CHAPTER-IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the analysis and interpretation of data collected to evaluate the effectiveness of video assisted child birth education programme on knowledge, intra-partum behavior, maternal and fetal outcome among primigravida mothers.

All data were tabulated and summarized in the master data sheets.

Kerlinger (1973)[43] defined data analysis is the "categorizing, ordering, manipulating and summarizing of data to obtain answer to research questions". The purpose of the analysis is to reduce the data to an interpretable form so that research problem can be studied and tested. The researcher has broken the data into constituent parts for the purpose of answering research questions and hypotheses.

According to Abdellah and Levine (1979)[24] interpretations of tabulated data can bring to light the real meaning of the findings of a study.

Polit and Hungler (1999)[37] stated that data analysis is the systematic organization and synthesis of research data, and the testing of research hypotheses using those data.

Analysis and interpretation of the data are based on data collected from 350 primigravida mothers through structured knowledge questionnaire, intra-partum behavior observation check-list (IPBOC) and structured record analysis proforma. Analysis and interpretation of the data was done by using both descriptive and inferential statistics based on the objectives of the study and the hypotheses to be verified.

OBJECTIVES OF THE STUDY

1. To assess the knowledge of primigravida mothers in experimental and control group regarding child birth before administration of the video assisted child birth education programme.
2. To assess the knowledge of primigravida mothers in experimental and control group regarding child birth after administration of the video assisted child birth education programme in experimental group only.
3. To compare the level of knowledge of primigravida mother regarding child birth before and after administration of the video assisted child birth education programme
4. To observe and compare the intra-partum behaviour of the primigravida mother in experimental and control group.
5. To observe and compare the maternal and foetal outcome in experimental and control group.
6. To associate the knowledge with selected demographic variables.

HYPOTHESES

H_1- There is a significant difference in knowledge among primigravida mothers of experimental group after the administration of video assisted childbirth education programme at 0.05 level of significance.

H_2- There is a significant difference in the intra-partum behaviours among primigravida mothers of experimental group after the administration of video assisted

childbirth education programme at 0.05 level of significance.

H_3- There is a significant difference in the maternal and foetal outcome among primigravida mothers of experimental group after the administration of video assisted childbirth education programme at 0.05 level of significance.

According to Best (1982)[25] "a null hypothesis is concerned with the judgment as to whether, apparent difference or relationships, are true difference or relationship or whether they merely results from a sampling error."

Best also added that "the rejection or acceptance of a null hypothesis is based on some level of significance as a criterion. To psychology and education, 0.05 level of significance is often used as a standard for rejecting or accepting a hypothesis."

So, the level for accepting or rejecting a hypothesis was set at 0.05 level.

Polit and Hungler (1999)[37] stated that "the null hypothesis is a statement that there is no actual relationship between variables and that any such observed relationship is only a function of chance, or sampling fluctuations. The need for null hypothesis lies in the fact that statistical hypothesis testing is basically a process of rejection. It is possible to show that the null hypothesis has a high probability of being incorrect, and such evidence lends support to the scientific hypothesis. The rejection of null hypothesis, then, is what the researcher seeks to accomplish through statistical tests."

The null hypotheses of the present study was stated as follows:

H0 - There is no significant difference in knowledge, intra-partum behaviour, maternal and fetal outcome among primigravida mothers of experimental group after the administration of video assisted childbirth education programme at 0.05 level of significance.

ORGANIZATION AND PRESENTATION OF DATA

The obtained data were analyzed, tabulated and interpreted by employing descriptive and inferential statistics. The data have been organized under following sections.

Section-I:

Description of the samples (primigravida mothers) according to their demographic characteristics

Section-II:

Findings related to the knowledge score of primigravida mothers in control and experimental group regarding labor process and child birth preparedness

Section II.a - Findings related to the PRETEST knowledge score of primigravida mothers in experimental & control group.

Section-II.b - Findings related to the POSTTEST knowledge score of primigravida mothers in experimental group & control group

Section-III:

Findings related to the effectiveness of video assisted child birth education programme on knowledge.

Section IV:

Findings related to the intra-partum behavior of the primigravida mothers

Section IV.a: Findings related to the comparison of compliance to the intra-partum behavior among the primigravida mothers in experimental and control group at the time of reporting to the labour room

Section IV.b: Findings related to the comparison of compliance to the intra-partum behavior among of the primigravida mothers in experimental and control group during all the four stages of labour

Section V:

Findings related to maternal and foetal outcome in experimental and control groups

Section V a:

Findings related to comparison of maternal outcome in experimental and control groups

Section V b:

Findings related to comparison of fetal outcome in experimental and control groups

Section VI:

Findings related to association of the knowledge with selected demographic variables

SECTION – I

This section describes the characteristics of the sample subjects, which provide background information. Frequency and percentage distribution of the sample subjects are given in Table 4.

Table 4

Description of samples (primigravida mothers) based on their demographic characteristics in terms of frequency and percentages in both the groups.

N=350

Sl. No	Demographic variable	Experimental group (n=175)		Control group (n=175)	
		Freq	%	Freq	%
1.	**Completed period of present pregnancy (weeks)**				
	32	2	1.1%	1	0.6%
	33	20	11.5%	22	12.6%
	34	45	25.7%	41	23.4%
	35	41	23.4%	42	24.0%
	36	47	26.9%	49	28.0%
	37	20	11.4%	20	11.4%
2.	**Age in years**				
	18 to 21	46	26.3%	48	27.4%
	22 to 25	108	61.7%	103	58.9%
	26 to 29	14	8.0%	16	9.1%
	30 and above	7	4.0%	8	4.6%
3.	**Type of your family**				
	Nuclear	44	25.1%	44	25.1%
	Joint	124	70.9%	124	70.9%
	Extended	7	4.0%	7	4.0%

Sl. No	Demographic variable	Experimental group (n=175)		Control group (n=175)	
		Freq	%	Freq	%
4.	**Education**				
	Primary	90	51.4%	88	50.3%
	Secondary	67	38.3%	70	40.0%
	Higher secondary	14	8.0%	10	5.7%
	Graduation and above	4	2.3%	7	4.0%
5.	**Occupation**				
	Housewife	125	71.4%	124	70.9%
	Farming	10	5.7%	10	5.7%
	Self employed	16	9.1%	16	9.1%
	Service	11	6.3%	13	7.4%
	Labourer	13	7.4%	12	6.9%
6.	**Monthly family income**				
	< Rs 3,000 /-	18	10.3%	18	10.3%
	Rs 3,001 – 5,000/-	65	37.1%	60	34.3%
	Rs 5,001 – 10,000/-	78	44.6%	76	43.4%
	>Rs 10,000/-	14	8.0%	21	12.0%
7.	**Have you heard about birth preparedness information**				
	Yes	85	48.6%	86	49.1%
	No	90	51.4%	89	50.9%
7.1	**If yes, what was the source of information**				
	• Radio/TV / Internet	6	3.4%	6	3.4%
	• Radio/TV / Internet, Family	3	1.7%	3	1.7%

Sl. No	Demographic variable	Experimental group (n=175)		Control group (n=175)	
		Freq	%	Freq	%
	members				
	• Radio/TV / Internet, Health workers	1	0.6%	1	0.6%
	• Friends	9	5.1%	8	4.6%
	• Family members	49	28.0%	51	29.1%
	• Family members and Health workers	1	0.6%	2	1.1%
	• Health workers	12	6.9%	12	6.9%
	• Books/ Magazines	4	2.3%	3	1.7%

The data depicted in Table 4 shows that according to the period of present pregnancy in experimental group, 26.9% of the primigravida mothers had completed 36 weeks of pregnancy, 23.4% of them had completed 35 weeks, 25.7% of them had completed 34 weeks and in control group, 28% of the primigravida mothers had completed 36 weeks of pregnancy, 24% of them had completed 35 weeks, 23.4% of them had completed 34 weeks. According to their age majority of the samples in experimental and control group were between 22 – 25 years i.e. 61.7% and 58.9 % respectively followed by 26.3% of the samples in experimental group and 27.4% of the samples in control group belongs to the age group of 18 to 21. Maximum of the samples (70.9%) of both the group belongs to joint family & 25.1% of both group belongs to nuclear family. 51.4% of the samples in experimental group and 50.3% of the samples in control group were educated up to primary level followed by 38.3% of experimental group samples and 40% of

control group samples were educated up to secondary level. Majority of the samples in experimental in control group were house wives i.e. 71.4% and 70.9% respectively. 5.7% samples of both the group were doing farming & 9.1% of both the group was self employed. The monthly family income were ranges from 5,001 – 10,001/- in 44.6% of the samples in experimental group and in 43.4 % of the samples in control group. The family income of 3,001/- to 5,000/- were in 37.1% of experimental & 34.3% of control group samples. Almost half the population in both the group had not heard about childbirth education before i.e. 51.4% and 50.9% in experimental and control group respectively. Family members were the main source of information for those who had heard about childbirth education before. It is 28% in experimental group and 29.1% in control group. The next sources of information were health workers i.e 6.9% in both the group followed by friends in 5.1% in experimental and 4.6% in control group. Mass media i. e Radio, TV, Internet was the source of information for 3.4% of the population in both the group.

Section II

Findings related to the knowledge score of primigravida mothers in control and experimental group regarding labor process and child birth preparedness

This section describes the pre test and post test knowledge scores of the experimental and control group primigravida mothers. Pretest knowledge was assessed on the 1st day of contact with both groups of samples before administration of the Video Assisted Child Birth Education Programme. Post test knowledge was assessed on 7th day. Knowledge was measured by structured knowledge questionnaire which has total 25 questions.

The section is again divided into two sub-sections:

Section II.a - Findings related to the PRETEST knowledge score of primigravida mothers in experimental & control group.

The data is being presented in Table 5,6 and Figure 8

Section-II.b - Findings related to the POSTTEST knowledge score of primigravida mothers in experimental group & control group

The data is being presented in Table 7,8 and Figure 9

Section II.a - Findings related to the PRETEST knowledge score of primigravida mothers in experimental & control group.

Table 5

Frequency and percentage distribution of the PRETEST knowledge score of primigravida mothers in control and experimental group regarding labor process and child birth preparedness

N=350

Knowledge	**Experimental group (n=175)**		**Control group (n=175)**	
	Freq	**%**	**Freq**	**%**
Poor (Score 0-8)	105	60.0%	102	58.3%
Average (Score 9-17)	69	39.4%	72	41.1%
Good (Score 18-25)	1	0.6%	1	0.6%

The data presented in Table 5 shows that in pretest, in the experimental group, majority of (60%) the primigravida mothers had poor knowledge (Score 0-8), 39.4% of them had average knowledge (score 9-17) and 0.6% of them had good knowledge (score 18-25) regarding labour process and childbirth preparedness. In case of control group, in pretest, majority (58.3%) of the primigravida mothers had poor knowledge (Score 0-8), 41.1% of them had average knowledge (score 9-17) and 0.6% of them had good knowledge (score 18-25) regarding labour process and childbirth preparedness.

Table 6

Mean, Median, Mode, SD and Range of score of the PRETEST knowledge score of primigravida mothers in control and experimental group regarding labour process and childbirth preparedness

N=350

Group	Mean	Median	Mode	SD	Range of score
Experimental group (n=175)	8.3	8	7	3.6	0 – 18
Control group (n=175)	8.4	8	7	3.7	0 – 18

The maximum possible score = 25

The maximum possible score in the structured knowledge questionnaire was 25. The data presented in Table- 6 shows that the mean pretest knowledge scores of experimental group was 8.3 with the range of (0 – 18) and the mean pretest knowledge scores of control group was8.4 with the range of (0 – 18). The findings also shows that the pretest knowledge scores of the experimental group were more homogeneous as evident from their standard deviation of (3.6) than the pretest knowledge score of control group with the standard deviation of (3.7). The data further shows that the median and mode of the pretest knowledge scores of both the group was same i.e. 8 & 7 respectively.

N = 350

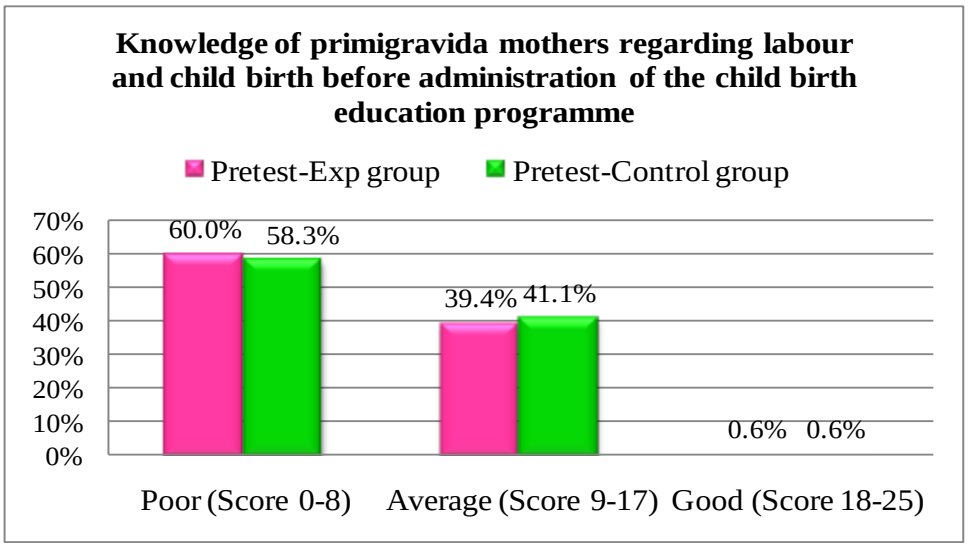

Figure 8: Bar diagram showing the percentage distribution of the primigravida mothers according to their PRETEST level of knowledge regarding labour process and childbirth Preparedness in both the groups.

The data in Figure 8 represents the percentage distribution of the primigravida mothers according to their pretest knowledge level regarding labour and childbirth preparedness. It shows that maximum of the mothers in both the group (i.e. 60% in experimental group and 58.3% in control group) were possessing poor knowledge in pretest.

Section-II.b - Findings related to the POSTTEST knowledge score of primigravida mothers in experimental group & control group

Table 7

Frequency and percentage distribution of the POST TEST knowledge level of primigravida mothers in control and experimental group regarding labour process and childbirth preparedness

N=350

Knowledge	Experimental group (n=175)		Control group (n=175)	
	Freq	%	Freq	%
Poor (Score 0-8)	10	5.7%	91	52.0%
Average (Score 9-17)	98	56.0%	83	47.4%
Good (Score 18-25)	67	38.3%	1	0.6%

The data presented in Table- 7 reveals that in posttest, in experimental group, majority of 56% of the primigravida mothers had average knowledge (Score 9-17), 38.3% of them had good knowledge (score 18-25) and 5.7% of them had poor knowledge (score 0-8) regarding labour process and childbirth preparedness. Whereas, in posttest, in control group, majority of 52% of the primigravida mothers had poor knowledge (Score 0-8), 47.4% of them had average knowledge (score 9-17) and 0.6% of them had good knowledge (score 18-25) regarding labour process and childbirth preparedness.

Table 8

Mean, Median, Mode, SD and Range of score of the POST TEST knowledge score of primigravida mothers in control and experimental group regarding labour process and childbirth preparedness

N=350

Group	Mean	Median	Mode	SD	Range of score
Experimental group (n=175)	**15.6**	**16**	**19**	**3.5**	**7 – 23**
Control group (n=175)	**8.8**	**8**	**6**	**4.1**	**0 – 18**

The maximum possible score = 25

The maximum possible score in the structured knowledge questionnaire was 25. The data presented in Table- 8 shows that the mean posttest knowledge scores of experimental group was 15.6 with the range of (7 – 23) was higher than the mean posttest knowledge scores (8.8) of control group with the range of (0 – 18). The finding also shows that the standard deviation of posttest knowledge scores was 3.5 in experimental group and 4.1 in control group. The data further shows that the median and mode of the posttest knowledge scores were 16 and 19 in experimental group and in case of control group it was 8 & 6 respectively.

N = 350

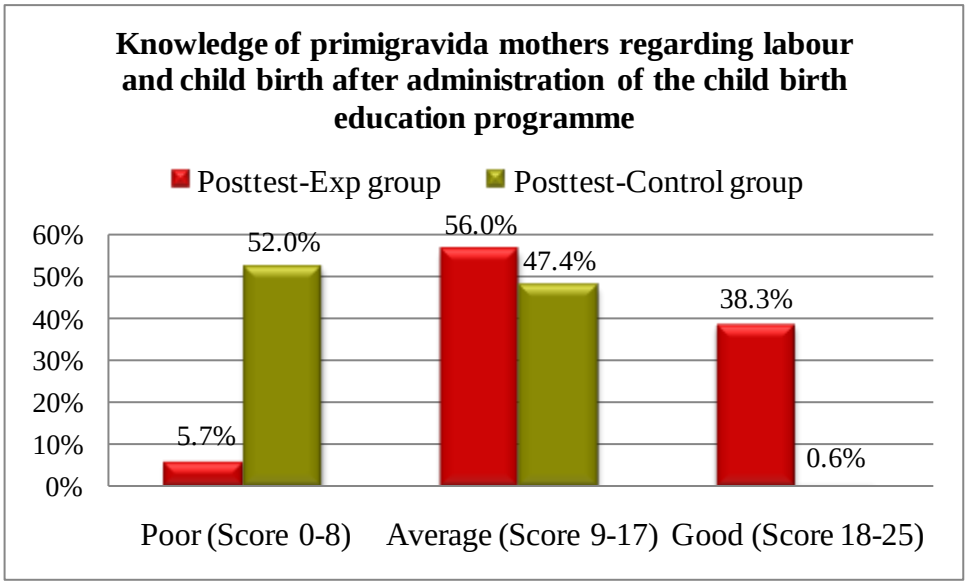

Figure 9: Bar diagram showing the percentage distribution of the primigravida mothers according to their POST TEST level of knowledge regarding labour process and childbirth preparedness in both the groups.

The data presented in Figure 9 depicts that among the experimental group primigravida mothers 56% possessed average knowledge and 38.3% of them possessed good knowledge in posttest. Whereas, in control group, majority of the primigravida mothers (52%) possessed poor knowledge regarding labour process and childbirth preparedness in posttest.

Section-III:

Findings related to the effectiveness of video assisted child birth education programme on knowledge.

This section describes the data related to comparison of the pre test and post test knowledge scores in and among the experimental and control group primigravida mothers.

The data have been presented in the Table 9,10,11,12,13,14,15 & 16 and Figure 10&11.

Table 9

Frequency and percentage distribution of the PRETEST & POSTTEST knowledge level of primigravida mothers regarding labour process and childbirth preparedness in experimental & control group

N=350

Knowledge	Experimental group (n=175)				Control group(n=175)			
	Pretest		Posttest		Pretest		Posttest	
	Freq	%	Freq	%	Freq	%	Freq	%
Poor (Score 0-8)	105	60.0%	10	5.7%	102	58.3%	91	52.0%
Average (Score 9-17)	69	39.4%	98	56.0%	72	41.1%	83	47.4%
Good (Score 18-25)	1	0.6%	67	38.3%	1	0.6%	1	0.6%

The data presented in Table 9 compares the pretest and posttest knowledge level between the groups in terms of frequency & percentage. It reveals that in **pretest** majority of the samples from both the group were having poor level of knowledge (score 0 – 8) i.e. 60% and 58.3% in experimental and control group respectively. Only 0.6% of the samples in both the groups were having good knowledge (score 18 – 25). 39.4% of the primigravida

mothers in experimental group and 41.1% of the primigravida mothers in control group were having average knowledge (score 9 – 17).

When the **posttest** knowledge score is compared it shows that only 5.7% of the primigravida mothers in experimental group were having poor knowledge (score 0 – 8) whereas in case of control group mothers it remains high i.e. 52%. 38.3% of the samples in experimental group achieved good knowledge (score 18 – 25) and only 0.6 % of the samples in control group could achieve this. Majority of the primigravida mothers (56%) in experimental group had average knowledge (score 9 – 17) and in case of control group mothers it is only 47.4%.

This shows that there is remarkable improvement in the knowledge of primigravida mothers of experimental group after administration of the video assisted child birth education program. **N = 350**

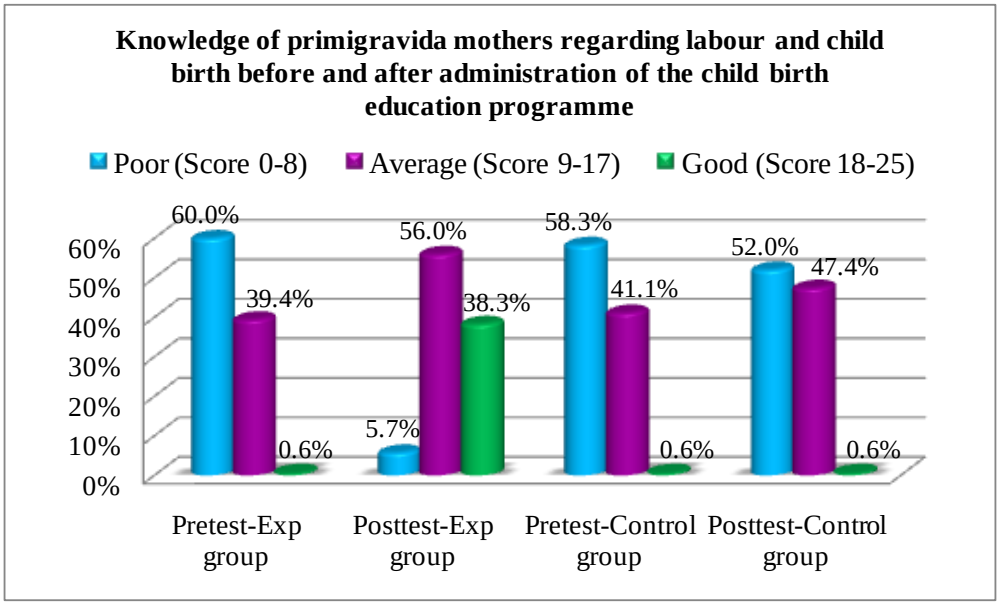

Figure 10: Cylinder diagram showing the percentage distribution of the primigravida mothers according to their knowledge level in PRETEST & POSTTEST for both the groups.

The data presented in Figure 10 shows that 60% of the primigravida mothers had poor knowledge during pretest which reduced to only 5.7% during posttest. The data also shows that only 0.6% of the primigravida mothers in experimental group had excellent knowledge during pretest which increased to 38.3% during posttest. The data further shows that maximum of the mothers in control group had poor knowledge in both pre and posttest i.e. 58.3% and 52% respectively.

Table 10

Mean and Standard Deviation of PRE TEST & POST TEST knowledge score among the primigravida mothers in Experimental and Control group

N=350

Test	Mean		SD	
	Exp. (n=175)	Cont. (n=175)	Exp. (n=175)	Cont. (n=175)
PRE TEST	8.3	8.4	3.6	3.7
POSTTEST	15.6	8.8	3.5	4.1

Maximum possible score=25

The maximum possible score in the structured knowledge questionnaire was 25. The data presented in Table- 10 shows that the mean pretest knowledge score in experimental and control group was 8.3 & 8.4 respectively. The mean posttest knowledge scores of experimental group 15.6 was quite higher than the mean posttest knowledge scores (8.8) of control group. The data further compares the standard deviation which shows that in pretest it was 3.6 and 3.7 respectively in experimental and control group & in posttest it was 3.5 and 4.1 respectively in experimental and control group.

Table 11

Mean, Mean Difference, Standard Deviation and "t" value of PRETEST knowledge Scores of primigravida Mothers in Experimental and Control group

N=350

Group	Mean	SD		T	Df	p-value
Experimental (n=175)	8.26	3.6	0.14	0.4^{NS}	348	0.358
Control (n=175)	8.40	3.7				

^{NS} = Not Significant at 0.05 level of significance.

Df (348) 't' = 2.00 at 0.05 level of significance.

The data given in Table- 11 shows that the mean pretest knowledge score of the experimental group was 8.26 and the mean pretest knowledge score of control group mothers was 8.40 with a difference of 0.14, which was not found to be statistically significant as evident from't' value of 0.4 for df 348 with a p-value of 0.358 (less than 0.05). at 0.05 level of significance. This shows that the obtained mean difference was by chance and not a true difference. This also shows that the experimental and control group primigravida mothers did not differ initially in terms of their knowledge.

Table 12

Mean, Standard Deviation, Mean Difference and "t" value of Pretest and Posttest knowledge Scores of primigravida Mothers in Control group

N=175.

Test	Mean	SD	Md	T	Df	p-value
Pretest	8.4	3.7	0.4	1.82^{NS}	174	0.672
Posttest	8.8	4.1				

*** Significant at 0.05 level of significance.**

Df (174) 't' = 2.00 at 0.05 level of significance.

The data depicted in Table 12 represents paired t-test applied by the researcher for comparison of knowledge scores of control group primigravida mothers in pretest and posttest. The average knowledge score in pretest was 8.4 which increased to 8.8 in posttest. The obtained mean difference 0.4 was not found to be statistically significant as evident from 't' value of 1.82 for df 174 at 0.05 level of significance. This shows that the obtained mean difference was by chance and not a true difference. This result indicated that the knowledge level of the primigravida mothers in control group regarding labour process and childbirth preparedness was not significantly increased. The obtained difference in the knowledge score in posttest may be due to influence of some extraneous variables like influence of family member, friends, health personnel and mass media etc which was not under control of the researcher.

Table 13

Mean, Standard Deviation, Mean Difference and "t" value of Pretest and Posttest knowledge Scores of primigravida Mothers in Experimental group

N=175.

Test	Mean	SD	Md	T	Df	p-value
Pretest	8.3	3.6	7.3	34.2*	174	0.000
Posttest	15.6	3.5				

*** Significant at 0.05 level of significance.**

Df (174) 't' = 2.00 at 0.05 level of significance.

The data depicted in Table 13 represents paired t-test applied by the researcher for comparison of knowledge scores of experimental group primigravida mothers in pretest and posttest. The average knowledge score in pretest was 8.3 which increased to 15.6 in posttest. The obtained mean difference 7.3 was found to be statistically significant as evident from 't' value of 34.2 for df 174 at 0.05 level of significance. Corresponding p-value was 0.000 which is small (less than 0.05). This shows that the obtained mean difference was a true difference and not by chance. **Therefore the researcher rejected the null hypothesis H_o and accepted the research hypothesis H_1.** This result indicated that the video assisted Child Birth Education Program significantly improved the knowledge of the primigravida mothers in experimental group regarding labour process and childbirth preparedness

Table 14

Comparison of area wise knowledge scores in pretest and posttest among the primigravida mothers of experimental group.

N=175.

Sl. no	Area	Pretest		Posttest		T	df	p-value
		Mean	SD	Mean	SD			
1.	Pregnancy and birth	1.0	0.1	2.0	0.0	2.7*	174	0.042
2.	Events during child birth process	1.1	0.8	2.1	0.9	16.2*	174	0.000
3.	Time and place for delivery	0.6	0.5	1.0	0.2	10.4*	174	0.000
4.	Signs of labor	1.0	0.2	1.1	0.4	4.5*	174	0.000
5.	Investigations	0.5	0.7	1.9	1.0	22.4*	174	0.000
6.	Responsibilities during labor	1.1	0.6	1.9	1.0	10.6*	174	0.000
7.	Comfort measures during labor	0.4	0.5	0.9	0.3	12.6*	174	0.000
8.	Episiotomy	0.1	0.3	0.8	0.4	17.8*	174	0.000
9.	Child birth preparedness	0.7	0.5	1.1	0.3	10.8*	174	0.000
10.	Mother and baby craft items	0.6	0.6	1.6	0.7	19.5*	174	0.000
11.	Breast feeding	1.0	0.0	1.0	0.0	NA	174	NA
12.	Diet after delivery	0.2	0.4	0.9	0.2	23.5*	174	0.000

*** Significant at 0.05 level of significance.**

Df (174) 't' = 2.00 at 0.05 level of significance.

The data presented in Table 14 depicts paired t-test applied by the researcher for comparison of area wise knowledge scores in

pretest and posttest among the primigravida mothers of experimental group. Area wise obtained 't' values for this comparison were 2.7 (Pregnancy and birth), 16.2 (Events during child birth process), 10.4 (Time and place for delivery), 4.5 (Signs of labor), 22.4(Investigations), 10.6 (Responsibilities during labor), 12.6 (Comfort measures during labor), 17.8 (Episiotomy), 10.8 (Child birth preparedness), 19.5 (Mother and baby craft items), -0.4(Breast feeding) and 23.5 (Diet after delivery) with 174 degrees of freedom. P-values corresponding to areas all the areas except breast feeding were 0.000 which are small (less than 0.05). Hence the null hypothesis $\mathbf{H_o}$ is rejected and H_1 is accepted. Therefore it can be said that the Video Assisted Child Birth Education Program significantly improved the knowledge of the primigravida mothers regarding labour process and childbirth preparedness in all the areas except for breast feeding in experimental group. The primigravida mothers were already aware of the breast feeding where no much improvement is seen.

Table 15

Mean Difference, Standard Deviation and "z" value of change in knowledge scores of primigravida mothers in experimental and control groups.

N=350.

Group	Change in knowledge score (posttest-pretest)	SD	z	p-value
Experimental group (n=175)	7.3	2.8	111.6*	0.000
Control Group (n=175)	0.4	1.7		

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

Researcher applied two sample z-test for comparison of change in knowledge scores of primigravida mothers in experimental and control group. The data presented in Table 15 depicts that the average change in knowledge score in experimental group was 7.3 which was 0.4 for control group. The obtained z-value for this comparison was found to be statistically significant as evidenced by 'z' value of 111.6 for 348 degrees of freedom at 0.05 level of significance. Corresponding p-value was 0.000 which is small (less than 0.05). **Hence the researcher rejected the null hypothesis H_0 and accepted the research hypothesis H_1.** Knowledge of experimental group mothers improved significantly as compared to that in control group. Therefore it can be said that the video assisted Child birth education program helped to improve the knowledge significantly for the primigravida mothers

of experimental group regarding labour process and childbirth preparedness.

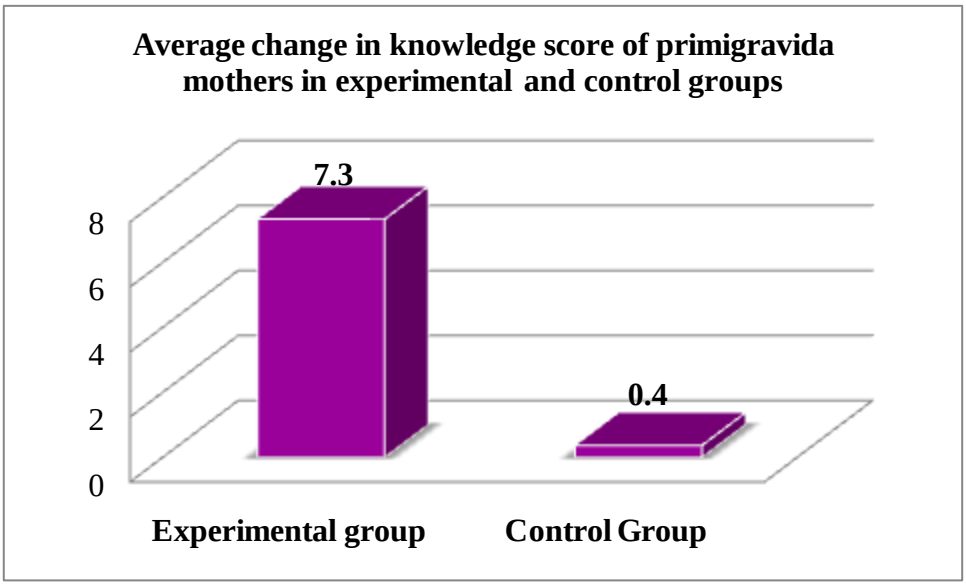

Figure 11: Bar diagram showing the average change in the knowledge score of the primigravida mothers in experimental & control group.

Figure 11 represents the average change in the knowledge score among the primigravida mothers in both the groups. The figure furthers shows that the the difference in average knowledge score between posttest and pretest knowledge score was 7.3 for the experimental group of mothers which was 0.4 in case of control group of mothers.

Table 16

Comparison of change in area wise knowledge scores of primigravida mothers in experimental and control groups.

N=350

Sl no	Area	Experimental		Control		Z	df	p-value
		Mean diff	SD (diff)	Mean diff	SD (diff)			
1.	Pregnancy and birth	0.0	0.1	0.0	0.1	0.4^{NS}	348	0.327
2.	Events during child birth process	1.0	0.8	-0.3	0.5	17.1*	348	0.000
3.	Time and place for delivery	0.4	0.5	0.4	0.5	-1.0 ^{NS}	348	0.835
4.	Signs of labor	0.1	0.4	-0.4	0.5	11.2*	348	0.000
5.	Investigations	1.5	0.9	0.2	0.7	15.1*	348	0.000
6.	Responsibilities during labor	0.7	0.9	-0.4	0.7	12.4*	348	0.000
7.	Comfort measures during labor	0.5	0.5	0.2	0.6	5.8*	348	0.000
8.	Episiotomy	0.6	0.5	0.0	0.4	13.6*	348	0.000
9.	Child birth preparedness	0.4	0.5	0.3	0.5	2.0*	348	0.026
10.	Mother and baby craft items	1.0	0.7	0.1	0.5	14.4*	348	0.000
11.	Breast feeding	0.0	0.0	0.0	0.0	NA ^{NS}	348	NA
12.	Diet after delivery	0.8	0.4	0.2	0.4	12.6*	348	0.000

*** Significant at 0.05 level of significance.**

^{NS} = Not Significant at 0.05 level of significance

Df (348)'t' = 2.00 at 0.05 level of significance.

The data presented in Table 16 shows the result of two sample z-test applied by the researcher for comparison of change in area wise knowledge scores of primigravida mothers in experimental and control group. The 'z'-values for this comparison were 0.4 (Pregnancy and birth), 17.1(Events during child birth process), -1.0 (Time and place for delivery), 11.2 (Signs of labor), 15.1(Investigations), 12.4 (Responsibilities during labor), 5.8 (Comfort measures during labor), 13.6 (Episiotomy), 2.0 (Child birth preparedness), 14.4 (Mother and baby craft items), and 12.6 (Diet after delivery), with 348 degrees of freedom. Corresponding p-values were small (less than 0.05) in all the areas except for area of Pregnancy and birth, time and place of delivery and breast feeding. Hence the researcher rejected the null hypothesis H0 and accepted the research hypothesis H_1. Knowledge of experimental group mothers improved significantly as compared to that in control group in all the areas except Pregnancy and birth, time and place of delivery and breast feeding where they don't show much difference in experimental and control group. So the Video Assisted Child birth education program significantly improved the knowledge of the primigravida mothers regarding labour process and childbirth preparedness.

Section IV

Findings related to the intra-partum behavior of the primigravida mothers

This section describes the compliance to the intra-partum behaviour of the experimental and control group primigravida mothers at the time of reporting to the labour room as well as throughout the process of labour. Intra partum behaviour is observed as and when the primigravida mothers of both the group underwent the process of labour. The observation commences when the mothers reported to the labour room for delivery and ends at the end of fourth stage of labour. Intra-partum behaviour was observed by semi-structured intra-partum behaviour observation checklist.

The section is again divided into two sub-sections:

Section IV.a: Findings related to the comparison of compliance to the intra-partum behavior among the primigravida mothers in experimental and control group at the time of reporting to the labour room

The data is presented in Table 17, 18 and 19

Section IV.b: Findings related to the comparison of compliance to the intra-partum behavior among of the primigravida mothers in experimental and control group during all the four stages of labour

The data is presented in Table 20, 21,22,23,24 & 25.

Section IV.a: Findings related to the comparison of compliance to the intra-partum behavior among the primigravida mothers in experimental and control group at the time of reporting to the labour room

Table 17

Frequency & Percentage distribution of compliance to the intra-partum behaviour of the primigravida mothers in experimental and control group at the time of reporting to the labour room

N=350

Compliance to the intra-partum behaviour	Experimental group (n=175)		Control group(n=175)	
	Freq	%	Freq	%
Non compliance (Score 0-10)	0	0.0%	0	0.0%
Poor compliance (Score 11-20)	0	0.0%	30	17.1%
Average compliance (Score 21-30)	2	1.1%	104	59.4%
Good compliance (Score 31-40)	173	98.9%	41	23.4%

Data presented in Table 17 shows that in experimental group almost all of the primigravida mothers (98.9%) shows good compliance to the intra-partum behaviour at the time of reporting to the labour room (Score 31-40) whereas in control group only 23.4% of them had good compliance. This indicates that the expected intra-partum behavior while reporting to labour room for delivery is better in experimental group than that of the control group as they received the Video Assisted Child Birth Education Program where expectant intra-partum behaviors at the time of reporting to the labour room was taught to them .

Table 18

Mean, SD and 'z' value of compliance to the intra-partum behaviour score of the primigravida mothers in experimental and control group

N=350.

Group	Mean	SD	Z	p-value
Experimental group (n=175)	38.2	2.8	63.0*	0.000
Control Group (n=175)	26.4	5.0		

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

Table- 18 represents the result of two sample z-test applied by the researcher for comparison of compliance to the intra-partum behaviour of the primigravida mothers in experimental and control groups. Average compliance score of experimental group was 38.2 which was 26.4 for control group. Z-value for this comparison was 63 with 348 degrees of freedom which was found to be statistically significant as corresponding p-value was 0.000, which was small (less than 0.05). **Thus the null hypothesis H_0 is rejected and the researcher accepted H_2.** Hence it can be concluded that Video Assisted Child Birth Education Program significantly improved the compliance to the intra-partum behaviour among primigravida mothers in experimental group at the time of reporting to the labour room as compared to that of control group.

Table 19

Mean, SD and 'z' value of item wise compliance to the intra-partum behaviour of the primigravida mothers at the time of reporting to the labour room in experimental and control group

N=350.

Expectant behavior at the time of reporting tom labour room	Experimental (n=175)		Control (n=175)		'z'	df	p-value
	Mean	SD	Mean	SD			
Reports to labour room on recognition of signs of true labour	4.0	0.0	3.1	1.7	6.9*	348	0.000
Reports to labour room with cut nails and no nail polish	3.5	1.4	1.3	1.9	12.2*	348	0.000
Reports to labour room with no jewelleries	4.0	0.0	3.8	0.8	2.7*	348	0.004
Reports to labour room without having full meals	3.6	1.2	3.7	1.1	-0.4^{NS}	348	0.644
Brings all necessary documents while reporting to labour room	4.0	0.0	4.0	0.0	#DIV/0! ^{NS}	348	#DIV/0!
Reports to labour room after having a good Body bath and some hot drink	3.4	1.5	0.6	1.4	18.1*	348	0.000
Reports to labour room accompanied by relatives	4.0	0.0	4.0	0.0	#DIV/0! ^{NS}	348	#DIV/0!

Expectant behavior at the time of reporting	Experimental (n=175)		Control (n=175)		'z'	df	p-value
	Mean	SD	Mean	SD			
Brings baby wrap for receiving baby	4.0	0.0	4.0	0.0	#DIV/0! NS	348	#DIV/0!
Brings extra set of dress for self and baby	4.0	0.0	0.9	1.7	23.8*	348	0.000
Possesses toiletries and antiseptic for the period of ward stay	3.7	1.0	0.9	1.7	19.6*	348	0.000

NS Not significant at 0.05 level of significance.

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

Table- 19 represents the result of two sample z-test applied by the researcher for comparison of item wise compliance to the intra-partum behaviour of primigravida mothers in experimental and control groups at the time of reporting to the labour room. From the above table it is evident that the compliance to the intra-partum behaviour at the time of reporting to the labour room in experimental group were significantly better than those for control group for items 'Reports to labour room on recognition of signs of true labour', 'Reports to labour room with cut nails and no nail polish', 'Reports to labour room with no jewelleries', 'Reports to labour room without having full meals', 'Reports to labour room after having a good Body bath and some hot drink', 'Brings extra set of dress for self and baby' and 'Possesses toiletries and antiseptic for the period of ward stay' since the calculated p-values were small (less than 0.05), for all the above said items. For items like 'Brings all necessary documents while reporting to labour room', 'Reports to

labour room accompanied by relatives' and 'Brings baby wrap for receiving baby' the samples in both group showed the desired compliance.

Section IV.b: Findings related to the comparison of compliance to the intra-partum behavior among of the primigravida mothers in experimental and control group during all the four stages of labour

Table 20

Frequency & Percentage distribution of compliance to the intra-partum behaviour of the primigravida mothers in experimental and control group in all the four stages of labour

N=350

Compliance to the Intra-Partum Behaviors	Experimental group (n=175)		Control group(n=175)	
	Freq	%	Freq	%
Non compliance (Score 35)	0	0.0%	0	0.0%
Poor compliance (Score 36-70)	1	0.6%	4	2.3%
Average compliance (Score 71-105)	83	47.4%	171	97.7%
Good compliance (Score 106-140)	91	52.0%	0	0.0%

The data presented in Table 20 compares the compliance to the intra-partum behavior in all the four stages of labour among experimental and control group of primigravida mothers. It reveals that in experimental group more than half (52%) of the primigravida mothers had good compliance (Score 106-140), 47.4% of them had average compliance (score 71-105) and only 0.6% of them had poor compliance (score 36-70) to the intra-partum behaviors in all the four stages of labour. None of the mothers in experimental group have shown poor compliance. Whereas, in

control group, majority of 97.7% of them had average compliance (Score 71-105) and 2.3% of them had poor compliance (score 36-70) to the intra-partum behaviors in all the four stages of labour. None of the mothers in control group have shown good compliance. This indicates that the compliance to the intra-partum behaviors of the experimental group mother was comparatively better in all the four stages of labour as they received the Video Assisted Child Birth Education Program where they were taught about the expectant intra-partum behaviors during the process of labour.

Table 21

Mean, SD and 'z' value on compliance to the intra-partum behavior among the primigravida mothers in experimental and control group in all the four stages of labour

N=350.

Group	Mean	SD	Z	p-value
Experimental group (n=175)	98.0	15.4	12.7*	0.000
Control Group (n=175)	79.8	3.9		

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data presented in Table-21 depicts the results of two sample z-test applied by the researcher for comparison of compliance to the intra-partum behavior among primigravida mothers in experimental and control group in all the four stages of labour. Average complaince score of experimental group was 98 which was79.8 for control group. Z-value for this comparison was 12.7 with 348 degrees of freedom. It was found to be statistically significant as the corresponding p-value was 0.000, which was

small (less than 0.05). Hence the researcher rejected the null hypothesis H0 and accepted the research hypothesis H_2. Therefore it can be said that Video Assisted Child Birth Education Program helped the primigravida mothers in experimental group significantly to show better compliance to the intra-partum behavior in all the four stages of labour.

Table 22

Mean, SD and 'z' value of item wise compliance to the intra-partum behavior in FIRST STAGE OF LABOUR among the primigravida mothers in experimental and control group

N=350.

	Expectant behaviour during First Stage of Labour	**Experimental (n=175)**		**Control (n=175)**		**'z'**	**df**	**p-value**
		Mean	**SD**	**Mean**	**SD**			
1	Pays full attention to the instructions	3.2	1.0	1.8	0.6	15.4*	348	0.000
2	Follows the intra partum instructions well	2.8	0.7	1.8	0.6	12.9*	348	0.000
3	Verbalizes positive thoughts.	2.3	0.8	1.5	0.5	12.8*	348	0.000
4	Frequently asks the health team member regarding the expected duration of child birth	1.6	0.5	2.0	0.0	-11.2*	348	0.000
5	Keeps herself calm	2.5	0.5	2.0	0.0	13.7*	348	0.000
6	Verbally expresses inability to bear the labour pain	2.4	0.9	3.6	0.7	-13.2*	348	0.000
7	Demands for analgesia	2.1	0.7	2.8	0.6	-10.4*	348	0.000

Expectant behaviour during First Stage of Labour		Experimental (n=175)		Control (n=175)		'z'	df	p-value
		Mean	SD	Mean	SD			
8	Seeks advice for method of bearing pain	2.5	0.5	2.0	0.0	13.7*	348	0.000
9	Cries loudly with the onset of pain	1.9	0.8	2.9	0.4	-14.8*	348	0.000
10	Asks for sips drinking water	2.7	0.4	2.1	0.3	13.8*	348	0.000
11	Listens to encouragement from persons helping her.	3.2	0.9	2.1	0.4	15.9*	348	0.000
12	Gets ready for each contraction by taking deep breath	3.2	0.9	2.1	0.4	15.9*	348	0.000
13	Uses deep breathing during contractions	2.9	1.2	1.5	0.5	14.2*	348	0.000
14	Relaxes herself between contractions by taking long deep breaths	2.8	1.3	1.3	0.5	14.5*	348	0.000
15	Concentrates on something which helps to distract her attention	2.8	1.3	1.3	0.5	14.5*	348	0.000
16	Cooperates during PV examinations	3.0	1.0	2.0	0.1	13.8*	348	0.000
17	Takes deep breath to relax during vaginal examination	3.2	1.0	2.0	0.6	14.1*	348	0.000
18	Adopts position / ambulates as per her comfort	3.2	0.9	2.1	0.3	15.8*	348	0.000

Expectant behaviour during First Stage of Labour		Experimental (n=175)		Control (n=175)		'z'	df	p-value
		Mean	SD	Mean	SD			
19	Goes for urination every 2-3 hourly	3.2	0.9	2.1	0.3	15.8*	348	0.000
20	Performs abdominal massage as instructed	2.1	0.9	1.1	0.2	15.0*	348	0.000
21	Doesn't exhibit premature bearing down efforts	3.0	0.1	3.0	0.1	0.6	348	0.282

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data presented in Table 22 compares the compliance to the intra-partum behaviour of the primigravida mothers of both the group in first stage of labour. Since the p-values were small (less than 0.05), the samples in experimental group showed significantly better compliance to the intra-partum behavior as compared to those in control group for almost all of the items of first stage of labour except the item 'Doesn't exhibit premature bearing down efforts'. Therefore it can be said that the experimental group primigravida mothers had better compliance to the intra-partum behaviour in first stage of labour as they received the Video Assisted Child Birth Education Programme.

Table 23

Mean, SD and 'z' value of item wise compliance to the intra-partum behavior in SECOND STAGE OF LABOUR among the primigravida mothers in experimental and control group

N=350.

Expectant behaviours during Second Stage of Labour		Experimental		Control		z	df	p-value
		Mean	SD	Mean	SD			
22	Asks for drinking water	1.8	0.6	1.2	0.4	11.3*	348	0.000
23	Informs that she has the urge to defecate	3.7	0.5	3.1	0.4	13.3*	348	0.000
24	Adopts and maintain position for effective bearing down as instructed by the health worker	2.9	0.3	2.8	0.4	3.1*	348	0.001
25	Demonstrate appropriate technique of bearing down	3.0	1.0	2.0	0.1	13.8*	348	0.000
26	Maintains good breathing control during bearing down	3.0	1.0	2.0	0.1	13.8*	348	0.000
27	Performs effective bearing down efforts as instructed	3.2	0.9	2.1	0.4	15.9*	348	0.000
28	Exhibits persistent rapid breathing / breath holding	2.1	0.7	2.7	0.7	-8.8*	348	0.000
29	Cries loudly with the onset of severe pain	2.1	0.8	2.9	0.8	-8.4*	348	0.000

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data presented in Table 23 compares the compliance to the intra-partum behaviour of the primigravida mothers of both the group in second stage of labour. Since the p-values were small (less than 0.05), the samples in experimental group showed significantly better compliance to the intra-partum behavior as compared to those in control group for all of the items of second stage of labour.

Table 24

Mean, SD and 'z' value of item wise compliance to the intra-partum behavior in THIRD STAGE OF LABOUR among the primigravida mothers in experimental and control group

N=350.

	Expectant behaviours during Third Stage of Labour	**Experimental**		**Control**		**z**	**df**	**p-value**
		Mean	**SD**	**Mean**	**SD**			
30	Exhibits bearing down efforts during expulsion of placenta	4.0	0.2	4.0	0.2	0.6	348	0.282
31	Cooperates during suturing of episiotomy	3.5	0.9	2.3	0.7	13.8*	348	0.000
32	Cries loudly and doesn't allow for suturing as well as inspection and exploration of the perineum, vagina, cervix and uterus	1.3	0.6	2.0	0.5	-11.2*	348	0.000

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data depicted in Table 24 compares the compliance to the intra-partum behaviour among the primigravida mothers of both

the group in third stage of labour. The calculated 'z' value (0.6) for the item 'Exhibits bear down efforts during expulsion of placenta' was not found to be statistically significant at 0.05 level of significance. But for the other two items the calculated 'z' values (13.8 & - 11.2) were found to be statistically significant at 0.05 level of significance ($p<0.05$). Thus, it can be said that mothers in the experimental group were compliant and cooperates better than that of the control group during the time of episiotomy suturing and inspection and exploration of the vagina, cervix and uterus during third stage of labour.

Table 25

Mean, SD and 'z' value of item wise intra-partum behavior in FOURTH STAGE OF LABOUR among the primigravida mothers in experimental and control group

N=350.

Expectant behaviours during Fourth Stage of Labour		**Experimental**		**Control**		**z**	**df**	**p-value**
		Mean	**SD**	**Mean**	**SD**			
33	Remains calm and cooperative	2.5	0.5	2.0	0.0	13.7*	348	0.000
34	Accepts hot drinks orally within 1-2 hours of delivery	4.0	0.2	4.0	0.2	0.6	348	0.282
35	Readily start feeding/ breast feed the baby within ½ hour of birth	4.0	0.2	3.8	0.6	4.5*	348	0.000

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data presented in Table 25 compares the compliance to the intra-partum behaviour of the primigravida mothers of both the group in fourth stage of labour. The calculated 'z' values (13.7 & 4.5) were found to be statistically significant at 0.05 level of significance, thus it can be said that the primigravida mothers in experimental group had better compliance to the listed behaviour of the fourth stage of labour than that of the control group as they received the video assisted child birth education programme.

Section V

Findings related to comparison of maternal and foetal outcome in experimental and control groups

This section describes the maternal and fetal outcome of the experimental and control group primigravida mothers. The maternal and fetal outcome is observed in both the group after the delivery after the administration of Video Assisted Child Birth Education Programme to the experimental group only. Maternal an\d fetal outcome was measured by record analysis.

It is divided into two sub sections:

Section V-a:
Findings related to the maternal outcome in experimental and control groups

The data have been presented in Table 26,27,28,29 & 30 and Figure 12, 13, 14 & 15.

Section V b:
Findings related to the fetal outcome in experimental and control groups

The data have been presented in Table 31,32 & 33.

Section V-a:

Findings related to the maternal outcome in
Experimental and Control groups

Table 26

Comparison of the maternal outcome criteria among the primigravida mothers in experimental and control group by frequency and percentage

N=350.

Sl. no	Maternal outcome criteria	Experimental (n=175)		Control (n=175)	
		Freq	%	Freq	%
1	**Nature of progress of labour**				
	Progressed Spontaneously	92	52.6%	103	58.9%
	Augmented by any method	83	47.4%	72	41.1%
	If augmented the method used				
	Oxytocin	62	35.4%	54	30.9%
	Low rupture of the membrane	7	4.0%	18	10.3%
	Low rupture of the membrane followed by Oxytocin	14	8.0%	0	0.0%
2	**Any medication used for pain relieving**				
	Yes	34	19.4%	71	40.6%
	No	141	80.6%	104	59.4%
	if yes, Name of the drug				
	Bascopan	24	13.7%	33	18.9%
	Bascopan & Tramadol		0.0%	26	14.9%
	Tramadol	10	5.7%	14	8.0%
3	**Mode of delivery**				
	Vaginal delivery	165	94.3%	135	77.1%
	Instrumental delivery (forceps, vacuum)	10	5.7%	40	22.9%
4	**Nature of vaginal delivery**				
	Normal vaginal delivery with episiotomy without laceration and tear	134	76.6%	64	36.6%
	Normal vaginal delivery with episiotomy and laceration	24	13.7%	47	26.9%

Sl. no	Maternal outcome criteria	Experimental (n=175)		Control (n=175)	
	Normal vaginal delivery with episiotomy and tear	10	5.7%	29	16.6%
	Normal vaginal delivery without episiotomy	7	4.0%	35	20.0%
6	**Total duration of labour**				
	<8 hours	90	51.4%	36	20.6%
	8 to 12 hours	65	37.1%	61	34.9%
	12 to 16 hours	20	11.4%	38	21.7%
	> 16 hours	0	0.0%	40	22.9%
	Duration of first stage of labor				
	<6 hours	90	51.4%	36	20.6%
	7-8 hours	31	17.7%	42	24.0%
	9-10 hours	34	19.4%	21	12.0%
	11-12 hours	10	5.7%	36	20.6%
	>12 hours	10	5.7%	40	22.9%
	Duration of second stage of labor				
	<30 min	104	59.4%	63	36.0%
	31-60 min	51	29.1%	55	31.4%
	61-90 min	20	11.4%	17	9.7%
	91-120 min	0	0.0%	40	22.9%
	Duration of third stage of labor				
	<5 min	135	77.1%	37	21.1%
	6-15 min	40	22.9%	97	55.4%
	16-25 min		0.0%	41	23.4%
7	**Nature of expulsion of placenta**				
	Spontaneous expulsions	151	86.3%	116	66.3%
	Assisted expulsion	24	13.7%	59	33.7%
8	**Presence of Maternal complications**				
	No	165	94.3%	148	84.6%
	Perineal tear	10	5.7%	27	15.4%

From the data presented in Table 26 it is said that more than half (52.6%) of the primigravida mothers in experimental group had spontaneous progress of labour and in case of control group it was 58.9%. When the labour is augmented, mostly Inj Oxytocin was used for the purpose.

Majority of the samples i.e 80.6% in experimental group and only 59.4% of the samples in control group had NOT used any pain relieving drugs.

Maximum of the samples had undergone vaginal delivery in experimental and control group i.e. 94.3% & 77.1% respectively.

According to the nature of delivery, majority of the samples (76.6%) in experimental group had normal vaginal delivery with episiotomy without laceration and tear where only 36.6% of the samples in control group had undergone the same.

Total duration of labour was less than 8 hours for almost half the samples (51.4%) in experimental group but only 20.6% of the samples in control group had less than 8 hours of total duration of labour. In case of control group 34.9% had 8 to 12 hours of labour duration, 21.7% had 12 to 16 hours duration and 22.9% had more than 16 hours duration. In case of experimental group it was 13.7% 5% &7.4% respectively.

The duration of first stage of labour was less than 6 hours in case of 51.4% samples in experimental group and 20.6% samples in control group.

When the duration of second stage of labour is concern, it is seen that 59.4% of the samples in experimental group had less than 30 minutes duration and in case of control group it was 36%.

77.1% of the experimental group samples had less than 5 minutes of third stage of labour duration and only 21.1% of control group samples had the same.

Placenta was spontaneously expelled in case of 86.3% samples in experimental group and 66.3% samples in control group

Majority of the samples i.e. 94.3% of samples in experimental group and 84.6% of samples in control group did not develop any maternal complications after the delivery.

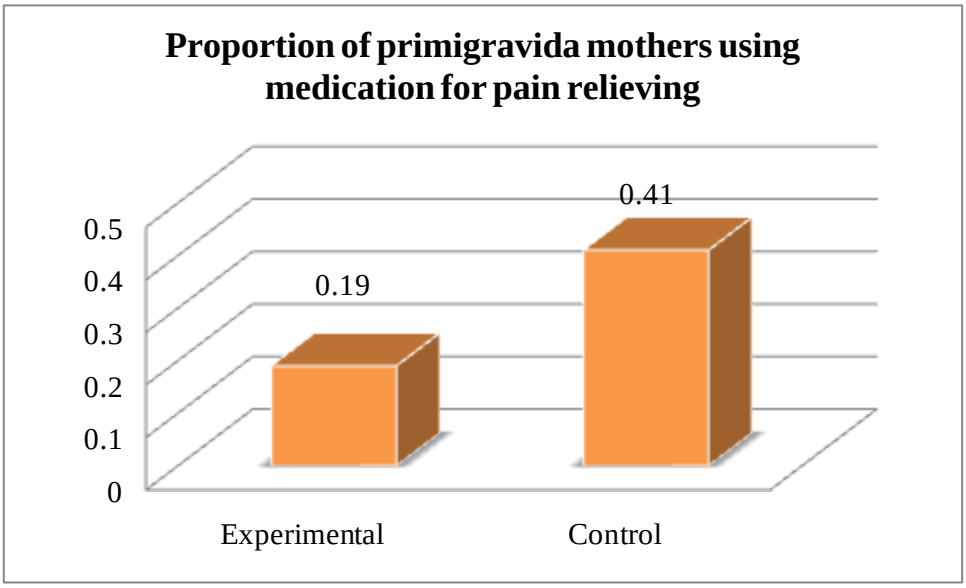

Figure 12: Bar diagram showing the proportion of the primigravida mothers as per their use of pain relieving drugs during labour in experimental & control group.

The data depicted in figure 12 represents the proportion of primigravida mothers used pain relieving medications during the labour process. It shows that 0.19 proportion of the mother in experimental group and 0.41 proportion of the mother in control group used pain relieving medication during their labour process

Table 27

p-hat, q-hat, SE and 'z' value of proportion of primigravida mothers taking pain relieving drugs in experimental and control group

N=350.

Group	Proportions	N	p-hat	q-hat	std. error	z-value	p-value
Experimental (n=175)	0.19	175	0.300	0.700	0.049	4.491*	0.000
Control (n=175)	0.41	175					

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

Table- 27 shows the result of proportions test applied by the researcher for comparison of proportion of mothers taking pain relieving drug of the primigravida mothers in experimental and control group. Proportion of mothers taking pain relieving drug in experimental group was 0.19 which was 0.41 in control group. The calculated Z-value for this comparison was 4.491 with 348 degrees of freedom. As the corresponding p-value 0.000 was small (less than 0.05), the null hypothesis H0 is rejected and H_3 is accepted. So from the above findings it can be inferred that the proportion of primigravida mothers taking pain relieving drug in experimental group was significantly less as compared to that of control group. The reason for less use of pain relieving drugs among experimental group of primigravida mothers was they were more relaxed during the process of labour as they knew about it through Video Assisted Teaching and also they knew the comfort measures to be adopted during labour.

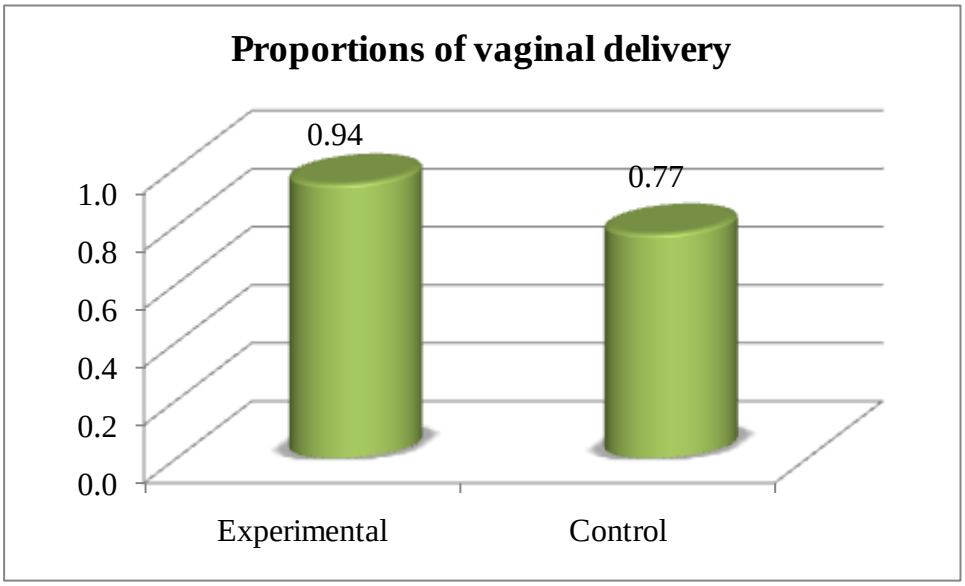

Figure 13: Cylinder diagram showing the proportion of the primigravida mothers as per their mode of delivery in experimental & control group.

Table 28

p-hat, q-hat, SE and 'z' value of proportion of primigravida mothers as per their mode of delivery in experimental and control group

N=350.

Group	Proportions	N	p-hat	q-hat	std. error	z-value	p-value
Experimental	0.94	175	0.857	0.143	0.037	4.58*	0.000
Control	0.77	175					

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data presented in Table- 28 shows the result of proportions test applied by the researcher for comparison of proportion of vaginal delivery in experimental and control group. Proportion of normal vaginal delivery in experimental group was 0.94 which

was 0.77 in control group. The data further depicts that the calculated Z-value for this comparison was 4.58 with 348 degrees of freedom. Corresponding p-value was 0.000, which was small (less than 0.05), so the null hypothesis H0 is rejected and H_3 is accepted. Therefore it can be said that the need for operative interference is much more reduced in the primigravida mothers who were prepared for the process of labour through Video Assisted Child Birth Education Program.

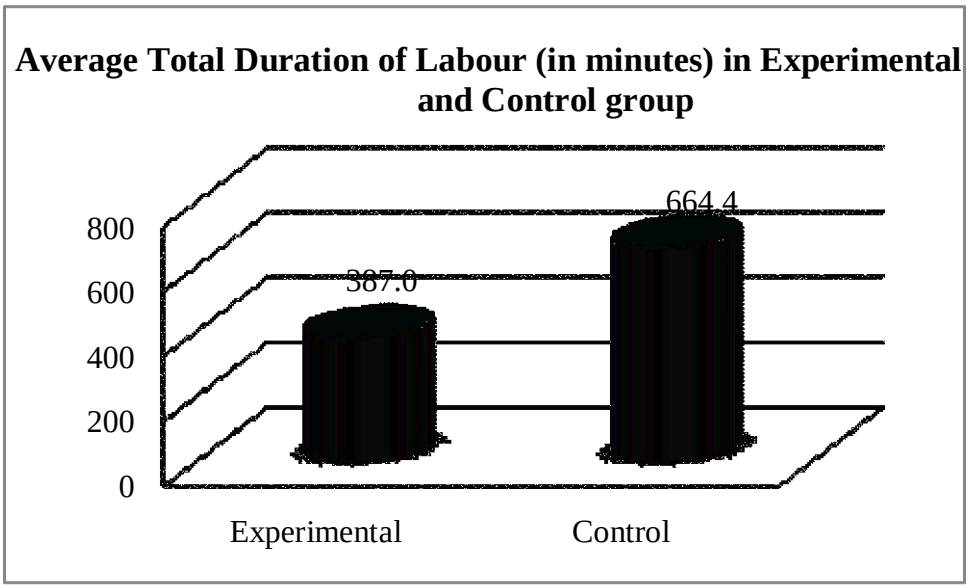

Figure 14: Cylinder diagram showing the average duration of labour among the primigravida mothers in experimental & control group

The data depoicted in Figure 12 shows that the average total duration of labor of experimental group was 387 minutes i.e 6 hours 45 minutes and in case od control group **the** average total duration of labor was 664.4 i.e. 11 hour 07 minutes.

Table 29

Mean, SD and 'z' value of total duration (in minutes) of labor among the primigravida mothers in experimental and control group N=350.

	Mean	SD	Z	DF	p-value
Experimental (n=175)	387.0	15.5	16.9*	348	0.000
Control (n=175)	664.4	216.3			

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The date represented in Table- 29 shows the result of two sample z-test applied by the researcher for comparison of total duration of labor (in minutes) of primigravida mothers in experimental and control groups. Average total duration of labor of experimental group was 387 minutes (6 hours 45 minutes) which was 664.4 (11 hour 07 minutes) minutes for control group. The calculated Z-value for this comparison was 16.9 with 348 degrees of freedom. Corresponding p-value was 0.000, which was small (less than 0.05), the null hypothesis H_0 is rejected and H_3 is accepted. So the total duration of labour in experimental group is significantly less than the control group. As the primigravida mothers in experimental group received Video Assisted Child Birth Education where they were taught about breathing and relaxation technique, comfort measures during labour and their responsibility in each stage of labour, they were able to adjust with the process of labour easily which aids in the fast progress of their delivery process than those who did not received the education.

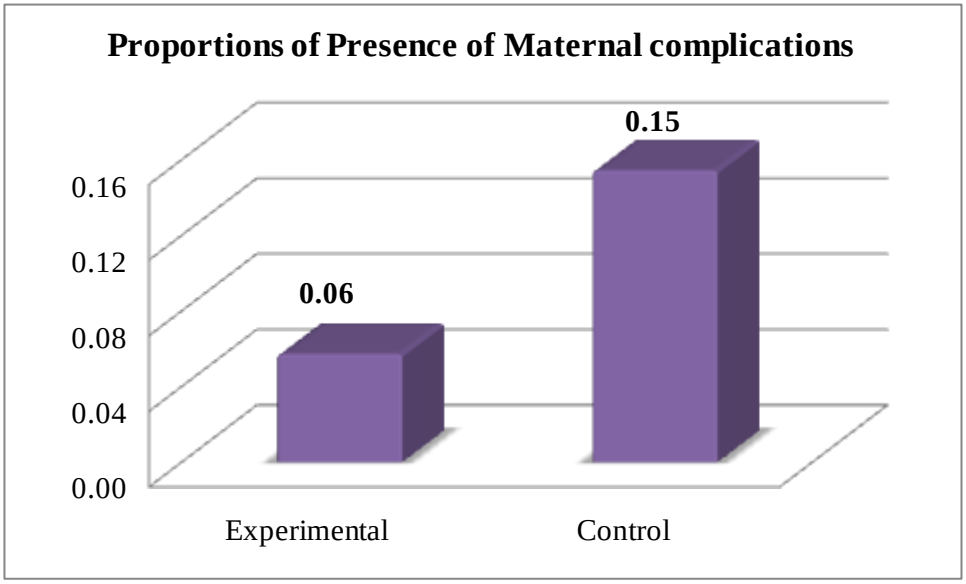

Figure 15: Bar diagram showing the proportion of primigravida mothers in experimental & control group as per their presence of maternal complications (perineal injury)

The data presented in Figure 15 shows that proportion of presence of maternal complications in experimental group was 0.06 which was 0.15 in control group.

Table 30

p-hat, q-hat, SE and 'z' value of proportion of primigravida mothers in experimental and control group according to the presence of maternal complications (in terms of perineal inury)

N=350.

Group	Proportions	N	p-hat	q-hat	std. error	z-value	p-value
Experimental	0.06	175	0.106	0.894	0.033	2.95*	0.002
Control	0.15	175					

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

Table-30 represents the data of proportions test applied by the researcher for comparison of proportion of presence of maternal complications (perineal trauma) in experimental and control group. Proportion of presence of maternal complications in experimental group was 0.06 which was 0.15 in control group. Z-value for this comparison was 2.95 with 348 degrees of freedom. Corresponding p-value was 0.002, which was small (less than 0.05), the null hypothesis H_0 is rejected and H_3 is accepted. So it can be inferred that the proportion of primigravida mothers in experimental group had significantly less maternal complications in terms of perineal trauma as compared to that of control group. This may be because of their deep breathing and relaxation technique practices during labour and performance of effective bearing down effort when required.

Section V b:

Findings related to the fetal outcome in experimental and control groups

Table 31

Comparison of the fetal outcome criteria among the primigravida mothers in experimental and control group by frequency and percentage N=350

Sl. No	Foetal outcome criteria	Experimental		Control	
		Freq	%	Freq	%
1	**The newborn is born**				
	Alive	175	100.0%	175	100.0%
2	**The newborn cried immediately after birth**				
	Yes	155	88.6%	100	57.1%
	No	20	11.4%	75	42.9%
3	**APGAR score at 1 minute after birth**				
	0 to 3	7	4.0%	10	5.7%
	4 to 6	59	33.7%	65	37.2%
	7 to 10	109	62.3%	100	57.1%
4	**APGAR score at 5 minutes after birth**				
	4 to 6	7	4.0%	10	5.7%
	7 to 10	168	96.0%	165	94.3%
5	**Presence of any complications/ birth injury**				
	Caput Succedaneum				
	YES	15	8.6%	25	14.2%
	No	160	91.4%	150	85.8%
	Cephal Hematoma				
	No	175	100.0%	175	100.0%
	Minor scalp injury				
	Yes	0	0.0%	7	4.0%
	No	175	100.0%	168	96.0%
	Any other injuries				
	No	175	100.0%	175	100.0%

The data depicted in Table 31 compares the data related to fetal outcome between experimental and control group. It shows that all the birth were live birth in both groups. In experimental group, 88.6% & in control group, 57.1% of the newborn cried immediately after birth.

In experimental group, majority of 62.3% of them had APGAR score of 7 to 10 at 1 minute after birth, 33.7% of them had APGAR score of 4 to 6 and only 4% of them had APGAR score of 0 to 3 at 1 minute after birth. In control group, majority of 57.1% of them had APGAR score of 7 to 10 at 1 minute after birth, 37.2% of them had APGAR score of 4 to 6 and 5.7% of them had APGAR score of 0 to 3 at 1 minute after birth.

In experimental group, majority i.e. 96% of newborn had APGAR score of 7 to 10 at 5 minutes after birth. In control group too, majority (94.3%) of newborn had APGAR score of 7 to 10 at 5 minutes after birth.

91.4% of the newborn from experimental and 85.8% of the newborn from control group did not had caput succedaneum.

None of the newborn in experimental and control group had cephal hematoma.

None of them from experimental group had minor scalp injury and in control group, a very few (4%) of newborn had minor scalp injury.

None of the newborn from experimental or control group had any other injuries.

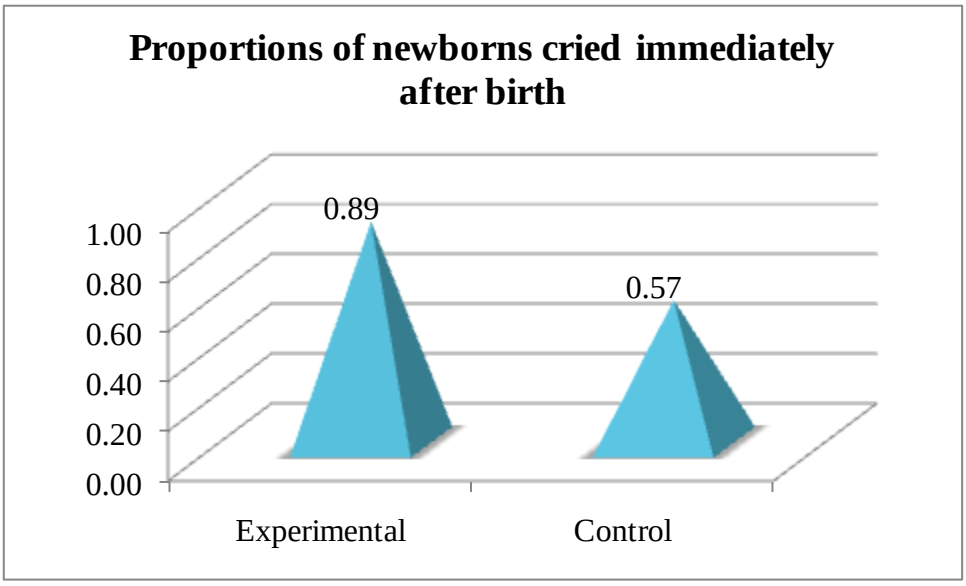

Figure 16: Cone diagram showing the proportion of newborn cried immediately at birth in experimental & control group

The data presented in Figure 16 shows that the proportion of the newborns cried immediately after birth in experimental group was 0.89 and 0.57 proportion of the newborns cried immediately after birth in case of control group.

Table 32

p-hat, q-hat, SE and 'z' value of proportion of newborn cried immediately at birth in experimental and control group

N=350.

Group	Proportions	N	p-hat	q-hat	std. error	z-value	p-value
Experimental	0.89	175	0.729	0.271	0.048	6.6*	0.000
Control	0.57	175					

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The data in Table-32 shows the result of proportions test applied by the researcher for comparison of proportion of the

newborns cried immediately after birth in experimental and control group. Proportion of the newborns cried immediately after birth in experimental group was 0.89 which was 0.57 in control group. Z-value for this comparison was 6.6 with 348 degrees of freedom. Corresponding p-value was 0.000, which was small (less than 0.05), the null hypothesis $H0_3$ is rejected. The proportion of newborns cried immediately after birth in experimental is significantly more as compared to that of control group.

Table 33

Mean, SD and 'z' value of APGAR score at 1 minute of birth among the newborns in experimental and control group

N=350.

	Mean	**SD**	**Z**	**DF**	**p-value**
Experimental (n=175)	7.56	1.8	3.92*	348	0.018
Control (n=175)	6.32	2.5			

*** Significant at 0.05 level of significance.**

Df (348) 't' = 2.00 at 0.05 level of significance.

The date represented in Table- 33 shows the result of two sample z-test applied by the researcher for comparison of APGAR score at 1 minute of birth among the newborns in experimental and control groups. Average APGAR score at 1 minute of birth among the newborns in experimental group was 7.5 which was 6.3 for control group. The calculated Z-value for this comparison was 3.9 with 348 degrees of freedom. Corresponding p-value was 0.018, which was small (less than 0.05), the null hypothesis H_0 is rejected and H_3 is accepted. So the APGAR score at 1 minute of

birth among the newborns in experimental group is significantly higher than the control group. As the primigravida mothers in experimental group received Video Assisted Child Birth Education where they were taught about breathing and relaxation technique, comfort measures during labour, therefore they were able to be relax and comfortable during the process of labour which aids in supplying more oxygen towards their baby hence improving the APGAR score at the time of birth than those who did not received the education.

Section VI:

Findings related to association of the knowledge with selected demographic variables

Association of knowledge with demographic variables was assessed using Fisher's exact test. The summary of Fisher's exact test results is presented below in Table 34.

Table 34

Association of knowledge with demographic variables

N=350

Demographic variable		Knowledge			p-value
		Poor	Average	Good	
Age in years	18 to 21	52	40	2	0.002*
	22 to 25	126	85	0	
	26 to 29	25	5	0	
	30 and above	4	11	0	
Type of your family	Nuclear	49	39	0	0.668
	Joint	148	98	2	
	Extended	10	4	0	
Education	Primary	122	56	0	0.001*
	Secondary	73	62	2	
	Higher secondary	9	15	0	
	Graduation and above	3	8	0	
Occupation	Housewife	141	108	0	0.000*
	Farming	18	2	0	
	Self employed	16	16	0	
	Service	7	15	2	
	Laborer	25	0	0	
Monthly family income	< Rs 3,000 /-	28	8	0	0.000*
	Rs 3,001 – 5,000/-	62	61	2	
	Rs 5,001 – 10,000/-	103	51	0	
	>Rs 10,000/-	14	21	0	
Have you heard about birth preparedness information	Yes	55	114	2	0.000*
	No	152	27	0	

* Significant at 0.05 level of significance

The data represented in Table-34 describes the association between knowledge with demographic variables. The data shows that the corresponding p-values for age (0.002), education (0.001), occupation (0.000), monthly family income (0.000), and previous information regarding birth preparedness (0.000), were less than 0.05. Therefore it is said that few demographic variables such as age, education, occupation, monthly family income and previous information regarding birth preparedness information were found to have significant association with knowledge of primigravida mothers. The data also depicted that the knowledge of the primigravida mother is not associated with the type of family as the corresponding p-value (0.668) is more than 0.05.

SUMMARY OF THE CHAPTER

This chapter dealt with the analysis and interpretation of data collected from 350 primigravida mothers of a selected hospital of Pune. Both descriptive and inferential statistics were used for data analysis. The statistical tests employed were mean, median, standard deviation,'t' test , 'z' test, test of proportion and Fisher's exact test. Tables, Bar graphs, cylinder diagram, cone diagram were plotted to depict the demographic characteristics, knowledge score, intra-partum behaviors, maternal and fetal outcome.

The results of the analysis shows that the video assisted child birth education programme was effective in improving the level of knowledge regarding labour process and child birth preparedness, compliance to the intra-partum behaviour at the time of reporting to the labour room for delivery in all the stages of labour among the primigravida mothers. The results also shows that the video assisted child birth education programme was effective in reducing the duration of labour, use

of pain relieving drugs and improving the mode of delivery & APGAR score of the newborns. The results further depicts that knowledge was associated with demographic variables such as age, education, occupation, and previous information regarding birth preparedness.

The next chapter that is chapter- V presents the summary, discussion of the findings, conclusions, implications, limitations and recommendations.