

Effect of Nursing Intervention Package on Constipation and Quality Of Life among Elderly

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Abstract

Aging in India is increasing. As the age increases the health problems also increases. Constipation is the most common gastrointestinal problem of the elderly and it increases the hospital admissions. A quasi-experimental study was done to assess the effect of community based nursing intervention package on constipation and quality of life of elderly residing in urban and rural community. By using multistage random sampling technique the data were collected from 120 participants (experimental group I(rural) =30, experimental group II (urban) =30, control group =30). Pretesting of the three groups were done and implemented the nursing interventional package for the experimental group I&II for one month and post test of three groups were done after one month. The result revealed that the intervention was effective to reduce the intensity of constipation and improve the quality of life in both rural and urban group. The study concluded that community based nursing intervention is effective to relieve constipation and improve the quality of life of elderly.

Key words: elderly, constipation, nursing intervention, quality of life

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I. Introduction

Most of the time, constipation among elderly is considered as normal physiological change and the complaint is being neglected. And even the primary caregiver also thinks so. A random sample of 1833 of elderly was screened for prevalence of 40.1% was suffering from constipation.¹ increased intake of fibre and other nursing interventions such as increased fluid intake etc. are effective interventions to solve the problem of constipation. The elderly most of the time are reluctant to express and seek medical advice for constipation, even if they are distressing and decreasing their quality of life. Another significant problem is the increase in number of elderly comparing to the number of young adults. So there are only very less people to take care of them and their problem due to functional decline is often neglected. Lack of accessibility to the health services often act as a hindrance in seeking medical advice for their health problems. So community based interventions seems to be the method for the best method for the care of community dwelling elderly.

Statement of the problem

A quasi-experimental study to assess the effect of nursing intervention package on constipation and quality of life of elderly residing in selected urban and rural community

Objectives of the study

1. Determine the effect of nursing intervention package on constipation and quality of life
2. Compare the effect of nursing intervention package on constipation and quality of life between experimental group I(rural) and experimental group II (urban)
3. Find the correlation between constipation and quality of life
4. Find the association between selected demographic variables and constipation

Research hypotheses

H1: There will be a significant difference in the intensity of constipation of elderly after the implementation of nursing intervention in experimental group 1 and control group

H2: There will be significant difference in the intensity of constipation of elderly after the implementation of nursing intervention in experimental group 1 & II

H3: There will be significant difference in the quality of life of elderly after the implementation of nursing intervention in experimental group 1 and control group

H4: There will be significant difference in the quality of life of elderly after the implementation of nursing intervention in experimental group 1 & II

H5: There will be significant association between selected demographic variables and constipation

Delimitations

The study is delimited to:

1. The expressed constipation and quality of life
2. The elderly residing in Kottayam district
3. The elderly residing in home settings
4. The elderly in the age group of 65-80 years
5. One time post test only

II. Methodology

Study Design

The study used a quasi-experimental design to assess the effect of nursing intervention to assess the effect of nursing intervention package on elderly residing in rural and urban community

Setting and sampling process

The study was conducted at the community settings of Kottayam district in Kerala. The sample size was finalized to be 30 in each group. To achieve the sample size of 30 in each sub groups 525 elders were screened.

Criteria for participant selection

The elderly who are between the age group of 65-80 years suffering from constipation, willing to participate, conscious and able to follow the instructions were included in the study. The elderly suffering from neurological and psychiatric problem and undergone abdominal surgery within two years are excluded from the study.

Method of data collection

The data was collected in three phases. During phase 1 screening and pre-test was done using Victoria bowel performance scale and WHOQOL BREF scale. The participants were identified from the voter's list and located their houses with the help of ASHA workers. In phase II the investigator implemented the nursing intervention package in experimental group I(rural) and experimental group II (urban). Multiple approaches were used in this study to bring about the comprehension of the intervention package. They were educated about physical exercise, maintaining regular bowel pattern, correct toilet positioning and increased fluid and fibre intake. Procedure of abdominal massage was demonstrated to the care givers and return demonstration were done by them. The information booklet translated in Malayalam was distributed for easy reference. The participants were contacted through phone daily and they were motivated to adhere to the intervention and cleared their doubts. In phase III post test of three groups were done after one month. The participants were encouraged to continue the intervention.

Ethical considerations

Ethical clearance certificate was obtained from the Institutional Ethical Committee. Written permission was obtained from the secretary of panchayath and municipality for conducting the research study. Informed written consent from the participants was taken and confidentiality was assured. After the post-test the intervention was also implemented in the control group.

III. Results

Sample characteristics

The sample characteristics of the elderly are depicted in table 1.

Table 1: Sample characteristics of the elderly

S.no	Participants characteristics	Experimental group I Frequency (%)	Experimental group II Frequency (%)	Control group Frequency (%)
1.	Age in years			
	• 65-70	12(40)	10(33)	16(53)
	• 71-75	10(33)	12(40)	11(37)
	• 76-80	8(27)	8(27)	13(10)
2.	Sex			
	• Male	18(60)	16(53)	18(60)
	• Female	12(40)	14(47)	12(40)
3.	Marital status			
	• Married	21(70)	17(57)	17(57)
	• Single	2(7)	4(13)	3(10)
	• Widow/Divorcee	7(23)	9(30)	10(33)
4.	Occupation			
	• Employed	2(7)	1(3)	1(3)
	• Unemployed	2(7)	4(13)	4(13)

	<ul style="list-style-type: none"> Retired Self-employed 	19(63) 7(23)	20(67) 5(17)	20(67) 5(17)
5	Educational status <ul style="list-style-type: none"> Elementary High school Higher Secondary Collegiate 	17(56) 2(7) 2(7) 9(30)	15(50) 15(50) 0 0	15(50) 10(33) 1(3) 4(13)
7	Co-morbid conditions <ul style="list-style-type: none"> Yes No 	22(73) 8(27)	20(67) 10(33)	20(67) 10(33)

Effect of nursing intervention package on constipation and quality of life

Table 2 shows that there is no significant difference between the pre test and post test score of control group, where as in the experimental group 1 at the post test level median score is significantly higher than the pre-test score (4.94, 0.001*). At the post-test level severity of constipation is significantly reduced in experimental group 1 as compared to the control group also (6.61, 0.001*). It can be inferred that the nursing intervention package was effective in reducing the intensity of constipation of elderly residing in rural community. Among participants with constipation after the intervention, the experimental group 1 had a significantly higher post-test median overall quality of life score (8), physical domain score (25.5) and psychological domain score (21) as compared to the pre-test score and p<0.001 as per Wilcoxon sign rank test . Alike pattern was observed while comparing the post test score of experimental group and control group. So it can be inferred that the nursing intervention package is effective to improve the overall quality of life, physical domain and psychological domain of elderly suffering from constipation residing in rural community.

Table 2: Impact of nursing intervention package on constipation and quality of life in rural group

Problem/QOL	Experimental group I Median(IQR)		Wilcoxon Sign Z, p-value	Control group Median(IQR)		Wilcoxon Sign Z, p-value
	Pre- test	Post-test		Pre- test	Post-test	
Constipation (BPS Score)	-3(-3 to -2)	-1(-1 to 0)	4.94, 0.001*	-2(-3 to -2)	-2(-2 to -1)	1.41, 0.16
Quality of life (WHOQOL BREF scale score)						
a. Over all						
b. Physical	6(6-7)	8(7-8)	11.9,0.001*	6(5-7)	6(5-7)	1,0.3
c. Psychological	23(20-24)	25.5(23-28)	14, 0.001*	22.3(20-24)	22.3(20-24)	0,1
d. Social relation	18(18-19)	21(20-23)	14.7, 0.001*	18(18-19)	18(18-19)	1,,0.3
e. Environmental	11(10-11) 25(24-27)	11(10-11) 25(24-27)	0,1 0,1	11(10-11) 25(24-27)	11(10-11) 25(24-27)	0,1 0,1

*=Significant, IQR= inter-quartile range

Comparison of the effect of nursing intervention package on constipation and quality of life between experimental group I(rural) and experimental group II(urban)

Table 3 depicts that after the intervention both experimental group 1&II had significantly higher BPS score, overall quality of life score, physical domain score and psychological domain score and p<0.001 as per Wilcoxon sign rank test. So it can be inferred that the nursing intervention package is effective to relieve constipation and improve quality of life of elderly residing in both rural and urban setting.

**Table 3: Comparison of the effect of nursing intervention package on constipation and quality of life between experimental group I(rural) and experimental group II (urban)
n1=30, n2=30**

Problem/QOL	Experimental group I Median(IQR)		Wilcoxon Sign Z, p-value	Experimental group II Median(IQR)		Wilcoxon Sign Z, p-value
	Pre- test	Post-test		Pre- test	Post-test	
Constipation (BPS Score)	-3(-3 to -2)	-1(-1 to 0)	4.94, 0.001*	-2(-3 to -2)	0(-1 to 0)	4.90, 0.001*
Quality of life (WHOQOL BREF scale score)						
a. Over all						
b. Physical	6(6-7)	8(7-8)	11.9,0.001*	6(5-6)	8(7-8)	17.02,0.001*
c. Psychological	23(20-24)	25.5(23-28)	14, 0.001*	21(20.2-23)	26(24-27.8)	24.1,0.001*
d. Social relation	18(18-19)	21(20-23)	14.7, 0.001*	19(18-19)	20(20-21)	10.4,0.001*
e. Environmental	11(10-11) 25(24-27)	11(10-11) 25(24-27)	0,1 0,1	10(10-11) 25(24-27)	11(10-11) 25(24-27)	0,1 0,1

*=Significant, IQR= inter-quartile range

Figure 1 depicts that after the intervention the mean percentage of BPS score of experimental group 1&II is decreased by (51%) and (48%) whereas the BPS score of control group is decreased only by 2%. So it can be inferred that the nursing intervention is effective to reduce the intensity of constipation of elderly residing in rural and urban community.

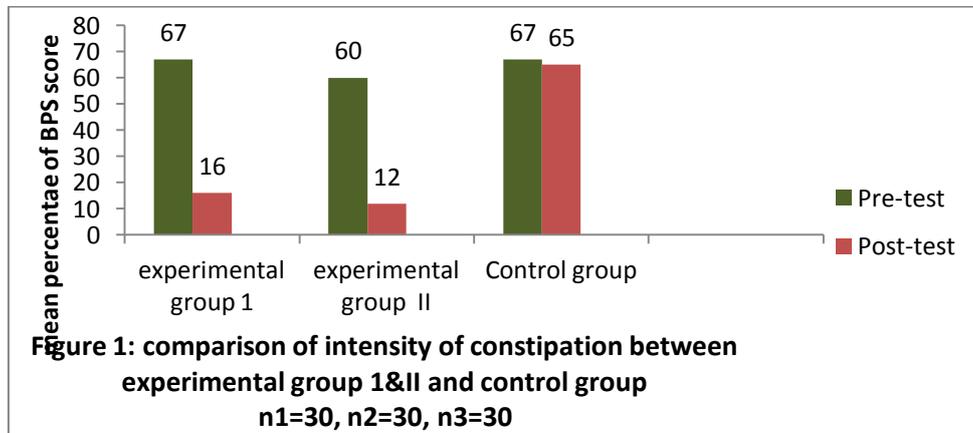
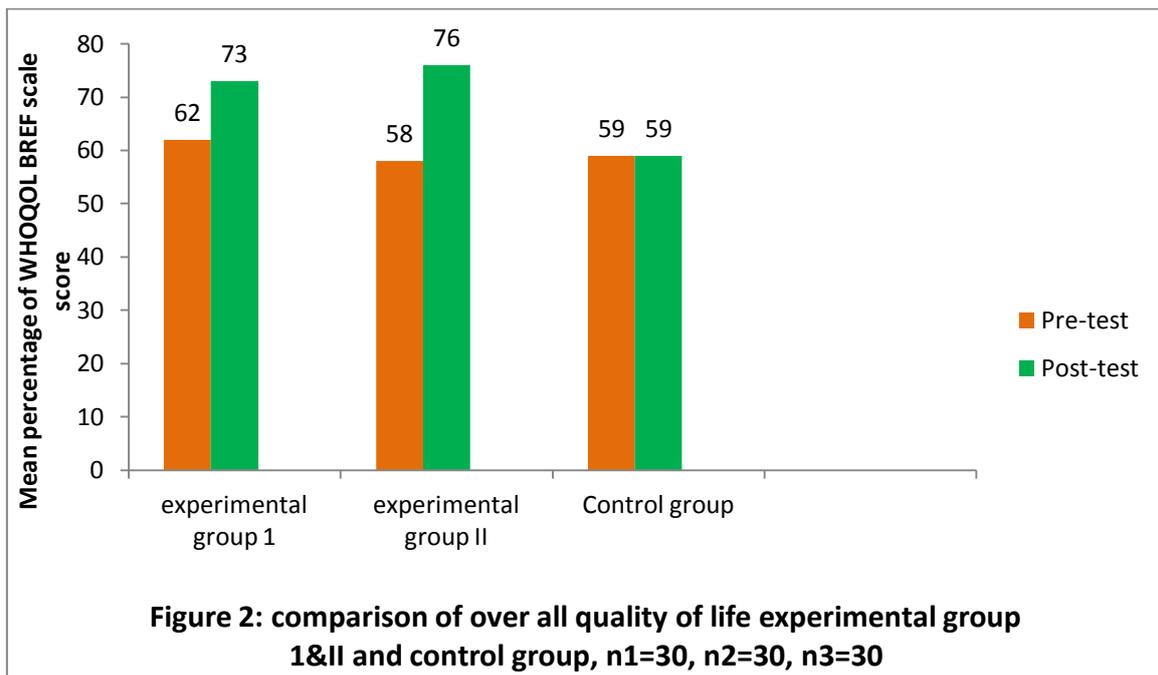
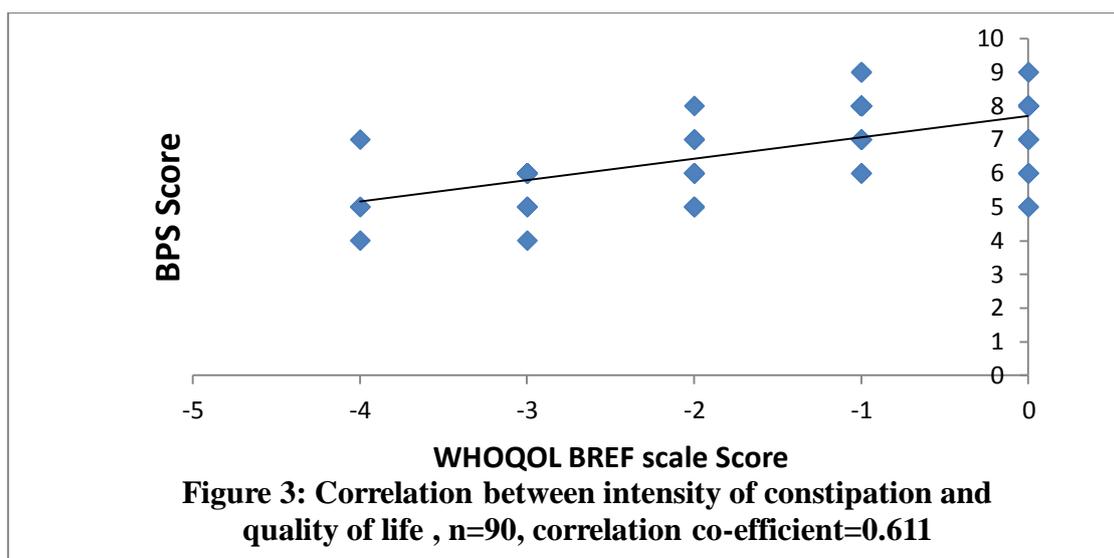


Figure 2 depicts that after the implementation of nursing intervention at post test level there is an increase in mean percentage of overall quality of life of experimental group 1(11%) and experimental group II(22%) where as in the control group there is no change in mean percentage. So it can be inferred that the nursing intervention package improved the overall quality of life of elderly suffering from constipation residing in rural and urban community.



Correlation between constipation and quality of life of elderly

Figure 3 depicts that as the BPS score increases (increase in BPS score indicates decrease in intensity of constipation) the WHOQOL BREF scale score also increases. So the intensity of constipation is inversely proportional to the quality of life.



Association between selected demographic variables and constipation

Chi square analysis reveals that educational status ($\chi^2=21.064, p=.001$), i.e. significantly higher percentage of participants with elementary education had BPS score -2 as compared to other educational level.

IV. Discussion

In the present study nursing intervention was effective to reduce the intensity of constipation and improve the quality of life in both rural and urban group. Similar results were reported in a randomized trial done among people with functional constipation that abdominal massage was helpful in relieving constipation.³ Another quasi-experimental study also reported that the planned nursing intervention including bran supplement was effective in the bowel management of older orthopaedic patients.² Review of medical record of children with chronic constipation revealed that increased fluid intake improved the stool consistency.⁴ A comparative study done among 28 apparently healthy people revealed that squatting position reduced the strain on defecation.⁵ Ethically it is wrong to neglect the need of the control group. So the intervention package was taught to the control group after the post test.

V. Conclusion

The study concluded that the community based nursing intervention package prepared and used in this study is effective to relieve constipation and improve the quality of life of elderly residing in urban and rural community.

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