ABSTRACT

Title of the study

A study to assess the effectiveness of sleep hygiene practices on quality of sleep, psoriasis severity and activities of daily living among patients with psoriasis at selected hospitals, Chennai.

Purpose

To improve the sleep quality and full daytime alertness among patients with psoriasis.

Objectives

The objectives of the study were to,

1. evaluate the effectiveness of sleep hygiene practices on quality of sleep among patients with psoriasis.

2. determine the effectiveness of sleep hygiene practices on psoriasis severity among patients with psoriasis.

3. assess the effectiveness of sleep hygiene practices on activities of daily living among patients with psoriasis.

4. correlate the quality of sleep, psoriasis severity and activities of daily living.

5. associate the selected background variables with quality of sleep, psoriasis severity and activities of daily living.
To answer the research questions the hypotheses formulated were as follows:

1. There will be a significant difference in the sleep quality among patients who practice the sleep hygiene practices than those who do not.

2. There will be a significant difference in psoriasis severity among patients who practice the sleep hygiene practices than those who do not.

3. There will be a significant difference in activities of daily living among patients who practice sleep hygiene practices than those who do not.

Related literature were reviewed and Weidenbach’s prescriptive nursing practice model was used for designing the conceptual framework.

Methodology

The research design adopted for this study was randomized controlled trial with the components of manipulation, randomization and control. The sample size was 400, with 200 in each group selected through purposive sampling technique. Settings were Sri Ramachandra Hospital, Chennai. The instruments had 5 parts: Part I - Background and Clinical Variables, Part II-Pittsburgh Sleep Quality Index (PSQI), Part III - Simplified Psoriasis Index (SPASI) and Part IV-Katz and Lawton’s ADL scale and Part V-Sleep diary. Data were collected from both groups for pretest on the first visit to Dermatology OPD the posttests were done on the 30th day, 120th day and the
180\textsuperscript{th} day. The intervention was Sleep hygiene practices - a small structured teaching and a demonstration of sleep position and relaxation technique, issue of a pamphlet which gives the same information provided by teaching to a small group of 4 patients given on the day of first visit to the study group. A sleep diary was issued to both groups and both groups were instructed to log their wakeup time, sleep time daytime activities etc. Reinforcement was given on the second visit and motivation was given on the third visit to the study group, but for the control group the same intervention was given on the 180\textsuperscript{th} day after the posttest-III.

**Findings of the study**

**Comparison**

Among the psoriasis vulgaris patients during the pretest 190(95.5\%) had poor sleep quality, 9(4.5\%) patients had mild sleep quality. During the posttest \textbf{I} (90.5\%) patients had poor sleep quality, (9.5\%) patients had mils sleep quality. During the posttest \textbf{II} (31\%) had poor sleep quality (58\%) patients had mild sleep quality (11\%) patients had moderate sleep quality. In the posttest \textbf{III} 8(4\%) patients had poor sleep quality, 78 (39\%) patients had mild sleep quality, (78(51.5\%) patients had moderate sleep quality and 10(5\%) patients had good sleep quality. Where as in the control group (96.5\%) patients had poor sleep quality, and (3.5\%) patients had mild sleep quality during the pretest. The sleep quality remained same in the posttest \textbf{I}, \textbf{II} but in the posttest \textbf{III} (94.5\%) patients had poor sleep quality and (5.5\%) patients had mild sleep quality.
On comparing the psoriasis severity in study group all 199 (100%) patients had moderate severity, the severity remained same in the posttest I, in the posttest II (95.5%) patients had moderate severity (0.5%) patients had mild severity, in the posttest III 168 (84%) patients had moderate severity 31 (16%) patients had mild severity. In the control group all patient 200 (100%) had moderate severity in the pretest and it reduced to 99% in the posttest I, and 95.5 in the second post test and 92% in the posttest III.

While comparing the ADL in the study group 1.55 patients were independent and 25% patients were dependent in the pre test. During the posttest I dependency rate reduced to 21.5% and independency rate was 1.5%. In the posttest II the independency rate increased to 6.55 and dependency rate reduced to 19.5%, during the posttest III the independency rate increased to 12.5% and the dependency rate reduced to 15.5%. In the control group independency rate was 8% and the dependency rate was 21.55% during pretest. Independency rate decreased to 6.5%, 0%, 0% in the posttest II & III subsequently. The dependency rate increased to 37%, 45%, and 51% in the subsequent posttests.

Comparison of mean sleep quality scores between study and control group showed a significant difference in the posttest I at p=0.0100, in the posttest II at p = 0.0010 and in the posttest III p<0.0001.

The mean psoriasis severity score was compared and it showed a significant difference in the posttest I at p<0.0001 level and in the posttest III at p<0.0001 level.
When mean ADL score was compared and there was a significant difference between study and control group was observed in the posttest I at p<0.0013, in the posttest II at p<0.0013 level in the posttest III at p<0.0001 level.

Correlation

The present study identified a strong negative correlation between sleep quality and psoriasis severity in the posttest II r=0.117 at p=0.0213 which means when sleep quality improves, psoriasis severity reduces. There is a negative correlation between sleep quality and psoriasis severity in the posttest III r=0.0211 and p=0.003 which is significant. This study revealed a strong negative correlation between sleep quality and pruritus r=0.211 at p=0.003 which is significant. The sleep quality score lesser is higher the quality. Hence when the sleep quality score is less the ADL score increases indicates ADL improvement.

Association

The present study found no significant association between the demographic variables and sleep quality in the posttest III among the study group and no significant association between demographic variables and psoriasis severity in the posttest III among the study group. The present study revealed no significant association between demographic variable and ADL in the posttest III among the study group. This study shows that there is no association found between total severity score and background variables but the components of psoriasis had significant association.
The present study identified a significant association between occupation and erythema at $p<0.006$ **, a significant association between occupation and plaque at $p<0.003$ level** and a significant association between residence and scaling at $P<0.043$**.

**Regression**

On analyzing the relationship between study variables and background variables, the findings show a significant relationship between sex and sleep quality during the posttest III at the level of $p<0.0036$ with $R^2$ value of 54%.

This study brought out the fact that there was a significant relationship between occupation and erythema during the posttest III at $p<0.0082$ with $R^2$ value of 1.7%, and explored that there was a significant relationship between age and plaque at $p<0.037$ with a $R^2$ value of 1.3%. Also there was a significant relationship between occupation and plaque at $p<0.007$ level with a $R^2$ value of 1.3%.

The present study finds a significant relationship between residence and scaling during the posttest III at $p<0.0154$ with the $R^2$ value of 8.8.
Conclusions

Psoriasis patients have disturbed sleep; nurses need to know the sleep quality assessment. It is mandatory to educate the patient on sleep hygiene practices which were found by this study to improve the sleep quality, reduce the psoriasis severity, and improve the ADL. Quality sleep reduces the severity of psoriasis and work productivity is improved. Nurses need to educate psoriasis patients bearing these factors in mind.

Key words- sleep hygiene practices, sleep quality, psoriasis severity.