

The Effectiveness of an Educational Package on Post COVID Rehabilitation in Terms of Knowledge and Practice among Post COVID Patients

Sneha Sara Sam¹, Sarita Shokanda², Madhumita Dey³

¹Nursing Officer, A. I. I. M. S., New Delhi, India

Corresponding author Email: [snehamishelmary88\[at\]gmail.com](mailto:snehamishelmary88[at]gmail.com)

Mobile: 9958939733

^{2,3}Assistant Professor, R A K College of Nursing, Lajpat Nagar, New Delhi

Abstract: *The present study was conducted to assess the effectiveness of an educational package on post COVID rehabilitation in terms of knowledge and practice among post COVID patients in Chhawla district of Delhi. A quantitative approach was used for this study. The theoretical framework used for this study was Dorothea Orem's self care deficit theory. Sample size selected was 100 using non probability snowball sampling. The tools used were structured knowledge interview schedule and a practice rating scale. Self introduction and establishment of rapport with the subjects was done. . Written consent was taken from each sample and confidentiality of the respondents was assured and maintained. A pretest was administered to assess the knowledge and practice of post COVID rehabilitation among post COVID patients. An educational package on post COVID rehabilitation was administered to post COVID patients on 10/2/22 to 12/2/22. Post test was taken from 18/2/22 to 22/2/22 to assess the knowledge and practice of post COVID rehabilitation among post COVID patients. The results showed that the educational package was effective in improving the knowledge and practice of post COVID patients*

Keywords: educational package, post COVID rehabilitation, post COVID patient

1. Introduction

On March 11, 2020, the World Health Organization has declared COVID-19 as a global pandemic, indicating significant global spread of an infectious disease. Soon, the virus was in all continents and over 177 countries. The most critical cases led to an overwhelming number being admitted into the intensive care units of hospitals, leading to a concern that the virus would overwhelm local health care systems. ⁽¹⁾

In many individuals recovering from COVID-19, health problems may extended far beyond acute infection, even among those who experienced mild illness. Limitations in functioning resulting from these problems affected the physical, cognitive, and mental aspects of health, and had an important impact on work and social life. Due to the new, fluctuating and protracted course of the after-effects of COVID-19, the need for rehabilitation services in this population persisted beyond the pandemic.

Rehabilitation is an integral part of universal health coverage (UHC), alongside health promotion, prevention, curative and palliative care. It is a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment. . Rehabilitation service delivery occurs along the continuum of care, at all levels of health care ⁽²⁾

2. Objectives

- 1) To assess and evaluate the knowledge and practice of post covid patients before and after the administration of educational package on post covid rehabilitation

- 2) To determine relationship between knowledge and practice after the administration of educational package on post covid rehabilitation
- 3) To determine association between knowledge, practice of post covid patients with selected demographic variables

3. Materials and Methods

A quantitative approach with pre experimental one group pre-test post-test design was used to evaluate the effectiveness of educational package among 100 post COVID patients of a rural community at Chaawla village, New Delhi. The tools developed and used for data collection were Semi structured health problem assessment Performa, structured knowledge interview schedule and a practice rating scale. The snowball sampling technique was used. The inclusion criteria were post covid patients of Chhawla village who were willing to participate. and subjects who were available during data collection. The tools used were structured knowledge interview schedule and a practice rating scale. After getting administrative approval, self introduction and establishment of rapport with the subjects was done. Written consent was taken from each sample and confidentiality of the respondents was assured and maintained. A pretest was administered to assess the knowledge and practice of post COVID rehabilitation among post COVID patients. An educational package on post COVID rehabilitation was administered to post COVID patients on 10/2/22 to 12/2/22. Post test was taken from 18/2/22 to 22/2/22 to assess the knowledge and practice of post COVID rehabilitation among post COVID patients. Data were analysed using descriptive and inferential statistics

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4. Result

4.1 Demographic data of the post COVID patients

Most (67%) of the post-COVID patients were females and 33% were males. Majority of samples (29%) were from age group 30-45 years, 25% samples had graduate level of education. Only 10 % samples were not having any formal education. Most of the samples 41% were housewives. 14 % were having hypertension. Majority of the sample (51 %) had income of above 30000

4.2 Effectiveness of educational package on post COVID rehabilitation in terms of knowledge among post COVID patients

H₀₁: The mean post test knowledge score of post-COVID patients will not be significantly higher than their mean pre test knowledge score after the administration of educational package on post-COVID rehabilitation non post-COVID rehabilitation as evident from structured knowledge interview schedule at 0.05 level of significance

Table 1: Mean, mean difference (MD), standard deviation difference (SD_d), standard error of mean difference (SE_{MD}) and “t” value of the pre test and post test knowledge scores of post-COVID patients on post-COVID rehabilitation, N=100

Knowledge score	Mean	MD	SD _d	SE _{MD}	“t” value
Pre test	17.87	3.18	0.54	0.663	*5.28
Post test	21.05				

*t value for df (99) level = 1.98, significant at 0.05 level

The data presented in table no 1 showed that mean post test knowledge score (21.05) was higher than their mean pre test knowledge scores (17.87) with a mean difference of 3.18. The calculated “t” value (5.28) was found to be statistically significant at 0.05 level of significance. Thus it was established that the difference obtained in the mean pretest and post test knowledge scores of post COVID patients is a true difference and not by chance. Hence the null hypothesis H₀₁ was rejected and research hypothesis H₁ was accepted. This showed that the educational package on Post-COVID rehabilitation was effective in enhancing the knowledge of post-COVID rehabilitation.

4.2 Effectiveness of educational package on post COVID rehabilitation in terms of practice among post COVID patients

H₀₂: The mean post test practice score of post-COVID patients will not be significantly higher than their mean pre test practice score after the administration of educational package on post-COVID rehabilitation as evident from structured expressed practice rating scale at 0.05 level of significance

Table 2: Mean, mean difference (MD), standard deviation difference (SD_d), standard error of mean difference (SE_{MD}) and “t” value of the pre test and post test practice score of post-COVID patients on post-COVID rehabilitation, N=100

Practice score	Mean	MD	SD _d	SE _{MD}	“t” value
Pre test	42.42	4.69	0.96	0.957	*4.81
Post test	47.11				

*t value for df (99) level = 1.98, significant at 0.05 level

The data presented in table no2 showed that mean post test practice score of post-COVID patients (47.11) was higher than their mean pre test practice score (42.42) with a mean difference of 4.69. The calculated “t” value (4.81) was found to be statistically significant at 0.05 level of significance. Thus it was established that the difference obtained in the mean pretest and post test practice scores of post COVID patients was a true difference and not by chance. Hence the null hypothesis H₀₂ was rejected and research hypothesis H₂ was accepted. This showed that the educational package on Post-COVID rehabilitation was effective in enhancing the practice of post-COVID rehabilitation

4.3 Relationship between knowledge and practice after the administration of educational package on post covid rehabilitation

H₀₃: There will not be significant relationship between post test knowledge score and post test practice score of post-COVID patients as expressed from structured knowledge interview schedule and structured expressed practice rating scale at 0.05 level of significance

Table 3: Karl Pearson coefficient of correlation between post test knowledge scores and post test practice scores of post-COVID patients regarding post-COVID rehabilitation, N=100

Variables	Mean	SD	“r” value
Post test knowledge scores	21.05	6.61	*0.298
Post test practice scores	47.11	5.67	

*r value for df (98) “r”= 0.19, significant at 0.05 level

The data presented in the table no 3 showed that there was a weak positive correlation (0.298) between post test knowledge and practice score of post-COVID patients on post COVID rehabilitation, which was found to be significant at 0.05 level. Hence the null hypothesis H₀₃ was rejected and research hypothesis H₃ was accepted and the positive relation shows that as the knowledge scores increases, it enhances the practice scores as well.

4.4 Association between knowledge, practice of post covid patients with selected demographic variables

H₀₄: There will not be significant association between the mean post test knowledge score of post-COVID patients and selected variables after administration of educational package on post-COVID rehabilitation as measured from structured knowledge interview schedule at 0.05 level of significance in terms of age, gender, educational status, occupation, pre covid co morbidities, duration after covid infection and habits

Table 4: Chi square Value Showing Association between Post test Knowledge Score with Selected Variables of Post COVID Patients, N=100

S No.	Selected Variables	Chi Square	df	Chi Square Table Value
1	Age	2.51 ^{NS}	3	7.81
2	Gender	0.865 ^{NS}	1	3.84
3	Education	1.49 ^{NS}	6	12.59
4	Occupation	5.96 ^{NS}	4	9.48
5	Pre covid comorbidities	16.99 ^S	8	15.5
6	Duration after covid infection	0.6 ^{NS}	3	7.81
7	Habits	1.43 ^{NS}	2	5.99

The computed chi square value of selected variables like age, gender, education, occupation, duration after COVID infection, habits were found to be not significant at 0.05 level of significance. The computed chi-square value between pre COVID co morbidities of the post-COVID patients and their knowledge scores **were significant at the 0.05 level of significance**. Thus the null hypothesis H_{04} was failed to reject except in the variable pre COVID comorbidities and research hypothesis H_4 was rejected except for the variable pre COVID comorbidities. This indicated that knowledge was independent on its own and not influenced by majority of selected variables except pre COVID comorbidities

Table 5: Chi square value showing association between post test practice score with selected variables of post covid patients, N=100

S No	Selected Variables	Chi Square	df	Chi Square Table Value
1	Age	7.97 ^{NS}	6	12.59
2	Gender	1.24 ^{NS}	2	5.99
3	Education	6.40 ^{NS}	12	21.02
4	Occupation	2.00 ^{NS}	8	15.5
5	Pre covid comorbidities	13.23 ^{NS}	16	26.29
6	Duration after covid infection	3.16 ^{NS}	6	12.59
7	Habits	0.62 ^{NS}	4	9.48

The computed value of selected variables such as age, Gender, education, occupation. pre COVID co morbidities, period of hospitalization, duration after COVID infection, habits were found to be statistically not significant at 0.05 level of significance. Hence the null hypothesis H_{05} was **failed to reject** and research hypothesis H_5 was rejected. This indicated that practice was not depending on selected variables. The practice was independent on its own and not influenced by any of the selected variables

5. Conclusion

The educational package on post-covid rehabilitation was effective to increase the knowledge of post-covid patients of the selected rural community of Delhi regarding post covid rehabilitation. There was statistically significant correlation between the knowledge and practice of post-covid patients of the selected rural community of Delhi regarding post covid rehabilitation. There was association between post - test knowledge scores of post-covid patients with their selected demographic variable pre COVID comorbidities. But associative factors like gender, age, occupation, education, duration after covid infection, and lifestyle habits

were found statistically not significant with post test knowledge scores of the post-covid patients.

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