Effectiveness of Structured Teaching on Home Care Management of Diabetes Mellitus

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Diabetes is an "iceberg" disease. Although it has increased both in terms of prevalence and incidence of non-insulin dependent diabetes globally, there has been a dramatic increase in newly industrialized and developing countries. Currently the number of cases of diabetes worldwide is estimated to be around 150 million. This number is predicted to double by the year 2025 (a prevalence rate of about 5.4 percent) with the greatest number of cases being expected in China and India.

The investigator was strongly convinced and motivated to design a structured teaching programme to educate the diabetic clients on disease condition, investigation, foot care, exercise, personal hygiene, which in turn is expected to increase the awareness among diabetic clients and prevent further complications.

A supportive educative system to help the diabetic clients in decision-making, behaviour control and knowledge acquisition was definitely felt as essential by the investigator. The educative system can guide, teach and promote an environment for the diabetic clients to practice the preventive measures like diet control, exercises, self-administration of medication and regular follow up. The nurses can play a crucial role in creating the supportive system for the diabetic clients. If the results of the study prove to be effective, the developed structured teaching programme can be widely used by the nurses in varied settings.

Objectives

- To assess the existing level of knowledge on home care management of diabetes among diabetic clients through pre-test.
- To evaluate the effectiveness of structured teaching programme on knowledge of home care management of diabetes among diabetic clients through post-test.
- To find out the association between pre and post-test level of knowledge regarding home care management and selected demographic variables.

Null hypotheses were formulated. Orem's self-Care Deficit Theory Model was following for this study.

Extensive review was made of literature regarding incidence and causes of diabetes mellitus and the effectiveness of STP on home care management of diabetes mellitus. Each aspect of diabetes (disease condition, investigation, diet, exercise, foot care, personal hygiene, insulin and prevention of complications) was included in the review.

Research Design

A pre-experimental design was utilized to conduct the study. The present study was conducted at the outpatient department of Apollo Hospital and Voluntary Health Service Hospital. Purposive sampling technique was used. 50 samples were selected.

Tool was prepared on the basis of objectives. The instruments used in this study were demographic variable proforma and structured questionnaire on home care management. The structured questionnaire consisted of 35 multiple choice questions regarding home care management of diabetes mellitus. Each question had 4 options which included one right answer. Every correct answer carried one mark and no negative marking was given for wrong answers. The total score was 38 which was classified into 3 levels.

- <50% Inadequate knowledge
- 50-70% Moderately adequate knowledge
- >75% Adequate knowledge

Validity of the tool was obtained by getting opinions from 7 experts in Karnataka and Tamil Nadu. The reliabili...
MEAN AND STANDARD DEVIATION OF PRE-TEST AND POST-TEST LEVEL OF KNOWLEDGE ON HOME CARE MANAGEMENT OF DIABETES MELLITUS. (N = 50).

<table>
<thead>
<tr>
<th>Knowledge Scores</th>
<th>M</th>
<th>SD</th>
<th>t</th>
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<tbody>
<tr>
<td>Pre-test</td>
<td>19.50</td>
<td>4.67</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>30.06</td>
<td>3.45</td>
<td>12.91***</td>
</tr>
<tr>
<td>Improvement</td>
<td>10.56</td>
<td>1.22</td>
<td></td>
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</tbody>
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***P < 0.001

The table above shows the mean and standard deviation of knowledge on home care management of diabetes mellitus in pre-test as well as post-test. The finding shows that diabetic clients attending out patients department lack knowledge regarding home care management of diabetes irrespective of their demographic characteristics.

Results and Discussion

There was equal percentage of participants (50%) from both sex. Most of the subjects were graduates (40%) and non-vegetarian (66%). The subjects comprised of equal number of participants from working and non working groups (50%). The family history of diabetes was present in 34% of the subjects.

Hereditry plays a very important role in the development of diabetes mellitus. This study revealed that 98% had a family history of diabetes mellitus out of which 34% of subjects had acquired it genetically from their fathers.

The investigator found that 40% were well aware and knowledgeable about diabetes mellitus and its management because of being chronic and because of information acquired through TV shows, radio programmes, newspapers, pamphlets etc. The patients were coming regularly for check up every month.

In the pre-test, majority of the participants (60%) had inadequate knowledge, 30% of participants had moderately adequate knowledge and none of them had adequate knowledge. In the post-test, 70% of the participants gained adequate knowledge, 30% of participants had moderately adequate knowledge and none of them had inadequate knowledge. The overall mean and standard deviation of knowledge on home care management was increased in post-test (M = 30.06 SD = 3.45) when compared with pre-test (M = 19.50 SD = 4.67).

The highest improvement in mean value was observed in the aspect of diet (M = 5.06).

There was no significant association between the selected demographic variables and level of knowledge on home care management of diabetes mellitus in pre-test as well as post-test. The finding shows that diabetic clients attending out patients department lack knowledge regarding home care management of diabetes, irrespective of their demographic characteristics.

Nurses should recognize the need for teaching clients. The study stresses the importance of the nurses being knowledgeable to provide adequate information about diabetes home care management. The results of the present study also emphasize the need for health personnel to involve themselves more in giving information regarding home care management of diabetes. Nurses should possess skills in counselling person-to-person or group counselling within the short time available in the out patient department.

The nursing curriculum should be updated to enable nursing students to identify the educative supportive needs of the chronically ill diabetic clients. The students should cultivate their skills in giving health education along with care. This study calls for the strengthening of clients’ education as a part of
present system of nursing education. The course content of the curriculum should include the latest views about diabetes mellitus and nursing care.

**Conclusion**

A major responsibility of the professional nurses is helping patients gain self-management skills for any chronic health problem through teaching and counselling. Self-management skills are probably the major determinant of how well the health problem is controlled and the quality of life maintained, particularly for persons with diabetes. Research confirms that patient education has a positive effect on patient outcomes. The nurse is in a unique position to educate and motivate patients with diabetes mellitus to optimize well-being and minimise long-term diabetes complications.

**References**

- Diabetes supplement of the National Health Survey. Journal of American Diet Association, 64,30-33

**In Memoriam**

Ms. Jyotsna Das, Principal, School of Nursing, The Calcutta Medical Research Institute, passed away on April 27, 2007 at Calcutta.

Ms. Jyotsna Das completed G.N.M. training from C.M.R.I. in September 1974 and worked as a staff nurse in ICCU. She completed B.SC. (Nsg) from Chandigarh in 1983. After the completion of training, she joined C.M.R.I. School of Nursing in 1984 as Sister Tutor. In 1995 she was promoted as Principal and continued to work in the post till death. She had been suffering from Parkinson’s disease since last couple of years. She suffered from cardiac arrest on April 16, 2007 followed by which she was on ventilator and fought for 10 more days before finally going for a permanent rest in the early hours of April 27, 2007.

Sister Das has left a permanent vacancy in the heart of the faculty members, which is very difficult to fill.