Comparing the Educational Readiness in Children with Breech Presentation Versus Cephalic Presentation

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Article information

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<td>Received: 20 Oct 2010</td>
<td><strong>Background</strong>: Considering the fact that breech presentation is the most common abnormal presentation, the present paper compares the preparation of those people who had been born with breech and cephalic presentation.</td>
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<td><strong>Materials and Methods</strong>: In this cross-sectional study we examines 1847 children in primary schools in Zahedan who had been born in 1994-1999; they were selected randomly from three elementary schools in Zahedan. Questionnaires were used to collect information and information about educational preparation of students were gathered using the standard and approved questionnaires by the Education Department of Iran archived in the patients’ profiles. To analyze the data, t-test and χ² test had been used and p=0.05 was considered significant.</td>
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<td><strong>Results</strong>: Out of the 1847 examined children, 1446 children (3.78%) were male and 401 ones (7/21%) were female. 1738 patients (94%) had cephalic presentation (evident group) and 109 (6%) had breech presentation (cases). There was a significant statistical difference among the age averages of the mothers with the fetus presentation (p=0.001) and also among the average marks of the educational preparation of students and the fetus presentation (p=0.017) and children born with the breech presentation had higher scores in preparation. There was no significant difference between the mean score of the educational preparation and child delivery method (p=0.13).</td>
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<td><strong>Conclusion</strong>: This study showed that school preparation scores, regardless of the mode of delivery, in breech presentation are higher than that in cephalic presentation.</td>
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Keywords: Educational Readiness, Fetus Presentation, Breech, Cephalic

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Introduction

Educational researches indicate the fact that the mental and physical health of children warrants their natural developments during evolution stages, while the inability to identify and pay attention to the physical and mental problems can menace the overall health of children and will result in various educational and behavioral problems. Based on the international statistics, almost 10 to 15 percent of children have physical or sensational disabilities or various growth problems. Recognition of these problems at the early stages can be helpful in preventing them from reaching the very severe condition.

Identification of children with the physical disorders or inappropriate academic preparation and presenting educational methods and equipments suitable for their problems is necessary in educational achievements. Educational preparation means to have proficiency, knowledge, attitudes, motivation and other behavioral characteristics which are the first condition for eliciting the highest rate of benefits from education. Several factors can reduce both the mental and physical abilities of children. One of which is abnormal presentation and the most common abnormal presentation is breech presentation. The breech presentation importance is its effect in increasing the side effects and mortality rate in mothers and newborn [2, 3]. It has been imagined that the breech presentation and particularly natural delivery of children with breech presentation causes mental damages in infants; therefore cesarean had been considered as the best method of giving birth to children.

According to some recent studies on IQ and the educational preparation of those children who have been born with breech presentation with each kind of child delivery equal to or higher than cephalic (fetus presentation of the head), the necessity of breech child delivery with cesarean method went under question and it seems that presentation and the type of child delivery has no impact on the levels of educational preparation of children. Considering the above points, this study had been done to investigate the role of presentation on the level of educational preparation as a significant index for physical and mental health of infants in elementary schools of Zahedan.

Materials and Methods

In this descriptive-analytical study in its cross sectional type, 1847 students of primary school who had been born 1994 to 1999 were randomly selected from three elementary schools in the city of Zahedan. After receiving parent’s satisfaction and confidentiality of research...
results, questionnaires had been distributed among families and the following information gathered: mothers’ age at the time of child delivery, student’s age, the weight at the time of birth based on available documents on children’s growth curve, gender, presentation condition at the time of birth (cephalic or bridge), immaturity or maturity at the time of birth, the number of twins, birth delivery method (natural or cesarean). Then we had caring card and questionnaire of students’ educational preparation based on their profiles and finally, students with breech and cephalic presentation had been compared together considering the score of educational preparation. Preparing students include assessment of knowledge, attitudes and skills based on standards questionnaire of education institute and achievement of score based on evaluating curve and central likes. In this study, twin cases, hereditary and congenital deformities and defects, trauma leading to fractures of the head before entering school, and other similar factors interfering were excluded as far as it was possible. To analyze results, t and χ² test had been used and values of p<0.05 was considered as a significant level in statistical view. Gathered data had been statistically analyzed by SPSS-16 software.

Results

The present study included 1847 students of primary school, among which 1446 (78.3%) were male and 401 (21.7%) were female. Among them 1738 individuals had childbirth with cephalic presentation (control group), and 109 individuals with breech presentation (group A). The results shows that there is a significant difference from statistical point of view between mother’s age and fetus presentation that shows mothers’ age is important in fetus presentation (p=0.0001), the average weight at the time of birth in cephalic group 3.19 and in breech group 3.15 kilograms which there was no remarkable statistical difference (p=0.555). The average of school preparation scores in cephalic group was 44.61 and 45.76 in breech group which illustrates a significant statistical difference (p=0.017) and the average score was higher in breech group.

Similarly, there was no statistical difference between gender distribution based on cephalic or breech presentation in both groups (p=0.2). Among them, 1790 students (97.1%) were born in hospitals and 54 students (2.9%) were born in a place other than a hospital. We had 38 (2.2%) and 8 (2.9%) in a non-hospital place. 1,790 students (%1.97) students (97.1%) were born in hospitals and 54 students (2.9%) were born in a place other than a hospital. 1,790 students (%1.97) students (97.1%) were born in hospitals and 54 students (2.9%) were born in a place other than a hospital.

Discussion

The results of this study showed that the school preparation scores of students with breech presentation are higher than those born through cephalic presentation. Presentation of abnormal fetus in womb is associated with side effects including intrauterine mortality, infection, fetal distress, damages during childbirth, nervous damages, etc. The scores of educational preparations of students are highly concentrated as a significant indicator of physical and mental health of children which is also among one of the health concern in children of breech presentation. Based on the results of the study, we had two significant statistical differences in age of mothers indicating that the age of mother is important in fetus presentation, in this regard we can advise no to be pregnant in old ages. Although we had remarkable difference in the scores of educational preparation in both...
groups which indicates higher preparation in breech group, we had no significant difference in those born through cesarean or natural method.

Roemer et al. studied IQ and educational preparation of born people through breech (658 cases) or cephalic (1151 cases) method in a period of ten years illustrated that those born through breech presentation have higher IQ compared to those born through cephalic presentation [5]. The results are in line with what we have figured out. Moreover, there had been a study on children 3-7 born through breech and cephalic method in 1965-1970 to understand IQ and muscular power. The mentioned study relates children IQ and muscular power to the following factors: the age of mother, the number of childbirth, the method of childbirth, duration of childbirth, the first minute Apgar, infant weight, bilirubin concentration as well as brain damages at the time childbirth. In this study we have no significant difference in terms of IQ of both groups [6]. Sorensen et al. implemented Boerge Prien IQ test between the years 1973-1976 in Danish epidemiology center on those who registered for military service. IQ was 43.2 in those born through cephalic presentation and 39.9 in those born through breech presentation which does not accord with our study [7].

Based on some other studies, it is figured out that IQ level in children born through breech method is higher than those through cephalic method [8-10] and also we no significant difference in the levels of IQ based on studies upon the relationship between IQ and fetus presentation and the methods of childbirth [11, 12], although side effects including fetal distress, umbilical cord prolapsed, aspiration of amniotic fluid and other common side effects in breech presentation makes vaginal childbirth more difficult [13, 14], but it seems, provided that we prepare the pleasing conditions for natural childbirth, caesarean childbirth has no positive impact on student’s IQ and educational preparation with breech presentation. In some other studies, the small weight of infants born through breech childbirth based on fetus age had been proposed to reduce IQ in comparison with breech group. Based on various results that show similar or higher IQ in breech method, it is inferred that factors leading to different weights and fetus age is different in breech and cephalic group; therefore, further investigations are necessary. Brain damage is the reason that almost all pregnancy with breech presentation will end in cesarean, based on different investigations in this regard, it is suggested that considering the fact that we don’t have sufficient information for birth indexes, these questionnaire should be modified by university professors to reduce unnecessary cesarean cases in our country and approach the standard of WHO through broader researches and presenting parents with appropriate teachings.

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Conflict of Interest
The authors declare no conflict of interest.

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References
