

Effectiveness of ivy gourd leaves powder on blood glucose



**ASSIGN
BUSTER**

CHAPTER-V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATION AND RECOMMENDATIONS

This chapter deals with discussion, summary, and conclusion drawn. It also clarifies the limitation of the study, the implications and recommendations given for different areas of nursing practice, nursing education, nursing administration and nursing research.

DISCUSSION

Diabetes mellitus is a group of metabolic disorders characterized by hyperglycaemia resulting from defects in insulin secretion, insulin action or both (WHO). Diabetes has emerged as a major healthcare problem in India. It is estimated that 40 million persons with diabetes in India in 2007 and this number is predicted to rise to almost 70 million people by 2025. It is estimated that every fifth person with diabetes will be an Indian.

The real burden of the disease is however due to its associated complications which lead to increased morbidity and mortality. Rapid urbanization and industrialization have produced advancement on the social and economic front in developing countries such as India which have resulted in dramatic lifestyle changes leading to lifestyle related diseases. This transition from a traditional to modern lifestyle, consumption of diets rich in fat and calories combined with a high level of mental stress has compounded the problem further. (International Diabetes Federation (IDF) 2007)

The present study was designed to evaluate the effectiveness of Ivy gourd leaves powder administration in reduction of blood glucose level among type 2 diabetes mellitus patients.

The data collected for the study were analysed statistically and discussed below based on the objectives. The sample size was 80.

1. Demographic variables of subjects on blood glucose level among type-2 diabetes mellitus patients

The distribution of demographic variables of 80 subjects are as follows, majority 43(53.75 per cent) are in the age group between 46 to 55 years, regarding sex majority 47 (58.75 per cent) were to male, regarding religion 68(85 per cent) believing in Hinduism, regarding educational status 53(66.25 per cent) most of them are secondary and above qualified, regarding occupation 47(58.75 per cent) most of them are employed, and regarding family monthly income 41(51.25 per cent) of them has an income between Rs. 6501 and 7500, and related to marital status 75(93.75 per cent) are married, related to type of family 53(66.25 per cent) are living in nuclear family, regarding dietary pattern 76(95 per cent) of them are non-vegetarian, related to un healthy practices of client 21(26.25 per cent) of them has the bad habits of smoking, related to healthy life style practices 74(92.5 per cent) had not following any healthy life style practices, regarding BMI 35(43.75 per cent) of them are having BMI more than 27 related to family history 70(87.5 per cent) of them had no significant family history and related to number of hospitalization due to illness 73(91.25 per cent) has no history of hospitalization

2. The first objective of the study was to assess the pretest and post test blood glucose level among type-2 diabetes mellitus patients

The findings of the present study revealed that most of the 80 subjects pretest fasting blood glucose level was above 151 mg/dl for 34(42.5 per cent). The pretest post prandial blood glucose level for 34(42.5 per cent) was upto 170 mg/dl.

On the 14th day post test fasting blood glucose value analysis shows that 42(52.5 per cent) subjects has a blood glucose level upto 130. The post prandial blood glucose level for 69(83.75 per cent) are in the range upto 170 mg/dl.

On the 28th day post test fasting blood glucose level analysis shows that 67(83.75 per cent) has a blood glucose level upto 130 mg/dl. The post prandial blood glucose level for 77(96.25 per cent) subjects was upto 170mg/dl.

3. The second objective of the study was to determine the effectiveness of Ivy gourd leaves powder administration on blood glucose level

Dr. Julian Whitaker (2011) conducted a study on effectiveness of Ivy gourd in reduction of blood glucose at Rajasthan the results showed that in a double-blind, placebo-controlled clinical trial, 60 newly diagnosed type 2 diabetic subjects (not taking any medications for glucose control) received either 1,000 mg of Ivy gourd extract, or a placebo. Those taking Ivy gourd extract experienced better blood sugar control, with a 15.6 per cent decrease in fasting blood glucose level.

<https://assignbuster.com/effectiveness-of-ivy-gourd-leaves-powder-on-blood-glucose/>

Mean score of pretest fasting blood glucose level is 145. 5 and mean score of pretest post prandial blood glucose level was 177. 5. Mean score of 14th day post test fasting blood glucose level was 131. 13 and mean 14th day post test post prandial blood glucose level was 157. 88. Mean score of 28th day post test post prandial blood glucose level was 119. 4 and post prandial blood glucose level was 144. 11.

The comparison of pretest fasting and 14th day post test fasting blood glucose level, the computed value of ' t' is 16. 282 is significant at <0. 001.

The comparison of pretest fasting and 28th day post test fasting blood glucose level, the computed value of ' t' is 20. 794 is significant at <0. 001.

The comparison of pretest post prandial and 14th day post test post prandial blood glucose level, the computed value of ' t' is 21. 912 is significant at <0. 001.

The comparison of pretest post prandial and 28th day post test post prandial blood glucose level, the computed value of ' t' is 28. 183 is significant at <0. 001

The comparison of 14th day fasting and 28th day post test fasting blood glucose level, the computed value of ' t' is 11. 961 is significant at <0. 001.

The comparison of 14th day post prandial and 28th day post test post prandial blood glucose level, the computed value of ' t' is 11. 961 is significant at <0. 001

The data shows that there is a significant reduction of blood glucose level after the administration of Ivy gourd leaves powder. The longer the period of administration of Ivy gourd shows more significant effectiveness in reduction of blood glucose level. Thus it reveals that the 28th day of administration of Ivy gourd is more significantly effective than the 14th day of administration of Ivy gourd leaves powder.

3. The third objective of the study was to associate the demographic variables with post

test blood glucose level .

Cruickshank (2007) stated that the global prevalence of diabetes for all age group is estimated to be 2. 8%. Type-2 diabetes accounts for at least 90% of all diabetes worldwide. Diabetes incidence, prevalence and progression varies by ethnic group. This review highlights unique aspects of risk of developing diabetes its overwhelming vascular complications and their management mainly using data among south-Asians and African-Caribbean' in the United Kingdom data. It also concluded that although the origin of the ethnic difference in incidence need further clarification, many factors should be amenable to prevention and treatment in all ethnic groups worldwide.

The chi-square was used to associate the level of post test blood glucose level with age, occupation, income, dietary pattern, family history of diabetes mellitus, life style practice, and BMI.

There is no association between 28th day post test fasting and post prandial blood glucose level with selected demographic variables.

<https://assignbuster.com/effectiveness-of-ivy-gourd-leaves-powder-on-blood-glucose/>

Summary

The study is conducted to determine the effectiveness of Ivy gourd (*Coccinia indica*) leaves powder administration on blood glucose level among type-2 diabetes mellitus patients in selected areas of Coimbatore.

The objectives of the study were

- To assess the pretest and post test blood glucose level among type 2 diabetes mellitus patients.
- To determine the effectiveness of Ivy gourd leaves powder administration in reduction of blood glucose level.
- To associate the selected demographic variables with post test blood glucose level.

The study tested the following hypothesis

There is a significant reduction in the blood glucose level of the type 2 diabetes mellitus after the administration of Ivy gourd leaves powder.

The conceptual framework adopted was Mr. Ludwig Von Bertalanff ' General system theory (1968). The research design used for the study was quasi experimental, one group pretest post test only design. A house to house survey was done for selecting the sample. The sample size consisting of 80. The tool used for data collection consists of demographic variables test for clinical variables, test for clinical variables. The data collected for a period of 6 weeks. Descriptive and inferential statistics are used in statistical analysis Paired ' t ' test used to determine the effectiveness of Ivy gourd leaves powder administration in blood glucose level . The study tested and

<https://assignbuster.com/effectiveness-of-ivy-gourd-leaves-powder-on-blood-glucose/>

accepted the hypothesis that there is a significant reduction in the blood glucose level.

Major findings of the study

- In this study among 80 subjects, majority 43(53. 75per cent) are in the age group between 46to 55 years, regarding sex majority 47 (58. 75per cent) belongs to male, regarding religion 68(85per cent) believing in Hinduism, regarding educational status 53(66. 25per cent) most of them are secondary and above qualified , regarding occupation 47(58. 75per cent) most of them are employed, and regarding family monthly income 41(51. 25per cent) of them has an income between Rs. 6501 and 7500 , and related to marital status 75(93. 75per cent)are married, related to type of family 53(66. 25per cent) are living in nuclear family, regarding dietary pattern 76(95per cent) of them are non-vegetarian, related to un healthy practices of client 21(26. 25per cent) of them has the bad habits of smoking, related to healthy life style practices 74(92. 5per cent) had not following any healthy life style practices, regarding BMI 35(43. 75per cent) of them are having BMI more than 27 related to family history 70(87. 5per cent)of them had no significant family history and related to number of hospitalization due to illness 73(91. 25per cent) has no history of hospitalization
- In this study fasting blood glucose level upto130mg/dl for 14 (17. 5per cent) subjects, 131-150mg/dl for 32(40per cent) and remaining 34(42. 5per cent) are in the range of Above 151 mg/dl. The pretest post prandial blood glucose level Upto170mg/dl for 34 (42. 5 per cent)

subjects, 171-185mg/dl for 21(26. 25per cent) subjects and remaining 25(31. 25per cent) are in the range Above 186.

- In this study the 14th day post test fasting blood glucose level upto130 mg/dl for 42 (52. 5 per cent) subjects, 131-150 mg/dl for 31 (38. 75per cent) and remaining 7 (8. 75 per cent) are in the range of Above 151 mg/dl. The 14th day post test post prandial blood glucose level upto170 mg/dl for 69 (86. 25 per cent) subjects, 171-185 mg/dl for 21 (26. 25 per cent) subjects.
- The 28th day post test fasting blood glucose level upto130 mg/dl for 67 (83. 75 per cent) subjects and 131-150 mg/dl for 13 (16. 25 per cent) and the 28th day post test post prandial blood glucose level upto170 mg/dl for 77 (96. 25 per cent) subjects and 171-185mg/dl for 3 (3. 75 per cent) subjects.
- In this study there was a significant difference between the pretest and post test blood glucose level. Mean score of pretest fasting blood glucose level is 145. 5and 14th day post test fasting blood glucose level is 131. 13. Mean score of pretest post prandial blood glucose level was 177. 5 and 14th day post test post prandial blood glucose level is 157. 8, and compared with paired ' t ' test it shows that it was statistically significant.
- Mean score of pretest fasting blood glucose level is 145. 5 and mean score of pretest post prandial blood glucose level was 177. 5. Mean score of 14th day post test fasting blood glucose level was 131. 13 and mean 14th day post test post prandial blood glucose level was 157. 88.

Mean score of 28th day post test post prandial blood glucose level was 119.4 and post prandial blood glucose level was 144.11.

- The comparison of pretest fasting and 14th day post test fasting blood glucose level, the computed value of 't' is 16.282 is significant at <0.001.
- The comparison of pretest fasting and 28th day post test fasting blood glucose level, the computed value of 't' is 20.794 is significant at <0.001.
- The comparison of pretest post prandial and 14th day post test post prandial blood glucose level, the computed value of 't' is 21.912 is significant at <0.001.
- The comparison of pretest post prandial and 28th day post test post prandial blood glucose level, the computed value of 't' is 28.183 is significant at <0.001.
- The comparison of 14th day fasting and 28th day post test fasting blood glucose level, the computed value of 't' is 11.961 is significant at <0.001.
- The comparison of 14th day post prandial and 28th day post test post prandial blood glucose level, the computed value of 't' is 11.961 is significant at <0.001.
- There is no association between 28th day post test fasting and post prandial blood glucose level with selected demographic variables

Conclusion

Consuming Ivy gourd leaves powder is an effective, feasible, low cost method to decrease the blood glucose level. It can be used as a home remedy for the treatment of type-2 diabetes mellitus. The findings of the study are consistent with the literature and have support from the studies conducted in India and in the world. Based on the method of sample selection and support from many studies conducted throughout the world, the findings may be generalized to individuals with type 2 diabetes mellitus.

The study findings provides the statistical evidence which clearly indicates that Ivy gourd is one of the best therapy to lower blood glucose level.

Implications

Nursing is a dynamic process, which involves quality based practice, scientific body of knowledge and dissemination of research knowledge into practice. Nurses can incorporate the Ivy gourd as one of the excellent herbal therapy for effective management of type 2 diabetes mellitus in adults. The present study findings have several implications in Nursing practice, Nursing Education, Nursing Research and Nursing Administration.

Nursing practice :

- The nurses working in the community setting should practice the use of low cost, effective, acceptant therapy as an integral part of their profession. The present study showed that most of the patient with type 2 diabetes had high high blood glucose level.

- Nurses should initiative in introducing the practice of low cost preparation of Ivy gourd powder in the community setting. The proper dissemination of low cost, effective, acceptant therapy is essential.
- The nurses should place the health in hands of people especially the adults.

Nursing education

- The nursing education can provide education to the nursing personnel to update their knowledge on the alternative methods of treatment like Ivy gourd leaves powder and its valuable benefits to the patients.
- The nurse educator can create awareness about the therapeutic benefit of Ivy gourd leaves powder.
- The nurse educator may include Ivy gourd leaves powder as a means of herbal therapy in the curriculum, its effect in health and wellness which can be adopted by the students and the nursing personnel too.

Nursing administration

- Leaders in nursing practice should take active part in recommending the low cost herbal remedies and illuminate the effectiveness of it to the policy makers to introduce in the community at large scale.
- The nurse administrators have to undertake the health needs of the most vulnerable by effective organization and management.

Nursing research

- Study will serve as a valuable reference and pathway for further researchers.

- The findings of the study would help to expand the scientific body of professional knowledge from which further researcher can be conducted.
- Administration of Ivy gourd leaves powder may be studied more significantly and used as specific nursing intervention.

Limitations

- The intervention was given only for 28 days.
- In present study control group was not included.
- Persons who had diabetes for more than 6 months were excluded.
- Higher blood glucose levels were not included.

Recommendations

- A similar study can be replicated with control group and experimental group
- A similar study can be conducted with different dose and different way of supplement to reduce the blood glucose level
- A study can be conducted with large number of samples.
- Long term effect of Ivy gourd leaves powder can be done by administering for a long period and compare with Hba1c levels
- A comparative study can be done with peoples of different blood glucose level.