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BNJ is an official publication of Department of Publication of Belitung Raya Foundation in Belitung Indonesia, jointly with Indonesian National Nurses Association of Belitung Indonesia (PPNI Belitung) and Prodi D3 Keperawatan Belitung Poltekkes Kemenkes RI Pangkal Pinang.

Belitung Raya Foundation is a non-profit organization which focuses on education, health, information technology, and social and empowerment of the community. Belitung Raya Foundation is established since 2015 with official license of establishment from the Ministry of Justice and Human Rights of Republic of Indonesia (MENKUMHAM RI) with No: AHU-0009599.AH.01.12.Year 2015 and Notarial Deed No: 12 on 06 July 2015 by SRI ARIYAWATI, SH.,M.KN.

BNJ has been accredited by the Ministry of Science, Research, Technology and Higher Education of Indonesia (RISTEKDIKTI RI) with No: 10/3/KPT/2019, valid until 2024 (SINTA grade 3).

BNJ is indexed in Ovid EMCare (Elsevier), DOAJ, SINTA, Google Scholar, Garuda, ROAD, JournalTOCs, and WorldCat.

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First published by Department of Publication of Belitung Raya Foundation
Manggar Belitung Timur Propinsi Bangka Belitung, Indonesia
Email: editorbnj@gmail.com | belitunrayafoundation@gmail.com

Volume 2 issue 1: January - February 2016
Library of Congress Cataloging-in-Publication Data
Belitung Nursing Journal Volume 2 Issue 1
E-ISSN 2477-4073
P-ISSN 2528-181X

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Editor's Note: This issue has been corrected and updated with minor changes on 9 June 2020 according to BNJ Policy
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DO NOT IGNORE SEPARATION ANXIETY IN CHILDREN

Su-ari Lamtraktul*

Department of Pediatric Nursing, The Royal Thai Army Nursing College
Bangkok, Thailand

*Corresponding author:
Maj Su-ari Lamtraktul
The Royal Thai Army Nursing College
317/6 Ratchawithi Rd, Khwaeng Thung Phaya Thai, Ratchathewi, Bangkok, Thailand 10400
E-mail: mamiaw_army@hotmail.com

Madam,
Childhood is a happy and pleasant time. But, for some children, it is filled with anxiety regarding separation from major attachment figures, generally the parents. It is often called as separation anxiety, which is considered as a normal stage of development for children, and can be relieved when children get older. However, if the anxiety is persistent to get in the way of school or other activities, it is no more considered to be normal, Separation Anxiety Disorder (SAD) may occur.

SAD is a common child-onset anxiety disorder characterized by excessive and inappropriate anxiety for the child’s stage of development. To meet the criteria for a diagnosis of SAD, the excessive anxiety must have three or more symptoms as following: 1) recurrent excessive distress when separation from home or attachment figure occurs or is anticipated, 2) SAD often worry that harm (e.g., being kidnapped or being involved in an accident) will befall themselves or a parent, 3) persistent reluctance to go to school or elsewhere because of fear of separation, 4) persistent reluctance or refusal to go to sleep without being a major attachment figure, 5) repeated complaints of physical symptoms (e.g., headaches, stomachaches, nausea, or vomiting) when separation from a major attachment figure occurs or is anticipated or involved.

In line with this, little is known about the etiology of SAD because of the less research attention regarding the internalizing disorders in children (i.e., anxiety and depression). However, the literature mentions that childhood anxiety disorders are associated with a history of similar disorders in their family or parents. In addition, current evidence highlights the significant role of such
factors as genetics, temperament, and family environment in the dysregulation of emotion and the development of anxiety pathology.4

In this regard, professional nurses should take a part in the effort of preventing the occurrence of SAD, such as educating the families or parents of the children about the symptom and the impact of SAD, and nurses, especially pediatric nurses, need to provide the strategies to avoid persistent separation anxiety, which lead to anxiety disorder. The author remarks “do not ignore separation anxiety, it may disturb the children development”.

Declaration of Conflicting Interest
The author declares there is no conflict of interest in this article.

Funding
None.

Authorship Contribution
This study is the original work of the corresponding author.

References

ABSTRACT

**Background:** Diabetes mellitus (DM) is one of the leading causes of death and it is caused by genetics, nutrition, and unhealthy behaviors. Therefore, changes in lifestyle associated with eating behaviors in diabetes mellitus patients greatly impact on their quality of life. There are many factors related with changes in lifestyle of diabetes mellitus patients, especially eating behaviors.

**Purpose:** This study aims to examine the relationships between self-efficacy, psychological stress, family support, and eating behaviors among type 2 diabetes mellitus (T2DM) patients in Sidoarjo, Indonesia.

**Method:** A total of 117 T2DM patients from the Sidoarjo Community Health Center were included in the analysis. Using SPSS IBM 21.0 program, Pearson product moment correlation was performed to analyze data.

**Results:** The findings showed that self-efficacy and family support had a positive relationship with eating behaviors ($r = .692, p < .001$; $r = .683, p < .001$, respectively). Psychological stress had a negative relationship with eating behaviors ($r = -.327, p < .001$).

**Conclusion:** Self-efficacy, family support, and psychological stress had relationships with eating behaviors. Nurses should pay attention to these factors that make T2DM patients having a long-term commitment in healthy eating behaviors.

**Keywords:** type 2 diabetes mellitus, related factors, food selection, meal plan

INTRODUCTION

Diabetes mellitus (DM) is one of the leading causes of death and it is caused by genetics, diet/ nutrition (consume fast food, foods high in fat, cholesterol and low in fiber), and unhealthy behaviors (drinking alcohol and lack of activity or sport). Diabetes mellitus, if not handled properly, will result in the onset of complications in various organs such as the eyes, heart, kidneys, leg veins, nerves, and others. Diabetes mellitus is difficult to
be controlled in good condition, but it will be more difficult if the state of diabetes mellitus exacerbated by emotional disturbances, instability home, or lack of desire to try because of the lack of motivation. Many people with diabetes mellitus are admitted to hospital because they have an active diabetes complication, but there are still many cases of undiagnosed diabetes incidence in community.

Nutrition intervention in diabetes is one of the parts that are integral with the other treatments. Therefore, changes in lifestyle associated with eating behaviors in diabetes mellitus patients greatly impact on their quality of life. There are many factors that related to food selection and eating patterns of diabetes mellitus patients. The factors that related with selecting foods and eating patterns are divided into 3 domains, including personal dimension, behavioral patterns and environmental characteristics. Personal dimension is the desire of individuals to consume favorite foods when suffering emotional stress, along with nutrition-related knowledge, and lifelong history of eating beyond the point of self-satisfaction. Planning arrangements for a diabetic diet would be more effective if it involves a certain pattern of behavior, such as organizing meals in advance, alternative identification favorite foods, and learning to appropriate foods for diabetes mellitus. The aim of the study was to examine the relationships between self-efficacy, psychological stress, family support, and eating behaviors among type 2 diabetes mellitus patients.

MATERIAL AND METHODS
This study was a correlational study. Before conducting the study, researcher obtained a legal permit from the Sidoarjo Health Department. The researcher asked diabetes mellitus patients’ willingness to participate, when the patients were willing to become participants, then researcher continued for collecting the data by home visit because of time limitation for collecting data in the Sidoarjo Community Health Center. Before starting data collection, the researcher explained about the human protection, purpose, and method used in this study. After declaring consent as a respondent, the researcher explained briefly about the direction to fill the questionnaire and allowed respondents to fill it out according to their own circumstances. Each respondent was given 20-30 minutes to answer each questionnaire. Data were collected during January to February 2015.

In this study, the researchers used Self-Management Diabetes Dietary Behaviors Questionnaire (SMDDBQ) developed by Primanda et al for eating behaviors, modification of Diabetes Management Self-Efficacy Scale-United Kingdom (DMSES-UK) developed by Sturt et al. for self-efficacy, Diabetes Distress Scale (DDS) developed by Polonsky et al. for psychological stress, and Diabetics Social Support Questionnaire-Family (DSSQ-Family) developed by La Greca and Bearman cited in Puntsho Om for family support.

Selection and Description of Participants
The population in this study referred to adult people who were diagnosed with T2DM from the doctor, they live in the Sidoarjo sub-district. Sidoarjo sub-district has three Community Health Centers with a total of T2DM patients were 5,788 people. Three Community Health Center in Sidoarjo sub-district has the same characteristics of participants and by using cluster random sampling, the Sidoarjo Community Health Center was elected as the research location.
with the total of T2DM patients were 3,356 people. Participants’ recruitment process was performed by selecting persons with diabetes mellitus who visited the Sidoarjo Community Health Center for following up as the potential participants.

The inclusion criteria in this study were aged between 20-60 years old because diabetes mellitus in Indonesia mostly in adult group and accounted for 4.2 % of death in the age group 15-44 years in urban areas, it will give an impact on economic growth.\textsuperscript{11} The participants are able to read, write, and comprehend Indonesia language. The number of participants whom the data obtained from approximately 7 up to 8 participants per day. The researcher continuously doing this until the number of participants reach 117.

### Statistical Method

In the analysis of data, the researchers used Pearson’s product moment correlation to check the relationship between self-efficacy, psychological stress, family support, and eating behaviors. Statistical significance level was assumed when \( p < .05 \).

### RESULTS

This study aimed to examine the relationships between self-efficacy, psychological stress, family support, and eating behaviors among type 2 diabetes mellitus patients in Indonesia. The results of this study were presented as the followings.

<table>
<thead>
<tr>
<th>Table 1 The relationships between self-efficacy, psychological stress, family support, and eating behaviors</th>
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<tbody>
<tr>
<td><strong>Self-efficacy</strong></td>
</tr>
<tr>
<td>Overall eating behaviors</td>
</tr>
<tr>
<td>Arranging a meal plan</td>
</tr>
<tr>
<td>Selecting a healthy diet and amount</td>
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<tr>
<td>Recognizing the amount of calorie needs</td>
</tr>
<tr>
<td>Managing dietary challenges</td>
</tr>
</tbody>
</table>

The results showed that self-efficacy and family support had positive relationship with overall eating behaviors \((r = .692, p < .001; r = .683, p < .001, respectively)\). Psychological stress had negative relationships with overall eating behaviors \((r = -.327, p < .001)\). For relationships between dimensions of eating behaviors and self-efficacy, the strongest relationship \((r = .691, p < .001)\) was managing dietary challenges and followed by selecting a healthy diet and amount \((r = .634, p < .001)\). For relationships between dimensions of eating behaviors and psychological stress, the strongest relationship \((r = -.332, p < .001)\) was recognizing the amount of calorie needs and the lowest relationship \((r = -.247, p < .01)\) was arranging a meal plan. For relationships between dimensions of eating behaviors and family support, the strongest relationship \((r = .638, p < .001)\) was selecting a healthy diet and amount and
followed by managing dietary challenges. \((r = .628, p < .001)\).

**DISCUSSION**

Self-efficacy and family support had strong positive relationship with overall eating behaviors. It was asserted that, increasing self-efficacy and family support would increase awareness of T2DM patients to commit toward healthy eating behaviors. Self-efficacy had strongest relationship with managing dietary challenges dimension of eating behaviors and followed by selecting a healthy diet and amount dimension. It means if T2DM patients had good self-efficacy on eating behaviors, it will increase their behaviors for managing dietary challenges and selecting a healthy diet and amount. They can manage and organize their conditions to adherence for healthy eating behaviors. This finding was consistent with several previous studies. Self-efficacy related to self-care management of diabetes mellitus, such as dietary self-care management, and it will impact to Hb1Ac.\(^{12}\) Self-efficacy had strong relationship with adherence to a treatment regimen.\(^{13,14}\)

Family support had positive relationship with overall eating behaviors. Family support also had strongest relationship with selecting a healthy diet and amount dimension and followed by managing dietary challenges dimension of eating behaviors. Family support was related with family role and functioning. In some culture, family role may lead conflicts in decision making for the treatment management of disease, such as healthy eating behaviors, medication, etc.\(^{15}\) In another research, Trief et al.\(^{16}\) found that positive family functioning related with diabetes mellitus patients’ behaviors, such as eating behavior, physical activity, and medication adherence. The same thing also expressed by Pereira, Berg-Cross, Almeida, & Machado,\(^{17}\) family support improved compliance management of patients with diabetes to control glycemic status and quality of life.

Psychological stress had negative relationship with eating behaviors. The results found that psychological stress will decrease their ability for arranging a meal plan, selecting a healthy diet and amount, recognizing the amount of calorie needs, and managing dietary challenges. This finding was consistent with several previous studies. Lustman et al.\(^{18}\) found that psychological stress or depression had negative relationship with DM patient’s adherence to diet, physical activity, and medication regimens which contribute to glycemic control. In other research, psychological stress is related with increasing rates of diabetes complications and mortality in T2DM patients.\(^{19,20}\)

**CONCLUSION**

Self-efficacy, family support, and psychological stress were related with eating behaviors on type 2 diabetes mellitus patients. Health workers should concern on self-efficacy, family support, and psychological stress to maintain the commitment of type 2 diabetes mellitus patients in terms of eating behaviors.

**Declaration of Conflicting Interest**

None declared.

**Funding**

None.

**Authorship Contribution**

K.W.R.P contributed in designing, reviewing, collecting data, analyzing, and drafting the manuscript. C.T and S.J contributed in designing, reviewing, analyzing, and drafting the manuscript. All authors agreed with the final proof of the article.

**References**


Indonesia has produced a significant number of nursing schools. According to the latest information from the Directorate General of Higher Education, there are 733 nursing schools in Indonesia, which consist of 368 schools providing a vocational nurse training, and 385 schools providing professional nurse training that represent a large increase over previous years. It is expected that these nursing schools can produce a huge number of nurses that are able to fulfill the need of society in Indonesia. But, as the matter of fact, nursing shortage is still happening in Indonesia, specifically in terms of unfulfilled position. Ministry of Health (MOH) estimates that the need of nurses are 87,874 nurses of 118,788 health workers at hospitals, and an estimated 10,146 extra nurses are needed at primary health care level. This condition tells that the unequal distribution is a big challenge in Indonesia.

The unequal distribution of nurses is a crucial issue to address due to the health care needs of the people, especially in underserved rural and remote area. Ministry of Health indicates that there are 87 districts located within 27 of 33 provinces in Indonesia are left behind regarding access to basic health care services. There are also 92 districts in the outermost small islands and 34 small outlying islands that do not have basic services. Therefore, it leads to the question, “Where are Indonesian nurses going?” Nurses actually prefer to migrate in the big cities in Indonesia, such as in DKI Jakarta, West Java, Central Java, East Java, and North Sumatera. It is because the job opportunities are available in those cities while the technology has a great influence for nurses to move.
In this regard, to cope with the unequal distribution of nurses, Government of Indonesia initiates the contract scheme program or called “Pegawai Tidak Tetap” in Bahasa Indonesia to distribute not only nurses but also medical doctors to the remote and rural areas, and also provide additional incentives for those who work in those areas. However, many nurses are rejected to be placement in those areas. Literature indicated that difficulties of geographic with lack of transportation and infrastructure facilities in most areas outside of Java, Bali, and Sumatra Island are the causes of rejection. While low salary, lack of facilities and uncertainty of future carrier of nurses are also considered the other importance factors for unequal distribution of nurses in Indonesia. Morel (2014) said that there are many factors influencing recruitment and distribution of health professionals, including nurses in rural and remote areas such as financial factors, professional factors, location, family and other factors.

Therefore, based on this condition the nurse leaders need to have a great strategy to provide pull factors to increase the intention of nurses to fulfill the positions in the locations or areas needed, especially in rural and remote areas. The nurse leaders also need to prepare for investment and increase the effectiveness of recruitment of new nurses to those areas. However, the author remarks, “The loss of nurses to other provinces or to locations in the city/district where the jobs are, including rural and remote areas is considered a positive investment and create market equilibrium. In contrast, if nurses just keep staying in the location that there are no jobs available, it will be considered a negative investment.”

Declaration of Conflicting Interest
None declared.

Funding
None.

Authorship Contribution
This study is the original work of the corresponding author.

References

ABSTRACT
Shifting from hospital-based care to community-based care involves the family as advanced caregivers to the patients with schizophrenia at their home. Yet, they have need of knowledge and skill in caring the patients as well as support from health care providers and society. Family caregivers should be well-prepared to take care the patients with schizophrenia at home since it gets some negative consequences on their physical, psychological, social, and financial. Nurse needs to assess the factors that might influence the family caregivers to feel burden, and include the family caregivers into nursing care in which would not only to improve the patients’ mental health but also the family caregivers.

Keywords: schizophrenia, family caregivers, factors of burden

INTRODUCTION
Schizophrenia is a complex disorder with an extremely varied presentation of symptoms.\(^1\) World Health Organization (WHO) estimated that globally about 29 million people have schizophrenia. Although its incidence is low (3 per 10,000), its prevalence is high due to the chronicity of this illness.\(^2\) Data from the Health Ministry of Indonesia stated there were 18,800 schizophrenic patients in Indonesia that were confined in 2011.\(^3\)

The essential in caring the patients is maintaining the wellness while encouraging the self-care ability on the patients and the family caregivers. Patients with schizophrenia have long duration of illness, and extent disabilities both of daily functions and social interactions, therefore their family have to look after them to prevent the relapse episode. In Indonesia, most of the caregivers of patients with schizophrenia are their own family. In order to help the family caregivers in caring for the patients at home, nurses need to understand the burden they may feel during caring the patients. This paper aims to provide the insight of knowledge...
about the burden of family caregiver, its related factor, and the assessment of the burden.

DEFINITION OF FAMILY CAREGIVER BURDEN

Definition of family caregiver. Caregivers or carers are people who provide care to family members, life partners or friends whose sick, elderly or disabled, without paid. Family caregiver is someone who is responsible for the physical, emotional, and financial supports of the family members who are unable to care for him/herself due to illness, injury or disability.

Definition of burden. From literature review, burden has been defined since 1966. Grad and Sainsbury stated that burden is any negative impact to the family caused by caring for ill member. Hoenig and Hamilton divided burden into objective and subjective. Objective burden as an event or activity associated with negative caregiving experiences, whereas subjective burden referred to feeling that appeared in the caregiver caused by the fulfillment caregiving of the caregiving function. From Chan, objective burden is related to the patient's symptoms, behavior, and sociodemographic characteristics; and subjective burden is the mental health and subjective distress among family members. Conceptual clarity is elusive here, however. Rose stated the conceptual of burden is difficult to find, and what has been described as a "burden" is more accurately described as a "stressor".

Definition of family caregiver burden. The family caregiver burden is the extent to which caregivers perceived their emotional, physical health, social life, and financial status as a result of caring for their ill relatives. They viewed burden as a product subjective perception of caregiver when caring for impaired person. The term caregiver burden used to express any negative consequences of caring for patients with mental disorders by family caregivers. Recently, the area of caregiving burden has been widened to involve the physical, psychological, social, and financial aspects experienced by family caregivers. From World Federation of Mental Health, burden experienced by family refers to affect for those who close to the person with mental health problems.

Development of Knowledge of Family Caregiver Burden. In the past, patients with schizophrenia who have been cared focus only in hospital; in these days, caring for the patients would be performed by their families at home. Shifting from hospital-based care to community-based care has identified the family as the caregiver. In Western countries, the studies showed about 25%-50% of discharged patients with schizophrenia live and need advanced caring from their families. Likewise, in Indonesia, almost all discharged patients with schizophrenia will return to their own homes in the communities.

The shift from hospital-based care to community-based care requires the gather role of health care providers, family of patient, the public at large, and policy marker function as well. The essential in caring the patients is maintain the wellness while encourage the self-care abilities on patients, family, and community. Some caregivers report the duties of family caregiver are hard responsibilities that affect their daily lives and include lack of household financial, disrupt of either work or leisure activities, and also their physical and mental health status. For another, they enjoy the time they spend with their spouse, the chance to grow closer to the care receivers, the intimacy of personal care, and the sense of being needed and appreciated. It represents that some
family caregivers cope the burden better than others.

The concern of family caregiving brings two ways of safety issues in nurse views. First, caregivers refer to “secondary patients”. They need protection and guidance in terms of the high risk for injury and adverse events in caring for the patients at home. Second, family caregivers are “unpaid providers”. They need information to learn how to perform the caregivers’ role in order to properly caring for the patients. Mental health nurses have the ideal opportunity in assisting the families who are living with schizophrenic patients to develop more effective coping behaviors, communication skills, and social support systems.15

FACTORS RELATED TO FAMILY CAREGIVER BURDEN

Burden of family caregivers leads to negative consequences not only for themselves but also for patients, other family members, and health care system. Numerous studies conducted to examine the factors associated with family caregivers’ burden on various dimensions. In this review, the factors related to family caregiver burden would be classified into internal factors and external factors.

Internal Factors

Internal factors are some aspects of the family caregivers’ characteristics which affect the burden.

1. Socio-demographic factors including gender, age, religion, cultural, marital status, education, occupation, income, relationship with the patient, number of family members.

   Gender

   Mostly family caregivers are females. Female caregivers have significant higher burden scores on the “emotional strain” and “financial/physical strain domains.16 The findings suggest that female caregivers rather than male caregivers have less positive coping with symptoms of their ill relatives.17

   Age

   There is a significant difference between the caregivers’ age groups with those aged 40 or above scored significant higher levels of burden.11 On another study, the younger caregivers have significant higher score on caregiver burden.18 However, age of caregivers has little influence on caregiving burden.17 There is no age-specific effect of either the patient's age or the caregiver's age on the amount of burden of caregiving.19

   Religion

   The results of the Chien11 study indicated that the caregivers with traditional Chinese religions such as Confucianism and Buddhism reported higher levels of burden than those who are Christians or Catholics. Another study which data collected by in-depth interviews and observation involving 17 caregivers in Thailand, found evidence that the Thai health care system has made little provision for caregiver burden.20

   Cultural

   The relationship between culture and burden affected by other intervening factors such as socioeconomic status or the sense of obligation and responsibility. The aim of study from Caqueo-Urizar and colleagues21 was to describe the levels of burden in Aymaras caregivers (aborigines who are located on the highlands of Northen Chile) from schizophrenic patients, and the finding showed significant differences between Aymara and non-Aymara families in the total burden score and the incompetence subscale.

   Marital status

   Single (unmarried) caregivers experienced more tension. Higher caregiver burden by the single caregivers may be understood from the perspective
that most of them would be either widowed parents or unmarried siblings and hence having lower social support and thereby perceive more burden.\textsuperscript{18}

\textit{Education}

In the context of caring for an adult with schizophrenia, low level of education means that fewer resources are available to caregivers who are faced with challenging behaviors and other caregiver-related stressors.\textsuperscript{22} Lower educational attainment of the caregiver is predicting higher burden scores in various domains.\textsuperscript{16}

\textit{Occupation}

Employed caregivers have significant higher burden scores on the “self-criticism” and “time/dependence” domains. On the other hand, unemployed caregivers reported higher levels of burden on the “financial/physical strain” domain.\textsuperscript{16}

\textit{Income}

Studies found that caregivers' burden score was negatively correlated with their household income.\textsuperscript{8} The mean of burden scores was significantly higher among caregivers who had lower monthly household income.\textsuperscript{11} Same result also on Kate and colleagues\textsuperscript{18} study that the significant higher score in caregiver burden was associated with lower income. A high burden score is also associated with rural setting and poorer economic circumstances of the family.\textsuperscript{19}

\textit{Relationship with the patients}

Caregivers who are parents or spouses of the patients have significant higher burden scores on the “uncertainty” domain.\textsuperscript{16} Parents have significant lower scores on all the domains (except tension domain) of caregiver burden compared to spouses.\textsuperscript{18} Relationship between parent and patient has a direct impact on the burden, which means that the caregivers who are parents experienced higher perception of burden than those as other relationships.\textsuperscript{17}

\begin{itemize}
\item \textbf{Number of family member}
Caregivers of patients living in households with fewer numbers of people have higher burden scores on the “financial / physical strain” and “time / dependence” domains.\textsuperscript{16} The number of family members is significant in reducing the demands for care and involvement of caregiving, thus lower the caregiving burden.\textsuperscript{11}

\item \textbf{2. Duration of caring the patients}
The amount of daily contacts with the patients predicts the burden of family caregivers. The higher the number of hours spent with the patient, the greater the degree of perceived burden by the caregivers.\textsuperscript{23} Due to the sociocultural sense of obligation to care for sick family members oneself (rather than delegating care), caregivers who spend lesser time with the patients may be vulnerable to self-reproach.\textsuperscript{16}

\item \textbf{3. Perceived social support}
Social support is one of predictors in family caregivers’ burden. Poor social support is a predictor of higher burden scores on the “financial/physical strain”, “emotional strain”, and “time/dependence” domains.\textsuperscript{16} Chien and colleagues\textsuperscript{24} explored the effect of the mutual support group intervention on family burden. The findings demonstrated that the efforts by mental health workers to establish and support mutual support groups for family caregivers of patients with schizophrenia is likely to lead to major benefits for family carers and indirect benefits for their relatives with schizophrenia associated with living in a more supportive and harmonious family environment.

\item \textbf{4. Coping strategies}
There are many significant findings between the burden and the coping strategies in caregivers when they cared
\end{itemize}
for their relatives with schizophrenia. Caregivers’ poor management styles lead to frequent conflicts with their sick relatives, resulting in distress and suffering. Tension domain of caregiver burden has significant positive correlation with caregiver’s coping strategies of avoidance, collusion, coercion and total coping checklist score. The passive oriented or emotion-focused coping strategies (resignation, avoidance) have less impact on burden than active oriented or problem-focused strategies.

5. Quality of life
Evidence shows that caregivers’ experience negatively changes their quality of life. Decreased quality of life may be associated with caregivers' burden, lack of social support, course of the disease and family relationships problems. In addition, in developing countries, quality of life is affected by caregivers' economic burden. Tension domain of caregivers’ burden has significant negative correlation with all the domains of caregivers’ quality of life.

6. Physical status
According to Bull, as cited in Chou, caregivers in poor health are consistently found to have significantly higher burden levels than those in good health. Relationships between burden and health can change over time as the situation becomes more burdensome. The high levels of burden might relate to the poor health condition of older caregivers, which has been consistently found to result in high burden level and subsequently increases the physical and psychological demands of caregiving.

7. Knowledge about schizophrenia
If caregivers do not have adequate knowledge and support, they may not be able to take up the responsibilities of taking care of the ill persons. The relationship between the caregivers’ knowledge about schizophrenia and their burden is negatively correlated through the family coping with the patients’ symptoms. It means the lesser knowledge caregivers have about schizophrenia, the poorer coping they used, thereby the higher burden they perceived.

External Factors
External factors are stimuli of burden that originate in the outside of family caregivers’ areas.
1. Socio-demographic factors of patients including age and duration of illness.
Family burden is not affected by patient’s previous admissions, age of illness onset and the duration of illness. All these variables are related to patient’s psychiatric history and may not have an accumulative effect on the caregiver’s well-being. A study from Othman and Salleh found that there is no age-specific effect of either the patient's age or the caregiver's age on the amount of burden of caregiving. However, another study found that the correlates of family caregiver burden with patient’s age is negatively significant as well as illness duration that 11 or more years since illness onset, it means young patient age is related to increased family caregiver burden. One of predictors that has higher caregiver burden scores is longer duration of illness of patient correlated with higher scores on the “uncertainty” domain.

2. Severity of patient illness
The symptoms of schizophrenia patients would impact to the burden of family caregiver as well as the severity of patient illness. Higher Positive and Negative Syndrome Scale (PANSS) scores predict higher caregiver burden scores in several domains. There is a positive correlation between the total amount of symptomatic behavior and the different
burden variables. The more symptomatic behavior the family member reported, the more efforts family members have to make, the more extra works they do, the worse the mood they experience at home, the more emotionally burdened they feel, the more often other family members left home or threatened to do so, and the more inconvenience have been experienced. Patient’s global psychosocial functioning, incorporating severity of psychotic illness, is also found to be positively associated with perceived burden. Impaired psychosocial functioning (low global assessment scale score) of patients have a direct negative impact on both objective and subjective dimensions of family burden (high family burden scale score). The strong correlation between social problem behavior of patient score with total objective and subjective family caregiver burden also found on Othman and Salleh study. The correlation between symptom severity and caregiver burden underscores the need to ensure effective treatment for patients with schizophrenia as a vital step in addressing caregiver burden.

3. Mental health service and its utilization
Roick et al. as cited on Rafiyah conducted a study on 333 Germany caregivers and 170 Britain caregivers with schizophrenia to compare burden experienced by caregivers caring for schizophrenia person in those countries. Results showed that Britain caregivers reported more burden than Germany caregivers. The major cause of difference of burden was the differences in the provision of mental health service. Germany has on average 7.5 psychiatric beds per 10,000 populations, whereas Britain has only 5.8. Therefore, the unmet needs for care (covering the dimension of basic living condition, health care, functioning and service) seem to be higher among the people with schizophrenia in Britain.

ASSESSMENT OF BURDEN
Family caregiver burden are viewed widely on the physical, psychological, or emotional, social and financial problem experienced by family caregivers. Therefore, some scales are required to measure different aspect or single issue in terms to answer the research questions on study. Numerous questionnaires have been developed to quantify the large subjective domain of caregiver burden, but the Zarit Burden Interview is the most widely referenced scale in studies of caregiver burden. However, many researchers use other instruments to assess the family caregiver burden. Some of instruments include Family Burden Interview Schedule, Family Burden Scale, Burden Scale, Burden Assessment Scale, and Caregiver Burden Scale.

The Zarit Burden Interview explores the caregiver burden on the negative physical, mental, social, and economic impacts of caregiving on the life of the caregivers. This instrument was constructed by Zarit et al to assess caregiver burden in dementia, but it has also shown satisfactory psychometric properties in assessing caregiver burden in schizophrenia. The Family Burden Interview Schedule is a 25-item semi-structured interview schedule designed by Pai and Kapur, which consists of objective and subjective dimensions of burden measurement and also includes six domains of perceived burden, including effects on family finance, routine, leisure, interaction, physical health, and mental health.

The Burden Assessment Scale designed by Reinhard and colleagues measured burden objectively and
subjectively. The objective burden items are the visual behavioral effects of care giving in several areas, including financial problems, limitations on personal activity, household disruption and social interactions; and subjective burden items refer to the feelings, attitudes and emotions expressed by the caregivers and include area of shame, stigma, guilt, resentment, grief and worry.25

CONCLUSION

Many studies were conducted to explore the burden of family caregivers of patients with schizophrenia and its relationship with the other variables. The studies found that the characteristics of family caregivers, including their perceived social support, coping strategies, and knowledge about the disease considered as their internal factors that affect their burden of caring the schizophrenic patients, while the external factors include the characteristics of patients such as severity of illness and mental health service and its utilization. However, the knowledge of family caregiver about caring the schizophrenia patient has not been identified yet. Future study may need to examine that factor related to family caregiver burden.

There are three components to understand the issues of burden of care: 1) the patients, in terms of the impact of the schizophrenia disorder itself, its symptom profile and long-term course; 2) the caregivers, and their ability to cope with the challenges and frustrations; and 3) the community and the context caregiving takes place.31 However, the concerns of family caregiving on patients with schizophrenia should not be seen on negative consequences only. Nurse needs to help the family caregivers in preparing themselves to perform the roles while preventing them in perceiving burden. The effectiveness of nursing interventions through family role as the caregiver of patients should be expanded, thus decreasing the number of relapse period of patients with schizophrenia.

Declaration of Conflicting Interest
Nothing to be declared.

Funding
None.

Authorship Contribution
This study is the original work of the corresponding author.

References

