Original Research Article

A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAM ON COVID- 19 VACCINATION IN TERMS OF KNOWLEDGE AND ATTITUDE AMONG THE PEOPLE IN SELECTED RURAL AREA OF NADIAD TALUKA

ABSTRACT

A COVID-19 vaccine is a vaccine intended to provide acquired immunity againstCOVID-19. Prior to the COVID-19 pandemic work to develop a vaccine against corona virus disease like SARS & MERS establishes knowledge about the structure &function of corona virus. This knowledge enables accelerated development of various vaccine technology during early 2020. The study aim to assess the effectiveness of planned teaching program on covid- 19 vaccination in terms of knowledge and attitude among the people. A quantitative study with one group pre test post test design was conducted at various rural places of Nadiad Taluka. A total 60 people were enrolled in to the study. A structured knowledge questionnaire and likert attitude scale was built that contained information regarding COVID 19 vaccination. The effect of PTP was analyzed by statically T-test and chi square test was used to find the association with selected demographic variables. In the knowledge regarding COVID-19 vaccination range was 8, mean was 0.849 standard deviation was 0.357, standard error mean was 0.0595. In the attitude range was 33, mean was 4.345, standard deviation was 0.797, standard error mean was 0.132. A knowledge paired t-test value was 5.30 and the attitude paired t-test value was 6.57 was. The planned teaching program was effective in increasing knowledge and attitude regarding COVID-19 vaccination among the rural people of nadiad taluka.

1. INTRODUCTION

A COVID-19 vaccine is a vaccine intended to provide acquired immunity againstCOVID-19. Prior to the COVID-19 pandemic work to develop a vaccine againstcorona virus disease like SARS & MERS establishes knowledge about the structure &function of corona virus. This knowledge enables accelerated development of variousvaccine technology during early 2020. By February 2021, 66 vaccine candidates werein clinical research including 17 in phase 1 trial, 23 phase 1 & 2 trial and 6 in 2 trial &20 in phase 3 trials several COVID-19 vaccine demonstrated efficacy as high as 95%in preventing symptomatic COVID-19 infections. As February, 2021 10 vaccinesauthorized by at least 1 national regulatory authority for public use.2 RNA vaccines(thePfizer–bioNTechvaccine&themodernavaccine).Forconvensionalinactivated vaccine (BBIBP – cor V from sinopharm, BBV 152 from bharat biotech,coronavacfromsinovac,andWIBPfromsinopharm)onepeptide vaccine(Epivaccoronafromthevectorinstitute)[1]

As of 1st February,2021 101.31 million doses of COVID-19 vaccinehavebeen administered worldwide based on official reports from national health agencies.By December more than 10 billion vaccines doses had been pre-ordered by countries.There are many different COVID-19 vaccines in development because it is not yetknown which ones will be effectives and safe. Different vaccine types may be needed for different population groups. For example, some vaccine may working older persons and some may not as the immune systemweaknesswitholderage.[2]Vaccines are the most important public health measures and most effective strategy to protect the population from COVID-19 , sinceSARS-CoV-2 is highly contagious virus and effects population widely and globally. The competition for COVID-19 vaccine invention and development against the spread and catastrophic effects of the disease of the disease is ongoing and new more effective vaccines are likely to be developed as we move through the pandemic. With the distribution of vaccines under way, it is very important to examine community acceptance of COVID- 19 vaccination.[3]Vaccinations have allowed us to control disease that treated many lives, such as measles, polio, tetanus. It's important that as many people as possible get vaccinated. Vaccination don't just protect individuals, when enough people vaccinated, it helps protect the society. This occurs through heard immunity wide spread vaccination make it less likely that as susceptible person will come into contect with someone who has a particular disease.[4]

STATEMENT OF THE PROBLEM

"A study to assess the effectiveness of planned teaching program on COVID- 19 Vaccination In terms of knowledge and attitude among the people in selected Rural area of Nadiad Taluka"

2. OBJECTIVES

1. To assess the knowledge of the people before & after administration of planned teaching programme on COVID-19 vaccination in selected area of Nadiad taluka.
2. To assess the attitude of the people before & after administration of planned teaching programme

on covid-19 vaccination in selected area of Nadiad taluka.

3. To find association between selected demographic variable & posttest knowledge score among people in selected area of Nadiad taluka.
4. To find association between selected demographic variable &post test attitude score among people in selected area of Nadiad taluka.
5. To assess the association between knowledge and attitude among people in selected rural area of Nadiad taluka.

3. HYPOTHESIS

H0 : The mean post test knowledge score of people will be significantly higher thanthe mean pre-test knowledge score on about COVID-19 vaccination at 0.05 level ofsignificance afteradministrationofplannedteachingprogramme.

H1 : The mean post test attitude score of people will be significantly higher than themeanpre-testattitudescoreonaboutCOVID-19vaccinationat0.05levelofsignificance afteradministrationofplannedteachingprogramme.

H2: There will be significantassociation between post testknowledge score &selecteddemographicvariable at0.05levelofsignificance.

H3 : There will be significant association between post-test attitude score & selecteddemographic variableat0.05levelofsignificant.

4. METHODOLOGY

Research approach :A Quantitative approach was used n this study.

Research design: Pre experimental-pre-test post-test design was chosen for analyzing the effectiveness of planned teaching program on COVID- 19 Vaccination.

Variables:

1. **Independent variables:** In this study the independent variable is planned teaching programme.
2. **Dependent variable :** In this study the independent variable is Knowledge and attitude.
3. **Socio demographic variable:** In this study the independent variable is Age,COVID positive or not, Education, Medical history, Gender, family income, Religion.

Setting of the study: Salun, Nadiad

Population: Target population for the study was community people of Rural area.

Sample size: Sample size for the study comprised of 60 community people at selected rural area of NadiadTaluka.

Criteria for sample selection:

Inclusive criteria:

- Those who will give consent to participate in the study.
- People above 18 years.

- Male and female both.

Exclusive criteria:

- Those who will not understand and speak hindi, english and gujarati.
- People below 18 years.
- Those who will not willing to participate in the study.
- Those who will not be available at the time of data collection.

Sampling technique: Convenient sampling technique (non probability sampling) was used to select the sample.

Tool for data collection:

1. Section A: Consist of Demographic variables.
2. Section B: Consist of Questionnaire related to Covid-19 disease.
   Consist of Questionnaire related to Covid-19 vaccination.
3. Section C: Consist of 5 point likert scale to assess the attitude.

Scoring System:

Table 1: For knowledge,

Good	>75%	>23
Average	50-75%	15-23
Poor	<50%	<15

Table 2 For attitude,

Unfavorable	<70%	<40
Favorable	>70%	>40

Intervention:certain interventions are provided to improve the knowledge and attitude regarding the covid-19 vaccination.

Reliability:

The reliability a refers to the degree of consistency, adequacy, accuracy of tool[3]. Reliability will be checked through karlpearson's split-half method. The reliability of tool was checked before pilot study. The reliability if the structured knowledge and attitude questionnaire was (N). The co relation coefficient of r value is 0.91 if R value is greater than o.91 tests is reliable, hence the tool was found reliable**.**

Validity:

In order to measure validity of the tool i.e. structured knowledge questionnaire and planned teaching programme were given to people of selected urban area of nadiadtaluka. The experts were requested to validate the objectivity, adequacy and appropriate of content areas. Tools and structure teaching programme were developed under expert guidance to make the clarity of each item.

Pilot study:A pilot study was conducted among 06 samples from vaso village, Nadiad

Procedure for data collection: The investigator has taken formal permission from concern medical officer of salun PHC center, Nadiad. The investigator collected from the selected urban area of nadiadtaluka. The investigator prepared the master data collection schedule for the entire data collection plan. The data collection procedure was started on 1st September 2021.

A. Informed consent was taken from the eligible participate in the study.

B. 60 selected urban area people using non-probability convenient sampling technique were selected.

C. Baseline data was collected from group.

D. The investigator administered pretest on a 1st day than administered plan teaching programme on 7th day post-test was done by researcher. The entire samples gave cooperation data collection procedure and no major problem was faced during data collection.

Plan for data analysis: Data was to be analyzed on the basis of objectives and the hypothesis of the study. Data analysis is the schematic organization and synthesis of research data and the testing of research hypothesis using the data. Demographic variables analyzed using frequency and percentage. The association of each demographic variable with post test knowledge. Sore has presented on from of the table.The structured knowledge and attitude questionnaire before and after administration of plan teaching programme was field in the master data sheet was given according.The descriptive and inferential statistical procedure used the data from the structured knowledge and attitude questionnaire before and after administration of plan teaching programme analyzed using mean, standard deviation (SD), and paired t-test that presented in the form tables.

5. RESULTS AND DISCUSSION

Section I: Distribution of sample characteristics according to socio demographic variable of participants.

That in the study group, 28 (46.00%) of above 40-60 year of age group, 24 (40.00) of them in age group 18-40, 4 (7.00%) were in 60-80 year of age, 4 (7.00%) were in the >80 year of age.With regard to gender 35 (58.00%) are female and 25 (42.00%) are male.Education status of the study group reveal that 22 (37.00%) had a primary level of education respectively, 15 (25.00%) had a non-formal education, 13 (21.00%) had a secondary level of education, 6 (10.00%) had up to graduate or above and 4 (7.00%) had a education up to higher secondary.Occupation status of the study group reveal that 22 (37.00%) were non- government, 11 (18.00%) were labor, 10 (17.00%) were unemployed, 9 (15.00%) were studying, 8 (13.00%) were government.The family monthly income of the study group reveal that 27 (45.00%) of the family income Rs. 5001-15000, 17 (28.00%) of the family income Rs. <5000, 12 (20.00%) of the family income Rs. 15001-25000, 4 (7.00%) of the family income Rs. 25001-35000.Marital status of the study group 34 (57.00%) of married, 21 (35.00%) were unmarried, 5 (8.00%) were widow/widower.Most of the subject were family type 39 (65.00%) were joint family, 11 (18.00%) were nuclear, 6 (10.00%) were single parent family, 4 (7.00%) were extended.Regarding habit the study group of 21 (35.00%) were smoking, 17 (28.00%) were no any habit, 13 (22.00%) were tobacco chewing, 5 (8.00%) were alcohol consuming, 4 (7.00%) were other habit.The data regarding the religion of the study group reveal that 44 (73.00%) were belongs to Hindu 7

(12.00%) were belongs to Muslim, 4 (7.00%) were belongs to other.Along with about the COVID-19 vaccination is they taken vaccine or not, among them 23 (38.00%) taken 1st dose of COVID-19 vaccine, 19 (32.00) taken 2nd dose , 18 (30.00%) were not the vaccine.

Section II: Assessment of knowledge regardingCOVID-19 vaccination among the rural people before and after administration of planned teaching programme.

In that pretest level of knowledge the study of 50 (83%) of patient had poor knowledge and 10 (17%) had average knowledge. The above table 2 shows post test level of knowledge in the study of 52 (87%) had good knowledge and 8 (13%) had average knowledge. pretest knowledge range was 15 , mean was 0.424, standard deviation was 0.494, standard error mean was 0.0823. Posttest knowledge range was 8, mean was 0.8849, standard deviation was 0.357, standard error mean was 0.0595.

Section III: Assessment of attitude regarding COVID-19 vaccination among the rural people before and after administration of planned teaching programme.

In that pretest level of attitude in the study of 60 (100%) were unfavorable and no any favorable. posttest level of attitude in the study of 55 (92%) were favourable,5 (8%) were unfavourable. pretest level of attitude in the study of range was27, mean was 3.701, standard deviation was 1.290, standard error mean was 0.215. Posttest level of attitude in the study of range was 33, mean was 4.345, standard deviation was 0.797 and standard error mean was 0.132.

Section IV: Effectiveness of planned teaching programme on knowledge and attitude regarding COVID-19 vaccination among people.

In that comparison between Posttest knowledge and attitude on regarding therapeutic intervention. The mean posttest knowledge score was 0.849 with a mean difference of 0.425 also the paired t-test was 5.30 and the tabulated ‘t’ was (2.00) and the mean posttest attitude score was 4.435 with a mean difference of 0.644 also the paired t-test was 6.57 and the tabulated ‘t’ was (2.00).

Section V: To find association between selected demographic variable and post testknowledge and attitude score among rural people of Nadiadtaluka.

The association of knowledge regarding COVID-19 vaccination among the rural people of Nadiadtaluka in reference to the association of knowledge regarding COVID-19 vaccination among the rural people of Nadiadtaluka with their demographic variable there was not significant association of knowledge score with variable. The association of knowledge regarding COVID-19 vaccination among the rural people of Nadiadtaluka in reference to the association of attitude regarding COVID-19 vaccination among the rural people of Nadiadtaluka with their demographic variable there was not significant association of attitude score with variable.

6. CONCLUSION

The purpose of present study is to quasi experimental study to assess the effectiveness of planned teaching programme on knowledge and attitude regarding COVID-19 vaccination on rural people of nadiadtaluka.

After providing the planned teaching programme on COVID-19 vaccination the level of knowledge and attitude towards it was increased.

7. NURSING IMPLICATION

The findings of the study have implication for nursing practice, nursing education, nursing administration, and nursing research.

Nursing Practice:

1. Nurses are the key personnel of a health team, who play a major role in community health promotion and maintenance.
2. Nurses as a key person working in community settings should provide proper knowledge to the community people regarding the COVID-19 and COVID-19 vaccination
3. The community health nurse can identify knowledge of the community people and attitude regarding the COVID-19 vaccination and she can provide the knowledge by health education.
4. Awareness regarding the COVID-19 vaccination can help in improving knowledge and attitude regarding the COVID-19 vaccination.

Nursing Education:

The nurse should equip themselves by reading more book, recent updates and current issues.The nursing curriculum is responsible for preparing future nurses with emphasis on providing curative, preventive and promotive health services**.** The nurse educator can provide in service education to the social care nursing personnel to update their knowledge among the importance of knowledge and attitude regarding COVID-19 vaccination.The nursing students from school and colleges of nursing should be encouraged to improve and update their knowledge regarding the COVID-19 and COVID-19 vaccination.The students, nurses and all health personnel should be given responsibility to teach the public regarding the COVID-19 and COVID-19 vaccination.

Nursing Administration:

The nurse administration can support the nurses for conducting a research on various aspect of COVID-19 vaccination.The nurse administrator can organize a conference, seminar, work shop on COVID-19 and COVID-19 vaccination and motivate the staff nurse to actively participate in such activities.The nurse administrator can arrange in service education and special training trainingprogramme regarding the COVID-19 vaccination

Nursing Reaserch:

The findings of the study can provide guideline to new nurse researcher to conduct similar studies in different settings.This study was served as a valuable reference material for future investigator.The study can published in various national and international journals.

8. RECOMMENDATION

Keeping in view that the finding of the present study, the following recommendations were made:

- The similar study can be conducted on larger sample with different demographic variable. To make

broad generalization.

- A similar study can be replicated at different setting to strengthen the findings.
- A similar study can be replicated, but the interval between pre-test and post-test should be more than 10-15 days.
- A study can be conducting using other dependant variables.
- A teaching programme may be designed for Anganwadi workers, health workers, school teachers and social workers to disseminate knowledge and attitude regarding the COVID-19 vaccination.

- **COMPETING INTERESTS DISCLAIMER:**
-
- Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

9.

10.

11.

12.

13.

14.REFERENCES

1. https://www.who.int/health-topics/coronavirus
2. https://www.bbc.com/news/world-asia-india-55748124
3. https://www.bbc.com/news/world-asia-india-55748124#:~:text=The%20vaccine%2C%20which%20is%20known,it%20can't%20cause%20illness.
4. https://www.bbc.com/news/world-asia-india-55748124
5. Suresh K. Sharma nursing research & statistics. 1st edition, published by Elsevier a division of Reed Elsevier India Pvt.Page:71
6. MunshiRuzdakhanam, Patel Moshmi, Christian Brinky, PanchalShruti, NinamaNidhi, Goyara Krishna.(2017).
7. BP, Beck CT, polit DF, Essential of nursing Research: methods appraisal and utilization. Lippincott-Raven;1997
8. Kothari CR. Research methodology: methods and techniques. New age international;2004.