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# Application of Benson Relaxation Therapy in Type 2 Diabetes Patients with Nursing Problems of Blood Glucose Level Instability

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Ketidakstabilan kadar glukosa darah adalah variasi kadar glukosa darah naik atau turun dari rentang normal. Tanda dan gejala yang dapat muncul meliputi polifagi, polidipsi, poliuria, mengantuk, pusing, gangguan koordinasi, serta kadar glukosa darah yang rendah atau tinggi. Terapi relaksasi Benson merupakan salah satu intervensi nonfarmakologis yang terbukti efektif membantu mengontrol kadar glukosa darah. Penelitian ini bertujuan untuk mengetahui penerapan terapi relaksasi Benson pada penderita diabetes melitus tipe 2 dengan masalah keperawatan ketidakstabilan kadar glukosa darah. Metode: Penelitian ini menggunakan studi kasus dengan pendekatan asuhan keperawatan pada dua responden penderita diabetes melitus tipe 2. Hasil: Sebelum intervensi, kedua pasien mengeluh sering merasa haus, sering buang air kecil, sering merasa lapar. Setelah dilakukan intervensi terapi relaksasi benson secara rutin yang dilakukan selama 7 hari berturut-turut dengan durasi setiap pertemuan 10-15 menit menunjukkan adanya penurunan kadar glukosa darah pada kedua responden. Kesimpulan: Pada penelitian ini bahwa terapi relaksasi Benson efektif sebagai intervensi komplementer untuk membantu menstabilkan kadar glukosa darah sekaligus meningkatkan kesejahteraan psikologis pasien.

***Application of Benson Relaxation Therapy in Type 2 Diabetes Patients with Nursing Problems of Blood Glucose Level Instability***

*Blood glucose instability is a variation in blood glucose levels that rise or fall from the normal range. Signs and symptoms that may appear include polyphagia, polydipsia, polyuria, drowsiness, dizziness, coordination disorders, and low or high blood glucose levels. Benson relaxation therapy is one non-pharmacological intervention that has been proven effective in helping to control blood glucose levels. This study aims to determine the application of Benson relaxation therapy in patients with type 2 diabetes mellitus with blood glucose level instability nursing problems. Methods: This study used a case study with a nursing care approach on two respondents with type 2 diabetes mellitus. Results: Before the intervention, both patients complained of frequent thirst, frequent urination, and frequent hunger. After the Benson relaxation therapy intervention was conducted routinely for 7 consecutive days, with each session lasting 10-15 minutes, there was a decrease in blood glucose levels in both respondents. Conclusion: This study found that Benson relaxation therapy is effective as a complementary intervention to help stabilise blood glucose levels while improving patients' psychological well-being.*

**Introduction**

Type 2 diabetes mellitus is a chronic metabolic disorder that occurs due to an imbalance in the insulin work process, both because the body's cells experience resistance to insulin and because the pancreas is unable to produce insulin optimally (Saeedi et al., 2023). As a result of this condition, glucose cannot be utilized efficiently by the body, resulting in an accumulation of sugar in the bloodstream. One of the biggest challenges faced by patients with type 2 DM is fluctuations or irregularities in blood sugar levels**,** which can be the entrance to the emergence of both short-term complications such as hypoglycemia and hyperglycemia, as well as long-term complications such as impaired kidney function (nephropathy) and retinal damage (retinopathy) (PERKENI 2021).

According to *the International Diabetes Federation* (IDF), it is estimated that 589 million people worldwide suffer from Diabetes Mellitus. It is estimated that by 2030 there will be around 643 million adults between the ages of 20 and 79 who suffer from diabetes, and that number is projected to increase to 783 million by 2045. Overall, the number of cases of diabetes mellitus is expected to reach 643 million by 2030, and 783 million by 2045. Type 2 diabetes targets more than 90% of this number (IDF 2024). The diabetes population in Indonesia is estimated at 19.47 million people (Riskesdas, 2018) and based on the 2023 Indonesian Health Survey (SKI), the national prevalence of Diabetes Mellitus (DM) in the population aged ≥15 years who are diagnosed by a doctor is 2.2%, while based on blood sugar checks it reaches 11.7% (BKPK of the Ministry of Health of the Republic of Indonesia 2023). A report from the East Java Provincial Health Office noted that in 2021 there were 929. 535 cases of diabetes mellitus in the province. Based on data from the Jombang Regency Health Office, in 2023, the number of DM patients was recorded at 35,735 people, a sharp increase compared to the previous year (Jombang Health Office, 2023). Based on data from the Elderly Posyandu in RW 08 Sambong Hamlet, there were 98 people indicated to have diabetes mellitus**,** and of this number there were 28 people who were indicated to have type 2 diabetes mellitus**.**

The problem of instability of blood glucose levels in patients with type 2 diabetes mellitus often develops slowly, even without the patient realizing it in the early stages. Generally, patients begin to feel mild complaints such as symptoms experienced by people with diabetes mellitus, including frequent urination, excessive thirst, fast hunger, weight loss, weakness,

fatigue, drowsiness, malaise, and tingling sensations in the body (Nurjannah et all., 2023). In addition, sufferers can also experience skin infections, itching, and if severe, symptoms of ketoacidosis and excessive sleepiness will appear. Stress is one of the psychological elements that can worsen diabetes mellitus. When a person is under stress, the body releases hormones such as cortisol and adrenaline, which can lead to increased glucose levels in the blood, worsen insulin resistance, as well as reduce the effectiveness of medical treatment (Warren et al., 2021).

The application of the Benson relaxation technique in nursing interventions can be an effective alternative to help control blood glucose levels in patients with type 2 diabetes mellitus (Ratnawati et al., 2021). This process can be done in a relatively short time (about 10 to 15 minutes) and should be done every day, both in the hospital and in the home environment. The role of the nurse is very important in detecting the patient's stress levels, providing information and demonstrations of Benson's relaxation techniques, supervising the impact of therapy on the condition of blood sugar levels (Anita et al., 2023). Therefore, integrating Benson's relaxation technique in nursing interventions is an innovative and practical step to improve the quality of nursing services oriented to a holistic approach as well as health promotion and disease prevention (Jannah et al., 2024).

## Method

This research design uses a case study research design, which is a research design that includes an intensive study of one research unit. Limitations of Problems This study only discusses the theme entitled "Application of Benson Relaxation Therapy in Patients with Type 2 Diabetes Mellitus with Nursing Problems of Instability of Blood Glucose Levels in Sambong Village, Dukuh, Jombang Regency".Presenting data in this case study, the researcher compiles and decipher data based on the nursing care process which includes the stages of study, diagnosis, intervention, implementation, and evaluation.

## Research Results

This table describes the symptoms experienced by both respondents before and after the Benson relaxation therapy intervention, as well as the changes that occurred in their blood glucose levels after 7 days of therapy.

Table 1: intervention research data

| Responden | Gejala sebelum intervensi | Durasi terapi (Hari) | Durasi setiap pertemuuan (menit) | Gejala setelah intervensi | Perubahan kadar Glukosa darah |
|---|---|---|---|---|---|
| R1 | Sering merasa haus, sering buang air kecil, sering merasa lapar | 7 | 10-15 menit | Haus, lapar, buang air kecil berkurang, kadar glukosa darah menurun | Menurun |
| R2 | Sering merasa haus, sering buang air kecil, sering merasa lapar | 7 | 10-15 menit | Haus, lapar, buang air kecil berkurang, kadar glukosa darah menurun | Menurun |

Based on Table 1, Benson relaxation therapy for 7 days on both respondents with type 2 diabetes mellitus showed positive results. Before the intervention, both respondents experienced common symptoms such as frequent thirst, hunger, and urination, indicating unstable blood glucose levels. After undergoing Benson relaxation therapy for 10-15 minutes per session, these symptoms decreased significantly, and the blood glucose levels of both respondents decreased. This shows that Benson relaxation therapy is effective in helping to reduce stress and stabilise blood glucose levels, so it can be a useful complementary intervention in the treatment of type 2 diabetes.

The implementation of nursing in patients is carried out by paying attention to the individual abilities of the patient and the conditions of the environment in which they live. Implementation begins from the observation stage, where an assessment of the patient's physical and emotional condition is conducted, followed by collaboration between patients to ensure the patient's active involvement in the treatment process. Education is provided, including an explanation of Benson's relaxation therapy to lower blood glucose levels, as well as the correct and regular use of diabetes medication. In this case, the main therapeutic intervention applied is Benson's relaxation therapy, which is tailored to the patient's physical, psychological, and ability conditions so that it can be performed effectively. The implementation of benson relaxation therapy was carried out well and smoothly in patients 1 and patient 2.

Implementation is the stage of implementing actions that have been planned in the nursing plan. This action includes independent and collaborative interventions, carried out by nurses

independently, interdependently, and dependent (Nurasihtoh, 2022). In patients with Diabetes Mellitus, comprehensive nursing procedures are carried out, both in general and specifically according to the client's needs. The specific intervention provided is Benson relaxation therapy, which aims to lower blood glucose levels and help patients achieve a more relaxed psychological state. According to the researcher, the implementation carried out was in accordance with the planning and ran according to the set targets, without reducing the planned objectives. The implementation is conditionally adjusted to the patient's ability and condition, and is given continuously for seven days.

**Discussion**

Nursing evaluation of patients 1 and 2 over seven days showed a gradual change in the patient's condition from day one to day seven. On the first day, patients show excessive thirst, excessive hunger, frequent urination and accompanied by high blood glucose levels. As the day progresses, the patient's activity begins to increase to thirst decreases considerably, hunger decreases considerably, the amount of urine decreases considerably, and blood glucose levels gradually decrease. show a positive response to the intervention given, so it is said that the results of the evaluation of the problem have been resolved. Nursing evaluation is the final stage that aims to assess whether the nursing actions that have been implemented have achieved the set objectives. Evaluation is not considered the end of the nursing process, but rather as an ongoing mechanism to ensure the quality of intervention and continuous improvement. This evaluation is closely related to each stage in the nursing process, including assessment, planning, and implementation (Nurasihtoh, 2022). According to the research, the evaluation has been carried out according to the set target, which is for seven days. Although changes in the patient's condition did not occur rapidly, the observed improvements showed significant improvement during that period. This improvement was also associated with the administration of Benson relaxation therapy, which was given to lower blood glucose levels and help patients achieve a more relaxed psychological state, thus supporting the overall success of the intervention.

This study aims to explore the application of Benson relaxation therapy in patients with type 2 diabetes mellitus who have problems with unstable blood glucose levels. The results show that after seven consecutive days of Benson relaxation therapy, there was a decrease in

blood glucose levels in both respondents. This decrease indicates that relaxation therapy can help stabilise blood glucose levels, which is one of the main challenges for type 2 diabetes patients. This is in line with the study's objective of determining the effectiveness of non-pharmacological interventions in overcoming blood glucose level instability.

In relation to previous theories and literature, the findings of this study support various studies showing that stress can affect blood glucose levels, and relaxation therapy as popularised by Benson can reduce stress and have a positive impact on blood glucose stability. Previously, research by Ratnawati et al. (2021) also showed that relaxation therapy can help control blood sugar levels in diabetic patients. Thus, this study adds scientific evidence to the importance of non-pharmacological approaches as part of diabetes patient care. Although the results of the study show the effectiveness of Benson relaxation therapy, there are limitations in terms of the small sample size, which was only two respondents. This limits the generalisation of the findings of this study to a wider population.

Future research should involve more respondents to strengthen the results and verify the long-term benefits of this therapy. In addition, further research can explore the effects of combining relaxation therapy and pharmacological treatment in a more comprehensive management of type 2 diabetes. Thus, this study makes a significant contribution to the development of nursing interventions in managing diabetes through a more holistic approach.

**Conclusion**

In general, the results of the study show that there is a similarity in the conditions in both patients which leads to the problem of instability of blood glucose levels. The main nursing diagnosis that is established is the instability of blood glucose levels according to the characteristics of the major and minor data. The nursing interventions carried out are in accordance with the theory at SLKI, including observation and collaboration, as well as special interventions in the form of Benson relaxation therapy as part of therapeutic therapy. The implementation in the form of benzon relaxation therapy was carried out for seven days and ran smoothly according to plan, starting from observation, collaboration, to the provision of special therapy. Results and Evaluation show Subjectively, patients convey that their body condition feels better and fewer complaints are characterized by an increase in the scale of the patient's

condition from score 1 to a score of 4, Objectively, the results of the evaluation show an improvement in the instability of blood glucose levels based on major and minor indicators with the final result of the problem being resolved.

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