



“A study to identify the diabetic retinopathy among the diabetic clients and to assess the effectiveness of the video assisted teaching (vat) on knowledge of diabetic Retinopathy and its treatment between the age group of 40-50 years at the selected village at Shanthigrama community health Centre, Hassan”

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ABSTRACT

The diabetic retinopathy is a disease of the retina that caused by diabetic mellitus. People with diabetes can have a eye disease called diabetic retinopathy. This occurs when the high blood sugar causes damage to the blood vessels in the retina. These blood vessels can swell and leak and then can close and stopping blood from passing through. Sometimes abnormal new blood vessels grow on the retina. All these causes blindness among diabetic patients It's caused by damage to the blood vessels of the light-sensitive tissue at the back of the eye called retina. At first, diabetic retinopathy may cause no symptoms or only mild vision problems. The causes of the diabetic retinopathy is, over time too much sugar in the blood that can lead to the blockage of the tiny blood vessels that nourish the retina, cutting off its blood supply. As result the eye attempts to grow new blood vessels which is abnormal and that can leak easily. Diabetic retinopathy poses a considerable worldwide public health and economic burden due to the growing number of people with diabetes. Since diabetic retinopathy may result in visual impairment or blindness, it can also have a profound impact on patients' lives. Early detection of retinal abnormalities is essential in preventing diabetic retinopathy and loss of vision. Laser photocoagulation only targets advanced stages of disease and does not usually restore vision. Systematic screening for diabetic retinopathy can substantially reduce the risk for visual impairment and blindness, and the key to achieving national targets.

Introduction

“He that is stricken blind cannot forget the precious treasure of his eye sight lost”

The diabetic retinopathy is a disease of the retina that caused by diabetic mellitus. The retina is the nerve layer that lines the back of our eye ball. The retina is important to eye that takes picture the and sends to the brain. Diabetic causes changes in the tiny blood vessels that nourish the retina. In early stages the arteries in the retina weaken and begin to leak, forming small hemorrhages' (blood flow from the ruptured blood vessels) called NPDR(Non-Proliferative Diabetic Retinopathy)¹

People with diabetes can have an eye disease called diabetic retinopathy. This is when high blood sugar levels cause damage to blood vessels in the retina. These blood vessels can swell and leak. Or they can close, stopping blood from passing through. Sometimes abnormal new blood vessels grow on the retina. All of these changes can steal our vision.² According to recent estimates, approximately 285 million people (6.6%) in the 20–79year age group will have diabetes in 2010 and by 2030, 438 million people (7.8%) of the adult population, is expected to have diabetes.(1) The largest increases will take place in the regions dominated by developing economies.³

Methodology

Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. This chapter deals with the methodology adapted to assess the knowledge of diabetic client at selected village Shanthigrama Community Health Centre Hassan regarding the Prevention and treatment of Diabetic Retinopathy.

Objectives of the Study

01. To assess the knowledge of diabetic retinopathy, its prevention and treatment among the diabetic clients between the age group of 40-50 years at the selected village at Shanthigrama Community Health Centre, Hassan.
02. To prepare and administer Video Assisted Teaching on diabetic retinopathy, prevention and treatment among the diabetic clients between the age group of 40-50 years at the selected village at Shanthigrama Community Health Centre, Hassan.

03. To determine the effectiveness of the Video Assisted Teaching on knowledge of Diabetic Retinopathy, its prevention and treatment among the diabetic clients between the age group of 50 years at the selected village at Shanthigrama Community Health Centre, Hassan.
04. To determine the association between the demographic variables with pre-test knowledge on Diabetic Retinopathy, its prevention and treatment among the diabetic clients between the age group of 40-50 years at the selected village at Shanthigrama Community Health Centre, Hassan.

Assumption: -

01. The diabetic clients may have inadequate knowledge on Diabetic Retinopathy, its prevention and treatment
02. Video Assisted Teaching on Diabetic Retinopathy may enhance the knowledge on prevention, early diagnosis and treatment of the diabetic clients.

Hypothesis: -

- H₁:** There will be a significant association between the demographic variables (age, gender, religion, education status, occupation, residence, type of family, monthly income of the family, marital status, nutritional pattern, personal habits, life style exercise, history of diabetes duration, and knowledge on Diabetic Retinopathy,) and pre-test knowledge on Diabetic Retinopathy among the diabetes clients between the age group of 40-50 years at the selected village at Shanthigrama, Community Health Centre, Hassan.
- H₂:** There will be a significant association between the pretest knowledge scores and posttest knowledge score regarding Diabetic Retinopathy among diabetic clients between the age group 40-50 years at the selected village at Shanthigrama Community Health Centre, Hassan.

Research approach - In this study is quantitative evaluative research approach is being used. **Research design:** In this study the quasi-experimental design with one group pretest and posttest design was adapted.

Results

Section – 1

TABLE-1: Pre-test level of knowledge regarding diabetic retinopathy, its prevention and treatment among the diabetic clients. (N=50)

Level of Knowledge	Percentage of Knowledge Scores	No. Of Study Participants.	Percentage of Frequency
Inadequate	≤50%	50	100.00%
Moderate	50-75%	0	0.00%
Adequate	>75%	0	0.00%
Total		50	100.00%

Research Setting: Selected village Shanthigrama Community Health Centre, Hassan.

Population: The population of the study were patients with diabetic mellitus.

Sample: Patients with diabetic mellitus.

Sample size: The total sample size of this study is 50 diabetic clients at selected village Shanthigrama Community Health Centre, Hassan.

Sampling Technique: In this study, Non-randomized sampling technique was adopted.

Variables

- **Independent variables;** Video Assisted Teaching program on Diabetic Retinopathy, its

Prevention and Treatment.

- **Dependent Variables;** Knowledge of diabetic retinopathy, its prevention and treatment.
- **Criteria for selection of samples**

Inclusion Criteria

Diabetic Clients who are under treatment for diabetic mellitus.

Diabetic Clients who are available at the time of data collection.

Diabetic Clients who are willing to participate in the study.

Diabetic Clients with adequate/in-adequate vision acuity.

The literate and illiterate Diabetic Clients.

Exclusion Criteria

- Diabetic Clients who are not willing to participate in the study.
- Diabetic Clients who are not available at the time of data collection.

Recommendations

- A Similar study can be replicated on large sample to generalize the findings.
- A Similar study can be conducted in different setting.
- A study can be conducted to assess the effectiveness of innovative teaching methods.

Interpretation;

Table 1 depicts the score relating to level of knowledge among 100% of population of which respondent have the several levels of knowledge of pre-test level. Here (50) 100% of population have inadequate level of knowledge and none of them has either moderate or adequate level of knowledge about Diabetic Retinopathy.

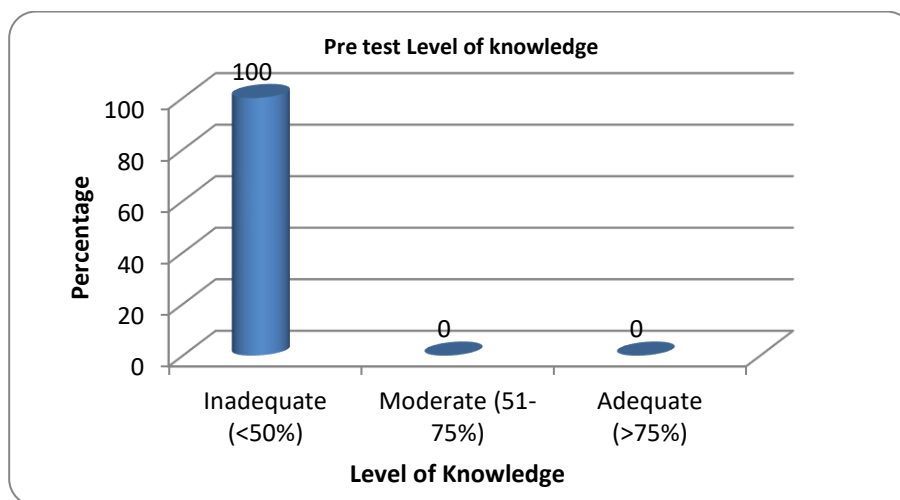


Table-2: Aspect wise and overall Mean, Mean %, SD, and CV of pre-test knowledge scores regarding diabetic retinopathy, its prevention and treatment among the diabetic clients. (N=50)

Aspects	No. of Items	Minimum	Maximum	Range	Mean	Mean %	Standard Deviation	Co-efficient of variation
Aspect 1: General Questions	4	2	3	1	2.22	55.50%	0.42	18.92%
Aspect2: Meaning	1	0	1	1	0.16	16.00%	0.37	231.25%
Aspect3: Causes	2	0	2	2	0.36	18.00%	0.53	147.22%
Aspect 4: Vulnerable group	2	0	2	2	0.3	15.00%	0.51	170.00%
Aspect 5: Changes in diabetic retinopathy	3	0	2	2	0.38	12.67%	0.64	168.42%
Aspect 6: Symptoms of diabetic retinopathy	1	0	0	0	0	0.00%	0	****
Aspect7: Risk factors	1	0	1	1	0.02	2.00%	0.14	700.00%
Aspect8: Types	4	0	0	0	0	0.00%	0	****
Aspect 9: Treatment of diabetic retinopathy	5	0	1	1	0.08	1.60%	0.27	337.50%
Aspect10: Diet in the diabetic retinopathy clients	1	0	1	1	0.26	26.00%	0.44	169.23%
Aspect 11: Monitoring blood sugar	2	1	2	1	1.46	73.00%	0.5	34.25%
Aspect 12: Management and prevention of diabetic mellites	4	0	3	3	0.88	22.00%	0.8	90.91%
Pre test Overall knowledge scores	30	3	12	9	6.12	20.40%	1.96	32.03%

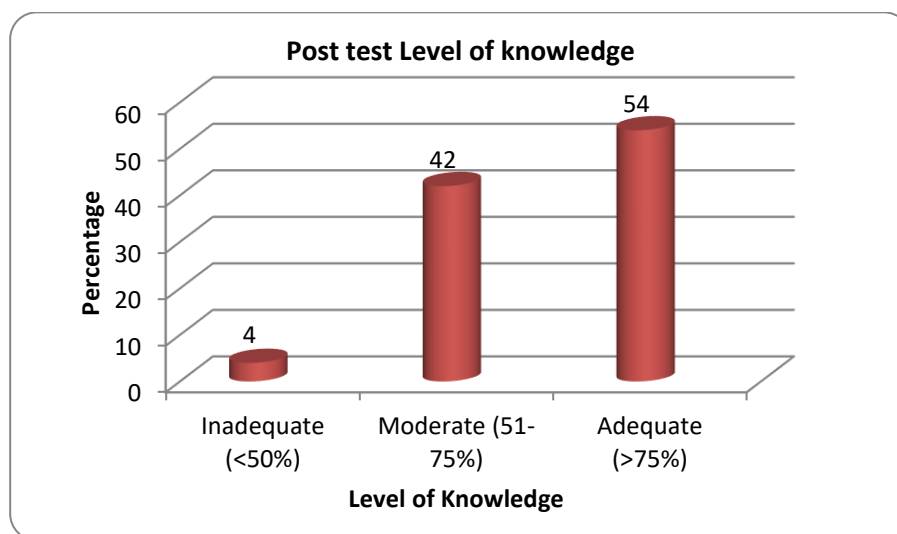
Interpretation:

Table 2 depict that overall knowledge score at pre-test has mean% of 20.40% with maximum score of 12 over a range of 09 having mean value of 6.12 with standard deviation of 1.96. with regards to knowledge aspect the mean% of knowledge regarding Diabetic Retinopathy was found to be highest 73.00% with maximum score of 3 a range of 3 having mean score 2.22 with standard deviation of 0.42 and mean% knowledge regarding Diabetic Retinopathy was found to be lowest as 01.60% with maximum score of 1 over range of 2 having mean score of 0.36 with standard deviation of 0.53.

Section II

Post-Test knowledge scores among diabetic Clients

Table-3: Post-test level of knowledge regarding diabetic retinopathy, its prevention and treatment among the diabetic clients. (N=50).



Cylinder diagram showing distribution of the diabetic clients according to their post-test level of knowledge regarding diabetic retinopathy, its prevention and treatment.

Level of Knowledge	Percentage of Knowledge scores	No. Of Study Participants.	Percentage of Frequency
Inadequate	≤50%	2	4.0%
Moderate	50-75%	21	42.0%
Adequate	>75%	27	54.0%
Total		50	100.0

Interpretation:

Table 4 describes the frequency and percentage distribution of the level of knowledge of Diabetic clients regarding Diabetic Retinopathy after Video Assisted Teaching in which out of 50 clients, most of them 54.00% (27) have adequate knowledge, 42.00% (21) have moderate knowledge and 04.00% (02) of them have inadequate knowledge.

Comparison of pre-Test and post-Test knowledge regarding Diabetic Retinopathy, Its Prevention and Treatment Among The Diabetic Clients

Table-5: Comparison between pre-test and post-test levels of knowledge regarding diabetic retinopathy, its prevention and treatment among the diabetic clients. (N=50)

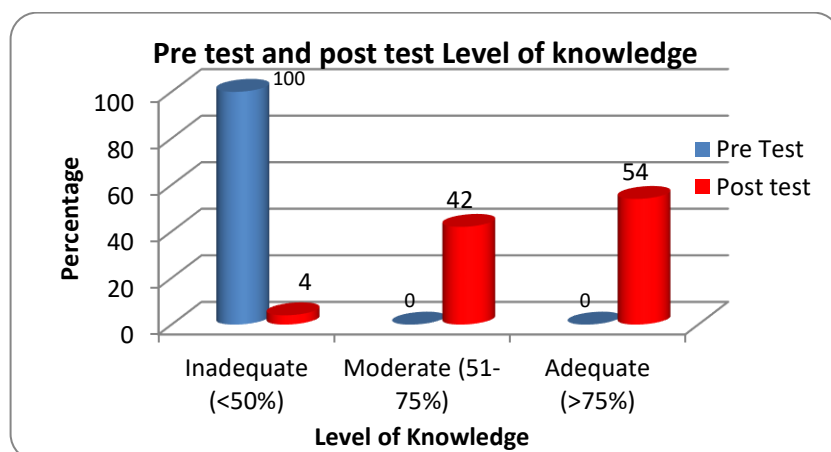
Level of Knowledge	Percentage of Knowledge Scores	No. of study participants.		Percentage of Frequency	
		Pretest	Post Test	Pre-Test	Post Test
Inadequate	≤50%	50	2	100.0%	4.0%
Moderately Adequate	50-75%	0	21	0.0%	42.0%
Adequate	>75%	0	27	0.0%	54.0%
Total		50	50	100.0	100.0

Interpretation:

Table 5: depicts the score of relating to level of knowledge among 100% population of which respondent have the several levels knowledge at pre-test level and post-test level.

At pre-test level 100% (50) population had inadequate level of knowledge and none of them had either moderate or adequate knowledge regarding Diabetic Retinopathy.

After Video Assisted Teaching about DiabeticRetinopathy,54.0% (27)of them got adequate knowledge, 42.0% (21) of them got moderately adequate knowledge and 04.0% (2) of the population got inadequate knowledge respectively. The results have shown improvement in once level of knowledge regarding D.



Cylinder diagram comparing pre-test and post-test level of knowledge regarding diabetic retinopathy, its prevention and treatment among the diabetic clients.

Conclusion

This chapter presents the conclusions drawn, implications, limitations, suggestions and recommendations.

The focus of this study was to evaluate the effectiveness of Video Assisted Teaching on knowledge regarding prevention and treatment of the Diabetic Retinopathy among Diabetic clients in terms of gained posttest knowledge scores. From the data analysis and findings of the present study it is concluded that there were significant differences between the pre test and posttest knowledge scores.

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