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"A Study to Assess the Effectiveness of a Structured Teaching Programme on Knowledge Regarding Stress Management Among COVID-19 Patients in a Selected Hospital in Bangalore."

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ABSTRACT

Background: The increasing prevalence of COVID-19 has heightened the need for effective stress management strategies among patients. This study aimed to assess the effectiveness of a structured teaching program (STP) on the knowledge of stress management among COVID-19 patients. **Methods**: A quasi-experimental study was conducted with 60 COVID-19 patients. The Structured Knowledge Questionnaire (SKQ), consisting of 20 multiple-choice questions, was used to assess the knowledge of stress management before and after the STP. The data were analysed using paired t-tests to compare pre-test and post-test knowledge scores. **Results**: The pre-test mean knowledge score was 8.17, with a standard deviation of 4.08, while the post-test mean score increased to 15.58 with a standard deviation of 3.3. The mean difference between pre-test and post-test scores was 7.41, indicating a significant improvement in the knowledge of stress management following the STP. The paired t-test showed a significant difference ($t = 15.5$, $p < 0.05$), confirming the effectiveness of the program. **Conclusion**: The structured teaching program was found to be effective in improving the knowledge of stress management among COVID-19 patients. This study highlights the importance of structured educational interventions in enhancing patients' coping mechanisms during the pandemic.

Keywords: Structured Teaching Program (STP), Stress Management, COVID-19 Patients, Pre-test and Post-test Design, Knowledge Improvement, Paired t-test, Patient Education, Mental Health, Health Promotion

INTRODUCTION

The COVID-19 pandemic has had a profound impact on global health, affecting not only physical well-being but also mental health. Stress has emerged as a significant challenge for patients diagnosed with COVID-19, often exacerbating their overall health condition and recovery process. Effective stress management is essential to improve the psychological resilience and quality of life of these patients. Structured teaching programmes play a vital role in enhancing knowledge about stress management techniques, empowering patients to cope better with their condition. By providing clear and systematic information, these programmes enable individuals to understand stress triggers, implement effective coping strategies, and promote mental well-being. This study aims to assess the effectiveness of a structured teaching programme on improving knowledge regarding stress management among COVID-19 patients, thus contributing to better holistic care and recovery.

4. NEEDS AND SIGNIFICANCE OF THE STUDY

The COVID-19 pandemic has had a profound impact on both the physical and mental health of patients. Among the psychological challenges faced by patients diagnosed with COVID-19, stress is one of the most common and detrimental factors. Prolonged stress can exacerbate physical symptoms, delay recovery, and negatively affect the overall well-being of patients. Therefore, it is crucial to address stress management as part of comprehensive care for COVID-19 patients. Structured teaching programmes have proven to be effective in enhancing knowledge and providing patients with practical tools to manage stress. Educating COVID-19 patients about stress management can empower them to cope better with the emotional and psychological demands of the illness. This knowledge can lead to improved mental health outcomes, enhanced recovery, and reduced complications related to stress. This study is significant because it seeks to evaluate the effectiveness of a structured teaching programme tailored specifically for COVID-19 patients, aiming to improve their understanding and application of stress management techniques. By assessing the impact of such a programme, this research can contribute valuable insights to nursing practice and patient care, particularly in the context of the ongoing pandemic. Furthermore, the findings may inform future interventions to support the mental health of COVID-19 patients, potentially improving their overall quality of life and recovery process.

OBJECTIVES OF THE STUDY:

1. To assess the knowledge of COVID-19 patients regarding stress management before and after the structured teaching programme.

2. To evaluate the effectiveness of the structured teaching programme in improving the knowledge of COVID-19 patients on stress management.

3. To examine the association between the demographic variables of COVID-19 patients and their pre-test knowledge level regarding stress management.

Hypothesis:

Null Hypothesis (H0):

There is no significant difference between the pre-test and post-test knowledge scores of COVID-19 patients regarding stress management after undergoing the structured teaching program.

Alternative Hypothesis (H1):

There is a significant difference between the pre-test and post-test knowledge scores of COVID-19 patients regarding stress management after undergoing the structured teaching program.

METHODOLOGY AND DATA COLLECTION

Research Approach

An evaluative research approach was used in this study to assess the effectiveness of the structured teaching programme on the knowledge of COVID-19 patients regarding stress management.

Research Design

The study adopted a pre-experimental design using a one-group pre-test post-test design. This design allows for the measurement of knowledge before and after the intervention within the same group of participants.

Variables of the Study

Independent Variable: Structured teaching programme on stress management.

Dependent Variable: Knowledge of COVID-19 patients regarding stress management.

Target Population

The target population for this study consists of COVID-19 patients admitted to a selected hospital in Bangalore who are willing to participate in the study.

Sample

The sample for this study includes COVID-19 patients who meet the inclusion criteria and are willing to participate in the study.

Sample Size

A total of 60 patients will be included in the study. This sample size has been determined based on the availability of patients and their willingness to participate in the study.

Sampling Technique

Convenience sampling will be used for this study. Patients who are available and willing to participate during the study period will be selected.

Settings of the Study

The study will be conducted at a selected hospital in Bangalore, where COVID-19 patients are being treated during the time of the study. The study will take place in **2021**.

Instruments Used for the Study

1. Demographic Profile: A tool will be used to collect data on the demographic variables of the participants, such as age, gender, education, and prior exposure to stress management education.

2. Structured Knowledge Questionnaire: A questionnaire will be designed to assess the knowledge of COVID-19 patients regarding stress management. The questionnaire will be developed based on existing literature and expert consultation.

Description of the Structured Knowledge Questionnaire

The tool will consist of 20 multiple-choice questions, with each question having three options, only one of which will be correct. Each correct answer will be assigned one point, for a total possible score of 20. The knowledge levels will be categorized as follows:

1. Poor Knowledge (1-5 marks)

2. Average Knowledge (6-10 marks)

3. Good Knowledge (11-15 marks)

4.Excellent knowledge (15-20 marks)

Data Collection

Data will be collected using Google Forms, which will be shared with participants via WhatsApp groups to ensure easy access. The pre-test and post-test knowledge questionnaires will be sent through these WhatsApp groups. The structured teaching programme (STP) will be conducted online via Zoom meetings, enabling remote participation from patients.

Data Analysis

The pre-test and post-test scores will be analysed using descriptive and inferential statistics. A paired t-test will be used to evaluate the effectiveness of the structured teaching programme in improving the knowledge of COVID-19 patients regarding stress management.

Ethical Considerations

Approval will be obtained from the institutional ethics committee. Informed consent will be obtained from all participants, and confidentiality will be maintained throughout the study. Participation will be voluntary, with the option to withdraw at any time.

Theoretical Framework

The study will be guided by Pender's Health Promotion Model, which focuses on enhancing individuals' health behaviours and knowledge to improve well-being. This model will help explain how COVID-19 patients improve their knowledge and manage stress more effectively after the intervention.

Inclusion Criteria

- COVID-19 patients aged 18 and above who are willing to participate in the study.
- Patients who can understand the structured teaching programme.

Exclusion Criteria

- Patients unable to understand the programme due to language barriers.
- Patients who are critically ill or unable to participate due to their medical condition.

Results

Section 1: Demographic Characteristics of COVID-19 Patients

The majority of the participants were aged between 31 to 40 years (45%), followed by those aged between 21 to 30 years (35%). Most of the participants were male (95%), with a significant portion being married (81.7%). In terms of area of residence, 58.3% lived in rural areas, while 28.3% resided in urban areas. The majority of participants lived in nuclear families (68.4%) and were living with their spouse (81.7%). Regarding monthly income, most participants earned above 20,000 (83.4%). The majority reported having average social support (46.6%), followed by those who perceived their support as good (36.7%) and poor (16.7%). When asked about previous knowledge of stress management, 20% of participants reported having prior knowledge, while 80% did not. These socio-demographic factors provide valuable insight into the knowledge of stress management among COVID-19 patients.

Table 1: Frequency and Percentage Distribution of COVID-19 Patients According to Their Demographic Variables (n = 60)

Demographic variables	CATEGORY	FREQUENCY(NO)	PERCENTAGE (%)
Age (yrs)	20 -30 years 31-40 years 41 -50 years	21 27 12	35.5% 45.0% 20.0%
Gender	Male Female	57 3	95.0% 5.0%
Marital status	Married Unmarried Widow	49 10 1	81.7% 16.6% 1.7%
Area of living	Rural Urban Tribal Others	35 17 5 3	58.3% 28.3% 8.4% 5.0%
Types of family	Nuclear Joint	41 17	68.4% 28.3%

	Extended	2	3.3%
Monthly income	Above 20000 15000-20000 10000-15000 Below 10000	50 3 5 2	83.4% 5.0% 8.3% 3.3%
Social support	Good Average Poor	22 28 10	36.7% 46.6% 16.7%
Previous knowledge	Yes No	12 48	20.0% 80.0%

Section 2 Effectiveness of Structured Teaching Program

1. Description of COVID-19 Patients' Knowledge Regarding Stress Management. The pre-test and post-test knowledge scores obtained by the COVID-19 patients regarding stress management were tabulated in the master data sheets. The mean, median, range, and standard deviations of the pre-test and post-test scores were computed to evaluate the effectiveness of the structured teaching program. The findings are presented in Table 2.

Table 2: Pre-test and Post-test Knowledge Scores of COVID-19 Patients Regarding Stress Management (N = 60)

TEST	MEAN	MEDIAN	RANGE	SD
PRE-TEST	8.17	5	5-17	4.08
POST TEST	15.58	15	10-28	3.3

The table presents the mean, median, range, and standard deviation of the pretest and posttest knowledge scores of COVID-19 patients regarding stress management (N=60). The mean score for the pretest was 8.17, with a median of 5, a range of 5-17, and a standard deviation of 4.08. In contrast, the posttest mean score was 15.58, with a median of 15, a range of 10-28, and a standard deviation of 3.3. This data demonstrates a significant improvement in the knowledge of stress management among the participants after the structured teaching program.

Table 3, Frequency and Percentage Distributions of COVID-19 Patients according to their Level of Knowledge (N = 60)

KNOWLEDGE SCORE	PRE-TEST FREQUENCY	PRE-TEST PERCENTAGE	POST-TEST FREQUENCY	POST-TEST PERCENTAGE
POOR	35	58.3%	0	0%
AVERAGE	12	20.0%	10	16.67%
GOOD	13	21.3%	33	55.0%
EXCELLENT	0	0%	17	28.3%

The table illustrates the distribution of COVID-19 patients' knowledge levels before and after the structured teaching program. In the pretest, 58.3% of the participants had poor knowledge, 20% had average knowledge, 21.7% had good knowledge, and 0% had excellent knowledge. In contrast, after the teaching program in the posttest, 0% of the participants were classified as poor, 16.7% had average knowledge, 55% had good knowledge, and 28.3% had excellent knowledge. This indicates a significant improvement in the knowledge level of participants regarding stress management after the structured teaching program.

Comparison of Pre-test and Post-test Knowledge Scores

To evaluate the effectiveness of the structured teaching program, the significance of the difference between the pretest and post-test knowledge scores was analysed. Paired t-test was used to compute the statistical significance. The data are presented in Table 4.

Alternative Hypothesis (H_1):
There will be a significant difference between the mean pretest and post-test knowledge scores of COVID-19 patients who have undergone the structured teaching program regarding stress management.

Table 4: Mean, Mean Difference, and Paired 't' Test of Pretest and Post-test Knowledge Scores of COVID-19 Patients Regarding Stress Management (N = 60)

Knowledge score	mean	Mean difference	SD difference	Paired t teat value
Pre test	8.17	7.41	±3.71	15.5
Post test	15.58			

$p < 0.05$ (significant)

The data presented in Table 4 shows that the mean difference between pre-test and post-test knowledge scores is 7.41. This indicates an increase in knowledge scores after undergoing the structured teaching program. To determine the significance of the gain in knowledge, the paired t-test value was computed. The obtained t-value of 15.5 was found to be significant at the 0.05 level of significance.

Discussion

In this study, the researcher evaluated the effectiveness of a structured teaching program in improving the knowledge of stress management among COVID-19 patients. The results indicated a significant improvement in knowledge, with the pre-test mean score of 8.17 and the post-test mean score of 15.58. The paired t-test revealed a highly significant difference ($p < 0.05$), confirming the effectiveness of the program. The findings show that 55% of the participants in the post-test achieved "Good" knowledge, compared to only 21.3% in the pre-test. These results highlight the positive impact of the structured teaching program on enhancing participants' understanding of stress management. Overall, this study emphasizes the importance of structured educational interventions in improving the knowledge of stress management among COVID-19 patients, which can help them cope better during their treatment and recovery.

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