

## การประยุกต์ใช้รูปแบบการประเมินผลกระทบต่อครอบครัวที่มีผู้ป่วยโรคเรื้อรัง: การนำผลงานวิจัยไปใช้ประโยชน์

### Implementing a Model to Evaluate Family Impact Associated with Chronic Illness: Research Utilization

บทความวิชาการ (Academic article)

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#### บทคัดย่อ

บทความนี้มีวัตถุประสงค์เพื่อนำเสนอถึงการนำผลงานวิจัยไปใช้ประโยชน์ ได้แก่ การนำรูปแบบการประเมินผลกระทบต่อครอบครัวที่มีผู้ป่วยโรคเรื้อรัง (FIACI model) ที่พัฒนาขึ้น ไปประยุกต์ใช้ในการจัดการศึกษา ทางการพยาบาลโดยการบูรณาการผลงานวิจัยในการจัดการเรียนการสอนรายวิชาปฏิบัติการพยาบาลครอบครัว ชุมชน 1 จากผลการประเมินพบว่าการนำรูปแบบการประเมินผลกระทบต่อครอบครัวที่มีผู้ป่วยโรคเรื้อรังไปใช้ในการจัดการเรียนการสอนภาคปฏิบัติการพยาบาลครอบครัวชุมชน 1 นั้นทำให้นักศึกษามีแนวทางในการประเมินผลกระทบต่อครอบครัวที่มีผู้ป่วยโรคเรื้อรังได้อย่างครอบคลุม ส่งเสริมให้นักศึกษามีความคิดวิเคราะห์และสามารถวางแผนการพยาบาลจากปัญหาที่พบในแต่ละครอบครัวได้อย่างมีประสิทธิภาพ

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## ABSTRACT

This article aims is to provide an overview of the development and implementation of a nurse educator initiative, a model to evaluate the family impact associated with chronic illness of their family members. The model that was developed was integrated in family and community health nursing I practice curriculum. The objective of this article is to explain how the Initiative model has helped to enhanced the nursing student assessment of the family impact associated with chronic illness of their family members and improved quality of care.

**Keywords:** Chronic illness, Chronic disease, Research utilization, Impact of chronic disease, family impact

### Chronic Disease situation in World and Thailand

According to Center for Disease Control and Prevention (CDC), chronic diseases are a condition that require on going medical attention or causes activities limitation and continue for at least one year or more (CDC, 2019). Chronic disease, chronic illness or Non-Communicable Diseases (NCDs) is now a major cause of the world leading health problems causing disability and death. The statistics show that 60% of deaths globally are due to NCDs and among these 80% occurred in low-and middle-income countries. It is alarming that all the countries are now facing issues of death from chronic disease which is actually preventable. According to the World Health organization (WHO, 2018)

report regarding top 10 global cause of deaths worldwide in 2016, death was caused by Ischemic heart disease, Stroke, Chronic obstructive pulmonary diseases (COPD), Lower respiratory tract infections, Alzheimer disease and other dementias, Trachea bronchus lung cancer, Diabetes mellitus, road injury, diarrhea disease and tuberculosis respectively. From the report it could be seen clearly that majority of cause of death were due to Non communicable diseases (NCD) or chronic diseases. It is alarming that ischemic heart disease and stroke are the top killers in the world that in combination has caused 15.2 million of death in 2016 (WHO, 2018). Moreover, ischemic heart disease and stroke have remained the major cause of death ranked top 10 since 2001.

As detailed above it could be clearly seen that NCDs rank top 10 global cause of death worldwide, and this situation is similar to Thailand. In Thailand, the people life style are changing dramatically. Majority of the population tends to consume food that bought from outside their home due to economic and time constraint. Therefore, many Thai people are suffering from chronic illness which is one of the major causes of death. According to the Thai Public Health Statistics reported by the Strategy and Planning Division, Ministry of Public Health, Thailand (2017), data retrieved from death certificate found that the leading cause of death in Thailand is due to cancer, cerebrovascular disease, pneumonia, ischemic heart diseases, and land transport accident. It is clearly seen that as the world is developing the population with chronic disease are rising., and it is the fact that Chronic disease have a substantial impact on the lives of the people living in both developed and developing countries (Davy et al., 2015).

### **Impact of Chronic Disease**

The era of the 20<sup>th</sup> century has huge development of science and economic as well as humanity in many aspects which includes human life expectancy that has

increased respectively, but this does not include year of healthy life as many people are facing with chronic illness or non-communicable diseases (Maschio et al., 2019). They are long duration and generally slow progression. The four mains type of Chronic disease are cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. All group and regions are affected by chronic disease. Chronic diseases are now the leading causes of death and disability worldwide and it was predicted that by 2030 chronic diseases will be the major cause of deaths worldwide more than seventy five percent (Geneau et al., 2010). In addition, majority of dead almost 80% will occur in low- income and middle-income countries which have high impact on the individuals, families and the national economics (WHO, 2008; Mathers, 2006; Nugent, 2008). In addition, it is found that the burden of chronic diseases is one of that main reason that caused disability adjusted life years to increase consistently and as reported in several studies the numbers has risen to more than 80% (Anderson & Malone, 2015; Basu, 2013; Higuchi 2010).

Chronic disease also cause poverty as household expenditures increased due to

health problems while the household income decreases (Abegunde & Stanciole, 2008; WHO, 2015) A study conducted in India by Mahal et al (2010) has found that the expenditure by Indian households that has a family member with a chronic disease increases and have a risk of falling into poverty almost 40% this is because some of the family members could not earn and some has to look after one another. The countries also suffer huge economic losses as a result of high health care cost, and lost productivity because of illness and deaths in early age from chronic diseases (Mahal et al., 2010). This is relevant to an evidence reported by WHO (2015), that majority of dead due to chronic diseases occur before the age of 70 and of these dead at early age occurred in low and middle – income countries. The rapid rise in chronic disease in these countries are closely linked with poverty as the household's expenses regarding health care increases (WHO, 2015). Vulnerable and socially disadvantage people get sicker and die sooner than people of higher social position, especially because they are at greater risk of being exposed to harmful products and have limited access to health services. This is supported by a study conducted in Brazil by

Mascho et al (2019) who found that chronic disease or non-communicable disease has increased and many were found to be in advance condition which is incurable and unable to access to proper health care due to poverty.

### **Impact of Chronic Disease on Family**

Any chronic illness in family often has impact on family members (Olivia,2008). Illness among any family members would cause burden on the remaining family members. (2-4) as well as the family members quality of life. Several studies have been carried out investigating the family impact related to family members that have chronic disease. Majority of the studies found that the family members life can be affected, the family financial status, family relationships, education and work, leisure time and social activities and finally all this does have high impact on the family quality of life (Golics et al., 2013). This is supported by a semi structured interview carried out with 133 families with family members that have chronic disease by Golics, et al., (2013) found that family members quality of life was affected in many aspects which includes physical effects, phycological distress and social

problems. In addition, many studies found that many family members that have their family members with chronic disease are often affected emotionally themselves more than the member that have chronic disease (Bowen, MacLehose, Beaumont, 2011; Leow & Chan, 2011; Golics, et al., 2013)

Often when any family members get ill the family members take up the role of caring. The caregiver (sometimes referred to as the informal caregiver or family caregiver) is the person who is involved in providing care to the patient at home. The caregivers could be a father, mother, wife, husband, son, daughter, sister, brother, friend or significant other. In addition, the caregiver focuses on providing care without wages or reward. Finally, the context of caregiving occurs at home. Caregivers can be divided also into two categories based on the level of care provided, namely primary caregiver and secondary caregiver. A Primary caregiver is the main person who provides direct care and spends time continuously with the care recipient. The services provided mainly include personal care such as bathing, feeding and toileting, and home health care activities such as administering medication and changing dressings (Oupra et al., 2010). A Secondary caregiver is the person(s) who

provides indirect care and does not spend time continuously with the care recipient. The services provided may range from shopping, transportation and running errands. The service may include occasional direct care when the primary caregiver is not available, but the amount of time spent in performing caregiving activities is less than the primary caregiver provides (Oupra et al., 2010). It can be seen that the role of family members who provide care and assume a role as a caregiver is complex. The role may be exhausting and time consuming because the caregivers have to deal with both physical health as well as psychological health problems of a family member that suffer due to chronic disease.

Assuming the role of family caregiver means more burden and responsibilities to the family and this can lead to changes in living pattern and family life. For example, family members have to dedicate their time to providing care to their family members that suffer from chronic disease , which otherwise may have been allocated to performing their former role effectively which may cause they unable to maintain their previous work and as a consequence may experience career disruption (Oupra et al., 2010).

It is important that health care professionals should be able to assess the family impact associated with chronic illness and provide care according to their needs and problems, not just routine care. Providing proper care and consultation could help to prevent further complication due to chronic disease as well as family burden and strain (Olivia, 2008; Oupra & Amattayakong, 2009; Oupra et al., 2010) Therefore, it is important that an effective model should be implemented to serve the needs to prevent further problems. Healthcare personal especially the nurses are the key person that provides direct care for the patients as well as their families. Therefore, it is very important that nurses could assess the impact on family caused by chronic illness in order to plan effective nursing care and provide proper support.

#### **Implementing the Family Impact Associated with Chronic Illness model (FIACI-model) in Family and Community Health Nursing I practice curriculum**

It is recognized worldwide that as the chronic disease are rising high each day, the impact and pressure on healthcare workforce does increase (Anderson & Malone, 2015). The need for health care

relevant to caring for chronic disease are high at moment and will increase in future. Many health care institutions have to plan to be able to handle the situation regarding care for people that are affected by chronic diseases or chronic illness (Block, Tran & McIntosh, 2011). When indicating about chronic care, the chronic care model which composed of six elements: health systems; self-management and support; decision support; delivery system design; clinical information systems and community resources and policies is normally applied to enhanced care in many health care institutions as well as training of medical practitioners and were known to be successful (Stellefson, Dipnarine & Stopka, 2013; Block, Tran & McIntosh, 2011; Bodenheimer, Wagner & Grumbach, 2002).

However, the model mentioned above is not applicable to all settings. The author as a nurse lecturer often found that during the nursing student clinical placement in community health nursing, I practice curriculum, the nursing students struggle to find out the family impact when having family members with chronic disease. They cannot access what happen to the family and family members and majority of them comes up with a problem

of health due to chronic disease which is already known but none were able to point out what impact the family has. The impact of chronic disease on the families with family members suffering from chronic disease is often unrecognized and underestimated (Oupra et al., 2010). It is essential that the impact of family members chronic disease on family members should be assessed as soon as possible in order to reveal the extent of its impact and enable the nursing students as well relevant healthcare staff to be able to develop strategies to support the family members of patients with chronic disease. This encouraged the author to conduct a development research (R&D) using mixed methods to find out the family impacts associated with chronic illness. The research was conducted in five initial stages lasting for one year and the impacts on family associated with family members with chronic disease were discovered. Each impact was grouped in to four major impact which were (i) Impact on family member health status, (ii) Life cycle, (iii) relationship and family role and (iv) economics (Figure 1). Each impact has negative and positive outcomes.

The Family Impact Associated with Chronic Illness model (FIACI – model) was

then integrated in the Family and community health nursing I practice curriculum. For 5 years 580 nursing students have assessed 580 families that have family members with chronic disease using the FIACI model

The model was implemented in 580 families. Majority of the families had at least one family member with chronic disease, and mainly suffering from hypertension, diabetes, cancer and stroke respectively. All the nursing students were trained how to use the FIACI model before implementing the model with the family that were assigned for them to provide home health care during their clinical placement. The process of the training for nursing students on how to use the FIACI-model begins with the author providing them with knowledge regarding impact of chronic disease on family members and four major impacts on family that were associated with family members with chronic disease. Then, the nursing student were assigned to practice how to collect subjective and objective data from the case study, categorized the data into four major impact according to the FIACI-model then plan nursing care according to the major impact that were reveal from the data. In addition, feedback was also given following

the training. This training process prior to the nursing students Family and community health nursing I clinical placement was provided to ensure that they will be able to implement the model precisely, and with confidence during their clinical placement.

#### **Evaluation of the use of Family Impact Associated with Chronic Illness model (FIACI-model)**

The satisfaction of the student regarding using the model to assess the family before providing care were high SD = .68,  $\bar{x} = 4.37$ . The families that care was provided by using FIACI-model to assess the impact prior to planning nursing care does have high satisfaction and improvement in families relationship as well as other aspects and this are few examples of their expressions “*I used to feel that things will never get better but this student could make me improve I could do much better*”; “*my families members used to quarrel a lot they feel is a burden but when this student explain us we adjusted now we are doing much better*”; “*my son in law and daughter were separated they fight every day but now they are together again*”. The clinical supervisors were satisfied with the FIACI-model as they mentioned that “*the*

*students under my supervision were able to assess the family impacts and plan nursing care according to the families need when using the FIACI-model, moreover, I felt that there has more analytical thinking*”.

#### **Strength and limitation of the FIACI model**

The strength of this model is that it could help the nursing student to increase their self confidence in providing nursing care to the family by looking at the family as the whole not only focusing on disease. In addition, it also enhanced their family nursing concept which is suitable for Thai culture context. However, the FIACI model does have minor limitation as when using this with family member that have chronic disease with the Activity of Daily more than 7 out of 10 (Barthel Index Score) the impact is not clearly seen, therefore the FIACI model is recommended to use when the family members which chronic disease Barthel Index is less than 7 or not more than 7 out of 10

#### **Conclusion**

The Family Impact Associated with Chronic Illness model (FIACI – model) was designed to equip nursing student and

nurses with the practical and theoretical skills necessary for them to practice as family planning nurses. It will meet the needs of nurses who will be practicing family care nursing as part of their role. In addition, it also helps the nursing students to develop confidence to demonstrate advancement of their clinical practice. It is assumed that nursing students and nurses

accessing family using FIACI- model will develop their clinical skills in specific areas of practice. The focus of this model will be on the development of students that have built on their awareness and skills related to the use of evidence-based practice through nursing care and on managing change.

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Figure 1 Family Impact Associated with Chronic Illness Model (FIACI-model)

