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Egyptian Journal of Nursing (EJN)

Egyptian Journal of Nursing (EJN) is dedicated to Faculty of Nursing-Cairo University, Egypt. EJN is a peer-reviewed journal which is an essential resource for all nurses, as well as providing the best outcomes for the patients in their care. The Journal focuses on research papers and professional discussion papers that have a sound scientific, theoretical or philosophical base. Preference is given to high-quality papers written in a way that renders them accessible to a wide audience without compromising quality. All articles are peer-reviewed by at least two researchers expert in the field of the submitted paper. The editorial purpose of Egyptian Journal of Nursing (EJN) is to disseminate empirical findings from the highest quality basic and clinical research studies focused on (a) understanding health and illness experiences of individuals, families, and communities; (b) estimating the impact of therapeutic actions on health promotion, disease prevention, comfort during illness, and (c) nursing systems and nursing resource management.

Review process. Manuscripts are evaluated on the basis that they present new insights to the investigated topic, are likely to contribute to a research progress or change in clinical practice. It is understood that all authors listed on a manuscript have agreed to its submission. The signature of the corresponding author on the letter of submission signifies that these conditions have been fulfilled.

Received manuscripts will be first examined by the EJN editors. Manuscripts with insufficient priority for publication will be rejected without external evaluation. Incomplete packages or manuscripts not prepared in the advised style will be sent back to authors for correction. The manuscripts will be sent to independent experts for scientific evaluation. Submitted papers will be accepted for publication after a positive opinion of the independent reviewers.

Types of articles accepted

1- **Original articles**: Articles which represent in-depth research in various scientific disciplines.
2- **Case reports**
3- **Review articles**: Should normally comprise less than 10,000 words contain an unstructured abstract of 200 words or less, and includes up-to-date references.

4- **Mini Reviews**: These are reviews of important and recent topics that are presented in a concise and well-focused structure. The number of words is limited to 5,000.
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8- **Announcements** of forthcoming events (meetings, awards.. etc.).

Preparation of Manuscripts

- Type or print out the manuscript on white A4 paper, with margins of at least 25mm (1 inch). Use Arial or Times New Roman 12 with double spacing throughout the MS.
- Type or print on only one side of the paper.
- Please number the lines consecutively, beginning with the title page
- Please do not include more than 6 tables and/or illustrations in the manuscript of a full length research paper and not more than 2 tables and/or illustrations in a short communication.
- Please number the pages consecutively, beginning with the title page.
- The article is to be divided into sections with the following headings, each started on a separate sheet:

Title page

It should contain the following; 1) The title of the article, which should be concise (not more than 90 characters), but specific and informative, 2) Names of author and coauthors, academic degree, 3) Affiliation for each author (department, hospital, or academic institution) to which the work should be attributed, 4) Name and full address (including phone, fax number, and e-mail address) of the author with whom correspondence will be made regarding the processing of the manuscripts and mailing of reprints, 5) A short running title of no more than 40 characters to used in the header of the article.

Abstract & keywords

All manuscript must have a brief abstract of maximum 200-300 words. The abstract should concisely give the main aspects and features under the following clearly labeled sections: Objective (or background and purpose), material and methods, results, and conclusions. 3-6 key words for indexing should be given on the same page of the abstract.

Text

Authors should use subheadings to divide the sections of their manuscript: Introduction, Methods, Results, Discussion, Acknowledgements, and References.

Introduction: State the purpose of the article and summarize the rational for the study. Give only strictly pertinent reference and do not include data or conclusions from the work being reported.

Material and Methods: Describe your selection of the experimental subjects (patients or laboratory animals, including controls). Identify the age, sex, and other important characteristics of the subjects. Identify the methods, apparatus, and procedures in sufficient detail to allow other workers to reproduce the results. Describe statistical methods with enough detail to enable a knowledgeable reader to access to the original data to verify the reported results. Specify any computer programs used.

Results: Present your results in logical sequence in the text, tables, and illustrations. Do not repeat in the text all the data in the tables or illustrations. Emphasize or summarize only important observations.

Tables: Each table should be typed double-spaced on a separate sheet. Do not use internal horizontal or vertical lines. Tables should be numbered consecutively in Arabic numerals according to the order of their appearance in the text. The table number is to be followed by a brief informative descriptive title. Footnotes and explanations are to be typed underneath the table.

Illustrations: Limit the illustrations to those to those which clarify and reinforce the text while avoiding illustrations that demonstrate the same features. Photographs, line drawings, and graphs should be of a high artistic and technical quality. A manuscript can be rejected on the basis of the poor quality of illustrations. Line drawings or graphs should be in India ink or very sharp high contrast prints on glossy paper. If photographs of people are

used, the subjects must not be identifiable. Illustrations should be submitted unmounted and untrimmed. Color photographs are accepted with extra charge. Each illustration should be identified by slightly inscribing its number on the back along with the family name of the first author and an arrow indicating its upper border.

Legends to Figures: Legends should be typed double-spaced on a separate sheet and numbered consecutively in Arabic numerals according to the order of their citation in the text. Legends should be brief and specific.

Discussion: Emphasize the new and important aspects of the study and the conclusions that follow from them. Relate the observations to other relevant studies.

Acknowledgements

The source of financial grants and other funding should be acknowledged, including a frank declaration of the authors' industrial links and affiliations. The contribution of colleagues or institutions should also be acknowledged. Thanks to anonymous reviewers are not allowed

References

We recommend the use of a tool such as Endnote or Reference Manager for reference management and formatting.
Endnote reference styles can be searched for here: http://www.endnote.com/support/enstyles.asp
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The Vancouver system of referencing should be used. In the text, references should be cited using superscript Arabic numerals e.g. (2-5, 15). In the order in which they appear. If cited only in tables or figure legends, number them according to the first identification of the table or figure in the text. In the reference list, the references should be numbered and listed in order of appearance in the text.

Cite the names of all authors when there are six or fewer; when more than seven list the first three followed by *et al*.

Reference to unpublished data and personal communications should not appear in the list but should be cited in the text only (e.g. Smith A, 2000, unpublished data; in press).

References should be listed in the following form:

Journal articles

1. Lupton D. Discourse and analysis: a new methodology for understanding the ideologies of health and illness. Australian Journal of Public Health 1992; **16:** 145-150.

Online articles not yet published in an issue

an online article that has not yet been published in an issue (therefore has no volume, issue or page numbers) can be cited by its Digital Object Identifier (DOI). The DOI will remain valid and allow an article to be tracked even after its allocation to an issue.

2. Birks M, Francis K, Chapman Y. Seeking knowledge, discovering learning: Uncovering the impetus for baccalaureate nursing studies in Malaysian Borneo. International Journal of Nursing Practice; doi: 10.1111/j.1440-172X.2009.01741.x

Books

3. Dunning T. *Care of People with Diabetes: A Manual of Nursing Practice.* Oxford: Blackwell Science, 1994.

Chapters in Books

4. Reid F. Mobility and safer handling. In: McMahon CA, Harding J (eds). *Knowledge to Care: A Handbook for Care Assistants.* Oxford: Blackwell Science, 1994; 53-69.

Electronic Material

5. Center of Disease Control, Taiwanese Ministry of H

Table of Content

Effect of Caffeinated Beverages Intake on Premenstrual Syndrome among Faculty of Nursing Students

DALAL. M.K. ESHRA, Ph.D.* (1).
INASS. K. A. KASSEM, Ph.D.* (2).
AMERA. B.RASHED, B.Sc* (3).
Maternal and Newborn Health Nursing Department, Faculty of Nursing - Menoufia University

Abstract

Caffeine is known to increase both the prevalence and severity of premenstrual syndrome PMS. **The aim** of this study was to examine the effect of caffeinated beverages intake on premenstrual syndrome. **The Design** of this study was quasi-experimental. **The sample** composed of all eligible students according to the inclusion criteria. The study sample consisted of 200 students divided into 2 groups (study and control group). **Tools** included structured interview questionnaire (used during screening phase) and self-administered questionnaire (used during follow-up phase). **The main findings** were that there was statistically significant difference between study and control group regarding PMS severity, duration, effect on daily activities and need for using natural methods to overcome PMS. **Conclusion:** There is a strong positive correlation between the reduction of caffeinated beverages intake and the decrease in PMS severity. **Recommendation:** Counseling for women at different age groups about correcting the unhealthy habits including caffeine consumption should be offered.

Keywords
Premenstrual syndrome, Premenstrual severity, Caffeine, Screening phase, Follow-up phase.

Introduction

It is reported that the premenstrual period exerts certain influence on the general behavior and wellbeing of women. Most of them experience minimal discomfort that doesn't curtail their activity. However some women have one or more of a broad range of symptoms that persist for one or several days and usually become less severe at the onset of menses. If symptoms are severe enough to disturb a woman's life pattern or impels her to seek medical relief, it is called premenstrual syndrome (PMS) (1).

A woman is considered to have premenstrual syndrome if she complains of recurrent psychological or somatic symptoms (or both), occurring specifically during the luteal phase of the menstrual cycle and which resolve in the follicular phase at least by the end of menstruation (2).

Previous researches studying the effect of caffeinated beverages on premenstrual syndrome have yielded conflicting results however the majority support the presence of strong relation between caffeinated beverages and PMS. Some authors have reported that caffeinated beverages intake increase the severity of PMS. Few authors concluded that there is only limited difference in the severity of PMS in women consuming caffeinated beverages compared with those not consuming such beverages at all. (3).

(4) estimated that about 80% of the world's population consumes a caffeine-containing substance daily and the global consumption of caffeine has been estimated at 120,000 tonnes per annum, making it the world's most popular psychoactive substance. This number equates to one serving of a

caffeine beverage for every person per day.

Significance of the study

PMS prevalence ranges from 41%-75% in all women of reproductive age around the world. **(5)**. Its occurrence has been doubled over the past 50 years due to the unhealthy habits. **(6)**. One of the unhealthy habits is the intake of caffeinated beverages. It is important to shed light on the effect of caffeinated beverages intake and the degree of severity of PMS symptoms.

Aim of the study: This study was conducted with the aim of examining the effect of caffeinated beverages intake on the premenstrual syndrome among students at Faculty of Nursing - Menofiya University.

Research hypothesis: there is a relationship between caffeinated beverages intake and the degree of severity of premenstrual syndrome symptoms

Subjects and methods:

Research design: A quasi-experimental design was used in carrying out the present study with comparison of study and control groups regarding their premenstrual syndrome.

Setting: Conducted at Faculty of Nursing, Menofia University.

Necessary approval from higher authority was taken. An informed consent to participate in the current study was taken after the purpose of the study was clearly explained to each student. Confidentiality of obtained personal data, as well as respect of participants' privacy was totally ensured.

Subjects:

The researcher recruited the whole study population (all eligible students according to the inclusion criteria) as the study population was limited in size (only 217 students). The sample was distributed as follows:

First year: 26 students were eligible from the total of 122.

Second year: 58 students were eligible from the total of 250.

Third year: 42 students were eligible from the total of 195.

Fourth year: 41 students were eligible from the total of 191.

Internship year: 50 students were eligible from the total of 176.

The sample size of the present study was compared with that of many previous studies which ranged from 100 and 200 participants (Hoa 2006, Cenac et al., 2007, Myint Thu et al., 2006 and Rizk et al., 2006) and also with the result of the sample size formula which is:

$$n = \frac{2\left(z_{1-\alpha/2} + z_{1-\beta}\right)^2}{\left(\frac{\mu_0 - \mu_1}{\sigma}\right)^2}.$$

Where z1-α/2 is the z score, α is the significant level, β is the type II error, μ 1 and 2 are the population numbers, σ is the population variance.

The total sample was 217 participants; only 200 completed the study and 17 participants were excluded during the second phase of the study due to personal causes, menstrual irregularity and faults in the diaries entry process. The sample was divided into 2 groups:

Group I (Study group): Participants who were instructed to decrease their daily caffeinated beverage intake during the week before menstruation.

Group II (Control group): Participants who keep their regular daily caffeinated beverage intake.

The filed work of the present study was conducted from October 2009 to January 2010 (one month for the screening phase and three months for follow-up phase).

Inclusion criteria of the sample were:
All recruited participants of the study were

1. Experiencing regular menstrual cycle within the last 6 months prior to the study.
2. Not having any chronic diseases or regularly use medications.
3. Experiencing moderate to severe PMS during the last 6 months prior to the study according to the standardized diagnostic criteria for PMS included in the structured interview questionnaire.
4. Not using any medication or herbal formulations during PMS period to overcome PMS discomforts.
5. Consuming caffeinated beverages daily during the week just preceding menstruation.

Procedure:
Operational Phase:
The study was conducted along 2 main phases:
Phase I (screening phase): lasted for a month and was devoted to examine the eligibility of participants based on the inclusion criteria. Data were collected using the structured interviewing questionnaire for testing the participants' eligibility. Participants were required to attend an information session to receive instructions on how to proceed and fill in questionnaire.

Phase II (follow-up phase): lasted for 3 months and was devoted to follow-up the severity of a selected group of PMS symptoms. Data were collected using self-administered questionnaire. At the start of this phase; the researcher planned a session for instruction regarding filling in the diaries and limiting caffeinated beverages intake (for the study group only). The control group was interviewed only for instruction regarding filling in the diaries.
Tools:

The study was conducted using two main tools: structured interview questionnaire and self-administered questionnaire which were developed by the researcher and revised by a jury of qualified experts then tested for validity and reliability.

The validity of the tools was ascertained by a group of subject area experts (medical and nursing staff) who reviewed the tools for content and internal validity. Also they were asked to judge the items for completeness and clarity. Suggestions were incorporated into the tools.

Test – retest reliability measure was applied by the researcher for testing the internal consistency of the tool. It was done through the administration of the same tools to the same participants under similar conditions on two or more occasions. Scores from repeated testing were compared.

A pilot study was conducted to test the applicability of the tools, the feasibility of the study and to estimate the time needed for data collection. It was conducted on 10% of the total sample (22 students). On the basis of the pilot study results; the researcher set the final fieldwork schedule. The sample of the pilot study was not excluded from

the main study sample as the study population was limited in size.

Statistical Data Analysis:

Upon completion of data collection, each answer sheet was coded and scored. The researcher coded the data into a coding sheet so that data could be prepared for computer use. Data was statistically analyzed using statistical package for social studies (SPSS. Inc, Chicago, IL, USA) version 12 on IBM compatible computer. Test of significance was used and level of significance was $p< 0.05$. Statistical presentation and analysis of the present study was carried out.

Data were summarized using the following:

Quantitative data were expressed as mean & standard deviation ($\times \pm$ SD) and analyzed by applying student t-test for comparison of two groups of normally distributed variables).

Results

The main findings of the present study were:

Table 1 shows that there was no statistically significant difference between groups ($P>0.05$) regarding any of their socio-demographic characteristics. In relation to marital status; the majority of the study and control groups' participants were single (83% and 77%) respectively. Regarding the academic years' distribution; 12% of participants of both groups were at the 1st year, 23% and 28% were at the 2nd year, 20% and 18% were at the 3rd year, 25% and 14% were at the 4th year meanwhile 20% and 28% were at the internship year. The table shows that participants age of the study and control groups were with no statistically significant difference.

Table 2 presents a comparison between studied groups regarding PMS severity along the follow-up cycles. The table shows that PMS severity was significantly decreasing from month to month ($P<0.001$). During the 1st cycle there were 14% of the study group's participants experiencing severe PMS as compared to 48% of the control group. During the 2nd cycle there were 11% of the study group's participants experiencing severe PMS as compared to 46% of the control group and during the last cycle only 10% of the study group's participants were experiencing severe PMS compared to 47% at the control group. The number of the study group's mild PMS sufferers was increasing and the number of moderate and severe PMS sufferers was decreasing from month to month as compared to the control group.

Table 3 compares duration of PMS between studied groups. It shows that there was a highly statistically significant difference ($P<0.001$) between study and control group regarding the decrease in PMS duration along all follow-up cycles. During the 1st follow-up cycle nearly half of the study group's participants (56%) experienced a decrease in PMS duration compared to 8% of the control group. During the 2nd cycle, 59% of the study group's participants experienced such decrease compared to 0% of the control group. During the 3rd cycle, about two thirds (63%) of the study group's participants experienced a decrease compared to 9% of the control group.

Table 4 displays that there was a highly statistically significant difference

(P<0.001) between study and control group regarding the interference of PMS with daily activities; 80%, 66%, and 42% of the study group's participants were experiencing such interference at the 1st, 2nd and 3rd follow-up cycles respectively compared to 97%, 94% and 95% of the control group. The same table also shows that the interference of PMS with daily activities was significantly decreasing from month to month after decreasing caffeinated beverages intake.

Table 5 reveals a highly statistically significant difference between groups regarding the natural methods to overcome PMS along the follow-up cycles (P<0.001). There were 32%, 26% and 17% of the study group's participants during the 1st, 2nd and 3rd follow-up cycles respectively as compared to half of the control group's participants (55%) at all follow-up cycles. The table also shows that the need for using natural methods to overcome PMS was decreasing from month to month.

Table 6 explains the correlation between reducing caffeinated beverages intake and the associated decrease in PMS severity. The table shows that there was a strong positive correlation (r = 0.8) between the reduction of beverages intake and the decrease in PMS severity at all follow-up cycles.

Table 1: Socio-Demographic Characteristics of the Studied Groups.

Variable	Study group (n =100)		Control group (n =100)		Test	P-value
	No	%	No	%		
Marital Status						
Single	**83**	**83.0**	**77**	**77.0**	χ^2	**> 0.05**
Married	**17**	**17.0**	**23**	**23.0**	**1.1**	
Academic Year						
First	**12**	**12.0**	**12**	**12.0**	χ^2	**> 0.05**
Second	**23**	**23.0**	**28**	**28.0**	**5.0**	
Third	**20**	**20.0**	**18**	**18.0**		
Fourth	**25**	**25.0**	**14**	**14.0**		
Internship	**20**	**20.0**	**28**	**28.0**		
Age						
Mean ± SD	**20.16 ± 1.31**		**20.18 ± 1.42**		**t 0.1**	**> 0.05**

Table 2: Comparison between Studied Groups Regarding PMS Severity along the Follow- Up Cycles.

Variable	Study group (n =100)		Control group (n =100)		χ^2 test	P-value
	No	%	No	%		
Premenstrual Syndrome Severity						
Follow-up Cycle 1						
Mild	**23**	**23.0**	**0**	**0.0**	**14.4**	**< 0.001***
Moderate	**63**	**63.0**	**52**	**52.0**	**10.2**	**< 0.001***
Severe	**14**	**14.0**	**48**	**48.0**	**32.5**	**< 0.001***
Follow-up Cycle 2						
Mild	**48**	**48.0**	**0**	**0.0**	**51.5**	**< 0.001***
Moderate	**41**	**41.0**	**54**	**54.0**	**11.7**	**< 0.001***
Severe	**11**	**11.0**	**46**	**46.0**	**32.9**	**< 0.001***
Follow-up Cycle 3						
Mild	**64**	**89.0**	**0**	**0.0**	**67.6**	**< 0.001***
Moderate	**26**	**26.0**	**53**	**53.0**	**30.5**	**< 0.001***
Severe	**10**	**10.0**	**47**	**47.0**	**37.1**	**< 0.001***

(*) Statistically significant at $p<0.001$

Table 3: Comparison between Studied Groups regarding PMS Duration.

Variable	Study group (n =100)		Control group (n =100)		χ^2 test	P-value
	No	%	No	%		
Decreased PMS Duration						
Follow-up Cycle 1						
Yes	**56**	**56.0**	**8**	**8.0**	**52.9**	**< 0.001***
No	**44**	**44.0**	**92**	**92.0**		
Follow-up Cycle 2						
Yes	**59**	**59.0**	**0**	**0.0**	**83.7**	**< 0.001***
No	**41**	**41.0**	**100**	**100.0**		
Follow-up Cycle 3						
Yes	**63**	**63.0**	**9**	**9.0**	**63.3**	**< 0.001***
No	**37**	**37.0**	**91**	**91.0**		

(*) Statistically significant at p<0.001

Table 4: Comparison between Studied Groups regarding the Interference of PMS with Daily Activities (Follow-Up Phase).

Variable	Study group (n =100)		Control group (n =100)		χ^2 test	P-value
	No	%	No	%		
Interference of PMS with Daily Activities						
Follow-up Cycle 1						
Yes	**80**	**80.0**	**97**	**97.0**	**14.2**	**< 0.001***
No	**20**	**20.0**	**3**	**3.0**		
Follow-up Cycle 2						
Yes	**66**	**66.0**	**94**	**94.0**	**24.5**	**< 0.001***
No	**34**	**34.0**	**6**	**6.0**		
Follow-up Cycle 3						
Yes	**42**	**42.0**	**95**	**95.0**	**52.7**	**< 0.001***
No	**58**	**58.0**	**5**	**5.0**		

Table 5: Comparison between Studied Groups regarding the Use of Natural Methods to Overcome PMS (Follow-Up Phase).

Variable	Study group (n =100)		Control group (n =100)		χ^2 test	P-value
	No	%	No	%		
Using Natural Methods to Overcome PMS						
Follow-up Cycle 1						
Yes	**32**	**32.0**	**55**	**55.0**	**31.3**	**< 0.001***
No	**68**	**68.0**	**45**	**45.0**		
Follow-up Cycle 2						
Yes	**26**	**62.0**	**55**	**55.0**	**35.2**	**< 0.001***
No	**74**	**74.0**	**45**	**45.0**		
Follow-up Cycle 3						
Yes	**17**	**17.0**	**55**	**55.0**	**72.0**	**< 0.001***
No	**83**	**83.0**	**45**	**45.0**		

(*) Statistically significant at $p<0.001$

Table 6: Correlation between the Reduction of Caffeinated Beverages Intake and PMS Severity.

Variable	Degree of PMS Severity	
	r	P-value
Follow-up Cycle 1 **Decreasing Caffeinated Beverages Intake**	**0.808**	**< 0.001***
Follow-up Cycle 2 **Decreasing Caffeinated Beverages Intake**	**0.863**	**< 0.001***
Follow-up Cycle 3 **Decreasing Caffeinated Beverages Intake**	**0.891**	**< 0.001***

(*) Statistically significant at $p < 0.001$

Discussion

The current study generated four main results which were: a reduced PMS severity, decreased PMS duration, a less interference of PMS with daily activities and a limited need to use natural methods for coping with PMS symptoms.

Concerning **PMS severity** during the follow-up phase of the study, the current findings revealed that there was a highly statistically significant difference between the study and control group. The reduction of severity appeared in the form of a decrease in the number of severe PMS sufferers and an increase in the number of mild PMS sufferers among study group's participants. This may be explained by the fact reported by **(7)** that caffeine is metabolized 25% slower during the week before menstruation which leads to caffeine accumulation resulting in increased PMS severity. Thus by decreasing caffeinated beverages intake in the current study caffeine accumulation was decreased and as a direct result PMS severity was also decreased. **(8)** who conducted a study at United Arab Emirates reported that by decreasing caffeine intake; clearance ability of caffeine by the kidneys increased leading to a reduction of severe PMS sufferers number to the half during the last month of the study. In contrast; **(9)** who conducted a study at University of Maryland and found that by decreasing beverages, PMS severity was not affected. This is because participants of Hoa's study were cigarette smokers (at a rate of 3-8 cigarettes\day) and some of them were alcohol consumers (at a rate of 5 drinks\day). **(10)** Estimated that cigarette and alcohol consumption increases PMS severity three folds even with caffeine reduction.

In regard to the **PMS duration**; the current study findings showed that there was a highly statistically significant difference between study and control group regarding PMS duration. Two thirds (63%) of the study group's participants experienced a decrease in PMS duration at the last follow-up cycle as compared to 9% of the control group. This is reasoned by the theory proposed by **(11)** that the less caffeinated beverages taken per day during PMS period; the faster caffeine clearance from the body and the shorter PMS duration. This result is confirmed by a study done in Iran by **(12)** who reported that decreasing caffeinated beverages intake during the week preceding menstruation had a direct effect on decreasing PMS duration due to faster caffeine excretion.

Interference of PMS with daily activities, was significantly decreasing from month to month in the current study to the extent that at the last follow-up cycle only forty two percent of the study group's participants were suffering from such interference as compared to one hundred percent at the beginning of the study. The participants were experiencing severe PMS symptoms which interfered with their daily activities at the beginning of the study and after decreasing caffeine intake, the severity of symptoms decreased to the extent that allowed participants to perform their daily activities normally. This result is in agreement with **(10)** who conducted a study at Oakland, USA and reported that decreasing caffeinated beverages intake was associated with a decrease in PMS interference with participants' daily activities. On the same line **(13)**; who conducted a study at

Peshawar University, Pakistan and mentioned that after decreasing caffeinated beverages intake, the interference of PMS with daily activities directly decreased.

A highly statistically significant difference between study and control group regarding the need for using natural methods to overcome PMS symptoms, this need was significantly decreasing from month to month among study group's participants. At the beginning of the study participants were experiencing severe PMS symptoms and they tended to use natural methods to be able to cope with symptoms severity, but after decreasing caffeine intake, the severity of symptoms was decreased to the extent of tolerability without using natural methods. This finding is in accordance with **(14)** who made a study at Thailand, **(15)** who conducted a study in Niger, Africa and **(16)** who conducted a thesis at Damascus University, Syria; all of them reported a marked decrease in the need to use natural methods by the study group after decreasing caffeine at all follow-up cycles of their studies due to decreased PMS severity.

In sum, the current study core result indicates that there was a strong positive correlation ($r = 0.8$) between the reduction of caffeinated beverages intake and the decrease in PMS severity as the more participants decreased the number of beverages intake or beverages concentration during the week just preceding menstruation, the less PMS severity they experience. This is confirmed by **(17), (8), (18), (14), (16) and (19)** as they concluded from their studies that there is a positive correlation between decreasing caffeinated beverages intake and PMS severity. In (9**);** who determined that there is a negative correlation between decreasing caffeinated beverages intake and PMS severity.

Conclusion:

The study revealed the following:

- There is a strong positive correlation between the reduction of caffeinated beverages intake and the decrease in PMS severity and duration.
- The daily activities affection and the need for using natural methods to overcome PMS are also decreased with decreasing caffeinated beverages intake.

Recommendations

- Counseling for students about correcting the unhealthy habits including caffeine consumption.
- Students with PMS must consider eliminating caffeine containing beverages from their diet especially at the week just preceding their menstruation.
- Caffeine consumers can gradually substitute their regular beverages with non-caffeinated ones that taste just like regular beverages.
- Replication of this study in other sectors as schools, with more emphasis on early correction of unhealthy habits among girls at young age.
- This area of research needs additional efforts in order to expand the evidence base on the association between caffeine and PMS.

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Nursing Prevention of Iron Deficiency Anemia (IDA) Among Infants in Gaza Strip

Dissertation for Doctoral Degree in Nursing Science-Community Health Nursing
Faculty of Nursing - Cairo University

By:
Hamza Mohammed Abdeljawad RN, BSN, MSN, DNSc.
Director of Quality, Palestine College of Nursing – Gaza, Palestine.

ABSTRACT

Anemia and specially iron deficiency anemia (IDA) is one of the most common disorders among children worldwide and Gaza Strip-Palestine is no exception, The aim of the study was three folds; to assess the level of hemoglobin among infants in Gaza Strip, to implement the developed educational program for prevention of IDA for infants' mothers, and to evaluate the effect of the program on mothers' knowledge and practice (K&P) as well as on infants' hemoglobin levels after implementing the program. Quasi-experimental design was used in this study, a non probability sample of 126 mothers with their infants were selected from Al-Rimal Clinic-MoH, and they served as control group for themselves for ethical reasons. Data were obtained through three main tools; self structured interviewing questionnaire for maternal K&P regarding IDA, review of medical records for hemoglobin and weight measurements, and structured self report on infant's 24-hour dietary recall that obtained through face to face interview with mothers. The main results two months after the program were: mothers K&P scores were significantly higher post program implementation (44.4) than before (38.7). Mean hemoglobin values were also significantly higher in post program compared to pre program status (11.1 vs. 10.7 g/dl), the prevalence of anemia (Hb < 11g/dl) was significantly lower post program (44.4% vs 60.4%). Compared to pre-program status; no significant differences were observed in the post program mean scores of the components of the 24-hour dietary recalls except for scores of foods that decrease iron absorption. The study concluded that the education program had a positive effect on mothers' K&P regarding IDA and hemoglobin levels of infants. The study recommended that nurses who work at the MCH clinics should effectively utilize their roles as educators and counselors to contribute to the prevention of anemia among infants in Gaza Strip, and to conduct further similar studies on larger, more representative sample of mothers with their infants in Gaza strip.

Key words: Iron deficiency anima - Prevention- Nursing

INTRODUCTION

Anemia among children is a worldwide health problem especially in developing countries and most common hematologic disorder of infancy and childhood. Anemia caused by an inadequate supply of iron is the most prevalent nutritional disorder and is the most preventable mineral disturbance.

Significance of the problem: prevalence of anemia among Gaza infants (more than 46%) along with poor socioeconomic status of Gaza population

(1). The study would be of great value for nursing practice, research, and education. This study will help in adopting an evidence based decision making regarding prevention of IDA among infants in Gaza Strip.

Prevention: Iron deficiency anemia can usually be prevented at low cost, and the benefit/cost ratio of implementing preventive programs is recognized as one of the highest in the realm of public health (2). Prevention can be achieved through optimum nutrition and appropriate iron supplementation. Prevention of iron deficiency anemia includes two main tracks; first is dietary modification and the second is by introducing iron supplementation. Failure to respond to treatment suggests poor compliance but also requires review of the child's health for further re-examination and consideration for further investigation (3). The role of the nurse in mother and child health (MCH) centers is promotion of nutritional status of infants and prevention of malnutrition through health education about nutrition, thus teaching mothers of anemic infants about selecting foods is a nursing responsibility (4).

Aims of the study: The study had three aims; to assess the level of hemoglobin among infants in Gaza Strip, to implement the developed educational program for prevention of IDA for infants' mothers, and to evaluate the effect of the program on mothers knowledge and practice (K&P) as well as on infants' hemoglobin levels after implementing the program; among those whose mothers attended the program at Al-Rimal Clinic.

Research hypotheses: (1) mothers' knowledge and practice regarding iron deficiency anemia among infants will be improved after being exposed to the proposed education program, and (2) infants' hemoglobin levels will be improved after exposing their mothers to the proposed education program.

Operational definition:

Anemic infant: Infant, whose hemoglobin is below 11 g/dl

MATERIALS AND METHODS

Study design: A quasi-experimental design (pre/post-test).

Sample: A non-probability sample of 126 infants and their mothers were selected from those who attended at Al-Rimal clinic to give their infants the measles vaccination at 9 months age. Infants who met the inclusion criteria at the time of data collection, and their mothers and who were willing to participate voluntarily in the study were recruited.

Inclusion Criteria:

Age of infant is 9 months, either anemic or not anemic, delivered full term and single , having medical record at the clinic, with no history of acute or chronic hemorrhage/blood loss, no history of malabsorption diseases, no history of blood or bone marrow disorder, no history of chronic illness, family has telephone access.

Setting of the Study:

The current study was conducted in Al-Rimal Clinic. It is a central primary health care center in Gaza City and belongs to the Palestinian Ministry of Health (MoH) and has laboratory services. Screening infants for anemia through hemoglobin level for all infants

at 9 months of age while attending the clinic to have the measles vaccination is a MoH policy.

Tools of the Study:

Structured interviewing questionnaire: that was developed by the researcher after reviewing the related literature. It covers three main parts:

1- Socio-demographic and historical data about infant, mother and family. Data were obtained through 22 questions in this part.

2- Pre/post-test about mother's knowledge and practice regarding breast feeding, complementary feeding of infants as well as IDA prevention among infants.

Review of medical records: for: 1- infant's hemoglobin measurement, 2- infant's body weight then plotted by the researcher on age for weight growth chart.

Structured self report on infant's 24-hour dietary recall: it was developed by the researcher for assessing quality of infants' feeding at the two times of data collection i.e. pre and post implementation of the educational program. This data was obtained through face to face interview of infants' mothers. The 24-hour recall consisted of all items consumed on the day prior to the interview. This dietary information allowed for the classification of meals according to iron, vitamin C, vitamin A, and iron inhibitors in the meal content.

All of these tools were used twice (pre & post the educational program).

Validity & Reliability: content validity of the tools was checked through distribution of the tools to experts in the field of study, for reliability the values of Cronbach's Alpha for the pre and post tests equal 0.809 and 0.826 respectively. In Split Half Method the values of Spearman-Brown Correlation Coefficient for the pre and post tests equal 0.886 and 0.824 respectively. Therefore, it can be said that the researcher proved that the questionnaire was valid and reliable.

Ethical Consideration: the present study was submitted to and approved by the Research Ethics Committee of the Faculty of Nursing – Cairo University, and in Gaza Strip permissions to conduct the study were obtained from the MoH officials and infants' mothers.

Procedures: approval from the Palestinian MoH officials in Gaza Strip was obtained to collect data and implement the program at Al-Rimal Clinic. Sample subjects were selected according to study inclusion criteria and based on their willingness to participate in the study. Mothers were informed about the research procedures before signing a written consent authorizing their participation in the study. Permission of participants was secured through face to face interview with mothers while attending the clinic for vaccinating their infants for measles. Written consent was obtained only from mothers whose infants met the inclusion criteria to participate in the study after explanation of confidentiality & right for withdrawal issues.

Statistics: using the SPSS software version 13, data entry then data cleaning was done. Computer program was used to perform the appropriate statistical analysis. Paired t-test was used for comparison between numerical variables and Chi square test was used for

comparison between categorical variables. A significance level was considered when P □ 0.05.

Limitations of the study: the researcher wasn't able to include another hematological or biochemical indicators beside hemoglobin measurement due to two main reasons; first the available policy at the clinic regarding type and procedures of infants' hemoglobin testing at 9 months of age, and any deviation from that could provoke mothers' rejection to withdraw blood from their infants; the second due to logistical reason since the clinic laboratory rejected to do another tests rather than hemoglobin due to lack of resources and staff. Also there are other factors that may cause anemia rather than iron deficiency, and these factors may contribute to less success of the program on the infants' hemoglobin levels.

RESULTS

About 80% (126) of mothers and their infants completed the program. Out of those infants 51.6 % were females and 48.4 % were males. The majority of mothers' years of education were 10-12 years. Most of the fathers of infants of the study sample (80.3%) were working compared to 5.7% of mothers. More than quarter of mothers (27.8%) reported that the average monthly income of their families ranged between less than 130 to 260 USD. Less than two thirds of families (60.3%) reported that their income was sufficient for the family needs. Most of infants (60.3%) were living in nuclear families, 41.3% have 4-6 family members living in the same household, 40.5% of the families have 4-6 family dependants, more than one third of infants (34.9%) had 3-4 siblings. At time of data collection 90.5% of infants' mothers were not pregnant; 48.4% of infants' mothers had anemia during their pregnancy with their last infants. Also 54% of the infants' mothers always received iron supplementation and 19.1% never received it while being pregnant with their infants. About 51.6% of mothers exclusively breastfed their infants for 4 months or less, while 8.7% of mothers gave exclusive breastfeeding for 8 months and more.

Table 1: Total mean scores of mothers' knowledge and practice regarding infants' feeding in the pre & post program

Type of knowledge & practices	Pre implementation score - X ± SD	Post implementation Score - X ± SD	t-test	P-value
Breast feeding (score of 10)	7.04 ± 1.41	7.56 ± 1.24	- 3.988	0.000 *
Complementary and IDA prevention and management (score of 70)	31.6 ± 4.17	36.98 ± 5.56	- 7.69	0.000 *
Total (score of 80)	38.7 ± 4.5	44.4 ± 5.9	- 9.72	0.000 *

P* 0.001

As shown in table (1) the difference between pre & post program total mean scores of mothers' knowledge and practices regarding breastfeeding, complementary foods and IDA prevention were statistically significant (t = -3.988, - 7.69, - 9.72, P 0.000).

Table 2: Comparison between pre & post program regarding infant's 24-hour dietary means

24-hour dietary recall contents	Pre-implementation - X ± SD	Post implementation - X ± SD	t-test	P-value
Number of dietary meals	2.7 ± 1.17	2.9 ± 1.13	- 1.54	0.13
Number of breastfeeding	6 ± 4.27	6.5 ± 5.6	- 1.02	0.71
Number of other milk feeding	1.2 ± 1.77	1.2 ± 1.76	0.27	0.78
Score of iron rich foods	0.98± 0.96	1.16 ± 1.04	- 1.42	0.157
Score of vitamin C rich food	0.74 ± 0.93	0.78 ± 1.2	- 0.29	0.76
Score of foods decrease iron absorption.	1.29 ± 1.16	1.62 ± 1.10	- 2.48	0.01*
Score of vitamin A rich food	1.98 ± 0.99	2.08 ± 1.09	- 0.88	0.37

P* 0.05

In table (2) there were slight improvement of all means about quality and quantity of dietary intake of infants in the last 24 hours. However, only significant difference was found regarding foods that decrease iron absorption (t= - 2.48, P= .01).

Table 3: Comparison between infants means of hemoglobin & weight values in the pre & post program

Program's implementation status	Mean ± SD	t-value	P-value
Hb (Pre-implementation)	10.7 ± 1.1	- 3.43	0.001 *
Hb (Post-implementation)	11.1 ± 0.9		
Wt in grams (Pre-implementation)	8666 ± 1212.2	- 0.819	0.415
Wt in grams (Post-implementation)	9704.8 ± 1812		

* P ? 0.01

As shown in table (3) the mean difference of hemoglobin values among infants were statistically significant after program implementation at t= -3.44, P =0.001; while there were no statistically significant difference in the means of weight.

Table 4: Anemia status of infants in pre and post program implementation status

Anemia status	Pre		Post		Chi-square	*p*-value
	no	%	no	%		
No anemia (Hb 11 gm or more)	50	39.7	70	55.6	9.414	0.009*
Mild anemia (Hb 9-10.9 gm)	69	54.8	55	43.6		
Moderate anemia (Hb 7-8.9 gm)	7	5.5	1	0.8		
Total	126	100	126	100		

***P □ 0.01**

In table (4) there was obvious increase in the health of studied infants as in the post test 55.6% had no anemia, the mild anemia decreased in the post test from 54.8% to 43.6% & moderate anemia was present in the pre program among 5.5% & only in 0.8% in the post program, the findings were statistically significant to post program status (Chi-square = 9.414, P-value = .009).

DISCUSSION

The study aimed to assess the level of hemoglobin among infants in Gaza Strip, to implement the developed educational program for prevention of IDA for infants' mothers, and to evaluate the effect of the program on mothers knowledge and practice (K&P) as well as on infants' hemoglobin levels after implementing the program. Research hypotheses included: : (1) mothers' knowledge and practice regarding iron deficiency anemia among infants will be improved after being exposed to the proposed education program, and (2) infants' hemoglobin levels will be improved after exposing their mothers to the proposed education program.

Regarding family income more than quarter of mothers reported that the average monthly income of their families ranged from less than 130 to 260$; while slightly more than half of families their income was below the poverty line (2 USD/day) based on the mean family size of 6 members in Gaza Strip according to Palestine Central Bureau of Statistics (PCBS) (5). These findings match with Ghosh who studied vitamin and mineral deficiency diseases, and found that many infants become iron-deficient specially in those with low socioeconomic group household where meat, egg, and fish are eaten rarely (6). More than half of infants were anemic; the vast majority of them were having mild anemia, while the minority had moderate anemia. The study findings come along with what Dudek mentioned that the incidence rate of IDA among high risk populations may be as high as 10 % – 50 % with most vulnerable groups of infants younger than 2 years of age (7). Also the findings of the study agree with the findings of Halileh who studied the determinants of anemia among 6-59 months children in the occupied Palestinian territory (oPt) and found that, there was more vulnerability of anemia among children less than 24 months age and living in the Gaza Strip (8).

Regarding the 24-hour dietary recall of infants in the post program, there were slight improvement of all means about quality and quantity of dietary intake of infants. However only statistically significant difference was found regarding foods that decrease iron absorption like tea & dairy products with iron rich meals. These findings were supported by Wong who mentioned that IDA caused by inadequate supply of iron from impaired absorption from presence of iron inhibitors like tea and dairy products (9).

The study findings supported the research hypotheses regarding improving hemoglobin level of infants after exposing their mothers to the educational program; since the mean difference of hemoglobin values among infants were statistically significant after program implementation. In the post program, more than half of infants had no anemia and moderate anemia nearly disappeared. Regarding mild anemia, it was decreased by 11.2% post program. In this context, these positive findings of implementing the education program including the iron supplementation part support Behrman & Kliegman who mentioned that if the dietary history suggests iron deficiency, a therapeutic trial of iron is appropriate with or without laboratory confirmation (10). While for those whose hemoglobin level did not improve, they are in need for what Hockenberry mentioned that if the hemoglobin level fails to rise after 1 month of oral iron therapy, it is important to assess for persistent bleeding, iron malabsorption,

noncompliance, improper iron administration, or other causes of anemia (11).

From the point of view of the investigator the overall positive findings of the study regarding mothers K&P for feeding infants due to the role of mothers in improving infant's health.

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Impact of teaching the process of normal labour by audiovisual materials on raising the student's learning level

Manal F.Moustafa[1],GhadahA.Mahmoud[2]
Obstetrics and Gynecological Nursing, Faculty of Nursing Assuit University Egypt

Abstract:
More than three quarter of students prefer multimedia methods of teaching process of labour and the majority of them(91.8%) prefer multi method media for gaining & understanding knowledge & gaining practical skills.Also found the majority (96.4%) have satisfactory Knowledge about process of labour post use Audiovisual aids in teaching process of labour

Aim of the study:
To assess the impact of teaching the process of normal labour by audiovisual materials on raising the student's learning level at bthe Faculty of Nursing, Assiut & South Valley University, Egypt.

Subject and Methods:
Aquasi- experimental group pretest & post test design was carried out on a sample of 110 students considered the all third year nursing students in both Faculty of nursing in Assuit South Valley (80 & 30 students) respectively in the second semester who will study the teaching course of the process of labour in
year (2009-2010) . Data was collected through self administered questionnaire sheet as pre & post test to collect the necessary data.

Result: The mean age of students was19.7 ± 0.8 years. More than three quarter (75.5%) of students preferred multimedia methods of teaching and the majority (91.8%) of them preferred use multi teaching method for gaining and understanding Knowledge & practical skill. There were statistically significant association revealed between the pre & post test after use AVA in teaching labour process, finally more than half (67.3%) of them reported that AVA fixes the information

Conclusion: The study recommended that Audiovisual aids (AVA) could be a better option over didactic Lecture to teach our undergraduate students.
Keywords: **AVA:** Audio visual Aid

Introduction:
Labour and birth is one of the most exciting and anxious time not only for the parturient woman but also for the new nursing student. To be good midwives, nursing students must comprehend what are the normal progress of labour as well as doing prognosis of the childbearing woman (1) normal or what deviate from the regular parameters They also have to know how to Understanding factors affecting the process and mechanism of labour is one of the important principles for providing care for childbearing women either in normal or abnormal deliveries (2). These subjects are difficult for nursing students, especially, Thai nursing students who acquire such knowledge mainly from lecture and tutorials, which cannot provide adequate understanding. A demonstration with a static plastic model is given only once due to constraints in budget and staff. Moreover, there is a wide gap between theory and practice. (1) The overall preference of students was distributed

equally between blackboard teaching and multimedia teaching, this is an interesting finding because the literature suggests that students prefer computer-assisted teaching modalities (3) A key issue in training nursing students is developing patient care skills. Nursing students need to learn how to make clinical judgments of patients' needs and be able to communicate this knowledge in an appropriate way. (1) & (4). Recent research has used simulation as part of patient health care with varying degrees of success (5) (6) (7) (8) & (9). They concluded that improved performance was associated with watching videotaped vignettes. (4). ''Large class sizes, repeating lectures and increasing workloads'' The challenges in nursing undergraduate programs can be addressed and enhanced with the use of new technologies. (10). A nursing education is developing basic clinical skills prior to actual patient care. The importance of practice learning has been increasingly recognized as a way to improve nursing skills. Clinical nurse educators have pointed out that novice nurses cannot provide the correct nursing care to patients until they have received sufficient practical training during the orientation period (11) & (12). Nurses also complain that they cannot remember the large amounts of knowledge which were taught in their school of nursing (13). Thakore and McMahon (2006) (14) suggest that developing an effective multi-media module consists of four phases: Identifying the educational objective designing the content, building or creating multimedia material that is relevant to the educational objective. The evaluation and integration of the e-learning module into the curriculum.

The aim of the study

To assess the impact of teaching the process of normal labour by audiovisual materials on raising the student's learning level at the Faculty of nursing Assuit & South valley University, Egypt

Subjects & Methods

Research Design

A quasi- experimental group pretest & post test design was used in carrying out this study

Setting:

This study was conducted in Faculties of Nursing at Assuit & South valley university Egypt.

Population &Sample:

The sample comprised 110 3rd year nursing students in both Faculty of nursing in Assuit & South Valley (80 & 30 students) respectively in the second semester who were study the teaching course of the process of labour in year (2009-2010) The students were told the purpose of the study and explanations given for the tasks to be performed.

Procedure

An official permission was obtained from the dean of the faculty of nursing ,Assuit and south vally University ,Egypt after explanation of the aim of the study and its reflection on developing the clinical teaching methods at the faculty . At the end of teaching semester, the investigator gave every student a questionnaire to be filled about their sociodemographic characteristics and the main data related to the clinical teaching session about the process of labour to clarify her opinion about the benefits of the use of different audiovisual methods in teaching the session of the process of normal labour and which is the best

method from the point of view of the students.Finally the pre and posttest was answered by the same students to clarify the level of understanding about the process of normal labour presented by the audiovisual methods.Pretest was done before starting the audiovisual session about the process of normal labour.The time of filling out the pretest was 15 to 20 minuts to finished .The total number of sessions was six. Every session had 15 to 20 students and is took one hour for explaining the scientific videos related to the process of normal labour .After finishing the session, the students filled out the post test to explor their knowledge after the audiovisual sessions.

Tools of data collection

A specially designed through self administered questionnaire sheet was developed by the researchers to collect the necessary data, to be filled from all 3rd year
nursing students who will study the teaching course of the process of labour .It was based on review of related literature and reviewed by experts from nursing obstetrics & Gynecological nursing specialties.
This questionnaire include 7 sections

The first section was concerned with personal data or Sociodemographic Characteristics**,** such as age, group ,residence **The second section** was about Data related to the clinical teaching session about the process of labour (The number of the group, the code of the group, the time of the session, the duration of the session, the different methods of teaching the session of the process of normal labour, the preferred teaching method from the point of view of the student, the benefits of the use of different audiovisual methods in teaching the session of the process of normal labour **The third section** was related to The student s Knowledge about 1st stage of labour e.g. ,(latent ,active ,transitional, phase physiological changes, bag of water ,show & management of 1st stage of labour etc…..).**The fourth section** was Knowledge about the second stage of labour such as e.g.(cervical dilatation & effacement ,crowning ,station ,mechanism of normal
labour & its management etc….).**The fifth section** was knowledge about the 3rd stage of labour e.g.(signs and symptoms& different methods of placental separation, & placental
examination etc…..)**The six sections** was knowledge about 4th stage of labour e.g. (examination of vagina, APGAR scores immediate management etc……) **the seven section** included the benefits related to the students from using audiovisual aids in teaching.

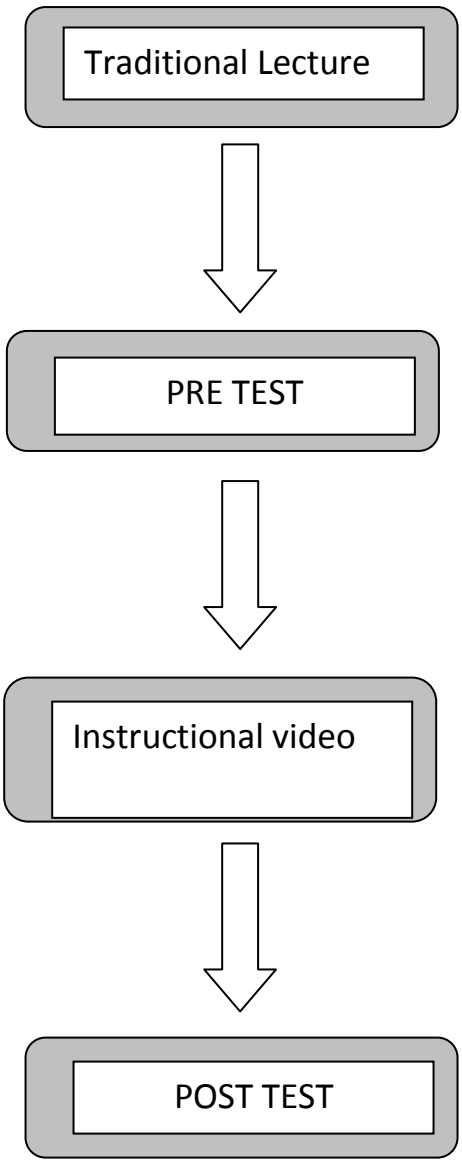
Pilot Study:

After the development of the Tool a pilot study was carried out on 10% of the 3rd year nursing students before implementing of the study to test the clarity and calculate the time needed to fill full the necessary data of the questionnaire and the necessary modifications were done based on the result of the pilot study. The result of the pilot study indicated that the statements of the questionnaire were clear, relevant & few statements had to be modified .The study was carried out during the period from Feb 2010 to May 2010.

Ethical considerations:

Before implantation of the study as official permission obtained for the Dean of the Faculty of Nursing Assuit & Qena University after full explanation of the aim of the study .The study was approved by the Faculty ethical committee & was carried out for the students. There were no risk can affect the students during the application of the study. Informed consent was obtained from each student before their participation of the study. All nursing students have singed the consent to participate in this study.

Research process



Data analysis:

Data were analyzed using the statistical package for social science (SPSS) version 16, Chi-square, T test ,p values **<0.05** were considered to be statistically significant. Scoring for the knowledge items in section 3, 4, 5, 6&7 correct response was scord 1 and the incorrect zero .For each section the scores of the items were summed – up and the total divided by the number of the items, giving a mean score for the section .These scores were converted into a percent score, and means standard divisions were computed .The student knowledge was considered satisfactory if the percent score was 60% or more and unsatisfactory if less than 60%

Results:

The socio- demographic characteristics of nursing students in the study sample (n=110) are presented in **table (1)** the mean age of nursing students were 19.7±0.8 years. As regard group there are 72.7% of sample from Assuit Faculty of nursing and 27.3% from Quena faculty. As regard residence, about around half (52.7%) were living in urban areas while (47.3%) from rural area

Table (2) describes the methods of teaching normal labour reported by nursing .It was found that more than half (64.5%)teaching labour by lecture, while found (75.5%) preferred multiple methods of teaching, and the majority of them (91.8%) considered gaining knowledge & practical skills as the main benefits of using multiple teaching methods

Table (3) show the Impact of using AVA in teaching 1st stage of labour on studied sample s knowledge it was found that (79.1%) of student define translational phase of labour if compare by. (100%) post use audiovisual with statistical significant p value (<0.001*).But about shelfing & engagement of the head it was found that (69.1%)pre using audiovisual if compare by the majority of them (99.1%) in post with statistical significant p value (<0.001*) Also for servical ripening it was found that (68%)pre while become (99.1%) in post with statistical significant p value (<0.001*).And for bag of water it found that (67%) of student pre if compare by (100%) in post use audiovisual aid

Table (4). Show the Effectiveness of teaching the Second stage of normal labor to nursing students using audiovisual aids. It was found that (64.5%) of student in pre define crowning if compare by (99.1%) of them in post use audiovisual aids ,Also it was found in pre less than half (49.1%) of student Know the mechanism of station at different level if compare by (98.2%) in post use the audiovisual aids Regarding for the internal rotation of the head it was found that around the half of them (57.3%) in pre if compare by (99.1%) in the post .But for extent ion of the head less than half (46.4%) of student in pre and increase to (99.1%) in post. And for the internal rotation of the head found that (52.7%) of student in pre if compare by (99.1%) in the post, with statistical significant p value (<0.001*) in all items

The study revealed that **Table(5)** describe the.Effectiveness of teaching the third and fourth stages of normal labor to nursing students using audiovisual aids, it was found that more than half (64.5) of student in pre know supra pubic bulging if compare by (100%) post use audiovisual, Also for the Duncan method of placental separation found that (58.2%) of student in the pre developed to (99.1%)in the post use .As regard the number of cotyledons in placenta examination around the half (54.5%) in pre if compare by (99.1%) in post, with statistical significant p value (<0.001*) in all items

Table (6) show) Total effectiveness of teaching normal labor to nursing students using audiovisual aids show in pre use audiovisual aids only (13.6%) of student had satisfactory knowledge if compare by (96.45%) in post use audiovisual aids with statistical significant p value (<0.001*) in all items.

Table(7) show the comparison of pre-intervention Knowledge about normal labor among nursing students according to group no significant between satisfactory knowledge for the student in pre for the different stage of labour (12.5%- 16.7%) for Assuit & Qena respectively

Table (8). Comparison of post- intervention Knowledge about normal labor among nursing according to group students show no significant between the knowledge for the students in post for the different stage of labour (95.%& 100%) for Assuit & Qena respectively

Table (8) Comparison of post- intervention Knowledge about normal labor among nursing students according to group Show no significant between satisfactory knowledge for the student in post for the different stage of labour (95.0 % and 100%) for Assuit & Qena

Table (9). Comparison of pre- intervention Knowledge about normal labor among nursing students according to residence Show no significant between satisfactory knowledge for the student in pretest for the different stage of labour (15.5 % and 11.5%) For Assuit & South Valley respectively.

Table (10) Comparison of post- intervention Knowledge about normal labor among nursing students according to their residence Show no significant between satisfactory knowledge for the student in post for the different stage of labour (15.5 % and 11.5%) for Assuit & Qena respectively

Table (11) reported the Benefits gained from teaching normal labor by using audiovisual aids as reported by nursing students after the intervention (n=110). identified that more than half of the student (67.3%) mention the audiovisual aids fixes the information, Also found nearly of this percent (62.7%) of the student Gaining and understanding the information by videos is better than the lecture only, and found half of the student (50%) mention that audiovisual aids make the information more understandable and easier &fantastic.

Table (1) Characteristics of nursing students in the study sample (n=110)

Items	Frequency	percent
Age		
< 20	**45**	**40.9**
20+	**65**	**59.1**
Range	**20.0-22.0**	
Mean±SD	**19.7±0.8**	
Faculty name		
Assiut	**80**	**72.7**
Qena	**30**	**27.3**
Residence :		
Urban	**58**	**52.7**
Rural	**52**	**47.3**

Table (2) Methods of teaching normal labor and related benefits as reported by nursing students in the study sample (n=110)

Items	Frequency	percent
Methods of teaching used for normal labor :		
Lecture	**71**	**64.5**
Audiovisual aids	**6**	**5.5**
Multiple methods	**33**	**30.0**
Methods of teaching preferred for normal labor:		
Lecture	**2**	**1.8**
Audiovisual aids	**22**	**20.0**
Simulation	**3**	**2.7**
Multiple methods	**83**	**75.5**
Benefits of using multiple teaching methods:		
Gaining understanding knowledge	**7**	**6.4**
Gaining practical skills	**2**	**1.8**
Both	**101**	**91.8**

Table (3): Impact of using AVA in teaching 1st stage of labour on studied sample s knowledge.

First stage	Time				X2 Test	p-value
	Pre (n=110)		post(n=110)			
	No	%	No	%		
1- The definitions of :						
* Latent phase (0-3 cm)	93	84.5	110	100.0	18.42	<0.001*
*Active phase (3-8 cm)	93	84.5	110	100.0	18.42	<0.001*
*Transitional phase (8-10cm)	87	79.1	110	100.0	25.69	<0.001*
2-The prodromal signs of labour:						
Shelfing	76	69.1	108	98.2	34.01	<0.001*
Lightening	79	71.8	109	99.1	32.91	<0.001*
Engagement of the head	76	69.1	109	99.1	37.00	<0.001*
3-physiological changes:						
*contraction and retraction of the uterine contraction	77	70.0	110	100.0	38.82	<0.001*
*Cervical ripening (effacement)	68	61.8	109	99.1	48.59	<0.001*
*Show	80	72.7	110	100.0	34.74	<0.001*
*Bag of fore water	67	60,9	110	100.0	53.45	<0.001*
*Dilatation of the cervix	85	77.3	110	100.0	28.21	<0.001*
Management of the first stage	91	82.7	110	100.0	20.80	<0.001*

(*)Statistically significant at p<0.05

Table (4). Effectiveness of teaching the Second stage of normal labor to nursing students using audiovisual aids

Second stage	Time				X2 Test	p-value
	Pre (n=110)		post(n=110)			
1- The definitions of :#	No	%	No	%		
*Cervical dilation	83	75.5	109	99.1	27.66	<0.001*
*Cervical effacement	72	65.5	109	99.1	42.67	<0.001*
*Crowning	71	64.5	109	99.1	44.12	<0.001*
2- The mechanism of bearing down	68	61.8	109	99.1	48.59	<0.001*
3-The mechanism of station at different levels	54	49.1	108	98.2	68.28	<0.001*
4- The mechanism of normal labour:						
* Engagement	73	66.4	109	99.1	41.23	<0.001*
*Complete flexion of the head	71	64.5	109	99.1	44.12	<0.001*
*Internal rotation of the head	63	57.3	109	99.1	56.39	<0.001*
*The extension of the head	51	46.4	109	99.1	77.09	<0.001*
*Restitution	42	38.2	103	93.6	75.28	<0.001*
*The internal rotation of the shoulder	58	52.7	109	99.1	64.65	<0.001*
*The external rotation of the head	62	56.4	109	99.1	58.00	<0.001*
*Delivery of the shoulder and the body	73	66.4	108	98.2	38.18	<0.001*
*Management of the second stage of labour	89	80.9	109	99.1	20.20	<0.001*

(*)Statistically significant at p<0.05
 # More than one answer

Table (5).Effectiveness of teaching the third and fourth stages of normal labor to nursing students using audiovisual aids

Third stage	Time				X2 Test	p-value
	Pre (n=110)		post(n=110)			
1- The third stage of labour: #	No	%	No	%		
*Globular ,smaller and harder uterus	73	66.4	110	100.0	44.48	<0.001*
*Supra-pubic bulging	71	64.5	110	100.0	47.40	<0.001*
*Gush of blood from the vagina	83	75.5	110	100.0	30.78	<0.001*
*Elongation of the umbilical cord	81	73.6	110	100.0	33.40	<0.001*
*Loss of pulsation of the cord	78	70.9	110	100.0	37.45	<0.001*
2- Different methods of placental separation						
*Schultz's method	67	60.9	109	99.1	50.11	<0.001*
*Duncan's method	64	58.2	109	99.1	54.79	<0.001*
3- The placental examination						
*The maternal surface	68	61.8	110	100.0	51.91	<0.001*
*The number of cotyledons	60	54.5	109	99.1	61.29	<0.001*
*The fetal surface	70	63.6	110	100.0	48.89	<0.001*
*The umbilical cord	76	89.1	110	100.0	40.22	<0.001*
4- Management of the third stage of labour, The fourth stage of labour						
*Examination of the vagina for perineal tears	96	87.3	110	100.0	14.5	<0.001*
*Immediate newborn examination (APGAR score)	79	71.8	107	97.3	27.27	<0.001*
*Physical examination	90	81.8	110	100.0	22.00	<0.001*
*Immediate postpartum management	88	80.0	110	100.0	24.44	<0.001*
	86	78.2	109	99.1	23.87	<0.001*

(*)Statistically significant at p<0.05

#more than one answer

Table (6) Total effectiveness of teaching normal labor to nursing students using audiovisual aids

Satisfactory Knowledge (60%)	Time				X2 Test	P-value
	Pre(n=110)		Post(n=110)			
	No	%	No	%		
Stage1	22	20.0	103	93.6	121.55	<0.001*
Stage11	9	8.2	103	93.6	160.71	<0.001*
Stage111	27	24.5	106	96.4	118.66	<0.001*
Stage1V	34	30.9	100	90.9	83.16	<0.001*
Total Knowledge -Satisfactory -Unsatisfactory	15 95	13.6 86.4	106 4	96.4 3.6	152.08	<0.001*

(*)Statistically significant at p<0.05

Table7. Comparison of pre- intervention Knowledge about normal labor among nursing students according to group

Satisfactory Knowledge (60%)	Group				X2 Test	P-value
	Assiut(n=80)		Qenna(n=30)			
	No	%	No	%		
Stage1	13	16.3	9	30.0	2.58	0.11 NS
Stage11	7	8.8	2	6.7	Fisher	1.00 NS
Stage111	20	75.0	23	76.7	0.03	0.86 NS
Stage1V	23	28.8	11	36.7	0.64	0.42 NS
Total Knowledge -Satisfactory -Unsatisfactory	10 70	12.5 87.5	5 25	16.7 83.3	Fisher	0.55 NS

NS: not significant

Table (8). Comparison of post- intervention Knowledge about normal labor among nursing students according to group

Satisfactory Knowledge (60%)	Group				X2 Test	P-value
	Assiut(n=80)		Qenna(n=30)			
	No	%	No	%		
Stage1	74	92.5	29	96.7	Fisher	0.67 NS
Stage11	75	93.8	28	93.3	Fisher	1.00 NS
Stage111	76	95.0	30	100.0	Fisher	0.57 NS
Stage1V	71	88.8	29	96.7	Fisher	1.00 NS
Total Knowledge -Satisfactory -Unsatisfactory	76 4	95.0 5.0	30 0	100.0 0.0	Fisher	0.57 NS

NS: not significant

Table 9. Comparison of pre- intervention Knowledge about normal labor among nursing students according to residence

Satisfactory Knowledge (60%)	Residence				X2 Test	P-value
	Assiut(n=58)		Qenna(n=52)			
	No	%	No	%		
Stage1	11	19.0	11	21.2	0.08	0.77 NS
Stage11	6	10.3	3	5.8	Fisher	0.50 NS
Stage111	12	20.7	15	28.8	0.98	0.32 NS
Stage1V	18	31.0	16	30.8	0.00	0.98 NS
Total Knowledge -Satisfactory -Unsatisfactory	9 49	15.5 84.5	6 46	11.5 88.5	0.37	0.54 NS

NS: not significant

Table (10) Comparison of post- intervention Knowledge about normal labor among nursing students according to their residence

Satisfactory Knowledge (60%)	Residence				X2 Test	P-value
	Urban(n=58)		Rural (n=52)			
	No	%	No	%		
Stage1	54	93.1	49	94.2	Fisher	1.00 NS
Stage11	57	98.3	46	88.5	Fisher	0.051 NS
Stage111	55	94.8	51	98.1	Fisher	0.62 NS
Stage1V	50	86.2	50	96.2	Fisher	0.10 NS
Total Knowledge -Satisfactory -Unsatisfactory	56 2	96.6 3.4	50 2	96.2 3.8	Fisher	1.00 NS

NS: not significant

Table (11) Benefits gained from teaching normal labor by using audiovisual aids as reported by nursing students after the intervention (n=110)

Benefits of using audiovisual aids for students	Frequency	Percent
* The audiovisual aids put me in real situation	41	37.3
* It reviews the content of lecture	20	18.2
* It increases may knowledge	52	47.3
* It fixes the information	74	67.3
* It makes the information more understandable ,easier & fantastic	55	50.0
* Gaining and understanding the information by videos is better than the lecture only	69	62.7
*It brakes the barriers of fear between the theoretical and clinical field	36	32.7
*I will never forget the information after using seeing it	51	46.4
*other	16	14.5

Discussion

Nursing teachers have conventionally been using different teaching methods to educate nursing students previously dominated by black board and slide projectors. More recently audiovisual such as videotapes and multi media have been introduced. Traditionally, the main function of the nurse educator was to provide facts to students this traditional method of nurse education focused on the cognitive domain and the ecquisition of cognitive skills. Provision was only made for formal evaluation in a normal directed manner. (15)

Technological advances and the introduction of outcomes- based education opened anew world of knowledge, which meant that the nurse educator no longer had all the information about a specific subject .This lead to a change in the role of the nurse educator, from lecturer to learning facilitor. The function of the learning facilitator covers psychomotor, cognitive and effective domains. Accordingly, the evaluation of learners is now criterion-directed, and evaluates all three domains.

Lectures are the most traditional, old fashioned and didactic method of teaching. They may be interrupted by questions and perhaps even some discussion, but usually they are a one way delivery of information. (16 &17)

The function of the nurse educator is to assist guide the learner to achieve personal and professional's development in all three domains (18). Video streaming (also known as web casting) refers to video that is stored on the web and available at any time for users to view (19).It has been used increasingly in higher education in the areas of nursing) medicine social work economics earth science and engineering information(20,21,22,23,24,25,26,27&28)

The Bridge the gap between the different types of learners by adding audiovisual aids to your teaching techniques. Since most people are visual learners, it's important to go beyond spoken words when educating students (21)

The aim of the present study is to assess the impact of teaching the process of normal labour by audiovisual materials on raising the student's learning level at the Faculty of nursing Assuit & South valley University, Egypt.

The study was carried out on a sample of student with mean age 19.7±0.8 .The finding of the present study have shown that more than half (64%) of students reported that the Lecture is a method of teaching normal labour , this result agree with Richardson(2008) (30), who mentioned that lectures are the most traditional old fashioned &didactic method of teaching ,they may be interrupted by questions & some discussions can cover large amount of theoretical information & useful with large number of learners at one time. While this study disagree with Golden (1989) (31) who mentioned that the major limitation of lectures is that the listener passively receives the material &feels bored& sleepy.

This result disagree with Nantz,KS.(1998) (29) who tell the old model of lectures & note taking has been found to be unsuccessful in making efficient use of faculty time for allocating information to large groups of learners.

More than three quarter (75.5%) of students prefer multimedia methods of teaching process of labour and found majority (91.8%) of students prefer use multi teaching method for gaining understanding Knowledge & gaining practical skill. This result agree with MC Convilleet (2005) (2) who suggest that the combination of theoretical information delivered in lectures & viewing examples of patient care skills on video provided students with a much clearer understanding of task difficulties than what could have been achieved through a traditional lecture based only approach. Also (Mohan L. 2010) & (Baxi SN 2009) (32&33) see that the understanding of topics is best possible with a combination & support of audiovisual aids including a black board, white board, while the second best option was power point presentation and also was agree with (shah HK 2006) (34) who mentioned that the students showed a preference for the use

of a combination of visual aids during the didactic lectures.

The finding similar was result of Smith et al (2006) (35) who mentioned that instructional videos are at least as effective as face to face demonstration for teaching psychomotor skills .Written examination scores showed no significant difference in the two teaching methods.

The majority of students (96.4%) have satisfactory knowledge about process of labour post use Audiovisual aids in teaching labour process , This study revealed to that statistically significant association were revealed between the pre & post test after use audio visual aids ,video clip in teaching the process of labour , This result agree with McGrath et al 2005) (36) who reported that the development of the video clips facilities an additional method of delivery &importantly ,allows students to observe simulated real life scenarios repeatedly. Also similar with (Alinier et al 2004 & Cioffi 2001) (37&38) they reported that suggests that students can learn by watching appropriate video taped session. This result confirmed with study with (MC Lonrvill 2006, & Freeman & copper 2000) (2&39) who tell that technology supported learning has been found to benefit students who struggle to attend face to face lectures & those who are visual rather than auditory learners. Also help students adopt deeper approaches & learn because they feel less inhibited than if had to participate in role play in front of large class. Also agree with (Kaveevich et al 2009) (40) who has mentioned that multimedia (AVA) is one of teaching tools or replace the traditional classroom practice Also multimedia can assist in learning vital signs & basic critical care & can meet all the competency requirements. And with Jeffres 2005-Darozewsks 2004-Lepper 2009-justhan&Timman 2oo5-Kensy 2002) (1, 41,42,43,&44) reported that several studies have suggested that the learner preferred sensory processing modes visual ,auditory or motor manipulation. This result also similar with (Yoo, MS 2009) (45) who is mentioned that teaching by videos weaknesses in their non verbal behavior such as gestures & facial expression. Also (Kenny2002-& Buckley 2005) (46&47) reported that online discussion has been regarded as an effective learning tool, offering several advantages over traditional classroom. Braungart 2003 (48) mentioned that studding only from textbooks may not be enough; the students may have to use imagination as to what happens inside the uterus. Moreover, each student comes up with different interpretations depending on her prior Knowledge & misconceptions.

On the other hand the result of this study conversely with (Greedy 2007) (49) who report that audiovisual on line learning need better self discipline & computer skills .Also feel disconnected from their class members, and the students were frustrated with the computer technology & need more technical support .Also with O'Neil Fisher 2008 (50) who shown that alack of technology & computer experience is a barrier to success in on line course. The present study mention that student prefer AVA as teaching method but still not available in all Faculty of Nursing.

The significantly higher in posttest in our study result of factual knowledge in all nursing students is due to improved nursing knowledge on the process & mechanism of labour than traditional lecture, This agree with Rouse 2000 (51) who mentioned that graphics animation in video clip help clarify the content & promote, appreciation of complexity of the process & mechanism of labour. Also Gerdprast 2009 & Kenny 2002 (1&46) reported from several studies has suggested that the learner preferred sensory processing modes, visual auditory or motor manipulation.

In present study found that nursing students reported that there are benefits from teaching normal labour using audiovisual aids more than half (67.3%) of them reported that AVA fixes the information, this congruence with Singh Arjun (2011) (52) who mentioned that AVA definitely helps in understanding of subjects & long term retention of memory

.Kenny(2002) (46) mentioned that the students found it easy to access the videos & understood the instruction Also could watch the videos & whenever they wanted is tempered by this finding.

Also found that more than half of nursing students (62.7%) mentioned that gaining & understanding the information by videos is better than the lecture only, also found half (50%) of student mentioned that the AVA makes the information more understandable, easier& fantastic .This agree with Singh A (2011) (52) who mentioned that most students were in favor of the new methods of teaching & they strongly preferred it to didactic teaching. Also with Kelly, M (2009) (53) who mentioned that the maximum benefit of visual aids is obtained only in conjunction with a well structured lecture, comparison of the recall of visually & verbally presented lecture information has shown a clear superiority of visual information over verbal information for both immediate& long term recall students favor teaching methods employing audiovisual aids over didactic lectures without using these aids.

This result congruence with zick et al (2007) (54) who mentioned that video based self assessment can improve the clinical skills of students nurse. Also it is a teaching method shown to have a high level of student satisfaction .,and with Abutarbush 2006-Jowett& coworkers 2007 (55&56) who mentioned that AVA helps students to develop clearer understanding of the topics also reported that improvement in their decision making through self assessment for the student. Also AVA benefit in revision and assessed in the competence in the end of semester OSCE. Also the result agree with Epstein et al (2003) (57) investigated students satisfaction with video projects on a medical – surgical nursing course and the students reported that using video was a fantastic & dramatic experience.

In our study found (37.3%) of student mentioned that use AVA put him in real situation ,this result agree with Abraham 2008 & McConville 2006 (1&58) who mentioned that video clips that simulate real- life scenarios likely to be encountered by nurses during their training and then throughout their career. Also we use different methods to train our undergraduate's students & AVA definitely helps in the understanding of subjects & long term retention of memory.

Conclusion

In the light of the present study findings it can be concluded more than half of students mentioned that the lecture is the method of teaching normal labour. Although more than three quarter of students prefer multimedia methods of teaching and found majority of students prefer use multi teaching method for gaining understanding Knowledge & gaining practical skill Significantly higher in post test in our study ,The majority of students have satisfactory Knowledge in post test , With also statistically significant association were revealed between the pre & post test after use AVA in teaching labour process, finally students reported that there are benefits from teaching normal labour using audiovisual aids more than half of them reported that AVA fixes the information use audiovisual aids (AVA) has significant practical applications in nursing education since specially in learning process of labour for the third student of nursing, The students opinion about the use of audiovisual aids during didactic lectures was favorable for help him to develop clearer understanding of the topics also the video was assessed in their competence in the end of semester .And they have many benefit.

Recommendation

Use Multi media has been shown to be effective for classes with students from back ground, Video clips that stimulate real life scenarios likely to be encountered by nursing during their training & then through their carrier& also successfully increase self efficacy to deal with situation. Video material provides students the opportunity to re visit the clips as many times as they wish out side of the classroom environment More research is needed to evaluate the effectiveness of video, based on self assessment on performance of the clinical skills. Audiovisual aids (AVA) could be a better option over

didactic Lecture to teach our undergraduate students where we have high student to teacher ratio.

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Impact of kegel's exercise on reducing post partum stress urinary incontinence.

Entisar M. Youness[1], Eman R. Ahmed[1], Ghadah A. Mahmoud[1],& Safwat Abdel-Rady Mohammad[2].

[1]Department of Obstetrics and Gynecological Nursing, Faculty of Nursing, Assuit University,[2] Department of Obstetrics and Gynecological Medicine, Faculty of Medicin , Assuit University ,Egypt.

ABSTRACT:

Introduction: There is good evidence that vaginal delivery can be associated with damage to the innervations of the pelvic floor as well as direct trauma to levator ani muscle and endo-pelvic fascia. This may result in the development of genuine stress incontinence. Postpartum stress incontinence can occur in up to 34% of women.

Aim of the study was to assess the effect of postpartum women's training with reinforcement of pelvic floor muscles exercise on reduction and improvement of postpartum stress urinary incontinence.

Research design: Quasi-experimental design was utilized in this study.

Subjects and methods: A total of 440 postpartum women were recruited for this study according to power analysis, they were divided into two groups. 220 women were allocated for the intervention group and given an instructional schedule for performing kegel's exercise from the first day postpartum up to 3 months , about 10% of participants were lost to follow-up. The control group didn't have any information about kegel's exercise(had the ordinary postpartum instructions). Both groups were followed-up to assess the presence of stress urinary incontinence at the first week, 6-week and 12-week postpartum.

Results: Findings of this study presented that, there were statistically significant differences between both groups regarding the presence of stress urinary incontinence, that is, the group that realized exercises presented less incontinence. The overall prevalence of SUI at the first week postpartum was 21% (42 of 200) and 19.5% (39 out of 200) of the intervention and control groups respectively with no statistical significant difference between groups. Stress urinary incontinence rate at 6-weeks postpartum was 8% and 12.5% of the intervention and control groups respectively with a highly statistical significant difference P=0.002. At 12- weeks postpartum the rate of SUI was (1%) and (9%) of the intervention and control groups with a highly statistical significant difference P=0.0005.

Conclusion: Performance of Kegel's exercise seems to reduce the likelihood of stress urinary incontinence.

Keywords: Pelvic floor exercises; Postpartum; Stress urinary incontinence

Introduction:

Urinary incontinence in women is one of the most common pelvic floor disorders associated with giving birth. It is defined by the International Continence Society as the complaint of any involuntary leakage of urine. It can result from a variety of different conditions and it is useful to classify them accordingly. The most common type of urinary incontinence in women is stress incontinence[1].

Childbearing is an established risk factor for urinary incontinence among young and middle-aged women. It has been suggested that vaginal delivery is the main contributing factor, possibly because of damage to important muscle tissue or nerves. However, pregnancy itself may cause mechanical changes, hormonal changes, or both that can lead to urinary incontinence[1].

Stress urinary incontinence is a problem that affects many women after childbirth. In the immediate postnatal period (less than 14 days after delivery) about 22.7% of all women complain of some degree of stress incontinence. Having any kind of vaginal delivery carries a higher risk of

postnatal incontinence compared with having caesarean section[2].

Surveys of women more than 3months after delivery have shown that about one in five women report experiencing stress incontinence during the first postnatal year[3].

Pregnancy and vaginal delivery are known to be associated with damage to the pelvic floor innervations, direct trauma to the levator ani muscles and endopelvic fascia by way of stretching or tearing. It has been observed that bladder neck mobility is worsened following vaginal births and this is postulated to be the cause of urinary stress incontinence secondary to parturition. A study by Van Brummen et al[4]. showed that the antenatal development of stress incontinence lead to an 18-times higher risk of developing stress incontinence during the year following child birth, and that this was most prevalent in the group that delivered vaginally[4].

The pelvic floor consists of group of 12 striated muscles arranged in 3 layers. This muscular plate expands from pubic symphysis to the side walls of the ileum towards the coccyx. The striated muscle fibers of each muscle run in the same direction in each muscle but in different direction of the other muscles of the pelvic floor group. However, when the pelvic floor contracts it is always en masse, moving the pelvic girdle in one direction[5]. The only known voluntary function of the pelvic floor muscle group is a mass contraction, best described as an inward lift and squeeze around the urethera, vagina and rectum. The function of pelvic floor muscles is to lend structural support to the pelvic structures, the urethera, vagina and rectum[6].

The pelvic floor muscle training involves the repetitive contraction of the pelvic floor muscle, which builds strength and perineal support, and improves muscle tone. As the pelvic floor is entirely composed of striated muscle, the principles of strength training for striated muscle should be followed when attempting to tone and strengthen the pelvic floor. The movement is a voluntary inward and upward contraction or squeeze of the pelvic floor. The number of contractions recommended across studies ranges from 8-12 contractions three times a day, to 20 contractions four times a day, to many as 200 contractions per day. The duration of 'squeeze and hold' , or contraction, varies in published studies from 4s to 30-40s. Author Kegel is the founder of contemporary pelvic floor exercises[7]. In addition to the treatment of incontinence, pelvic floor exercises may be suggested during the postnatal period as a preventative measure [8].

The recommended posture of kegel's exercise to be adopted during the prescribed exercise regimen also varies and includes sitting, kneeling, standing, lying down and standing with legs astride. The recommended duration of the prescribed regimen varies widely, from one week to six months, with three months being most frequently recommended [9].

Kegel's exercises have many advantages as no side effects, non-invasive , patient participation and motivation. Pelvic floor exercises are most effective with persons who have SUI but can also be effective in persons with urge incontinence. Researchers working with varied populations have reported an average of 70% improvement in SUI after 4 to 6 weeks of intensive, daily pelvic floor muscle exercises[10].

Aim of the study is:

To assess the effect of postpartum women's training with reinforcement of pelvic floor muscles exercise on reduction and improvement of postpartum stress urinary incontinence.

Subjects and Methods:

Research Design: Quasi-experimental design was utilized in this study.

Setting:

The study was conducted at postpartum ward, Obstetrics Department, Woman's Health Center, Assuit University Hospital, Egypt.

This study was conducted in a tertiary care obstetrical hospital with approximately

8500 vaginal deliveries each year. Between January 2010 and September 2010; parturient women were invited to enrolled in this study. These women were recruited during labor . Inclusion criteria were any parity, no history of urinary tract abnormalities or pelvic surgery, no significant medical illness, and no medication that would alter urinary tract function. The power analysis, based on a predicted stress urinary incontinence rate of 10% for postpartum incontinence indicated that 440 women must completed the study. Considering the mobility patterns of today's population, we anticipated that about 10% of participants would be lost to follow-up. Twenty –three women were lost to follow – up. Thus ,417 women completed the 6-week follow-up. Between completion of the 6-week follow-up and 12-week follow-up, 17 women were lost to follow-up , resulting in a study sample of 400 women in the two groups.

Subjects:

Participants were 440 women, aged 18-42 years, who had immediate vaginal deliveries. Subjects of this study will be divided into two main groups.

Group (A):

The intervention group : It is consisted of 220 post-partum women who learned to perform Kegel's exercise during post partum period from the first day post partum up to the third month post partum. The women were interviewed in their rooms on postpartum ward and followed up by telephone at the end of first week, 6 weeks, and 12 weeks postpartum . These women also given an educational pamphlet and written instructions about how to do kegel's exercise.

Group (B) :

The control group: It is consisted of 220 post-partum women. Women of this group followed the ordinary written postpartum instructions from the Woman's Health Center and not receive any information about Kegel's exercise and checked for stress urinary incontinence by the end of first week, 6 weeks and 12 weeks postpartum by telephone.

Questionnaire:

Data were collected using an interview questionnaire that was designed by the researchers to collect the necessary data. It based on review of related literature and reviewed by experts from Obstetrics and Gynecological nursing and medical related specialists. The questionnaire was compromised of three parts. The first part was designed to investigate women's of both groups regarding demographic characteristics, obstetric history: age, education status, occupation and parity status. The second part was planned to determine the presence of SUI using the question " Do you have any urinary leakage during your daily activities, cough or sneezing etc., symptoms, episodes and grades of SUI. The third part is the part of follow-up which included reminding the women at least once a week by telephone to practice the pelvic floor exercise and the data about the presence of SUI at the first week, 6-week and after 12- weeks postpartum, its symptoms if present, episodes and severity. Data collection took place within 6 months from 1/1/2010 to 30/6/2010. Follow up of the cases end in 30/9/2010.

Content Validity:

It was established by panel of 5 experts from Obstetrics and Gynecological nursing and medical related specialists and review of related literature for clarity, relevance, comprehensiveness, understanding, applicability and easiness.

Pilot Study: A pilot study was conducted on 10% of the studied women(44 postpartum women) to test feasibility of tools and time required to be applied. Simple modification was done of some items of the interview questionnaire and the assessment sheet that they were not consistent with this study.

Administrative design:

Official letters clarifying the purpose and setting of the study were obtained from the Dean of Faculty of Nursing at Assuit University and the director of Woman's Health Center, Assiut University Hospitals, requesting their approval for data collection.

The study was conducted through the following phases:

1-Interviewing phase:

The investigator interviewed the women, an explanation of the nature and the purpose of the study was done, then a verbal consent and a complete personal and obstetrical history were taken. Personal data included socio-demographic characteristics such as age, residence, occupation, educational level and telephone number. Obstetrical history such as parity and gravidity status, mode of last delivery , place of last delivery and Current obstetrical history . The investigators filled the interviewing questionnaire form individually and assured that confidentiality was maintained.

2-Assessment phase:

The investigator asked the women about the presence of postpartum stress urinary incontinence, and its symptoms and accordingly classifying the SUI into grades.

3-Intervention phase:

Every women in the intervention group was informed that Kegel's exercise is very simple ,risk-free and painless. It involves squeezing the pelvic floor muscles. It can be done anytime and anywhere. The women were be taught that the muscles she tightens are the muscles should contract during Kegel's exercise. The researchers did the palpation test to teach the woman which muscles to contract. Teaching was done with gloved fingers inserted into the vagina while asking the woman to contract the appropriate muscles. The investigator was identify the correct muscle accurately to the women because some women initially have difficulty to identify them. They mistaken contract their abdominal or thigh muscles instead of their pelvic floor muscles.

The woman is instructed to tighten the pelvic muscles for 3 seconds and then relaxes them for 3 seconds, repeating the Kegel's exercises 10 to 15 times per session and doing at least 3 sessions per day. To enhance the effect of these exercises, a typical regimen starts with 15 contractions in the morning and afternoon and at night. The woman will be informed that performing Kegel's exercises should take as long as three months (12 weeks). Each woman in the intervention group was given a household card including the benefits of practicing Kegel's exercises, time of doing it, the duration and frequency of the exercise, and a structured schedule of the total period (12 weeks)to be checked in it while performing the exercise(for women who are illiterate, we instructed them to make someone read and check on it for them).

There are general guidelines to ensure women practicing Kegel's exercises:-

(1) Avoid exercising while urination, or stopping to prevent voiding difficulties.
(2) Emptying the bladder before beginning exercises.
(3) Keeping abdominal and thigh muscles relaxed.
(4) Drawing muscles up and in not straining down with the abdomen.
(5) Breath while holding muscles contracted.
(6) Trying to get the maximum tightening with each muscle contractions.
(7) Trying contracting muscles in different positions e.g., while standing, sitting, lying and with the feet together and apart(Caldecott,2006)[11].

4-Follow up Phase:

The researchers followed- up these women of the intervention group and motivated them to perform the exercises through telephone calls by reminding the women with the benefits of Kegel's exercises and motivating them to perform exercises every day at regular times to avoid forgetting it and make Kegel's exercise a habit.

For both groups ,evaluating the presence of stress urinary incontinence symptoms and making the grades of it at the end of first week, after 6 weeks and at the end of the 12-week postpartum.

Definitions:

Stress Urinary Incontinence: Unintentional loss of urine prompted by a physical movement or activity such as coughing,

sneezing, or heavy lifting that puts pressure (stress) on the bladder[12].

Stress Urinary Incontinence Grades according to (Sandvik,2000)[13].

Grade 0: Continent.

Grade 1: Loss of urine with sudden increase in abdominal pressure, not in bed at night.

Grade 2: Incontinence worsens with lesser degree of physical stress.

Grade 3: Incontinence with walking, standing erect from sitting position or sitting up in bed.

Grade 4:Total incontinence occurs and is lost without relation to physical activity or position.

Ethical consideration:

Confidentiality was obtained, data is only available to the researchers and the participants.

Statistical Analysis:

Collected data were coded and analyzed. Descriptive statistics for the variables were calculated. Variables were compared using chi-square test. The variables were significant at P value < 0.05. All the statistical analysis was performed using SPSS package version 17.

Results:

Socio-demographic characteristics of the studied women are summarized in **table (1).** The mean age of the women were (25.50±5.042 and 24.93±4.034) years among the intervention and control groups respectively with no statistical significant difference between both groups. Regarding the level of education, more than one quarter of the sample were illiterate (29%vs 27%) of the intervention and control groups respectively, on the other hand, secondary education represented (36% vs 40%) of the intervention and control groups respectively. Majority of the studied women were housewives (83% vs 84%) and came from rural areas(74%vs 76%) of the intervention and control groups respectively with no significant difference.

Table (2): shows the obstetrical history of the studied women . It illustrates that most of the women among the intervention and control groups were multipara(66% vs 64.5%) respectively with no statistical significant difference among both groups, P= 0.752. About one –third of the studied women (28.5% vs 29%) of the intervention and control groups respectively had vaginal delivery with episiotomy ,and minority of them had instrumental delivery(2.5% vs 2%) of the intervention and control groups respectively. Majority of the studied women had previous hospital delivery of both groups. As regards the data related to the incidence of postpartum SUI, **table (3)** shows that, the overall prevalence of immediate postpartum SUI in the intervention group was(21%) 42 out of 200,and (19.5%) in the control group 39 out of 200 with no statistical significant difference between both groups, P=0.803. Fortunately SUI rate at 6- weeks postpartum was 8% and 12.5% of the intervention and control groups respectively with a statistical significant difference, P=0.002. After12-weeks postpartum the rate of SUI was 1% and 9% of the intervention and control groups with a highly statistical significant differences between them, P=0.0005.

Table (4) shows the frequency of practicing Kegel's exercises among the intervention group. It illustrates that 37% of the women practiced the exercise more than 75% of the given schedule, 18% of the women practiced the exercise from 50% to less than 75%, 29% of the women practiced the exercise from 25% to less than 50% and 16% of the women practiced the exercise less than 25% of the given schedule.

Table (5) It points to the subjective assessment of SUI after the intervention of Kegel's exercises are displayed. It evident that there is an improvement of SUI after exercising and those who perform Kegel's exercises sufficiently reported a great improvement of SUI. It shows a statistically significant improvements in the rate of SUI after the intervention. As regards the prevalence of SUI after 12 weeks of performing the exercise, this table noticed that 2 women only had persistent postpartum

SUI among the group who practiced the exercise less than 25% of the given schedule. This table proved the association between the improvement of SUI with practicing Kegel's exercise.

Classification of SUI into grades after performing Kegel's exercises are summarized in **table (6)**. Stress urinary incontinence Grade 1 incidence at the first week postpartum among intervention and control group were (61.9% vs 41%) 26 out of 42 and 16 out of 39 respectively with no statistical significant difference between groups. After 6th week, Grade 1 represents 11 of 16 (68.9%) of the intervention group versus 15 out of 25 (60%) of the control group. Among women complaining of SUI after 12 weeks postpartum, 2 cases reported to have SUI Grade 1 of the intervention group which may be affected by performance of Kegel's exercises for 3 months compared to 9 of 18 women Grade 1 of the control group , 6 of 18 Grade 2 also 2 of 18 Grade 3 and 1 of 18 Grade 4 with a highly statistical significant differences between the two groups, P=0.03.

Table (7) shows the symptoms of postpartum SUI. It illustrates that during the first week postpartum, there is no significant difference between the intervention and control groups regarding postpartum SUI symptoms. At the 6th week postpartum there is no significant difference among groups regarding the SUI symptoms. Fortunately after 12-weeks postpartum, it is obvious from this table that the intervention group who received the intervention as allocated showed reduction in the symptoms of SUI with a highly statistical significant difference, P=0.04.

Data pertaining to episodes of urinary leakage among the studied women are presented in **table (8).** It is obvious from this table that episodes of urinary leakage shows no significant differences among the intervention and the control group at the first week postpartum, P=0.806. After 12 weeks postpartum the intervention group shows that the 2 women who had SUI had once a week episode of urinary leakage ,while the control group shows that ; 4 out of 18(22.2%) of women who had postpartum SUI had one episode per day , 5 out of 18(27.8%)had few episodes per day and 9out of 18 (50%) had once a week episode of urinary leakage with a highly statistical significant difference between groups, P= 0.0004.

Results:

Table(1): Socio-demographic characteristics of the studied women.

	Intervention Group(200).	Control Group(200).	P-value
Age (yr): Mean ± SD	25.50± 5.042	24.93± 4.034	0.212
Education:			0.738
.Illiterate.	58(29%)	54(27%)	
.Read & write.	4(2%)	8(4%)	
.Basic education.	24(12%)	22(11%)	
.Secondary education.	72(36%)	80(40%)	
.University.	42(21%)	36(18%)	
-Occupation:			0.787
.House wife.	166(83%)	168(84%)	
.Occupied.	34(17%)	32(16%)	
Residence:-			0.644
.Rural.	148(74%)	152(76%)	
.Urban.	52(26%)	48(24%)	

Table (2):Obstetrical history of the studied women.

	Intervention Group(200).	Control Group(200).	P-value
Parity:			0.752
Primipara .	68(34%)	71(35.5%)	
.Multi-para	132(66%)	129(64.5%)	
Mode of last delivery:			0.969
.No deliveries.	68(34%)	71(35.5%)	
. NVD.	70(35%)	67(33.5%)	
.NVD é episiotomy.	57(28.5%)	58(29%)	
.Instrumental delivery.	5 (2.5%)	4(2%)	
Place of last delivery:			0.549
.Hospital delivery.	114(57%)	108(54%)	
.Home delivery.	18 (9%)	21(10.5%)	

Table (3): Incidence of post partum SUI among groups.

	Intervention Group(perform kegel's exercise) (200)	Control Group (not perform kegel's exercise) (200)	P-value
1st week postpartum	42 (21%)	39 (19.5%)	0.803
6th week postpartum	16 (8%)	25 (12.5 %)	0.002
12nd week postpartum	2 (1 %)	18 (9 %)	0.0005

Table (4):Frequency of reported post partum practices of pelvic floor muscles exercises.

Performance	Intervention Group(200).
-Less than 25%	32(16%)
- >25% to 50%	58(29%)
- > 50% to 75%	36(18%)
- >75% to 100%	74(37%)

Table (5): Relation between performing kegel's exercise and the prevalence of SUI among the intervention group.

	1st week	6th week	12nd week	P-value
-Less than 25%	22 (52.4%)	8 (50%)	2(100%)	0.0001
- >25% to 50%	10 (23.8%)	8(50 %)	0(0.0%)	
- > 50% to 75%	6 (14.3 %)	0(0.0%)	0(0.0%)	
- >75% to 100%	4 (9.5%)	0(0.0%)	0(0.0%)	

Table(6):Grade classification of post partum women with SUI after intervention group performance of kegel's exercise.

	Intervention Group(200).	Control Group(200).	p-value	Intervention Group(200)	Control Group(200)	p-value	Intervention Group(200).	Control Group(200).	p-value
	First week postpartum			After 6- weeks postpartum			After 12- weeks postpartum		
Grade 1	26(61.9%)	16(41.0%)	0.170	11(68.9%)	15(52.6%)	0.728	2(100%)	9 (50%)	0.03
Grade 2	10(23.8%)	14 (35.9%)		3(18.6%)	7(26.3%)		0(1%)	6(33.3%)	
Grade 3	6(14.3%)	9(23.1%)		2(12.5%)	2(15.8%)		0(0%)	2 (11.1%)	
Grade 4	0(0.0%)	0 (0.0%)		0 (0.0%)	1 (5.3%)		0(%)	1(5.6%)	
Total	42(100%)	39(100%)		16(100%)	25(100%)		2(100%)	18(100%)	

Table(7):Symptoms of post partum women with SUI after intervention group performance of kegel's exercise.

	Intervention Group(200).	Control Group(200)	p-value	Intervention Group(200).	Control Group(200).	p-value	Intervention Group(200).	Control Group(200).	p-value
	1ST week postpartum			6th week postpartum			12th week postpartum		
Dribbling of urine	26(61.9%)	25(64.1%)	0.924	10(62.5%)	17 (68%)	0.728	0 (0.0%)	11(61.1%)	0.04
Involuntary urination	2(4.8%)	3 (7.7%)		1(6.2%)	3 (12%)		2 (100.0%)	4(22.2%)	
Dysuria	10 (23.8%)	8(20.5%)		2(12.5%)	3 (2%)		0 (0.0%)	1 (5.6%)	
More than one symptom	4(9.5%)	3(7.7%)		3 (18.8%)	2 (8%)		0 (0.0%)	2(11.1%)	
Total	42(100%)	39(100%)		16(100%)	25(100%)		2(100%)	18(100%)	

Table (8):Episodes of urinary leakage of post partum women with SUI after intervention group performance of kegel's exercise .

	Intervention Group(200).	Control Group(200)	p-value	Intervention Group(200).	Control Group(200).	p-value	Intervention Group(200).	Control Group(200).	p-value
	1ST week postpartum			6th week postpartum			12th week postpartum		
-Once a day.	11(26.2%)	12(30.8%)		2 (12.5%)	6 (24%)		0 (0.0%)	4 (22.2%)	
-Few times a day	2(4.8%)	1 (2.6%)		0 (0.0%)	3(12%)		0 (0.0%)	5(27.8%)	
- Once a week	29 (69%)	26(66.6%)	0.806	14(87.5%)	16(64%)	0.18	2(100%)	9 (50%)	0.0004
Total	42(100%)	39(100%)		16(100%)	25(100%)		2(100%)	18(100%)	

Discussion:

Incontinence is a common and distressing problem after childbirth. Three months after delivery,20-30% of women have urinary incontinence .The most common type of urinary incontinence is the stress incontinence[1]. Despite the extent of the problem, There is good evidence that postnatal pelvic floor exercises are effective in the treatment of postpartum stress incontinence [14]. A well recognized treatment for stress incontinence is the practice of pelvic floor exercises. Pelvic floor exercises involve repeated contractions of the muscles of the pelvic floor in order to build up strength of the muscles and improve control of micturation[15].

This study compromised 440 postpartum women who delivered vaginally and divided into two main groups ,the intervention and control groups. It was conducted at the Women's Health Center, Assuit University Hospital, Egypt. Personal, labor and delivery characteristics of women who were recruited in this study were compared and no significant differences was found.

Concerning the prevalence of postpartum SUI of the present study, it was estimated that at the first week post partum the prevalence of SUI is 21% of the intervention group and 19.5% of the control group with no statistical significant differences P =(0.708). These findings are similar to the study of Farrell,(2001)[3] who estimated the incidence of postpartum SUI to be 22% after vaginal delivery . As stated earlier by other authors, the prevalence rate of postpartum stands within the range of values found in the literature, which extends from 4% in a study by Viktrup and Lose (1993) [16] to 34.3% in another study by Abrams et al,2003)[17] while later on , the prevalence of SUI was 14.1% following vaginal delivery at the study which was done by Eftekhar et al., (2006) [18]who assess the prevalence of postpartum SUI in Tahran, Iran.

As regards SUI rate at 6- weeks postpartum it was 8% and 12.5% of the intervention and control groups respectively. At 12- weeks postpartum the rate of SUI was 1% and 9% of the intervention and control group respectively with a highly statistical significant differences between groups. There are two possible explanations for the differences between the rate of SUI reported by those groups , first ; the reduction of the rate of SUI at 12-weeks postpartum among the intervention group may be due to the effect of practicing kegel's exercises despite the frequency of performance, second ; the considerable reduction of the SUI rate among the control group may be due to the three months duration following childbirth which may allow pelvic floor muscles function to return to normal and consequently relieve the SUI symptoms. These findings are similar to the study by Farrel et al.,[3] 2001 who study the incidence and relative risks of postpartum urinary incontinence .After a follow-up of 3-months , Viktrup and Lose, (1993)[16] found that, symptoms had resolved in most of their patient, reporting a 7% prevalence rate of postpartum incontinence and 4% persistent incontinence rate . In a similar study by Chaliha and Stanton(2002)[19] they found that 3 months postpartum the incontinence rate was 14.6%. These findings shows that a longer follow-up allows more time for pelvic function to return to normal.

After implementation of the present study exercise, statistically significant improvement were revealed among most women in the intervention group. This was evident in the grades of SUI, subjective assessment of the

SUI symptoms and episodes of SUI. This successful outcome of the intervention group is in congruence with the findings of Viktrup and Lose (1993)[16] who found that women who followed up after delivery for 3 months, most of them their symptoms had resolved. Moreover, Mohamed , (1996) [20] who study the efficacy of late pregnancy kegel's exercises on control postpartum stress urinary incontinence reported that the subjective evaluation of SUI after practicing Kegel's exercises had 80% complete relief of women's symptoms.

As regard Kegel's exercises frequency of performance, the current study found that, more than one third (37%) of the intervention group would be more likely to do the exercises adequately(> 75% to 100 %).Just (18%)of women in the intervention group reported that they had practiced pelvic floor exercises from (> 50% to75%) . The women who reported doing Kegel's exercises sufficiently were more advantaged and were significantly better than who perform the Kegel's exercises less than (25%) of the given schedule, P= 0.0001.

These findings are similar with the study which was done by Whitford et al , (2007)[2], who studied the practices of pelvic floor exercises in pregnancy and the prevalence of SUI . They found that, just over half of the women (54%) reported that they had practiced pelvic floor exercises as given at the interview and they considered practices of the exercise more than once a week has been suggested as an adequate level of practice (Chiarelli and Cockburn,2002) [21].

Conclusion:

About 20% of recruited women in this study have postpartum stress urinary incontinence after vaginal delivery being persistence by 1% of the intervention group and 4.5% among the control group after 3 months of follow up. Pelvic floor exercises are beneficial and have no significant adverse effects. Substantial and durable improvements in continence can be achieved, when the post-partum women are appropriately selected and the exercises are adequately done.

Recommendation:

Further trials for post partum urinary incontinence types and fecal incontinence are needed.

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Traditional Practices of women in Pregnancy, Labor and Postpartum Period at Minia Urban and Rural areas

Dr. Ekbal Abd el Rheim Emam[1] Dr. Abeer Mohamed Maghaweri[2] Dr. Sawsan Allaa El-Dean[3]

1. Lecturer in woman health and Gynecology Nursing Department, faculty of Nursing, Minia University
2. Lecturer in department of community health, faculty of nursing, Bani-Swaif University
3. Associate professor of department of community health, faculty of nursing, Assiut University

Abstract

Individual health behaviors are embedded in patterns of cultural exchanges and are usually passed down from generation to generation. Cultural values, such as attitudes and beliefs, affect the lifestyles, and therefore health conditions, of individuals. Today, many traditional beliefs and practices influence parts of life from birth to death. The aim of this study was to identify and compare traditional practices in pregnancy, labor and postpartum periods**.** Descriptive and comparative research design was utilized in this study. Participants were selected from records kept in primary health centers in two areas. In this research, a stratified random sampling method was used and total number of 440 women (220 from urban area and 220 from rural area).Tools used in carrying out the study will be described under three sections, demographic data, traditional practice and Likert scale for attitude. The results showed that there is no significant difference between both groups in relation to socio demographic Mean± SD age between both groups (29.6±7.9); and (30.4±7.9 respectively).A significant difference was noted concerning using contemporary and traditional practices among urban and rural women. In conclusion**,** that various traditional practices about pregnancy, labor and postpartum period are still used even among urban women.

Keywords, Traditional practices; Pregnancy; Labor; Postpartum periods.

Introduction

Childbearing in any society is a biological event, but the birth experience is also socially constructed. It takes place within a cultural context and is shaped by the perceptions and practices of that culture (***Lefkarites, 1992); (Steinberg, 1996);(Liamputtong Rice, 2000a) and (Liamputtong Rice, 2000b***). Therefore, many beliefs and practices relating to childbearing process must be observed by the woman and her family to ensure the health and well-being of herself and her newborn baby (***Steinberg, 1996); (Jordan, 1997); (Liamputtong Rice, 2000a) and (Liamputtong Rice, 2000b***).

In the Middle East, resting 40 days after having a baby is customary in Jordan, Lebanon, Egypt, and Palestine (***Nahas and Amashen, 1999); (Nahas et al., 1999***). During this 40-day period, someone comes to the house or stays with the new mother to take care of the baby, the house, and the other children, so that "all new mothers have to do is rest" (***Nahas and Amashen, 1999***).

Individual health behaviors are embedded in patterns of cultural exchanges and are usually passed down from generation to generation (***Kaewsarn et al., 2003***). The concept of health, illness and care are integral parts of general cultural values, beliefs and practices. Culture is an active concept that contains dissimilarities and changes. In today's world, human culture serves some of the aims of

globalization. Cultural values, such as attitudes and beliefs, affect the lifestyles, and therefore health conditions, of individuals. Unlike rapid changes in technology, changes in belief are quite slow (***Cortis, 2003***).

Today, many traditional beliefs and practices influence parts of life from birth to death. Some of them vary from region to region, family to family and person to person, but they are still of great importance (***Cilalı 1999***).

Traditional health practices, such as rubbing olive oil over the abdomen and perineal area to make the birth canal slippery to facilitate deliveries were common in the USA in the late 1890s; these practices are still commonly practiced in underdeveloped countries (***Fikree et al., 2004***). Health workers should recognized people's reactions, attitudes and cultural values towards health services in order to provide an active and effective health service (***Leninger, 2001***).

Significance of study:

Over the past 2 decades, Turkey has made remarkable progress in the provision of health-care services, particularly for children and pregnant women. Although this trend is encouraging, the current levels of infant and maternal mortality remain unacceptably high. In Turkey, infant deaths were 29 per 1000 live births, and maternal deaths were 100 mothers in 100,000 live births in the year 2000. Thus, of the annual 1,400,000 live births, nearly 1500 women die. Over 23% of maternal deaths occur during pregnancy and 47% during delivery. One explanation for poor health among women and children is the failure of many women to use modern health-care services **(*Erci, 2003*) and (*TNSA, 2003*).** In Egypt, no studies had been done about the topic. As well, in long run, it's hoped that the outcome of this study will be educate women about the benefits of contemporary health- care practice to reduce cultural inertia and conflict.

Aim Of the study

The aim of this study was to identify and compare traditional practices of women in pregnancy, labor and postpartum periods.

Materials and methods

Designs*:*

Descriptive and comparative research design was utilized in this study.

Sample*:*

Participants were selected from records kept in primary health centers in two areas: (one urban and other rural). In this research, a stratified random sampling method was used and total number 440 women (220 from Urban area (Malawi city), and 220 from Rural area (El- Roda village).

***Setting*:**

Face to face interview with women in Minia governorate (urban and rural area).

Data collection*:*

Interview questionnaire were conducted at home, by asking questions from the survey form. The women were alone at the time of interview. Answers were studied by content analysis. Each question was read to the women and their answers written on the form. Each woman was interviewed once, and the interview lasted between 30 min and 1hr, depending on the woman's responses. As the responses varied, content analysis was divided into three categories. Although practices in which health services and personnel were used during pregnancy, labor and postpartum period were assessed as "contemporary practices", other practices were evaluated as "traditional practices" **(Maimbolwa et al., 2003).**

Women who used none of these practices were considered as "no practices".

Tools of data collection:

Tools used in carrying out the study will be described under three sections:

a- Section one contained questions about demographic details of the women, such as age, educational level, employment status, family type, number of children and availability of prenatal care.

b- The second focused on traditional practices in pregnancy, labor and postpartum period. Open-ended questions, such as to know that she is pregnant or not, and what can be done to reduce vaginal bleeding……etc, and the number of open- ended questions include about 17 questions. ***For scoring,*** contemporary practice was scored (2), traditional practice was scored (1) and no practice was scored (0). For each area of practice, the scores of the items were summed up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into a percent score.

c- Likert scale: Likert scale adopted from (***Tavsancil, 2002*****),** aims to determine the attitudes of women toward traditional practices used in pregnancy, labor and postpartum and scale was modified by investigator was measured using the 23 item. Each items is statement about traditional practices to which respondents indicate their agreement using 3- point Likert scale ranging from "agree" (scored as 3) to, "disagree" (scored as 1).were respectively scored 3, 2, and 1. The scale also consisted of three subscales, "during pregnancy" (14 items), during labor (4 items), and during postpartum (5 items).

Scoring of the scale

Response	*Score*
Agree	3
Uncertain	2
Disagree	1

Items are summed for total score, with possible score ranging from 23 to 69 and higher scores indicating more favorable attitudes toward traditional practice. Disagree attitude as score range (23) while agree attitude (69) and uncertain (46).

Data analysis:

Data were analysis using SPSS (statistical package for social sciences) for windows (version 11.5). Level of $p<0.05$ was considered statistically significant. Number of cases of women calculated by computerized.

Result

Socio-demographic characteristics of the participants

Women's demographic characteristics are shown in (Table1). A total of women in urban (mean age of (29.6±7.9); and women in rural (mean age of 30.4±7.9). A total of 38.6% and 43.3 of urban and rural women, respectively, were secondary school graduates. Most of the women included in the study were housewives. Family type was nuclear in 47.3% of urban cases and 47.7% of the rural cases. During their gestational period, only 85.0% of the urban women and 69.5% of the rural women received prenatal care. A total of women in

urban (mean number of children 3.2±1.17); and women in rural (mean number of children 3.17±1.73).

Attitudes related to traditional and contemporary practices among women in the study sample are described in table (2).

a- Attitudes during pregnancy:

It can be noticed during pregnancy that mostly women in urban area have agreed upon the items move pregnant in her bed a lot umbilical cord wrapped around the neck of the fetus and the chokes, Feeling pregnant stomach heart burn (acidity) resulting from fetal hair, If wants to change of position in the bed to sit down first & then change the status and Son of seven months living better than the son of eight months. While not agree in some items Ultrasonography harmful to fetus, all medications during pregnancy cause deformities in the fetus, disclosure gynecological fall pregnant women and disclosure gynecological turns eye infant. While the attitude related to rural area mostly women have agreed upon the items from the form the abdomen pregnancy shows you are pregnant girl or boy, because you are pregnant, you should eat double the amount that you eat before you're pregnant, move pregnant in her bed a lot umbilical cord wrapped around the neck of the fetus and the chokes, If wants to change of position in the bed to sit down first & then change the status, disclosure gynecological fall pregnant women, Pregnant should not eat eggs because it causes albumin and Son of seven months living better than the son of eight months. While not agreed, the items included Ultrasonography harmful to fetus and disclosure gynecological turns eye infant.

b- Attitudes during labor:

Attitudes related to traditional and contemporary practices among women in the study sample it can be noticed during labor that women in urban and rural area have agreed upon the items some of diet or drinks help bearing down and hard- boiled eggs help bearing down.

c- Attitudes during postpartum period:

Attitudes related to traditional and contemporary practices among women in the study sample It can be noticed during postpartum period that women in urban and rural area have agreed upon the item some must be protecting for the mother and child the envy or evil eye, Necessary comfort in bed after giving birth, particularly after caesarean section and The need to sleep on her back constantly following childbirth. While not agreed, the items included Wrap the baby strongly strengthens bones & strengthens them, the need to address the hot spices and other.

Practices during pregnancy

A total of 31.4% of urban women and 50.5% of rural women had traditional practice relating to know that she is pregnant or not. A women is supposed to be pregnant if amenorrhea, nausea and vomiting, loss of appetite, note of large breast and if she does not enjoy drinking tea (table 3). In order to high blood pressure during pregnancy in urban (48.2%) of the women used contemporary and (45.0%) used traditional practices. Some example of traditional in urban are as follow: drinking water, sugar, crackling or drinking a cup of tea, prevent eat salt food and take sugar food, drink some herbal and complete bed rest. In rural (26.8%) of women used contemporary and (56.8%) used traditional practices. Some example of traditional practices in rural are follow: if drinking cup of tea or crackling, prevent salt food and prevent stress situation (table 3).

Practices during labor

In order to feeling the signs of labor, (75.9%) of urban women who participated in this study used contemporary and (24.1%) used traditional practices. These include go to doctor and call of midwives. However, of the rural women participating in the study (42.7%) used contemporary and (57.3%) used traditional practices to ward feeling of labor, such as inability to walk, call to midwife.

A total of (61.4%) of the urban sample used contemporary and (37.3%) used traditional practices to facilitate labor, such as, walking, to take an injection to facilitate labor, drinking cup milk cinnamon, taking a quantity of eggs and sugar , bathing and continuous bearing down. In rural, (61.4%) used contemporary and (38.6%) used traditional practices. This included good nutrition, take cup milk with cinnamon, complete bed rest or recumbent position, and eat boiled eggs, walking, to take injection to facilitate labor and exercise.

In order to reduce vaginal bleeding contemporary practices were used by (31.4%) of urban women and (20.9%) of the rural women. In the urban group, (30. 9%) used traditional practices, such as good nutrition complete bed rest and linking the abdomen, wearing heavy clothing, drink the juice and fat diet, and drinking cup of crackling. Traditional practices used by (44.5%) of the rural sample included sitting in warm water, complete bed rest and good nutrition.

The practices used for placenta retention were contemporary in (48.2%) of the urban sample and traditional in (47.7%). Among the traditional practices were ‘pressing on the abdomen; sleeping on the abdomen, outside by midwife and bearing down even down. Although (33.6%) of the rural sample used contemporary practices, (54.1%) used traditional practices for placenta retention. These included pressing on the abdomen, putting a heavy objects on the abdomen, putting hand in the uterus and outside by midwife and drink warm circuit.

The practices used for prolonged of labor were contemporary in (88.6%) in the urban sample and traditional (5.5%) such as go to the hospital and refugee in the caesarean section, patience and increase of walking. In the rural sample (60.0%) used contemporary and (5.0%) used traditional practices with prolonged labor go to doctor and refugee in the caesarean section, take intravenous fluid, increase of walking and patience and sleeping on the back.

Practices during the postpartum period

For perineal hygiene in urban, (69.1%) of the sample used contemporary practices and (30.5%) used traditional practices, such as ‘use hot warm water with disinfectant, sitting on warm water.

In rural, (56.4%) used contemporary and (43.6%) used traditional practices, such as ‘such as‘ use hot warm water with disinfectant, sitting on warm water use soap with water.

To aid the involutions of the uterus, traditional practices, such as ‘tying something around the abdomen, were used by (49.5%) of the women in the urban group and by (64.1%) of the women in the rural group (Table 3).

To reduce the engorgement of the breasts, (81.4%) of the urban sample used contemporary practices and (13.2%) used traditional practices. Among the traditional practices were ‘increase drinking of fluid and paint breast with ointment and massage or hot compresses. In rural, (68.6%) used contemporary and (17.3%) used

traditional practices, such as using traditional recipes inherited.

In order to increase the amount of breast milk, (59.1%) of urban women used contemporary practices and (40.5%) used traditional practices, such as eating jarjir, radish and eat Halawa Tehinea, drinking warm fenugreek and drinking juices frequently. Although (49.1%) of the rural sample contemporary practices, (50.9%) used traditional practices, such as eat meat and Halawa Tehinea and eggs, and drinking warm fenugreek and eat jarjir and radish. More of the women in rural used traditional practices to increase the quantity of breast milk (table 3)

In order to healing of umbilicus, in urban (15.5%) and (17.7%) in rural area in traditional practices women used powder and use of the ashes.

To protect the baby and the mother from diseases within the 40 days after birth, (43.6%) of urban women used traditional practices such as keeping the holy book of Koran, not letting the strangers see the baby, not going out and wearing heavy clothing, lack of sun exposure and extreme cold and wearing cloths of the child upside down. In rural, (50.0%) of the women used traditional practices, such as not letting the go out until after 40 days, complete bed rest and wearing heavy clothing, keeping the holy book of Koran, wearing cloths of the child upside down, lack of sun exposure and extreme cold, put a blue bead on the front of the child and not to put perfumes.

Table (1) Distribution of the studied sample in relation to demographic characteristics.

Variable	Urban(n=220)		Rural(n=220)	
	No.	%	No.	%
Age mean±SD	29.6±7.9		30.4±7.6	
Education				
can't read & write	51	23.2	57	25.9
can read & write	25	11.4	21	9.5
Primary school	31	14.1	21	9.5
Secondary school	85	38.6	95	43.3
University	28	12.7	26	11.8
X^2= 146.64, p= 0.000				
Family type				
Nuclear family	104	47.3	105	47.7
Extended family	62	28.2	75	34.1
Broken family	54	24.5	40	18.2
Employment				
Housewives	187	85.0	200	90.9
Employed	33	15.0	20	9.1
Prenatal care				
Yes	187	85.0	153	69.5
No	33	15.0	67	30.5
Number of children mean±SD	3.2±1.71		3.17±1.73	

Table (2): Attitude toward traditional and contemporary practice among women (N=440)

Variable	*Urban*						*Rural*						*Chi Square*	*P value*
	Agree	*%*	*Not sure*	*%*	*Not agree*	*%*	*Agree*	*%*	*Not sure*	*%*	*Not agree*	*%*		
During pregnancy:														
1. Form the abdomen pregnancy shows you are pregnant girl or boy.	**88**	**40.07**	**38**	**17.3**	**94**	**42.7**	**110**	**50.01**	**27**	**12.3**	**83**	**37.7**	**4.990**	**P=0.083**
2. Drinking large amounts of water leads to increased body water retention.	**52**	**23.6**	**94**	**42.7**	**74**	**33.6**	**53**	**24.1**	**77**	**35.07**	**90**	**40.9**	**3.261**	**P=0.196**
3. Eat sweet lead to contraction in the uterus.	**44**	**20.0**	**94**	**42.7**	**82**	**37.3**	**93**	**42.3**	**59**	**26.8**	**68**	**30.9**	**26.839**	**P=0.000**
4. Because you are pregnant, you should eat double the amount that you eat before you're pregnant.	**99**	**45.0**	**58**	**26.4**	**63**	**28.6**	**142**	**64.5**	**25**	**11.4**	**53**	**24.1**	**21.655**	**P=0.000**
5. Move pregnant in her bed a lot umbilical cord wrapped around the neck of the fetus and the chokes	**136**	**61.8**	**51**	**23.2**	**33**	**15.0**	**143**	**65.0**	**42**	**19.1**	**35**	**15.9**	**1.105**	**P=0.575**
6. If wants to change of position in the bed to sit down first & then change the status	**163**	**74.1**	**29**	**13.2**	**28**	**12.7**	**160**	**72.7**	**33**	**15.0**	**27**	**12.3**	**0.304**	**P=0.859**
7. Ultrasonography harmful to fetus.	**44**	**20.0**	**34**	**15.5**	**142**	**64.5**	**46**	**20.9**	**68**	**30.9**	**106**	**48.2**	**16.604**	**P=0.000**
8. Calcium intake during pregnancy leads to large size of the baby's head and obstructed labor.	**89**	**40.5**	**55**	**25.06**	**76**	**34.5**	**60**	**27.3**	**92**	**41.8**	**68**	**30.9**	**15.402**	**P=0.000**
9. All medications during pregnancy cause deformities in the fetus.	**39**	**17.7**	**46**	**20.9**	**135**	**61.4**	**56**	**25.5**	**82**	**37.3**	**82**	**37.3**	**26.112**	**P=0.000**
10. Feeling pregnant stomach heart burn (acidity) resulting from fetal hair.	**139**	**63.2**	**30**	**13.6**	**51**	**23.2**	**164**	**74.5**	**27**	**12.3**	**29**	**13.2**	**8.271**	**P=0.016**
11. Disclosure gynecological fall pregnant women	**60**	**27.3**	**47**	**21.4**	**113**	**51.4**	**139**	**63.2**	**29**	**13.2**	**52**	**23.6**	**58.176**	**P=0.000**
12. Disclosure gynecological turns eye infant	**34**	**15.5**	**44**	**20.0**	**142**	**64.5**	**56**	**25.5**	**45**	**20.5**	**119**	**54.1**	**7.416**	**P=0.025**
13. Pregnant women should not eat eggs	**99**	**45.01**	**35**	**15.9**	**86**	**39.1**	**122**	**55.5**	**36**	**16.4**	**62**	**28.2**	**6.300**	**P=0.043**

Variable	*Urban*						*Rural*						*Chi Square*	*P value*
	Agree	*%*	*Not sure*	*%*	*Not agree*	*%*	*Agree*	*%*	*Not sure*	*%*	*Not agree*	*%*		
because it causes albumin.														
14. Son of seven months living better than the son of eight months.	**187**	**85.0**	**14**	**6.4**	**19**	**8.6**	**191**	**86.8**	**7**	**3.2**	**22**	**10.0**	**2.595**	**P=0.273**
During labor:														
1. Some of diet or drinks help bearing down.	**189**	**85.9**	**27**	**12.3**	**4**	**1.8**	**198**	**90.0**	**15**	**6.8**	**7**	**3.2**	**4.456**	**P=0.108**
2. Hard-boiled eggs help bearing down.	**177**	**80.5**	**30**	**13.6**	**13**	**5.9**	**147**	**66.8**	**60**	**27.3**	**13**	**5.9**	**12.778**	**P=0.002**
3. Squat position is harmful to the birth.	**87**	**39.5**	**52**	**23.6**	**81**	**36.8**	**98**	**44.7**	**89**	**40.6**	**32**	**14.6**	**31.609**	**P=0.000**
4. After the first caesarean section, C.S along	**84**	**38.2**	**51**	**23.2**	**85**	**38.6**	**104**	**47.3**	**59**	**26.8**	**57**	**25.9**	**8.231**	**P=0.016**
During the postpartum:														
1. Must be protecting for the mother and child the envy or evil eye.	**145**	**65.9**	**24**	**10.9**	**51**	**23.2**	**171**	**77.7**	**15**	**6.8**	**34**	**15.5**	**7.616**	**P=0.022**
2. Necessary comfort in bed after giving birth, particularly after caesarean section.	**163**	**74.1**	**28**	**12.7**	**29**	**13.2**	**149**	**67.7**	**51**	**23.2**	**20**	**9.1**	**8.977**	**P=0.011**
3. Wrap the baby strongly strengthens bones & strengthens them.	**57**	**25.9**	**57**	**25.9**	**106**	**48.2**	**77**	**35.0**	**76**	**34.5**	**67**	**30.5**	**14.491**	**P=0.001**
4. The need to address the hot spices and other	**23**	**10.5**	**68**	**30.9**	**129**	**58.6**	**48**	**21.8**	**86**	**39.1**	**86**	**39.1**	**19.507**	**P=0.000**
5. The need to sleep on her back constantly following childbirth.	**138**	**62.7**	**31**	**14.1**	**51**	**23.2**	**170**	**77.3**	**20**	**9.1**	**30**	**13.6**	**11.142**	**P=0.004**

(*) statistically significant at p<0.05, (**) highly statistically significant at p<0.01

***Table (3): Distribution* of the sample according to their contemporary and traditional practice among women (n=440)**

Variable	*Urban*						*Rural*						*Chi Square*	*P value*
	*CP**	*%*	*TP*	*%*	*NP*	*%*	*CP*	*%*	*TP*	*%*	*NP*	*CP*		
Pregnancy practice:														
1. To know that she is pregnant or not?	**151**	**68.6**	**69**	**31.4**	**0**	**00.0**	**109**	**49.5**	**111**	**50.5**	**0**	**00.0**	**16.585**	**<P=0.000**
2. Abortion or bleeding during pregnancy.	**105**	**47.7**	**47**	**21.4**	**68**	**30.9**	**92**	**41.8**	**57**	**25.9**	**71**	**32.3**	**1.884**	**>P=0.390**
3. Uterine contraction during pregnancy.	**124**	**56.4**	**52**	**23.6**	**44**	**20.0**	**109**	**49.5**	**62**	**28.2**	**49**	**22.3**	**2.112**	**>P=0.348**
4. High blood pressure during pregnancy.	**106**	**48.2**	**99**	**45.0**	**15**	**6.8**	**59**	**26.8**	**125**	**56.8**	**36**	**16.4**	**25.053**	**<P=0.000**
5. Severe pain in the upper abdominal.	**42**	**19.1**	**155**	**70.5**	**23**	**10.5**	**30**	**13.6**	**177**	**80.5**	**13**	**5.9**	**6.236**	**>P=0.044**
6. Exposure to sudden thirst without desire to urinate.	**61**	**27.7**	**90**	**40.9**	**69**	**31.4**	**38**	**17.3**	**94**	**42.7**	**88**	**40.0**	**7.73**	**>P=0.021**
Labor practice:														
1. Feeling labor pain.	**167**	**75.9**	**53**	**24.1**	**0**	**00.0**	**94**	**42.7**	**126**	**57.3**	**0**	**00.0**	**50.189**	**<P=0.000**
2. Facilitate labor.	**135**	**61.4**	**82**	**37.3**	**3**	**1.4**	**135**	**61.4**	**85**	**38.6**	**0**	**00.0**	**3.054**	**>P=0.217**
3. Reduce vaginal bleeding.	**69**	**31.4**	**68**	**30.9**	**83**	**37.7**	**46**	**20.9**	**98**	**44.5**	**76**	**34.2**	**10.330**	**<P=0.006**
4. Placenta retention.	**106**	**48.2**	**105**	**47.7**	**9**	**4.1**	**74**	**33.6**	**119**	**54.1**	**27**	**12.3**	**15.654**	**<P=0.000**
5. Prolonged labor.	**195**	**88.6**	**12**	**5.5**	**13**	**5.9**	**132**	**60.0**	**11**	**5.0**	**77**	**35.0**	**57.692**	**<P=0.000**
Postpartum practice :														
1. Perineum care.	**152**	**69.1**	**67**	**30.5**	**1**	**0.5**	**124**	**56.4**	**96**	**43.6**	**0**	**00.0**	**9.000**	**P=0.011**
2. Involution uterus.	**104**	**47.3**	**109**	**49.5**	**7**	**3.2**	**73**	**33.2**	**141**	**64.1**	**6**	**2.7**	**9.602**	**P=0.008**
3. Reduce the engorgement of the breast.	**179**	**81.4**	**29**	**13.2**	**12**	**5.5**	**151**	**68.6**	**38**	**17.3**	**31**	**14.1**	**12.741**	**P=0.005**
4. Increase the amount of breast milk.	**130**	**59.1**	**89**	**40.5**	**1**	**0.5**	**108**	**49.1**	**112**	**50.9**	**0**	**00.0**	**5.665**	**P=0.059**
5. Feeling of the umbilicus.	**186**	**84.5**	**34**	**15.5**	**0**	**00.0**	**181**	**82.3**	**39**	**17.7**	**0**	**00.0**	**1.290**	**P=0.525**
6. Protect the mother and baby from diseases within 40 days after birth.	**124**	**56.5**	**96**	**43.6**	**0**	**00.0**	**110**	**50.0**	**110**	**50.0**	**0**	**00.0**	**1.789**	**P=0.181**

(*) statistically significant at p<0.05, (**) highly statistically significant at p<0.01

* ***CP: Contemporary Practice // TP: Traditional Practice // NP: No Practice.***

Discussion

The aim of the study to identify and compare traditional practices about pregnancy, labor and postpartum period.

According to the study finding, statistically significant comparison of practices and belief in pregnancy, labor and postpartum in urban and rural in Minia government. The finding is an agreement with (***Fikree et al., 2004***) who reported that Comparison of practices and beliefs in pregnancy, labor and puerperium in Turkey and Iran has revealed a large variation among the different cultures of the two countries.

The present study demonstrated some traditional practices can be limited in urban and rural area such as consuming high caloric foods and drinking hot herbal. These finding were agreed with the results reported by (***Kaewsarn et al., 2003); (Maimbolwa et al., 2003);*** (***Fikree et al., 2004) and (Liamputtong et al., 2005***).

The present study demonstrated must be protecting mother and child evil eye. These finding agree with study done by (***Rassool, 2000***). Some traditional practices, such as 'putting the holy Koran over the head or keeping the holy book of Koran' in Muslim countries, are thought to have a healing effect on the various systems of the human body. Our research supports the view that cultural rituals are important in pregnancy, labor and the puerperium. According to Eastern traditions, which are influenced by Chinese beliefs, women are confined at home for at least 30 days after childbirth (***Lefeber and Voorhoever, 1997); (Kaewsarn et al., 2003)and (Maimbolwa et al. 2003***).

In recognizing the signs of pregnancy and labor, a number of contemporary practices are now replacing traditional practices in Turkey and Iran. This result agrees with my study (68.6%) in contemporary practices in urban area compare with (49.5%) in contemporary practices in rural area.

Although practices, such as hot compresses or inserting burned cloth into the uterus to reduce vaginal bleeding after the delivery at home they may be considered as a risk to the health of the mother and baby. This is probably because women do not consider bleeding a serious condition the study by ***(Fikree et al***., ***2004***), this result disagreement with my study.

Other practices applied when delivery of the placenta is delayed are pressing over the abdomen, inserting the hand into the uterus or applying vapor. These practices are also used in other countries (***Lefeber and Voorhoever, 1997) and (Maimbolwa et al., 2003***). This result agrees with my study especially in traditional practices in rural area.

Traditional practices are more commonly applied to increase the supply of breast milk in Turkey, and to deal with swollen breasts in Iran. In addition, in order to protect the mother and baby from diseases or the evil eye, traditional practices are commonly applied in both countries. Studies have shown that, in most countries, it is common to believe that evil spirits or witches cause serious illnesses and death (***Kaewsarn et al., 2003); (Maimbolwa et al., 2003)***, (***Fikree et al., 2004) and (Liamputtong et al., 2005***). Our results have produced similar findings, and these traditional practices can be considered harmless.

According to Chinese traditions, the first 30 or 40 days postpartum is recognized as a special time period for behavior restrictions and a state for convalescence. This period is called 'sitting month' or 'doing the month (***You and Yuan, 2005***). Their body can be easily attacked by

'heat' or 'cold', which may cause some health problems like dizziness, headache, backache and arthritis in the month or in later years. Therefore, Chinese women are advised to follow a specific set of food choices and health care practices. For example, the puerperal women should stay inside and not go outdoors; all windows in the room should be sealed well to avoid wind. Bathing and hair washing should be restricted to prevent possible headache and body pain in later years (***You and Yuan, 2005) and (Chan SM et al, 2000***). These result agree with my study especially traditional practice in rural area compare with traditional in urban to protect the mother and baby from diseases within 40 days after birth.

Conclusion and recommendation:

In this study the researcher found that, urban and rural area similar practices are involved in pregnancy, labor and the postpartum period. It is surprising that so many traditional practices are still used. Although rural women use traditional practices to eliminate engorgement of the breast, and use traditional practices to increase the amount of breast milk.

Recommendation based on our results midwives and nurses should educate women about the benefits of contemporary care and provide strategies to help them deal with conflicts between their practices and those recommended in contemporary health-care practice to reduce cultural inertia and conflict. We also recommend that some of the antenatal visits be extended to early postnatal visits to follow up and guide the women on contemporary postpartum practices, which will enable women to practice them. In addition to such promotion, new mothers, husbands and other family members, such as mother-in-law and grandmothers should be offered health education courses that give them more positive attitudes towards contemporary practices during pregnancy, labor and postpartum.

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Improving Communication Skills among Nurses through an Educational Training Program

(1) Naglaa Abed El megied Mohamed, lecturer of psychiatric nursing, Department of Psychiatric and Mental Health Nursing, Faculty of nursing. Assiut University
(2) Nadia Abd Elghanay Abd El Hammed, lecturer of psychiatric nursing, Department of Psychiatric and Mental Health Nursing, Faculty of nursing. Assiut University

Abstract:
Communication skills are the ability of an individual displays in consistently demonstrates the ability to effective communicate with clients, colleagues, subordinates and supervisors in professional manner and in the personal department. This study aimed to design, implementing and evaluating the effectiveness of an educational training program of communication skills addressed to nursing staff to help them improve their caring competencies of mentally ill patients. The study was carried out at Assiut Psychiatric Mental Health Hospital, Ministry of Health. The study sample comprised 30 nurses (14 males and 16 females); data were collected through pre/post three months post the educational training program. The main results yielded by the study proved that, the highest percentage among nurses aged from 30 or more than 30 years, females than males, and single, more than ⅔ (73.3%) of the studied group was lived in rural area and the scores of knowledge and practical skills of communication were improved after application of educational training program among nurses . The study recommended continuous education provided for all nursing personnel working with psychiatric patients and Communication skills methods as a training program should be provided to all nurses at regular sessions by professional people in the field of mental health to train them on dealing with stressful situation. And make nurses updated of new knowledge and to be good communicator to handles of patient's care.

Key Words: **Communication Skills, Psychiatric Nurses, Educational Training, Program.**

Introduction:

Psychiatric mental health nurses are confronted with the daily responsibilities of assessing, intervening and evaluating client responses to stress and client reactions [(1)]**.** Communication is an essential component of palliative care; communication difficulties are recognized stress factor among health professionals especially nurses [(2)]**.** A communication skill is the ability to use language (receptive) and express (expressive) information, which is the set of skills that enables person to covey information so that it is received and understood [(3)].

Effective communication with patients is increasingly understood as a key to effective, patient-centered care in all health care settings, the quantity and quality of training that nurses get in ways to promote and enhance effective nurse: patient communication is sadly lacking. This is true in the context of the pre-service training of nurses, and it is even more true with regard to the in-service training and continuing education of nurses. There are, fortunately, some rare exceptions. This annotated bibliography is intended to provide information about, and connections with, the relatively few publications that contain practical information and ideas about how to do a better job of helping nurses learn to jointly establish meaning (*i.e.*, truly communicate) with patients with the

wide variety of communication vulnerabilities and communication challenges that patients bring with them, or develop in the course of their treatment. [4].

Today, as the Joint Commission in the United States moves rapidly forward with "new and revised requirements to improve patient: provider communication applicable to the hospital accreditation program" (emphasis theirs), it is especially important for those responsible for hospital care, and those responsible for training nurses for positions in hospitals, to take a fresh look at the quality and extent of the training they provide to nurses in this crucial area. The evidence keeps mounting that communication barriers, breakdowns and problems are the root cause of more "sentinel events," medical errors, unnecessary costs, and inadequate treatments than any other single cause. What is needed now is energetic action by health care decision-makers to move forward more quickly in adopting and adapting some of the ideas contained in the list of publications below [4].

The communication enable nurses to explore in detail the concept of interpersonal communication and to assist nurses to identifying, practicing and applying arrange of communication skills that will enable them to develop helpful, caring relationships with patients care. Communication training activities such as establishing relationships with adults and patients using concept of warmth, respect, genuineness, empathy and trust, practicing active listening, observation and responding, improving communication and professional presenting skills and practicing communication strategies with people who have specific communication needs due to mental health problems [5].

Communication is most evident in the areas of patients care, interpersonal skills and professionalism, so effective communication skills are also critical for demonstrating individual skill sets in medical knowledge and systems – based practice [2]. They need to identify the meaning of their own stress and develop strategies that increase personal and professional growth. They need to be aware of themselves in relation to others and to explore issues that affect them in the workplace [6]. The ability to manage stressful situations is determined by self –esteem, confidence and sense of power [7].

So nurses need to be good communicator in the clinical setting and confident in the necessary competencies and skills. Helping and caring for others are the essential core of professional nursing , often this care is viewed to be in conflicts when goals are achieved through direct and effective communication of ones needs , desire and wishes , however communication skills is essential to nursing in that nurse acts as communicator , advocate for and consultant to the client and to others . Also, improve nurse patient communication to give more effective caring for the psychiatric patients in psychiatric setup. The aim of the study was to design, implementing and evaluating the effectiveness of an educational training program of communication skills addressed to nursing staff to help them improve their caring competencies of mentally ill patients among nurses working in psychiatric hospital at Assiut governorate.

Study Hypothesis:

Educational training program about communication skills can significantly improve both knowledge and practice of the nurses.

Subjects and Method:

Research design:

The design followed for this study is a pre test –post test quasi experimental study.

Setting:

The study was conducted on nurses at Assiut psychiatric mental health Hospital, Ministry of Health. The hospital is serving Assiut City and all Upper Egypt governorates. The hospital included eleven services (general male department, general female department, private male department, private female department, department of drug addiction, department of infection control, department of electroconvulsive therapy, E.E.G department, outpatient clinic, dentist clinic and clinic for pediatric. The capacity of hospital beds approximately about 100 beds.

Subjects:

Subjects of the study comprised of 30 nursing staff (14 males and 16 females), working in the three shifts in Mental Health Hospital at Assiut governerorate within a period of six months from March to August 2010.

Tools of the study:

Two instruments were used for data collection:

(1) Sociodemographic Data Structured Interview Questionnaire: This interview questionnaire developed by the researchers included the sociodemographic data of the study subjects such as nurse's age, gender, place of work, marital status, education and years of experiences in psychiatric nursing field.

(2) Communication Skills Checklist (CS – List): It was developed by **Bowling, A** [8] and consisted of fifteen items deemed necessary for communication skill. The answer for each item on the CS- list ranged from (1)" unable to do at all" to (6) "able to do completely", the higher scores of the CS – list indicate higher communication skills.

The levels of communication categorized into:

- < 50 % indicates low level of communication
- 50- 70 % indicate middle level of communication
- > 70 % indicates high level of communication

Communication Skills Training Program: it was developed by the researcher to test the effectiveness of communication skills training among nurses. The program conducted on "5" sessions for each group, two sessions per week, each session timed from one hour to two hours.

Description of program:

A- Preparation Phase:

An educational training program has been specially designed for psychiatric nurses based on the findings of their assessed knowledge and practice. It was developed to cover all necessary knowledge and practices.

B- Planning Phase:

Steps of program development:

General objective: by the end of the program, nurses will be able to identify knowledge and practices of communication skills.

Specific objective: at the end of the program, the nurse will be able to:

1- Define communication.
2- Identify importance and list types of communication.
3- Understanding barriers of communication.
4- Identify techniques of communication skills.

C- Strategy:

Methods of instruction as well as the media to be used for the program were

decided, which were lectures, discussion and demonstration with handout.

D- Implementation of the educational training program:

- Implementation of the educational training program took fifteen weeks; the program was applied for all nurses working in Assiut Psychiatric Mental Health Hospital, Ministry of Health, it was impossible for all nurses to attend an educational session simultaneously. So, they were divided into 5 groups, average number of attendance in each session about 6 nurses according to their work schedule. The duration of an educational session ranged from one to 2 hours, the whole educational content in each group were covered within three weeks.
- Pre- test should be applied to all nurses to test their knowledge about communication skills firstly; post-program implementation was evaluated to test their knowledge and practice.
- Data were collected in the period from December 2010 to May 2011.

Curriculum specifications:

Sessions	Types of ILOS	Time allotted	Content
Session1:			1. Introduce yourself
A. Information of communication	Cognitive skills	30 minutes	2. Definition of communication 3. Importance of communication 4. Elements of communication
B. Intervention	Practical skills	30 minutes	1. Training on accepting 2. Training on making observation
Session2:			
A. Information of communication	Cognitive skills	30 minutes	1. Goals of communication 2. Types of effective communication
B. Intervention	Practical skills	30 minutes	1. Training on giving information 2. Training on exploring
Session3:			
A. Information of communication	Cognitive skills	30 minutes	1. Inform effective listening skills 2. Inform effective speaking skills
B. Intervention	Practical skills	30 minutes	1. Training on listening skills 2. Training on questioning skills
Session4:			
A. Information of communication	Cognitive skills	30 minutes	1. Chara cteristics of successful communication 2. Internal factors affecting communication
B. Intervention	Practical skills	30 minutes	1. Training on reflection 2. Training on restating
Session5:			
A. Information of communication	Cognitive skills	30 minutes	1. Identify external factors affecting communication 2. Identify barriers of communication
B. Intervention	Practical skills	30 minutes	1. Training on voicing doubt 2. Training on presenting reality

E- Evaluation:

This was based on findings of any improvement on knowledge and / or practices of nurse's attending the program to achieve this, the following steps were performed:

1. Assess nurse's, knowledge about all items previously before / during the program.
2. Evaluation of both knowledge and skills was conducted immediately after ending the educational training program (post-test) and three months later (follow-up test).

Statistical analysis

The data were computerized and verified using the SPSS (statistic among package for social science) version 11.5 to perform tabulation and statistical analysis. Qualitative variables were described in frequency and percentages, statistical significance was considered at p – value <0.05.

Results:

Results of the present study showed that:

In the present study, 60% of the studied group was in the age group<30 years, while 40% of them were less than or equal thirty (≥ 30 years) .As regard sex, more than half of the studied group were women. 80% of the studied group were single, while20% of them were married. According to residence, more than ⅔ (73.3%) of the studied group were living in rural area, while 26.7% of them lived in urban area.

Concerning staff nurses years of experience; more than half of the nurses (60%) had or more than ten years of experience, compared to only (40%) had less than ten years of experience. As regard place of work about two- third (70%) of the studied group worked at general ward, while 30% of them were at private ward. According to attending training courses about communication skills, most (83.3%) of the studied group did not attend training courses about communication skills, while only (16.7%) of them were attending training courses about communication skills. **Table (1).**

Table (2), illustrates the comparison of mean score related to nurses knowledge about communication skills before and after educational training. Highly statistical significant difference was found between before and after training program regarding knowledge about communication skills (P = 0.000*).

Table (3), shows the comparison of mean scores related to nurse's practice about communication skills before and after educational training program. Highly statistical significant difference was found between before and after training program regarding practice about communication skills (P = 0.000*).

Table (4) shows the total score of communication skills level of the studied group were significant change was found in the level of communication skills at p= 0.000 as 100% after educational training program.

Figure 1: in relation between years of experience and knowledge and practices in communication skills among the studied group, showed that with increasing category of experience , the skills of practice in communication was slightly decreased (r= -0.470, p = 0.009). While with increasing years of experience, the skills of knowledge in communication was decreased (r= -0.646, p= 0.010).

Table (1): Socio-demographic characteristics of the studied group (n=30)

Variables	No. (n= 30)	%
Age: (years)		
< 30	**18**	**60.0**
≥ 30	**12**	**40.0**
Sex:		
Male	**14**	**46.7**
Female	**16**	**53.3**
Marital status:		
Married	**6**	**20.0**
Single	**24**	**80.0**
Residence:		
Rural	**22**	**73.3**
Urban	**8**	**26.7**
Experience:		
< 10 y	**12**	**40.0**
≥ 10 y	**18**	**60.0**
Place of work:		
General	**21**	**70.0**
Private	**9**	**30.0**
Attending training courses about communication skills:		
Yes	**5**	**16.7**
No	**25**	**83.3**

Table (2): Comparison of mean scores related to nurses' knowledge about communication skills before and after educational training program

Nurses' knowledge about communication skills	Before training	After training
Mean ± SD	4.73 ± 2.24	8.00 ± 1.72
Range	0 – 9	3 – 10
P-value	0.000*	

Paired samples t-test * Statistical significant difference (P< 0.05)

Table (3): Comparison of mean scores related to nurses' practice about communication skills before and after educational training program

Nurses' practice about communication skills	Before training	After training
Mean ± SD	5.63 ± 2.62	7.50 ± 1.64
Range	0 – 9	2 – 10
P-value	0.000*	

Paired samples t-test * Statistical significant difference (P< 0.05)

Table (4): Scores of communication skills before and after implementation of training program among nurses

Communication skills	Before training		After training		P-value
	No.	%	No.	%	
Low	3	10.0	0	0.0	0.005*[1]
Middle	6	20.0	0	0.0	
High	21	70.0	30	100.0	

Paired samples t-test * Statistical significant difference (P< 0.05)
Total score: 90

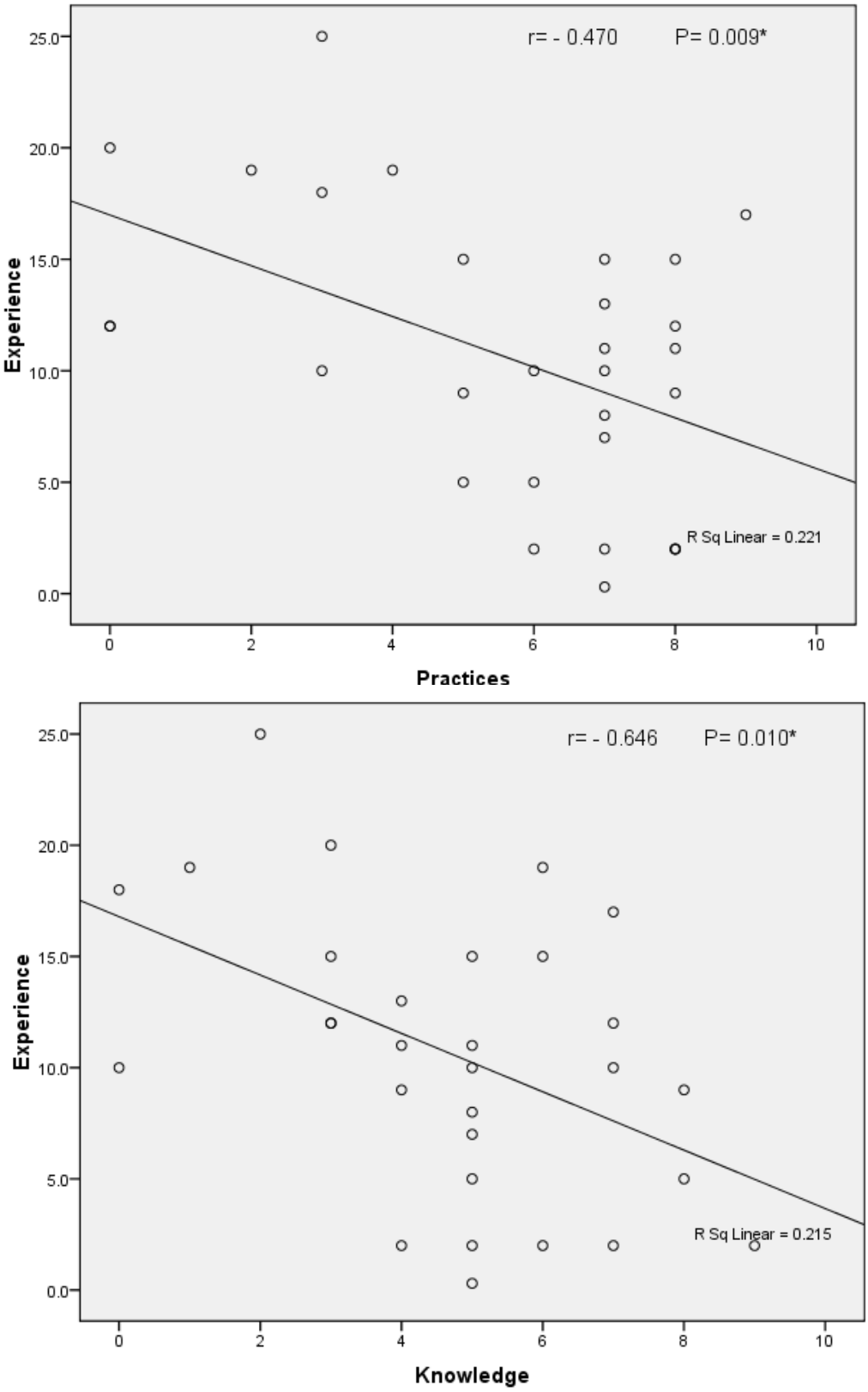

Figure (1) relation between years of experiences and knowledge and practices in Communication skills among the studied group

Discussion:

Communication is the most evident in the areas of patient care, interpersonal skills, and professionalism effective communication skills are also critical for demonstrating individual skill sets in medical knowledge and systems-based practice Katz, L., [2]. McGrath and Reid, [9] reported that psychiatric ward nurses experience high levels of stress. Moreover, they working environment of the nurses is known to be potentially stressing, and it seems that the crowded environment of psychiatric wards has led to desensitization of the nurses to the inter-personal relationship with the patients.

The present study aimed to design, implement and to evaluate the effectiveness of an educational training program of communication skills addressed to nursing staff to help them improve their caring competencies of mentally ill patients among nurses working in psychiatric hospital at Assiut governorate. The highest percentage of the studied group aged from 30 to more than 30 years old, more than half of them were women, and lived in rural areas. As regards staff nurses years of experience, more than half of them had or more than ten years of experience. These results agree with the result of Weert, et al, [10] who stated that the majority of the nurses attended in the study were females with an average age of 41 years. Also in the study of Ghazavi, et al, [11] reported that 77.8% of the studied sample were females, and most of them were in the age ranged from 25 to 30 years old (55.4%).While other studies do not go with these results, Zavertnik, J., et al, [12] who stated that the effects of gender, ethnicity and race differences were not significant among nurses.

Related to nurse's knowledge and practice about communication skills training program, the present study showed that, there were highly significant differences noticed after implementation of the training program regarding nurse's knowledge and practice about communication skills. Concerning communication skills levels of the studied group, the present study revealed that the total score of communication skills level was significantly higher after training program. This finding consistent with Takashi, et al, [13] who stated that communication skills levels were improved significantly after the training program. Wilkinson, et al, [14] who stated that an overall statistically significant improvement in assessment skills between pre-test and post-test scores of communication skills program, which allows nurses to explore their attitudes, raise self-awareness and develop knowledge and skills, which are most effective in preparing them to communicate with patients. Delvaux, et al, [15] during evaluated the effectiveness of educational workshop of communication skills on the nurses working in Oncology wards; found that nurses facilitating behaviors in communication more frequently after application of the program. Moreover, in the study of Edwards, et al, [16] during evaluated the improvement of communication skills of nurses in the South region of Ontario before and five months after the intervention, shows that, five months after the intervention a significant increase in employment of communication skills by the nurses and the score of quality of employing communication skills increased from 2.4 to 2.68 (p= 0.001) Also, in the study of Kruijver, et al, [17] when using methods for communication training program as role playing exercise , group discussion, videotapes demonstrations of key communication skills , exchange of experiences among nurses , case study discussion , found

that during combination of practical and theoretical communication training for nurses promote nurse's post-training communication skills.

Conclusion:

Based upon the study results, it is concluded that the educational training program affect on communication skills among nurses which improved after the training program. This revealed that the communication training helped nurses communicate effectively and be more tolerant to their patients.

Recommendations:

From the previous conclusion, the following recommendations are suggested:

1- Communication skills methods as a training program should be provided to all nurses at regular sessions by professional people in the field of mental health to train them on dealing with stressful situation.

2- Design, implementation and evaluation of an advanced communication skills module undertaken to final year undergraduate nursing students.

3- Nurses would become more a ware of their misconducts in interactions with the patients and try to improve their essential nursing skills and mental health.

4- In service training and continuing education should be provided for all nursing personnel working in psychiatric hospitals to make them updated of new knowledge and information.

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Role of Unhealthy Practices during the Menstrual, Partum and Postpartum Periods as Risk Factors for Secondary Infertility

Amany Hassan Abd Elrahim[1], Sahar Nagieb Mohamed[2], Azza Mohamed M. Hafez[3],
Hany Hassan Kamel [4]
Nursing Demonstrator - Faculty of Nursing Minia University[1],
Professor of Obstetrics and Gynecology Nursing Faculty of Nursing Assiut University, [2] Assistant Prof of Obstetrics and Gynecology Nursing Faculty of Nursing Minia University [3]
Lecturer of Obstetrics and Gynecology Faculty of Medicine Minia University[4]

Abstract

Background, Reproductive tract infections are caused by endogenous infections resulting from overgrowth of organisms normally existing in the reproductive tract as a result of bacteria being introduced into the upper reproductive tract as in the case of unhygienic practices during the menstruation, partum and postpartum periods. **Aim of this study,** determine the role of unhealthy practices during menstruation, partum and postpartum periods that could affect women's fertility. **Methodology**, case control study was used in this study. The sample were divided into two groups included (100) for study group and (100) control group. Data were collected in Minia City. Using structured interviewing sheet and checklist to identify practices followed during menstruation, partum and post partum periods. **Result:** unhealthy practices during menstruation, partum and postpartum periods were founded higher in study group than in control group and there were statistically different among groups at ($p<0.05$). **Conclusion & Recommendations**: The data concluded that unhealthy practices during menstruation, partum and postpartum periods were founded higher in study group than in control group and there were statistically different among groups at ($p<0.05$). A strong need for increasing women awareness about hygienic practices during the menstrual, partum and postpartum periods that preventing infection.

Key words: Unhealthy practices , Menstrual, Partum, Postpartum, Risk factors, Secondary infertility.

Introduction:

Secondary infertility refers to the inability to conceive or carry a pregnancy to term after successfully and naturally conceiving one or more child. World Wide, approximately 10-15% of couples are infertile and secondary infertility outnumbers primary infertility. Infertility can be primary if a pregnancy has never occurred and secondary if there has been a preceding pregnancy irrespective of the outcome of the pregnancy **(*WHO, 2007*).** Unhygienic practices during menstruation have been reported, including use of unhygienic material for the absorption of blood and altered bathing practices **(*Narayan, et al, 2001*).** Proper care during menses is essential to avoiding serious illness and infection. Change pads every two to four hours and more frequently during heavy flow. The vagina is designed to clean itself, and douching may disturb the vagina's natural chemistry **(*Larsen, 2005*)**. Douchin does not prevent or cure vaginal infections. In fact it actually increases the risk of infection by washing away the protective bacteria or by pushing an infection up into the cervix and uterus **(*Martino, et al, 2002*).** Similarly unhygienic practices during the postpartum period might result in reproductive tract infection (RTIs). Various studies have been conducted in the South Asian

population reported insertion of herbal medicine inside the vagina or uterus during the postpartum period and washing of the perineum with unsafe material thereby augmenting transmission of microorganisms to the upper reproductive tract leading to pelvic inflammatory disease (PID) culminating in adhesions and infertility **(*Inhorn, 2003*).**

Deliveries conducted in hospitals and clinics and those conducted by trained personnel play an important role in the prevention of vaginal infections. Deliveries which are conducted at home and these that are attended by traditional birth attendants (TBAs) can be added up as a risk factor for vaginal infections and its consequences **(*Firkree, et al, 2004*).** Personal hygiene is important for both mothers and there attendants. The woman should be encouraged to bath and wash as necessary to maintain personal freshness and the nurse must wash hands before and after examining the mother and wear gloves when handling used sanitary pads, bloodstained linen or body fluids **(*Ruth, et al, 2001*).**

Unhygienic obstetric practices in developing countries are also major contributors to infertility. In Africa nearly 85% of women had a diagnosis of infertility caused by infection **(*Larsen, 2005*).** The type and mode of infection varies from country to country depending on the social factors, health infrastructure, healthcare practices and environmental factors. Iatrogenic causes of infertility constitute approximately 5% of all causes in Western Europe compared to 15.5% in Africa **(*Aboulghair, 2005*).**

WHO have suggested that improving maternal health programs is an important first step? Simple steps like introducing hygienic obstetrics techniques and early recognition and referral of maternal infections could significantly reduce the risk of tubal blockage **(*WHO, 2007*).**

Significance of the study

From clinical experience there was a high incidence of secondary infertility caused by pelvic inflamatory disease (PID). Researches which done to identify the role of unhealthy practices during menstruation, partum and postpartum periods and secondary infertility weren't done in Egypt so , efforts were embarked on this study aimed to determine the role of unhealthy practices during menstruation, partum and postpartum periods that could affect women's fertility. Study conducted in 26 countries found that secondary infertility is caused primarily by infection generally attributed to sexually transmitted diseases (STDs) and unhygienic obstetric and abortion procedure. **(*Aboulghair, 2005*).**

Aim of the study

Determine the role of unhealthy practices during menstruation, partum and postpartum periods that could affect women's fertility.

Research question

Are unhealthy practices during the menstrual, partum and postpartum period's risk factors for secondary infertility?

Ethical consideration

After approval of the ethics committee, an official permission was obtained from Director and Head of Obstetric University Hospital and Minia General Hospital departments . The significance and purpose of the study was explained to them. Confidentiality of any obtained information was ensured to them.

Subject and methods

Case control study was utilized for the purpose of current study. The study was conducted in University Hospital (Gynecology department, Outpatient clinics) and Minia General Hospital departments in Minia City. A convenient sample of 200 women was included in the study. This sample was divided into two groups 100 women suffering from secondary infertility (Study group) and 100 fertile women (control group). Inclusion criteria: age from 20-40 years old currently married , Last delivery was vaginally , females have at least one previous conception, irrespective of its outcome ,females with secondary infertility caused by PID that confirmed with laparoscopy or clinical examination and not suffering from any chronic disease. Control group fertile women who delivered less than one year ago, and/or currently pregnant and not suffering from any chronic disease. Exclusion criteria: females with primary infertility and irregular marital life.

Tools for Data Collection

Using structured interviewing sheet which included: Sociodemographic data, complete history and checklist to identify practices followed during menstruation, partum and post partum periods.

Procedure

An oral informed consent was obtained from included women in the study. It included full explanation of the procedure, and rights for privacy and confidentiality. Interviewing the women to collect data related to the sociodemographic characteristics, menstrual, obstetrical, family planning, medical, surgical history and checklist to identify practices followed during menstruation, partum and post partum periods . . Each interview lasted for 15 minutes.

Operational Design

Pilot study was done on 10% of the women to evaluate the clarity and understanding of the tools. It also helped in the estimation of the time needed to fill the form. According to the results of the pilot, tools modifications were done. The women who were tested in the pilot study were not included in the main study sample. A Clear explanation of the nature and the aim of the study were given to the women to obtain their informed verbal consent which includes the rights for privacy and confidentiality.

Statistical analysis

Data entry and statistical analysis were done using SPSS 11.5 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Qualitative categorical variables were compared using chi-square test. Statistical significance was considered at p-value <0.05.

Results:

Table (1) shows that the mean age of the study group was 25.31 while it was 23.72 years for the control group. (34%) of those of study group were illiterate, while (33%) of the control were highly educated. There is a significant deference between both groups in relation to illiteracy and high education (p= .02) . There is a significant deference between both groups in relation to occupation and residence ($p<0.05$).

Table (2) shows that no statistically significance difference ($p>0.05$) among group in all items related to menstrual history. **Table (3)** shows that statistically significance

difference ($p<0.05$) regarding the health problem during previous pregnancy among groups there were (28%) of women had premature rupture of membrane (PROM) in study group to (15%) in control group. Regarding maternal complication after delivery there were (22%) of women in study group had postpartum hemorrhage to (12%) in control group and (20%) of women in study group had puerperal sepsis to (7%) in control group respectively and there were highly statistically significance difference ($p<0.001$). Regarding abortion there were statistically significance difference ($p<0.05$) among study and control group in which (28%) of women aborted in study group to (14%) in control group.

Table (4) show last contraceptive methods among groups there were (40%) and (22%) of study group and control group used IUD respectively and there were highly statistically significance different among group ($p< 0.001$).**Table (5)** shows distribution of the study and control group according to past vaginal and abdominal surgery there were statistically different among groups ($p<0.001$) in which one third (32%) of study group were made D&C operation in contrast of the control group only (5%) and (83%) of study group were made laparoscopy operation in contrast of the control group (3%) and there were highly statistically different among groups ($p<0.001$).

According to practices done during menstruation, partum and postpartum periods. **Table (6)** show that (29%) of the study group were used washed reusable clothes dried in side room in contrast (15%) of control group and there were statistically significant difference among groups ($p<0.05$). More than half (66%) of the study group not practiced hand washing before and after cleaning perineal area in contrast (45%) of control group and there were highly statistically significant difference among groups ($p<0.003$). one third (32%) of the study group were cleaned perineal area with water and soap in contrast about half (47%) of control group and there were statistically different among groups ($p<0.05$). A greater percentage (69%) of the study group weren't cleaned perineal area from front to back in contrast (52%) of control group and there were statistically different among groups ($p<0.05$). There were (18%) of the study group were bathed after stopping of blood to (7%) in control group and there were highly statistically different among groups ($p<0.007$). there were (37%) and (3%) of the study and control group changed sanitary pad less than 3 time / day respectively and there were highly statistically different among groups ($p<0.001$). The majority (88%) of the study group used vaginal douche to (61%) of control group and there were highly statistically different among groups ($p<0.001$). High percentage (57%) of the study group were used water for vaginal douche to (4%) in control group and there were highly statistically different among groups ($p<0.001$). Only (19%) of the study group were used nylon under wear to (6%) in control group and there were statistically different among groups ($p<0.01$). More than half percentage (58%) of the study group were delivered in home by dya to (28%) in control group and there were highly statistically different among groups ($p<0.001$). About (54%) of the study group were be examined vaginally and delivered without using gloves on the other hand (18%) in control group. A greater percentage (74%) of the study group were sit in warm water during postpartum period to (58%) of control

group and there were statistically different among groups ($p<0.05$).

Table (1) Socio-demographic characteristics among groups:

Item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
Age Mean ± SD	**25.31±5.72**		**23.72±4.01**			
1. Level of education						
• **Illiterate**	**34**	**34%**	**20**	**20%**	**9.427**	**.02***
• **Read and write**	**22**	**22%**	**16**	**16%**		
• **Secondary**	**26**	**26%**	**31**	**31%**		
• **University**	**18**	**18%**	**33**	**33%**		
2. Occupation						
• **House wife**	**62**	**62%**	**48**	**48%**	**3.960**	**.05***
• **Worker**	**38**	**38%**	**52**	**52%**		
3. Residence						
• **Urban**	**27**	**27%**	**40**	**40%**	**3.793**	**.05***
• **Rural**	**73**	**73%**	**60**	**60%**		

Table (2) Menstrual history among groups

item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
1. Age at menarche						
• 11-12	8	8%	12	12%	1.051	0.591
• 13-14	89	89%	86	86%		
• >14	3	3%	2	2%		
2. Duration of menstrual blood flow (days)						
• 2-3	4	4%	2	2%	1.279	0.734
• 4-5	83	83%	86	86%		
• >5	13	13%	12	12%		
3. Menstrual rhythm						
• Regular	86	86%	89	89%	0.411	0.521
• Irregular	14	14%	11	11%		
4. Amount of menstruation						
• Scanty	10	10%	9	9%	3.235	0.198
• Moderate	74	74%	83	83%		
• Excessive	16	16%	8	8%		
5. Menstrual disorder						
• No	45	45%	63	63%		
• Dysmenorrhea	36	36%	30	30%		
• Oligomenorrhea	3	3%	1	1%		
• Polymenorrhea	4	4%	2	2%		
• Menorrhagia	3	3%	-	-		
• Dysmenorrhea and Menorrhagia	5	5%	3	3%	11.712	0.110
• Dysmenorrhea and Oligomenorrhea	3	3%	-	-		
• Dysmenorrhea and Polymenorrhea	1	1%	1	1%		

Table (3) Obstetrical history among groups:

item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
1. Health problem during previous pregnancy • No • PIH • PROM	 64 8 28	 64% 8% 28%	 80 5 15	 80% 5% 15%	. 6.40	 0.04*
2. Mode of previous delivery • SVD • SVD with episiotomy	 81 19	 81% 19%	 78 22	 78% 22%	3.27	0.71
3. Maternal complication after previous delivery • No • PPH • Puerperal sepsis	 58 22 20	 58% 22% 20%	 81 12 7	 81% 12% 7%	13.0	<0.001**
4. Abortion • Yes • No	 28 72	 28% 72%	 14 86	 14% 86%	5.90	0.02*
5. Type of abortion • Spontaneous abortion • Induced abortion	 13 15	 46.4 % 53.6 %	 10 4	 71.4 % 28.6 %	8.00	0.02*
6. Abortion number • 1 • 2	 18 10	 64.3 % 35.7 %	 10 4	 71.4 % 28.6 %	5.95	0.06
7. Place of abortion • Hospital • Home • Clinic	 12 12 4	 42.9 % 42.9 % 14.2 %	 4 8 2	 28.6 % 57.1 % 14.3 %	6.70	.08
8. Treatment procedure used for abortion • No treatment • Dilatation and curettage	 13 15	 46.4 % 53.6 %	 9 5	 64.3 % 35.7 %	6.96	0.03*
9. post abortive complication • No complication • Hemorrhage • Puerperal sepsis	 16 8 4	 57.1 % 28.7 % 14.2 %	 11 2 1	 78.6 % 14.3 % 7.1%	7.56	0.06

Table (4) Distribution of last contraceptive methods among groups:

item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
Last contraceptive methods • Not using contraceptive methods • IUD • Pills • Injection • Norplant	36 40 9 13 2	36% 40% 9% 13% 2%	51 22 17 9 1	51% 22% 17% 9% 1%	19.19	<0.001**

Table (5) Distribution of the study and control group according to past vaginal and abdominal surgery

item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
1. past vaginal operation • No • D&C	68 32	68% 32%	95 5	95% 5%	20.65	< 0.001**
2. past abdominal surgery • No • Laparoscopy • Appendectomy	10 83 7	10% 83% 7%	93 3 4	93% 3% 4%	142.12	< 0.001**

Table (6) Distribution of the study and control group according to practices done during menstruation, partum and postpartum periods

item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
1. Types of absorbent material						
• Sanitary pads	14	14%	34	34%	13.34	0.01*
• New disposable clothes	16	16%	13	13%		
• Washed reusable clothes dried in sun light	22	22%	22	22%		
• Washed reusable clothes dried in side room	29	29%	15	15%		
• All of the above	19	19%	16	16%		
2. Practice hand washing before and after cleaning perineal area						
• Yes	34	34%	55	55%	8.928	0.003**
• No	66	66%	45	45%		
3. Washing of perineal area after toilet						
• Cleaning with water	68	68%	53	53%	4.708	0.03*
• Cleaning with water and soap	32	32%	47	47%		
4. Cleaning of perineal area from front to back						
• Yes	31	31%	48	48%	6.047	0.01*
• No	69	69%	52	52%		
5. Drying perineal area after washing						
• Yes	31	31%	52	52%	9.082	0.003**
• No	69	69%	48	48%		
6. Bathing during menstruation and post partum period						
• Every day	22	22%	41	41%	12.18	0.007**
• Alternated day	30	30%	31	31%		
• weekly	30	30%	21	21%		
• After stopping of blood flow.	18	18%	7	7%		
7. Changing sanitary pads / day						
• Less than 3 pads	37	37%	3	3%	37.79	< 0.001**
• 3 pads / day	29	29%	55	55%		
• More than 3 pads	34	34%	42	42%		
8. Using vaginal douches						
• Not using vaginal douche	12	12%	39	39%	38.24	< 0.001**
• Every day	2	2%	0	0		
• Alternated day	18	18%	8	8%		
• weekly	36	36%	9	9%		
• After stopping of blood flow	32	32%	44	44%		
9. Types of solution used						
• Water	57	64.8 %	42	68.8 %	35.43	< 0.001**
• Water with soap	22	25%	4	6.5%		
• Water with antiseptic solution	3	3.4%	12	19.6 %		
• Water with vinegar	6	6.8%	3			

Cont' table (6)

item	Study group N=100		Control group N=100		X^2	P
	N	%	N	%		
				6.5%		
10. Types of underwear used. • Cotton • Nylon • Both	54 19 27	54% 19% 27%	55 6 39	55% 6% 39%	8.951	0.01*
11. Person assist with delivery • Physician • midwife	42 58	42% 58%	72 28	72% 28%	18.36	< 0.001**
12. place of previous delivery • Hospital • Home • Clinics	28 58 14	28% 58% 14%	54 28 18	54% 28% 18%	19.21	< 0.001**
13. Use of gloves at the time of vaginal examination • Yes • No	46 54	46% 54%	82 18	82% 18%	28.125	< 0.001**
14. Use of clean sheet during delivery • Yes • No	48 52	48% 52%	90 10	90% 10%	41.23	< 0.001**
15. Use of gloves at the time of delivery • Yes • No	46 54	46 % 54%	82 18	82% 18%	26.75	< 0.001**
16. Sitting in warm water during postpartum period • Yes • No	74 26	74% 26%	58 42	58% 42%	5.70	0.02*
17. Number of sitting in warm water during postpartum period/ day • 1-3 • >3	48 26	64.9 % 35.1 %	35 22	60.3 % 39.7 %	6.558	0.04*
18. Vaginal insertion of homemade medication. • Yes • No	13 87	13% 87%	6 94	6% 94%	2.850	0.91

Discussion

The data presented in this study shows that there is a significant difference between both groups in relation to their mean age. Other demographic data such as occupation, residence and educational level were obtained and there were significant difference regarding these factors between study and control group ($p<0.05$). **(*Stanton, et al, 2007*)** found that infertility rate had a significant positive correlation with environmental, cultural factors and educational level of women. Table (3) showed that (28%) of study group had abortion in contrast (14%) in control group this agree with **(*Daling, et al, 2001*)** who mentioned that abortion is a very important cause of secondary infertility. Several studies from various parts of Africa have shown high rates of previous induced abortions in women seeking infertility treatment **(*Etuk, et al, 2000*).**

Other iatrogenic causes include the use of outdated treatments like dilatation and curettage (D&C) and cauterization of cervix for the treatment of infertility **(*Van Balen, et al, 2001*)**. The study revealed that in (table 5) (32%) of study group were done (D&C) in relation to (5%) in control group **(*Keith, 2002*)**. Illustrated that Using IUD greatly increases the risk of PID probably because of the avenue the device provides for organisms to ascend from the lower to the upper genital tract . Table (4) showed that (40%) of study group were used IUD as previous contraceptive method while (22%) in control group **(*Czerwinski, et al, 2001*)** found that Menstruation and PID are closely associated perhaps because the cervix dilates during menstruation have been reported including use of unhygienic material for the absorption of blood and altered bathing practices. In a study (26%) of women reported to bath less frequently and used unhygienic material to absorb the menstrual flow in the present study (table 6) showed that (30%) of women reported to bath less frequently and (29%) used unhygienic material to absorb the menstrual flow.

In the present study (58%) of women delivered at home. Only (28%) and (14%) delivered in hospitals and clinic respectively. The unclean place of delivery act as a risk factor for infection (20%) of study group were suffer from puerperal sepsis and (22%) of them suffer from postpartum hemorrhage this result has been supported by another study conducted at Gadchiroli, India where over (10%) of women who delivered at home developed RTIs in the postpartum period**. (*Bang, et al., 2004*)** Similarly unhygienic practices during the postpartum period might result in RTIs. **(*Inhorn, 2003*).**

In the present study (58%) of women delivered at home. Only (28%) and (14%) delivered in hospitals and clinic respectively. The unclean place of delivery act as a risk factor for infection (20%) of study group were suffer from puerperal sepsis and (22%) of them suffer from postpartum hemorrhage this result has been supported by another study conducted at Gadchiroli, India where over (10%) of women who delivered at home developed RTIs in the postpartum period **(*Bang, et al., 2004*).** This may be due to various factors such as lack of awareness about the importance of hygienic practices, negligence, or inability to afford the use of clean and hygienic material. (***Stanton, et al, 2007***) mentioned that lack of awareness of the use of clean material has been shown by another study that focused on postpartum practices as women presumed the postpartum period as a dirty time period and do not

pay attention to the importance of hygiene during this period**.**

Conclusion and Recommendations

The data concluded that unhealthy practices during menstruation, partum and postpartum periods were founded higher in study group than in control group and there were statistically different among groups at ($p<0.05$). The study recommended that there is a strong need for creating awareness among women about hygienic practices during menstruation, partum and postpartum periods through training program. Nurses have an important role in providing health education to women about hygienic practices during menstruation, partum and post partum periods that preventing infection which leads to PID then infertility.

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The Relationship between Antenatal Health Behavior and Pregnancy Planning

Dr. Ekbal Abd el Rheim Emam
Lecturer in Woman Health and Gynecology Nursing Department, Faculty of Nursing, Minia University

Abstract

A woman's perception of her pregnancy is one of the most important factors which can affect her personal health and well-being, her feelings towards her baby and her thoughts about giving birth. Being pregnant at a planned or unplanned time can also affect a woman's reaction towards having her baby. The aim of the study was to determine the relationship between antenatal health behavior and pregnancy planning. A cross sectional study design was adopted in this study. The study was conducted at Suzan university hospital, face to face interview was used with women in obstetrics and gynecology department. One thousand three hundred thirty one women were taken from the baseline sample. Tools used in carrying out the study included, Socio-demographic and obstetric data, Antenatal health behavior and timing of commencement of antenatal care. Results showed that there are statistically significant differences between unplanned and unwanted pregnancy 40 (21.3%) and 23 (22.5%) compared with 118 (13.1%) mother with planned pregnancy who did not take vitamins. ($p<0.000$). It was concluded that unplanned and unwanted pregnancy may have negative effects on antenatal visit and frequency of attending antenatal care mothers.

Keywords, antenatal health behavior, pregnancy planning, nutrition and weight gain.

Introduction:

A woman's perception of her pregnancy is one of the most important factors which could affect her personal health and well-being, her feelings towards her baby and her thoughts about giving birth. Being pregnant at a planned or unplanned time could also affect a woman's reaction towards having her baby. In terms of planning, pregnancy can be classified as: an intended or planned pregnancy; a mistimed pregnancy which preferably would have happened in the future; and an unwanted pregnancy (***Klerman, 2000)***.

Unplanned pregnancies occur in women from all classes of society, Unwanted pregnancies occur more frequently among women who have lower socio-economic and educational levels, who are young, unmarried and who already have other children ***(Lakha and Glasier, 2006; Bartz et al., 2007 and; Karaman et al., 2007).***

Ineffective use of contraceptive method, e.g. incorrectly or inadequately, wrongly held beliefs and attitudes towards family planning methods, insufficient access to contraception, and no use of any contraception can have an effect on whether a pregnancy is unwanted or unplanned **(Henshaw,1998).**

Many studies have provided evidence that unplanned pregnancies have an effect on a partner's perception of the pregnancy and status of wanting or not wanting the pregnancy, and on maternal and fetal outcomes and commenced attendance for antenatal care ***(Carter and Speizer, 2005; Martin et al., 2007)***.

Many studies have also shown that unwanted or unplanned pregnancies can negatively affect the duration of the pregnancy and persistence of behaviors that affect health in a negative way such as smoking, inadequate vitamin intake,

insufficient nutrition, unbalanced and insufficient weight gain, and reduced number of antenatal consultations ***(Özbaşaran and Yanıkkerem, 2003; Rosenberg et al., 2003and D'Angelo et al., 2004).***

It is very important for midwives and other relevant health workers to understand the concept of unplanned pregnancy, and to increase their awareness of methods and use of effective contraception so they can inform women how to prevent unplanned or unwanted pregnancies (***Santelli et al., 2003***). They could also play a crucial role in helping women to develop a positive attitude towards pregnancy by supporting them in the decision-making process (***Moos, 2003)***. In addition, midwives should be pro-active in developing and contributing to policy related to pregnancy, both locally and nationally. In this way, they could participate in the process of finding solutions to problems that they recognize in practice.

Magnitude of the problem

An unwanted pregnancy is a common problem globally, with potentially important individual, family and social consequences. In the USA, 49% of all pregnancies are unwanted, and half of these result in abortion ***(Finer and Henshaw, 2006***). In a study conducted in Japan, 51.2% of all pregnancies were unplanned, and 25.9% of pregnancies were unwanted **(*Goto et al., 2002***). According to data from the Population and Health Research Unit in Turkey for 2003, 20% of all births during the previous five year period in Turkey were unwanted, 14% were unplanned and 66% were planned ***(Turgay et al., 2003***). With an annual population growth rate of 1.8 and a total fertility rate of 3.3, unplanned pregnancy in Egypt, the most populous Arab country, is an important reproductive issue to address, especially given that over one-third of all pregnancies were reported to be unintended in 1995 (***El-Zanaty & Way., 2001***).The Egyptian rate of unintended pregnancy is closer to that found in the Islamic Republic of Iran, where the rate was 35% (***Abbasi-Shavazi, 2004***). It is much higher however than other African countries such as Nigeria, where the rate was 14% in 2003 ***(The Alan Guttmacher Institute, 2005***).

Aim Of the study

To determine the relationship between antenatal health behavior and pregnancy planning.

Materials and methods

Research Designs:

A cross sectional design was adopted in this study.

***Setting*:**

The study was conducted at Suzan university hospital, in obstetrics and gynecology department.

Ethical consideration:

After approval of the ethics committee, an official permission was obtained from director and head of obstetrics at Suzan university hospital department oral consent were taken.

Sample:

To select the sample, the annual rate of births at hospital was taken the baseline of (8560 women), and all mothers who gave birth during two month period were included in the research sample to represent the population. The sample consisted of a total number 1331 woman (906 of planned pregnancy, 188 of unplanned pregnancy and 102 of unwanted pregnancy) who gave birth during this time.

Exclusion criteria: 135 were excluded because they discharged without contact and high risk pregnancy.

Inclusion criteria: 1196 mothers who gave birth and were reached within 24 hours postpartum and who agreed to participate in the study were included.

Data collection:

The questionnaire was completed by the researchers during face to face interview with women who gave their oral consent to take part. It took approximately 20 minutes to administer each questionnaire. Averages of 23 mothers were interviewed per day.

Tools of data collection:

Tools used in carrying out the study are described under four sections:

1. Socio-demographic information of the women such as: age, level of education, mother occupation ……etc
2. The second section cover obstetric history such as: number of pregnancies, number of births…..etc.
3. Antenatal health behavior covering taking folic acid, nutrition……etc.
4. Antenatal visit covering timing of commencement of antenatal care and frequency of antenatal consultation.

Data analysis:

Data were analyzed using SPSS (statistical package for social sciences) for windows (version 11.5). Level of $p<0.05$ was considered statistically significant.*X2* tests were used.

Result:

Women's demographic characteristics are shown in (Table1). The majority of the women had secondary school graduates (54.5%, 44.7% and 45.1%), between planned, unplanned and unwanted pregnancies. Good percentages (71.7%, 70.7% and 63.7%) were housewives and also small percentages were employed. The age of the majority of the sample ranged for 20-29y (69.3% and 58.5%) between planned and unplanned pregnancy while the majority of unwanted pregnancies amounted to (60.8%). Statistically significant differences were found between planned, unplanned and unwanted pregnancy in level of education (X^2= 22.67, $p<0.001$) and age(X^2= 87.59, $p<0.000$).

Table (2) shows that unwanted pregnancies increased in percentage with the increased number of pregnancies and the number of births. Statistically significant differences ($p<0.000$), while the risk of unplanned pregnancies was high among women who reported that they did not use any contraception method and became pregnant represented (24.5%).

Table (3) shows that when the mother vitamin intake was examined according to whether pregnancy was planned, there was also statistically significant difference between unplanned and unwanted pregnancy, 40 (21.3%) and 23 (22.5%) compared with 118 (13.1%) mothers with planned pregnancies who did not take vitamins. ($p<0.000$) When mother consumption of beverages containing caffeine was examined, the differences between the groups were also not statistically significant (P=0.249). When the relationship between maternal weight gain during pregnancy and pregnancy planning was examined,

statistically significant difference was found between mothers with planned pregnancies and the other two groups, (unplanned pregnancy and the mothers with unwanted pregnancies) (X^2= 23.44; P<0.000).

Timing of the commencement of antenatal visit and frequency of attended among mothers with planned, unplanned and unwanted pregnancies are shown in table (4), there are statistically significant difference (X2=194.92; P<0.000).

Table (1): demographic characteristics of the studied sample among planned pregnancy, unplanned pregnancy and unwanted pregnancy

Variable	Planned preg.		Unplanned preg.		Unwanted preg.		Total		X^2&P
	No=906	%	No=188	%	No=102	%	No=1196	%	
Age									
≤19y	99	11.0	18	9.6	4	3.9	121	10.1	87.59 0.000
20-29	628	69.3	110	58.5	36	35.3	774	64.7	
≥30	179	19.7	60	31.9	62	60.8	301	25.2	
Level of education									
Illiterate	61	6.7	26	13.8	4	3.9	91	7.6	22.67 0.001
Primary school	246	27.2	52	27.7	31	30.4	329	27.5	
Secondary school	494	54.5	84	44.7	46	45.1	624	52.2	
University	105	11.6	26	13.8	21	20.6	152	12.7	
Mother occupation									
Housewife	650	71.7	133	70.7	65	63.7	848	70.9	2.86 0.239
Employed	256	28.3	55	29.3	37	36.3	348	29.1	
Husband occupation									
Employed	614	67.8	136	72.3	57	55.9	807	67.5	8.31 0.016
Not employed	292	32.2	52	27.7	45	44.1	389	32.5	
Address									
Rural	288	31.8	58	30.9	18	17.6	364	30.4	8.68 0.013
Urban	618	68.2	130	69.1	84	82.4	832	69.6	

Table (2): Obstetric history of the studied sample among planned pregnancy, unplanned pregnancy and unwanted pregnancy

Variable	Planned preg.		Unplanned preg.		Unwanted preg.		Total		X²&P
	No=906	%	No=188	%	No=102	%	No=1196	%	
Number of pregnancy									
1	172	19	27	14.4	5	4.5	204	17	91.93 0.000
2	396	43.7	85	42.2	19	18.6	500	41.8	
3	274	30.2	56	29.8	45	44.1	375	31.4	
4≥	64	7.1	20	10.6	33	32.4	117	9.8	
Number of birth									
1	200	22	27	14.4	4	3.9	231	19.3	173.32 0.000
2	423	46.7	85	45.2	15	14.7	523	43.7	
3	248	27.4	57	30.3	47	46.1	352	29.4	
4≥	35	3.9	19	10.1	36	35.3	90	7.5	
Type of birth									
Vaginal	593	65.5	111	59	31	30.4	735	61.5	48.12 0.000
Caesarean section	313	34.5	77	41	71	69.6	461	38.5	
Gestation at birth									
≤37	178	19.6	40	21.3	30	29.4	248	20.7	34.95 0.000
38-42	642	70.9	111	59	54	53	807	67.5	
≥42	86	9.5	37	19.7	18	17.6	141	11.8	
Use of contraception									
Used	813	89.7	142	75.5	88	86.3	1043	87.2	28.24 0.000
Not used	93	10.3	46	24.5	14	13.7	153	12.8	

Table (3) antenatal health behavior of the studied sample among planned pregnancy, unplanned pregnancy and unwanted pregnancy

Variable	Planned preg.		Unplanned preg.		Unwanted preg.		Total		X²&P
	No=906	%	No=188	%	No=102	%	No=1196	%	
Vitamin intake									
Do not take any	118	13.1	40	21.3	23	22.5	181	15.1	70.86 0.000
Sometimes take	313	34.5	97	51.6	59	57.8	469	39.2	
Take every day	475	52.4	51	27.1	20	19.6	546	45.7	
Consumption of beverages containing caffeine									
Do not drink	138	15.2	29	15.4	14	13.7	181	15.1	5.39 0.249
Drink less	334	36.9	76	40.4	29	28.4	439	36.7	
Drink at the same amount before pregnancy	434	47.9	83	44.1	59	57.8	576	48.2	
Nutrition required during pregnancy									
Low	95	10.5	26	13.8	41	40.2	162	13.5	69.39 0.000
Appropriate	428	47.2	89	47.3	33	32.4	550	46	
High	383	42.3	73	38.8	28	27.4	484	40.5	
Weight gain based on body mass index									
Low	146	16.1	25	13.3	25	24.5	196	16.4	23.44 0.000
Appropriate	513	56.6	87	46.3	60	58.8	660	55.2	
High	247	27.3	76	40.4	17	16.7	340	28.4	

Table (4): Commencement of antenatal visits and frequency of antenatal care among planned pregnancy, unplanned pregnancy and unwanted pregnancy

Variable	Planned preg.		Unplanned preg.		Unwanted preg.		Total		X²&P
	No=906	%	No=188	%	No=102	%	No=1196	%	
First antenatal care									
During first trimester	813	89.7	119	63.3	27	26.5	959	80.2	270.96 0.000
After first trimester	93	10.3	69	36.7	75	73.5	237	19.8	
Frequency of attended									
5± visits	727	80.2	98	52.1	21	20.6	846	70.7	194.92 0.000
≤4 visits	179	19.8	90	47.9	81	79.4	350	29.3	

Discussion

The aim of the study was to determine the relationship between antenatal health behavior and pregnancy planning. This study found that there were statistically significant relationships between pregnancy planning and antenatal health behaviors. Mothers with unplanned pregnancies smoked more and drank beverages containing caffeine more frequently than mothers who had planned their pregnancies; they also took fewer vitamins, were less likely to have adequate nutrition and did not gain the recommended weight during pregnancy. They were also more likely to attend later for antenatal care and to attend fewer antenatal visits.

This study found that women who reported their pregnancy as unwanted drank more beverages containing caffeine, were less likely to eat nourishing foods and gain insufficient pregnancy weight gain, supporting the findings of earlier studies **Özbaşaran and Yanıkkerem, (2003**).

The current study also supported the findings of earlier studies that an unwanted pregnancy is associated with delaying commencement of antenatal care beyond the first trimester of pregnancy (**Erol et al., 2003**; **Korenman et al., 2002**). In these studies, more than twice as many women with unwanted pregnancies reported inadequate antenatal care compared with women with planned pregnancies**. Pagnini and Reichman, (2000)** found that women whose pregnancies were unwanted had dramatically reduced odds of attending for care early. **Pulley et al., (2002)** reported that the proportion of pregnancies for which women initiated antenatal care at or before eight weeks of gestation was significantly greater if the pregnancy was planned than if the pregnancy was unplanned or unwanted. In addition, **Hulsey, (2001)** found that an unwanted pregnancy was a predictor for late or non-attendance for antenatal care.

The fact that the consumption of drinks containing caffeine did not decrease during pregnancy may be associated with cultural differences as drinking tea is an inseparable part of breakfast for Turkish families. Drinks with caffeine, especially tea, were consumed by all the groups in this study although higher in the unwanted pregnancy group. In the planned pregnancy group the acceptance of the pregnancy and the motivation for education may be high. In this way, mothers may be educated about the negative effects of drinks containing caffeine on pregnancy, and they may be motivated to decrease their intake of these drinks.

Sayan and Erci, (2001) reported that pregnant women do not receive sufficient, balanced nutrition, and that over half of pregnant women do not know how much weight they put on during pregnancy. They also found that women take more responsibility for their health and develop more positive attitudes towards nutrition as their age, education and economic levels increase. **Mete, (1992)** reported that women often underestimated how much weight they had gained during their pregnancy. There are concerns anecdotally that women in Turkey do not have enough knowledge about nutrition in general and, specifically, nutrition during pregnancy.

Keeton and Hayward, (2007) found that unwanted pregnancies were the reason for non-attendance for antenatal visits as well as poor socio-demographic and economic conditions. **Mete ,(1992)** found in a study of the reasons for why women do not attend for antenatal care that insufficient

motivation for antenatal care and not believing it to be of importance were the reasons for non-attendance for antenatal care in over a third of pregnant women who did not attend for antenatal care identified within the study. In the current study, the proportion of women starting and continuing antenatal care were higher than the data from the Population and Health Research in Turkey (2003). This can be explained by the increased accessibility to available health services for women attending the study site which was covered by public insurance.

Conclusion and recommendation:

This study showed that unplanned and unwanted pregnancy may have negative effects on antenatal visit and frequency of attending antenatal care mothers**.** Educational program for contraceptive methods are important and necessary in preventing unplanned and unwanted pregnancy. Health visitors should ensure they are able to reach women who are reluctant to seek care of their pregnancies and motivate them to do so. This study found that significant difference was found between mothers with planned pregnancies who were influenced by antenatal health behavior.

Recommendations: Based on the findings of the study, we recommend more interventions concerning reproductive health programmes and services that should be taken into consideration and more care given to promoting reproductive health awareness of pregnant women. Women with unplanned or unwanted pregnancies who have higher tendencies to develop negative behaviors should be the target group for midwives and other relevant health-care providers.

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للتواصـــــل:

السكرتير الاداري: أ/ امل فتحي
موبايل: 01127248710 ت: 0223645336

E-mail: elmagla.egy2010@yahoo.com

Site: www.nursing.cu.edu.eg