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A Pre-Experimental Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge and Practices Regarding Self Administration of Insulin among Diabetic Patients Admitted in a Selected Hospitals of Amritsar, Punjab

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ABSTRACT

BACKGROUND: Diabetes is a serious, chronic disease that occurs either when the pancreas does not produce enough insulin (a hormone that regulates blood glucose) or when the body cannot effectively use the insulin it produces. "A Pre Experimental study to assess the effectiveness of planned teaching Programme on knowledge and practices regarding self-administration of insulin among the diabetic patients admitted in a selected hospital of Amritsar, Punjab." **AIM:** The present study aims to assess the effectiveness of Planned Teaching Programme on knowledge and practices regarding self-administration of insulin among the diabetic patients admitted in a selected hospital of Amritsar, Punjab. **METHOD:** A sample of 60 diabetic patients were selected by purposive sampling technique. Informed consent was obtained from the participants prior to data collection. Tool consists of demographic profile, self-structured knowledge questionnaire and practice checklist on self-administration of insulin was used to collect the data. Pre-test data was collected and Planned Teaching Programme on self-administration of insulin was given to diabetic patients and after one-week post-test data was collected from the staff nurse. **ANALYSIS AND RESULT:** The data was analyzed by descriptive and inferential statistics. The present study revealed that pre-test result showed that majority 32(53.3%) had poor knowledge and 28(46.7%) had average knowledge while regarding practice majority 39(65%) had average practice and 21(35%) had poor practice. On the other hand, post-test result showed that maximum 40(66.7%) had good knowledge and 20(33.3%) had average knowledge whereas maximum 46(76.7%) had good practice and 14(23.3%) had average practice. Result on knowledge showed that post-test mean knowledge score 21.60±2.66 was higher than pre-test mean score 10.51±2.56 with mean difference of 11.08 with calculated t=25.69 at df=59, p=0.001 was highly significant. Result on practice revealed that post-test mean practice score 11.26 ± 1.79 was higher than pre-test mean score 6.71±2.21 with mean difference of 4.55 with calculated t=12.17 at df=59, p=0.001 was highly significant. Findings revealed that planned teaching Programme was effective in improving the knowledge and practice regarding self-administration of insulin among the diabetic patients.

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KEYWORDS: *insulin self-administration, diabetic patients.*

BACKGROUND OF THE STUDY

Diabetes is a serious, chronic disease that occurs either when the pancreas does not produce enough insulin (a hormone that regulates blood glucose) or when the body cannot effectively use the insulin it produces. Diet, exercise, weight loss, and a healthy lifestyle remain essential in the initial and ongoing management of type 2 diabetes. The addition of one or more oral Anti Diabetic (OADs) is appropriate when glycemic control can no longer be achieved by the use of the initial non-pharmacological measures. Similarly, insulin should be added when the combined use of OADs and non-pharmacologic measures are no longer able to achieve glycemic control.

Insulin therapy is an essential component of medications used in DM treatment and the cornerstone of treatment in type 1 and type 2 diabetes. Despite this, at least one-third of patients fail to take their insulin as prescribed and 20% of adults deliberately miss their doses. Insulin therapy presents many challenges due to complexities associated with its intricate use. Sufficient knowledge of its use can help to prevent complications, adverse patient outcomes, poor adherence to therapy and invariably poor glycaemic control.

Insulin is one of the oldest valuable antidiabetic medications available and also the most effective agent in dropping hyperglycemia when used in appropriate doses. Type 1 Diabetes mellitus patients are treated by multiple-dose insulin injection or continuous subcutaneous insulin infusion. To control the burden, patients need to use insulin therapy as ordered by the health care providers. The insulin injection technique is one of the most common areas with the likelihood of errors6. It requires sound knowledge and attitude on self-insulin administration by patients so that they can contribute meaningfully to the management of their lives.

Knowledge and practice of patients regarding insulin self- administration could lead to better management of diabetes and eventually a good quality of life. However, the knowledge and attitude gap exists in type 1 diabetes mellitus management that does not allow patients to independently take their medication to reduce the morbidity and mortality associated with diabetes. Even though these patients in Ethiopia face the high risk of treatment complications like patients elsewhere, the evidence that showed the knowledge and attitude on insulin self-administration is a substantial deficiency. The significance of this study was assessing the level of knowledge, attitude, and associated factors on insulin self-administration among type 1 diabetic patients to address the gap and also to provide opportunities for future studies to fill in the gaps that this study could not address.

The Diabetic patients who are on insulin need to be knowledgeable regarding the disease and insulin therapy and also, they must have a competency and positive attitude towards Self-administration of insulin injection to overcome the barriers of insulin injection and to have good glycaemic control. The purpose was to improve the competency level of self –administration of insulin, which in turn will help in better glycaemic control and avoid complications. Glycaemic control and prevention of complication will reduce the cost of treatment and diabetes related mortality. With this view, the present study was carried out to assess the knowledge and skills of Diabetes Mellitus Patients regarding the self-administration of Insulin and to establish the professional responsibility in providing instruction module to Self-administration of Insulin**.**

METHODOLOGY

RESEARCH APPROACH

Quantitative approach is adopted to assess the effectiveness of Planned Teaching Programme on knowledge and practices regarding self-administration of insulin among the diabetic patients admitted in a selected hospital of Amritsar, Punjab.

RESEARCH DESIGN

Pre experimental study design is utilized to achieve the objectives of the study.

RESEARCH SETTING

The present study was conducted at selected hospital of Amritsar, Punjab.

SAMPLE AND SAMPLE SIZE

The present study sample size consisted of 60 diabetic patients.

SAMPLING TECHNIQUE

For the present study, purposive sampling technique was used to select the sample for the study.

SAMPLING CRITERIA

INCLUSION CRITERIA: Diabetic patients.

- Who are under insulin therapy
- who will be willing to give consent.
- who will be available at the time of data collection.

EXCLUSION CRITERIA: Diabetic patients.

- who are not co-operative
- who are sick or ill

STUDY INSTRUMENT

Self-Structured knowledge questionnaire was used to assess the effectiveness of Planned Teaching Programme on knowledge and practice regarding

self-administration of insulin among diabetic patients admitted in selected hospitals of Amritsar, Punjab.

ETHICAL CONSIDERATION

Approval was obtained from ethical committee, SGRD Institute of Nursing, Pandher, Amritsar. Formal permission was taken from the concern authority of selected hospital, Amritsar, Punjab. Informed consent was obtained from the participants. Anonymity and confidentiality of subjects was maintained.

PILOT STUDY

The pilot study was carried out on 6 diabetic patients at selected hospital, Amritsar, Punjab to assess the feasibility for conducting main research study and to assess the relevancy of the tool. There were no problems faced during the study.

DATA COLLECTION

The data collection was done in the month of February and March 2025 at concern authority of selected hospital, Amritsar, Punjab. A total sample of 60 diabetic patients who met the inclusion criteria of study were included in this study. Samples for the study were selected by using purposive sampling technique. Researcher introduced herself to the participants and explained about the purpose of the research and benefits of this study. Prior to data collection informed consent was obtained from the diabetic patients. The tool consists of demographic variables and structured knowledge questionnaire and practice checklist on self-administration of insulin was administered to collect the pre-test data. Planned Teaching Programme on self-administration of insulin was given to the diabetic patients and post-test was collected using same questionnaire.

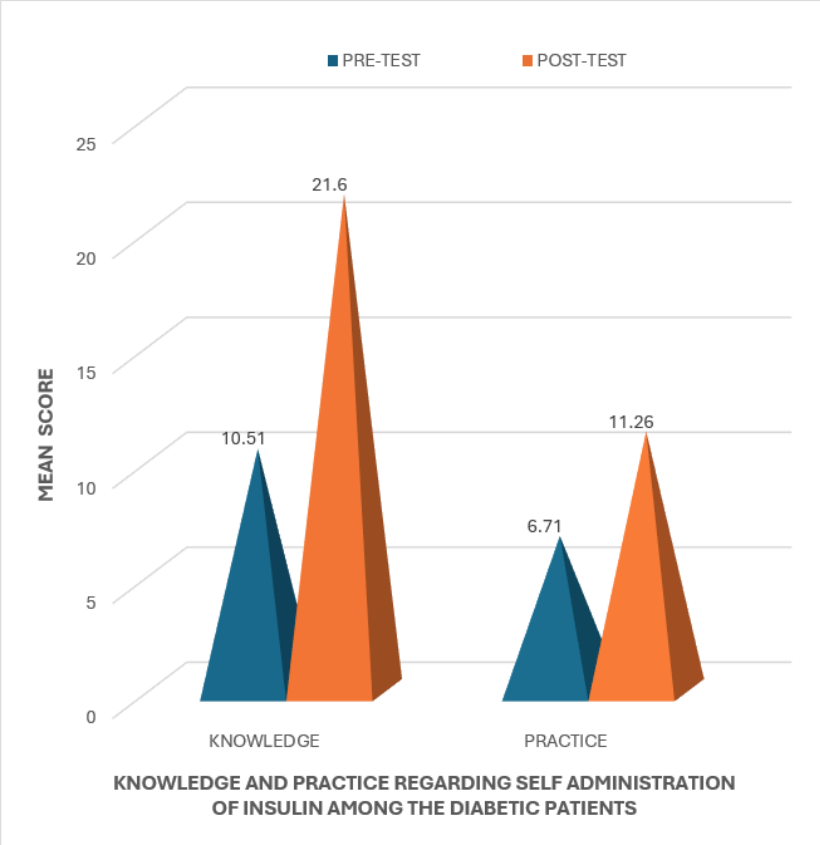
PLAN FOR DATA ANALYSIS

The data analysis was done according to study objectives by using descriptive and inferential statistics. The plan of data analysis would be as follows:

- Frequency, percentage, mean and standard deviation was calculated.
- Paired t test was used to test the hypothesis.
- Chi-square test was used for association.

RESULT

Result on knowledge showed that post-test mean knowledge score 21.60±2.66 was higher than pre-test mean score 10.51±2.56 with mean difference of 11.08 with calculated t=25.69 at df=59, p=0.001 was highly significant. Result on practice revealed that post-test mean practice score 11.26±1.79 was higher than pre-test mean score 6.71±2.21 with mean difference of 4.55 with calculated t=12.17 at df=59, p=0.001 was highly significant. Findings revealed that planned teaching programme was effective in improving the knowledge and practice regarding self-administration of insulin among the diabetic patients. Findings revealed that during pretest (r=0.229, p=0.078) and post-test (r=0.180, p=0.143) indicate weak positive correlation between knowledge and practice regarding self-administration of insulin among the diabetic patients and was statistically found non-significant. Result showed that educational status was found significant association at $p<0.05$ but other demographic variables such as age, gender, occupational status, monthly family income, type of family, duration of DM, BMI and attended any training on insulin administration were found to be non-significant at $p<0.05$ with post-test level of knowledge and practice regarding self-administration of insulin among the diabetic patients.



KNOWLEDGE AND PRACTICE REGARDING SELF ADMINISTRATION OF INSULIN AMONG THE DIABETIC PATIENTS

CONCLUSION

The Planned Teaching Programme proved to be effective in significantly improving both the knowledge and practice of diabetic patients regarding the self-administration of insulin. The educational intervention not only enhanced their theoretical knowledge but also empowered patients to apply correct practices confidently and independently. These findings underscore the importance of structured and consistent educational programmes as a key component of diabetes management, contributing to better glycaemic control and overall patient outcomes. The knowledge and practice of self-administration of insulin among diabetic patients play a critical role in effective diabetes management and the prevention of complications. Strengthening educational interventions and continuous support from healthcare professionals are essential to improve both knowledge and self-care practices. Tailored diabetes education programs that address patients' specific needs and misconceptions can significantly enhance their confidence, accuracy, and adherence to insulin therapy. Ultimately, empowering patients with proper knowledge and skills in insulin self-administration leads to better glycaemic control, reduced complications, and improved quality of life.

RECOMMENDTIONS

The following recommendations are made on the basis of the study: -

- The study can be conducted on large sample size.
- The study can be conducted at different settings.
- The study can be conducted to assess the effectiveness of demonstration on knowledge and practice of diabetic patients regarding the self-administration of insulin.
- The follow up study can be conducted to assess the practice of diabetic patients regarding the self-administration of insulin.
- A study can be carried to determine the complications of diabetic patients regarding self-administration of insulin.
- A study can be carried to evaluate the incidence of injuries of diabetic patients during self-administration of insulin.

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CONFLICT OF INTEREST: There is no conflict of interest

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