"A Study To Assess The Effectiveness of Music Therapy on Sleeping Pattern Among Geriatric Age Group of Selected old Age Home In Shirdi."

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Abstract:

Background of the study: Music therapy is a powerful, evidence-based approach to improving the well-being of older adults. It can improve cognitive function, reduce anxiety and depression, and enhance social relationships. Cognitive Enhancement: Music can stimulate brain areas involved in memory and learning, aiding in the retention of information. Mind Emotional Well-being: Engaging with music can reduce symptoms of depression and anxiety, promoting a positive mood. Time Social Connection: Group music activities foster a sense of community and reduce feelings of isolation. Physical Health: Rhythmic activities can improve motor skills and coordination. **Objectives** 1.To assess the level of sleeping pattern before and after music therapy among geriatric age group. 2. To evaluate the effectiveness of music therapy on sleeping pattern among geriatric age group. 3) To find out the association between the post-test level of sleeping pattern among geriatric age group with their selected demographic variables. **Material and methods**: Non-probability convenience sampling technique was used, Sample size was 100 geriatric age group residing in old age home Shirdi, variables was Independent variable: Music therapy, Dependent variable: sleeping pattern. Sampling techniques used for the present study was non-probability purposive sampling technique. A Performa was prepared to collect the data. Descriptive and inferential statistics were used to analyze the data according to objectives. **Results:** In the current study majority of the geriatric people 36(36%) were of 61-65 years of age, 36(36%) were of 66-70 years of age. Majority 51(51%) samples were female and 49(49%) were male, Majority 42(42%) were belonging to Hindu religions, Majority 28(28%) were done with secondary education, Majority 35(35%) were private employees, Majority 52(52%) were more then 10001, Majority 64(64%) were married, 34(34%) were divorced, and no one was unmarried, Majority 38(38%) were pension, Majority 58(58%) were vegetarian, Majority of 68(68%) were not taking the antipsychotic medication, Majority of the geriatrics 68(68%) were having poor sleeping pattern, 32(32%) were having satisfactory sleeping pattern and no one was having good sleeping pattern. The mean pretest score was 43.9± 6.07. Whereas in the post-test majority of the

geriatrics55 (55%) were having goods sleeping pattern, the mean difference was found out to be 33.54withthestandarddeviationofmeandifferencewasfoundouttobe±13.84.The calculated t'value was found to be 15.95 with p'value 0.0001, the association of post-test level of sleeping pattern among geriatric persons with their selected demographic variables. Chi square analysis was used to find out the association. Conclusion: Music interventions range from passive music listening and multi-component music approaches. We recommend future studies to provide a detailed description of music interventions and tailor music selections to older adults 'preferences. In addition, future studies should incorporate both subjective and objective measures of sleep outcomes to account that certain music interventions may have a larger effect on the type of sleep measurement.

Keywords: Sleeping problem, Old age home.

CHAPTER-I

INTRODUCTION

—Sleepisanormalbodyprocessthatallowsyourbodyandbraintorest.Atfirstglance, sleep is deceptively simple. For most people, it's just a matter of getting comfortable, closing yours eyes and drifting into slumber. But despite how simple it seems, sleep is one of the most complex and mysterious body processes known to sciences. [1]

Sleep is a natural, recurring state of rest for the body and mind, during which: Consciousness is reduced, Sensory activity is decreased, Muscle activity is relaxed, the brain engages in specific patterns of activity. It's essential for both physical and mental health.[2]

Sleep plays a vital role in good health and well-being throughout your life. The way you feel while you are awake depends in part on what happens while you are sleeping. During sleep, your body is working to support healthy brain function and maintain your physical health.

In children and teens, sleep also helps support growth and development. Getting inadequate sleep over time can raise your risk for chronic (long-term) health problems. It can also affect how well you think, react, work, learn, and get along with others. Learn how sleep affects your heart and circulatory system, Metabolism, respiratory system, and immune system and how much sleep is enough.[3]

Infants require the most sleep, with are commended12–16hoursaday(including naps), and adult sever age 18 need seven or more hours a day. While a common misconception is that older adult require less sleep, the National Institute on Aging says that older adults still need seven to nine hours of sleep each night. unfortunately, 32.8 percent of adults report less sleep has is recommended, with 32.2 percent of adult females reporting inadequate sleep compared to 33.4 percent of males. Studies have also shown that women reported sleeping more than men. However, the differences found were typically less than 30 minutes. Overtime, poor sleep c an reduce lifespan by 4.7 years for women and 2.4 years for men. Sleeping position vary from person to person, and many people move around throughout the night. Preferences include back (supine), stomach (prone),side sleep in goon the left, and side sleeping on the right. A minter sting study was publishing 2022 examining the effects of position on sleep quality. Researcher sad is covered that subjects who preferred to sleep on their right side (15percent reported the highest quality sleep, followed by left-side sleepers (31 percent), and then back sleepers(54%).But sleep positionishig hly subjective and more research is needed to support this finding.[4]

The amount of sleep recommended for different age groups varies. Generally, new- bornsneed14-17 hours, infants 12-15 hours, toddlers 11-14 hours, pre-schoolers10-13hours, school-agedchildren9-11hours,teenagers8-10hours,andadults7ormorehoursper night. Older adults may need 7-8 hours of sleep.[5]

Sleephasreceivedincreasingattentionwithinthecontextofgeriatricresearchbasedon a growing body of evidence that links poor sleep with many adverse health outcomes, especiallydeclineincognition,inolderadults.Alongwithmanyotherphysiologicalalterations in normal aging, sleep patterns change with aging, independent of many factors including medical co morbidity and medications. Total sleep time, sleep efficiency, and deep sleep (slow wave sleep) decrease with aging; and number of nocturnal awakenings and time spent awake during the night increase with aging. These age-related changes in sleep are associated not only with changes in the circadian and homeostatic processes, but also with some normal physiological and psychosocial changes in aging. This article describes age-related changes in sleep, circadian rhythms, and sleep-related hormones. We will focus on changes associated with normal aging gather than changes that accompany common pathological processes in older adults, which are discussed in detail in other chapters.[6]

Ageing is an irreversible process; ―Old age is an incurable disease‖. There are 81 million senior citizens in INDIA. 10 lakhs in Mumbai, 90% of senior citizen are from unorganized sector with no social security, 40% below poverty line, 75% rural areas, 73% illiterate. Sleep disturbance in senior citizen is a widely under recognized and under treated medical illness. The risk of insomnia in the elderly increases with other illnesses and when ability to function becomes limited. Survey has estimated that more than 50% of community living people age 60 or older experience sleep disturbance. Sleep disorder can result in tiredness, depression, greater anxiety, irritability, pain sensitivity, muscle tremors and lack of day time alertness.[7]

Sleep is a physiological process essential to life. Its quality is strongly related to psychological and physical health and other measures of well-being. Sleep deprivation and symptoms related to sleep disorder shave not only been ignore debut also in adequately understood. Almost one-third of adult‘s report difficulty in sleep. The pattern of sleep and wakefulness in different subjects is known to vary with their age, the demands of their occupation, their physiological and psychosocial characteristics, psychiatric illness, and some types of physical illness. In the last few years, there has been a growing attention to sleep and sleeplessness-related problems. This interest is mainly due to the recognition that sleepiness and fatigue are becoming endemic in the population. Sleep itself is in short supply for young physicians in their formative years because they stay up late to cram for examinations in medical college followed by prolonged stints at the hospital. The escalating level of stress on students, as well as the hectic schedule of interns and residents working at the hospital is affecting their health and life style. Numerous studies conducted within the past decade have analyzed the deleterious effects of sleep deprivation on medical house staff in various medical as well as surgical specialties.[8]

Sleep plays an essential role in our health; boost in the immune system, decree sing the caloric intake and improving cognition. Sleep undergoes significant changes during adolescence because of both physiological and environmental factors. Physiologic factors include adolescents requiring shorter periods of sleep, increased tolerance towards sleep deprivation and adolescents having a delayed sleep and waking times due to abnormal delayed circadian rhythm. This occurs as are sultofalater release of melatonin hormone released by the body in

the evening to prepare for sleep. Duration and quality of sleep are fundamental factors for the growth and development of adolescents. Carskadon et al. studied the sleep patterns and their effect on the physiologic development of 458 adolescents.Thestudyshowed late bedtime associated with higher pubertal development (p < 0.02). Environmental factors affecting sleep include increased work load, emotional turmoil, extracurricular activities, and decreased influence of parents on bedtimes and lifestyle habits. In a review of 67 studies, Lauren Heeltap. Found that use of electronic devices before sleep especially causes an alerting effect leading to sleep disturbances among humans. Brett A Dolezal and his colleague use studied 34 researches and found in 29 of them, that physical activity improve both sleep quality and quantity and can be used as an effective intervention for those having sleep problems. Other lifestyle habits affecting sleep is cigarette smoking. It leads to sleep problems like having difficulty in falling asleep and maintaining asleep.9

Statement of The Problem

"A study to assess the effectiveness of music therapy on sleeping pattern among geriatric age group of selected old age home in Shirdi."

Objectives

1. Toassessthelevelofsleepingpatternbeforeandaftermusictherapyamonggeriatric age Group.

2. To evaluate the effectiveness of music therapy on sleeping pattern among geriatric age group.

3. To find out the association between the post-test level of sleeping pattern among geriatric age group with their selected demographic variables.

Hypothesis

H1: There will be a significant difference between the pattern of sleep among elderly people.

H2: There will be significant association between post-test score of patterns of sleep of elderly people and selected demographic variables

CHAPTER -III
METHODOLOGY

Research Approach: Quantitative evaluative approach is used in this study.

Research Design: Pre-experimental design with one group pre-test and post-test was use.

Variables: Independent variable: Music therapy, Dependent variable: Sleeping pattern

Setting of the study:

The present study was conducted in at selected old age home Shirdi .Population

Geriatric people residing in old age home shirdi.

Sample: Sample was geriatric age group who the inclusion criteria.

Sampling Technique: Non-probability convenience sampling technique was used to select the Sample.

Sample Size: Sample size was 100 geriatric age group residing in old age home Shirdi.

Inclusion criteria:

1) Geriatric in the age group of 61 year and above.

2) Geriatric who are willing to participate in this study

3) Geriatric who can speak and understand Marathi.

Exclusion criteria:

1) Geriatric age group with sensory deficit. Instruments intended to be used- A Modified Pittsburgh sleep quality index (MPAQI) was used to assess the sleep quality.

RESEARCH TOOLS

Section A: Demographic variables of geriatric age group

Section B: Modified Pittsburgh sleep quality index

TOOLS AND TECHNIQUES

Section A: Socio demographic variables: age, gender, religion, education, previous occupation, marital status, monthly income, source of income, food habits

Section B: Sleep Pattern Scale:-Modified Pittsburgh sleep quality index.
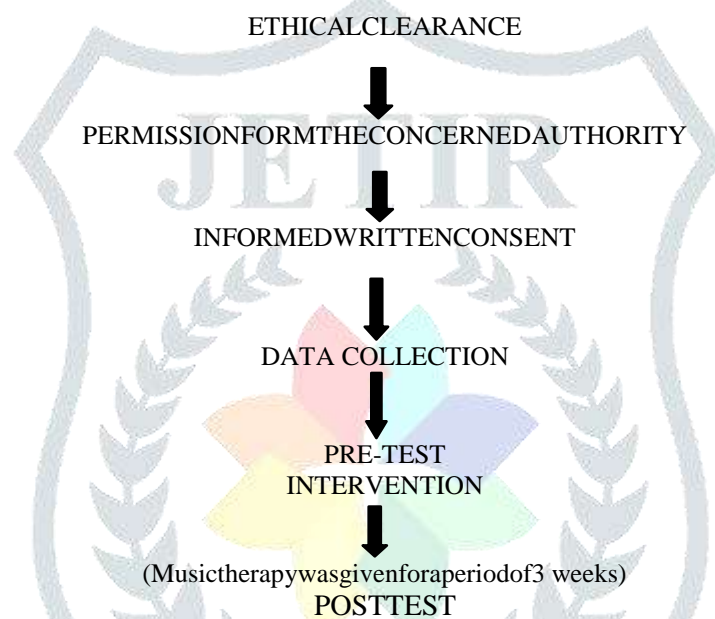
DATA COLLECTION PROCEDURE:

ETHICALCLEARANCE

⬇

PERMISSIONFORMTHECONCERNEDAUTHORITY

⬇

INFORMEDWRITTENCONSENT

⬇

DATA COLLECTION

⬇

PRE-TEST
INTERVENTION

⬇

(Musictherapywasgivenforaperiodof3 weeks)
POSTTEST

Fig. Data collection procedure:

TABLEN 01: SHEDULE ON MUSIC THERAPY (INTERVENTION)

Tract number	Time/ duration	Name of the raga	Effect of raga
Track-1	11.51 min	Sahana	Defusing mental tension, mood elevator provides a pleasing effect on the nerves.
Track-2	11.48 min	Bhagyashree	Sleep deprivation provides relaxation and model evation
Track-3	10.47 min	Sarangara	Physical and emotional tension relief provide sleep slumber.
Track-4	11.34 min	Neelambari	Gentle and soothing to the central nervous system, helps to initiate and maintain a deep sleep and relaxation.

CHAPTER IV

DATA ANALYSISAND INTERPRETATION

Section I: Distribution of socio-demographic variables of geriatric persons

Table No III: Frequency and percentage wise distribution of socio-demographic characteristics

N=100

SR.NO	variables		frequency	percentage
1	Age	61-65	36	36%
		66-70	36	36%
		71-75	26	26%
		76 Nd Above	2	2%
2	Gender	Male	51	51%
		Female	49	49%
3	Religion	Hindu	42	42%
		Muslim	15	15%
		Christian	17	17%
		Other	26	26%
4	Education	Illiterate	24	24%
		Primary	28	28%
		Secondary	13	13%
		Graduate and Above	18	18%
5	Previous Occupation	Unemployed	0	0%
		Private	35	35%
		Government	32	32%
		Self	31	31%
6	Monthly Income	Less5000	21	21%
		Between 5001-10000	27	27%
		More10001	52	52%
7	Marital Status	Married	64	64%
		Unmarried	0	0%
		Widowed	0	0%
		Divorced	34	34%
8	Source of Income	Home	38	38%
		Pension	32	32%
		Other	13	13%
9	Food Habits	Veg	58	58%
		Non-Veg	39	39%
		Mixed	3	3%
10	Any Antipsychotic Medication	No	68	68%
		Yes	32	32%
		If Any	0	0%

Section II: Pre-test level and post-test level of sleeping pattern among geriatric persons.

Table No IV: Frequency and percentage wise distribution of per-test level and post-test level of sleeping pattern among geriatric persons   N=100

S.N	Level of sleeping pattern	Pre-test				Post test			
		Frequency	%	Mean	SD	Frequency	%	Mean	SD
1	Poor	68	68			16	16		
2	Satisfactory	32	32			29	29		
3	Good	00	0	43.9	±6.07	55	55	23.19	±11.47

The above table no II shows the pre-test and post-test level of sleeping pattern among geriatric persons which concludes that in the pre-test majority of the geriatrics 68(68%) were having poor sleeping pattern, 32(32%)

were having satisfactory sleeping pattern and no one was having good sleeping pattern. The mean pre-test score was 43.9± 6.07. Whereas in the post- test majority of the geriatrics 55(55%) were having good sleeping pattern, 29(29%) were having satisfactory sleeping pattern and 16(16%) was having poor sleeping pattern, the mean post-test score was found out to be 23.19±11.47.

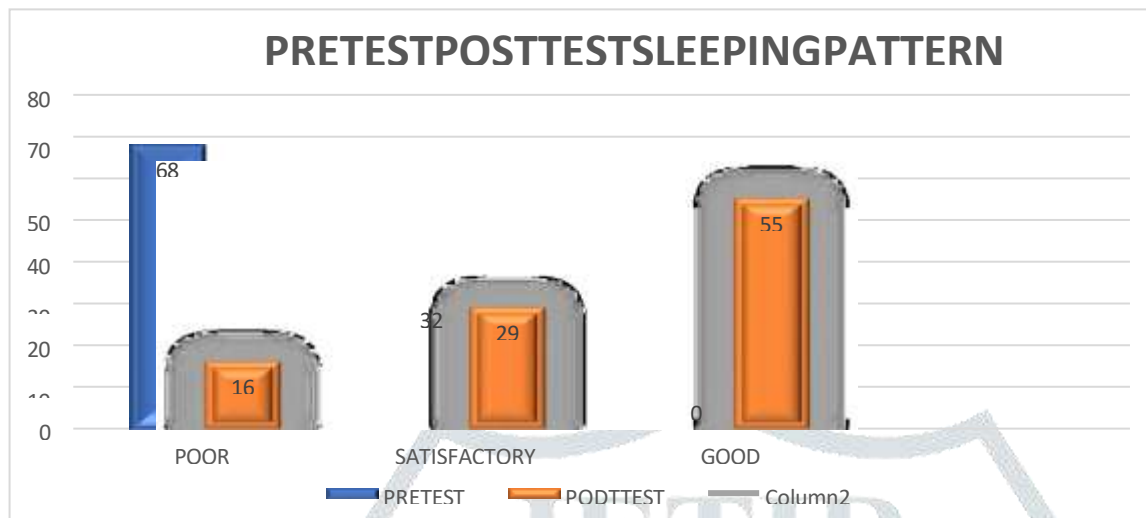Figure No 14 : Bar diagram showing percentage wise distribution of pre-test level and post-test level of sleeping pattern among geriatric persons

Section III: Effectiveness of music therapy on level of sleeping pattern among geriatric persons.

Table No V: Effectiveness of music therapy on level of sleeping pattern among geriatric persons. N=100

	Mean	S.D.	Mean difference	SD(Mean difference)	t" test value	P value
Pre-test	43.9	±6.07	33.54	±13.84	15.95	0.0001*
Post-test	23.19	±11.47				

(*P<0.05, significant and**P<0.01&***and P<0.001, highly significant)

The above table no IV shows the effectiveness of music therapy on level of sleeping pattern among geriatric persons where the mean pre-test score was 43.9± 6.07 whereas the mean post test score was 23.19±11.47.

The mean difference was found out to be 33.54 with the standard deviation of mean differencewasfoundouttobe±13.84.Thecalculated_t'valuewasfoundtobe15.95with_p' value 0.0001* which is significant concluding that the music therapy elf- was found to be effective in improving level of sleeping pattern among geriatrics in selected old age home.
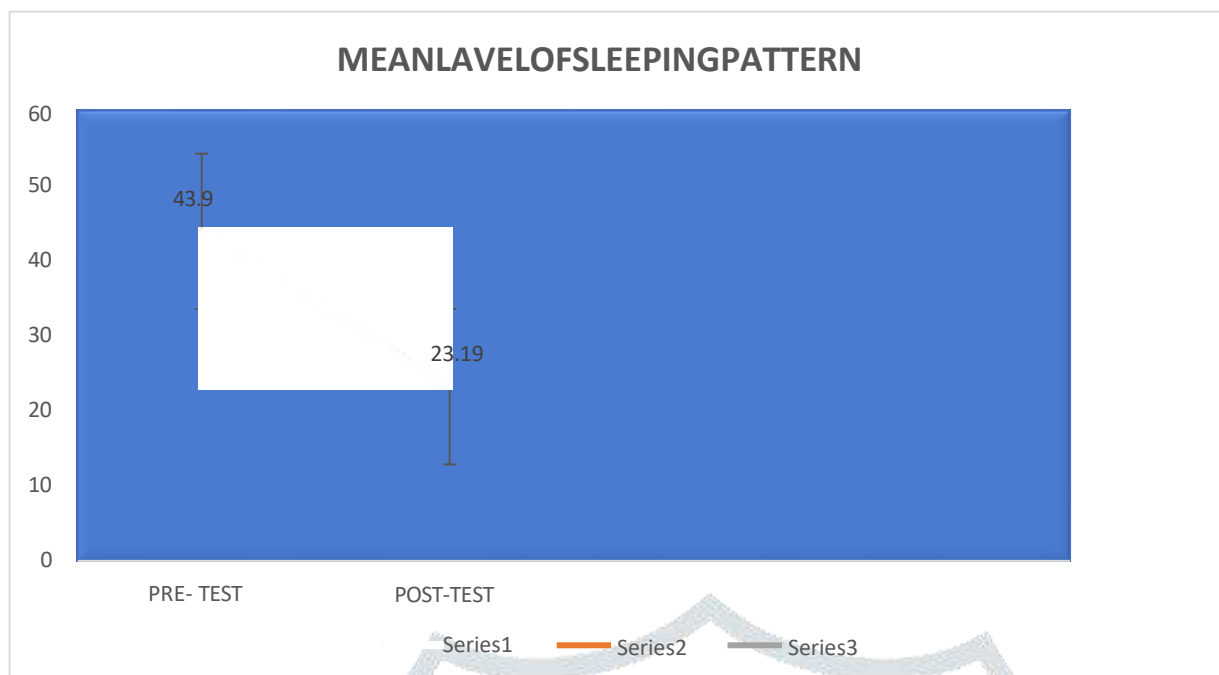
Figure No15: Bar diagram showing mean level of sleeping pattern among geriatric persons.

Section IV: Association between the post-test level of level of sleeping pattern among geriatric persons with their selected demographic variables.

Table No VI: Association between the post-test level of level of sleeping patternamonggeriatricpersonswiththeirselecteddemographicvariables.

N=100

Sr. No	Demographic Variables		Poor	Satisfactory	Good	Chi square value	df	P value	inference
1	Age	61-65	5	12	19	4.36	6	0.62	Non- significant
		66-70	4	13	19				
		71-75	4	4	17				
		76 Nd Above	2	1	1				
2	Gender	Male	9	12	30	1.52	4	0.46	Non-significant
		Female	7	17	25				
3	Religion	Hindu	4	13	25	2.51	6	0.86	Non- significant
		Muslim	3	4	8				
		Christian	3	5	8				
		Other	5	7	14				
4	Education	Illiterate	4	4	20	5.08	6	0.53	Non- significant
		Primary	5	12	16				
		Secondary	3	6	8				
		Graduate& Above	4	7	11				
	Previous	Unemployed	0	0	0				Non- significant
		Private	5	10	19				

5	Occupation	Government	6	5	21	5.33	6	0.25	
		Self	5	14	15				
6		Less5000	5	6	10	2.43	4	0.63	
	Monthly Income	Between5001-10000	4	10	13				Non- significant
		More10001	7	13	32				
7	Marital Status	Married	12	16	36	1.87	6	0.39	Non- significant
		Unmarried	0	0	0				
		Widowed	0	0	0				
		Divorced	4	13	19				
8	Source of Income	Home	4	11	27	3.56	4	0.46	Non- significant
		Pension	8	13	21				
		Other	4	5	7				
9	Food Habits	Veg	7	13	36	4.83	4	0.30	Non- significant
		Non-Veg	8	15	18				
		Mixed	1	1	1				
10	Any Antipsychotic Medication	No	9	14	45	11.26	4	0.004	significant
		Yes	7	15	10				
		If Any	0	0	0				

The above table no V predicts outcomes of association of post-test level of sleeping pattern among geriatric persons with their selected demographic variables. Chi square analysis was used to find out the association. The results conclude that there was no any significant association of post-test sleeping pattern among geriatric persons with selected demographic variables.

CHAPTER-V
Discussion

It was to conduct an experimental study to assess the effectiveness of music therapy on sleepingamonggeriatricagegroupofselectedoldagehomeinShirdi.InAhmednagardistrict. Data for the socio – demographic variables were collected by structured interview questionnaires, modified Pittsburgh sleep quality index as a tool. The total study sample size was100 descriptive and inferential statistics (frequency, percentage, mean, standard deviation, t paired test and chi square test) was used to analyzed the data.

Conclusion

In this systematic review we found that music interventions demonstrated mixed efficacyinimprovingsleepamongolderadults.Musicinterventionsrangefrompassivemusic listening and multi-component music approaches. We recommend future studies to provide a detailed description of music interventions and tailor music selections to older adults' preferences. In addition, future studies should incorporate both subjective and objective measuresofsleepoutcomestoaccountthatcertainmusicinterventionsmayhavealargereffect on the type of sleep measurement.

REFFRANCES

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