A Study to Assess the Effectiveness of Sleep Hygiene Measures and Relaxation Therapy on Sleep Quality and Stress Level among Residents of an Old Age Home

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Abstract: Topic: A study to assess the effectiveness of sleep hygiene measures and relaxation therapy on sleep quality and stress level among residents of an old age home. **Background:** Holistic nursing should be an aspiration for all nurses, as it helps patients feel acknowledged, valued, and appreciated. Holistic nursing care most needed for old age people. Specially those who are residents at old age home. The focus is low good health throughout life can help older men and women lead full and productive lives and resource for their families and communities. Sleep and stress is the most common problem for the old age people.so that guided imagery relaxation therapy is effective one for older adult. **Aim**: The objectives of the study were*Assess the sleep quality and stress level among residents of an old age home. *Evaluate the sleep quality and stress level after sleep hygiene measures and relaxation therapy among residents of an old age home. *Associate the selected demographic variables with sleep and stress level among residents of an old age home. **Method:** This pre experimental study was conducted between old age people. samples were selected using convenient sampling method. A Pittsburgh sleep quality analysis scale and perceived stress scale was used to assess the knowledge. **Results**: samples (n=60) The Paired "t" test value was 14.84 and. the p-value is p<0.001**. This shows that was a highly significant difference between pretest and post test scores of sleep hygiene measures. The Paired "t" test value was 17.99 and. the p-value is p<0.001**. This shows that there was a highly significant difference between pretest and post test scores of relaxation therapy on stress level among older adult. **Conclusion**: The findings obtained in this study analyzed data for Sleep hygiene program and relaxation therapy is an important tool for improving the sleep quality and stress level among elderly people.

Key Words: Sleep hygiene measure, Relaxation therapy, sleep, stress, sleep quality, residents old age.

1. Introduction

Aging is a normal stage of life, which comes to every person. And so considered old age is the end stage of life. Specifically, in our Indian society, old age has always been a concerned due to lack of power of social, economic and professional spheres, and its closeness to death. But with changed family patterns and value system and there is a drastic change in their life style. As population grows older adult becomes more and more pronounced. Now a day the concern for mental health and well-being of older people is also increased. **(MahimaTandon 2017).**

Among Geriatric illnesses, older adult sleep disturbances are accounts for high as 25% to 60%. And half of older individuals report some form of sleep difficulty that may include longer sleep onset times, lower rates of sleep efficiency, more time in bed, more awakenings during the night, earlier wake up times, and more daytime naps. They experience changes in bio rhythm to make them sleep early in the evening and wake up early in the morning **(Kiran Sharma, Swati Srivastava 2018).**

Guided imagery is a form of focused relaxation that can help create harmony between the mind and body. It is a way of focusing your imagination to create calm, peaceful images in your mind, thereby providing a "mental escape." Guided imagery provides a powerful psychological strategy that enhances a person's coping skills greatly. That Imagery involves all the senses, as well as one's whole body and emotions. And it is a way of viewing your ideas, feelings, experiences and interpretations. **(Mawaheb Mahmoud Zaki et al., 2018)**

2. Objective of the study

1. Assess the sleep quality and stress level among residents of an old age home.
2. Evaluate the sleep quality and stress level after sleep hygiene measures and relaxation therapy among residents of an old age home.
3. Associate the selected demographic variables with sleep and stress level among residents of an old age home.

2. Methodology

Research approach

A Pre experimental study was adopted for this investigation. Pre experimental studies involveO_1pre-test assessment on level of sleep and stress among residents of an old age home **X** teaching of sleep hygiene measures and training for relaxation therapyO_2post-test assessment of level of sleep and stress among residents of an old age home.

Sample and Sampling Techniques A purposive sampling technique was used to collect the samples. The samples were selected from the selected old age home Coimbatore. The size of the sample was 60.

TERITARY PREVENTION

Criteria for sample collection
Inclusion Criteria Inclusion Criteria

- Elderly people 65years above on both sexes.
- Elderly people who are willing to participate.
- Elderly people who are suffering stress and varying degree of sleep disturbance
- Elderly people who could able to meet their activities of daily living
- Elderly people who are able to read and understand Tamil

Exclusion Criteria

- Elderly people who are having poor sensory ability to respond
- Elderly people who are very sick.
- Elderly people who are mentally ill.

Development of Tool: Data collection tool refers to instrument, which was constructed to obtain relevant data. An extensive review and study of literature helped in preparing items for tool. The investigator used a Pittsburgh sleep quality analysis scale and perceived stress scale as tool for the study.

Description of Tool
The tool used in the present study consisted of two parts.

Section A: It includes, demographic variables such as age, gender, marital status, educational qualification, any illness conflicts with family members, religious belief, diet pattern, monthly income

Section B: The Pittsburgh sleep quality index(PSQI) is a simple screening tool for assessing the outcome over the preceding months of patient with significant sleep disturbance that need further evaluation. There are 19 items having following seven component scores; subjective sleep efficiency, sleep duration, use of sleeping medication and daytime dysfunction. The sum of these seven component scores yields one global. Apart from first your open questions, the rest were assessed on a 4-point scale. Each component score has a value of'0' (no infinity) to '3' (severe difficulty). The maximum score is 42 and minimum score is 14. That high score indicates higher level of difficulty and low score indicate normal.

Section C
The perceived stress scale was developed to measure the degree to which situations one's life are appraised stressful. It was designed to tap how unpredictable, uncontrollable and

overloaded respondents of direct quarries about current levels of experienced stress. The PSS was designed easy to understand. The questions in the Perceived stress scale (PSS) ask about feelings and thoughts during the last month. First, reverse your scores for questions 4, 5, 7, & 8. On these 4 questions, change the scores like this: 0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0. The minimum score is 0 and maximum score is 40. Higher scores indicating higher perceived stress. Scores ranging from 0-13 would be considered low stress. Scores ranging from 14-26 would be considered moderate stress. Scores ranging from 27-40 would be considered high perceived stress.

Data Collection: Formal permission was obtained from the authorities. The investigator first introduced and explained the need and purpose of study.Investigator to take 15 to 20 minutes for each interview and 10 elderly people per day. Investigator to take 1 week for pre-test method on that time to assess only the sleep quality and stress. And the second week to fifth week (4 Weeks) given the interventions like sleep hygiene measures and relaxation therapy. The sleep hygiene measures given by using pamphlets. While giving this sleep hygiene measures individual selected with calm and quiet environment. The investigator selected three set of group. Each group 20 elderly people were selected. The investigator spent 15-20 minutes for educating the sleep hygiene measures. The relaxation therapy given by selected 20 elderly people with comfort measures each team spent15 to 20 minutes. The investigator to do the interventions for three set of group. Each group the investigator spent 15 minutes for that relaxation therapy. After that 28 days later, the last one week was taken for assessment of posttest to assess the sleep and stress level among residents of an elderly people.

3. Results

There were 60 respondents in the study. Regarding Sex majority of the elderly people 37(62 %) of them were females, 23(38 %) of them were males.

Table 1: Participants Demographic

Demographic variables	(n=60)	
	f	%
1.Age (in years)		
a)65-75	31	52
b)76-85	20	33
c)>85	9	15
2.Gender		
a)Male	23	38
b)Female	37	62

3.Marital status		
a)Married	39	65
b)Unmarried	8	13
c)Widow	9	15
d)Divorced	4	7
4.Educational qualification	19	32
a)Not literate	19	32
b)Primary	15	25
c)Secondary	7	11
d)Graduated		
5.Any Illness		
a)Yes	25	42
b)No	35	58
6.confilict with family members	30	50
a)Yes	30	50
b)No		
7.Religious beliefs		
a)Yes	44	73
b)No	16	27
8.Dietary pattern		
a)Vegetarian	16	26
b)Non vegetarian	4	7
c)Both	40	67
9.Monthly income		
a)Pensioner	11	18
b)Depends on others	49	82

Table 2: Description of pre-test and post-test scores on sleep quality and amongelderly people.

Level of sleep quality Difficulties	Score			
	Pre test		Post test	
	f	%	f	%
Mild	0	0	8	13.3
Moderate	5	8.3	33	55
Severe	55	91.7	19	31.7
Total	60	100	60	100

Figure: 1

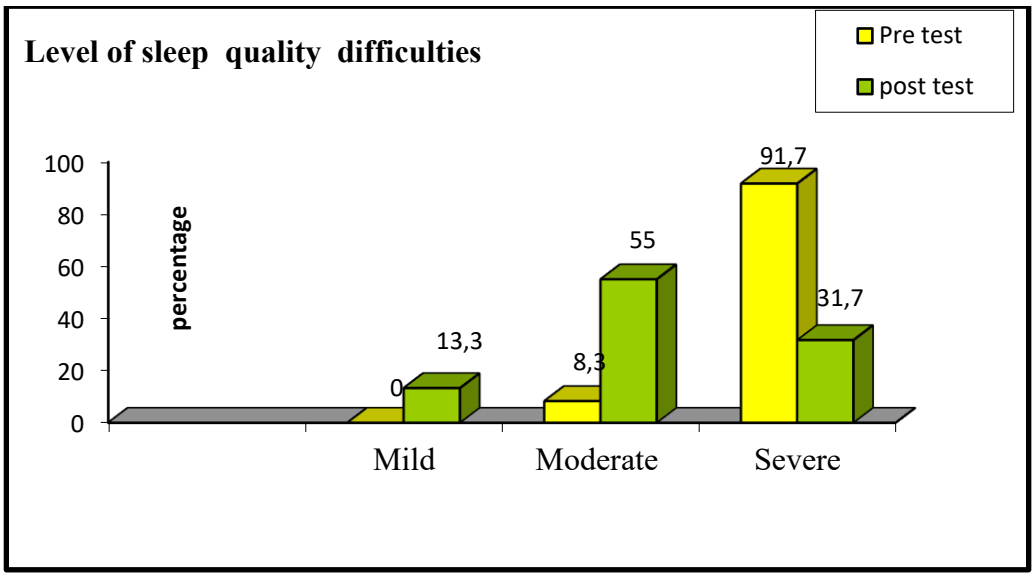

Table 3: Description of pre-test and post-test scores of stress level among elderly people (n = 60)

Level of stress	score			
	Pre test		Post test	
	F	%	f	%
Low	0	0	18	30
Moderate	50	83.3	42	70
High	10	16.7	0	0
Total	60	100	60	100

Figure 2:

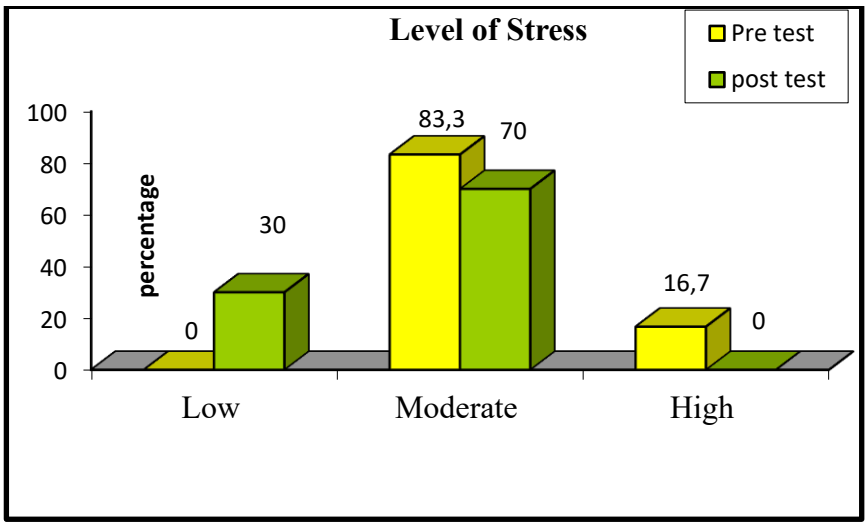

Table 4: Association between Level of Sleep Quality and Stress in Pre Test and Post Test among Selected Demographic variable

Demographic variables	Moderate		Severe		χ^2 (df)	p-value (N/NS)
	F	%	f	%		
1.Age (in years) a)65-75 b)76-85 c)>85	31 1	5 2 2	28 19 8	47 31 13	0.45 (df=2)	0.796 NS
2.Gender a)Male b)Fema	23	35	21 3	35 5	0.0	0.93

le			4	7	0 6 (d f = 1)	6 N S
3.Marital status a)Married b)Unmarried c)Widow d)Divorced	3 1 1 0	5 2 2 0	3 6 7 8 4	6 0 1 2 1 3 7	0 . 6 5 7 (d f = 2)	0. 8 8 3 N S
4.Educational qualification a)Not literate b)Primary c)Secondary d)Graduated	2 1 1 1	3 2 2 2	1 7 1 8 1 4 6	2 8 3 0 2 3 1 0	0 . 7 3 (d f = 3)	0. 8 6 5 N S
5.Any Illness a)Yes b)No	0 5	0 8	2 5 3 0	4 2 5 0	3 . 8 9 (d f	0. 0 4 8* S

					= 1)	
6.conflict with family members a)Yes b)No	14	27	2926	4843	1.96 (df = 3)	0.161 NS
7.Religious beliefs a)Yes b)No	32	53	4114	6823	0.49 (df = 1)	0.481 NS
8.Dietary pattern a)Vegetarian b)Non vegetarian c)Both	203	305	14437	2376 2	0.76 (df = 2)	0.683 NS
9.Monthly income	05	08	114	187	1.2	0.26

a)Pensioner b)Depends on others			4	4	2 (df = 1)	8 NS

Table 5: Association between level of sleep quality in posttest with Selected Demographic variable

Demographic variables	Mild		Moderate		Severe		χ^2 (df)	p-value (N/NS)
	F	%	f	%	F	%		
1.Age (in years) a)65-75 b)76-85 c)>85	620 10 30	10 30	17 11 5	28 18 8	874	13 12 8	3.08 (df = 4)	0.544 NS
2.Gen	4	6	1	2	6	1	0	0

der a) Male b)Female	4	6	320	233	13	022	.843(df=2)	.656NS
3. Marital status a) Married b) Unmarried c) Widow d) Divorced	6101	1020	2164	351073	12151	20282	5.14(df=6)	0.526NS
4.Educational qual	4211	7322	91095	151715	6751	10128	2.94(d	0.816N

fication a) Not literate b)Primary c)Secondary d) Graduated				8			f=6)	S
5.Any Illness a)Yes b) No	35	58	1221	2035	109	1715	1.37(df=2)	0.502 NS
6.confilict with fa	35	58	1815	3025	910	1517	0.825(	0.662 N

mily members a)Yes b) No							df=2)	S
7.Religious beliefs a)Yes b) No	62	103	258	4213	136	2210	0.34(df=2)	0.842NS
8. Dietary pattern a)Vegetarian b) Non vegetarian c)B	314	527	9123	15238	4213	7322	2.45(df=4)	0.652NS

oth								
9. Monthly income a)Pensioner b) Depends on others	17	1.711.6	627	1045	415	6.725	0.276 (df=2)	0.871 NS

comparison between pretest and posttest to assess the effectiveness of sleep hygiene measures on sleep quality among elderly people, pretest mean score was (20.55, SD 4.15), which is 49 % and in posttest mean score was (12.11, SD 2.78), which is 29 %. The Paired "t" test value was 14.84. And the p-value is p<0.001**. This shows that was a highly significant difference between pretest and post test scores of sleep hygiene measures on sleep quality among residents of an old age home. It seems that a Sleep hygiene measure was effective. pretestmean score was (22.8, SD 3.78), which is 57% and in post test mean score was (15.07, SD 2.61), which is 38 %. The Paired "t" test value was 17.99.And the p-value is p<0.001**.This shows that was a highly significant difference between pretest and post test scores of relaxation therapy on stress level among residents of an old home. It seems that relaxation therapy was effective. **Results:** Pretest majority of the older adult 55(91.7) having severe sleep quality, 5(8.3) having moderate level sleep quality, none of them having mild level sleep quality. In posttest majority of the older adult 55(33) having moderate level sleep quality 19(31.7) of them having severe level sleep quality, 8(13.3) of them having mild level sleep quality difficulties. Pretest majority of them 50(83.3) having moderate level of stress, 10(16.7) having high level of stress, none of them having low level of stress. In posttest majority of the older adult 40(70) of them having moderate level

stress, 18(30) of them having low level of stress, none of them having high level of stress. The Paired "t" test value was 14.84 and. the p-value is p<0.001**.This shows that was a highly significant difference between pretest and post test scores of sleep hygiene measures .The Paired "t" test value was 17.99 and. the p-value is p<0.001**.This shows that there was a highly significant difference between pre test and post test scores of relaxation therapy on stress level among older adult..

Table 6: Evaluate the pretest and post test score of stress level among elderly people

Level of stress	Mean	SD	Mean %	Mean difference	't'-Value	P-Value
Pre test	22.8	3.78	57	7.33	17.99	P<0.001***
Post t	15.07	2.61	38			

est						

Table 7: Evaluate the pretest and post test score of sleep level among elderly people

Level of sleep quality	**Mean**	**SD**	**Mean %**	**Mean difference**	**'t'-Value**	**P-Value**
Pre test	20.55	4.15	49	8.43	14.84	P<0.001***
Po	12	2.	29			

s t t e s t	. 1 1	7 8				

Conclusion

The following conclusions are drawn from the findings of the study. The Majority of elderly people is having moderate and severe level sleep quality and stress problem. After the sleep hygiene measures and relaxation therapy, severe level of sleep quality and stress were moved to moderate and low level. It seems sleep hygiene measures and relaxation therapy was effective to implement elderly people.

Implications for Nursing

The findings of the study are implications in nursing service, nursing administration, nursing education, and nursing research.

Nursing Practice

The review literature related to older adult shows most of them having sleep and stress difficulties. Individual will be benefited while using of this sleep hygiene measures and relaxation therapy. That helps to regulate their physical health and also mental health.

Nurses play a major role in promoting well being in older adults. And to promote a balanced, active and social life style through effective adjustment to life's physical, social, emotional, and spiritual challenges are the primary role of nurses.

Nursing Education

Now a day's life expectancy has increased as a result of many health programmes, high technology care, insurance program, and public participation in health care.

The student must be prepared to face challenges of the near feature. This can be developed only when the students understand gerontological nursing. In the psychiatric nursing curriculum to enable the nursing student to equip with skills that have become need necessary.

Nursing Service

Sleep hygiene measures and relaxation therapy can be used by the nursing professionals who are working in psychiatric ward, half way home, old age home, counseling centre, and de-addiction center.

Majority of older adults commonly affected with sleep and stress. Nurses need to play major role to recover from this problem.

Recommendations

On the basis of present study, following recommendations were made.

- Similar kind of study can be conducted for a larger number of samples using random sampling technique.
- It would be better to have longitudinal studies spread over a few years to observe the effectiveness of sleep hygiene measures and relaxation therapy.
- Experimental study could be conducted with sleep hygiene measures and relaxation therapy.

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