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Effectiveness of interventional package on knowledge and attitude towards prenatal HIV testing and mother to child transmission among antenatal mothers

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ABSTRACT

Human Immunodeficiency Virus (HIV) is an infection that assaults immune cells called CD4 cells, which are a kind of T cell. These are white platelets that move around the body, recognizing flaws and inconsistencies in cells just as contaminations. The present study aimed to effectiveness of interventional package on knowledge and attitude towards prenatal HIV testing and parent to child transmission among pregnant women in selected settings. 60 pregnant women sample in Quantitative approach with Pre experimental one group pre-test and post-test design, sample selection was done by Non Probability – Purposive Sampling Technique, Effectiveness of structured teaching programme in meaning pregnant women gained 35% etiology and effects gained 31% in management and precautions in PCT pregnant women gained 41% prevention 36.8% overall they gained 37.28% and Attitude gained 23.3% after intervention. Pre-existing knowledge was assessed by using semi structured teaching programme, pregnant mothers gained 23.3% more knowledge score than pretest score and the mean difference is 12.80 by using generalized McNamara's chi-square test, it is statistically significant. In pretest, mothers were having 10.77 score whereas, in post-test they were having 23.57 score. Difference score is 12.80. The difference is large and it is statistically significant. Successful intervention toward prevention of mother-to-child transmission (PMTCT) and achieving the goal of eliminating the new HIV infection is highly dependent on everyone; especially, women of child-bearing age should have accurate and up-to-date knowledge about HIV transmission, risk of transmission to babies, and possible interventions.



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INTRODUCTION

Human immunodeficiency virus (HIV) is an infection that assaults invulnerable cells called CD4

cells, which are a sort of T cell. These are white platelets that move around the body, distinguishing shortcomings and peculiarities in cells just as contaminations. Right when HIV targets and attacks these cells, it reduces the body's ability to fight various illnesses. This increases the risk and impact of sharp defilements and tumours. In any case, an individual can pass on HIV without experiencing signs for a long time. HIV is a profound established sickness. In any case, getting treatment and managing the sickness feasibly can prevent HIV from landing at an extraordinary level and diminish the threat of an individual passing on the disease. (Dorothy R. Marlow). The first instance of (AIDS) were accounted for in the United States in the spring

of 1981. By 1983 the human immunodeficiency infection (HIV), the infection that causes AIDS, had been separated. (Substance Abuse Treatment for Persons with HIV/AIDS <https://www.ncbi.nlm.nih.gov/books/NBK64928>). The HIV is a pandemic still which remains and an issue of noteworthy stress on an overall scale. A total of 35.3 million people are living with HIV; of these, a normal 2.3 million are as of late infected. (WHO, 2011; UNAIDS, 2011)

Knowledge of pregnant women on the three periods of mother-to-child transmission (MTCT) of HIV has implication for child HIV acquisition. This assessment intends to review the data on pregnant women on mother-to-kid transmission of HIV and to perceive related factors in Meket region, upper east Ethiopia. (Luo and He, 2008)

The mode of transmission of HIV happens in two different ways mother to kid transmission is a huge source of HIV contamination in kids underneath 15 years. The vertical transmission, from mother to kid happens in utero (30 - 35% cases), during conveyance (60-65%) and through breastfeeding (1-3%). Even transmission represents just 10-15% HIV cases in kids. (Asefa and Beyene, 2013)

Ethiopia is one of the greatest plague countries in sub-Saharan Africa. The national HIV regularity check was 1.5%, anyway the inescapability in women was 1.9% in 2011.⁵ Expanded pace of HIV in pregnant women would in the long run may lead to an extended recurrence of HIV in kids. Among indisputably the 137,494 new HIV defilements, 10% were adolescents spoiled generally due to vertical mother-to-kid transmission of HIV (MTCT). (Abajobir, 2013) It is estimated that 800,000 infants were infected with HIV via mother-to-child transmission in 2001, almost 90% of them in Sub-Saharan Africa. (Mujumali, 2011) The increasing number of women living with HIV worldwide makes prevention critical, not only for the sake of women's health but also to reduce future HIV infection among infants in sub-Saharan Africa, where half the female population is of childbearing age (Newell, 2001; Haddis and Jerene, 2006). There are factors that determine the awareness of pregnant women about voluntary counselling and testing services. Although voluntary counselling and testing is widely accepted, there are progressive and unacceptable losses to follow-up of 55%, 68%, and 70% of HIV-positive mothers during the antenatal period, delivery, and first postnatal visits, respectively. Moreover, a great majority of deliveries occur at peripheral sites where PMTCT is not available. (Kominami *et al.*, 2007; Jebessa and Teka, 2006)

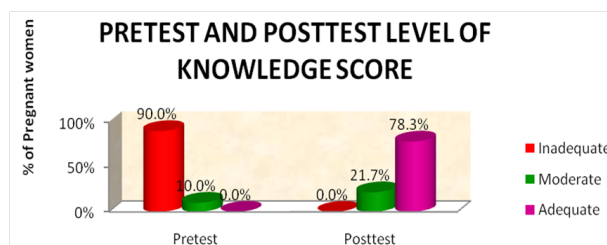


Figure 1: Percentage of pre-test and post-test level of knowledge

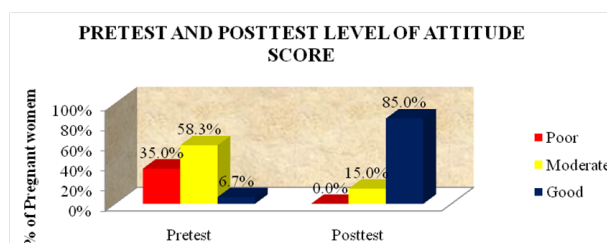


Figure 2: Percentage of pre-test and post-test level of Attitude

Accordingly knowledge and attitude of pregnant ladies on counteraction of MTCT of a HIV contamination and pre-birth testing is a basic angle to lessen the effect of HIV, particularly on kids. The counteraction of MTCT assumes a significant job in constraining the quantity of youngsters being contaminated by HIV from the infected pregnant women through pre-birth screening and prophylaxis. This study is focusing on reduction of overall risk of HIV Infection through intervention such as providing knowledge via structured teaching module and providing booklets for references.

MATERIALS AND METHODS

A group of pre-test and post-test design was used to conduct the Study in selected settings in maternity home. Study Population is pregnant women who met the inclusive criteria. The data were collected using Purposive Sampling Technique; Sample size with 60 pregnant women who met the inclusive criteria. Inclusion Criteria pregnant women of all trimesters, who were willing to participate in the study and who could understand Tamil or English language. Exclusion Criteria – The study excluded, pregnant women who had other illness and those who were not willing to participate. Description of tools includes three sections such as demographic variables, knowledge and Attitude based semi structured questionnaire. The study was conducted in selected maternity homes, after obtaining permission from the medical officer of particular maternity centre. Before the data collection, the researcher introduced herself, explained the purpose of the study to the centre staff nurse and pregnant women

Table 1: Comparison of Pre-test and Post-test Level of Knowledge and Attitude Score

	Level	Pre-test		Post-test		Generalized McNemar's test	McNe-
		N	%	N	%		
Knowledge	Inadequate knowledge	54	90.0%	0	0.0%	c2=56.27 P=0.001***(S)	
	Moderate knowledge	6	10.0%	13	21.7%		
	Adequate knowledge	0	0.0%	47	78.3%		
	Total	60	100.0%	60	100.0%		
Attitude	Poor Attitude	21	35.0%	0	0.0%	P=0.001***(S)c2=53.00	
	Moderate Attitude	35	58.3%	9	15.0%		
	Good Attitude	4	6.7%	51	85.0%		
	Total	60	100%	60	100%		

***significant at $p \leq 0.001$ level

Table 2: Comparison of Overall Knowledge Score & Attitude Score Before and after intervention package

	No. of Pregnant women	Pretest Mean \pm SD	Posttest Mean \pm SD	Mean difference Mean \pm SD	Student's paired t-test
Overall Knowledge Score	60	10.77 \pm 3.16	23.57 \pm 2.78	12.80 \pm 2.93	t=33.80 P=0.001*** DF = 59, significant
Overall Attitude Score	60	6.17 \pm 1.56	8.50 \pm 1.26	2.33 \pm 1.47	t=12.30 P=0.001*** DF = 59, significant

***very high significant at $P \leq 0.001$

Table 3: Correlation between Knowledge Gain Score and Attitude Gain Score

	Correlation between Knowledge	Mean gain score \pm SD	Pearson correlation coefficient	Interpretation
Knowledge Vs Attitude	Attitude	12.80 \pm 2.93	r=0.59 p=0.001***	There is a significant, positive correlation between knowledge and Attitude score. It means knowledge increases their Attitude also increases moderately.

*** very high significant at $P \leq 0.001$

in centre. The confidentiality was assured and consent was obtained from the participants then the pregnant women were interviewed and educated using structured teaching module. Three to five participants were selected every day and assured that at any time they can withdraw from the study. The period of study extended for four weeks, the data was collected from Monday to Saturday between 8am to 4 pm. Using purposive sampling technique 60 samples were collected who fulfilled their selection criteria. Pre-test was conducted 25 minutes, the interventional package was implemented on the same day for 45 minutes using flip cart, booklets which were prepared by the researcher after consulting with the specialist. After seven days of interval the post test was administered to the same sample for 20 to 25 minutes regarding the knowledge and attitude of sample towards prenatal HIV testing and parent to child transmission, using the same questionnaire, and evaluated the effectiveness of prenatal HIV testing and parent to child transmission among pregnant women. The data were analysed using descriptive and inferential statistics. Chi square test was used to associate post-test knowledge and attitude of pregnant women regarding prevention of MTCT of an HIV infection and prenatal testing with selected demographic variables.

RESULTS AND DISCUSSION

The major findings of the study, Age group of 18-24 years 63.3% of pregnant women, educational status 40.0% of mothers were Primary Education, Occupation status of pregnant women 71.7% were house wives, Monthly income of the family 55.0% were less than Rs. 5000, Place of residence 56.7% of pregnant women were urban, those who didn't have family history of asthma were 86.7%, Type of fuel used in home is 58.3% were LPG gas, those who didn't have pet animals in their homes were 66.7%; the kind of pet animals in some of their homes were 40.0% dog, bird; the age of children were in 1-3 years was 50.0%, 65.0% of children are male gender, 63.3% of children were first in order of the birth. Effectiveness of structured teaching programme in meaning pregnant women gained 35% aetiology and effects gained 31% in management and precautions in PCT pregnant women gained 41% prevention 36.8% overall they gained 37.28% and Attitude gained 23.3% after intervention. (Table 1) (Figure 1 & Figure 2) This shows effectiveness of structured teaching programme intervention. The analysis revealed that there was significant difference in the level of knowledge and Attitude who received structure teaching programme. (Table 2) Hence hypothesis H1

stated that there is significant difference between the mean pre-test and post-test knowledge and Attitude regarding prevention of MTCT of an HIV infection and prenatal testing among pregnant women who received the structure teaching programme. The association between knowledge gain score and their demographic variables. Elders, more educated, private employee, family history of asthma and urban pregnant women who have gained more knowledge score than others. Statistical significance was calculated using one-way analysis of variance F-test and student independent t-test. H2 There is a significant relationship between the post-test information score of pregnant ladies with their chose segment factors. The examination uncovered that there was high critical relationship between segment factors, for example, age, training, occupation $F=37.13$ $P=0.001^{***}$ (Knowledge) and $F=53.00$ $P=0.001^{***}$ (Attitude). (Table 3) The analysis revealed that there was significant association between the knowledge and Attitude regarding prevention of MTCT of an HIV infection and prenatal testing among pregnant women with selected demographic variables. Hence H2 was accepted.

CONCLUSIONS

Pregnant women must have holistic knowledge regarding anticipation of MTCT of a HIV contamination and pre-birth testing. They play a vital role in the all aspects of management and control measures & prevention of HIV infection. The present study had been supported by a series of other studies which confirmed that the knowledge on HIV Infection is important to get a healthy child, for the prevention HIV infection among children. Data analysis and result, was found that structured teaching programme on anticipation of MTCT of a HIV contamination and pre-birth testing among pregnant women is effective.

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