



Effect of Progressive Muscle Relaxation Therapy on Anxiety Levels in Diabetes Mellitus Patients in the Work Area of Semurup Community Health Center

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Abstract. According to the World Health Organization (WHO) 2021, around 422 million people worldwide suffer from diabetes, and 1.5 million deaths are directly linked to diabetes each year (World Health Organization, 2022). Based on data obtained from the Semurup Community Health Center, data obtained in 2021 was 126 cases of diabetes mellitus, in 2022 there were 167 cases of diabetes mellitus and in 2023 cases of diabetes mellitus increased, namely 344 cases of diabetes mellitus in men and women. Research objective to determine whether there is an effect of providing progressive muscle relaxation therapy on anxiety levels in Diabetes mellitus patients in the Semurup Health Center work area. Relaxation techniques are one of the nursing actions that can reduce anxiety and can automatically reduce blood sugar levels. Relaxation exercises also aim to univariate the feelings experienced when muscle groups are relaxed and compared to when the muscles are tense. This type of research is Quantitative, a type of research that produces new findings that can be achieved (Obtained) using statistical procedures or other means of quantification (Measurement). The population in this study was 344 people, the sample in this study was 16 people. The data analysis is Bivariate with the T Test. The results of the statistical test through the T Test obtained a Significance value of = p value = 0.000 (p <0.05). research conducted on the level of anxiety in patients with diabetes mellitus found that the average level of anxiety in patients with diabetes mellitus pretest was 26.19 with a standard deviation of 7.530 and a standard error mean of 1.882. The conclusion of this study is that there is an effect of progressive relaxation techniques on anxiety levels in diabetes mellitus patients in the Semurup Health Center Work Area with ap value = 0.000 (p <0.05).

Keywords: Progressive Muscle Relaxation Therapy, Anxiety.

INTRODUCTION

Diabetes mellitus is disease chronic progressive marked with inability body for do metabolism carbohydrates, fats and proteins, leading to to hyperglycemia (high glucose levels) blood high. Diabetes mellitus sometimes called as “High sugar”, both by clients and also provider Health services. According to World Health Organization (WHO) 2021 around 422 million people worldwide suffer from diabetes, and 1.5 million death in a way direct associated with diabetes every year (World Health Organization, 2022).

The prevalence of diabetes mellitus in the world is estimated to reach 463 million people (9.3% of the world's population) aged 20-79 years with deaths reaching 4.2 million people. Based on data obtained from the Jambi Provincial Health Service, it is known that the number of diabetes mellitus sufferers in 2021 was 24,361 people, and in 2022 it increased to 27,346 people. Based on data obtained from the Semurup Health Center, the data obtained in 2021 amounted to 126 cases of diabetes mellitus, in 2022 there were 167 cases of diabetes mellitus and in 2023 cases of diabetes mellitus increased to 344 cases of diabetes mellitus in men and women (Semurup Health Center, 2023).

Diabetes mellitus or diabetes is a disease characterized by blood glucose levels that exceed normal (Hyperglycemia) due to the body's lack of insulin, both absolute and relative, and an imbalance between

glucose transport into cells, glucose stored from the liver and glucose released from the liver, causing blood sugar levels to increase (Hasdianah, 2012). People with diabetes mellitus will experience problems including anxiety. Disorders that arise are caused by lifelong illness or complications that arise. If this anxiety is not addressed, it will make it increasingly difficult to manage diabetes mellitus. Anxiety in people with diabetes mellitus is because diabetes is considered a frightening disease, because it has a complex negative impact on the continuity of individual anxiety. Anxiety occurs because a person feels both physically and psychologically (Jauhari, 2016).

METHODOLOGY

The research design used in this study was Quasy-Experiment, namely to determine the effect of progressive muscle relaxation therapy on anxiety levels in patients with diabetes mellitus. This study used the One Group Pretest and Pottest approach, namely before the progressive muscle relaxation therapy intervention was carried out, then after the progressive muscle relaxation therapy intervention was carried out. The sample of this study the sampling technique used in this study used the purposive sampling technique, namely the determination of respondents to be used as samples based on certain criteria. as many as 16 respondents who will be given progressive muscle relaxation therapy intervention.

RESULTS AND DISCUSSION

After collecting the data, the results of the study conducted in the Semurup Health Center Work Area were obtained, regarding the effect of progressive muscle relaxation therapy on anxiety levels in diabetes mellitus patients with the following results:

Table 1. Descriptive Statistics Ability diabetes mellitus patients Before and After progressive muscle relaxation therapy (n = 16)

Variable	Mean	Standard Deviation (SD)	Standard Error of Mean (SEM)	Category	Frequency (n)
Pre-Test Therapy)	Before 26.19	7.530	1.882	anxiety	16
				Not anxiety	0
Post-Test Therapy)	After 20.25	3.941	0.985	anxiety	0
				Not anxiety	16

Univariate Analysis: Based on table. 1, the average Anxiety Level in Diabetes Mellitus Patients before (Pre-test) the Progressive Relaxation Technique was performed was 26.19 with a standard deviation of 7.530 and a standard error mean of 1.882 and after (Post-test) the Progressive Relaxation Technique was performed was 20.25 with a standard deviation of 3.941 and a standard error mean of 0.232.

Diabetes mellitus (DM) is a disease disturbance metabolism chronic caused by many marked factors with height blood sugar levels as consequence from disturbance function of insulin. Diabetes is disease chronic complex and requires maintenance medical sustainable with reduction strategy multi - factor risk outside control glyceimic.

Anxiety is a disorder characterized by anxiety or fear that is unrealistic and irrational, and cannot be intensively displayed in clear ways. *Anxiety* comes from the Latin word *agustus* which means stiff, and *ango*, *anci* which means stiff, unpleasant emotions, marked by subjective feelings such as tension, fear, worry and also marked by an active central nervous system

Distribution frequency based on characteristics age Respondent research part big from 16 respondents aged 50-55 years as many as 10 people (62.5%) in the group intervention, seen from aspect type sex part big from 16 respondents various sex Woman as many as 11 people (68.8%) indicated distribution frequency based on Education Respondent research of 16 respondents. In the group intervention, Viewed from Education aspect almost half from 16 respondents 6 people (37.5%) graduated from high school 2 studies conducted on anxiety levels in diabetes mellitus patients found that the average anxiety level in *pretest diabetes mellitus patients* was 20.25 with a standard deviation of 3.941 and a standard error mean of 0.985. statistical test results with using the dependent t-test, it was found p value = 0.000 ($p \leq 0.05$) exists influence decline level anxiety in patients with Diabetes Mellitus after done Relaxation Techniques Therapy progressive in the work area Health Center Semurup.

CONCLUSIONS

Based on the results of the research that has been conducted on the effect of progressive relaxation techniques on anxiety levels in patients with diabetes mellitus in 2024, the following conclusions can be drawn: There are characteristics of respondents to progressive relaxation therapy in the Semurup Health Center Work Area in 2024 as many as 16 respondents. The level of anxiety in patients with diabetes mellitus before the progressive relaxation technique was carried out in the Semurup Health Center Work Area in 2024 was 26.19 with a standard deviation of 7.530 and a standard error mean of 1.882. The level of anxiety in patients with diabetes mellitus after the progressive relaxation technique was carried out in the Semurup Health Center Work Area in 2024 was 20.25 with a standard deviation of 3.941 and a standard error mean of 0.985 There is an effect of progressive relaxation techniques on anxiety levels in patients with diabetes mellitus in the Semurup Health Center Work Area with a p value = 0.000 ($p < 0.05$).

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