The Correlation between Spiritual Intelligence and Self Efficacy to the Patient with Type 2 DM in The Workplace area of Primary Health Center III of North Denpasar

I Gusti Ayu Wika Arpandyani[1], Meril Valentine Manangkot[2], Made Oka Ari Kamayani[3]

Nursing Study Program
Faculty of Medicine, Udayana University, Denpasar, Bali
arpandyani@gmail.com
Nursing Study Program
Faculty of Medicine, Udayana University, Denpasar, Bali
Nursing Study Program
Faculty of Medicine, Udayana University, Denpasar, Bali

Abstract Diabetes Mellitus (DM) is a elevated blood glucose levels due to decreased insulin secretion. Increased cases of DM if not untreated will cause complications for patients. These complications can be reduced by sustainable management for changing the patient behavior. The lack of DM's management was determined by various factors such as spiritual intelligence and self efficacy. The aim of this study was to know the correlation between spiritual intelligence and self efficacy in patients of type 2 DM in the Primary Health Center III of North Denpasar. This study was a *non-experimental* study with correlational design. The sample consisted of 43 persons selected by consecutive sampling technique. The data were collected by questionnaire SISRI and DMSES to know the score of spiritual intelligence and self efficacy. Data were analyzed using *Pearson Product Moment* test. The results of this study indicated there is the positive correlation between spiritual intelligence and self efficacy with sufficient correlation, p value 0,019 (p ≤ 0,05). Spiritual intelligence was giving 12,6 % influence on self efficacy, the rest was influenced by the other factor. It was expected that patients can apply spiritual intelligence and self efficacy in everyday life so that it could prevent the occurrence of DM complications.

Index Terms— **Type 2 Diabetes Mellitus, Spiritual Intelligence, Self-Efficacy**

I. INTRODUCTION

The development of disease in the world today has experienced a shift in patterns from infectious diseases (ID) to non-infectious diseases (NID). This is related to the development of world which have become more advanced such as in aspect of lifestyle changes, population growth and increased life expectancy [1]. One of them is Diabetes Mellitus (DM). DM is a collection of symptoms that arise in a person caused by an increase in blood glucose levels due to decreased insulin secretion [2]. DM patients will experience several complaints or symptoms such as increased frequency of bowel movements (polyuria), hunger (polyphagia), thirst (polydipsy), fatigue and loss of energy [3]. Patients who suffere from Type 2 Diabetes still produce insulin but insulin does not work optimally because of the lack of response of the target tissue (muscle, adipose tissue and liver) to insulin [4].

The number of DM patient had been increasing from 108 million in 1980 to 382 million in 2013 and increasing again to 415 million in 2015. Globally, the prevalence of DM occured in adults over 18 years and had increased from 4.7% in 1980 to 8.6% in 2015.

The increasing cases of DM if left untreated will cause complications for patients. According to Potter and Perry [5] complications of DM could result in the danger of the patients mental health which could become the cause of fear, anxiety, and depression. Dependence on other people in getting treatment routinely created a feeling of helplessness so it required perseverance in undergoing and managing DM treatment in sustainable manner.

Continous management of DM treatment could be influenced by various factors including spiritual intelligence and self-efficacy. Self-efficacy of Type 2 DM patients focused on the patient's belief in being able to implement behaviors that help improve their illness and improve their treatment such as physical exercise, diet, glucose control,

and medicines [2]. Whereas spiritual intelligence would help patients be more morally sensitive to situations / circumstances. The moral sensitivity experienced is the ability to distinguish between selfishness and concentration on their faith to God [6].

Spiritual intelligence could raise motivation to learn so that patients have the motivation to manage DM treatment continously amd help the patient's recovery [7]. Therefore, the authors were interested in examining the relationship of spiritual intelligence and self-efficacy in DM Type 2 patients in the Work Area The Workplace Area Of Primary Health Center III North Denpasar.

II. METHOD

The research was quantitative type which was a descriptive Non-Experimental with a correlational research design. Correlational research aims to reveal correlative relationships between variables, in this study, it was to know the relationship of spiritual intelligence and self-efficacy to Type 2 DM patients.

Population and Sample is Type 2 DM patients in Workplace Area Of Primary Health Center III   North Denpasar. Sampling was done by using consecutive sampling which resulted in 43 respondent.

Data collection was done using SISRI and DMSES questionnaires to determine the score of spiritual intelligence and self-efficacy. The reliability and validity of the instrument had been tested. Overall reliability values from the SISRI questionnaire, It obtained a Cronbach alpha value of 0.760 which was more than 0.374 (p <0.05). While the DMSES questionnaire obtained a Cronbach alpha value of 0.808 which was more than 0.374 (p <0.05). Both questionnaires were valid and reliable.

Sample of 43 respondents was given the SISRI and DMSES questionnaires when they came to the North Denpasar Public Health Center III Polyclinic. The questionnaire was given before the respondent entered the doctor's office. The process of filling the questionnaire was approximately 10 minutes. If the respondent had been summoned to be examined, then filling out the questionnaire was continued after the respondent had finished their examination by doctor.

Before They were being given the questionnaire, the researcher and the research assistant explained the purpose of the study and the procedure for filling out the questionnaire. If the respondent cannot read or write, the questionnaire was assisted by the researcher or research assistant. If the respondent agreed, then the respondent would sign an informed consent sheet, otherwise a thumbprint would be used.

There were 21 items in the SISRI questionnaire and 14 items in the DMSES questionnaire. The provisions for answering the SISRI and DMSES questionnaires were using a Likert scale. The range of scores for the SISRI questionnaire was low (<44), moderate (44 - 57), high ($\geq$58). While the range of DMSES questionnaire scores was low (<37), moderate (37 - 53), high ($\geq$54). Data analysis was done using Pearson Product Moment. (95% confidence level, p $\leq$0.05).

III. RESULT

Based on the demographic characteristics, the majority of respondents are in the middle aged range, which was 95.3%. Based on the sex of the majority of respondents, 62.8% were female. Based on the level of education, it was found that 39.5% of the majority of respondents had a high school / vocational education. The majority of respondents namely 46.5% have other jobs such as traders, laborers, and retirees. Most respondents namely 95.3% were married. Based on the duration of DM, the majority of respondents, 79.1%, had been suffering from DM for 1 - 5 years.

The highest frequency of spiritual intelligence was found in the medium category, namely 30 respondents (69.8%). While the highest frequency of self-efficacy was found in the category of moderate self-efficacy, namely 29 respondents (67.4%). The results of the analysis of the relationship between spiritual intelligence scores and self-efficacy was a significance of 0.019 (p $\leq$0.05) because of that H_0 is rejected,So there is a relationship between spiritual intelligence and self-efficacy to the Type 2 DM patients.

IV. DISCUSSION

In accordance with the results of the study, most of the respondents' spiritual intelligence scores were in the medium category which was 29 respondents (67.4%). The moderate spiritual intelligence of the respondent was showing that the majority of respondents were able to adapt to changes that occured both in facing and withstanding the pain, having self-awareness, facing and utilizing their suffering. This study was also supported by the Praba study in 2016 in DMT2 patients. The results of research conducted by Praba was that most of the spiritual intelligence of respondents were in the moderate category as much as 79.2%. Spiritual intelligence was being demonstrated by individuals by adapting to the existing changes so that individuals had an understanding of spiritual well-being, finding meaning and purpose in ther life.

The results of the study showed that respondents had spiritual intelligence in the medium category also showed that most respondents could accept their illnesses and accept their lives well. In Primary Health Center III North Denpasar. There was already a program every week for prolanist participants such as DM, which was a routine exercise. Not only gymnastics, every month if participants were not busy, recreation and *tirtayatra* (pilgrimage) were usually held. Someone would have a good spiritual intelligence was also influenced by good environmental factors. Indirectly the association / community helped to increase the spiritual intelligence of respondents.

Based on the results of the study, most of the respondents' self-efficacy scores were in the medium category as many as 29 respondents (67.4%). Self-efficacy of respondents was showing that the majority of respondents were able to do the treatment recommended by health workers. Ranging from indicators of managing blood glucose levels, diet, physical activity, foot care and treatment programs.

Research conducted by Ariyani, Sitorus and Gayatri in 2012, regarding self-efficacy in Type 2 DM patients resulted with most of the respondents had good self-efficacy (52.7%). The study also explained that, self-efficacy was influenced by internal factors in a person, namely motivation and depression. The self efficacy of the respondents was in the high and moderate category and was being related to the level of education. Individuals who had a higher education level usually had higher self-efficacy, because they learn more and receive formal education and got more opportunities to learn and overcome a problem that existed in their lives. [8].

Correlational analysis showed that there was a significant positive relationship between spiritual intelligence and self-efficacy in Type 2 DM patients in Primary Health Center III North Denpasar. It was proven by the results of the calculation of the hypothesis test that had been done using the Pearson product moment correlation formula with the help of a computer program obtained p value of 0.019. Research conducted by Henrietta in 2008 on 102 Type 2 DM patients ranging in age from 55 to 88 years stated that spirituality and self-efficacy provide a source for dealing with stress due to the effects of complex treatments as in the case of type 2 DM.

In addition, the calculation of the level of relationship between the variables of spiritual intelligence with the self-efficacy variable seen from the value of r was 0.355 meaning that the relationship between spiritual intelligence and self-efficacy was sufficient. R Square value was 0.126 which means that the influence of spiritual intelligence on self-efficacy was 12.6%, while the rest were influenced by other factors. Therefore it could be concluded that there is a relationship between intelligence and self-efficacy in DM Type 2 patients in the Workplace Area Of Primary Health Center III North Denpasar.

V. CONCLUSION

Based on the results of the analysis and discussion of the relationship of spiritual intelligence with self-efficacy in DM Type 2 patients in the Workplace Area Of Primary Health Center III   North Denpasar. which has been described previously, it can be concluded that the majority of respondents 'spiritual intelligence was in the medium category (69.8%), the majority of respondents' self-efficacy in the moderate category (67.4%).

Based on the bivariate analysis test results with Pearson Product Moment. It was found that p value = 0.019, r value = 0.355 and R^2 = 0.126. This means that there is a sufficient positive relationship between spiritual intelligence and self-efficacy. Spiritual intelligence had an effect of 12.6% on self-efficacy. Researchers could use the results of this study as a source of further research data related to factors that influence spiritual intelligence and self-efficacy, including external factors, one of which was motivation.

REFERENCES

[1] Kemenkes, R.I., (2015), *Profil Kesehatan Indonesia Tahun 2015*. Jakarta: Kementerian Kesehatan RI

[2] Soegondo,S., Soewondo, P., Subekti. (2013). P*enatalaksanaan Diabetes Melitus Terpadu*. Jakarta :FKUI

[3] Smeltzer, S.C.M & Bare, B.G. (2008). *Burnner & Suddarth's Textbook of Medical Sugical Nursing*. Philadelpia: Lippincott

[4] PERKENI, (2015). *Konsensus Pengelolaan dan Pencegahan Diabetes Mellitus Tipe 2 di Indonesia Tahun 2015*, Jakarta.

[5] Potter. P.A, & Perry, A. G. (2007). *Buku Ajar Fundamental Keperawatan: Konsep,. Proses, Dan Praktik*, edisi 4, Volume.2. Jakarta: EGC.

[6] Desmita. (2014). *Psikologi Perkembangan*. Bandung: PT. Remaja Rosdakarya

[7] Sadriman, A. M. (2011*). Interaksi Dan Motivasi Belajar*. Jakarta: PT. Raja Grafindo Persada

[8] Bandura, A (2008*). Self Efficacy*. New York: Stanford University http://stanford.edu/dept/psychology/bandura/papers.html