28, 2020.

High spirit in working of health volunteers

Health volunteers have been officially trained by health centers or community hospitals in the basics of caring. In community still have shortages in the care workforce or caregiver that were serious concerns, so there should be a long-term plan to ensure that sufficient human resources were generated to meet the increasing demand for care by creating a curriculum for training caregivers in the community.

Budget to support long-term care

Financing support continues to be a challenge for working in the community for sustainable care projects, and an insurance system will likely be needed. In working of health promotion hospitals or health centers still have the caregivers project that supported by Provincial Health Office, Ministry of public health that they paid for 1500 Baht per month in each caregiver for long care with

responsible patients taking care 5-10 patients, if there were fewer than 5 of elderly patients will get 600 Baht per month. Such as found with health volunteer 4, she worked two roles one was health volunteer and another for caregivers so she gets both budgets. This is the phenomenon in the community.

Continuing and coordinating care in the community in Thailand (Bangkok) and Indonesia (Bali) in the aspect of continuity with a primary care professional found that both countries had a similar situation that patients were receiving primary care that closes to their homes and still have health volunteers to necessary support, Healthcare providers provide the incentives for appointments with flexible times, they can be booked in advance, and allow the time for people to talk about what matters, in the health care system had the support primary care professionals in working as a Team. That found a similar system both in Thailand and Indonesia, the health service system in Indonesia was provided through three levels of health services.

In general, the Bali health services provided the service in the community that can be classified into 3 levels, namely: 1) Primary healthcare services; 2) Secondary healthcare services, and 3) Tertiary healthcare services. The same as the level of care in Thailand but in detail of classification is different. Primary health services are provided starting at the lowest level of care in the community. Hospital health services were increasing not only because of the improvement in the health services delivery system but also supported by increasingly technological developments utilized by the hospital management. Even the discharge planning (DP) of patients was increasingly being improved based on information systems and technology. This makes it easier for health care providers to provide services to the patients.

DISCUSSION

According to the study of continuing and coordinating care in community aspects of healthcare providers in Bangkok and rural areas, Thailand and Bali, Indonesia found that continuity with a primary care professional, in Thailand had an average score lower than in Bali, Indonesia. Explain that when considering the items that occurred in the framework of WHO such as in the continuity with primary care professional level that items composed of making sure that patients were chosen the primary care practice close to home, still have the choice to promote continuing care, the systems provide incentives and flexible duration that can be booked in advance, and allowed sufficient time, and establish recruitment criteria and retention practices that for “burn-out” and staff turnover, all that things can explain that from the geographic of the country, Bali is smaller than Thailand but stronger in cultural, ritual for ceremony, and family than Thai. These lead to meeting and seeing each other. Many celebrations occur in the activity of daily life with family and praying in the community temple so these events can talk and meet close up among them. Those things lead to satisfaction and good perception. Moreover, the study^{8,9} found that there were many problems of community participation which were caused by two main actors such as government levels, trust, and sense of belonging, family burdens, caring about their businesses, traditional cultures, and migration that might support the result of the study in Thailand.

According to the study of collaborative planning of care and sharing in making a decision that was composed of creating a culture of empathy, trusting in an interdisciplinary team, healing relationships, developing staff competency in conducting centered care of patients, holistic care included physical, psychological, emotional, and spiritual well-being, support the health literacy, provide coaching in health

behavior for caregivers to create self-management and build social connections, introduce health volunteers to the community. All these lead to increasing providers' knowledge, networks, and beneficial resources to bring people to culturally appropriate motivation and to support their neighborhood, match people with the cultural background of care aides to develop an enabling, social, motivational role^{9,10,11} found that in Bangkok and Bali had similar collaborative and planning of care that try to promote quality of life in the term of longitudinal continuity that composed of discharge planning, giving care and follow-up by a professional team in all settings, Links and referral strategies for professional team, community connector, support by informal care congruent with the term^{10,11,12} studied the prevention of chronic illness in the 21st-century elimination of the leading preventable causes of premature death and disability in the USA found that collaborative approach will improve health equity by building communities that promote health rather than curing a disease, had more accessible in healthcare, and focus the health-care system on improving health of people in community.

From the study, The level of care that perceived in Thailand and Indonesia found that the same in the items of Integrated people-centered health services composed of people receiving a continuum of health promotion, case management, prevention, diagnosis, treatment, needs throughout the life span but in Thailand was not the same as In Bali in rehabilitation, and palliative care services, coordinated across the different levels, place of care within and beyond the health sector, according to rehabilitation, palliative care, and coordination that need to develop to cover all communities so the ministry of public health need to distribute the manpower of healthcare providers such as physical therapists, palliative care nurses to cover all

communities that can lead to the satisfaction that found in the study that had the average score at 4.07, SD1 .36 whereas in Bali had the average score at 4.21, SD .74 2, satisfaction with health care had the average score at 4.21, SD .74 whereas in Bali had the average score at 4.38, SD .71 similar to the study of Parmar¹³ studied about supporting family caregivers of elderly within acute conditions and continuing care systems needed to identify that the family experience was captured and included as an essential component of care, stimulate a culture of collaboration, expand the idea or concept of the healthcare to team and family caregivers, to provide more palliative care, and to enhance policies in the community¹⁴.

RECOMMENDATIONS

Policy recommendations

1) According to the study, it was found that the policy on continuing care for the elderly was not yet clear in health promotion. Therefore, local administrative organizations should enact policies on health promotion in continuing care for the elderly and concretely implement them to achieve the goals of the policies providing the elderly with good quality, and Local government organizations should promote and support a budget for the elderly health promotion system to be sufficiently allocated to ensure stable and sustainable quality of life for the elderly.

2) According to the study, found that the score of rehabilitation, palliative care, and coordination across the different levels is still low so the ministry of public health should have a policy to point the healthcare providers to create care that covers rehabilitation, palliative care, and coordinated across the different levels in communities such as distribute manpower of physical therapist and community palliative care nurses to all community.

SUGGESTIONS FOR FUTURE STUDY

1). This study is a specific area study in Bangkok and Bali. Therefore, it is appropriate to further expand the scope of the study areas to the extent of the district and provincial levels.

2). There should be a study of continuing and coordinating elderly care in rural communities to find a good model of continuing care because it will have cross-cultural care among a varied group of people by concerning the environmental context of the community.

References

1. Ruan Y, Chen W, Zhuang C, & Lin H. Health-Related Perceptions of Older Adults/Patients with Degenerative Lumbar Diseases (ODLs) are associated with their Quality of Life: a Mixed-Methods Study. 2021.DOI: 10.2147/PPA.S328532. PMID: 34675494; PMCID: PMC8518139.
2. Bauer UE, Briss PA, Goodman RA, & Bowman BA. Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and disability in the USA. *Lancet*.2014; 5:384(9937):45-52. DOI: 10.1016/S0140-6736(14)60648-6.
3. Polis S & Fernandez R. JBI. Database System Rev Implement Rep. 2015;13(1):39-51.
4. Pankong , O., Khrabiad, S., Amphawa, K., & Sangsee, P. Effectiveness of Care in Older Adults with Chronic Illness by Community Participation. *Journal of Health and Nursing Research* .2020;36(3): 94-104.
5. WHO & UNICEF. A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals. Geneva: World Health Organization.2018.
6. WHO, UNICEF. Integrated community case management. An equity-focused strategy to improve access to essential treatment services for children. New York City (NY): United Nations Children’s Fund.2012.
7. Daniel WW & Chad L.Cross. Biostatistics: A Foundation for Analysis in the Health Sciences. 10th edition.2013;189-192. New York: John Wiley & Sons.
8. WHO. Framework on integrated, people-centered health services. Report by the Secretariat (document A69/39). In: Sixty-ninth World Health Assembly, Geneva.2018.
9. Piseth N. & Charungkaittikul S. Proposed strategies to strengthen community participation in community learning centers in The Kingdom of Cambodia. *Humanities, Arts and Social Sciences Studies (HASSS)*.2021; 21, (3):436-446.
10. World Health Organization. Noncommunicable Diseases Progress Monitor.2015. ISBN: 978 92 4 150945 9
11. Artsanthia J.& Pomthong R. Nurses’role: Case study of psychological care for Caregivers of Patients with Terminal Illness. *Journal of the Royal Thai Army Nurses*. 2018; 19 (1) :1-8. (in Thai).
12. Ursula E B, Peter A B, & Richard A G. Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and disability in the USA.2014. DOI: [https://doi.org/10.1016/S0140-6736\(14\)60648-6](https://doi.org/10.1016/S0140-6736(14)60648-6)
13. Parmar J, Jacqueline T, P, Lesley C., Karenn C., Peter G, J.T. Supporting Family Caregivers of Seniors within Acute and Continuing Care Systems. *Canadian Geriatrics journal*.2018; 21(4):292-296.
14. Artsanthia J. Palliative Care in community with the Buddhism traditions. *Journal of the Royal Thai Army Nurses*. 2013; 14 (1) :123-27. (in Thai).