

# Emotional Regulation and Psychological Well-Being in Patients with Diabetes Mellitus

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**Abstract:-** This study aims to determine the relationship between emotional regulation and the psychological well-being of diabetes mellitus patients in Yogyakarta, Indonesia. A total of 53 patients with diabetes mellitus participated in this study. This research uses the quantitative method. Psychological Well-being Scale and Emotion Regulation Questionnaire (ERQ) is used to measure the variables. Statistical analysis showed that emotion regulation had a positive significant correlation with psychological well-being. Coefficient correlation between emotion regulation and psychological well-being of  $r = 0.771$  with  $p = 0.000$  ( $p < 0.01$ ). The relationship between the two variables showed that the higher the emotion regulation score, the higher the psychological well-being level.

**Keywords:-** Emotional Regulation, Psychological Well-being, Diabetes Mellitus

## I. INTRODUCTION

Referred to as a silent killer disease (Todkar, 2016), diabetes mellitus is a disease that sometimes doesn't consider as a big problem. As a result, people with diabetes mellitus didn't notice that self-management and self-treatment are important things to do. This causes the effects of the disease is getting worse. Diabetics in Indonesia continue to increase every year. According to data from the International Diabetes Federation states that in 2015 the number of diabetes patients in Indonesia reached 10 million (Kementerian Kesehatan Republik Indonesia, 2016). In Yogyakarta, data is obtained from Ngaglik 1 Community Health Centre located in Sleman district, it shows that the number of patients with diabetes mellitus in 2017 is 1005, of which this number increased from the previous year which amounted to 833 people. This data will continue increasing and the estimated number of diabetics in Indonesia will reach 21.3 million in 2030.

Diabetes Mellitus is a degenerative disease, in which patients will decrease conditions over time. This makes the patient diabetes mellitus tends to experience negative emotions before being able to deal with the conditions. In research conducted by de Groot, Golden, and Wagner (2016), there were several psychological issues experienced by people with diabetes mellitus with several levels of age such as children, adults, and the elderly. The psychological

effects with several levels of age such as children, adults, and the elderly. The psychological effects experienced include symptoms of depression, anxiety disorders, eating disorders such as anorexia nervosa, bulimia, and binge eating disorders, there also severe mental illness like obesity and cardiovascular disease. This consists of research conducted by Hacket and Stepto (2017) which states that physical or biological changes will affect stress levels, which are exacerbated by unhealthy behaviors such as poor diet, little physical activity, and non-compliance in taking medication.

As revealed by Ross (2008), individuals who suffer from severe illness usually go through several stages to successfully accept and make peace with the circumstances experienced. These stages include denial reaction, in this case, individuals tend to reject themselves experiencing chronic diseases. After that, the stage of anger, where the individual often wondering about why he had a serious illness and was busy looking who is to blame. The third stage is the stage of bargaining, in this stage, the individual usually offers something as compensation to God so that individuals can survive and live longer with the disease. Stage the next is the stage of depression, where at this stage individuals sometimes refuse support from the environment regarding the disease. The four stages will be directing the individual towards the last stage, namely acceptance. At the stage acceptance, the individual is aware of his illness so that he is slowly able to deal with the situation.

The stages that appear in patients with chronic diseases cause emotional and psychological problems in individuals. This is consists of research by Jimenez, Niles, Park (2010) that the level of acceptance associated with the level of emotion and mood regulation. Tiwari (2015) states that individuals survive against chronic diseases usually experience emotional disorders as an effect of pain, feeling hopeless, and lack of concern for people around them. After that, he also appears feeling anxious, scared, and depressed due to the need to regulate daily behavior day. This phenomenon is called diabetes distress (Fisher, Hessler, Polonsky, Strycker, Guzman, Bowyer, Blumer, and Masharani, 2018). In that research similarly, the results obtained in the form of high diabetes distress are often influenced by poor emotional regulation so that it influences self-control and control metabolism that can affect blood sugar levels.

According to Thompson (1994), emotion regulation is the ability to control behavioral action as a way to express people's emotions towards the environment. Gross and Thompson (2007), stated that emotion regulation is a strategic ability carried out by individuals to maintain and strengthen positive emotions, as well as reduce negative emotional responses. Quoted from Gross and John (2003), emotion regulation has two aspects namely cognitive reappraisal and expressive suppression. A cognitive reappraisal is a cognitive form that has the potential to change emotions in accordance with the thoughts held by individuals. Expressive suppression is a form of response adjustment that allows individuals to get blocking the emergence of negative behaviors from emotional expressions that are being made by individuals. Both of these abilities are carried out either consciously or not aware and the response that arises can be either emotional or behavioral experience individual against a stimulus.

Individuals with emotional regulatory abilities both are usually able to maintain or even increase positive emotions and conversely, it can reduce the negative emotions that are felt. Emotional regulation sometimes influenced by individual cognitive abilities so this ability can be increased at certain stages of development. Individuals with good emotional regulation tend to feel calm and experience a relatively positive life. Therefore, individuals can also have high psychological well-being. According to Ryff and Singer (1996) psychological well-being is mental perception throughout the development of life in living the challenges of life experience. This is proven by research conducted by Nelis, Weytens, and Dupuis (2011) which shows that developing emotional competence can bring more positive changes to psychological well-being, subjective health, quality of social relations and workability.

According to Ryff and Singer (1996), psychological well-being has 6 aspects of self-acceptance, positive relationships with others, autonomy, environmental mastery, life goals, and self-development. Ryff (2014) also states that there are several facilitators that influence psychological well-being are the development of age, personality, family experiences, work, and other living conditions, biological health, and clinical intervention. Meanwhile, according to Oskrochi, Mustafa, and Oskrochi (2018), several factors influence psychological well-being, including the type of sex, marital status, number of jobs, and employment status.

Through research on improving emotional competency carried out by Nelis, Kotsou, Quoidbach, Hansenne, Weytens, Dupuis, and Mikolajczak (2011), revealed that subjects can improve emotional function, change long-term personality, and positive influence in various aspects of life. Mc.Rae, Jacobs, Ray, John, and Gross (2012) state that reappraisal frequency has been

associated with greater well-being and the part of the crucial cognitive control process. In addition, emotional competence can lead to changes in well-being more positive psychological, subjective health, quality of social relations, and job success. In another study conducted by Karreman and Vingerhoets (2012), emotion regulation acts as a mediator between stickiness and resilience to well-being. The results of the study indicate that high reappraisal and resilience is one of the important contributors to well-being.

## II. RESEARCH METHODS

### A. Research Subject

The subjects in this study were 53 patients with diabetes mellitus in the Sleman, Yogyakarta with an age range of 40 to 70 years. The subject of this study consisted of 10 men and 43 women with various educational backgrounds from elementary school to the elementary school level.

### B. Method of Collecting data

This research is quantitative research. Data collection in this study uses a scale in the form of a questionnaire to reveal two variables, namely the variable of emotional regulation and psychological well-being. The emotion regulation measure used in this study is the Emotion Regulation Questionnaire (ERQ) by Gross and John (2003) and the Psychological Well Being scale by Prameswari (2015).

Emotion Regulation Questionnaire (Gross, 2003) consists of 10 favorable questions. This questionnaire using 1-7 scales (1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neutral, 5=somewhat agree, 6, agree, strongly agree). The higher total score obtained, the higher emotion regulation that individual has. Otherwise, the lower total score obtained, the lower emotion regulation that an individual has.

Psychological Well-being Scale (Prameswari, 2015) consists of 10 item favorable and 9 item unfavorable. This questionnaire using 1 – 4 scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree for item favorable. For unfavorable item 1 – strongly agree, 2 = agree, 3 = disagree, 4 = disagree. The higher total score obtained, the higher psychological well-being that individual has. Otherwise, the lower total score obtained, the lower psychological well-being that individual has.

### C. Data Analysis Techniques

Data analysis in this study used the Spearman correlation analysis method. The Spearman correlation is used after the results of the normality test show that the distribution of data is not normal. The technique is to determine the relationship between emotional regulation and the psychological well-being.

**III. RESEARCH RESULT**

Category	Norm Formula	Total	%
Very low	$x < 51$	7	13,21
Low	$51 \leq x < 54$	13	24,53
Medium	$54 \leq x < 55$	13	24,53
High	$55 \leq x < 57,20$	10	18,87
Very high	$X \geq 57,20$	10	18,87
Total		53	100%

Table 1:- The Psychological Well-Being Scale Samples

Category	Norm Formula	Total	%
Very low	$x < 35,6$	10	18,87
Low	$35,6 \leq x < 39$	5	9,43
Medium	$39 \leq x < 41,4$	17	32,07
High	$41,4 \leq x < 42$	0	0
Very high	$X \geq 42$	21	39,62
Total		53	100%

Table 2:- The Emotional Regulation Scale Samples

According to the research result, there is a level of categorization of emotional regulation and psychological well-being. The categorization of emotional regulation measures is divided into five. In table 2 shows that 18.87% of the subjects belong to the very low category, 9.43% of the subjects classified as low, 32.07% of the subjects classified as moderate, and 39.62% of the subjects classified as very high. In table 1 which shows the categorization of psychological well-being, as many as 13.21% of the subjects belong to the low category, 24.53% of the subjects belong to the low and medium categories, 18.87% of the subjects belong to the high and very high categories.

			PWB
Spearman's rho	Emotional Regulation	Correlation Coefficient	,771**
		Sig. (2-tailed)	,000
		N	53

Table 3:- The Test of Correlation between Emotional Regulation and Psychological Well-Being

The results of data processing with the Spearman correlation test on 53 diabetes mellitus patients using SPSS, showed that emotional regulation and psychological well-being were significantly positively correlated ( $p < 0.05$ ) with a value of  $p = 0,000$ . The level of relationship or correlation between emotional regulation variables and psychological health is forceful within a value of  $r = 0.771$ . The relationship between the two variables is emotional and psychological regulation, also has a unidirectional relationship. That means that the higher the emotional regulation of diabetes mellitus patients, the higher the psychological well-being of these patients.

**IV. DISCUSSION**

Emotional regulation is the ability or strategy that an individual has for maintaining and strengthen positive emotions and reduce negative emotions (Gross, 2003). Individuals who have good emotional regimes are better able to keep feeling calm down and have a more positive life. The research conducted by Nelis, Weytens, and Dupuis (2011) shows that developing emotional competence can bring more positive changes to psychological well-being, subjective health, quality of social relations and workability. Therefore, individuals with good regulations will have good psychological well-being.

The results of the research conducted by Liliana and Nicoleta (2014) also prove that emotional stability can affect well-being in four dimensions, namely positive affects, negative affects, emotional distress, and life satisfaction. Emotional regulation refers to the ability of someone to understand and accept his emotional experience, everyone must have a healthy strategy in managing emotions that are not good in order to be able to engage inappropriate behavior. While well-being includes mental health (mind) and physical health (body) which can be used as disease prevention and health promotion (Verma, Totuka, & Gaur, 2014).

Patients with diabetes mellitus will experience many changes in life. Existence these changes make the patient must be able to adapt in order to accept the situation. However, the stage of acceptance in patients with chronic disease is not easy. That matter according to Ross (2008) statement which states that individuals suffer severe illness usually through several stages to successfully accept and make peace with the circumstances experienced. Moreover, patients with diabetes mellitus are prone to experience negative emotions that will affect the patient's psychological well-being.

In this study, it was found that cognitive reappraisal had a relationship stronger with psychological well-being compared to expressive suppression. A cognitive reappraisal is a cognitive form that has the potential to change emotions in accordance with the thoughts of individuals. Changes in conditions experienced by patients with diabetes mellitus will make patients more often feel negative emotions for the events experienced. Therefore, a positive cognitive reaction can change diabetic patients' thoughts about negative emotions are felt to be emotions more positive in interpreting problems or changes experienced. Positive reappraisal also will make patients with diabetes mellitus focus more on positive aspects of changes due to pain experience.

## V. CONCLUSION AND SUGGESTION

In this study, emotional regulation is significantly associated with psychological well-being of patient with diabetes mellitus. The higher the emotional regulation possessed by the subject, the higher the level of psychological well-being. Conversely, the lower the emotional regulation possessed by the subject, the lower the level of psychological well-being. The following are suggestions for future research is the next study should use more participants and be taken from several other regions in Indonesia. Then, the research on patients with diabetes mellitus is still lacking, especially for patients with Muslim diabetes mellitus. It should be necessary for research in psychology studies with the subjects is diabetes mellitus patients.

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