Effectiveness of Computer Assisted Teaching Program on Knowledge regarding Menstrual Blood Banking among 3rd Year Basic B.Sc. Nursing Students at Selected Nursing Colleges, Hassan

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Abstract

A study was conducted to evaluate the effectiveness of computer assisted teaching program on knowledge regarding menstrual blood banking among 3rd year basic B.Sc. nursing students at selected nursing colleges, Hassan. 50 students were selected by non probability purposive sampling technique. The knowledge was assessed by using structured knowledge questionnaire. The study results revealed that most of the respondents 48(96%) had inadequate knowledge, 2 (4%) of the respondents had moderate knowledge and none of them had adequate knowledge during pre-test. After computer assisted teaching program 26(52%) of the respondents had moderate knowledge, 24(48%) of them had adequate knowledge and none of them had inadequate knowledge. The calculated paired 't' test value of 22.5* is greater than the table value at 0.05 level of significance, which indicates that there is a significance difference between mean pre-test and post-test knowledge scores of whole tests of respondents. It is concluded that CATP was effective in increasing knowledge of 3rd year B. Sc. students regarding menstrual blood banking.

Keywords: Effectiveness; Knowledge; Computer-Assisted Teaching Program; Menstrual Blood Banking.

Introduction

Menstrual blood banking is a process of banking menstrual blood for the purpose of cell therapy, it enables women to store their menstrual blood under required conditions and preserve it for future. These banks charge minimal annual fee for storage and preservation and allow women to have lifelong benefits from them. It is a revolutionary new service that provides women with the unique opportunity to collect harvest and preserve vital stem cells from their menstrual blood during the menstrual cycle. These cells can be expanded as and when necessary and can be potentially used in the future for various therapeutic and cosmeceutical applications.

Studies demonstrate that these are a unique population of cells that can be safely isolated and can provide us with an expandable source of stem cells from women until they reach menopause. Considering their relevance and importance in treatment of diseases including certain neuro disorders, it becomes crucial for women to preserve their menstrual blood in the Menstrual Blood Bank.

Menstrual Blood Banking has a wide scope as the

need for regenerative therapies incorporating cells that can engraft and differentiate is vast. But till today most of the women especially the teenagers perceive menstruation as a curse, they are unaware of the fact that menstrual blood could be a reservoir of stem cells which could bring a ray of hope among millions of population, who are suffering from deadly diseases. The investigator felt a need to educate and convey this information about menstrual blood banking to nursing students and believes educating nursing students can unveil the hidden benefits of menstrual blood to the general population.

Objectives of the Study

1. To assess the knowledge regarding menstrual blood banking among 3rd year Basic B.Sc. Nursing students at selected nursing colleges Hassan.

2. To evaluate the effectiveness of computer assisted teaching program on knowledge regarding menstrual blood banking among 3rd year Basic B.Sc. Nursing students at selected nursing colleges, Hassan.

3. To find the association between post test knowledge score and selected demographic variables.

Methodology

Research Approach
Evaluative Approach

Research Design
Pre-experimental; one group pre test post test design

Sampling Technique
Non probability: Purposive sampling technique

Sample Size
50

Population
3rd year Basic B.Sc. Nursing students

Setting
Government College of Nursing Hassan.

Tool Used

Structured knowledge questionnaire to assess the knowledge regarding menstrual blood banking.

Part-I : Consists of 7 items related to demographic data.

Part-II: Structured knowledge questionnaire consisting of 30 items regarding menstrual blood banking.

Procedure of Data Collection

Formal permission was obtained from the Principal of Government College of Nursing, Hassan. The study was conducted for a period of 4 weeks at Government College of Nursing, Hassan. The purposes and objectives of the study were explained to students and confidentiality was assured with consent to participate in the study. Pre test was conducted to assess the knowledge of students. Following this, computer assisted teaching programme CATP) was administered. Post test was conducted on 7th day after pre-test by using the same questionnaire. Data collected was then tabulated analyzed.

Results

Section I: Analysis of Demographic Characteristics of Respondents Under Study

Section I revealed that majority of the respondents 44 (88%) were 20 years old and 6 (12%) were 21 years old. Most of the respondents 44(88%) were females while remaining 6 (12%) of them are males. Majority of the respondents 35 (70%) were Hindus, 12 (24%) were Christians and remaining 3 (6%) were Muslims. 19 (38%) of respondents' father had higher primary education, 13 (26%) had primary education, 8 (16%) had degree & above, 6 (12%) had PUC and 4 (8%) were illiterate. Most of the respondent's (74%) are from rural area and 26% are from urban area and none of the respondents had previous exposure to the information about menstrual blood banking.

Section II: Analysis of Pre-test and Post-test scores and Effectiveness of Computer assisted Teaching Program.

Table 2: The calculated paired 't' test value of 22.5* is greater than the table value at 0.05 level of significance, which indicates that there is a significance difference between mean pre-test and post-test knowledge scores of whole tests of respondents it is concluded that CATP was effective

in increasing knowledge of 3rd year B.Sc. students regarding menstrual blood banking. Hence the null hypothesis H_0 was rejected and research hypothesis H_1 is accepted.

Section III: Analysis of Association between Demographic Variables and Post-Test Knowledge Scores

The data revealed that the calculated χ^2 values with regard to Gender ($\chi^2 = 6.28$, P<0.05) was more than the table values at 0.05 level of significance,

hence the null hypothesis H_{02} is rejected and research hypothesis H2 is accepted with regard to gender but the calculated χ^2 values with regard to age ($\chi^2 = 0.57$, P>0.05), religion ($\chi^2 = 0.83$, P>0.05), education of father ($\chi^2 = 5.31$, P>0.05), education of mother ($\chi^2 = 5.52$, P>0.05), monthly family income ($\chi^2 = 3.07$, P>0.05), place of residence ($\chi^2 = 0.38$, P>0.05) were less than the table values at 0.05 level of significance, hence the null hypothesis H_{02} is accepted and research hypothesis H_2 is rejected with regard to these demographic variables.

Table 1: Aspect wise mean pre-test and post-test knowledge on menstrual blood banking with mean and SD of enhancement and paired 't' test values   **N=50**

No.	Knowledge Aspects	Respondents Knowledge (%)						Paired 't'
		Pre test		Post test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	Test
I	Menstruation	62.5	20.75	96.0	10.25	34.5	26.25	11.16 *
II	Stem cells and stem cell therapy	33.63	12.63	61.63	15.09	28.0	14.45	10.26 *
III	Menstrual blood banking	19.00	27.25	69.5	20.25	50.5	28.75	10.63 *
IV	Collection and storage of menstrual stem cells	31.63	10.72	79.0	11.7	48.18	16.36	21.75 *
	Combined	34.93	8.33	73.93	9.0	38.86	10.76	22.5 *

* Significant at 5% level,   t (0.05, 49df) = 1.96

Table 2: Over all pre test and post test Mean, SD, Mean% and SD% of Knowledge scores of respondents regarding menstrual blood banking with paired 't' test value   **N=50**

Aspects	Max. Score	Respondents Knowledge				Paired 't'
		Mean	SD	Mean (%)	SD (%)	Test
Pre test	30	10.48	2.5	34.93	8.33	
Post test	30	22.18	2.7	73.93	9.0	22.5 *
Enhancement	30	11.66	3.23	38.86	10.76	

* Significant at 5% level,   t (0.05, 49df) = 1.96
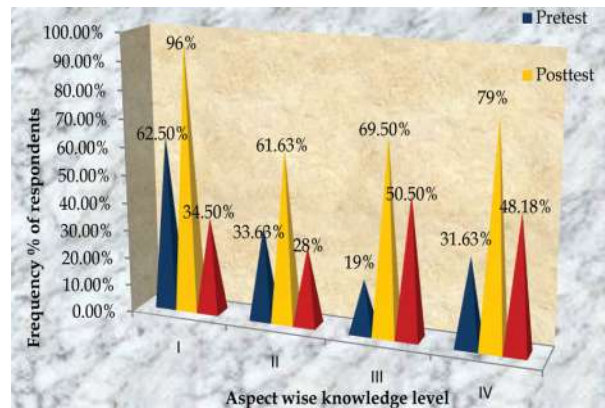

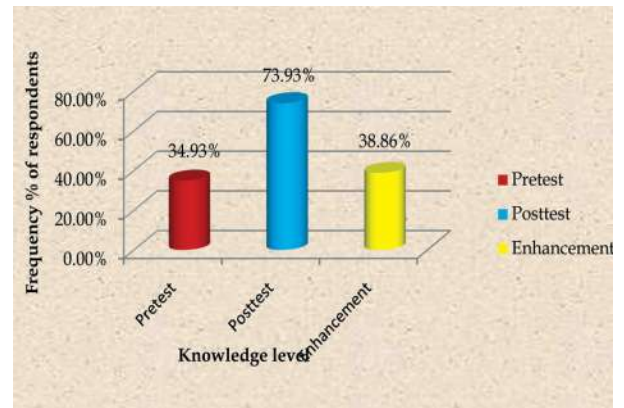**Fig. 1:** Pyramid diagram showing aspect wise mean pre-test and post-test knowledge on menstrual blood banking

Fig. 2: Cylindrical diagram showing overall mean pre test and post test knowledge level on menstrual blood banking

Conclusion

Based on the findings of the study, the following conclusions are drawn.

1. Pre test knowledge of students regarding

menstrual blood banking was inadequate.

2. There was a need for CATP for students regarding menstrual blood banking.

3. The findings of the study have proved that computer-assisted teaching programme was

effective in improving the knowledge of nursing students regarding menstrual blood banking.

4. Post-test knowledge level of respondents are significantly associated with gender but age, religion, educational status of parents, family monthly income, place of residence and previous exposure to information of respondents were not significantly associated with their post-test knowledge levels.

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