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The Expectation and Parentage of Twins *A Study on the Language Development of Twin Infants*

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Abstract. This is a follow-up study aiming to describe personality development of twins and possible differences at different ages. The investigation was conducted at the Mother Clinic in the Karolinska Hospital in Stockholm. This report describes the language development of 35 twin pairs at 9 months of age. The development values show that no greater differences exist for girls between twins and singletons. The language result is however lower. The boys, on the other hand, have considerably lower results both on total development scale and on the language scale.

Key words: Language development, Personality development, Parents of twins

INTRODUCTION

The birth of twins is a relatively unusual occurrence, a fact which is reflected in various stories and tales (not the least within mythology), and identical twins almost always call forth wonder, interest and curiosity.

Daydreams of being a twin or having twins are rather usual and have often been used as a literary motive. The “dreamtwin” is created as a compensatory figure with perfect understanding for the cotwin. In the dream, the twinship is often idealized and problem-free. In real life, a twin relationship may be filled with rivalry, dependency, jealousy and a desire to dominate.

With this as a point of departure, my interest has been awakened concerning a group of parents about whom very little is known, and a group of children who are not so usual in our society. In my work with the remedial education teacher training program, I have often

come in contact with twins with various forms of problems. This has started a thought process concerning the possibility of being able to prevent problems by means of information to the parents at an early stage on what it actually means to have twins. In many of the studies published during recent years on medical, psychiatric and social aspects of pregnancy, giving birth and motherhood, the emphasis has been mainly on the somatic care of pregnant women.

However, several studies centered about the psychosocial situation of the pregnant woman and the new mother have also been reported. A doctoral dissertation by Elisabeth Lagercrantz, [6] has contributed increased knowledge and understanding regarding the psychological situation of women, new mothers, and infants. Her study, however, sheds light on only the woman's experience and her interplay with the children during their first months of life. The man is "forgotten", or appears at least not to have been under consideration during the study.

The period of twin-expectancy has been illuminated in a study by Marta Henricson-Cullberg [3]. The study was carried out at Danderyd Hospital and included 24 mothers of twins. However, the study was done after twins were born and did not include the fathers. The purpose of my study has been to clarify the experiences of the twin parents-to-be in connection with the time when they are informed that they will have twins, to know more about their thoughts preceding the birth, and to throw light upon their experiences of the delivery itself. I have also met the families and the children on two later occasions: once when the children were 9 months of age and again when they were 18 months. The purpose of the two follow-up contacts has been to describe the personality development of the twins and potential differences between twins and singletons. (This latter concept I shall use for comparison between twins and non-twins.)

The decisive importance of the first year of life for the development of an individual is very well documented by many theorists, eg, Spitz, Bowlby, Piaget and Erikson [1,2,9,11]. The experiences a person has during his first year of life play a decisive role for how the child later will be able to use its resources to advantage in relationships with others. The importance for the small child of a constant and continuous relationship with one and the same nursing care person (usually the mother) is strongly emphasized. The child needs to be able to develop a strong emotional tie which can constitute the basis for future social interplay with other persons. Similarly, the importance is stressed of the child receiving necessary sensory stimulation. The greatest importance of the mother for the child lies in the fact that she is "there", speaks to and busies herself with the child. In psychoanalytic theory it is emphasized how intimately the child's intrapsychic functions and its early personality development are associated mainly with the mother's individuality [8].

How then is the situation for twins, who must constantly share the attention, stimulation and love of the mother with another person? The early dialogue between mother and child must naturally be different for twins as compared to singletons. One hypothesis regarding why the language development of twins is delayed as compared to singletons is based on the assumption that twins receive approximately half of the language contact as singletons. Erikson [2] has perhaps most thoroughly described what the growing infant requires emotionally during various stages of development in order to become a complete individual. It is important that first of all a basic trust in the world will be created. This takes place through the child, in a stable environment, and together with its mother, learning to give and take. If the needs of the child are satisfied and it also is capable of satisfying the need of the fosterers - if the child feels that close to it there are always certain definite persons who really care for it and for whom the child is important - then the child receives the secure foundation on which trust and confidence can be built up. The child feels confidence in others and in the world, but

also confidence in itself [7].

The feeling of faith which the mothers create in their children is connected with the mothers' keenness and sensitivity for the individual need of the children and with the mother's own feeling of personal competence within her role in society and with her entire life style. It is important that the parents in their upbringing can transmit to the child an "almost somatic" conviction that there is meaning in what they do. If the parents are uncertain in roles as fosterers they will have greater difficulty in transferring this conviction to the child.

Is it possible that being a twin mother results in such an uncertain role as a fosterer that already at a very early stage it creates such anxiety as to affect the relation between her and the child, and later the personality development of the child?

Through the interviews concerning the experience of receiving the information of the expectancy of twins and the thoughts in connection with the delivery, one of the things that became clear was that many couples have expressed very positive expectations on the coming arrival of twins once they have had the possibility of reworking their first reactions. But in an all too positive experience of the news can lie the risk of a denial of possible coming problems. These parents who deny the problems may, due to this, later be prevented from realistic adjustment to the new life situation which twin parenthood involves.

A feeling of uncertainty in confronting the future situation has arisen as an effect of the parents-to-be having been informed of possible risks during pregnancy and of complications during childbirth. Anxiety and fear have been observed both before the birth and as regards what type of delivery will be used. For several of these twin mothers such complications did arise so that one or both children had to be placed in incubators immediately after birth. This means that "the first irreplaceable dialogue" was delayed and that worry and anxiety remained as to the actual conditions of these children. Klaus et al [5] have shown, among other things, that mothers who directly after delivery have had intense skin contact with their children were more loving and sensitive towards them as compared to other mothers. This early separation in which the children immediately are removed and then laid into incubators can perhaps carry with it the fact that the mother does not have the opportunity to be assured that children are healthy and without deformities. This can perhaps increase anxiety and in turn make later contacts with the children more difficult. Can the mother's worry and impaired possibilities of building up a relation with the child immediately after childbirth affect their later personality development?

The intention of this article is to give a brief description of certain results which have appeared when the twins were studied at 9 months of age.

MATERIALS AND METHODS

Study Population

The present study has been carried out at the Women's Clinic of the Karolinska Hospital in Stockholm, Sweden, where, since 1980 special emphasis has been placed on interest in twin pregnancies. The study was approved by the Committee on Ethics at the hospital in the fall of 1981. An obstetrician has charge of the supervision of all twin pregnancies. Ultrasonic observation and other medical check-ups of the mothers and the embryos take place at regular intervals. A great number of the twins mothers-to-be enter the clinic during the most critical period, which usually occurs at some time between the 28th and 35th week. The purpose of

this is mainly to prevent premature birth. It is also known that bedrest is favourable to fetus development. The majority of the women are assigned places in a special maternity ward, to which even those who have not spent time in hospital during pregnancy come after their deliveries. Personnel in this ward have acquired experience of how the twin mothers shall be treated.

When the mother-to-be has been called to her first physician visit she has received written information regarding the twin investigation. After one or two weeks, when the couple has had the opportunity of deciding whether or not they wish to participate in the investigation, I have telephoned them to determine a time for a first discussion. I have not made any conscious selection. This means that the investigation group consists of both first-time parents and parents who already have children. Possible single mothers would not have been included, and during the period of the study there were no single twin mothers at the clinic. Nor does the group include parent couples who desired abortions. The choice of the families was started during the latter part of the fall of 1981 and continued until July 1983. The group was composed of 35 couples.

Method

Many researchers have established that flaws or shortcomings in the early growth environment can inhibit development. The majority of the studies use the children's development or their intelligence measured by means of development or intelligence scales as a measurement of flaws and shortcomings in the development of the children, but also as a measurement of causality. This means that a high value on a scale is interpreted so that the children have received stimulation adjusted to them. No causality can however be given in this description. I cannot, and therefore shall not express myself on what effect the early mother-child contact has had on the personality development of the child. I shall only describe the development of the child at nine months of age, which perhaps anyway can stimulate thought and reflections in the mind of the reader.

In order to make possible the drawing of comparisons with other studies of a similar nature, I have chosen to use a development scale which measures the general development, but also can give information on various aspects of child development and capacity for social adjustment. The scale I have used is Griffiths' Mental Development Scale which has been developed by Ruth Griffiths in London (1954).

This baby scale consists of 260 tasks divided into 5 subscales, each of which is intended to illuminate a special aspect of a child's development: (A) the locomotor scale, (B) the personal-social scale, (C) the hearing and speech scale, (D) the hand and eye coordination, and (E) the performance scale. Every subscale consists of 52 tasks, for the first year of life 32 tasks.

Despite the fact that the Griffiths' Mental Development Scale has relatively good statistical qualities, it should be used with certain care, considering, among other things, characteristics in the development of small children and the major role which environmental effect and attitudes of upbringing appear to play during this developmental period.

In addition to a developmental evaluation of the children, a relatively unstructured and free-form interview with the parents was carried out, with the purpose of obtaining information on the growth of the children as it has taken place from childbirth until the investigation period. I preferred the free interview form for the purpose of being able to create the right contact (which actually was already well established after two previous conversations: first, after the report that the pregnancy involved twins and secondly in connection with the

childbirth), but also to draw out as spontaneous information as possible. This conversation was centered partly on the children's so-called "inner environment", namely the relation between the children themselves and their parents, and partially on the parents' types of behaviour toward the children.

In addition, the conversation dealt with children's general adjustment and social relations to adults other than the parents, to possible brothers or sisters and to other children. A concluding description has also been done proceeding from the children's behaviour in the test situation. This portion has illuminated the children's capacity for contact, independence, self-realization, reaction to the test situation, capacity for initiative, domination-withdrawal tendencies, and the general adjustment of the children. The concepts "adjustment" and "maladjustment" are defined operationally. "Adjustment" means that the children have no more serious symptoms of disturbance on the basis of the above described behaviour, whereas "maladjustment" means that such symptoms exist.

Test Procedure

In good time before the date the children reached 9 months of age, telephone contact was made with the parents in order to find an appointment time no more than a week before or after that date. All test and interviews were carried out in the homes. The time which was considered the best for the children was chosen first of all, which means that approximately 70% of the evaluations were in the mornings, when children were considered to be most alert. The children who had a tendency to be "morning wary" were tested in the afternoons, as were those cases in which that time suited the family in general best.

Each visit required between two and four hours. In most cases both the mothers and the fathers have been present during the testing, in some cases brother or sister were also present.

The testing of the twins was always done before the interview. In this way the test leader held fewer preconceived expectations, even though experience from the previous contacts with the parents and the children to a certain degree can have steered the relationship with and expectations regarding the children. All 35 families participated. Due to the fact that one child died in childbirth, the report was based on 69 children.

RESULTS AND DISCUSSION

No statistical significance estimates have as yet been done. Only certain average values have been compiled. The following report deals with a small choice of the results, which will later be expanded.

In connection with childbirth, twins can be exposed to especially great dangers. The situation for the first-born twin is particularly critical. It is often difficult to supervise the heart frequency of both twins at the same time, and also the of risk lack of oxygen increases markedly for the second-born twin after the birth of the first [12].

The ultrasonic supervision in use today makes it possible to prevent certain childbirth complications. Due to various complications in the case of the mother or one or both children, as many as 19 of the 35 mothers were delivered by Cesarean section. Of these, the operations were of an acute nature for 13 mothers, which means that these deliveries took place under anesthetic. Several of these children were premature, ie, born before the 37th week of pregnancy. If a child weighs less than 2,500 g (even though born at term), it is considered underweight for term. Low birth weight is determined in relation to the length of the pregnancy. In the

case of twins, delivery normally occurs at about the 38th week of pregnancy. Delivery before that time, and especially before the 35th week, means that the child is immature.

Of 17 pairs, both twins weighed less than 2,500 g. In 6 of the pairs, only one twin weighed less than that. Twenty pairs were born before the 38th week. Regardless of whether both or only one of the twins were immature at birth, both children were required to remain in the premature ward. The reason for this was to avoid the risk of removal of one twin, leaving the other alone in hospital. In such a case, the twins would have experienced different types of contact with the mother during the first weeks of life. As many as 14 pairs thus had to remain in the premature ward after the mothers had left the hospital, contact with parents being limited to relatively short visits.

In singleton deliveries, boys are generally heavier than girls, an average weight being 3,500 g vs 3,400 g [10]. In a longitudinal study of Stockholm children, the average weights were found to be 3,580 g for boys and 3,440 g for girls [4]. The average weight for twins in the present study indicates an opposite relationship between the sexes. No difference in weight between first-born and second-born has been observed, but there were many Cesarean sections, and the children born as No. 1 would have been born as No. 2 in a vaginal delivery due to position in the vaginal canal. The group includes many underweight children. These children also have other common characteristics, such as unusually large heads in relation to the bodies, thin extremities and trunk, thin layer of fat. The majority of these underweight children are boys. As regards opposite-sex pairs (Table 1), not even at birth were the twins equally mature, girls being on an average one or two months ahead in their development.

In testing with the above-mentioned developmental scales, the raw values can be transferred to various types of mean values (9-degree scale, or age of development). The mean values that follow are quota values. The development quota has been estimated on each subscale and on the total test (Table 2).

Table 1. The sample by sex combination

Twin pair	No. of pairs
Boy-boy	12
Girl-girl	14
Boy-girl	9
Total	35

Table 2. Development evaluation at the age of nine months

	Average quota
Test result total, both sexes	102.4
Test result total, girls	106.4
Test result total, boys	95.9
Language subscale, both sexes	95.7
Language subscale, girls	102.5
Language subscale, boys	92.3

By comparison with a normal population of children of this age, the total average value in Sweden lies at approximately 108 quota, and that for language development at approximately 107 (unpublished figures).

A first study of these values shows that, as regards the entire development evaluation, no differences exist for the girls among twins and singletons. The language result, however, appears to be lower. The boys, on the other hand, have considerably lower results both on the total scale and on the language scale.

Injuries to the central nervous system before or after delivery can affect development in twins, as pointed out by Zazzo [13] and others. No such injuries, however, have been noted at the birth of any of the twin children in the present study. Four of the 35 pairs had other forms of malformations, which should however not affect mental development.

That so many twins were premature or immature can, however, be a contributing cause of the low test results. That is examined in Table 3.

Table 3. Development evaluation in relation to birth weight

Birth weight (g)	No. of children	Average quota
< 2,000	18	95.6
2,000 - 2,490	20	104.3
> 2,500	31	107.2
Total	69	

The results show that no difference in development between twins and singletons exists unless the children are underweight. In other words, it is the underweight children who are immature at birth who still at 9 months of age answer for the lowering of the development results for the entire twin group. The fact remains, however, that great differences exist in language between singletons and twins. The difference is especially noticeable as far as the boys are concerned. Previously reported twin studies [eg, 13] have shown that twins have greater difficulties in early language learning. These studies, however, have dealt with twins who were somewhat older (2 - 5 years of age). The interpretation given by Zazzo [13] that the delayed language development depends upon inadequate communication can scarcely apply to infants. Zazzo believes that the twin condition can create a type of mutual understanding whereby the children become less motivated to speak since they, anyway, understand each other's gestures, facial expressions and selfcoined words. I should like to offer an alternative interpretation.

The changing of diapers is clearly a very common event for children during their first months of life. Frequent changes can occur, during which the mother has physical contact with the twin she is changing. The other twin is usually on the floor during this change and tries to gain attention. The time of testing has been preceded, from a purely developmental standpoint, by a very intensive imitation period of babbling. The babbling stage involves an organisation of the sounds which the child experiences in his environment. In order for the child to be stimulated in his babbling development, eye contact is necessary with a speaking adult, to whom the child listens and then answers with babbling. By means of stimulus, reinforcement and encouragement from the adult, the child eventually becomes conscious of co-

pying and can then use speech sounds as a tool for controlling his environment.

To return to the diaper-changing situation, the twin being changed can experience the physical proximity of the mother, who, however, simultaneously has eye contact with the twin on the floor, to make sure that nothing dangerous happens. Thus, the children may feel that the mother, with her physical and emotional proximity, gives two divergent messages, intimacy and rejection. As a defence, the children do not accept all the signals, but close themselves off from some of these and thus also from the important dialogue, which is the basis for the later learning of language. Can this be one possible explanation of the differences between the language development of singletons and twins at this early age?

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