

A Quasi-Experimental Study to Assess the Effectiveness of Video Assisted Programme on Knowledge and Practice Regarding Prevention & Control of Diabetes Mellitus among the Police Personnel at Selected Police Station of Districts Amritsar, Punjab

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ABSTRACT

Diabetes is a complicated metabolic condition that can cause several cardiovascular and neurological problems. A quantitative approach & quasi experimental design was adopted to assess the effectiveness of video assisted Programme on knowledge and practice regarding prevention & control of diabetes mellitus among the police personnel at selected police station of district Amritsar, Punjab. Total sample were 60 police personnel (30 for control & 30 for Experimental group). Sample was collected by using purposive sampling technique. The main study was conducted at selected police station of district Amritsar, Punjab. Socio demographic variables and self-structured knowledge questionnaire tool were selected for data collection.

In pretest knowledge, most 11(36.67) of police personnel had very poor knowledge regarding prevention & control of diabetes mellitus in experimental group whereas most 11(36.67%) of police personnel had very good knowledge regarding prevention & control of diabetes mellitus in control group. In pretest practice, majority 13(43.33%) of police personnel had below average practice regarding prevention & control of diabetes mellitus. On the other hand, maximum 15(50.00%) of police personnel had below average practice regarding prevention & control of diabetes mellitus.

In posttest knowledge, most (36.67%) of police personnel had very good knowledge regarding prevention & control of diabetes mellitus in experimental group whereas most 11(36.67%) of police personnel had very poor knowledge regarding prevention & control of diabetes mellitus in control group. In post-test practice, majority (43.33%) of police personnel had good practice regarding prevention & control of diabetes mellitus. On the other hand, maximum (53.33%) of police personnel had below average practice regarding prevention & control of diabetes mellitus. Comparison of the pre-test and post-test knowledge regarding prevention of diabetes mellitus among police personnel in experimental and control groups. It showed that in pre-test mean knowledge score was 16.6 ± 9.2 and post-test mean knowledge score was 22.1 ± 8.9 which was calculated by t-test & value was 5.73 which was highly statistically significant at level $p < 0.01$. In control group, in pre-test mean knowledge score was 14.5 ± 7.8 and post-test mean knowledge score was 14.2 ± 7.6 which was calculated by t-test & value was 5.73 which was not statistically significant at level $p < 0.05$.

Hence, it can be that video assisted programme was effective in increasing the knowledge regarding prevention & control of diabetes mellitus among police personnel. So, the null hypothesis was rejected at $p < 0.05$.

KEYWORDS: Diabetes, structured, mellitus.

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BACKGROUND OF THE STUDY

Diabetes is a complicated metabolic condition that can cause several cardiovascular and neurological problems. Endocrine system disorders like diabetes occur when the body is unable to keep blood sugar levels at the appropriate range for overall health and wellbeing. Recently, diabetes has grown to be a significant issue. According to estimates, 4-6 percent of Indians who lived in rural areas and 10-12 % of urban residents have diabetes mellitus. Additionally, there is a commensurate rise in complications associated with diabetes, such as diabetic nephropathy, diabetic retinopathy, and diabetic neuropathy.

Diabetes mellitus is brought on by a malfunction in the beta cells of the pancreatic islets of Langerhans. This results in inadequate insulin synthesis, which is necessary to control blood glucose level. Diabetes comes in two different forms. There are two types of diabetes mellitus: insulin-dependent and non-insulin-dependent. There are several potential causes of illness development, including genetics, infections, and immunological factors.

Diabetes is regarded as the root cause of all illnesses. Persistently elevated blood glucose levels can result in several problems. That can harm the heart, blood vessels, eyes, kidneys, and many other bodily organs. Heart attacks and strokes, the two leading causes of death in the world, can be caused by blood vessel and heart problems. If patients control their diabetes well with periodic medication, regular checkups, and follow-up care, that could lead to good glucose control and lower the risk of diabetic complications.

MATERIAL AND METHODS

Study design: Quasi Experimental Research Design was utilized to achieve the objectives of the study.

Study setting: The study was conducted in Police station, Amritsar, Punjab in the month of April 2022.

Study subjects: There was total 60 diabetes mellitus Police personnel (30 in Experimental group and 30 in Control group).

Inclusion Criteria:

Diabetes mellitus police personnel

- Who were willing in age group of 21-60 years.
- Who were willing participate in the study.
- Who were able to read and understand questionnaire.

Exclusion Criteria:

Diabetes mellitus Police personnel

- Who were sick due to other illness.
- Who were on leave.

Sampling: Purposive Sampling Technique was used to select the sample for the study.

Study instrument: Self-structured knowledge questionnaire were used to assess the effectiveness of Video Assisted Programme on knowledge and practice regarding prevention & control of diabetes mellitus among the police personnel.

Ethical Consideration: Ethical consideration was taken from research and ethical committee of Sri Guru Ram Das Nursing Institute Pandher, Amritsar and from the concerned authority of selected police station of district Amritsar, Punjab for the study to be conducted. Written informed consent was obtained from each participant before conducting the study. Anonymity and confidentiality of subjects was also maintained.

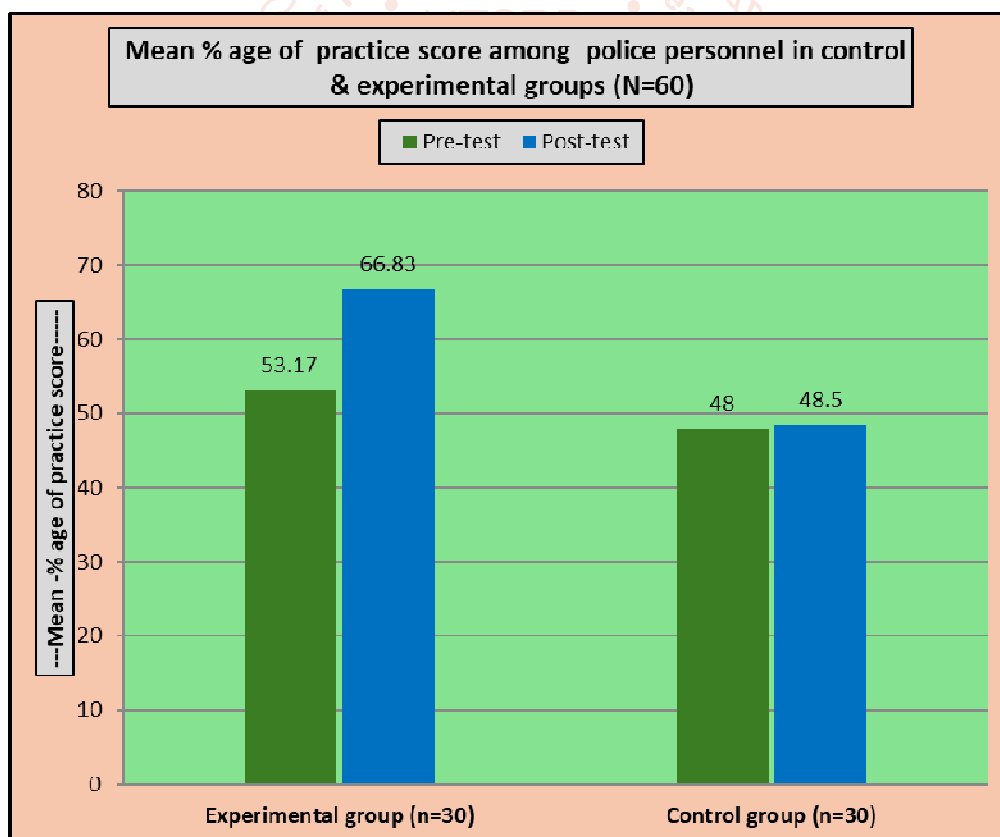
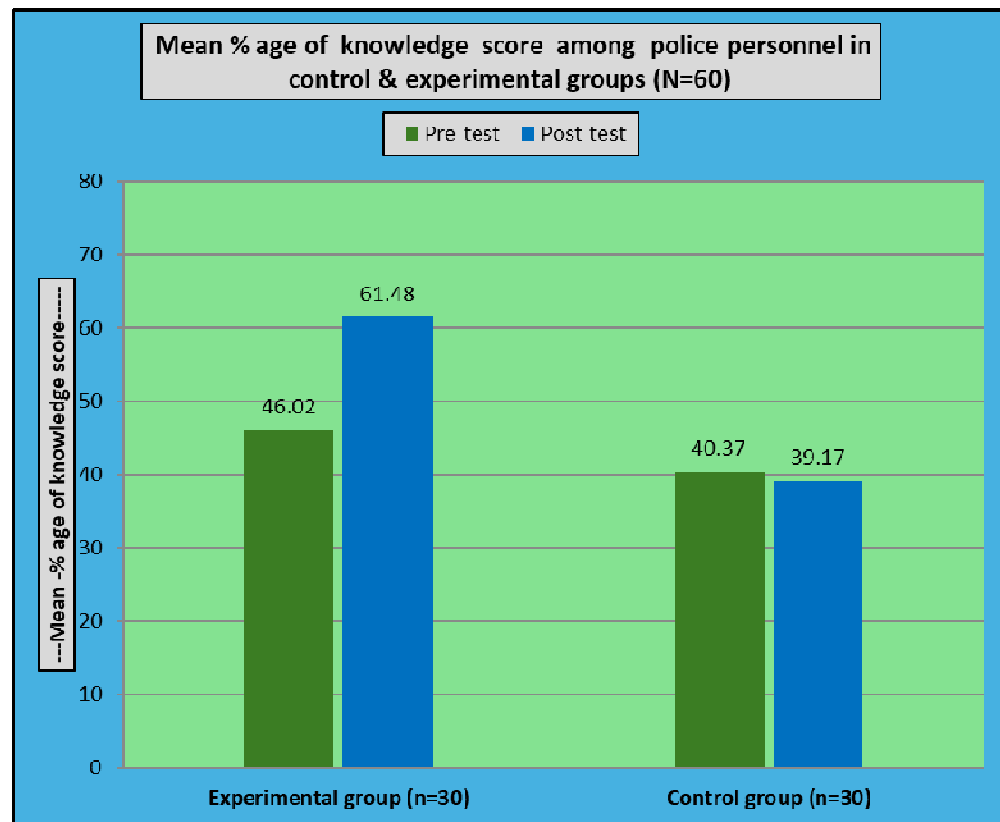
Pilot Study: Pilot study was conducted to assess the feasibility or to improve and to decide the plan for data analysis. The pilot study was carried out on 10 diabetic mellitus police personnel at Corporate Police Station, Amritsar, Punjab to assess the feasibility for conducting main research study and to assess the relevancy of the tool.

Data collection: A total sample of 60 diabetes mellitus patients (30 in Experimental group and 30 in Control group) were selected for the study by using purposive sampling technique. Researcher was introduced themselves to the participants and explain about the benefits of the study and assure them that their participation is voluntary and confidentiality was maintained.

Data Analysis: The data analysis was done according to study objectives by using descriptive and inferential statistics. The plan for data analysis is as following:

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

Result: In present study pre-test mean knowledge score was 14.5 ± 7.8 and post-test mean knowledge score was 14.2 ± 7.6 which was calculated by t-test & value was 5.73 which was not statistically significant at level $p < 0.05$. So, the null hypothesis was rejected at $p < 0.05$. Hence, it can be that video assisted programme was effective in increasing the knowledge regarding prevention & control of diabetes mellitus among police personnel.



Conclusion and Recommendations: The present study demonstrated that the video-assisted programme was effective in improving the knowledge and practice regarding the prevention and control of diabetes mellitus among police personnel. In the experimental group, the mean knowledge score increased significantly from 16.6 ± 9.2 in the pre-test

to 22.1 ± 8.9 in the post-test ($t = 5.73$, $p < 0.01$), indicating a statistically significant improvement following the intervention. In contrast, the control group showed no significant change in knowledge, with mean scores of 14.5 ± 7.8 in the pre-test and 14.2 ± 7.6 in the post-test ($p > 0.05$).

Similarly, the video-assisted programme significantly improved diabetes prevention and control practices among police personnel. The mean practice score in the experimental group increased from 10.6 ± 4.5 during the pre-test to 13.4 ± 4.6 in the post-test ($t = 4.07$, $p < 0.01$). However, no statistically significant improvement was observed in the control group, where the mean practice score changed only from 9.6 ± 4.0 to 9.7 ± 3.78 ($t = 0.43$, $p > 0.05$).

Overall, these findings confirm that the video-assisted educational programme is an effective intervention for enhancing both knowledge and self-care practices related to diabetes mellitus among police personnel. The study supports the incorporation of structured video-assisted health education into workplace wellness programmes to promote diabetes prevention, improve disease management, and reduce the risk of diabetes-related complications among high-risk occupational groups.

Recommendations:

- The study can be conducted on large sample sizes.
- This study can be conducted at different settings with other study designs
- This study can be conducted to assess the practices of Diabetic Patients regarding managing diabetes mellitus.
- The study can be conducted in community and hospital setting to make aware the population regarding diabetes mellitus.
- A descriptive study can be conducted to assess the practices of Diabetic Patients regarding management of diabetes mellitus.

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