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## IQ: Greatly Influenced by Early Family Life



By Kevin Brighton

### Abstract

For many years, psychologists and researchers have been interested in the nature and nurture debate with regards to IQ. Some have claimed that IQ is something that can be passed on through genetics and is an inherited trait. Others have declared that IQ level is not something passed on through genetics, but rather something determined by experiences one has in his or her life. This review was created to discuss how a child's IQ may be affected by early family life, a factor that requires more attention in the literature. This report will discuss how early child-parent experiences, intimate relationships between child and parent, and child-parent attachment each affect a person's level of IQ. By understanding the underlying factors of IQ, parents may be able to help their children develop cognitively at a young age and thus have a higher IQ.

**Keywords:** intelligence, IQ, family, parent and child relationship

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One subject of interest that philosophers and psychologists have considered for many years is that of intelligence (Leahy, 1961). In particular, many psychologists have considered how to accurately measure intelligence. In efforts to answer this question, early psychologists created intelligence tests and developed the idea of an intelligence quotient (IQ). These tests attempt to measure various aspects of an individual's intelligence and assign quantitative scores that describe the individual's performance. One's IQ can simply be defined as a person's mental age (determined by completing an intelligence test) divided by his or her chronological age, multiplied by 100 (Santrock, 2014). With the creation of intelligence tests and the concept of IQ, many researchers have wondered what factors influence a person's IQ (Leahy, 1961). Throughout the years, these psychologists and researchers have presented theories and conducted experiments to help determine what factors influence the level of IQ a person has. By understanding what affects IQ, people may better understand what steps they may take to affect their own IQ and the IQ of others.

One theory that has been suggested is that nurture is one of the determining factors of IQ (Lindahl, Malik, Kaczynski, & Simons, 2004). This theory takes the stance

that IQ is something that can be affected by experiences one has in his or her life. Individuals supporting this claim believe that a person is not simply born a certain way with a certain amount of intelligence. Rather, people can choose whom they wish to become and can increase or decrease their intelligence level depending on practice and determination.

Though research has shown that intelligence may be influenced by nurture-related experiences (Plomin & Spinath, 2004), the idea that IQ correlations can be inherited through genetics has also been of interest for many years (Galton, 1889). For example, one group of researchers emphasized that nature may have a huge effect on a person's IQ level (Johnson et al., 2007). Nature theorists believe that intelligence is something that is inherited and passed on from parents to offspring through genetics. In fact, nearly one hundred years ago, one researcher found a correlation between parents' IQ scores and that of their children's and believed that it was genetics that affected the children's IQ scores (Terman, 1916). To illustrate the nature view of how IQ is determined, one may argue that if a person has a very intelligent mother and father, he or she is bound to be intelligent as well. The argument is that intelligence is tied directly to biology and is not influenced by nurture.

Quite recently however, many concerned with the nature and nurture debate of IQ have focused their studies on how nature and nurture combined can influence intelligence (Caspi et al., 2007). Studies of monozygotic twins, for example, have taught researchers a lot about how much of an effect nurture and nature have on IQ (Johnson et al., 2007; Segal & Hur, 2008). However, one factor that could be further examined as having an effect on an individual's IQ is that of early family life. Though many today believe that IQ may be predetermined by nature and nurture, many may overlook ways in which one's early influence from, intimate relationships with, and attachment to parents affect IQ.

#### **Early Parental Characteristics and their Effects on the IQ of a Child**

A person's level of IQ may be very much influenced depending upon the parental environment in which a child was raised. Each parent is unique and has different personalities and experiences. The characteristics of *who* a parent is and the way he or she decides to raise his or her children may play a role in a child's intellectual development. The amount of education a parent has had, the home environment a parent establishes, and the parent's culture may all have an effect on a child's IQ.

#### **Parents' Level of Education**

Though some may argue that a child's early home environment does not significantly influence IQ (Leahy, 1961), many recent studies have concluded otherwise (Rowe, Jacobson, & Van den Oord, 1999; Sellers et al., 2002). Interactions between parents may greatly affect the environment a child is raised in and have an effect on later IQ (Lindahl et al., 2004). The way in which parents act and behave towards one another may influence how their child develops cognitively. One aspect of a parent's actions that a child may view and be directly affected by is the education of the parents.

One study in particular has found that the education level of a parent may have an environmental effect on the IQ of a child (Rowe et al., 1999). A parent may encourage children to strengthen their intellectual abilities based upon the parent's own level of intelligence. A parent's push during a child's early years to increase his or her cognitive abilities may greatly influence how hard a child will try to increase in intelligence and thus have a higher IQ. For example, one study found that there was a correlation between parents who had more or less than 12 years of education and their children's IQ (Sellers et al., 2002). Children who had higher IQ usually had parents with more

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than 12 years of education. Researchers concluded that this was due to the parents' enthusiasm and motivation towards their children's cognitive development (Sellers et al., 2002). Through the parents' example, a child may develop for themselves an opinion of how much they need to increase their intelligence.

Further, parents with more education may help promote an enriched home environment that may persuade their children to develop intellectually (Sellers et al., 2002). Parents with more years of education may be a model of what the children have the potential of achieving and becoming. These parents may also have realized through their education some of the benefits of having a good and enriching home environment for their children (Sellers et al., 2002). Parents with more education may provide their homes with a more positive environment, encouraging children to develop cognitively and thus increase their IQ.

#### **Effects of Parents' Culture on IQ of Child**

Other factors such as the parents' culture, occupation, and the way in which they structure their lives may also affect the IQ of a child (Deater-Deckard, 2009). Some researchers (Segal & Hur, 2008) investigated ways that early childhood parenting and culture may have an influence on a person's IQ. In this study, two Korean

monozygotic twins were raised in two completely different cultures. One of the twins was raised in the United States by foster parents while the other twin was raised in South Korea by her biological parents. Researchers conducting the experiment suggested from their results that IQ may be greatly affected by biology, but specific mental skills may be affected more by interactions with the environment. For example, when the twins' General IQ test scores were compared, they were quite similar. In contrast however, the twin living in the U.S. had a much higher Verbal IQ score than the twin living in South Korea. Researchers suggested that this may be due to the fact that there is a great emphasis on language skills in schools throughout the United States. Researchers also argued that the U.S. twin's adopted mother was a speech pathologist who may have greatly influenced her daughter in communication skills. On the other hand, the twin raised in South Korea had a higher Performance IQ score as compared to her sister in the United States. This may have been because of the stress placed on mathematical development in South Korea (Segal & Hur, 2008). Though the study is not fully clear on the reasons why the Verbal and Performance IQ scores were different, there is evidence that these twins' early experiences with their parents may have had an influence on their various performance levels. It

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therefore appears that the culture of the parents may be more important than the genes the child is born with when observing IQ scores.

### **Parental Creation of Home Environment**

Though a parent that is well educated may have a positive effect on his or her child's IQ, research also shows that some actions of a parent may have negative effects on a child's level of intelligence. It has been found that children raised in unfavorable home environments may have problems developing cognitively and may perform more poorly on IQ tests. Many developmental problems acquired in life may stem from early parenthood and early childhood experience (Laucht, Esser, & Schmidt, 1997). Pavarini, de Hollanda Souza, and Hawk (2013) observed that by creating a favorable home environment, a child may further develop his or her IQ. Higher IQ levels in children may be attributed to the quality of home environment where they were raised.

Researchers have also found that what happens in the home during the early period of a child's life may contribute to the IQ and cognitive performance of a child (Elardo, Bradley, & Caldwell, 1975). For instance, Deater-Deckard (2009) found that chaos such as loud noises or inconsistent family routines in a home may have a negative effect on a child's IQ. From his study, Deater-Deckard concluded that

having a home that is free of chaos may help one to healthfully develop cognitively (2009). The experiences a child has due to the home life his or her parents created may increase or decrease that child's IQ significantly and should thus be further explored in future research.

### **Parent and Child Relationships and Effects on IQ**

As discussed, parents' characteristics and actions may have an effect on a child's IQ. Not only can parents' parenting techniques and the environment in which they raise their children have an effect on their children's IQ, but also the relationships the parents have with their children. In other words, how a child feels he or she can relate to and feel comfortable with his or her parents may influence the child's IQ. To address parent and child relationships, the following sections will discuss how IQ is affected by three factors: early parent-child relations, a child's perception toward his or her parents, and daily acts parents may perform that may affect relationships with their children.

### **Parent and Child Relationships are Vital at Early Ages**

In one review (Pavarini, et al., 2013), researchers concluded that a parent's relationship with his or her child may play a very important role in the development of a child's intelligence. These reviewers also observed that there are certain things parents can do to help influence a

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child's understanding of mind (2013). Schacht et al. agreed by arguing that early, compassionate parenting and love between parent and child may increase a child's level of intelligence (2009). A child may have a higher IQ because a parent displays care, encouragement, and loving communication with the child.

In addition, other researchers have found that when children are younger, their intelligence may be influenced more by family nurture than by nature (Brant et al., 2013). It was found that those who had a higher IQ were more influenced by the environment as children. However, those with a lower IQ did not have some of that beneficial environmental influence as children, but rather had shown heritability of intelligence during their years of adolescence (Brant et al., 2013). Thus, much of the early relationship with parents may influence a child's IQ in a positive way. It has also been found that assortative mating may not significantly influence IQ. In other words, a man with a high IQ mating with a smart woman will not necessarily produce intelligent offspring. The study concluded that "higher IQ is associated with a prolonged sensitive period" (Brant et al., 2013). Other research also supports the claim that intelligence is influenced by early parent-child relationships (Laucht, et al., 1997). Therefore, it appears that IQ is greatly

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affected by experiences which a child has before his or her adolescent years. Many of these experiences affecting IQ have been found to be directly correlated with the relationship a child has with his or her parents. The parents, being the first teachers and mentors of a child, may therefore greatly influence their child's cognitive and intellectual abilities.

### **Child's Perception of Dependence in Relation to Parents**

Some researchers (Brown & Iyengar, 2008) concluded that much of a student's academic achievement may be affected by experiences that the child has with his or her parents at home. It was also found that there is a correlation between an adolescent's perception of independence and intellectual achievement (Brown & Iyengar, 2008). Another study found that preschool and elementary aged children that are more dependent upon parents may have a lower IQ score than those that feel independent (Dreger, 1968). How well a child feels he or she fits in with parents at home and how dependent the child is may have an effect on how he or she will perform intellectually in a school setting and on an intelligence test.

### **Daily Parental Acts Affecting Relationship with Child Mother and Child Interaction.**

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There are also many daily acts parents can perform that may affect their relationship with their children and their children's IQ level. For example, one study (Caspi et al., 2007) found that there is a high correlation between people with high IQ scores and ones that were fed breast milk as children. Caspi et al. (2007) suggested that the increased IQ level is affected by the fatty acids found within breast milk. If a mother breastfeeds her child, that child may be able to attain those fatty acids found primarily in breast milk and thus have an increased level of IQ (Caspi et al., 2007). Not only may breastfeeding have an effect on a child, but it was also found that the actions and moods of a mother may have a significant impact on not only a child's physical development, but also on a child's IQ level (Lipton, 1998). Both studies demonstrate how actions of the mother and her relation to the child may influence the IQ level of the child.

**Verbal interaction.** Other researchers have found that a parent's verbal interactions can have profound impacts on a child's verbal IQ. If a parent is more educated, for example, he or she may use more complex verbal communication (Sellers et al., 2002). How a parent communicates and uses language with his or her child may influence the development of the child's own level of Verbal

IQ. Other research has found that parents who communicate with their child concerning education and the child's homework may positively help motivate the child and the child's IQ may increase (Murray et al., 2006). Parents who daily encourage and communicate with their children by using complex verbal communication may actually help their children to have a higher level of intelligence.

Though much research shows how early parent-child relationships may influence a person's IQ, there are still some gaps in the current research that have not yet been tested in full. For example, researchers could consider in what ways interactions with specifically the father versus the mother may have a significant effect on a child's IQ (Pavarini et al., 2013). Also, there is still little or no research on how early family relations may specifically affect a girl versus a boy.

**Secure Attachment to Parents may Increase IQ Scores**

Along with quality parent-child relationships, healthy attachments may have a positive effect on one's IQ level. On the other hand, unhealthy or negative parent-child attachments may have a negative effect on the intelligence level of a person. The following will be an examination of the various attachment styles and how each of those attachments may affect one's IQ score.



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### **Attachment Styles**

Ainsworth (1985) conducted an experiment on how the bond or attachment between a parent and child affects a child's behavior. For the most part, Ainsworth found that infants who were more secure in the presence of the parent and others were infants whose mothers were loving, kind, aware of the infants' wants and needs, and receptive to the children's behavior and efforts (Ainsworth, 1985; Ainsworth et al., 1978). In a later study, researchers studied how attachment affects IQ scores. It was found that children that were considered to be secure scored higher in IQ than children that were insecure (Jacobsen, & Hofmann, 1997). In summary, if there is a strong and loving bond between the parent and child, the child is more likely to have a higher IQ.

### **Effects of Negative and Positive Attachment on IQ**

One study focused on how a father's behavior and attachment to his child may affect the child's well-being (Schacht et al., 2009). Researchers of this study found that when fathers are cold towards children and perform negative or affection-lacking parenting, it can have a negative effect on a child's cognitive adjustment (Schacht et al., 2009). Negative parenting and a lack of a loving attachment between parent and child may place a wedge in the child's learning development. However, if a parent shares a secure

attachment relationship with his or her child, that child may have fewer emotional struggles and be able to more fully develop his or her cognitive abilities. Another study found that a healthy attachment may lead to higher IQ and academic performance (West, Mathews, & Kerns, 2013). In this study it was found that secure attachment displayed towards children between the ages of 24 and 36 months correlated with a higher IQ in the child's later years. In opposition, children who were categorized as having an ambivalent or disorganized attachment tended to have lower IQ scores than securely attached children. This study also determined that the physical help parents offered to their children rather than verbal encouragement brought about a secure relationship and higher IQ (West et al., 2013). Healthy attachments between a parent and child may indeed affect a child's IQ score in a positive matter.

### **Authoritative Parenting**

When a mother demands more from her children cognitively, the children's cognitive abilities are found to be higher as opposed to when a mother is less demanding (Jang, 1997). However, authoritative parenting might not be the best parenting technique for all cultures. For example, some research shows that authoritative parenting may have more positive effects on European American children than on

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Asian American children (Chao, 2001). School performance was also found to be positively affected by authoritative parenting as well as relationship attachment between parent and child for European American children. Second generation but not first generation Chinese American children were also affected positively by authoritative parenting (Chao, 2001). Therefore, a parent's attachment and relationship with his or her child may have a positive effect on the child's level of intelligence.

### Discussion

Many factors affect a person's IQ. Although nature and biological forces affect IQ, one question that needs further attention is how IQ is directly affected by early family experiences that an individual has in his or her life. To better understand this topic, future research could focus more on longitudinal studies in order to more deeply investigate the development of IQ that may take place throughout a child's lifetime. Particularly, natural setting studies in the home may add to current research findings. Further, observing relations amongst the IQ of siblings may also show patterns or correlations and aid in the understanding of the factors of IQ. Also, further research could examine how a father or mother uniquely influence his or her child's IQ (Pavarini et al., 2013).

In summary, there is a lot of evidence that currently shows that certain early family experiences can have a positive influence on one's level of IQ. As discussed, a child's early experiences, especially with his or her parents, may greatly influence a child's efforts to increase his or her intelligence. Through daily acts and practices, parents are able to help their children develop intellectually and thus increase in their levels of IQ. By understanding how much early home life can influence the intelligence of a person, one may better conclude what he or she may do in helping others increase in intelligence. Parental characteristics, parent and child relationships, and attachment styles are all contributing factors to a person's level of IQ and should be studied more in full order to increase our understanding of factors affecting IQ.

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