A Comparison among Pittsburgh Insomnia Rating Scale after Normal Training and before Competition of Female Basketball Players

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Abstract

The aim of this study was Pittsburgh Insomnia Rating Scale Among Female Basket Ball Players (A Comparative Study). The objectives of the present study were (1) To determine insomnia rating scale after normal training (not very high intensity or volume) of female basketball players age ranged from 17 to 23 years for duration of an interval of one week. (2) To determine the effect on insomnia rating scale just before the competition of female basketball players age ranged from 17 to 23 years. (3) To compare between after normal training (not very high intensity or volume) and before the competition of female basketball players of age ranged from 17 to 23 years. The study was delimited to 15 female basketball players age ranged from 17 to 23 years. Insomnia Rating Scale was studied using Pittsburgh Insomnia Rating Scale. The dietary intake, life style and some unavoidable factors of female basketball players are considered as the limitations. PIRS were administered after normal training, just before the competition and to compare between after normal training and just before the competition of female basketball players age ranged from 17 years to 23 years. Conclusion of the study was There are significant difference in all the four variables of PIRS namely distress score, sleep parameter, quality of life after and total score found to be significantly difference between insomnia rating scale of after normal training and before competition of females players of basket ball at 0.05 level of significance.

INTRODUCTION

Sleep is one of nature's greatest invention and blessings of life. It is a periodic rest of the body which is absolutely essential for its efficient functioning. It has been called "most cheering restorative of tired bodies". Sleep is the indispensable condition to the recuperation of energy. We go to bad fatigue and get up refreshed. Sleep repairs the wear and tear of the body and mind incurred during waking hours. Nothing is so restorative to the nerves as sound and uninterrupted sleep. Sleep is thus a vital element in a total way of life. It is a basic need in man's mental as well as physical life. During sleep most of the functions of the body are carried on at the lowest level possible in health. Heat production is from 10% to 15 % below the basal level. The mechanisms regulating the body temperature are less sensitive then in the waking state and are depressed by 0.5 to 1.0 degree F. The rate of heart is reducing by 10 to 30 beats per minute and a decline in blood pressure of about 20 mm/ hg occurs in quite restful sleep. The urine volume is considerably reduced but its concentration in solids is increase. The tone of all the skeletal muscle is lessened. The eyes are usually rolled upward and the pupils constricted. Loss of sleep exerts seriously detrimental effects upon the nervous system. Long period of wakefulness may cause profound psychological changes such as loss of memory, irritability, hallucination and even schezothrenic manifestations (Carskadon,2010).

Insomnia or Sleeplessness

Insomnia or Sleeplessness has assumed alarming proportions in present time. This is evident from the wide range of medication for this condition described by physicians and sold by

chemist. Insomnia deprives a person of mental rest and thereby interferes with his activities in the daytime. It constitutes severe health hazard when it become a habit.

Sleep is a periodic state of rest for the body which is absolutely essential for its efficient functioning. Sleep gives relief from tension, give rest to the brain and body and person wakes up in the morning fresh and relaxed after sleep. The amount of sleep, however, varies within very wide limits from individual to individual. Normally, seven to eight hours sleep every night is adequate for most people some, however, do well with four to five hours because their sleep is deeper and more refreshing.

Pittsburgh Insomnia Rating Scale

PIRS is a widely used instrument for assessment and research practice. Designed to rate the severity of insomnia. Subjects score the items that have three broad sections. First, the subjective distress score had 46 items, second subjective sleep parameters had 10 items and third is the quality of life had 9 items then forth is the grand total of all the score i.e. total score. The items have to be scored according to the last week sleep experience and related variables PIRS have been mentioned as Section A of the scale have a 10 centimeter to mark the quality of sleep in the past last week. This answer is not used for the scoring. Section B has 46 questions which have to be answered on the likert scale from 0 to 3 (0 means not at all bothered, 1 means slightly bothered, 2 means moderately bothered, 3 severely bothered). Sum of the scores of 46 items is the grand score of the distress score. Section C has 10 questions which have to be answered on the likert scale 0 to 3 with variable answers depending on the question. Sum of the scores of 10 items is the grand score termed as sleep parameters score. Section D has 9 questions which have to be answered on the likert scale from 0 to 3 (0 is excellent, 1 is good, 2 is fair, 3 is poor). Addition of all the answers gives the final score is Quality of life score. Section E is comments which the patient gives but it is not added in the scoring. Final score is the grand total of all the three scores. Minimum score is 0 (good) and maximum is 195 (bad) (www.ncbi.nlm.nih.gov › NCBI › Literature › PubMed Central (PMC)

Objectives of the Study
- To determine insomnia rating scale after normal training (not very high intensity or volume) of female basketball players age ranged from 17 to 23 years for duration of an interval of one week.
- To determine the effect on insomnia rating scale just before the competition of female basketball player's age ranged from 17 to 23 years.
- To compare between after normal training (not very high intensity or volume) and before the competition of female basketball players age ranged from 17 to 23 years.

Delimitations of the Study
- The study was delimited to 15 females basketball player's age ranged from 17 to 23 years. Insomnia Rating Scale was studied using Pittsburgh Insomnia Rating Scale.

Limitations of the Study
- The dietary intake, life style and some unavoidable factors of female's basketball players are considered as the limitations.

Hypotheses of the Study
- It was hypothesized that there will be negative effect on insomnia rating scale just before the competition of female basketball players age ranged from 17 to 23 years.
- It was hypothesized that there will be significant difference between after normal training (not very high intensity or volume) and before the competition of female basketball players age ranged from 17 to 23 years.

Selection of Subjects

Keeping in view the purpose of the study, a large number of female basketball players were randomly selected. Total 15 females were selected the age of the subjects were ranged from 17 to 23 years.

Selection of Variables

The PIRS include following variables:

    a) Distress Score
    b) Sleep Parameter
    c) Quality of Life
    d) Global Score

Administration of the Test

- PIRS were administered to determine the insomnia rating scale after normal training of female basketball players age ranged from 17 years to 23 years.
- The PIRS were administered to determine the insomnia rating scale just before the competition of female basketball players age ranged from 17 years to 23 years
- PIRS were administered to compare between insomnia rating scale of after normal training of female basketball players and just before the competition of female basketball players age ranged from 17 years to 23 years

Findings of the Study

Table 1: Descriptive Statistics of PIRS of Female Basketball Players

Variables		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
DS	1	15	7.4667	1.45733	.37628	6.6596	8.2737	5.00	10.00
	2	15	45.5333	12.96075	3.34645	38.3559	52.7108	30.00	72.00
	Total	30	26.5000	21.37474	3.90247	18.5185	34.4815	5.00	72.00
SP	1	15	2.0000	.65465	.16903	1.6375	2.3625	1.00	3.00
	2	15	9.3333	.72375	.18687	8.9325	9.7341	8.00	10.00
	Total	30	5.6667	3.79049	.69205	4.2513	7.0821	1.00	10.00
QL	1	15	.4667	.51640	.13333	.1807	.7526	.00	1.00
	2	15	8.6667	1.04654	.27021	8.0871	9.2462	6.00	10.00
	Total	30	4.5667	4.24819	.77561	2.9804	6.1530	.00	10.00
TOTS	1	15	9.9333	1.57963	.40786	9.0586	10.8081	7.00	13.00
	2	15	63.5333	12.82780	3.31212	56.4295	70.6371	48.00	91.00
	Total	30	36.7333	28.69931	5.23975	26.0168	47.4498	7.00	91.00

Note: 1=After normal training

    2= before Competition

    Total= 1 (After normal training) +2 (before Competition)

The analysis in table 1 documented the descriptive statistics of PIRS. The Group wise Mean + SD of variable distress score after normal training of females, distress score before competition of were 7.4667 ± 1.45733 and 45.5333 ± 12.96075 respectively.

The group wise Mean $\pm$ SD of variable Sleep Parameter after normal training of female, Sleep Parameter after normal training of females, Sleep Parameter before competition of females

Sleep Parameter before competition of were 2.0000 $\pm$ 0.65465 and 9.3333 $\pm$ .72375, respectively.

The group wise Mean $\pm$ SD of variable quality of life after normal training of females, and quality of life before competition of were .4667 $\pm$ .51640 and 8.6667 $\pm$ 1.04654 respectively.
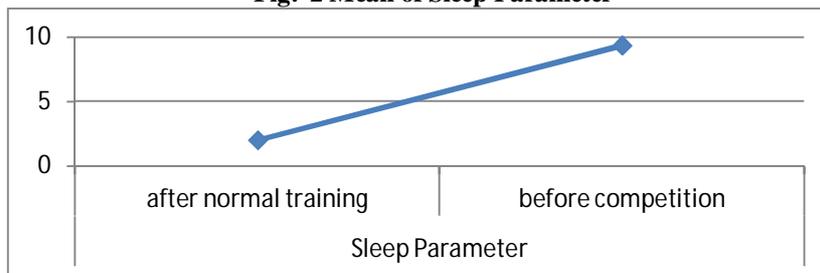
The group wise Mean $\pm$ SD of variable total score after normal training of females, and total score before competition of were 9.9333 $\pm$ 1.57963 and 63.5333 $\pm$ 12.82780 respectively.

The descriptive statistics of PIRS have been graphically illustrated in Fig.1 to 8

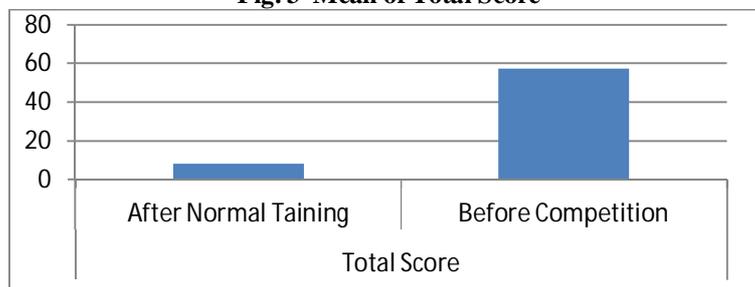**Fig.1 Mean of Distress Score**

Fig. 2 Mean of Sleep Parameter

Fig. 3 Mean of Quality of Life

Fig. 3 Mean of Total Score

Table 2:Analysis of Variance of PIRS

Variables		Sum of Squares	df	Mean Square	F	Sig.
Distress Score	Between Groups	10868.033	1	10868.033	127.780	.000
	Within Groups	2381.467	28	85.052		
	Total	13249.500	29			
Sleep Parameter	Between Groups	403.333	1	403.333	847.000	.000
	Within Groups	13.333	28	.476		
	Total	416.667	29			
Quality of Life	Between Groups	504.300	1	504.300	740.580	.000
	Within Groups	19.067	28	.681		
	Total	523.367	29			
Total Score	Between Groups	21547.200	1	21547.200	257.977	.000
	Within Groups	2338.667	28	83.524		
	Total	23885.867	29			

Note: N=15

The analysis of data in table 2 demonstrated all four variables of PIRS namely distress score, sleep parameter, quality of life after and total score were found to be significantly different between insomnia rating scale of after normal training and before competition of females players of basket ball.

Conclusion

There are significant difference in all the four variables of PIRS namely distress score, sleep parameter, quality of life after and total score were found to be significantly difference between insomnia rating scale of after normal training and before competition of females players of basket ball at 0.05 level of significance.

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