

“Effect of awareness package on knowledge regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women in selected hospital in Indore, Madhya Pradesh”

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Abstract

The present study has been undertaken to assess knowledge score regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women by awareness package in Index hospital, Indore. The research design adopted for the study was pre- experimental in nature. The tool for the study was self-structured knowledge questionnaire which consists of two parts-PART- I consisted questions related to Socio-demographic data; PART-II consisted of self - structured knowledge questionnaire to assess the knowledge score regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women. The data was analyzed by using descriptive and inferential statistical methods. The most significant finding was that 22.5% of primi gravid women were having average knowledge regarding transcutaneous electrical nerve stimulation application on pain whereas 77.5% had good knowledge after post-test. It was suggested that the nurses must educate primi gravid women regarding transcutaneous electrical nerve stimulation application on pain.

Keyword- Effect, awareness package, knowledge and transcutaneous electrical nerve stimulation application on pain.

1.INTRODUCTION

TENS is a method of electrical stimulation which primarily aims to provide a degree of symptomatic pain relief by exciting sensory nerves and thereby stimulating either the pain gate mechanism and/or the opioid system. The different methods of applying TENS relate to these different physiological mechanisms. The effectiveness of TENS varies with the clinical pain being treated, but research would suggest that when used ‘well’ it provides significantly greater pain relief than a placebo intervention. There is an extensive research base for TENS in both the clinical and laboratory settings and whilst this summary does not provide a full review of the literature, the key papers are referenced. It is worth noting that the term TENS could represent the use of ANY electrical stimulation using skin surface electrodes which has the intention of stimulating nerves. In the clinical context, it is most commonly assumed to refer to the use of electrical stimulation with the specific intention of providing symptomatic pain relief. If you do a literature search on the term TENS, do not be surprised if you come across a whole lot of ‘other’ types of stimulation which technically fall into this grouping.

2.OBJECTIVE OF THE STUDY

1. To assess the pre-test and post-test Knowledge score regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women.
2. To assess the effectiveness of awareness package on knowledge regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women.
3. To find out the association between the pre-test knowledge score regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women with their selected demographic variables.

3.HYPOTHESES:

RH₀: There will be no significant difference between pretest and post-test knowledge score on transcutaneous electrical nerve stimulation application on pain among primi gravid women.

RH₁: There will be significant difference between pretest and post-test knowledge score on transcutaneous electrical nerve stimulation application on pain among primi gravid women.

RH₂: There will be significant association between the pre-test score on transcutaneous electrical nerve stimulation application on pain among primi gravid women with their selected demographic variables.

4.ASSUMPTION

1. Primi gravid women may have deficit knowledge regarding transcutaneous electrical nerve stimulation application on pain.
2. Awareness package will improve knowledge of primi gravid women regarding transcutaneous electrical nerve stimulation application on pain.

5.METHODOLOGY:

An evaluative approach was used and research design pre-experimental one group pre-test post-test research design was used for the study. The samples consisted of 40 primi gravid women of preterm selected by Non probability convenient sampling technique. The setting for the study was Index hospital in Indore. Data was collected with the help of demographic variables and administering a self-structured knowledge questionnaire by the investigator before and after awareness package. Post-test was conducted after 7 days of pretest. Data were analysis using descriptive & inferential statistics.

6.ANALYSIS AND INTERPRETATION

SECTION-I Table -1 Frequency and percentage distribution of samples according to their demographic variables.

n = 40

S. No	Demographic Variables	Frequency	Percentage
1	Age in Years		
a.	21-23	8	20.0
b.	24-26	16	40.0
c.	27-29	7	17.5
d.	>29	9	22.5
2.	Religion		
a.	Hindu	19	47.5
b.	Muslim	15	37.5
c.	Christian	2	5.0
d.	Any other	4	10.0
3	Educational status		
a.	Primary	2	5.0
b.	Secondary	17	42.5
c.	Higher secondary	14	35.0
d.	Graduate	3	7.5
e.	No Formal education	4	10.0
4	Occupation		
a.	Professional	2	5.0
b.	House wife	19	47.5
c.	Laborer	16	40.0
d.	Any other specify	3	7.5

SECTION-II- Table- 2.1.1- Frequency and percentage distribution of Pre-test scores of studied subjects:

Category and test Score	Frequency (N=40)	Frequency Percentage (%)
POOR (01-06)	32	80.0
AVERAGE (7-12)	8	20.0
GOOD (13-18)	0	0.0
TOTAL	40	100.0

The present table 2.1.1 concerned with the existing knowledge regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women was shown by pre-test score and it is observed that most of the primi gravid women 32 (80.0%) were poor (01-06) knowledge and some primi gravid women have 8(20.0%) average category (7-12).

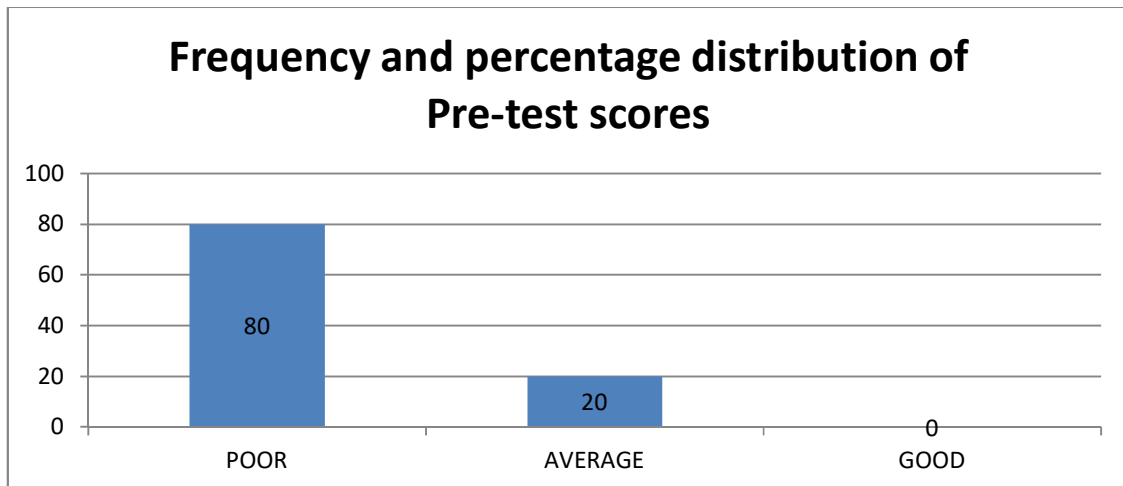


FIG.-2.1.1- Frequency and percentage distribution of Pre-test scores of studied subjects

Table-2.1.2. - Mean (\bar{X}) and standard Deviation (s) of knowledge scores:

Knowledge Pre -test	Mean (\bar{X})	Std Dev (S)
Pre-test score	1.20	0.40

The information regarding mean, percentage of mean and standard deviation of test scores is shown in table 2.1.2 knowledge in mean pre-test score was 1.20 ± 0.40 while in knowledge regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women in Index hospital in Indore.

Hence, it is confirmed from the tables of section-II that there is a significant difference in mean of test scores which partially fulfill the first second objective of the present study.

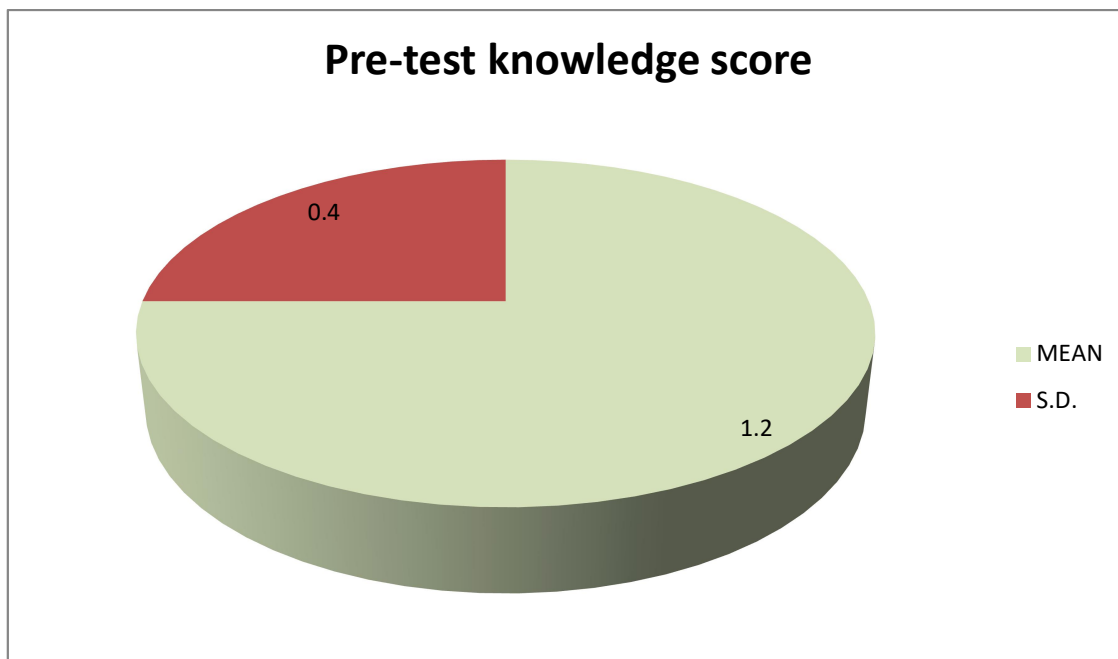


FIG.-2.1.1. - Mean (\bar{X}) and standard Deviation (s) of knowledge scores

Table-2.2.1- Frequency and percentage distribution of Post test scores of studied subjects:

Category and post-test Score	Frequency (N=40)	Frequency Percentage (%)
POOR (01-06)	0	0.0
AVERAGE (7-12)	9	22.5
GOOD (13-18)	31	77.5
TOTAL	40	100.0

The present table 2.2.1 concerned with the existing knowledge regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women was shown by post test score and it is observed that most of the primi gravid women 31(77.5%) were **GOOD** (13-18) knowledge and other primi gravid women have 9(22.5%) category which are **AVERAGE** (07-12) posttest knowledge score in the present study.

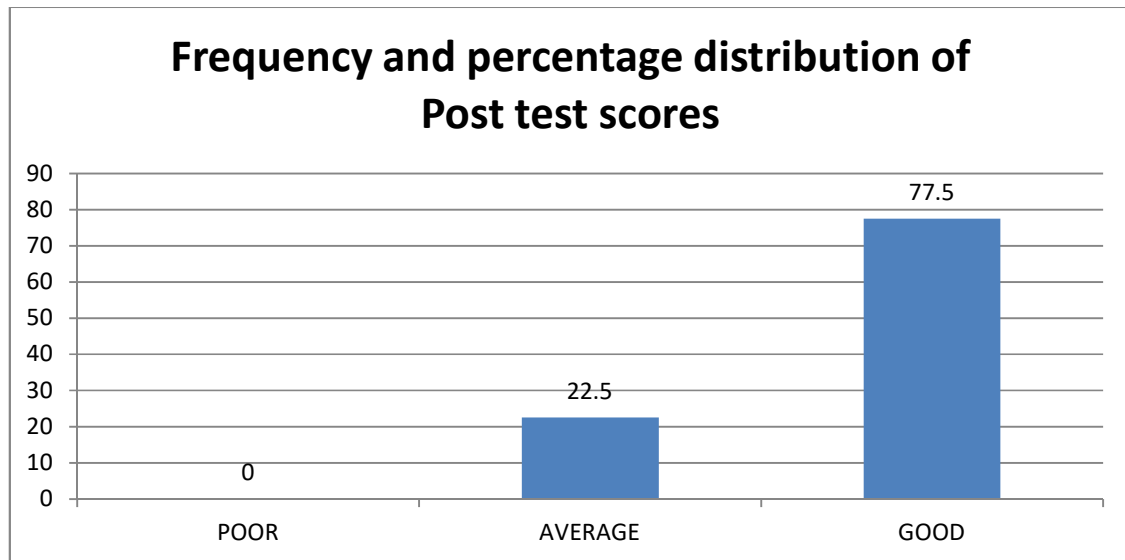


FIG.-2.2.1- Frequency and percentage distribution of Post test scores of studied subjects

Table-2.2.2. - Mean (\bar{X}) and standard Deviation (s) of knowledge scores:

Knowledge Test	Mean (\bar{X})	Std Dev (S)
Post-test score	2.77	0.42

The information regarding mean, percentage of mean and standard deviation of post test scores is shown in table 2.2.2. Knowledge in mean post test score was 2.77 ± 0.42 while in knowledge regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women in Index hospital in Indore.

Hence, it is confirmed from the tables of section-II that there is a significant difference in mean of test scores which partially fulfill the first second objective of the present study.

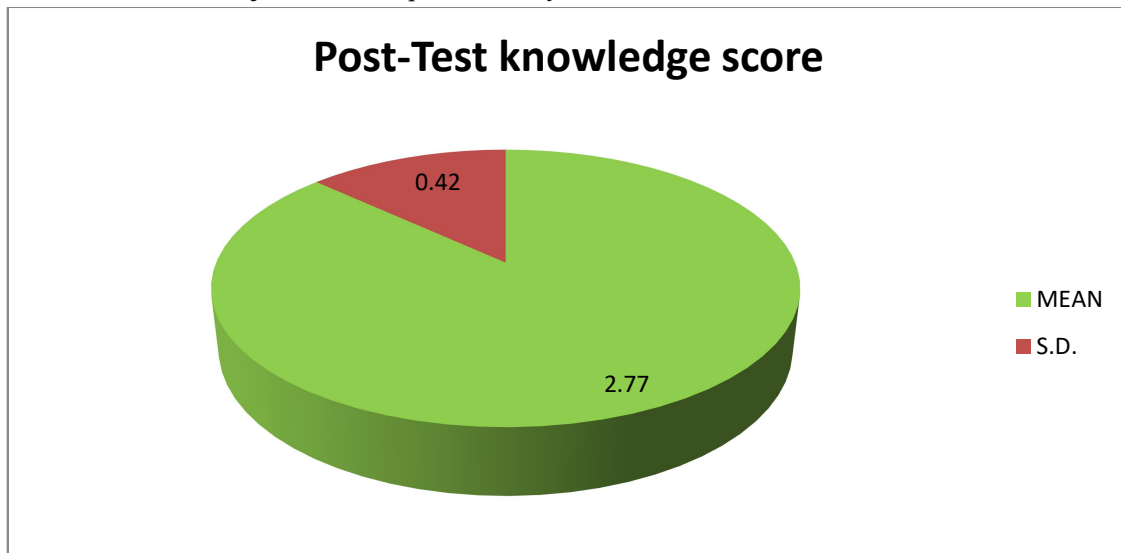


FIG.-2.2.2. - Mean (\bar{X}) and standard Deviation (s) of knowledge scores:

TABLE 2.2.3: Effectiveness of awareness package by calculating Mean, SD, Mean Difference and 't' Value of Pre-test and Post-test knowledge.

Knowledge Score of Primi gravid women	Mean (\bar{X})	S. D. (s)	Std. Error of Mean	D. F.	t-value	Significance
Pre-test	1.20	0.40	0.09	39	-16.76	P<0.0001*
Post-test	2.77	0.42				

When the mean and SD of pre-test and post-test were compared and 't' test was applied. It can be clearly seen that the 't' value was -16.76 and p value was 0.0001 which clearly show that awareness package was very effective in increasing the knowledge of primi gravid women.

SECTION-III Association of knowledge scores between test and selected demographic variables:

Table- 3.1 Association of age with pre-test scores:

Age	Test scores			Total
(In years)	POOR (1-6)	AVERAGE (7-12)	GOOD (13-18)	
21-23	7	1	0	8
24-26	12	4	0	16
27-29	4	3	0	7
>29	9	0	0	9
Total	32	8	0	40
X=5.06 p>0.05(Insignificant)				

The association of age test scores is shown in present table 3.1. The probability value for Chi-Square test is 5.06 for 3 degrees of freedom which indicated a insignificant value ($p>0.05$). Hence, it is identified that there is a insignificant association between age and test scores. Moreover, it is reflected that age isn't influenced with the present problem.

Table- 3.2 Association of Religion with pre-test scores:

Religion	Test scores			Total
	POOR (1-6)	AVERAGE (7-12)	GOOD (13-18)	
Hindu	17	2	0	19
Muslim	10	5	0	15
Christian	1	5	0	2
Any other	4	1	0	4
Total	32	8	0	40
X=4.85 p>0.05 (Insignificant)				

The association of religion and test scores is shown in present table 3.2. The probability value for Chi-Square test is 4.85 for 3 degrees of freedom which indicated a insignificant value ($p>0.05$). Hence, it is identified that there is a significant association between religion and test scores.

Table-3.3. Association of Educational status with pre-test scores:

Educational status	Test scores			Total
	POOR (1-6)	AVERAGE (7-12)	GOOD (13-18)	
Primary	2	0	0	2
Secondary	13	4	0	17
Higher secondary	11	3	0	14
Graduate	2	1	0	3
No formal education	4	0		4
Total	32	8	0	40
X=1.98 p>0.05 (Insignificant)				

The association of educational status test scores is shown in present table 3.3. The probability value for Chi-Square test is 1.98 for 4 degrees of freedom which indicated a insignificant valve ($p>0.05$). Hence, it is identified that there is a insignificant association between educational status and test scores. Moreover, it is reflected that educational status isn't influenced with the present problem.

Table- 3.4 Association of occupation with pre-test scores:

Occupation	Test scores			Total
	POOR (1-6)	AVERAGE (7-12)	GOOD (13-18)	
Professional	1	1	0	2
House wife	17	2	0	19
Laborer	12	4	0	16
Any other	2	1	0	3
Total	32	8	0	40
X=2.77 p>0.05 (Insignificant)				

The association of occupation test scores is shown in present table 3.4. The probability value for Chi-Square test is 2.77 for 3 degrees of freedom which indicated occupation and test scores. Moreover, it is reflected that occupation isn't influenced with the present problem.

7.RESULTS

The result of this study indicates that there was a significant increase in the post-test knowledge scores compared to pre-test scores of transcutaneous electrical nerve stimulation application on pain. The mean percentage knowledge score was observed 1.20 ± 0.40 in the pre-test and after implementation of awareness package post-test mean percentage was observed with 2.77 ± 0.42 .

8.CONCLUSION

Thus, after the analysis and interpretation of data we can conclude that the hypothesis RH1 that, there will be significance difference between the pre-test knowledge score with post-test knowledge score at the ($P<0.05$) is being accepted. Furthermore, awareness package regarding transcutaneous electrical nerve stimulation application on pain among primi gravid women may consider as an effective tool when there is a need in lacking, bridging and modifying the knowledge.

9.LIMITATIONS-

- The study was limited to Index hospital in Indore.
- The study was limited to 40 primi gravid women.

10.REFERENCE-

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