The First Language Development in IVF Children Compared to Spontaneous Conception Children

Dana Al Madanat
Department of English Language and Literature
Mu'tah University, Jordan
Email: madanatdana@yahoo.com

Abstract
The objective of this research is to investigate the first language development between IVF children and Spontaneous conception children. The sample of the study consists of two children (an IVF child and a Spontaneous conception child). The study was conducted in Jordan. The researcher used two instruments. The first one was a questionnaire for the parents for data collection. The second instrument was interviews for the children. This experimental study found that the IVF children were showing slightly advanced in speech development than spontaneous conception children. This research recommends that further research be conducted in the area.

Keywords: First Language, Development, IVF, Children, Spontaneous, Conception.

1. Introduction
First language development is thought to proceed by ordinary processes of learning in which children acquire the forms, meanings and uses of words and utterances from the linguistic input. The method in which we develop language skills is universal. Language acquisition is the process by which humans acquire the capacity to perceive and comprehend language, as well as to produce and use words and sentences to communicate. Language acquisition usually refers to first language acquisition which studies infants “acquisition “of their native language (Wikipedia, 2016).

IVF and Spontaneous conception children in Jordan as any other IVF and Spontaneous conception children in the world develop their first language in different levels as far as this research is concerns (Lemetyinen, 2012).

Ever since the birth of the first IVF child in 1978 till this day researches have been investigating the development of these children in different aspects. Kar (2013) evaluated and compared the speech and language development of children in prelinguistic period born in in vitro fertilization (IVF) and spontaneous conception. The study contained 300 children (150 full term IVF children and 150 spontaneous conception children). This descriptive study was conducted in Guru Nanak Institute of Dental Science and Research, West Bengal. The researcher used a questionnaire that was given to the parents to collect the data; this questionnaire was designed according to Early Language Milestone Scale-2 (ELM-2). The results of this study said that there is no statistically significant difference found between to IVF and spontaneously conceived children. The study concluded that speech and language development of IVF children are not affected by IVF.

In another study, Teymourir, Dokhanis, Hemmatis and Daneshmandann (2014) compared the spoken language skill in a pair of IVF twins, a pair of fraternal twins and two singleton children. The participants for this study were selected randomly and they were all Farsi-speaking females at the age of four years from the kindergartens of Tehran City. The researcher used Test of Language Development (TOLD) to collect data from the participants. The results of the study showed that no significant differences among scores of the composite quotients of three groups including IVF twins, fraternal twins and two singleton children in the compound subtest of spoken language were found and IVF infants scored slightly lower than control children. The study concluded to the fact that IVF children are not at great risk of speech and language development delay. All these studies and more have never discussed the conception that is mentioned in this research; as a result the researcher felt that there is a need to conduct this study.
2. Statement of Problem
IVF children develop their first language faster than Spontaneous conception children.

3. Research Objectives
The study is carried out to achieve the following objectives:
   i. To investigate the factors that help IVF children to develop their first language fast.
   ii. To examine the role does the environment play in the first language development in IVF children.
   iii. To analyze the genetic play any role in the first language development in IVF children.

4. Research Questions
This study addresses the following research questions:

   iv. What are the factors that help IVF children to develop their first language fast?
   v. What role does the environment play in the first language development in IVF children?
   vi. Does the genetic play any role in the first language development in IVF children?

5. Methodology
The population of this study consists of two children, an IVF child and a spontaneous conception child from Al Karak City in Jordan. Both of them are in terms of the age, social background, different in gender and speak Arabic as their first language. Whilst, the sample of the study contained two participants (one male and one female) making about 100% from overall population. Both of them are at the age of two years. The researcher selected the sample of the study purposively. That is, the researcher selected all of the existing population based on her experience. In order to collect the data the researcher used a questionnaire given to the parents to fulfill it and an interview to the children as a research instrument. Both of them were designed according to Early Language Milestone Scale 2. The researcher used SPSS to analyze the data.

6. Findings and Discussion
As far as the analysis of the study is concerned, the researcher used static package social science (SPSS) to calculate the frequency of the elected data. Based on the analysis it was found that the IVF’s parents answered 17 question out of 20 in the questionnaire yes and 3 questions no. While the spontaneous conception’s parents answered 11 questions yes and 9 questions no. Figure.1 in the next section displays the IVFs parents responses and Figure.2 the Spontaneous conception’s parents responses.

Figure.1: IVF’s Parents Responses on the questionnaire
The chart shows the results of the questionnaire that consists of 20 questions answered by the parents. The results as the follow percentage of the yes answers in IVF’s parents are 85% and the no answers are 15% as shown in the first chart. While the percentage of the yes answers in spontaneous conception’s parents is 55% and the no answers is 45% as shown in the second chart. Whilst the interview with the children came out with the following results: The IVF child uses a large variety of consonants and pronounces them in the right way. He can name and points at some body parts. He uses two words combinations such as more biscuits. He asks questions using the wh–words. He enjoys listening to stories and songs and he is able to sing and tell simple songs and stories. When he talks to family members and friends they can easily understand what he says. He isn’t stuttering or repeating sounds. He has a good range of words in his vocabulary including verbs such as run, play, eat, and drink.

Also, he can follow two to three step instructions. The child has a vocabulary of more than 450 words. He doesn’t get frustrated by not being understood, in the opposite he keeps repeating what he says and tries to make the listener understand him. He points to things, pictures and people when they are named. The child can say pronouns like I, we, you and understand the prepositions but he can’t says the plurals. He is able to say his first name, age, sex and name friends. He is able to talk well enough to strangers and make them understand what he says. The child knows around 25 English words with their meanings in Arabic and he code shifting them.

On the other hand, the spontaneous conception child doesn’t use a large variety of consonants and she doesn’t pronounce them in the right way. She can name and point to some body parts. She uses two words combinations such as more biscuits. She asks questions using the wh–words. She enjoys listening to stories and she can tell simple stories but she doesn’t enjoy listening to songs or sings them. When she talks to family members and friends they can understand her but not easily. She is not stuttering or repeating sounds. She has a good range of words in her vocabulary including verbs such as run, play, eat, drink etc. In addition, she can follow two to three step instructions. The child has a vocabulary of about 450 words. She doesn’t get frustrated by not being understood, in the opposite she keeps repeating what she says or she points to the thing that she is talking about. She points to things, pictures and people when they are named. The child can’t say pronouns like I, we, you or the plurals but she understands the prepositions. She is able to say her first name, age, sex and name friends. She is not able to talk well enough to strangers. The child doesn’t know any English words.

As an answer to the research questions it was demonstrated that the genetic plays a minor role in the first language development in IVF children. While the environment plays a major role. The educational level for the parents is one of the most important factors that help children in developing their language. Educated parents are concerned more about the first language development for their children so they avoid using the baby talk with them. Most of these parents teach their children other languages especially English in accordance to Arabic in early ages. Another important factor is the child’s order between his brothers and sisters. Parents give more attention to their first and second children while usually third and forth children get less attention when it comes to their language development and their cognitive abilities.
The third factor is the social factor. Children who go to nursery houses develop their first language and their social abilities faster than children who stay home with an adult, since children can learn from each other easier than learning from adults.

Based on the data analysis this experimental study found that the IVF children were showing slightly advanced in speech development than spontaneous conception children.

7. Conclusion

IVF children develop their first language faster than Spontaneous conception children. The environment’s role, the genetic’s role and the factors that help the IVF children in developing their first language were discussed in this paper. The slightly advanced in speech development in IVF children should be concerned for a future studies and researches.

References
6- Teymourir, Dokhanis, Hemmatis, Daneshmandan N. Speech and Language Development of IVF Children. *Iranian Journal of Pediatrics* October 2014, Volume 24, Number 2 (Supplement); page(s) 59 to 59.