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SELF-CARE BEHAVIOR OF PERSONS WITH DIABETES

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Abstract

This study focuses on determining the Self- Care Behavior of Persons with Diabetes. It employed the descriptive research design to gather the empirical data required and non-probability sampling technique was used in the selection of the participants. To gather an in-depth and substantive data, the researcher personally assisted and individually interviewed the participants in answering the survey questionnaire. The outcome of the study revealed that majority of the participants are on the action stage of the Transtheoretical Model of self-care behavior since they have made specific overt modifications in their physical, psycho-emotional, social and spiritual self-care behaviors for more than 6 months and they intend to continue these changes by moving or going forward in order to prevent the complications of the disease. Despite the challenges they encountered they were able to survive and face those challenges because of the support provided by their family, friends, health care providers and religious groups. Moreover, it was found out that the good interpersonal relationship they have developed with their doctors have positively affected their self-care behavioral changes. However, despite the programs and activities provided by the Diabetes Specialty Clinic of the Cotabato Regional and Medical Center, there are other participants who are still contemplating and pre-contemplating of modifying their behavior and is most common among newly diagnosed clients and those who have difficulty in adhering to the dietary and pharmacologic treatment.

Based on the given phenomena, the researcher therefore concluded that persons with diabetes can manage to change their self-care behavior despite the difficulties and challenges

experienced with the help of their family, friends and members of the health care team who inspired them to adhere with the therapeutic regimen thus motivating them to help themselves better with the dread effects of diabetes mellitus to improve their quality of life.

The researcher recommends the participants to be proactive advocates in the prevention and control of diabetes and be a motivation to other diabetic clients in self-care behavior change. Coherent and logical plans shall be formulated with full autonomy as partners and major decision makers in this care process. Moreover, for nurses and health care providers at large, to enhance and strengthen health promotion activities and programs to motivate and encourage diabetic clients to change their self-care behavior. The utilization of evidence-based interventions, strategies and processes are highly recommended in order to help diabetic clients move through stages and uplift the professional nursing care practice. Furthermore, focus on the challenges faced by the clients by helping them cope with the adversities, and strengthen their efforts in order to hurdle the difficulties encountered.

Keywords: Nursing, Self-Care Behavior, Diabetes Mellitus, Persons with Diabetes, Transtheoretical Model

Introduction

Managing diabetes mellitus (DM) is tasking and very challenging since it requires a lifelong medical treatment and lifestyle adjustment. Baghbanian and Tol (2012) cited that neither the curative model nor the compliance/adherence model is effective in diabetes care. Clients affected by it need to learn how to control their blood sugar and prevent complications by permanently changing their behavior. Malathy, Narmadha, Ramesh, Alvin and Dinesh (2011) suggested that an alternative paradigm is needed that recognizes that clients are in control of, and responsible for, the daily self-management of their DM, since they are the most important decision-makers in the care process, they should receive enough instructions to make informed decisions. As agreed by Ayele, Tesfa, Abebe, Tilahun and Girma (2012) to prevent serious morbidity and mortality, it requires dedication to demanding self-care behaviors.

It has been observed that over the last 20 years, trends in self-care interventions have evolved from education only to education plus behavioral models. Studies on self-care management suggest that enhanced self-care improves glycemic control and healing (Albright, Parchman and Burge, 2010). Thus, nurses and family's ability to understand and influence client behavior that enhances self-care may significantly influence the success of treatment for clients with diabetes. Further agreed by Baghbanian and Tol (2012) that the success of management of diabetes depends mainly on clients' response to the knowledge they have of the disease, their awareness of its implications, and their subsequent health behaviors.

The study aimed to determine and analyze the stage of self-care behavior of clients with diabetes mellitus. It focuses on determining the participant's stage of self-care behavior in the aspect of physical, psycho-emotional, spiritual and social. Likewise, the factors that affect the participant's self-care behavior, the challenges encountered by the participants in modifying their behavior and the participant's efforts to modify their behavior are being sought in this study.

As observed, despite the Department of Health's program to address the problem, adherence to activities such as control, prevention and treatment of DM are found to be low due to its long term changes and the clients tend to become indolent to participate in their own care. It is in this perspective that the researcher would like to determine the self-care behavior of the diabetic clients and to identify and analyze the factors that affect their self-care behavior. Thus, may aid in improving the diabetic's quality of life.

Methodology

This study employed quantitative descriptive research design. It described the SCB of the participants with DM. The participant's level of accomplishment of behavioral change was determined and discussed based on the Transtheoretical Model.

Non-probability purposive sampling technique was utilized since the researcher only included those clients with Diabetes Mellitus (Type I or Type II) who were enrolled and active members for six (6) months in the Diabetes Specialty Clinic of Cotabato Regional and Medical Center (CRMC), and were willing to participate. Limited only to clients age 18 and above, who were active members of the program from July 2017 up to December 2017. Based on the masterlist, there were 150 enrolees but only 60 were active members. However, out of 60 selected participants only 48 participated in the data collection, seven (7) refused to participate and five (5) did not show up during the two (2) weeks data collection schedule.

The research questions focused only on the four (4) aspects of wellness which were: physical, psycho-emotional, spiritual and social. In addition, these determined and identified the stages of self-care behavior of the clients based on their responses and was categorized by the researcher as described in the Transtheoretical Model. Furthermore, all stages of the Transtheoretical Model are used with the exception of the Termination Stage.

A self-constructed questionnaire translated to Filipino language was used to gather the relevant data of the study which was validated by experts on their field of specialization prior to the presentation and distribution to the participants. The content validation was rated 4.2 out of 5 points score which means very good, and the comments or suggestions to improve the paper were incorporated in the instruments, which is composed of five (5) parts. Part I composed of the participant's demographic profile which includes age, gender, civil status, religion, educational attainment, occupation, monthly income, and age when diagnosed with DM. Part II consisted of

40-item statement that aid in the identification of the participant's Stage of Self-Care Behavior in terms of physical, psycho-emotional, spiritual and social aspects which was answered with the use of the scale as adapted from the Transtheoretical Model. Part III is composed of 12-item statement that helped in the determination of the factors that affect self-care behavior by using the scale interpreted as either Yes or No. Part IV are open-ended questions that determined the challenges encountered by the participants in modifying their behavior, and their efforts to modify such behavior.

Determination of the number of clients who were enrolled in the DM club program at the Diabetes Specialty Clinic of CRMC was sought. Upon approval of the Dean of the Graduate School and Medical Center Chief of CRMC, a letter was given to CRMC Research and Ethics Committee thru CRMC Chief Nurse. Once reviewed and approved the formal and proper conduct of data collection commence.

The instrument was personally distributed with a letter stating the purpose and benefits of the study and the consent to participate during their regular visit at the DM clinic. Further, the participants were informed that they have the right to withdraw or refuse to participate if they feel that their right/s was/were violated and that the data gathered was treated with utmost respect and confidentiality. Personal interview was employed to assist the participants to clarify on their queries.

The quantitative data gathered was tabulated, tallied, analyzed and interpreted with the help of statistician while the phrases and statements from open-ended questions were categorized in accordance to the participants' challenges encountered and struggles in modifying their self-care behavior.

Descriptive statistics particularly the frequency, percentage distribution, and table were used to treat the quantitative data on the profile of the participants while mean and standard deviation were used to treat the stages of SCB of the participants and the factors affecting the participant's behavior. The qualitative data (phrases and statements) from open-ended questions were collected and categorized according to frequency of responses.

Results

Participant's Stage of Self-Care Behavior

The analysis of the participant's stage of self-care behavior was subdivided into four (4) domains in the areas of physical, psycho-emotional, spiritual and social for a holistic observation in the self-care behaviors being displayed by the clients with DM.

Table 1 shows the participant's stage in the physical aspect of self-care behavior. From the 13 statements mentioned, 9 items namely item 1, 4, 5, 7, 8, 9, 10, 11 and 12 have a description of being in the maintenance stage, wherein the participants are avoiding alcoholic beverages (highest mean of 4.98), quitting smoking (mean of 4.96), following the diet given by the nutritionist and brisk walking regularly (both with a mean of 4.83) since being diagnosed with DM. While some of the participants are in the action stage as shown on items 3 (take the medication religiously) with a mean of 4.44, and 6 (sleep at least 7 hours per night) with a mean of 4.42. However, there are participants who are engaging in sports (mean of 1.77) is still in the contemplation stage while some are exercising regularly (lowest mean of 1.38) is in the pre-contemplation stage.

Despite of this, the overall mean of the participant's stage in the physical area of self-care behavior is 4.24 with a final description of being in the action stage. This shows that majority of the clients are actively engaged in changing their physical behavior in order to combat and prevent the complications of DM while only some of them are still contemplating about doing regular exercises.

Table 1. *Mean and Standard Deviation of the Participant's Stage in the Physical Aspect of Self-Care Behavior*

Physical Aspect of Self-Care Behavior	Mean	SD	Description
I…			
1. monitor my blood sugar.	4.58	0.342	Maintenance Stage
2. exercise.	1.38	0.316	Pre-Contemplation Stage
3. take the medication.	4.44	0.424	Action Stage
4. follow the diet given by the nutritionist.	4.83	0.532	Maintenance Stage
5. limit intake of sugary foods.	4.85	0.352	Maintenance Stage
6. sleep at least 7 hours per night.	4.42	0.253	Action Stage
7. eat a well balanced diet.	4.73	0.253	Maintenance Stage
8. do brisk walking.	4.83	0.416	Maintenance Stage
9. quit smoking.	4.96	0.261	Maintenance Stage
10. avoid alcoholic beverages.	4.98	0.524	Maintenance Stage
11. take a walk at lunch breaks.	4.50	0.361	Maintenance Stage
12. find time for relaxation.	4.79	0.256	Maintenance Stage
13. engage in sports.	1.77	0.372	Contemplation Stage
Overall Mean	**4.24**	**0.359**	**Action Stage**

Table 2 reveals the participant's stage in the psycho-emotional area of self-care behavior. From the 6 statements mentioned, 5 items namely item 1, 2, 4, 5, and 6 have a description of being in the maintenance stage while item 3 is in the action stage. Those having been in the maintenance stage (highest) are the clients developing a good relationship with family and friends (highest mean of 4.98), doing personal interactions with others (mean of 4.96), and spending most of my time with their family as well as attending special events of family and friends (both with a mean of 4.88). While spending time with one's spouse (mean of 4.48) is only in the action stage.

In line with this, the overall mean of the participant's stage in the social area of self-care behavior is 4.83 with a final description of being in the maintenance stage. This reveals that most of the clients have the ability to sustain the changes in their social behavior.

Table 2. *Mean and Standard Deviation of the Participant's Stage in the Psycho-Emotional Aspect of Self-Care Behavior*

Psycho-Emotional Aspect of Self-Care Behavior	Mean	SD	Description
I…			
1. engage in creative activities.	2.10	0.253	Contemplation Stage
2. talk to my friends about my disease.	4.88	0.257	Maintenance Stage
3. consult my physician.	4.88	0.534	Maintenance Stage
4. attends the diabetes session /workshop.	4.85	0.351	Maintenance Stage
5. discuss my disease with my family.	4.88	0.364	Maintenance Stage
6. communicate with the diabetes nurse.	4.88	0.355	Maintenance Stage
7. manage my anxiety.	4.94	0.267	Maintenance Stage
8. avoid persons who are not supportive.	1.10	0.256	Pre-Contemplation Stage
9. avoid people who are full of negative thoughts.	1.31	0.253	Pre-Contemplation Stage
10. discuss my feelings and concerns with my family.	4.79	0.633	Maintenance Stage
11. keep a daily diary or journal.	1.38	0.538	Pre-Contemplation Stage
12. writing three good things that I did each day.	4.10	0.363	Action Stage
13. watch to movies and doing something that I enjoy.	4.88	0.264	Maintenance Stage
Overall Mean	**3.76**	**0.36**	**Action Stage**

Table 3 shows the participant's stage in the social aspect of self-care behavior.From the 6 statements mentioned, 5 items namely item 1, 2, 4, 5, and 6 have a description of being in the maintenance stage while item 3 is in the action stage. Those having been in the maintenance stage (highest) are the clients developing a good relationship with family and friends (highest mean of 4.98), doing personal interactions with others (mean of 4.96), and spending most of my time with their family as well as attending special events of family and friends (both with a mean of 4.88). While spending time with one's spouse (mean of 4.48) is only in the action stage. In line with this, the overall mean of the participant's stage in the social area of self-care behavior is 4.83 with a

final description of being in the maintenance stage. This reveals that most of the clients have the ability to sustain the changes in their social behavior.

Table 3. *Mean and Standard Deviation of the Participant's Stage in the Social Aspect of Self-Care Behavior*

Social Aspect of Self-Care Behavior	Mean	SD	Description
I…			
1. spend most of my time with my family.	4.88	0.356	Maintenance Stage
2. go out with friends.	4.83	0.352	Maintenance Stage
3. spend time with my spouse.	4.48	0.352	Action Stage
4. develop a good relationship with family and friends.	4.98	0.354	Maintenance Stage
5. do personal interactions with others.	4.96	0.365	Maintenance Stage
1. attend special events of family and friends.	4.88	0.352	Maintenance Stage
Overall Mean	**4.83**	**0.355**	**Maintenance Stage**

Table 4 presents the participant's stage in the spiritual aspect of self-care behavior. From the 8 statements mentioned, 6 items from 1 - 6 have a description of being in the maintenance stage while 2 items namely 7 and 8 are still in the pre-contemplation stage.

Those having been in the maintenance stage (highest) are the participants visiting the church regularly (highest mean of 4.98), visiting and talking to a priest or imam (mean of 4.94), and attending mass every Sunday/Friday (mean of 4.92). However, for the participants to meditate (mean of 1.29) and do yoga (lowest mean of 1.19) is still in the pre-contemplation stage.

Despite of that, the overall mean of the participant's stage in the spiritual area of self-care behavior is 4.55 with a final description of being in the maintenance stage. This reveals that most of the clients have the ability to sustain their modified spiritual behaviors of being closer to God since being diagnosed with DM.

Table 4. *Mean and Standard Deviation of Participant's Stage in the Spiritual Aspect of Self-Care Behavior*

Spiritual Aspect of Self-Care Behavior	Mean	SD	Description
I…			
1. visit the church.	4.98	0.345	Maintenance Stage
2. attend mass every Sunday/Friday.	4.92	0.354	Maintenance Stage
3. visit and talk to a priest or imam.	4.94	0.253	Maintenance Stage
4. an active member of spiritual group.	4.88	0.225	Maintenance Stage
5. involve in spiritual/ religious group activities.	4.88	0.245	Maintenance Stage
6. pray everyday.	4.79	0.427	Maintenance Stage
7. do yoga.	1.19	0.426	Pre-Contemplation Stage
8. meditate.	1.29	0.256	Pre-Contemplation Stage
Overall Mean	**3.98**	**0.310**	**Action Stage**

Table 5 shows the summary of the participant's self-care behavior. The overall result of the participant's behavior showed that most of them are in the action stage in terms of their physical aspect with the highest mean of 4.24, followed by spiritual aspect with a mean of 3.98 and psycho-emotional aspect as the lowest mean of 3.76. In terms of their social aspect it is on maintenance stage with a mean score of 4.83.

Table 5. *Summary of Participant's Self-Care Behavior*

Self-Care Behavior	Mean	SD	Description
1. Physical Aspect	4.24	0.359	Action Stage
2. Psycho-emotional Aspect	3.76	0.360	Action stage
3. Social Aspect	4.83	0.355	Maintenance Stage
4. Spiritual Aspect	3.98	0.310	Action Stage

Table 6 reveals the factors that affect the self-care behavior of the participants. Out of the 12 statements mentioned, almost all of it, 75% of the participants answered yes. From the 48 respondents, all (100%) said yes about doctor-client relationship being the one that greatly

affects their self-care behavior. Most (97.9%) of them said that their family support, the support from nurses and health care providers as well as the activities conducted by the diabetes clinic (97.9%), lack of financial resources (95.8%) and the distance of their place to the diabetes center as well as the support from friends and significant others affects their self-care behavior (both at 85.4%). The least statement that they perceive greatly affects them is their attendance to diabetes session classes (77.1%).

Table 6. *Frequency and Percentage Distribution of Factors Affecting the Self-Care Behavior of the Participants*

STATEMENTS	YES		NO	
	F	%	F	%
My self-care behavior is affected by:				
1. lack of financial resources.	46	95.8	2	4.2
2. my family support.	47	97.9	1	2.1
3. doctor- client relationship.	48	100.00	0	0.0
4. the support from nurses and health care providers.	47	97.9	1	2.1
5. the activities conducted by the diabetes clinic.	47	97.9	1	2.1
6. the distance of my place to the diabetes clinic.	41	85.4	7	14.6
7. religious support I receive.	39	81.3	9	18.8
8. the support from friends and significant others. Continuation...	41	85.4	7	14.6
9. my depression due to illness.	40	83.3	8	16.7
10. the anxious feeling experience.	39	81.3	9	18.8
11. the stress from work.	40	83.3	8	16.7
12. attendance to diabetes session classes.	37	77.1	11	22.9

Table 7 shows the participants challenges encountered in modifying their behavior. Twenty-four (24) out of 48 participants agreed that lack of financial resources is the most challenge encountered by the participants while only 3 participants verbalized that temptation is a challenge in modifying their self-care behavior.

Eighteen (18) out of 48 participants verbalized that controlling of diet and eating contraindicated foods and drinks are the efforts done in modifying their self-care behavior.

Table 7. *Frequency Distribution of Participants' Challenges and Efforts in Modifying their Behavior*

Challenges	f	Efforts to Modify Behavior	f
Lack of financial resources	24	Control of diet/eating contraindicated foods and drinks	18
Diet control	15	Follow instructions of healthcare providers	8
Eating patterns and behavior	6	Thinking of controlling the diet	8
Food choices	5	Gradual acceptance of the condition	6
Taking medications	5	Increase physical activity	3
Temptations	3	Adherence to medications	3

Discussion

Prevention and control of DM is not only dependent on diet and adherence to medication, but on how the client takes care of himself through modification of self-care behavior and formulating a self-care plan. According to Sonsona (2014) diabetes mellitus and self-management practices will likely complement with each other, therefore, it is necessary to address diabetes self-management as multiple behaviors. To determine and identify the client's practices on self-management, it is necessary to have a holistic perspective in considering factors that affect diabetes self- management and that spiritual, physical, and psycho- emotional and social dimensions of disease management are interrelated and should not be isolated from each other. This is agreed upon by McCoy (2017) wherein he stated that overall health includes not just the physical, but the psychological, emotional, social, and spiritual components of an individual's well-being.

According to studies on behavior change, people go through a number of stages as they modify their behavior. One of the most important theories of behavior change is the Transtheoretical Model (TTM) by Prochaska. Link (2013) stated that this theory of change is used to identify the stages that clients experience as they progress through lifestyle modifications. Identifying which stage each of the clients is experiencing will help better understand how they are feeling about adopting positive lifestyle changes, and how health care provider can help them progress through the stages of change.

Relative to the Transtheoretical Model of Prochaska, the result of the study revealed that majority of the responses of the participants are on the action stage in terms on the physical, psycho-emotional and spiritual aspects of self-care behavior, the since they are on the process of making some specific lifestyle modification as manifested by avoiding alcoholic beverages, quitting smoking, following the diet given by the nutritionist and doing brisk walking regularly, taking medications and sleeping at least seven (7) hours at night, visiting the church

regularly, talking to a priest or imam, attending mass every Sunday or Friday and participating in some religious activities within the last six months after being diagnosed with DM.

Physical activity is not just structured exercise and it does not have to be grueling. It can be any activity that works the major muscle groups, such as walking, gardening or yard work, stretching, dancing (Maxwell, Bastani, Vida, & Warda, 2012) and even washing the car is enough to offer health benefit. As concurred by Dave (2011) it is recommended to have at least 75 to 150 minutes of physical activity each week, a simple 30-minute walk at least a few times a week will suffice. In addition, Colberg and Sigal (2010) stated that exercise or physical activity is associated with increased quality of life and decreases between 50%-60% long term mortality and decrease blood sugar levels for individuals with T2DM. Further, Dave (2011) said that sleep of at least seven to nine hours each night for a week is a good physical self-care tactic which can be a good sign of willingness to modify self-care behavior.

However, few participants are still on the pre-contemplation and contemplation stages of TTM since they still do not have any intention to take action in the foreseeable future or they have the intention to change in the next six months. They have plans to engage in sports and exercise but no specific time as to when and how to start the plan, though they are aware of the pros and cons of changing their lifestyle. Based on the data gathered, participants in these stages are those who are newly diagnosed with DM thus they are still on the denial stage while others verbalized that they have difficulty in controlling their diet.

In addition, few participants are still pre-contemplating or do not have the intention to do meditation or yoga. According to Chandratreya (2015) yoga and meditation is helpful in the proper functioning of the endocrine glands through relaxing the sympathetic nervous system, relieve stress and anxiety. This result is agreed upon by Ricardo (2016) that taking care of the emotional self by managing anxiety, anger, sadness, and other feelings is an important aspect of self-care which can be accomplished by setting boundaries with people who are not positive or supportive and may have a negative effect on one's mental state. He also added that good, healthy relationships can help an individual maintain a positive frame of mind.

In relation to this, Harvey (2014) stated that the present health care system is not only looking into the diabetic personality but on ways to utilize methods such as spirituality to help improve healthy lifestyle. Religious coping and social support were shown to be effective in acceptance of diabetes and in self-care behavior. As mentioned, prevention and control of DM

is not only dependent on diet and adherence to medication, but on how the client takes care of himself through modification of self-care behavior and formulating a self-care plan. According to Sonsona (2014) diabetes mellitus and self-management practices will likely complement with each other, therefore, it is necessary to address diabetes self-management as multiple behaviors. To determine and identify the client's practices on self-management, it is necessary to have a holistic perspective in considering factors that affect diabetes self- management and that spiritual, physical, and psycho-emotional and social dimensions of disease management are interrelated and should not be isolated from each other. This is agreed upon by McCoy (2017) wherein he stated that overall health includes not just the physical, but the psychological, emotional, social, and spiritual components of an individual's well-being.

On social aspect of self-care behavior, the result of the study revealed that most of the participants' responses are on the maintenance stage as they have developed good relationship with their family and friends, continue doing personal interactions with others, spending most of their time with their family and attending special events of family and friends. According to Rad, Bakht and Feizi (2013) social support, especially family support, can be a vital component in the successful control of diabetes. Thus, family and support from friends play a very important role in encouraging and motivating clients in modifying their self-care behavior.

Aside from social support, the study found out that doctor-client relationship, support from nurses and health care providers, family support and the activities conducted by the diabetes clinic have a positive impact on their self-care behavioral change. As Ha, Anat and Longnecker (2010) stated, effective doctor-client communication is important in the delivery of high-quality health care and the central clinical function in building a therapeutic doctor-client relationship. Moreover, client's dissatisfaction and many complaints are due to breakdown in the doctor-client relationship.

Though lack of financial resources and the distance of the participants' place to the diabetes clinic have affected their attendance to the diabetes clinic sessions or health education, they perceive it as the least factor that greatly affect their self-care behavior. This perception is agreed upon by the study of Song and Xu (2014) that health education programs that provide traditional advice have a success rate of only 5%–10%. Thus, health education can be effective if it is accompanied with motivation which can be an effective approach to improve the self-management abilities of clients with DM. In addition, Tol, Shojaeezadeh, Eslami , Alhani, Mohajeritehrani (2012) explained that knowledge of diabetes gained from diabetes sessions / classes and health education creates a basis

for informed decisions about diet, exercise, weight control, blood glucose monitoring, use of the medications, foot and eye care and prevention of complication.

However, there are participants who are still on the action stage because they are still trying to modify their self-care behavior by spending most of their time with their spouses and are looking forward to reach out with their friends as verbalized by them. As concurred by Rad, et al. (2013) people with DM are more or less dependent on others and can support others to a lesser degree. They may feel alone as a result of their few personal interactions with others thus, their need for social support increases.

Conclusion

Based on the findings of the study, the researcher therefore concludes that change in self-care behavior is an important aspect in managing diabetes mellitus apart from diet and pharmacologic treatment. However, change in self-care behavior does not happen instantly, the clients usually move through a series of stages and will undergo several challenges. Some may find it hard or difficult to change due to reasons such as lack of financial resources to buy medicines, inability to control dieting and is commonly observed to individuals who have just been diagnosed with a disease. While others have passed through the different stages and have modified their self-care behaviors because they have accepted their condition and that complications will be prevented if they continue to move forward towards the final stage of the Transtheoretical Model of Self-Care Behavior. Acceptance of the disease with supports from family, friends, significant others and health care providers are the key factors for the success of self-care behavioral change.

The study will promote realization among the diabetic clients the importance of self-care behavior in the prevention and control of complications of their disease towards a healthy and quality life. Further, the support of the family is important in the development and success of their self-care behavior.

Practicing professional nurses can be of help in the development of an individualized care plans for clients with diabetes mellitus, with emphasis on how to change their self-care behaviors and improving their self-care skills, and making diabetes education as an intervention to help

strengthen the campaign on the prevention and control of the increasing number of diabetes cases and also as a way of promoting health to the maximum extent possible.

Nevertheless, this study will inspire trust and confidence so clients may actively involve themselves as partners in health with their journey towards progressive behavioral change. Persons with diabetes do not change their self-care behaviors simultaneously and quickly, rather, the change occurs when they are ready to do so and continuously through stages or a cyclical process.

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