

CHAPTER- V

SUMMARY, MAJOR FINDINGS, CONCLUSIONS, DISCUSSIONS, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter deals with a summary of the study, major findings with the conclusion drawn, limitation and implication for nursing practice , education , nursing administration and nursing research. It also gives an account of suggestion and recommendations for future research in the field of Midwifery Nursing Practice.

"The sections of research are to discuss, interpret and identify the limitations and generalization relevant to the investigation thereby furthering nursing research."

SUMMARY

The present study was undertaken to assess the effectiveness of a video assisted childbirth education programme on knowledge, intra-partum behaviour, maternal and fetal outcome among the primigravida mothers in selected hospitals of Pune city.

Labouring mothers are at a particular risk for increase level of anxiety during their childbirth experience because of the critical nature of the experience.

Pregnant women commonly worry about the pain they may experience during labour and child birth and how they will react and deal with such pain. Anxiety and pain are closely interrelated with each other. The interaction between anxiety and pain may become a spiralling process. Pain and anxiety

together can eventually become severe, in turn, a cause for panic and uneventful maternal and fetal complications.

Preparation of mother during labour in initial period will enhance the possibility of healthy normal delivery with less exhaustion, stress and pain to the mother.

Ideally preparation for labour and delivery should come in antenatal period and that too in third trimester where women specially primigravida are waiting for their due dates more eagerly and more eager to know about labour and its preparations.

Nurses as a health professional remain in continue and direct contact with the primi gravidae during their pregnancy and in ANC OPDS , they can determine women's learning needs and can prepare them for childbirth process.

Many researches are carried out in the area of childbirth and its preparation and knowledge of mothers related to labour. Nursing intervention is a very important factor in teaching mothers about labour process and how they should prepare.

Researcher attended many primigravida in labour who were not prepared mentally for labour and not able to follow the instructions that predispose them to more fear, anxiety and pain. Researcher observed these phenomena, interacted with mothers and with various review the researcher found this as a problem, need to be solved and motivated the researcher to study on this problem.

So the present study was undertaken by the investigator with the main purpose to evaluate the effectiveness of a video assisted childbirth education programme on knowledge, intra-partum behaviour, maternal and fetal outcome among primigravida

mothers in selected hospitals of Pune city. The study was undertaken with the following objectives:

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.

The study attempted to examine the following Hypotheses

- H₁- 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.
- H₂- 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.

H₃- 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.

A review of related literature has helped the researcher to gain in depth knowledge of the content.

A review related to research and non research literature helped the researcher to formulate a conceptual framework and to adopt a suitable methodology for study. The conceptual framework adopted for this study was based on Dorothea Orem's Self care theory. The literature reviewed was related to

- 1. Literature related to childbirth education**
- 2. Literature related to the knowledge of pregnant women regarding labour and childbirth preparedness**
- 3. Literature related to prenatal care and variables that influence childbirth**
- 4. Literature related to the effectiveness of child birth education**
- 5. Literature related to the effectiveness of structured video assisted education/teaching programme**

The literatures further reviewed enable the researcher to develop tool for data collection. It is also helped her to decide plan for data analysis and interpretation of data.

A quantitative research approach was adopted for the study with quasi- experimental pre-test post-test control group design. The independent variable of the study was video assisted child birth education programme and dependent variables were mother's knowledge, intra-partum behaviours in all the stages of labour, maternal outcome in terms of duration of labour, use of pain relieving drugs, nature of delivery, maternal complications and fetal outcome in terms of APGAR SCORE, birth injury.

The study was conducted in ANC OPD & labour room of Municipal Hospitals of Pune City. Non-probability purposive sampling technique was used to obtain an adequate size (350) of sample subjects and they were assigned to the groups (control & experimental). The sample comprised of 175 primigravida mothers in each experimental and control group.

To obtain necessary data for the study, the tools developed and used for data collection were a structured knowledge questionnaire, intra-partum behaviour observation check list & structured record analysis proforma. Structure questionnaire has got two Sections (section I consisted 8 items concerned with background data, section 2 comprised of 25 knowledge questions). Intra-Partum Behaviour Observation Checklist (IPBOC) is divided into two parts (part A comprised of 10 items related to the expectant intra- partum behaviour at the time of reporting to the labour room by the primigravida mothers and part B comprised of total 35 items regarding expectant intra-partum behaviours in all four stages of labour). Structured record analysis performa consists of two parts: Part A comprised of 8 items regarding maternal outcome and Part B comprised of 5 items regarding fetal outcome. Questioning (paper & pencil), observation (direct, non-concealed) and record analysis were the technique of data collection.

The content validity of the data collection tools were established by 21 experts who included nursing experts from all fields, gynaecologists and obstetrician, statistician, childbirth educators. Internal consistency reliability of the structured questionnaire was established by statistically computing the coefficient alpha by a test retest method. The Chronbach's alpha score of the tool was 0.87 which reflects a higher internal consistency.

The reliability co-efficient of the IPBOC & structured record analysis proforma for maternal and fetal outcome was computed by inter - observer reliability and there was 97% and 98% agreement respectively. The tools were administered to 15 mothers for a try out to check the items for clarity, relevancy and nature of the response. The tools were found to be reliable and feasible.

A pilot study was conducted from 15th October 2013 to 15th December 2013 to check the feasibility of the study in Kamla Nehru Hospital of Pune. The final data were collected from January 2014 to December 2014 in Kamla Nehru Hospital & Sonawane Maternity Home of Pune. Knowledge Pre-test was conducted on 1st day from both the groups followed by administration of Video Assisted Child Birth Education Programme to the experimental group only. Knowledge post test was conducted on 7th day. Intra partum behaviours were observed when the samples underwent labour process and record analysis was done for maternal and fetal outcome after the delivery. The procedure for administration of Video Assisted CBEP was as follows:

- * The session was conducted in a room of the OPD complex of Sonawane Maternity Home and Kamla Nehru Hospital.
- * The room was having seating arrangements with benches, adequate ventilation.

- * A good rapport was established with the participants with detail explanation of the purpose and schedule of this program.
- * Video assisted child birth education programme was conducted in Marathi language.
- * Animated videos were shown on the process of labour, episiotomy and breast feeding
- * Video was shown on relaxation exercises, comfortable positions to be adopted during labour, appropriate technique for bearing down effort.
- * Expected intra-partum behaviours during all the four stages of labour, maternal and fetal outcome was also shown.
- * Participants were encouraged to express their concerns about labour and delivery.
- * Participants were also encouraged to discuss any problems encountered.

The collected data were organized, analyzed and interpreted in terms of objectives and hypothesis of the study. Both descriptive and inferential statistics were used to analyze the data. The statistical tests employed were mean, median, standard deviation, 't' test , 'z' test, test of proportion and Fisher's exact test

MAJOR FINDINGS OF THE STUDY

Major findings of the study are summarized as follows:

1. Findings regarding sample characteristics:-

- 26.9% of the primigravida mothers in experimental group had completed 36 weeks of pregnancy, 23.4% of them had completed 35 weeks, 25.7% of them had completed 34 weeks completed period of present pregnancy
- 28% of the primigravida mothers in control group had completed 36 weeks of pregnancy, 24% of them had completed 35 weeks, and 23.4% of them had completed 34 weeks.
- Majority of the samples in experimental and control group were between 22 - 25 years i.e. 61.7% and 58.9 % respectively.
- Maximum of the samples (70.9%) of both the group belongs to joint family.
- 51.4% of the samples in experimental group and 50.3% of the samples in control group were educated up to primary level.
- Majority of the samples in experimental in control group were house wives i.e. 71.4% and 70.9% respectively.
- The monthly family income 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.
- 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.

2. Findings related to the knowledge score of primigravida mothers in control and experimental group regarding labor process and child birth preparedness before and after administration of the Video Assisted Child Birth Education Programme.

- The mean pre-test knowledge scores of experimental group was 8.3 with the range of (0 - 18) and the mean pre-test knowledge scores of control group was 8.4 with the range of (0 - 18).
- In pre-test majority (60%) of the primigravida mothers in experimental group had poor knowledge (Score 0-8), 39.4% of them had average knowledge (score 9-17) and only 0.6% of them had good knowledge (score 18-25) regarding labor process and child birth preparedness.
- In pre-test in case of control group too, majority (58.3%) of the primigravida mothers had poor knowledge (Score 0-8), 41.1% of them had average knowledge (score 9-17) and only 0.6% of them had good knowledge (score 18-25) regarding labor process and child birth preparedness.
- The mean post-test knowledge scores of experimental group was 15.6 with the range of (4 - 23) and than the mean post-test knowledge scores of control group was 8.8 with the range of (0 - 18).
- In post-test majority (56%) of the primigravida mothers in experimental knowledge had average knowledge (Score 9-17), 38.3% of them had good knowledge (score 18-25) and only 5.7% of them had poor knowledge (score 0-8)
- Whereas, in post-test, 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 only 0.6% of them had good knowledge (score 18-25).

3. Findings related to comparison of the level of knowledge of primigravida mothers between control and experimental group regarding labor process and child birth preparedness

- The mean pretest knowledge score in experimental and control group was 8.3 & 8.4 respectively. But the mean posttest knowledge scores of experimental group 15.6 was quite higher than the mean posttest knowledge scores (8.8) of control group.
- Initially (in pretest) the experimental and control group didn't differ in terms of their knowledge level as evident from 't' value of 0.4 for df 348 with a p-value of 0.358 (>0.05) at 0.05 level of significance.
- The mean posttest knowledge score of the experimental group (15.6) was significantly higher than the mean pretest knowledge score (8.3) of control group as evident from 't' value of 34.2 for df 174 at 0.05 level of significance with a p-value of 0.000 (<0.05)
- The Video Assisted Child Birth Education Program significantly improved the knowledge of the primigravida mothers regarding labor process and child birth preparedness in all the areas except for breast feeding in experimental group as evident by the 't' value for Pregnancy and birth ($t_{(174)}=2.7, p<0.05$), Events during child birth process ($t_{(174)}=16.2, p<0.05$), Time and place for delivery ($t_{(174)}=10.4, p<0.05$), Signs of labor ($t_{(174)}=4.5, p<0.05$), Investigations ($t_{(174)}=22.4, p<0.05$), Responsibilities during labor ($t_{(174)}=10.6, p<0.05$), Comfort measures during labor ($t_{(174)}=12.6, p<0.05$), Episiotomy

($t_{(174)}=17.8, p<0.05$), Child birth preparedness ($t_{(174)}=10.8, p<0.05$), Mother and baby craft items ($t_{(174)}=19.5, p<0.05$), and Diet after delivery ($t_{(174)}=23.5, p<0.05$).

- The average change (7.3) in knowledge score in experimental group was significantly higher than the average change (0.4) in control group as evidenced by 'z' value of 111.6 for 348 degrees of freedom at 0.05 level of significance.
- The change in area wise knowledge scores of primigravida mothers in experimental group was significantly higher than the control group as evident by 'z'-values of 17.1 (Events during child birth process), 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 at 0.05 level of significance.

4(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

- Almost all of the primigravida mothers (98.9%) shows good compliance to the intra-partum behaviour (Score 31-40) while reporting for delivery to the labour room whereas in control group only 23.4% of them had good compliance.
- The mean compliance to the intra-partum behaviour score (38.2) of experimental group was significantly higher than the mean behavioural change score (26.4) of control group. ($z_{(348)}=63, p<0.05$)
- 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 aspects like '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 jewellerys', '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 <0.05 for all the above said items.

4(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

- More than half (52%) of the primigravida mothers in experimental group had good compliance (Score 106-140), 47.4% of them had average compliance (score 71-105) and only 0.6% of them poor compliance (score 36-70) to the intra-partum behaviours in all the four stages of labour. None of the mothers in experimental group have shown non compliance to the intra-partum behaviors.
- Majority (97.7%) of primigravida mothers in control group had average compliance (Score 71-105) and 2.3% of them had poor compliance (score 36 - 70) to the intra-partum behaviours in all the four stages of labour. None of the mothers in control group have shown good compliance.
- The mean compliance to the intra-partum behavior score in all the four stages of labour of experimental group (98) was significantly higher than the mean compliance to the

intra-partum behaviour score (79.8) of control group. ($z_{(348)}=12.7, p<0.05$)

- The experimental group primigravida mothers shown significantly better compliance to the intra-partum behaviour in first, second, third and fourth stage of labour.

5(a) Findings related to comparison of maternal outcome in experimental and control groups

- More than half (52.6%) of the primigravida mothers in experimental group and 58.9% of primigravida mothers in control group had spontaneous progress of labour
- Majority of the samples i.e 80.6% in experimental group had NOT used any pain relieving drugs.
- Maximum of the samples had undergone normal vaginal delivery in both the group i.e. 94.3% & 77.1% respectively in experimental and control group.
- Majority of the samples (76.6%) in experimental group had normal vaginal delivery with episiotomy without laceration and tear whereas 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.
- 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.

- The proportion of primigravida mothers taking pain relieving drug in experimental group was significantly less as compared to that of control group [$z'_{(348)}=4.491$, $p<0.05$]
- The proportion of vaginal delivery in experimental group was significantly higher than that of the control group [$z'_{(348)}=4.58$, $p<0.05$]
- Total duration of labour in control group was significantly higher [$z'_{(348)}=16.9$, $p<0.05$] than that of the experimental group primigravida mothers.
- The proportion of primigravida mothers in experimental group had significantly less maternal complications in terms of perineal injury as compared to that of control group. [$z'_{(348)}=2.95$, $p<0.05$]

5(b) Findings related to comparison of fetal outcome in experimental and control groups

- All of the newborns were alive in both groups.
- Majority of the newborn (88.6%) in experimental group, & 57.1% of the newborn in control group cried immediately after birth.
- Majority (62.3%) of the newborn in experimental group and 57.1% of the newborn in control group, had APGAR score of 7 to 10 at 1 minute after birth.
- 96% of newborn in experimental group 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.
- The proportion of newborns cried immediately after birth in experimental is significantly more as compared to that of control group. [z' (df348)=6.6, $p<0.05$]
- APGAR score of the newborns in experimental group was significantly higher [z' (348)=3.92, $p<0.05$] than that of the control group newborns.

6. Findings related to association of the knowledge with selected demographic variables

- Age, education, occupation, monthly family income and previous information regarding birth preparedness information were found to have significant association with knowledge of primigravida mothers.

CONCLUSIONS

On the basis of the findings of the present study the following conclusions were drawn: -

The following conclusion was drawn from the study findings. Study analysis shows that there is significant increase in knowledge after intervention. Video assisted childbirth education programme is found to be effective to increase primigravida knowledge related to childbirth and prepare them for childbirth.

- * Primigravida mothers who were exposed to Video Assisted Child Birth Education Programme significantly possess more

knowledge regarding labour and childbirth than the mothers who did not exposed to Video Assisted CBEP.

- * Video Assisted Child Birth Education Programme was found to be effective in significantly improving the compliance to the intra-partum behaviour among primigravida mothers at the time of reporting to the labour room for delivery and in all the four stages of labour.
- * Total duration of labour was reduced significantly and there was less use of pain relieving drugs among the mothers who were exposed to Video Assisted Child Birth Education Programme.
- * Primigravida mothers who were exposed to Video Assisted Child Birth Education Programme underwent vaginal delivery more in number and had experience less maternal complications in terms of perineal injury significantly than the mother who were not exposed to the Video Assisted CBEP.
- * Video Assisted Child Birth Education Programme was effective in improving the APGAR score of the newborns in the experimental group of mothers.

Therefore the study can be concluded that structured Video Assisted Childbirth Education Programme prepare the primigravida mother for the process of labour and childbirth. It also conditions them to breathe and relax during contraction. Primigravida mother in the experimental group who were exposed to Video Assisted Child Birth Education Programme exhibited better compliance to the intra-partum behaviour at the time of reporting to the labour room & in all the stages of labour. Practice of breathing techniques, relaxing positions and knowledge regarding the labour process helps the mothers to feel

relaxed during the whole process of labour, thus shortens the total duration of labour. The need for instrumental delivery and the occurrence of perineal injury was much more reduced among the primigravida mothers who were exposed to video assisted CBEP. Video assisted CBEP also had a favourable impact on the newborn in terms of conditions at birth and APGAR score.

Therefore, structured video assisted childbirth education programme prepare the primigravida mother well for childbirth. It also can help them to feel relaxed during the whole process of labour, thus having a favourable impact on the mothers and the newborn. The information provided also reduces women's fear of unknown and they are able to participate positively in the process of labour, therefore improves the labour outcome.

DISCUSSION OF THE FINDINGS

Many researchers in the past and present decades shown that mothers have less knowledge about childbirth process and structured childbirth education programme is effective and helpful for mothers during delivery and relieves their stress and pain level. In this section the major findings of the presence study have been discussed with reference to the results obtained by other investigators.

The findings of the have been discussed with reference to the objectives and hypothesis of the study.

Knowledge regarding labour process and childbirth preparedness

Findings of the presence study indicated that the mothers who were exposed to Video Assisted Child Birth education Programme had significantly more knowledge regarding labour process and childbirth preparedness than the mothers who were not exposed to the Video Assisted Child Birth Education Programme. The findings are in conformity with the study

conducted by **Malata, Ellen Chirwa (2011)**⁷⁵ on Assessment of the effectiveness of childbirth education in Malawi where a sequential quasi-experimental design was used to assess the structured childbirth education programme that was subsequently launched. Healthy pregnant women of at least 30 weeks gestation were recruited and the final sample sizes were 104 and 105 for the control and intervention groups. The control group attended the normal antenatal clinic and the intervention group enrolled in a childbirth education programme in addition to the antenatal clinic education. Using a semi-structured questionnaire, the mean pre-test and post-test scores for the control group across the three domains were not significantly different from each other ($P>0.05$). For the intervention group there were significant differences ($P<0.05$) in the mean pre-test and post-test scores across the three domains. The results show that the childbirth education programme imparted knowledge to the intervention group who received more effective childbirth education and they were content with that.

The above study results is also being supported by **Hauck Y, McCaul K (2007)**⁹⁰ who conducted a study to develop and evaluate a childbirth educational programme for Malawian women. A mixed method approach was used for this three-phase study. In Phase 1, childbirth information needs of Malawian women were determined from literature and interviews with midwives. In Phase 2, a structured childbirth education programme was developed. In Phase 3, a quasi-experimental design using sequential sampling was conducted to evaluate the education programme. Participants were pregnant women who attended antenatal clinics in 2002, with 100 in the control group and 110 in the intervention group. Changes in childbirth knowledge were determined over a 6-week period. The findings of this study suggested that the childbirth education programme included information, teaching strategies

and a schedule for implementation for content relevant to the antenatal, labour and birth and postnatal time periods. Results revealed no significant difference in knowledge in the control group between pre-test and post-test scores. But for the intervention group, however, an overall significant increase in knowledge across all time periods was demonstrated ($P < 0.01$). The study concluded by mentioning that a childbirth education programme, developed for the Malawian context, was associated with important increases in maternal knowledge about antenatal, labour and birth and postnatal topics. The findings have implications for midwives in other developing countries and offer an example of a midwifery-led initiative to provide formal childbirth education to these vulnerable women.

The findings of the present study suggests that the primigravida mothers possess poor knowledge in pre-test which is also consistent with the findings of a study conducted by Doctors, led by **Dr. Michael Klein** of the Child & Family Research Institute and University of British Columbia. A total of 1,318 healthy pregnant women were surveyed in this study. They found that many of the pregnant women have very less knowledge regarding labour and childbirth and they seemingly unprepared to make their own decisions regarding place and mode of childbirth options, such as whether to have natural childbirth or a Cesarean section.

Intra-partum Behaviour

The findings of the present study also revealed that there was a significant compliance to the expectant intra-partum behaviour of the primigravida mother at the time of reporting to the labour room for delivery as well as in all the four stages of labour. This has been supported by a cohort study which was conducted by **Fabian HM, and Radestad IJ** ⁹¹ to investigate first

time mothers' views about child birth and parenthood education, in Sweden. The sample consisted of 1197 women who completed three questionnaires during early pregnancy, 2 months and 1 year after giving birth. The study revealed that child birth education helped 74% of first time mothers to prepare for child birth process. The first time mothers felt more relaxed which help them to cope easily with the process of labour. The study recommends conducting more research on current forms of antenatal education.

A Cochrane Database Systematic Review by **Gagnon AJ (2007)**⁶⁴ with the objective to assess the effects of this education on knowledge acquisition, anxiety, sense of control, pain, support, breastfeeding, infant care abilities, and psychological and social adjustment also support the study findings. Six trials, involving 1443 women, were included in this review. The findings reported that individualized prenatal education is directed toward avoidance of a Cesarean birth and increase the rate of vaginal birth. The effects of general antenatal education for childbirth and/or parenthood remain helpful to ease the process of labour.

The findings of the present study is also consistent with the findings of an evaluative study to determine the effectiveness of childbirth preparation class in terms of behavioural responses during first stage of labor by **Karkada Eva Chris, et,al**⁹⁵. The findings of the study revealed that there was a significant difference in the occurrence of behavioural responses between the experimental and control group at 0.05 level of significance ($t_{(58)}=11.858, p<0.05$). Hence the findings of the study indicated that more women in experimental group who had attended childbirth preparation class exhibited positive responses during first stage of labour and experiences less pain

intensity than the mother who had not attended the child birth preparation class.

Maternal and fetal outcome:

The present study results also revealed that the video assisted child birth education programme has positive impact on maternal and fetal outcome through reducing the duration of labour, less use of pain relieving drugs, better the APGAR score of the newborn. Similar findings were observed in the study done by **Sidorenko VN (2000)**¹⁰⁷ which revealed that childbirth education came out as an effective method to reduce the amount of administered pain killers to pregnant women, thus reducing the negative pharmacological load to the foetus. It further more reduced labour time and shortens the hospital stay. Thus the labour process becomes more natural, the delivery non traumatic and the motherhood more happy and safe.

The findings is also consistent with the findings of **Ferguson S, Davis D, Browne J**⁸⁹ who undertake a structured review of the literature to determine the effect of antenatal education on labour and birth, particularly normal birth. Ovid Medline, CINAHL, Cochrane and Web of Knowledge databases were searched to identify research articles published in English from 2000 to 2012, using specified search terms in a variety of combinations. All articles included in this structured review were assessed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The findings of this review revealed that the labour and birthing effects on women attending antenatal education may include less false labour admissions, more partner involvement, less anxiety, and less labour interventions. There is contradictory evidence on the effect of antenatal education on mode of birth. So the authors suggested that more research is

required to explore the impact of antenatal education on women's birthing outcomes.

The finding of the present study is also congruent with the study conducted by **Rautava P, Erkkola R & Sillanpaa M (2001)**⁷⁶. The author studied the possible influence of the expectant mother's knowledge of childbirth on the outcome and experience of pregnancy and labour was investigated by means of a postpartum questionnaire in 1238 primipara. The mothers were divided into two groups according to their basic childbirth knowledge. At birth, the conditions of newborns were equal in both groups when judged by APGAR scores. The low knowledge level group had small-for-gestational-age babies more frequently and these babies were also treated in the paediatric ward more frequently than those in the high knowledge group. The latter group was significantly more critical towards the staff of the delivery room and the postnatal ward; the fathers of this group were also present at delivery significantly more frequently. The low knowledge level group was significantly more unwilling to have another pregnancy in the near future or ever. The results indicated that low childbirth knowledge is associated with a poorer pregnancy outcome. It is also told that low childbirth knowledge may imply a set of problems, including those in inter-parental relationship, socio-economic situation and need for close surveillance and improved education. So the author suggested that there is a message to antenatal care staff of the need for support, supplementary education and careful obstetric surveillance.

The findings of the present study reveals that the mean duration of labour is significantly less among the primigravida women who attended video assisted childbirth education programme

than the women who had not attended. This finding is contradicted by the findings of an evaluative study to determine the effectiveness of childbirth preparation class in terms of behavioural responses during first stage of labour and outcome of labour by **Karkada Eva Chris, et,al**⁹⁵. The findings revealed that there was no significant difference in the mean duration of labour (in hours) between the experimental and control group. ($t_{(49)} = 1.566, p > 0.05$).

A study was conducted to determine the effects of participating in training programme for childbirth on the duration of labour and fetal oxygen saturation (FSpO₂). Neonatal outcome was analysed in terms of umbilical arterial blood pH and 5 minute APGAR score. Statistically significant differences between the groups were found in duration of second stage of labour, experimental group being shorter. This finding goes hand in hand with the present study. But there is no difference in neonatal outcome and this contradicted the findings of the present study.¹⁰⁶

The overall impact of the present study is that the Video Assisted Child Birth Education programme is effective for improving the knowledge, intra-partum behaviour and labour outcomes among the primigravida mothers. Similar findings were described by a district wide field trial conducted by **MC Pherson R A., et.al. (2006)**⁸⁶ in Siraha, Nepal. The aim of the field trial was to determine the effectiveness of the BPP (Birth Preparedness Programme) to positively influence planning for births, household-level behaviours 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 behaviours through inter-personal counselling with individuals and groups. Content of messages included maternal and newborn-danger signs and

encouraged the use of healthcare services and preparation for emergencies. Thirty-cluster baseline and endline household surveys of mothers of infants aged less than one year were used for estimating the change in key outcome indicators. Fifty-four percent of respondents (n=162) were directly exposed to BPP materials while pregnant. A composite index of seven indicators that measure knowledge of respondents, use of health services, and preparation for emergencies increased from 33% at baseline to 54% at endline (p=0.001). Five key newborn practices increased by 19 to 29 percentage points from baseline to endline (p values ranged from 0.000 to 0.06). The BPP can positively influence knowledge and intermediate health outcomes, such as household practices and use of some health services.

IMPLICATIONS

The findings of the present study have several implications for nursing profession i.e. in nursing practice, nursing administration, nursing education and nursing research.

NURSING AND MIDWIFERY PRACTICE

Today society demands a greater accountability and increase deficiency and effectiveness from the health care centre. Nursing care is no more only task oriented, fragmented care, but it demands a comprehensive and holistic care. A nurse is the most important member of a health team and has a unique function to perform for the client in an independent manner. Nurse is the most important member who is continuously with the patient since the time of the admission to discharge from the hospital. The modern philosophy of obstetrical nursing care stresses the importance of meeting the total needs of pregnant mothers during the course of their pregnancy, labour and postnatal period.

A primigravida woman undergoes many physiological as well as psychological changes during her pregnancy and less aware about childbirth process due to no previous experience and lack of information. This negligence among primigravida leads to further anxiety, stress and poor delivery outcome.

Nurses can educate the primigravida about childbirth preparation. Midwife plays a major role all throughout a woman's pregnancy, delivery and post-partum period. The present study revealed that primigravida are keen to know about childbirth process as they have poor knowledge.

First time mothers experience a tremendous stress during the normal delivery process which affects the maternal and fetal outcome. Video assisted child birth education is a very simple and cost effective measure which can be used effectively and independently by the nurses for reducing anxiety, pain and improving maternal and fetal outcome of the mothers during the normal delivery process.

The result of this study shows that the first time mothers lack knowledge regarding labour and childbirth and ways and means to positively cope with stress during labour. The primigravida mother group who received the video assisted childbirth education exhibited better change in expected behaviour and intra-partum behaviours. These findings are consistent with previous studies which also demonstrated the effectiveness of childbirth preparation classes and nursing support during labour in enhancing the level of self-efficacy and coping behaviours of primigravida mothers. Therefore, midwifery care during antenatal period should be provided during their routine antenatal follow-up to provide them a great emotional, informational and tangible support.

Therefore this intervention should be instituted as a compulsory policy for caring first time mothers in order to

assist these women in reducing feelings of fear, anxiety and to help them cope with intra-partum stress. However, nurses should be trained before implementing these practices in order to understand how to provide prenatal education and support.

There is need to implement the research findings in the clinical field, so as to avoid the gap between research studies and clinical practices. Health education provided to pregnant women should be more than information-giving. It should be health education aimed at development of abilities, competencies, and good attitudes toward labour and delivery with the ultimate goal being a successful and positive childbirth experience. Findings from this study regarding the effects of a video assisted childbirth education classes provide nurses and health care providers an evidence-based intervention that can be translated to prenatal care for pregnant women and lead to significant change in usual midwifery/ antenatal care.

Nurses should understand the importance of prenatal child birth education programme to reduce stress of the mothers during labour, which they can use effectively and independently.

Nurses working in the ANC OPDs and labour room should be equipped with the knowledge of child birth education content and they should be enthusiastic to introduce this as an essential and important nursing intervention for the first time mothers.

Nurses can educate the mothers about the whole process of labour and various non pharmacological measures for reducing stress and pain as an alternative therapy for the drug which in turn will reduce the harmful effect on the mother as well as on the newborn.

One to one contact during the child birth education programme can improve the interpersonal and trusting relationship with the mother and the nurses which in turn will empower the mothers to face the stress of labour.

Administration of child birth education can enhance the satisfaction level of the mother and other significant family members with the care provided.

NURSING EDUCATION

Education is the key to the development of excellence in nursing practice. Education faces tremendous challenge in keeping pace with the changes in nursing practice to maintain its high quality. Nurses with higher education and up to date knowledge will deliver cost effective and quality care.

Therefore, in order to ensure nursing student assists primigravida women during their childbirth process by systematic childbirth education programme, attention should be given to nursing education in the training period as it is student life where a student can be moulded and helped to develop a sense of responsibility towards a patient. Students should be taught about holistic care of pregnant women.

There are various techniques of available for imparting health education, which can be used by the nurses. So the students should be taught in detail about all the methods of health education which they can use effectively and independently to reduce anxiety, pain during labour and improve the maternal and fetal outcome.

The detail content of the child birth education programme for labouring women with its procedure of administration in theory and practice can be included the syllabus of the curriculum of basic nursing education programme. The student should be taught about the administration of child birth education programme during antenatal period. Learning opportunities should be given to the students to practice imparting child birth education in the clinical settings.

Midwifery students should be assigned to practice childbirth education during their clinical experiences, such as providing knowledge about impending signs and symptoms of labour, prenatal preparation, reporting to hospital on time, labour room setting, staff and its routine normal physiology and what to expect during labour, relaxation techniques, controlled breathing, other non-pharmacological pain relief methods and self care to cope with stress and pain during labour and delivery in order to better manage, plan and provide and promote appropriate and quality midwifery care.

Nurse instructors may use the significant findings of the present study to teach self care and self-efficacy concepts and to identify strategies to increase self-efficacy by increasing their knowledge regarding childbirth. Furthermore, in clinical nursing courses focused on health promotion and/or health education, nurse instructors should emphasize strategies and techniques that students can use to enhance labouring woman's ability to translate childbirth preparation classes into their use in labour and delivery.

Nurses and Student Nurses should be informed about various childbirth education certificate courses and they should be motivated to undergo those, so that they can practice this programme independently.

NURSING ADMINISTRATION

Our rapidly and changing and expanding world makes it necessary for us as nurses to increase our knowledge and skill concerning many aspects of MCH care. We must not only keep abreast of scientific and technological advances in health field of developed countries, but also devise ways for more creative use of our existing knowledge and resources, so that the best possible nursing care can be provided mothers as well as the babies in the developing countries.

The study has important implication for the nursing administration. The overall nursing responsibility of quality nursing care is on the nurse administrator.

The nurse administrators should accept the new trends in health care in order to improve the quality of care. Administrator can take steps to train staff nurses working in ANC OPDs, antenatal, postnatal wards who take care of women during their pregnancy and postnatal period, so that nurses can educate their clients. Special ANC classes can be conducted by nurses in ANC OPDs for antenatal mothers where classes can be arranged depending upon clients' need of knowledge.

Nurse administrator should also provide a conducive environment and facilities in terms of adequate staffing, audio visual aids and time to deliver child birth education programme for the mothers during their visit to ANC OPDs.

Nurse administrators can make an arrangement for a television to play the childbirth education slides in waiting lounge of the ANC OPDs so that the pregnant women can easily get the knowledge regarding labour and childbirth. This could be the good step for nurses to take decisions and work independently.

Administrator should be aware of recent research findings, through professional conferences and in-service education opportunities.

Nurse administrators can also organise in service education programme to teach the staff nurses about the content and procedure of child birth education programme.

NURSING RESEARCH

No profession can exist with or without research to develop its body of knowledge to test its strategies, to ensure that its action makes a difference. The health care environment today is dynamic and more demanding. There is a need to promote research based practice and the use of evaluation methods to measure outcome and document the quality and cost effective care as nursing moves towards an independent professional practice mode.

Research has a vital and significant role in nursing. Nurses must take up extensive research in the field of childbirth education as it will help woman to take charge of her childbirth with nursing assistance which in turn will improve the maternal and fetal outcome

Emphasis should be laid on publication of findings of research in journals to disseminate the research based evidence for nurse practitioners. It also can be presented at various nursing forums so that more number of nurses become aware about childbirth education and its importance and feel the need to include this in their routine patient care.

Future research should be undertaken to assess the knowledge, antecedent variables feelings, that may have a strong affect on coping behaviours in labour, like prior experiences with pain, fears, beliefs, practices and concerns regarding childbirth in Indian primigravida mothers. This should also examine the women's attitudes towards analgesics and normal

vaginal delivery. This would lay a foundation to plan tailor made midwifery services keeping in view the Indian values, traditions, cultural beliefs and practices regarding childbirth.

Different types of childbirth education programmes are conducted based on mother's condition, weeks of gestation. It can be used as reference for further studies.

An important research question remains: How far is a video assisted childbirth education programme associated with knowledge, attitude and practice? Future advanced researches should compare knowledge, attitude and practice of primigravida women who attend childbirth education classes and those who do not.

COMMUNITY EDUCATION

Nursing staff working in the community as community health nurse, health worker, skill birth attendant can help and educate primigravida from community about preparation for labour and delivery, so that they feel confident and take correct steps during preparation for labour and delivery.

Traditional birth attendants and skilled birth attendants can be educated by this programme and further they can educate the antenatal mothers and promote maternal and child health in the community.

LIMITATIONS OF THE STUDY

The limitations of the present study were

- The researcher could not control the environment in the labour room, such as attitudes and behaviour of labour room staff.
- Sample attrition.

RECOMMENDATIONS

On the basis of the findings, the following recommendations are offered for future nursing practice and research.

1. Study can be conducted to assess mother's attitude towards attending childbirth education programme.
2. Study can be replicated on large sample in different setting so that the findings can be generalized to large population.
3. A study may be conducted on the attitude of the hospital personal regarding policy to be adopted for childbirth education programme in their own setting.
4. A comparative study can be done to study the effectiveness of structured childbirth education programme among primi and multigravida.
5. The study can be replicated in different settings i.e. in primigravida of rural and urban settings to strengthen the findings.
6. The study can be replicated on antenatal mothers of all three trimesters.
7. A study may be conducted to assess the variables associated with intra-partum coping of first time mothers.
8. A longitudinal research may be conducted to establish association of childbirth education on knowledge, attitudes and practice of first time mothers.
9. Similar prospective longitudinal studies may be done in selected regions across the country to strengthen the evidence generated from this study.
10. A qualitative study can be conducted to illuminate antenatal women's perceptions of childbirth and childbirth education.
11. An evaluative study can be done to compare the effectiveness of other teaching strategies on the

knowledge, intra-partum behaviour responses and labour outcome among primigravid women.

12. A study can be conducted to determine the physiological and psychological effects of continuous one-to-one professional support of an intra-natal instructor on labor outcomes.
13. An evaluative study can be done to assess the effectiveness of video assisted teaching on other aspects of maternal and neonatal care like postnatal care, child care etc.

SUMMARY OF THE CHAPTER

This chapter has summarized the study and presented its conclusions. Implications of the study regarding nursing were discussed and recommendations for future research were provided. The findings from this study contribute to the deep understanding of the effect of childbirth education classes that will be useful for the development of prenatal midwifery services or other health campaigns. It also provided suggestions for future research.