

**A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING
PROGRAMME ON KNOWLEDGE REGARDING EXTERNAL CEPHALIC VERSION
AMONG NURSING STUDENTS OF SELECTED COLLEGES OF MEHSANA DISTRICT**

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ABSTRACT

INTRODUCTION: About 25% of fetuses will be in breech presentation at 28 weeks, and this decreases to about 3% to 4% of term pregnancies. Most of these patients will be delivered by cesarean delivery. It is held that the overall cesarean delivery rate is higher than it should be, and efforts to prevent the first cesarean section often present obstetricians with the task of decreasing the number of cesarean deliveries they perform. One alternative to cesarean delivery is an external cephalic version (ECV). Simply, it is a procedure to change the presentation of the fetus from breech, transverse, or oblique to vertex by applying pressure externally to the fetus through the gravid abdomen. DESIGN: A quantitative approach using pre-experimental one group pre-test post-test design. PARTICIPANTS: 60 Nursing students were selected using Probability- Simple Random sampling technique in selected colleges of Mehsana district. INTERVENTIONS: Structured teaching programme was given to the Nursing students. TOOL: Self Structured Questionnaire was used to assess the level of Knowledge on External Cephalic Version among Nursing students. RESULTS: In this study overall Among the 60 Nursing students, the result shows that the highest percentage is that 57(95%) nursing students belongs to the age group 18-24 years, majority 40(67%) of nursing students were female, 58(97%) were belongs to hindu religion, the highest percentages 30(50%) of nursing students in GNM stream, the highest 47(78%) of nursing students belongs to joint family, 41(68%) of nursing students were not attended external cephalic version programme and 48(80%) nursing students had previous information about external cephalic version through source of mass media. CONCLUSION: The findings of the study revealed that Structured teaching programme helps in improving knowledge regarding External Cephalic Version among Nursing students.

Keywords: Assess, Knowledge, Prevalence, Structured teaching programme, Nursing students, External Cephalic Version.

INTRODUCTION

“A BABY GROWS IN THE WOMB OF THE MOTHER AND ON THE MIND OF THE FATHER.”

- SULEKHAPANDE

About 25% of fetuses will be in breech presentation at 28 weeks, and this decreases to about 3% to 4% of term pregnancies. Most of these patients will be delivered by cesarean delivery. It is held that the overall cesarean delivery rate is higher than it should be, and efforts to prevent the first cesarean section often present obstetricians with the task of decreasing the number of cesarean deliveries they perform. One alternative to cesarean delivery is an external cephalic version (ECV). Simply, it is a procedure to change the presentation of the fetus from breech, tranverse, or oblique to vertex by applying pressure externally to the fetus through the gravid abdomen. 1

ECV has existed since 384–322 B.C., the time of Aristotle. Around 100 A.D., Soranus of Ephesus included guidance on ECV as a way to reduce complications of vaginal breech birth. 17th century French obstetrician, François Mauriceau, is alleged to have described ECV as “a little more difficult than turning an omelette in a frying pan”. 1

Justus Heinrich Wigand published an account of ECV in 1807 and the procedure was increasingly accepted following Adolphe Pinard’s demonstration of it in France. In 1901, British obstetrician, Herbert R. Spencer, advocated ECV in his publication on breech birth. In 1927, obstetrician George Frederick Gibberd, reviewed 9,000 consecutive births around Guy’s Hospital, London. Following his study, he recommended ECV, even if it failed and needed to be repeated and even if it required anaesthesia. 1

External cephalic version (ECV) is a process by which a breech baby can sometimes be turned from buttocks or foot first to head first. It is a manual procedure that is recommended by national guidelines for breech presentation of a pregnancy with a single baby, in order to enable vaginal delivery. 2

External version has made a resurgence in the past 15 years because of a strong safety record and a success rate of about 65 percent. Before the resurgence of the use of external version, the only choices for breech delivery were cesarean section or a trial of labor. It is preferable to wait until term (37 weeks of gestation) before external version is attempted because of an increased success rate and avoidance of preterm delivery if complications 2 arise. After the fetal head is gently disengaged, the fetus is manipulated by a forward roll or back flip. If unsuccessful, the version can be reattempted at a later time. The procedure should only be performed in a facility equipped for emergency cesarean section. The use of external cephalic version can produce considerable cost savings in the

management of the breech fetus at term. It is a skill easily acquired by family physicians and should be a routine part of obstetric practice. 3

Considering the complications that can arise from breech delivery, it is not surprising that, over the years, the possibility of manipulating the baby from the breech to the cephalic presentation has intrigued obstetric caregivers. ECV is a procedure in which the baby is manipulated by pressure through the mother's abdominal wall into a cephalic (head-down) position. 3

ECV before term (usually before 34 weeks' gestation) came into Routine obstetric practice on the basis of the self-evident immediate effectiveness of the procedure as well as reassuring results from several non-randomised trials, and in spite of the negative results of the only randomised trial reported prior to 1980. 4

The popularity of ECV before term waned after the mid 1970s, partly because of reports of a substantial perinatal mortality associated with the procedure (Bradley-Watson 1975), and the increasing perception of caesarean section as a safer option than ECV or breech delivery. 5

Prior to the mid-1970s, ECV was usually attempted before term because of the belief that the procedure would seldom be successful at term. Subsequent studies showed that with the use of tocolysis (medication to relax the uterus), ECV could be achieved in a substantial proportion of women with breech presentation at term. ECV at term differs in many fundamental ways from that performed before term. These include the fact that the fetus is mature and may be delivered more readily in the event of complications and that spontaneous versions without ECV attempt, or reversion after successful ECV, are less common at term. ECV before term is therefore evaluated as a separate procedure (see "External cephalic version for breech presentation before term). 6

At term, in three to four per cent of all singleton pregnancies the fetus presents itself in breech position. 1 In only 15% of the women with a breech presentation, an identifiable 3 factor exists such as uterine malformation, placenta praevia, polyhydramnios, (congenital) abnormalities of the fetus like anencephaly and disorders accompanied by motor impairment that are reported to be associated with breech presentation. Compared to birth in cephalic position, vaginal breech delivery of healthy fetuses is associated with increased risk of neonatal birth trauma, low Apgar scores and neonatal mortality. The results of the Term Breech Trial, a randomized controlled trial (RCT) comparing the mode of delivery in term breech presentations, showed a clear reduction in overall risk of perinatal and neonatal mortality and morbidity in favor of elective caesarean delivery compared to planned vaginal breech delivery (respectively 0.3% v 1.3%, RR 0.23, 95% CI 0.07 to 0.81 and 1.4% v 3.8%, RR 0.33, 95% CI 0.19 to 0.56). 6

Publication had an unprecedented large impact on daily clinical practice even though results correspond to a number needed to treat of 100, which means performing 100 elective caesarean

deliveries to prevent one perinatal or neonatal death.⁵ So gain in newborn health was judged superior to the accompanied increased risk for the mother because of the associated abdominal surgery. ⁶

Breech presentation occurs in up to 4% of pregnancies at term. Since publication of the term Breech Trial in 2000, elective caesarean delivery has been the dominant mode of delivery in most countries.^{1–3} In 2015 the World Health Organization reported that globally caesarean delivery was overused. Breech presentation is the third most common indication for elective caesarean delivery. External cephalic version (ECV) is a safe obstetrical procedure that reduces non-cephalic birth and caesarean delivery by approximately 50%. In 2014 the American College of Obstetricians and Gynaecologists and the Society for Maternal-Fetal Medicine published a joint consensus statement on the safe prevention of elective caesarean delivery, in which ECV is highly recommended. ⁶

In addition, the 2-year follow up of this study demonstrated no difference in „neonatal death or neurodevelopmental delay“ (RR 1.09, 95% CI 0.52 to 2.3). The authors concluded that a policy of elective caesarean delivery is substantially better, especially in Western countries and in clinical practice this policy was adopted quickly. Although the results of this study seemed to confirm the presumption that an elective caesarean delivery could reduce neonatal morbidity and mortality. ⁷

NEED OF THE STUDY

There is a higher risk of complications when delivering a baby presenting in the breech rather than in the cephalic position. Caesarean section appears to be safer for the baby, but presents a higher level of maternal morbidity. Achieving a cephalic vaginal delivery by successfully rotating the baby in utero therefore, potentially offers a way to reduce the caesarean section rate, and improve perinatal and maternal outcomes. It may be of particular importance in resource poor situations in which women may be unable to reach health services during labour, and caesarean sections are unavailable or unsafe. ⁸

The purpose of this study is to assess the knowledge of external cephalic version (turning the baby from the outside). Attempting to turn babies in-utero is recommended because it may decrease the risk of needing a cesarean section for abnormal presentation. While the study team knows that this procedure can be effective, the study team still has some un-answered questions as to the best way to perform this procedure to increase the chance of success.. Many prior studies have shown that using spinal anesthesia (a shot of medication placed in your back to numb and relax the abdomen) can increase the success rate of a version. This ultimately has led to the finding that using this anesthesia can decrease the rate of cesarean section. However, there have been only a small number of studies assessing the success rate if spinal anesthesia is used only in the event that without it fails. ⁹

Breech presentation occurs in approximately 3-4% of term pregnancies and leads to one of the most common indications for cesarean delivery. Attempting an external cephalic version (ECV) significantly increases the chance of cephalic presentation at time of delivery and reduces the chance of cesarean section. Since ECV does in fact reduce the rate of cesarean section, many studies have sought to determine the best method to perform the procedure to optimize the chance of success. A recent meta-analysis concluded that administration of neuraxial analgesia significantly increases the success rate of ECV and also increases the incidence of vaginal delivery. 10

As fetal breech presentation is the reason for a caesarean delivery in approximately 15% of all cases¹⁶, prevention is an important issue. Though theoretically vaginal breech delivery could reduce the number of caesarean deliveries and has to be discussed as an option with women, logically reducing the number of breech babies at term is a strategy to invest. Several methods to achieve this are described in literature and are based on different mechanisms. 5 A preventive measure to reduce the incidence of breech presentation at term is postural management from 32 weeks of gestation onwards. This includes knee-chest position, and a supine position with the pelvis elevated with a wedge-shaped cushion for several minutes to one hour per day. However, a Cochrane review from 2012 concluded insufficient evidence to support the use of postural management as standard treatment. 11

This study demonstrated no significant differences in perinatal and neonatal mortality between both modes of delivery (OR 0.64, 95% CI 0.13 to 3.1). The authors concluded that a planned vaginal breech delivery remains a safe option and can be offered to women in hospitals when strict criteria are met before and during labor. However, a recent published meta-analysis, including cohort studies and RCTs, confirmed the findings of the Term Breech Trial. 12

ECV is considered a safe procedure with few contraindications and can prevent breech delivery in 40-60% of cases.²⁶ The complication rate is low, with reported serious perinatal complications of 2.0/1000, including still-birth and placental abruption.^{27–30} In case of stillbirth, there does not seem to be a relationship with ECV, as it equals the reported stillbirth rate in the general population.³¹ It is important to compare perinatal risk associated with ECV with adverse outcome associated with the alternatives to ECV, namely perinatal mortality in planned vaginal breech birth (2.0/1000) and elective caesarean delivery (0.5/1000).³² As the ultimate goal of ECV is to achieve vaginal cephalic birth, there remains, 14 | Chapter 1 however, controversy on the question whether the risk of caesarean delivery is increased for women with a fetus in cephalic position after a successful version compared with women with a spontaneous cephalic presentation. 13

A review by Chan et al in 2004 found a two times increased risk for caesarean delivery in women after a successful external cephalic version.³³ Since 2004 many studies on ECV were

published, therefore an update on mode of delivery after successful ECV is needed and could shed more light on this issue. 14

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of Structured teaching programme on knowledge regarding External Cephalic Version among Nursing students of selected colleges of mehsana district.

OBJECTIVE OF THE STUDY

- To Assess the Level of Knowledge Regarding External cephalic version among Nursing students Of selected colleges of Mehsana District.
- To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding External cephalic version among Nursing students Of selected colleges of Mehsana District.
- To Find out The Association of The Pre test Knowledge Score with Selected Demographical Variables.

HYPOTHESES

H0: There will be no significant difference between pre-test and post test level of knowledge score regarding External cephalic version among Nursing college students.

H1: There will be significant difference between pre-test and post test knowledge score after administration of Structured teaching programme regarding External cephalic version among Nursing college students.

MATERIAL AND METHOD

Pre-experimental one group pre-test post-test research design and Quantitative Approach. Effectiveness of Structured teaching programme on knowledge regarding External cephalic version among Nursing students of selected colleges of Mehsana district. The data was collected from 60 Nursing students. “Probability Purposive” sampling technique were used. A Structured knowledge questionnaire was selected to assess the knowledge regarding External cephalic version.

RESULT

Demographic data was analyzed using frequency and percentage. Frequencies, percentage, mean, mean percentage (%) and standard deviation was used to determine the knowledge score. The “t” value was computed to show the effectiveness of Structured teaching programme and chi-square test

was done to determine the association between the pre-test knowledge of office employees with selected demographic variables.

□ Finding related to demographic data

In this study overall Among the 60 Nursing students, the result shows that the highest percentage is that 57(95%) nursing students belongs to the age group 18-24 years, majority 40(67%) of nursing students were female, 58(97%) were belongs to hindu religion, the highest percentages 30(50%) of nursing students in GNM stream, the highest 47(78%) of nursing students belongs to joint family, 41(68%) of nursing students were not attended external cephalic version programme and 48(80%) nursing students had previous information about external cephalic version through source of mass media.

□ Finding related to pre and post knowledge score

Pre-test prior to the administration of Structured teaching programme, 92% of Nursing students poor knowledge (score:0-10) and 08% Nursing students had average knowledge (score:11-20) regarding External cephalic version among Nursing students.

Post-test that was marked improvement in the knowledge of Nursing student with (66%) of Nursing student gained good knowledge (score 21-30) and (32%) gained average knowledge (score 11-20) regarding External cephalic version among Nursing students. It was inferred from the below table that the Structured teaching programme was effectiveness in improving knowledge on External cephalic version among Nursing students.

□ Finding related to effectiveness of structured teaching programme

Table 1: Distribution of subject on paired „t“ test between pre-test and post-test knowledge score regarding External cephalic version.

PARAMETER	MEAN	SD	MEAN %	„t“ VALUE
Pre-test	06.82	2.38	11.37	20.57
Post-test	16.87	2.48	28.11	

□ Finding related to association between pre-test knowledge score of Nursing students with their selected demographic variables:

To find out the pre-test knowledge score with selected demographic variables were found by using chi-square test. The results of the present study showed that there is no any significant association found between pre-test knowledge score and selected demographic variables like Age, gender, religion, stream of education, type of family, have you know about External cephalic version, previous source of information and evaluate the knowledge regarding External cephalic version. So, the research fulfills study objective.

CONCLUSION

The present study aims to evaluate the effectiveness of Structured teaching programme on Knowledge regarding External cephalic version among the Nursing students of selected colleges. The study conducted by using a pre-experimental one group pretest-posttest Research Design. Selected area is there in study for sample collection at Mehsana. The sample size was 60 college Nursing students. The tool used for the study is self-Structured knowledge questionnaire. The response was reanalyzed through descriptive (mean, frequency, percentage distribution, standard deviation) and inferential statistics (t test, Chi square). The findings were completed on the objective of the study.

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