



## Effectiveness of Structured Teaching Program on Knowledge of Diabetes Mellitus and its Complications Among Rural Community

### Nursing

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### ABSTRACT

**Introduction:** The long-term complications of Diabetes Mellitus are becoming more common. In an outlook high incidence of Diabetes Mellitus complications and in view of the various studies which suggested the necessity of planned teaching program for prevention of diabetic mellitus and its complications. **Method:** Quantitative research approach and Pre-experimental one group Pre-test - Post-test research design was adopted for the study. Setting was at rural Community of Pune City .The samples size was 100. Non-probability purpose sampling technique was used. Tool included: Section I – demographic variables of the samples. Section II - self-administered structured questionnaire. Questionnaire included thirty items and key score was poor knowledge (Score 0-10), average knowledge (Score 11- 20) and Good Knowledge (Score 21-30) . Reliability of the tool was found to be 0.9 Preintervention Pre-test was administered to subjects, followed by structured teaching Programme through AV aid on Diabetes Mellitus and its Complication was given, followed by post-test, which was carried after two weeks. **Result :** Findings revealed in Pre-test, average knowledge score was 12.66 with standard deviation of 1.78 whereas in post-test average knowledge score was 19.99 with standard deviation of 3.26. This indicates that the structure-teaching programme was effective to enhance the level of knowledge about the Diabetes Mellitus and its complications among the residents of Rural Community. **Conclusion :** The present study enhanced the knowledge on the diabetes mellitus and its complications of Rural community people. The study found that majority of resident have average knowledge and positive attitude towards Diabetes Mellitus and its complications.

### KEYWORDS

Effectiveness; Structured Teaching Program; Knowledge; Diabetes Mellitus; Rural Community

### INTRODUCTION

Diabetes Mellitus, the commonest endocrine disorder is a common health problem throughout the world. It affects developed as well as developing country.

The Indian Council of Medical Research India Diabetes Study presented that India had 62.4 million people with Diabetes in 2011.[1] These figures are predictable to increase to 101.2 million by 2030.[2]

Study on knowledge and awareness of diabetes in urban and rural India reported on the awareness and knowledge of diabetes on a representative sample of 04 regions of the India. The significant findings were; nearby 50% of the population of the four regions of India studied have heard of diabetes. Secondly, a significant discrepancy exists in the level of knowledge of diabetes between the different regions studied. In rural regions, comparatively the awareness and knowledge about diabetes are significantly lower than in urban areas and females had low awareness rates compared with males in all regions except Chandigarh city.

These results highlight the requirement for intensifying diabetes education measures to the community and to diabetic subjects precisely. Imparting knowledge about diabetes to the community is the first step in prevention and early detection of the disease and prevention of its complications. This is of particular significance considering that approximately half of all subjects with diabetes remain undiagnosed, this suggests that many of them would have developed complications by the time they are ultimately diagnosed. The study results highlights the need for the, better education measures even among individuals who know they have diabetes, as over 50% of them were not even aware that diabetes could affect the kidney or heart and less than 25% knew that it could affect nerves.[3]

Study on efficacy of training module on knowledge of diabetes care

among nurses emphasized that before giving the training module on diabetes care, average pre-test knowledge score was 21 which increased to 34.6 in post-test. T-value for this comparison was 25.6 with 199 degrees of freedom. Corresponding p-value was small <0.05. Diabetes care Training module for nurses was proved significantly effective in improving the knowledge of nurses regarding diabetes care.[4]

The long-term complications of Diabetes Mellitus are becoming more common. In an outlook high incidence of Diabetes Mellitus complications and in view of the various studies which suggested the necessity of planned teaching program for prevention of diabetic mellitus and its complications . It was decided to conduct an evaluative study on Structured Teaching Program on Knowledge of Diabetes Mellitus and its Complications among Rural Community

### OBJECTIVES

- To assess the Pre interventional knowledge on Diabetes Mellitus and its complication among the rural people.
- To evaluate the effectiveness of structured teaching programme on Knowledge of Diabetes Mellitus and its complications among the rural Community.

### Hypothesis

H0- There is no significant difference between the pre-test and post -test score of the people after structured teaching program on Diabetes Mellitus and its complications.

H1-There is significant difference between the pre-test and post -test score of the people after structured teaching program on Diabetes Mellitus and its complications.

### Material and Method

Quantitative research approach was adopted in the study. Pre-

experimental one group Pre-test - Post-test research design adopted for the study. Setting for the study was at rural Community of Pune City . The samples size was 100. Non-probability purpose sampling technique was used. Tool was developed in two Sections: Section I – demographic variables of the samples. Section II - self-administered structured questionnaire. Questionnaire included thirty items and key score was poor knowledge (Score 0-10), average knowledge (Score 11- 20) and Good Knowledge (Score 21-30) Setting of the study was in the Rural Community of Pune city. Reliability of the tool was found to be 0.9. Permission from the authority to conduct the research study was taken by the Gram-panchayat of selected community.

The permission to conduct the study was taken from the authority. The period of data collection commenced from Feb 04, 2018 to Feb 28, 2018. After taking the consent from the each samples, the researchers has administered Pre-test to subjects. After the assessment, structured teaching Programme through AV aid on Diabetes Mellitus and its Complication was given, followed by post-test, which was carried after two weeks.

**FINDINGS:**

The data and findings have been organized and presented under the following sections:

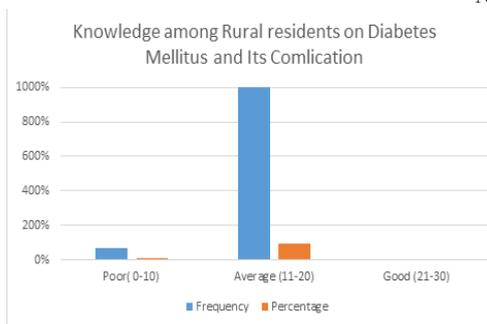
Section I –Analysis of data related to the demographic variables of the samples in frequency and percentages.

38% of samples falls in Age in 21-30 years . 52.% were male samples. 84% samples were married. 82% of samples falls under Less than Rs 5000 salary slab. Majority of samples had 52% primary educational status. 52 % had Source of information about Diabetes Mellitus and its Complication only .

Section II - Analysis of data related to assessment of Pre interventional Knowledge among the rural residents regarding Diabetes Mellitus and its complication.

Frequency and Percentage assessment of Pre interventional Knowledge regarding diabetes mellitus and its complications In pre test 7% subjects had poor knowledge and 93% subjects had average knowledge and No subjects had scored good knowledge level about diabetes mellitus and its complications.

N = 100



**Section III -** To evaluate the effectiveness of structured teaching program on knowledge of Diabetes Mellitus and its Complications among the residents of rural community.

	Mean	SD	T	df	Sig. (2-tailed)
Pre test	12.66	1.78	41.0	99	0.05
Post test	19.99	3.26			

Paired t-test applied for comparison of pre-test and post-test knowledge scores among the rural residents regarding diabetes and its complication. T-value was found to be 41.0 with 99 degrees of freedom. The null hypothesis H0 is rejected and hence H1 is accepted. In Pre-test, average knowledge score was 12.66 with standard deviation of 1.78 whereas in post-test average knowledge score was 19.99 with standard deviation of 3.26. This indicates that the structure-teaching programme was effective to enhance the level of knowledge about the Diabetes Mellitus and its complications among the residents of Rural Community.

Discussion: Present study findings revealed that the Knowledge level of residents of rural community was poor and have been improved

after providing the structured teaching programme on Diabetes Mellitus and its complications to the residents.

Similar findings were found in the study of Harpreet Kaur[5], which was conducted on effectiveness of structured teaching programme on self-care management in relation to prevention and complications of Diabetes Mellitus. Study results showed that the structured teaching programme was effective in enhancing the knowledge about Diabetes. Implications.

**Nursing practice**

- Nurses can plan educational sessions on prevention of diabetic complications by which number of readmission to the hospital can be significantly reduced.
- Nurses working at out-patient department must try to spend some time with diabetic patients by which teaching and training programs can be conducted on deficient areas such as diet, self care activities (foot and nail care), exercises and medications.

**Nursing education**

- Nurse educators can use different teaching strategies to educate community people in enhancing knowledge on Diabetes and its complication.

**Nursing research**

- The research helps to plan new interventional strategies for the diabetes mellitus patients to prevent the long term complications.

**Nursing administration**

- The present study has proven effectiveness of teaching program in enhancing the knowledge of diabetic patients regarding prevention of vascular complications. So the nurse administrator can take initiative to provide facilities to conduct such educational programs in the hospital.
- The nurse administrator at various levels of health care delivery system should focus their attention to make the public conscious about Diabetes mellitus and its complications
- Administrator should organize in service education programs, refresher courses and workshop for nurses and encourage them to participate in these activities.

**CONCLUSION**

The present study enhanced the knowledge on the diabetes mellitus and its complications of Rural community people. The study also helped the patients to improve quality of life and decrease the economic burden. The study found that majority of resident have average knowledge and positive attitude towards Diabetes Mellitus and its complications.

**Conflict of interest: Nil**

**Source of Funding: Self-funded**

**Ethical consideration:**

Permission has been taken by Gram-Panchayat of community. The study proposal was sanctioned by the Institute Ethical Committee of Symbiosis International (Deemed University). Study was explained to each participants and informed consent was taken from the participants. Confidentiality of information maintained by utilizing code number for sample.

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