

Effectiveness of Information Education Communication [IEC] Package on Knowledge and Attitude Regarding Birth Preparation among Primigravida Mothers at Selected Setting, Shillong

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Abstract

Birth preparation is the preparation of mothers-to-be for a normal satisfying delivery through relieving her doubts, fears and anxiety about the birth process and that is by providing information on the birthing process, the breathing techniques which will help her relieve anxiety and thereby focus on the labour, positions to be adopted for labour for comfort and reducing pain, exercises for improving her muscle tone and strength for labour, methods of pain management in labour, place of birth for safe delivery and the supplies to take along for the birth to receive the baby and mother. The aim of the study was to assess and compare the level of knowledge and attitude regarding birth preparation among primigravida mothers, to determine the effectiveness of IEC package on the level of knowledge and attitude regarding birth preparation, to correlate the knowledge with attitude and to associate the post test level of knowledge and attitude regarding birth preparation with their demographic variables among primi gravida mothers in study and control group. The conceptual frame work for the study was based on Weidenbach Helping Art Model of Clinical Nursing Practice. It provided a comprehensive frame work for achieving the objectives of the study. Quantitative approach and the quasi-experimental pre and post test control group design was selected to study the effectiveness of IEC package on birth preparation among primi gravida mothers. The investigator has collected the data within four weeks of time with effect from 01/08/2013 to 31/08/2013. Non probability convenient sampling method was used to select samples for the study. 60 primi gravida mothers were selected for the study [30 primi gravida mothers were allotted in study group and 30 primi gravida mothers were allotted in the control group]. Using the structured questionnaire, section-A demographic data of the primi gravida mothers were collected and using section-B the knowledge regarding birth preparation among primi gravida mothers and section C- attitude on birth preparation among primi gravida mothers were assessed respectively. Followed by the teaching program [IEC package] was provided in the OPD with the help of powerpoint, flash cards and pamphlet for 30 minutes and after a period of one week the post test was conducted. Likewise the structured questionnaire were provided to the mothers in the control group, by selecting 6 primi gravida each day for about 5 days and no teaching program was conducted, then the post test was conducted after one week. The IEC package was given to the primi gravida mothers in control group after the study was completed as an ethical consideration. The collection of data was performed within the stipulated time of 4 weeks. The Major findings of the study, the overall mean knowledge score in the pre test was 23.443 standard deviation 15.791 and mean knowledge score 61.777 standard deviation 28.37 in the post test project's t value 6.488 which was statistically significant at $p < 0.001$. The mean attitude score in the pre test is 55.933 standard deviation 7.51 and mean attitude score 18.579 standard deviation 18.57 in post test of the study group project's t value 3.746 which is statistically significant at $p < 0.001$. There was significant association between the gain in knowledge and residence in study group and age with attitude score in study group. The results of the study concluded that IEC package has improved the knowledge and attitude. Therefore the investigator felt that more importance should be given to IEC package.

Keywords: Information Education Communication [IEC]; Birth Preparation; Primigravida.

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Introduction

The prenatal period is a time of physical and psychological preparation for birth and parenthood. Becoming a parent is considered one of the maturational milestones of adult life, however for most parents especially mothers, getting ready for birth presents a unique challenge to accomplish satisfying childbirth experience. Most women progress through pregnancy in an uncomplicated fashion and deliver a healthy infant requiring little medical or midwifery intervention. Unfortunately, a significant number has insufficient knowledge to prepare for safe birth of baby and hence do not have a satisfying birth experience.

Mothers not emotionally ready, under the category of strange but true is the fact that mothers have more control over their labour than they know. When a woman is unsure of her ability to be a mother, fearful of the labor process, or simply doesn't feel ready to labour, her body can send chemical messages that block the labor process from starting. This is same process that causes the Fear- Tension -Pain cycle. It is important that the mother be honest about becoming a mother. This is very difficult to deal with once labour has begun, but sometimes it is necessary for the mother to speak these fears even after labor begun to prevent complications of birth which finally leads to caesarean section (CS) delivery, forcep extraction or vacuum delivery leading to higher rates of maternity a fetal mortality.

Developed countries have the benefit of childbirth preparation classes whereas developing countries and particularly north eastern states of India lack initiatives on childbirth preparation classes. The need for such initiatives is increasing as they provide primi mothers information on birth preparation and hence get them ready for the process.

Caesarean section was introduced in clinical practise as a life saving procedure for both mother and baby. As other procedures of some complexity, its use follows the health care inequity pattern of the world: underuse in low income settings, sometimes even unnecessary use in middle and high income settings.

Background of the Study

Global Scenario on Caesarean Rates

According to *World Health Statistics (WHS)(2013)* rising trends in Caesarean section rates are seen on worldwide basis with India claiming a CS rate of 8

compared to countries like Pakistan, Turkmenistan, United Kingdom, Nigeria [1].

Countries	CS Rates
India	8
Pakistan	7
Philippines	10
Turkmenistan	3
United Kingdom	-
United States of America	33
Maldives	32
Sri Lanka	24
South Africa	-
Nigeria	2
Egypt	28
China	22

National Statistics of Caesarean Rates in India

States/ Regions	CS Rates
North India	7.8
Central India	6.1
North East	5
East	4.5
WestIndia	8
South	15

North East of India comprising of 7 states and accounting a total of only 3.7% of the total population of India shows an alarming rise in caserean trends with a CS rate of 5. State wise incidence shows the State of Meghalaya ranking IInd with a total CS rate of (11.8) after Manipur (16.3), Mizoram(10.1) and Nagaland (6.3). This rise in Caeserean Trends demands attention for interventions as with increase in caesereans also comes risks for higher maternal mortality rates [2].

Significance and Need for the Study

Childbirth education has existed as a formal structure in this country since the 1960s and has provided preparation for childbirth with a focus on natural birth. Over time, the classes have continued to evolve but the underlying purpose remains the same: to provide prenatal preparation for pregnancy, labor, and birth [3].

Birth preparation is the preparation of mothers-to-be for a normal satisfying delivery through relieving her doubts, fears and anxiety about the birth process and that is by providing information on the birthing process, the breathing techniques which will help her relieve anxiety and thereby focus on the labour, positions to be adopted for labour for comfort and reducing pain, exercises for improving her muscle tone and strength for labour, methods of pain management in labour, place of birth for safe delivery and the supplies to take along for the birth to receive

the baby and mother [4,5,6].

Information, education and communication (IEC) combines strategies, approaches and methods that enable individuals, families, groups, organizations and communities to play active roles in achieving, protecting and sustaining their own health. Health information can be communicated through many channels to increase awareness and assess the knowledge of different populations about various issues, products and behaviours. Channels might include interpersonal communication (such as individual discussions, counselling sessions or group discussions and community meetings, events) or mass media communication (such as radio television and other forms of one-way communication, such as flash cards, brochures, leaflets and posters, visual and audio visual presentations and some forms of electronic communication). Communication can be both verbal and non-verbal. In verbal communication, the tone of voice can communicate feelings and emotions that are as significant as the words being spoken. Accordingly, it is important to choose words that do not offend in any way and that are easily understood. Use of trigger words, jargon, medical or other sophisticated terms are to be avoided. The use of particular languages may be important in reaching all sections of a community [7].

Kathleen Rice conducted a study to explore reasons why nulliparous women chose to have an elective labor induction and to identify the influence of prepared childbirth classes on their decision. The study included 1,349 nulliparous women at term who participated in a survey regarding their choices for childbirth, their attendance at prepared childbirth classes, and their experience with labor and birth. Sixty-three percent of women who attended childbirth classes and did not have elective induction reported that classes provided helpful information to assist in their decision-making process. Study results suggest attendance at prepared childbirth classes can be an effective source of information regarding elective labor induction and influential in women's decisions regarding whether or not to have elective labor induction. Women perceive prepared childbirth classes positively and find the information provided valuable [8].

Mc Pherson conducted a study to assess the effectiveness of the birth-preparedness package (BPP) on promotion and active preparation and decision-making for births, including pregnancy/postpartum periods, by pregnant women and their families. The aim of the field trial was to determine the effectiveness of the BPP to positively influence

planning for births, household-level behaviors that affect the health of pregnant and postpartum women and their newborns, and their use of selected health services for maternal and newborn care. Community health workers promoted desired behaviors through inter-personal counseling with individuals and groups. Content of messages included maternal and newborn-danger signs and encouraged the use of healthcare services and preparation for emergencies. The BPP can positively influence knowledge and intermediate health outcomes, such as household practices and use of some health services. The BPP can be implemented by government health services with minimal outside assistance but should be comprehensively integrated into the safe motherhood programme rather than implemented as a separate intervention [9].

The investigator has observed that mothers not ready for childbirth have unsatisfactory childbirth experience and mostly deliver with caesarean section. The rising rates of Caesarean have become alarming which increases the risk for maternal mortality and hence the investigator felt the need to conduct the study.

Objectives

1. To assess and compare the pre test and post test level of knowledge and attitude regarding birth preparation among primi gravida mothers between study and control group.
2. To determine the effectiveness of IEC package on the level of knowledge and attitude regarding birth preparation among primi gravida mothers in study group.
3. To correlate the knowledge with attitude regarding birth preparation among primi gravid mothers in study and control group.
4. To associate the post test level of knowledge and attitude regarding birth preparation with their demographic variables among primi gravida mothers in study and control group.

Hypotheses

H₁: There is a significant difference in the pre test and post test level of knowledge and attitude regarding birth preparation among primi gravida mothers between study group and control group at p<0.05

H₂: There is a significant relationship between the level of knowledge and attitude on birth among primi gravida mothers in study and control group at p<0.05

H₃: There is a significant association on the level of knowledge and attitude regarding birth preparation among primi gravida mothers in study and control group with their demographic variables at $p < 0.05$.

Research Methodology

Research Approach

The research approach in this study is Quantitative approach and evaluative in nature focusing on the effectiveness of IEC package on knowledge and attitude among primi gravida mothers regarding birth preparation.

Research Design

The research design adopted for this study is Quasi experimental pre and post test control group design.

Variables

Independent variable was Information Education Communication package on birth preparation and the dependent variable knowledge and attitude regarding birth preparation. The Extraneous variables were Mass media and peer group discussion.

Setting

The study was conducted in Ganesh Das Hospital, Shillong. Ganesh Das Hospital is the largest woman and child health hospital in Shillong with 300 beds dedicated to woman and child health. Antenatal Out Patient Department [OPD] average intake of antenatal mothers per day is 50. The study was conducted in the antenatal OPD.

Sample

The study comprised of all the primigravida mothers who have come for check up in antenatal OPD and who fulfilled the inclusion criteria.

Sample Size

The sample size was 60 primi gravida mothers. In these 30 primi mothers were allotted randomly in study and 30 primi mothers were allotted in control group.

Sampling Technique: Non probability Convenient sampling technique.

Criteria for Selecting Samples

Inclusion Criteria

- Primigravida mothers between 32-36 weeks of gestation.
- Primigravida mothers who were willing to participate in this study.
- Primigravida mothers who can understand and speak English or khasi.

Exclusion Criteria

- Primigravida mothers who are professionals in medical and nursing fields.

Development and Description of Instrument

The tool consists of

- *Section A:* Demographic variables
- *Section B:* Self administered structured questionnaire to assess the level of knowledge regarding birth preparation devised by the investigator
- *Section C:* 5 point Likert scale to assess the attitude regarding birth preparation devised by the investigator.

Ethical Considerations

The proposed study was conducted after the approval of the Dissertation committee and Dean of SRM College of nursing, SRM University, Kattankulathur, Kancheepuram district. Permission was obtained from Chief Medical Officer Ganesh Das Shillong and Nursing Superintendent.

Informed consent was obtained from the study participants, after explaining the nature and duration of the study. The investigator have explained benefits of IEC package on Birth preparation. Assurance was given to the individuals that each individual report will be maintained confidentially and they can withdraw from the study at any point of time.

Reliability of the Tool

The reliability of the tool was assessed by test-retest method the r value is $r = 0.8$ for knowledge and

by split half method for attitude scale in which the $r=0.8$ hence the tool is considered reliable and feasible proceeding with the main study.

Data Collection Procedure

The investigator has collected the data within four weeks of time .Formal permission was obtained from the Medical Director Ganesh Das shillong and Nursing superintendant. Non probability convenient sampling method was used to select samples for the study. 60 primi gravida mothers were selected for the study [30 primi gravida mothers were allotted in study group and 30 mothers were allotted in the control group]. A brief explanation was given explaining the purpose of the study with their consent so as to gain their co operation during the process of data collection. Using the structured questionnaire, section-A demographic data of the primi gravida mothers were collected and using section- B the knowledge regarding birth preparation

and section C- attitude on birth preparation were assessed respectively. The pre test was conducted, by selecting 10 primigravida mothers (5 in study and 5 in control) each day for about 6 days, to sum up a total of 30 mothers in the study group and 30 in control group. Followed by the teaching program [IEC package] was provided in the class with the help of powerpoint, flash cards and pamphlet for 30 minutes to the 30 study samples and after a period of one week the post test of conducted to both the study and control group . The collection of data was performed within the stipulated time of 4 weeks.

Results

Section A: Assessment of demographic variables of primi gravida mothers in study and control group.

Table 1: Frequency and percentage distribution of demographic variables with respect to primigravida mothers in study and control group N=60

Sl. No	Demographic variables	Study group (n=30)		Control group(n=30)		Chi square	
		N	%	N	%		
1	Age in year	18-22	8	26.6	6	20	$\chi^2=0.39$ df = 2 p=0.81
		23-27	17	56.6	19	63.33	
		28-32	5	16.66	5	16.66	
2	Religion	Christian	18	60	20	60.66	$\chi^2=2.16$ df=3 p= 0.53
		Indigenous	7	23.33	7	23.33	
		Hindu	3	10	0	0	
		others	2	6.66	3	10	
3	Education	Illiterate	2	6.66	1	3.33	$\chi^2=1.48$ df=4 p= 0.82
		Primary School Certificate	11	36.66	7	23.33	
		Middle School Certificate	12	40	15	50	
		Graduate or Postgraduate	3	10	3	10	
		Professional or honors	2	6.66	2	6.66	
4	Occupation	Unemployed	6	20	5	66	$\chi^2=9.37$ df=6 p= 0.153
		Unskilled worker	8	26.6	12	40	
		Semi skilled worker	6	20	2	6.66	
		Skilled worker	0	0	4	13.33	
		Clerical, shop owner or farmer	3	10	3	10	
		Semi professional	2	6.66	0	0	
5	Family income	Professional	5	66	3	10	$\chi^2=0.833$ df=4 p= 0.933
		Rs. 4556-7593	4	13.33	4	13.33	
		Rs. 7594- 11361	5	66	7	23.33	
		Rs. 11362- 15187	14	46.66	14	46.66	
		Rs. 15188-30374	5	66	3	10	
		Rs. 30375	2	6.66	2	6.66	
6	Residence	Rural	9	30	10	33.33	$\chi^2=0.278$ df=2 p= 0.87
		Semi urban	13	43.33	11	36.66	
		Urban	8	26.6	9	30	

Analysis of Pre and Post Test Level of Knowledge and Attitude

Table 2: Frequency and percentage distribution of pre test level of knowledge regarding birth preparation among primigravida mothers in study and control group N=60

	Study Group (n=30)						Control Group(n=30)					
	Inadequate knowledge		Moderate knowledge		Adequate knowledge		Inadequate knowledge		Moderate knowledge		Adequate knowledge	
	N	%	N	%	N	%	N	%	N	%	N	%
Pre Test	24	80	5	16.7	1	3.3	23	76.7	7	23.3	0	0

Table 3: Frequency and percentage distribution of pre test level of attitude regarding birth preparation among primigravida mothers in study and control group N=60

	Study group (n=30)						Control group (n=30)					
	Desirable attitude		Neutral attitude		Undesirable attitude		Desirable attitude		Neutral attitude		Undesirable Attitude	
	N	%	N	%	N	%	N	%	N	%	N	%
Pre test	1	3.3	7	23.4	22	75.3	4	13	19	63.3	7	23.3

Table 4: Mean and standard deviation of Pre test level of knowledge and attitude regarding birth preparation among primigravida mothers between study group and control group N=60

	Groups	Mean	SD	Unpaired t Test	P Value
Knowledge Pretest	Study Group(n=30)	23.4443	15.79190	0.302	0.764
	Control Group(n=30)	24.6673	15.57502		
Attitude Pretest	Study Group(n=30)	55.9333	17.51833	0.128	0.899

Table 5: Frequency and percentage distribution of post test level of knowledge regarding birth preparation among primigravida mothers in study and control group N=60

Post test	Study Group (n=30)						Control Group(n=30)					
	Inadequate knowledge		Moderate knowledge		Adequate knowledge		Inadequate knowledge		Moderate knowledge		Adequate knowledge	
	N	%	N	%	N	%	N	%	N	%	N	%
Knowledge	6	20	10	33.3	14	46.7	22	73.3	7	23.3	1	3.4

Table 6: Frequency and percentage distribution of post test level of attitude regarding birth preparation among primigravida mothers in study and control group N=60

Post test	Study group (n=30)						Control group (n=30)					
	Desirable attitude		Neutral attitude		Undesirable attitude		Desirable attitude		Neutral attitude		Undesirable attitude	
	N	%	N	%	N	%	N	%	N	%	N	%
Attitude	2	6.7	22	73.3	6	20	3	10	20	66.7	7	23.3

Table 7: Mean and standard deviation of Post test level of knowledge regarding birth preparation among primigravida mothers in study group and control group N=60

	Groups	Mean	SD	Unpaired t Test	P Value
Knowledge Posttest	Study Group(n=30)	61.7770	28.37590	5.557	0.000
	Control Group(n=30)	26.6667	19.80737		
Attitude Posttest	Study Group(n=30)	73.3333	18.57943	3.911	0.000
	Control Group(n=30)	55.1333	17.44891		

*** very high significance at $p \leq 0.001$

Comparison between the Pre Test and Post Test level of Knowledge and Attitude Regarding birth Preparation among Primi Gravida Mothers in Study and Control Group

Table 8: Mean and standard deviation between Pre test and Post test level of knowledge regarding birth preparation among primigravida mothers in study group N=60

	Mean	Study Group SD	Knowledge Paired t Test	P Value	Mean	Control Group SD	Knowledge Paired t Test	P Value
Pre Test	23.4443	15.79190	6.448	0.000	24.6673	15.57502	0.462	0.647
Post Test	61.7770	28.37590		***	26.6667	19.80737		

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

Table 9: Mean and standard deviation between Pre test and Post test level of attitude regarding birth preparation among primi gravida mothers in study group and control group.

	Study Group Attitude				Control Group Attitude			
	Mean	SD	Paired t Test	P Value	Mean	SD	Paired t Test	P Value
Pre Test	55.9333	17.51833	3.746	0.001	55.3333	18.80083	0.043	0.966
Post Test	73.3333	18.57943		***	55.1333	17.44891		

*** very high significance at P<0.001

Table 10: Correlation of level of knowledge with attitude regarding birth preparation among primi gravida mothers in study group and control group N=60

		Correlation	Correlation Coefficient	Interpretation
Study group (n=30)	Pretest	Knowledge VS attitude	r=0.11 p=0.51	Poor correlation
	posttest	Knowledge VS attitude	r=0.51 p=0.001***	Moderate correlation
Control group (n=30)	Pretest	Knowledge VS attitude	r=0.14p=0.48	Poor correlation
	posttest	Knowledge VS attitude	r=0.13p=0.47	Poor correlation

Table 11: Association of post test level of knowledge regarding birth preparation among primigravida mothers with their demographic variable in Study group N=60

Demographic variables	Study group (n=30)						Chi square test	P value	
	Inadequate		Moderate		Adequate				
	n	%	n	%	n	%			
Age	18-22yrs	1	12.5	2	25	5	62.5	2.835 4df	0.586
	23-27yrs	4	23.5	5	29.5	8	47.1		
	28-32yrs	1	20	3	60	1	20		
	>32yrs	0	0	0	0	0	0		
Religion	Christian	5	27.8	7	38.9	6	6	8.417 6df	0.209
	Indigenous	1	14.3	0	0	6	85.7		
	Hindu	0	0	2	66.7	1	33.3		
	Others	0	0	1	50	1	50		
Education	Illiterate	1	50	1	50	0	0	9.242 8df	0.322
	Primary school teacher	3	27.3	2	18.2	6	54.5		
	Middle school certificate	1	8.3	5	41.7	6	50		
	Graduate/postgraduate	1	33.3	2	66.7	6	0		
	Professional	0	0	0	0	0	100		
Occupation	Unemployed	3	50	2	33.3	2	16.7	12.043 10df	0.282
	Unskilled workers	3	37.5	3	37.5	1	25		
	Semi skilled workers	0	0	2	33.3	2	66.7		
	Skilled workers	0	0	0	0	4	100		
	Clerical/shop owner	0	0	1	33.3	0	60		
	Semi professional	0	0	0	0	2	0		
Family Income	<Rs. 1520	0	0	2	40	2	0	6.18 8df	0.626
	1521-4555	0	0	0	0	3	20		
	Rs.4556-7593	1	25	2	50	1	25		
	Rs 7594-11361	1	20	3	60	1	20		
	Rs.11362-15187	3	21.4	4	28.6	7	50		
	Rs. 15188-30374	1	20	0	0	4	80		
	>Rs 30375	0	0	1	50	1	50		
Residence	Rural	5	55.5	2	22.2	2	22.2	11.08 4df	0.026 *
	Semi urban	1	7.7	4	30.8	8	61.5		
	urban	6	20	10	33.3	14	46.7		

Significant at p≤0.05

Table 12: Association of post test level of knowledge regarding birth preparation among primigravida mothers with their demographic variable in Control group N=60

Demographic variables		Control group (n=30)						Chi square test	P value
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Age	18-22yrs	7	100	0	0	0	0	6.63 4df	0.152
	23-27yrs	13	72.2	4	22.2	1	5.6		
	28-32yrs	2	40	3	60	0	0		
	>32yrs	1	0	0	0	0	0		
Religion	Christian	14	70	5	25	1	5	1.09 4df	0.89
	Indigenous	6	85.7	1	14.3	0	0		
	Hindu	0	00	0	0	0	0		
	Others	2	66.7	1	33.3	0	0		
Education	Illiterate	2	66.7	0	0	1	33.3	11.0 8df	0.192
	Primary school teacher	6	85.7	1	14.3	0	0		
	Middle school certificate	11	73.3	4	26.7	0	0		
	Graduate/postgraduate	2	66.63	1	33.3	0	0		
	Professional	1	50	0	50	0	100		
Occupation	Unemployed	3	60	1	20	1	20	11.086 10df	0.862
	Unskilled workers	10	83.3	2	16.7	0	0		
	Semi skilled workers	1	50	1	50	0	0		
	Skilled workers	3	75	1	25	0	0		
	Clerical/shop owner	0	66.6	1	33.3	0	60		
	Semi professional	0	100	0	0	2	0		
	Professional	2	66.7	1	33.3	0	0		
Family Income	<Rs. 1520	0	0	0	0	0	0	19.972 8 df	0.010
	1521-4555	0	0	0	0	0	20		
	Rs.4556-7593	2	50	2	50	0	0		
	Rs 7594-11361	4	57.1	3	42.9	0	0		
	Rs.11362-15187	13	92.9	1	7.1	0	50		
	Rs. 15188-30374	2	66.7	1	33.3	0	80		
	>Rs 30375	1	50	0	0	1	50		
Residence	Rural	10	100	0	0	0	0	6.087 4df	0.1426
	Semi urban	6	54.5	4	36.4	1	9.1		
	Urban	6	66.7	3	33.3	0	0		

Table 13: Association of post test level of attitude regarding birth preparation among primigravida mothers in with their demographic variable in Study group N=60

Demographic variables		Attitude study group(n=30)						Chi square test	P value
		Desirable		Neutral		Undesirable			
		N	%	N	%	N	%		
Age	18-22yrs	0	0	4	50	4	50	9.662 4df	0.046 *
	23-27yrs	0	0	2	11.8	15	88.2		
	28-32yrs	1	20	1	20	3	60		
	>32yrs	0	0	0	0	0	0		
Religion	Christian	1	5.6	3	16.7	14	77.7	7.025 6df	0.319
	Indigenous	0	0	14	5.7	3	42.9		
	Hindu	0	0	0	0	3	100		
	Others	0	0	0	0	2	100		
Education	Illiterate	0	0	0	0	2	100	5.38 8df	0.715
	Primary school teacher	1	9.1	4	36.4	6	54.6		
	Middle school certificate	0	0	3	25	9	75		
	Graduate/postgraduate	0	0	0	0	3	0		
	Professional	0	0	0	0	0	100		
Occupation	Unemployed	1	16.7	2	33.3	3	50	10.292 10df	0.416
	Unskilled workers	0	0	2	16.7	25	0		
	Semi skilled workers	1	50	1	50	0	0		
	Skilled workers	3	75	1	25	0	0		
	Clerical/shop owner	0	66.6	1	33.3	0	60		

	Semi professional	0	100	0	0	2	0		
	Professional	2	66.7	1	33.3	0	0		
Family Income	<Rs. 1520	0	0	0	0	0	0	11.0202	
	1521-4555	0	0	0	0	0	20	8 df	
	Rs.4556-7593	2	50	2	50	0	0		
	Rs.7594-11361	4	57.1	3	42.9	0	0		
	Rs.11362-15187	13	92.9	1	7.1	0	50		0.80
	Rs. 15188-30374	2	66.7	1	33.3	0	80		
	>Rs 30375	1	50	0	0	1	50		
Residence	Rural	10	100	0	0	0	0	3.284	
	Semi urban	6	54.5	4	36.4	1	9.1	4df	0.511
	urban	6	66.7	3	33.3	0	0		

Significant at $P \leq 0.05$

Table 14: Association of post test level of attitude regarding birth preparation among primigravida mothers in Control group N=60

Demographic variables		Attitude control group (n=30)						Chi square test	P value
		Desirable		Neutral		Undesirable			
		N	%	N	%	N	%		
Age	18-22yrs	0	0	6	85.7	1	14.3		
	23-27yrs	1	5.6	11	61.1	15	88.2		
	28-32yrs	3	60	2	40	3	60	13.089	0.446
	>32yrs	0	0	0	0	0	0	4df	
Religion	Christian	4	20	11	16.7	5	77.7	7.025	
	Indigenous	0	0	6	55.7	1	42.9	6df	0.319
	Hindu	0	0	0	85.7	0	100		
	Others	0	0	2	0	1	100		
Education	Illiterate	0	0	0	66.7	2	100	5.38	
	Primary school teacher	1	9.1	4	36.4	6	54.6	8df	0.715
	Middle school certificate	0	0	3	25	9	75		
	Graduate/postgraduate	0	0	0	0	3	0		
	Professional	0	0	0	0	0	100		
Occupation	Unemployed	1	16.7	2	33.3	3	50	10.292	
	Unskilled workers	0	0	2	16.7	25	0	10df	
	Semi skilled workers	1	50	1	50	0	0		0.416
	Skilled workers	3	75	1	25	0	0		
	Clerical/shop owner	0	66.6	1	33.3	0	60		
	Semi professional	0	100	0	0	2	0		
	Professional	2	66.7	1	33.3	0	0		
Family Income	<Rs. 1520	0	0	0	0	0	0	11.0202	
	1521-4555	0	0	0	0	0	20	8 df	0.80
	Rs.4556-7593	2	50	2	50	0	0		
	Rs.7594-11361	4	57.1	3	42.9	0	0		
	Rs.11362-15187	13	92.9	1	7.1	0	50		
	Rs. 15188-30374	2	66.7	1	33.3	0	80		
	>Rs 30375	1	50	0	0	1	50		
Residence	Rural	10	100	0	0	0	0	3.284	
	Semi urban	6	54.5	4	36.4	1	9.1	4df	0.511
	urban	6	66.7	3	33.3	0	0		

Discussion

Childbirth is a wonderful experience which when a mother is ready for, marks the purpose of womanhood. Mothers who are usually not ready are reported to have had an unpleasant and frightening

experience, it is therefore necessary that a mother knows how to deal with childbirth in order to have a satisfying childbirth experience. The people of Shillong belong to tribal community and hence have lesser opportunities to learn about the process of childbirth and also the preparations involved for a

satisfying experience as provided by childbirth preparation classes in developed countries and metropolitan cities. Therefore an educative programme on Birth preparation may help the mothers prepare better for a pleasant, satisfying birth.

The mean and standard deviation of Pretest level of knowledge in Study group and control group revealed that mean value was 23.4443 with standard deviation 15.79190 of the study group and mean value was 24.667 with standard deviation 15.575 of the study projects "t" value was 0.302 which is not statistically significant. The mean and standard deviation of post test level of knowledge in Study group and control group revealed that mean value was 61.777 with standard deviation 28.3759 of the study group and mean value was 26.667 with standard deviation 19.80735 of the study projected "t" value was 5.557 which was statistically significant.

The mean and standard deviation of Pretest level of attitude in Study group and control group revealed that mean value was 55.993 with standard deviation 17.518 of the study group and mean value was 55.333 with standard deviation 18.880 of the study projects "t" value was 0.128 which is not statistically significant. The mean and standard deviation of post test level of attitude in Study group and control group revealed that mean value was 73.33 with standard deviation 18.579 of the study group and mean value was 55.133 with standard deviation 17.44 of the study projected "t" value was 3.911 which was statistically significant.

Hence the research hypothesis H_1 "there is a significant difference in pretest and post test level of knowledge and attitude regarding birth preparation among primi gravida mothers between study group and control group." was accepted at $P \leq 0.001$.

Assessment on comparison between the pre test and post test level of knowledge among primi gravida mothers regarding birth preparation in study group revealed that the mean value was 23.44 Standard deviation 15.79 in pretest level of knowledge and the mean value was 61.77 and Standard deviation 28.37 of post test of study group projected "t" value was 6.448 which was very highly significant at $P=0.000$. Assessment on comparison between the pre test and post test level of attitude among primi gravida mothers regarding birth preparation in study group revealed that the mean value was 55.933 with Standard deviation 17.51 of pretest in Study group and that of post test was 18.5794 and Standard deviation 18.57 of post test in Study group attitude projected 't' value 3.746 which was very high significant at $p=0.001$.

Hence the Research Hypothesis H_1 which stated that "there is a significant difference in pretest and post test level of knowledge and attitude regarding birth preparation among primi gravida mothers between study group and control group." was accepted at $P \leq 0.001$.

The correlation between post test level of knowledge and attitude regarding birth preparation among primigravida mothers in study group revealed that the Pearson's correlation constant "r" value was which 0.051 for post test level of knowledge and attitude which was very high significant at $p \leq 0.001$ level. So there was moderate correlation found between the knowledge and attitude regarding birth preparation among primi gravida mothers in study group.

Hence the Research Hypothesis H_2 stated that "there is a significant relationship between post test level of knowledge and attitude regarding birth preparation among primigravida mothers in study and control group" was accepted at $P \leq 0.001$.

The association of the post test level of knowledge regarding birth preparation among primigravida mothers in study group revealed that, there was significant association found between the knowledge regarding birth preparation with residence. But there was no association found between knowledge regarding birth preparation with other demographic variables.

Hence the Research hypothesis H_3 stated that "there is a significant association between the level of knowledge and attitude on birth preparation among primi gravida mothers in study and control group with selected demographic variables" was accepted at $P \leq 0.05$.

The association of the post test level of knowledge regarding birth preparation among primigravida mothers in control group revealed that, there was no significant association found between the knowledge regarding birth preparation with their demographic variables in control group.

Hence the Research hypothesis H_3 stated that "there is a significant association on the level of knowledge and attitude regarding birth preparation among primi gravida mothers in study and control group with demographic variables" was not accepted.

The association of the post test level of attitude regarding birth preparation among primigravida mothers in study group revealed that, there was significant association found between the attitude regarding birth preparation with age of primi gravida mothers in study group.

Hence the Research hypothesis H_3 stated that “there is significant association on the level of knowledge and attitude on birth preparation among primi gravida mothers in study and control group with their demographic variables” was accepted at $P < 0.001$ level.

The association of the post test level of attitude regarding birth preparation among primigravida mothers in control group revealed that, there was no significant association found between the knowledge regarding birth preparation with their demographic variables control group.

Hence the Research hypothesis H_3 stated that “there is significant association on the level of knowledge and attitude on birth preparation among primi gravida mothers in study and control group with demographic variables” was not accepted.

Conclusion

The present study assessed the effectiveness of IEC package on knowledge and attitude regarding birth preparation among primi gravida mothers at selected setting, Shillong. The result of the study concluded that IEC package has improved the knowledge and attitude. Therefore the investigator felt that more importance should be given to IEC package.

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