



Do children with autism exhibit a stage of stranger anxiety when they are about eight months old?

A qualitative analysis

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ABSTRACT

Background: A new perspective of autism, the Socioscheme theory, states that there is no specific deficit that causes the disorder, but a delayed development would be responsible for a weaker me-other-differentiation in individuals with autism. There is no specific dysfunction in the brain related to this delay, rather a general problem in underlying structures in the cerebrospinal axis. This causes slower maturation in some development areas (e.a. social interaction), and accelerated development in other areas. One important area of development is the development of attachment. Normally, children learn a lot about social interaction during early development. Especially during the stage of stranger anxiety, which generally occurs around eight months, the child receives important information from its parents about others. If autism means delayed development in social interaction and successively delayed attachment development, the child with autism is probably misguidedly considered as being ‘easy’ in social interaction, but it will miss very important information about social interaction. The current study examined whether children with autism exhibit a stage of stranger anxiety when they are about eight months. Additionally, it is also examined whether children present features of stranger anxiety later in life. **Method:** Nineteen respondents, parents of children with autism, were questioned through in-dept-interviews. A control group consisted of 5 respondents, namely parents of typically developing children. **Results:** Qualitative data analysis meaningfully showed that none of the children in the research group presented a stage of stranger anxiety when they were about eight months. Further, some of the parents described characteristics of stranger anxiety much later in the child’s life. Also other aspects of attachment development seemed to occur later than expected in typically developing children. **Conclusion:** Children with autism seem to show delayed maturation with regard to attachment development. Findings show that stranger anxiety does not take place at the age one would expect. Additional findings suggest that there might be a delayed attachment, although significant results stay off so far. Knowledge about delayed development is necessary for parents and caregivers of children with autism, in order to enable them to respond more adequately to the child, and subsequently guide him through life.

Keywords: Autism Spectrum Disorder, attachment, Socioscheme theory.

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1 Introduction

This chapter presents the purpose of the study along with an overview of theoretical and academic background knowledge. Concerning autism, ample research has been done, but new insights ask for new investigations. Knowledge with regard to attachment development in individuals with autism is still in progress. Since attachment development captures the main issue of this study on autism, namely with regard to stranger anxiety in children with autism, the attachment theory will be illuminated also. After a chronological overview, this chapter will close with the current explanatory model about autism. Whereas autism has been seen as a general deficiency so far, this model states that autism is about a delayed and accelerated development at the same time. In this framework stranger anxiety, as part of attachment development, has been investigated in this study.

1.1 Description and history of autism

Although interest in autism is at an all-time high, ancient myths suggest that children with autism have been around for centuries. For example, stories of elfin children, left in the place of real human babies who were stolen away by the ‘little people’, describe these ‘changeling’s’ as strange and remote, much like a child with autism (Wing & Potter, 2002). The use of the term autism comes from Leo Kanner (1943) and Hans Asperger (1944) independently, and is based on the term ‘autos’ coming up around 1912 when psychiatrist Eugene Bleuler used the word to refer to patients with schizophrenia who were self-absorbed and out of touch with the rest of the world. The word autism as such is derived from the Greek word ‘autos’, meaning ‘self’. The term was chosen to communicate the social and communicative isolation that is the foremost feature of the disorder. However, Dr. Bleuler's use of the term referred to schizophrenic individuals who displayed catatonic behaviors and not to autistic patients as we know them today.

1.1.1 First research

The factual history of autism begins in 1943, when the Austrian psychiatrist Dr. Leo Kanner, who moved to America, described 11 children who, in the first few years of life, withdrew into shells, disregarded people for objects, avoided eye contact, lacked social awareness, had limited or no language, and displayed stereotyped motor activities. They also did exhibit preservation of sameness, which is an anxious and obsessive insistence on the maintenance of sameness in daily routines and activities, which no one but the child may

disrupt. Their parents described them as ‘acting as if people weren’t there’ and ‘oblivious to everything around him’ (Kanner, 1943). In his original paper, Dr. Kanner emphasized that children with autism were born without the usual predisposition to be social.

Around the same time, Dr. Hans Asperger, also from Austria, described a milder form of this disorder that became known as Asperger’s syndrome (Asperger, 1943). Because of the intense interests of the children he studied and their lengthy descriptions of these interests, he compared them to “absent-minded professors” (Mash & Wolfe, 2007). Where Kanner described behavioral problems, Asperger was more interested in what was going on inside these children. Besides the differences both of them found the same principles, namely social withdrawal and lack of social insight and social skills (Delfos, 2011).

In 1978, Rutter synthesized Kanner’s report and subsequent research. He noted that the social and communication impairments in autism were distinctive and could not be accounted for solely as resulting from associated learning disability, and that the onset of the condition was very early (Rutter, 1987).

Because of the many different types of autistic behavior, Wing (2002) emphasized the triad of impairments in autism. Three areas of development were associated with social impairment, forming a cluster of features that provide diagnostic utility for autism. The triad consists of problems in social contact, impaired and deviant language and communication, and rigidity of thought and behavior and impoverished social imagination. The Autistic Spectrum is based on this triad of impairments.

1.1.2 Diagnostic criteria

Early work on autism was impeded by controversies over the validity of the condition, but by 1980 autism was officially recognized and included in a new class of disorder – Pervasive Developmental Disorder (PDD) – in the Diagnostic and Statistical Manual of Mental Disorders. The DSM-IV-TR (APA, 2000) considers the autistic disorder to be the most prototypic form of Pervasive Developmental Disorders. The diagnostic criteria according to the DSM-IV-TR are qualitative impairment in social interaction, qualitative impairments in communication, and restricted repetitive and stereotyped patterns of behavior, interests, and activities. Children with autism may show a failure to cuddle, an indifference to affection or physical contact, a lack of eye contact, facial responsiveness or socially directed smiles, and a failure to respond to their parent’s voices. Older children with autism may show difficulties in reciprocity, turn taking, and recognition of affective expression and attribution of mental stages of others. The category Pervasive Developmental Disorder Not Otherwise

Specified (PDD-NOS) is used when there is a severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills, or when stereotyped behavior, interests, and activities are present.

1.1.3 Prevalence

Recent findings throughout the world indicate a prevalence of 1 child per 150 for all forms of autism (Yeargin-Allsopp, et al., 2003). The prevalence for the subtypes of autism spectrum disorder are approximately 22 of 10,000 for autistic disorder, 33 of 10,000 for pervasive developmental disorder not otherwise specified (PDD-NOS), and 10 of 10,000 for Asperger's disorder (Fombonne, Zakarian, Bennet, Meng, & McLean-Heywood, 2006).

Autism is found in all social classes and has been identified worldwide. It is about 3 to 4 times more common in boys than in girls, a ratio that has remained fairly constant over the years, even with increasing prevalence estimates (Fombonne, 2003). In considering the high ratio of males to females with autism, Baron-Cohen (2002) in continuation of Hans Asperger, has proposed the *extreme male brain theory of autism*, which will be discussed later.

1.1.4 Three etiological models

Until recently, three major cognitive theories have been proposed to account for the behavioral symptoms of autism. The Theory of Mind account proposes a deficit in the ability to appreciate that beliefs and desires from others are different from one's own; the Central Coherence Theory proposes an impairment in the ability to process a wider context or meaning; and the Executive Function Theory proposes a deficit in executive processes such as mental flexibility, inhibition, monitoring and planning. Literature provides more theoretical models about autism in the current of time, but in this paper the focus will be on these major three.

Theory of Mind

The Theory of Mind (ToM) hypothesis of autism begins with the premise that the ability to read the intentions, beliefs, feelings, and desires of others from their external behavior has adaptive significance in human evolution. By age 4, most children can comprehend what others might know, think, and believe, something that even older individuals with autism have great difficulty doing (Mash & Wolfe, 2007). It has been proposed that the primary problems of individuals with autism stem from a deficit in their ToM mechanism. In other words, children with autism suffer in varying degrees from

'mindblindness'; that is, "they fail to develop the capacity to mindread in the normal way" (Baron-Cohen & Belmonte, 1995). The term ToM was first used by Premack and Woodruff (1978). In a series of studies, it was demonstrated that the ability of children with autism to attribute mental states to others is seriously impaired (Baron-Cohen, Leslie & Frith, 1985; 1986). These researchers found that about 80% of the children with autism were unable to correctly predict the ideas of others, whereas most mentally retarded and normal controls of lower mental age were able to do so. Neuroimaging studies have identified a network of brain regions active during mentalising. When undertaking mentalising tasks, individuals with Asperger syndrome show significantly less activation in the brain regions important for mentalising in normal individuals (Happé, et al., 1996).

The ToM-test has been construed to measure a broad range of aspects from a developmental perspective, namely the recognition of emotions, the assessment of how others think, and the understanding of the motives underlying behavior of others. Muris et al. (1999) proved that the ToM-test is a reliable and valid instrument that can be employed to screen the development of the Theory of Mind.

Central Coherence Theory

Another theory that explains about one of the characteristics seen in children with autism is the weak drive for Central Coherence. This refers to the strong tendency of humans to interpret stimuli in a relatively global way that takes the broader context into account. It has been proposed that individuals with autism have a weak tendency for central coherence and tend to process information in bits and pieces rather than looking at the big picture (Frith & Happé, 1994). Consistent with a general deficit in central coherence, individuals with autism perform surprisingly well on tasks in which a focus on parts of a stimulus, rather than the overall pattern, serves to facilitate performance (Mash & Wolfe, 2007). Delfos (2002) mentions that the problems in integrating information is mostly seen in a social context. Objects are recognized more easily. The fact that most individuals with autism have problems with recognizing faces, may be explained by the Socioscheme theory, as a result of the slowness in information processing and delay in the social area.

The brain basis of central coherence has been little explored, although preliminary suggestions are that the early stages of sensory processing are intact in autism whereas the top-down modulation of these early processing stages is not functioning appropriately (Frith, 2003).

Executive Functions

Although the two theories mentioned above explain many of the characteristics associated with autism, repetitive behaviors and restricted interests might best be explained by a third cognitive theory. Executive functions are processes which permit us to maintain effective problem solving by inhibiting inappropriate behaviors, engaging in thoughtful actions, sustaining task performance and self-monitoring, using feedback, and flexibly shifting from one task to another. It has been suggested that children with autism display a general deficit in higher-order-planning and regulatory behaviors (Russell, 1997). This theory provides an explanation for specific behavior in children with autism, like the preservation of sameness and problems in behavior control. Where the different processes for most children work in concert, enabling them to exercise deliberate control of their attention and impulses and to maintain problem solving behaviors in order to attain a future goal, children with autism consistently show deficits in one or more executive functions.

Structural studies of the autistic brain are limited, although several cortical and subcortical abnormalities have been identified (Bauman & Kemper, 1994). Transient delayed postnatal maturation of the frontal lobes (Zilbovicius, Garreau, Samson, Remy, & et al., 1995), serotonergic abnormalities in prefrontal cortex (Chugani, et al., 1997), and structural abnormality in orbitofrontal cortex (Salmond, de Haan, Friston, Gadian, & Vargha-Khadem, 2003) have all been reported.

1.1.5 Socioscheme theory

Whereas the term autism originally referred to the extreme withdrawal of oneself, none of the above mentioned cognitive theories about autism consider this as the main characteristic of people with autism. These three theories try to give an explanation for the etiology of autism based on a neurological dysfunction in the brain. Each of them are focused on a specific problem but none of them consider the withdrawal of oneself as the core principle (Delfos, 2002; 2011). Therefore, they are not able to explain the whole spectrum of aspects that play part in autism. The theory of mind only focuses on social behavior, the central coherence theory explains only the weak central coherence, and the executive function is just about specific behavior. The research of Baily e.a. (1996) is in accordance with this idea, because no part of the brain was found to function differently in autism; the brain as a whole functions differently. Independently from existing theories, but ultimately incorporating all the existing theories, Delfos (2002) has postulated the *Socioscheme theory*. Instead of presuming a specific dysfunction in the brain, this theory considers autism as a

variant of normal development. No specific neurological damage is expected to cause autism, but a general problem in underlying structures of the cerebrospinal axis. According to this theory the three cognitive theories are not about to be invalidated, but to be placed in a broader perspective where me-other-differentiation and delayed development play a core role.

The basic assumption of the Socioscheme theory is the influence of high prenatal testosterone levels on the development of the fetus in the uterus, extending the three-factor model of Geschwind (known as the Geschwind hypothesis) with a fourth factor. The Geschwind-Behan-Galaburda hypothesis of cerebral lateralization proposes that hormones may affect brain development and learning. During embryonic development, the male fetal gonads produce high levels of testosterone, comparable to the levels in adult males. The hypothesis proposes that the embryonic surges of testosterone delay the development of the left hemisphere, allowing the right hemisphere both space and time for greater development (Kolb & Wishaw, 2008). Thus, elevated levels of testosterone are hypothesized to slow down the growth of the left brain with a consequent compensatory growth of the right brain. Males in general have some comparatively better developed areas in the right hemisphere, which would presumably endow them with excellent spatial skills. Special abilities, such as precocious mathematical reasoning ability, may result. The appeal of the hypothesis is that it can account for the general observation that females tend to do better than males at language-related tasks and males tend to do better than females at spatial tasks. It also accounts for the high incidence both of precocity and of learning disabilities among males (Kolb & Wishaw, 2008). An additional aspect of the hypothesis is that it explains the high incidence of immune disorders in males and autoimmune disorders and allergies (migraines, asthma, thyroid disorders, ulcerative colitis, and so forth) among females and the atopic syndrome in males (Delfos, 2011). The hypothesis proposes that testosterone effects the development of the immune system in a inhibitory way with a consequent susceptibility to immune disorders (Geschwind & Galaburda, 1984).

In order to understand the importance of the Geschwind-Behan-Galaburda hypothesis in autism, the theory of the extreme male brain will be explained in addition. Asperger already proposed that autism was an extreme condition of a male brain. These days this assumption can be supported by the *extreme male brain theory of autism, ESB-brain* (Baron-Cohen, 2003) and the Socioscheme theory (Delfos, 2002; 2011). In the ESB-theory autism is presumed to fall at the extreme end of a continuum of cognitive abilities associated with systemizing and understanding the inanimate world, and at the extreme low end of abilities associated with empathizing and understanding our social world. Both abilities are present in all males and

females, but males are presumed to show relatively more systemizing and females to show more empathizing. Frequent interests and behaviors that occur among individuals with autism (e.g., attention to detail, collecting, interest in mathematics, mechanical knowledge, scientific and technical information) are presumed to reflect an extreme on the systemizing dimension of the male brain, and relative absence of empathizing (e.g., mindreading, empathy, eye contact, communication) (Baron-Cohen, Richler, Bisarya, Gurunathan, & Wheelwright, 2003).

According to the Socioscheme theory elevated levels of testosterone in the uterus cause a accelerated developed (male) right hemisphere and weaker me-other-differentiation and sequence less empathic abilities, and limitation in awareness of one's own thoughts and feelings because of the delayed development of the left hemisphere in individuals with autism (Delfos, 2002; 2011). These two effects, decreased development of the immune system and strong right hemisphere development, will be explained next.

Decreased development of the immune system

Korvatska and his colleagues (2002) proved that there is an association between dysfunction of the immune system and autism. According to Geschwind and Galaburda (Geschwind & Galaburda, 1984) generally, the immune system is less well developed in men than in women. In this framework Delfos (2002; 2011) postulates that autism is about a delayed development of the me-other-differentiation and consequently about less empathic abilities. To understand this, one should know that in the process of individualization the awareness of oneself relating to the world comes out of the psychological knowledge of oneself which is the outcome of the biological knowledge of oneself - in fact the immune system. The immune system is the biological knowledge of the body. The body has to know itself to discriminate between own body substances and other, different substances. Physical elements (functioning and limits of the body) and psychological elements (oneself, space and time, empathy, theory-of-mind, and self reflection) are the building stones for development of the *me*, situated in the world, which is the core of the Socioscheme theory. First a child becomes aware of the *me*, then of the *not-me* and at then of the *other*. This me-other-differentiation is about consciousness and tacit knowledge about oneself and oneself relating to the world. Children with autism show an underdeveloped socioscheme and are therefore less aware of the environment and are less focused on human beings. Consequently, they have problems in differentiation between themselves and others, which is basically necessary for

social interaction, emotional contact with others, social behavior, and development of empathy (Delfos, 2002; 2011).

Stronger right hemisphere development in disadvantage of the left

As mentioned above, besides the influence on the immune system, elevated levels of testosterone in the uterus also affect the development of the right hemisphere of the brain in disadvantage of the left hemisphere. This might explain the nonfluency of movement and the extraordinary perceptual abilities seen in some individuals with autism in accordance to a strongly developed right hemisphere. The left hemisphere plays part in language development which is one of the common dysfunctions in autism. Even individuals with Asperger syndrome, who are considered to have normal language, sometimes show odd communication, like affected or pedantic language (Delfos, 2011). Besides the underdeveloped language individuals with autism have less notion of their feelings and are less able to verbalize their feelings.

1.1.6 Nature versus nurture

According to Rutgers (2006) Asperger concluded that autism has a genetic inheritance because of the fact that the behavior seen in these children is persistent over time. Genetics are still assumed to be a very plausible explanation in autism. It is now generally accepted that autism is a biologically based neurodevelopmental disorder with multiple causes (Dawson & Faja, 2008). In general, individuals with autism have an elevated risk of about 5% for chromosomal anomalies (Barton & Volkmar, 1998; Dykens & Volkmar, 1997). However, these anomalies alone do not indicate the specific gene sites underlying the disorder, because autism has been associated with anomalies involving several chromosomes (Gillberg, 1998). Family studies indicate that about 3% to 7% of siblings and extended family members of individuals with autism also have the disorder (Rutter, 1978). Recent research shows that one gene, contactin 4 has a hampered functioning. Contactin 4 plays an essential role in the formation, maintenance, and plasticity of neuronal networks. Disruption of this gene is known to cause developmental delay and mental retardation. Roohi et al. (2009) suggests that mutations affecting contactin 4 function may be relevant to autism spectrum disorder pathogenesis.

1.1.7 Deviant brain development in autism

As mentioned before, brain anomalies are seen in individuals with autism. Relevant issues which will be discussed next are lateralization, grey and white matter development, and some specific brain regions assumingly concerning typical features in autism.

Lateralization

The Geschwind-Behan-Galaburda hypothesis provides evidence for the Socioscheme theory whereas it says that the right hemisphere has developed stronger than the left hemisphere, due to high testosterone levels in the uterus which effect cerebral lateralization. Cerebral lateralization means that specific functions of the brain develop either left or right. Spatial aptitude and abstraction are located in the right hemisphere, whereas language is situated in the left hemisphere. An important aspect in development of the brain is the maturation of connections. Grey matter decreases in order to growth of white matter – less neurons, but more connections occur.

Neuroanatomy research in children with autism shows that their left brains are less well developed than their right brains (Bauman & Kemper, 1994). This underdevelopment has to do with grey matter in proportion to white matter. Whereas grey matter usually decreases during maturation, in individuals with autism grey matter expands, especially in the left hemisphere (Hazlett, Poe, Gerig, Smith, & Piven, 2006). This means that there are more neurons, but less connections between them. Delfos (2002; 2011) suggests that this might be possibly interpreted as delayed development of maturation of the brain. One of the aspects of the pervasive developmental disorders, language impairment, can be explained by the underdeveloped left hemisphere. Also problems in complex social interaction can be clarified in this context. Keary (2009) shows that children with autism have a smaller than average corpus callosum, which plays an important role in the connectivity of the brain. Another feature, impaired motor skills, can possibly be illustrated by this difference in brain development in children with autism.

Neo-cortex and underlying regions

In a recently finished longitudinal study with magnetic resonance imaging (MRI) Hua et al. (2011) mapped an anomalous developmental trajectory of the brains of autistics compared with typically developing children and adolescents. Different from the latter, the autistic boys showed abnormally slowed white matter development, especially in the parietal, temporal, and occipital lobes. They also visualized abnormal overgrowth in autism in gray

matter structures such as the putamen and anterior cingulate cortex. Their findings reveal aberrant growth rates in brain regions implicated in social impairment, communication deficits and repetitive behaviors in autism, suggesting that growth rate abnormalities persist into adolescence, and could represent a delayed development.

According to Kolb & Wishaw (2008) in deep layers of the anterior cingulate cortex, and in the insula, a lateral cortical region, so called 'von Economo' neurons are located. Allman and his colleagues (2005) proposed that 'von Economo' neurons are associated with the emergence of theory-of-mind and, even more provocatively, that these cells fail to develop normally in people with autism, thus leading to the faulty social intuition that is characteristic of this disorder. They do not propose that the 'von Economo' neurons are responsible for theory-of-mind but rather that they are part of the frontal-lobe neural network that creates mental models of the thinking of others. This social-cognition network likely includes the amygdala, and evidence is accumulating that autistic people have consistent abnormalities in the cell density of the amygdala (Kolb & Whishaw, 2008). Baron-Cohen (2003) theorized that the extreme abnormalities in social cognition in autism result from an abnormality in an amygdaloprefrontal circuit. Please refer to paragraph 1.1.4 where will be explained about people with autism who consistently fail theory-of-mind tasks. This consistent deficit is an inability to understand the intentions and inner mental states of other people.

1.2 Autism and attachment

Kanner (1943) was the first to describe autism as a developmental disorder with a failure to form affective contact with others. According to Bowlby (1973), a combination of two or more of the following factors seemed most likely to be the cause of autism: genetic factors, brain damage and inappropriate mothering. However, he did not conduct research on attachment in children with autism (Rutgers, Bakermans-Kranenburg, van Ijzendoorn, & van Berckelaer-Onnes, 2004). Of course, nowadays we know that the latter, inappropriate mothering, does not cause autism. Probably it is the other way around: parents see that their child develops differently and feel that they need special care, but lack of knowledge and difficulties in finding reciprocal connection, makes it harder for them to anticipate (Delfos, 2011).

1.2.1 Attachment

Attachment is conceptualized as the affectional bond or tie that infants form between themselves and their mother figure based on the development of a schema about what people

will do when the child is in need (Ainsworth, Blehar, Waters, & Wall, 1979). The attachment system is activated when the child is tired or distressed, or when there are threats in the environment. In these situations, children display attachment behavior: they seek proximity to or contact with the caregiver, resuming play after having been comforted. Attachment behavior patterns reflect the child's anticipations about the caregiver's reactions to bids for comfort. These anticipations, in turn, guide child strategies for managing stress. The attachment relation between the caregiver and the child is the cumulative outcome of the child's experiences in interaction with the caregiver across the first year (Ainsworth, 1979). An internal working model of relationships emerges. The child learns what he or she can expect from others and how he or she relates to others.

Attachment development

Bowlby reasoned that infants are preadapted to engage in relationship-enhancing behaviors such as orienting, smiling, crying, clinging, signaling, and, as they learn to move about, proximity seeking. In order to survive, however, infants must become attached to a specific person who is available and responsive to their needs. Adults are similarly equipped with attachment-promoting behaviors to respond to an infant's needs, which are complementary to the needs of the infant – smiling, touching, holding and rocking (Mash & Wolfe, 2007).

Bowlby concluded that there are four stages, or levels, of attachment, and that all four happen within the first four years of a child's life. The first level, according to Bowlby, takes place between birth and three months of age. The baby knows instinctively that he has to keep his caregiver nearby. Smiling is the most important attachment behavior. In this stage, social smiling is still non-selectively and so far directed to faces in general. Other attachment behaviors are eye contact, crying, cooing, babbling, and the grasping reflex. These attachment behaviors provoke interaction and motivate the attachment figure, mostly the mother, to stay nearby.

In the second stage, when the baby is about three months, many reflexive attachment behaviors disappear, and his social behavior becomes more selective. Between three and six months, babies develop preference towards the mother or perhaps certain caregivers.

The third stage occurs at six to 24 months and is characterized by the baby seeking closeness to his attachment figure more actively. The child develops a more complex attachment to his mother or caregivers. At this point the child is able to communicate more, and to have more physical interaction. The attachment behavior is more purposeful. A mother

who leaves, is a stimulus for the baby to search for her. In this stage attachment becomes more intense. *Separation anxiety* usually begins at 9 to 10 months, peaks between 12 and 15 months, and can last until somewhere between 24 and 36 months. Separation anxiety emerges from the infant's growing awareness of separateness from his parent. It is yet further testimony to the strength of the child's attachment. There is a range of behavioral reactions to separation anxiety. Some children cry in protest and cling to the parent; others withdraw from the world until the parent returns; still others protest by becoming angry and aggressive. While these behaviors may seem troublesome at the moment, they are proof that the work of attachment has proceeded well to this point.

The fact that the attachment behavior becomes more selective is best visible as the child begins to experience *stranger anxiety*, by the age of 7 months. Paradoxically, stranger anxiety testifies to the strength of a child's attachment to his parents. It is this attachment that defines everyone else as strangers. Without attachment, there are no strangers, everyone is of equal emotional importance or unimportance. Behaviorally, this anxiety manifests as distress in the presence of strangers and a checking back in with the parent for reassurance. When children show this behavior, parents respond adequately by giving information about those specific strangers. They will tell the child for example who that person is, why he is there and if he is to be trusted. If a specific stranger is not to be trusted, the child will sense this in its parents' body language. In fact, these situations provide the child a chance to get information about others from their parents. They learn about other people, who is to be trusted and about social behavior.

The period of 10 to 18 months comprises the well-known "love affair with the world". The fundamental developmental task is exploring the world while refining blossoming motor skills. Attachment shows up here as repeated "checking in" with the parent amid the child's explorations. A child will go to the edge of her comfort zone and return to check in with her parent before venturing out farther. The final building blocks of this third stage are put in place between 24 and 36 months with the accomplishment of self and object constancy. Self constancy is the child's experience that she is the same person across different emotional states and situations. Object constancy is the child's experience of others as predictable and available. Much of object constancy comes from a child's mental images of others. Self and object constancy serve to quiet separation anxiety as well as strengthen a child's ability to delay gratification and accept discipline.

The final stage, from three years till end of childhood, is characterized by joint behavior. Egocentrism decreases and the child is able to play more actively together with other children and turns to be more cooperative (Mash & Wolfe, 2007).

Classification of attachment styles

Many studies of attachment in children with autism used the Strange Situation Procedure (SSP; Ainsworth, et al., 1979). The SSP involved a standard sequence of two separations from and reunions with the caregiver. These kind of laboratory studies may be a subject for debate in the case of children with autism because they are sensitive to sudden changes in the environment that are part and parcel of laboratory-based attachment assessments (Rutgers, van IJzendoorn, Bakermans-Kranenburg, & Swinkels, 2007). As an alternative to the SSP, Waters (1995) introduced the Attachment Q-sort (AQS). The AQS is based on naturalistic observations of parent-child interactions and can be applied to a broader age range.

Attachment depends on the way the parent is able to respond to the baby's signals. Consistent with this, different types of attachment styles can develop. The attachment behavior is classified in four types. Children with secure attachment (type B) seek actively interaction, and they are comforted by contact when distressed. On the whole, they appear to strike a balance between attachment and exploratory behavior. Insecure-avoidant children (type A) show little or no response to the attachment figure's leave taking. On reunion they avoid the caregiver actively, looking away and turning towards toys. Children classified as insecure-resistant (type C) appear preoccupied with their attachment figures throughout the procedure. They show great distress on separation, and combine contact seeking with contact resistance on reunion. They cannot easily be comforted, and often remain distressed. Disorganized attachment (type D) is assigned when a child shows a (momentary) breakdown of a consistent strategy to deal with the stress involved in the SST. These children show contradictory attachment behaviors, expressions of fear or apprehension regarding the parent, stereotypes, undirected movements and expressions, and freeing or stilling of all movements with a disoriented expression (Rutgers, et al., 2004).

1.2.2 Autism and attachment

The DSM-III (APA, 1980) stated the inability to develop a normal attachment as a formal criterion for autism. This failure in children with infantile autism was described as lack of responsiveness to and lack of interest in people, and an indifference or aversion to affection

and physical contact. The DSM-III-R (APA, 1987) stated that the attachment of some toddlers to their parents may be bizarre. There is, however, no explicit assertion about attachment left in the DSM-IV (APA, 1994) and the DSM-IV-TR (APA, 2000).

Previous studies

Buitelaar (1995) showed that children with autism are able to discriminate between their mother and a stranger. It has also been demonstrated that children with autism show more social behavior towards their parents compared to strangers (Rutgers, 2006). It is even stated that 53% of children with autism seem to develop a secure attachment relationship with their parents. However, this is less often than seen in normative, non-clinical samples (65%) (van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992). In general, children with autism appear to be less securely attached than others (Rogers, Ozonoff, & Maslin-Cole, 1993). A meta-analysis of studies on attachment in children with autism (Rutgers, et al., 2004) show that in comparison with children without autism, children with autism were significantly less securely attached to their parents/caregivers. However, differences between children with and without autism disappeared when children with autism had higher levels of functioning or when the children were diagnosed with less severe autistic symptoms. Despite their impairment in reciprocal social interaction, children with autism show signs of attachment security. The children display less contact seeking and contact maintaining with their mothers than control children. However, they demonstrate clear preference for their mothers over a stranger and many of them show an increase in proximity seeking with their mothers after a separation.

Mental Age Spectrum in 1 Person

Delfos (2010; 2011) describes a Mental Age Spectrum in 1 Person (MAS1P). Children with autism have a disharmonic development profile. Because of the discrepancy between the many developmental ages in one person, a child with autism of 10 years calendar age, can be about 2 years on the attachment level, and may be 16 on cognitive development, for example.

A very prominent behavior which is usually seen in children around 8 or 9 months, is stranger anxiety. From that age the child is afraid of people who he or she is not familiar with, although before that period of time he or she did not really differentiate too much between its caregivers or strangers. As stranger anxiety is an important phase in the development of attachment, it is possible that, considering the MAS1P, this phase is not commonly seen in children with autism in that age. In the Socioscheme theory (Delfos, 2011), autism means a

delayed development with respect to social behavior. At the time that the child is mature enough to develop an attachment relationship, the mother might not be able to recognize these signals from her child anymore because of the difference in calendar age, or she might interpret them incorrectly. A potential secure attachment is then limited.

Socioscheme theory and delayed attachment in autism

Though some studies declare that children with autism are less securely attached than controls, assumptions are available to consider secure attachment as delayed, instead of being absent. Rogers et al. (1993) hypothesized a development in children with autism from insecurity to increasing signs of security, assuming later development of secure attachment than in typically developing children. It is not a global deficit in their ability to form attachment that children with autism suffer from. Rather, the deficit seems to be in their ability to understand and respond to social information. With the Socioscheme theory, Delfos (2011) argues that because of the impairment in interpretation in social interaction, these children have problems with developing a secure attachment. As we know, attachment development arises from the child's behavior in order to keep his caregiver close to him (see the paragraph about attachment development according to Bowlby). The child learns that a specific person, mostly the mother, is able to satisfy his needs. An child with autism is more focused on subjects than on human beings and thereby his me-other differentiation develops slowly (Delfos, 2011). Consequently, he is less able to connect satisfaction with caregivers and therefore he expresses less attachment behavior towards his caregivers. Impairment in me-other differentiation makes it difficult to differentiate between yourself and the other. This, and the little awareness of the child of the effects of its own behavior towards others, hamper development of reciprocal interaction between mother and child. Therefore, secure attachment development is delayed in children with autism. This means that parents might not be able to develop a reciprocal connection with their child on the moment they expect to do so. Consequently, parents may feel rejected or even guard themselves for painful rejection.

Evidence for this delay is found in the comparison between children with the diagnosis autism and neglected children, who show behavior similar to children with autism. The latter in fact have normal developed me-other differentiation which means that they have impairments in social knowledge and insight, but their social interaction will develop more quickly when they are put in a different setting, under better circumstances, for example an adoption family. This development will not develop as quickly for children with autism when put in a different setting (Wing, 2002).

The hypothesis, as stated by Delfos (2002; 2011) in the Socioscheme theory, that attachment development in children with autism is about a delay, rather than an insecure attachment, leads to the research question of the present study.

1.3 Objective of the study

The research literature provides us with new insight in an explanatory model about autism. It is hypothesized that attachment development in children with autism is delayed, rather than insecure. The Socioscheme theory explains autism as delayed development (Delfos, 2002; 2011). So far, no research has been done yet to explore this subject and at present only little is known about this approach. As described in paragraph 1.2.1, attachment development develops in different stages. During the stage of stranger anxiety, the attachment development becomes well visible. To the author's knowledge it has not been investigated yet if children with autism witness a phase of stranger anxiety when they are 8 months old. Since attachment development is considered as delayed, as stated in the Socioscheme theory, and according to new brain research, it may be possible that this phase would emerge later in these children, together with behavior which will not be recognized as fear of strangers in a later period of time. Stranger anxiety is a very important developmental phenomenon because at that point the child learns a lot about social interaction, about others and subsequently about itself and itself in relation to others. When the child responds anxiously towards a stranger, the parents explain the child by giving all kind of information about that other person. Verbal and non-verbal information will be given. For example, parents explain that this neighbor who is coming over, is a kind person and is to be trusted. In case of protection, eye-contact or body language can be useful to show the child that it is better to keep distance. A child with autism which does not respond anxious will be considered as easy or indifferent towards others, but will miss this specific important social information. The main purpose of the present study is to examine the presence of a stage of stranger anxiety in children with autism. It is investigated whether parents have recognized a stranger anxiety phase when their child had the age of 8 months, or whether they have seen behavior which is considered as stranger anxiety later in his life. It is important to know this because it would provide evidence for the assumption that autism is about delayed development. It also could help parents discover the developmental needs of their children at unexpected ages. On the other hand it could be an explanation for inexplicable behavior which is sometimes seen in children with autism. For example, a boy with autism, 10 years of age, suddenly refuses to go to school anymore. Besides his teachers he also rejects any contact with friends of the family which he used to be

familiar with. It has been inquired that nothing special happened in school or in the family. Considering the MASIP one can question whether it could be possible that this child enters a stranger anxiety phase. When parents and caregivers would know this and when they are aware of this possibility, it would yield knowledge about how to respond adequately to the child with autism.

Thus, when hypothesized that attachment development in children with autism is delayed, rather than insecure, the research question which arises from the present study is whether children with autism show a phase of stranger anxiety when they are about eight months, and in addition whether they show behavior which is in accordance with stranger anxiety later on. It is expected that children with autism do not process the stage of stranger anxiety when they are about eight months. Consequently, stranger anxiety might be present at a later age.

2 Method

In this chapter the participants, the design, the procedure, and the measurement used in this study are described.

2.1 Participants

The aim of this research was to examine the presence of a stage of stranger anxiety in children with autism when they were about eight months old. In order to test the hypothesis, a sample of children with autism, and a control group of children without this diagnosis were compared. Data were gathered in two different countries, namely Ecuador and The Netherlands.

2.1.1 Children with autism spectrum disorder

This group included a sample of 19 children with autism. Fourteen of them were Ecuadorian of whom 3 were girls and 11 were boys, and 5 were from The Netherlands of whom 4 were boys and 1 was a girl. In total this group consisted of 4 girls (21%) and 15 boys (79%). The mean age was 12.8 years ($SD=5.2$; range 4 to 26). The Ecuadorian children were all connected to the founder of an expertise and daycare centre for children with autism in Quito, called 'Centre Meta'. Their diagnoses had mostly been determined by neurologists or pediatricians as it is common in Ecuador. These children had the average of 3 years of age when the diagnosis autism was determined. The Dutch participants had an active care pathway within RIAGG Kind & Jeugd Maastricht. Furthermore, three participants were included on the base of personal relations of the author, but only one participant was personally known by the author (based on a professional relationship). The average age of diagnosis in this group was determined at 8.6 years. The demographic variables can be found in table I.

Besides the diagnosis of autism some of the children had been diagnosed with other neurological disorders in early childhood, namely tuberous sclerosis, cerebral palsy, virus-linked meningitis, or hydrocephalus. The children vary from high functioning autism to low functioning with mental retardation as a comorbid diagnosis. Three of the pervasive developmental disorders are represented in the research group, namely Autistic Disorder, Asperger's Disorder, and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS).

TABLE I. Demographic Variables of Children with Autism (Research Group)

Ecuador (<i>n</i> = 14)				The Netherlands (<i>n</i> = 5)			
Child	Sex	Age (years)	Age at diagnosis	Child	Sex	Age (years)	Age at diagnosis
1	M	4	3.5	15	M	7	5
2	F	9	2.5	16	M	7	6
3	M	9	5	17	M	12	4
4	M	10	1.5	18	M	12	7
5	M	12	1.5	19	F	26	21
6	F	12	2				
7	M	13	3				
8	M	13	4				
9	M	14	1.5				
10	F	14	3				
11	M	14	3.5				
12	M	16	5				
13	M	17	0.5				
14	M	23	3.5				
Mean		12.9	2.9			12.8	8.6

M = Male; F = Female.

2.1.2 Children without autism

Due to time restrictions no control group was included in Ecuador. Therefore, a group of children without autism was formed in The Netherlands. This group consisted of 5 children with 4 boys (80%) and 1 girl (20%). The mean age was 8.4 ($SD=2.2$; range 5 to 11 years). All children were healthy, typically developing children. All of these children were at least 4 years old because up until this age usually no developmental disorders are diagnosed yet in children. From this age on it is more reliable to estimate whether a child is developing normally. The children were all healthy and had primary school education. Table II presents the demographic variables of the control group.

TABLE II. Demographic Variables of Control Group

The Netherlands (<i>n</i> = 5)		
Child	Sex	Age (years)
1	F	5
2	M	7
3	F	8
4	M	11
5	M	11
Mean		8.4

M = Male; F = Female.

2.2 Design

The present study employed a qualitative explorative research design. As this research is probably the first in its field, qualitative research is indicated to prepare the field for quantitative research. Data were collected cross-sectionally. Given that no research has been done yet on stranger anxiety in infants with autism, no research data on this issue are available so far. Therefore, a qualitative explorative research design was indicated (Baarda, de Goede, & Teunissen, 2005).

2.3 Procedure

Qualitative data were gathered by means of 24 in-depth interviews. The interviews, which took approximately 1 hour of time, took place locally in the children's homes or in an outdoor setting. A list with possible participants for this research in Ecuador (Quito) had been obtained at the Centre Meta, and in The Netherlands at the RIAGG Kind & Jeugd Maastricht and by means of personal relations. In total, twenty possible participants had been framed. The parents of all 20 children were personally approached and they all got additional information about this study. The final research sample consisted of 20 participants. To form a control group, 5 participants without autism were included on the base of personal relations. Consent was given by all of the parents. In all, 25 subjects participated in this research: 20 children with autism from Ecuador and The Netherlands formed the research group, and 5 children without autism from The Netherlands served as a control group. Ultimately, 19 research participants were useful due to one unsuccessful interview. All of the control participants were useful.

Interviews were audio taped, and transcribed verbatim in a Word-document. The interviews in Ecuador were undertaken in Spanish by both a bilingual (Spanish/Dutch) speaking assistant and a Dutch/English speaking researcher. Translation took place immediately during the interview in order to make interaction and participation possible. Loss of information resulting in bias should be considered as a possible limitation of the study. It was guaranteed that the content of the interviews was entirely confidential and that information identifying the respondent would not be revealed under any circumstances.

2.4 Measurement

As there are only few assumptions placed on this subject, exploratory research and hypothesis generation are necessary. Hence, participants should be able to provide data in their own words and in their own way without restrictions already placed in the measurement

(Boeije, 2005). Semi-structured in person interviews were chosen to ensure in depth information and detail. This type of interview further ensures a high tolerability of a longer list of questions, complex questions, steering questions, open-ended questions as well as personal and sensitive questions. Furthermore, as open-ended questions encourage free and information rich answers, the concepts' limitations and extremes are identified.

During each measurement data were obtained from the perspective of the parent. The questions were designed especially for the purpose of this study in cooperation with dr. Delfos. The interview questions serve as an instrument in order to investigate retrospectively the presence of a stage of stranger anxiety in individuals with autism. The interview consisted of three clusters with fifteen open-ended questions in total. All questions concerned three main topics, namely stranger anxiety, features of stranger anxiety later on, and the child's behavior towards his parents and other people. The main question was about the presence of stranger anxiety whereas the other questions served as sub-questions to provide information about specific situations, circumstances, reasons, observations and perceptions, and ideas and possible explanations of the parents. Questions about stranger anxiety and separation anxiety arose from literature findings about attachment development. Stranger anxiety and separation anxiety normally occur before the first year (Bowlby, 1973; Delfos, 2011). Theory about different attachment styles and attachment behavior when a child is tired or distressed, as presented by Ainsworth (1979), lead to questions about the child's behavior in stressful situations, like his way of responding while taking to daycare centre, for example. As the Socioscheme theory postulates that development in children with autism is delayed (Delfos, 2011), the age was always questioned in specific examples. See Appendix A for a detailed overview of the interview questions.

2.5 Analysis

Generally, semi-structured interviews are analyzed with the help of content analysis. The purpose for this qualitative analysis is to portray and classify the respondent's information and impressions. Therefore, the raw data (entire response record) needed to be simplified and transformed into analyzable structure.

According to Boeije (2005) there are three types of coding which enable the researcher to develop an analyzable structure, namely open coding, axial coding, and selective coding. Open coding, word by word analysis, was used to identify, name and categorize events and explanations found in the text. Strauss and Corbin (1998) describe open coding as a process of breaking down, examining, comparing, conceptualizing and categorizing data. Two types of

codes can appear: in-vivo codes which are basically the words used by the respondents, and constructed codes which stem from theoretical concepts. Constructed codes were basically based on Bowlby's attachment theory: *not selectively being focused on others; selectively being focused on the close caregivers; stranger anxiety; actively seeking for contact with the caregiver; separation anxiety; becoming more confident with physical distance from the caregiver*. Other in-vivo codes which occurred were: *no fear of other people; 'as if I didn't exist'; indifference towards others; fear of things, situations, animals or specific persons; withdrawal; special bond with others*. Sensitizing concepts are the constructed codes that arose from literature study. Open coding was followed by axial coding requiring the analyst to relate themes and categories with their subcategories to identify a more complex analysis of causal relationships in the data. Axial coding refers to a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories. The aim of axial coding is to differentiate between more important and less important elements of the study, thereby reducing the amount of data and codes. Finally, selective coding was used to integrate and corroborate the emerging relationships and to construct the explanatory models related to the topic of interest. Selective coding is about the core category, systemically relating it to other categories, and filling in categories that need further refinement and development. The focus is about integration and making connections in between the categories. How this worked into practice will be described next.

Though some electronic software programs exist to support analyzing qualitative research, the author was advised by several experts in qualitative research to analyze the data manually. Therefore, all transcribed interviews were printed out. By the use of different colored pencils all quotations related to specific codes of all interviews were underlined. This process was repeated several times since reading and re-reading provides the author knowledge how to differentiate and code all quotations. All of the ideas and thoughts of the researcher which could be possibly important related to this process were registered in codes and notes. For example, many parents used the Spanish word 'mamitis'. Translated this means that the child is focused strongly to the parent. But some interviewees used this in a context of their child being afraid of other people, and some used it to explain about separation anxiety. These two subjects had to be discriminated since they refer to different topics. Next, in order to overview all quotations related to their relevant codes, a diagram was made. Quotations were copied and cut and subsequently put under their corresponding codes. This overviews diagram clarified all of the relevant items related to the main topics.

2.6 Validity and reliability

Validity and reliability usually refers to the replicability of measurements under exactly equal circumstances. Unfortunately that is not within reach of a qualitative study because replication is not possible (Maso & Smaling, 1998). Nevertheless, internal reliability can be persecuted by the use of audio-taped documents. Because of the fact that the interview takes place on just one occasion, more factors may influence the reliability of the study: the state of mind and concentration and tenseness of the interviewer, and his way of questioning. Involvement of the interviewer, meaning both his position and the relation, are important factors with regard to quality (Baarda, et al., 2005; Boeije, 2005). For analyzing data Boeije (2005) advises to work in a team for cooperation in open coding, axial coding and structural coding. This increases the inter-rater reliability. In this study the researcher worked individually, so inter-rater reliability could not be established.

In order to increase internal validity, memo's and notes were registered. Due to time deficiency consensual validation did not took place.

3 Results

The purpose of the present study was to answer the question whether children with autism present a stage of stranger anxiety when they are about eight months old. With regard to the qualitative explorative research design, other relevant subjects related to this issue could be questioned too. When initially no stage of stranger anxiety was reported, features related to stranger anxiety had been tried to trace later on in the child's live. Furthermore, other topics related to attachment theory were discussed. Ultimately, parents noticed some other relevant themes related to their child. The main study themes that emerged of the present data included 1) stranger anxiety before one year; 2) stranger anxiety later on; 3) no fear at all towards strangers; 4) other issues related to attachment theory like separation anxiety and better coping with physical separation. All quotations refer to the serial numbers of children as mentioned in table I and table II, the Research Group (RG) and Control Group (CG), respectively.

3.1 Stranger anxiety before one year

None of the parents from children with autism reported a stage of stranger anxiety before one year. The characteristics of the qualitative data are presented in examples A parent of a 12-year-old boy stated:

“More than fear of strangers he had fear of new situations. He never had any fear of strangers.” {RG5}

This statement was in line with other interviewees' responses. A parent of a 7 year old boy compared his development with his younger sister and concluded:

“He has always been an easy and humble child. When I think about his younger sister, I remember she suddenly rejected completely from the caregivers at daycare centre. This only took a short period of time, a few weeks, and later on it just disappeared. I cannot remember he had this kind of stage.” {RG15}

In the same vein, the parents of a 12 year old boy made a comparison with their sons' siblings:

“His brother definitely presented a stage of stranger anxiety, despite he was exposed to many strangers all the time, because I had a very busy social live those days, and you would expect that he was actually used to strangers. But by the age of five months he suddenly rejected strangers. It only took a short period of time, a couple of weeks. I cannot remember that *he* past that kind of stage. *He* never showed fear of strangers.” {RG16}

The next quotation is supported by an example that came into the mind of these parents while remembering their 26-year-old daughter as a child:

During her first year she actually didn't respond to anything. If there were visitors, she wouldn't notice. We took her everywhere, but it didn't impress her at all. I don't think she differentiated between friends or family and strangers. She didn't know about that. For example, we could have given her to some total stranger, she would not have noticed. [...] Stranger anxiety is not something that is in accordance with her." {RG18}

Some parents, 4 out of 19, mentioned that their child presented anxiety towards some specific persons. The parents of this 13-year-old boy explained:

"He never had any fear of strangers. Of course he preferred some people over others. But he did show fear of dark-colored people. And once there was this little boy with light-colored curly hair towards whom he showed real fear." {RG7}

In the same line, another parent from a 14-year-old boy described:

"When he joins me visiting a friend everything seems to be ok. But as soon as the mother of that friend enters the room, he grabs me, or walks over to the door and becomes really nervous. He shows real fear at that moment. Possibly there is a bad connection between them, or maybe it is because the way she responds to him." {RG9}

Though this example could be defined as a fear of strangers, it doesn't represent the anxiety typically seen when children are about eight months old. In that case the child shows fear towards all people, except its closest caregivers. When this parent {RG9} was asked whether this fear is seen towards other strangers as well, she responded: "Not towards other people. He is not afraid of other people."

Also the next quotation describes both fear of a specific person and general fear of strangers. This parent of a 9-year-old girl said:

"I remember, for example, when a friend of her sister entered the room when a birthday party was going on, she became afraid immediately. I actually don't know why. Sometimes this happens with specific persons. It looks like fear, but eventually she tries to get closer. [...] She never showed fear of strangers in general." {RG2}

Some parents described their children having feelings of discomfort towards strangers, but obviously this is not to be defined as stranger anxiety. Although specific questions about stranger anxiety before one year were denied by this parent of a 14-year-old girl, she described:

“She likes to be alone. If there is a party going on for example, she won’t join the guests. From time to time she comes over to watch, but mostly she will observe the people from a distance. I don’t know if she is disappointed about not getting any attention or if she is bothered by the music which is probably too loud for her.”
{RG10}

So far, no parents in the research group reported a stage of stranger anxiety before the first year of age. Questions about fear were mostly replied by answers about specific fears. Some distinct examples that were mentioned were things like umbrellas or mirrors, specific advertisements on television, specific personal names. These examples are not in accordance with stranger anxiety, but support the fact that parents seriously tried to remember what kind of specific fears they have noticed with their children.

In conclusion, no stranger anxiety before one year had been mentioned by parents in the research group. Parents in the control group on the other hand, described features of stranger anxiety as one would expect according to Bowlby’s attachment theory (Bowlby, 1973). A mother of an 11-year-old son responded:

“I went back to work again when he was about 2,5 months old. His grandmother took care of him. The first few months everything was fine. Then, suddenly this changed. He started to cry when I left, he didn’t want me to leave him there. Before, he never showed this behavior. This was exactly like you would expect from literature about babies development, but I couldn’t imagine that my son would act like this, since the situation with his grandmother as caregiver was exactly the same. Also in the supermarket he suddenly became afraid of strangers. When people approached him, I saw fear in his eyes. [...] I noticed that he tried to make eye contact with me. The reason why he did that was to check with me how I would respond towards these people. After confirmation he felt ok. [...] It only took a short period of time. Later on this reaction decreased. When he started walking independently he even walked away from me to go and babble to strangers.” {CG5}

The control group shows a little variance in age when stranger anxiety appears. However, it is still mentioned around the first year. According to this interviewee:

“As a baby he was really easy. He would not have mentioned when I would have given him to another person, so to say. From the moment that he started to walk, this changed. He rejected people that he was not familiar with. He acted aloof and checked for us to stay close to him. He tried to see how I responded to those strangers. [...] When there were strangers around he tried to make eye contact with me. I confirmed him with my facial expression. Subsequently he felt more convenient. [...] In total this

lasted for about 3 or 4 months. After that period he was easy with other people.”
{CG4}

One out of five respondents in the control group did not mention fear of strangers before one year, though this parent did describe features in accordance with this stage, namely seeking for eye contact and being restraint towards strangers. Perhaps the right way would be to speak about a ‘mild expression of strangers anxiety’. {CG1} being a girl, internalizing instead of externalizing behavior should be taken into account, which could account for a mild expression of strangers anxiety. The following may illustrate this:

“She actually never showed real fear of strangers. When a stranger would enter the house, first she would be reserved, and after a while she would have tried to make contact. Besides that she had been an accessible child, she would always try to make eye contact with me to check whether everything is ok.” {CG1}

Ultimately, all findings in the research group do not represent stranger anxiety before one year, whereas findings in the control group are more in accordance to the theory of attachment development stated by Bowlby.

3.2 Characteristics of stranger anxiety later on

At first, questions about stranger anxiety were related to the first year. As no parent of the research group confirmed a presence of this stage at this age, features of stranger anxiety were questioned within a broader range of age. The next quotation from a mother extensively describes a development in her 4-year-old son:

“No, in the first year he didn’t show any fear of strangers. He actually seemed to like it. He was ok when people lifted him up, mainly family. Before the first year there were no problems. When he turned 2, his behavior started to change. [...] Towards my parents he suddenly felt some distance. He didn’t permit them to come closer anymore. He didn’t like it anymore when other people lifted him up. I saw that he closed his eyes. When my parents came over, he was really afraid. I explained who they were. If they stayed here for the whole day, eventually he found trust again. He was about 2 or 3 years then. [...] If his grandfather wanted to lift him up, he clinged into me. These days he does that less often. Nevertheless, this behavior doesn’t fit for his age, I think. It would be more consistent with the age of 1 or 2 years old, I guess.”
{RG1}

More quotations represent characteristics of stranger anxiety later than at the expected age of eight months. Whereas the previous example is about an age of 2 years, the next one outlines

features of stranger anxiety at the age of 17 years. The parents of this 23-year-old boy remember:

“Before he turned 17, he acted indifferently towards strangers. It was not a problem when strangers would enter. He was not interested in them. People at the shopping mall also didn’t affect him. He just didn’t care about it. Nowadays it is hard to walk in the streets. If he faces strangers he gets upset and sometimes he even becomes aggressive. Many things have been changed since he turned 17. [...] If a stranger would enter the house, he would become upset. [...] It looks like fear. It is like he measures whether that person is good or bad. If he doesn’t feel ok, he would isolate himself.” {RG14}

Another parent of a 10-year-old boy states:

“Ever since the age of 3 or 4 year old he became afraid of strangers. Although he seemed to get over this, he is still having some trouble with this.” {RG4}

Whereas these examples describe the fear, the latter doesn’t refer to this emotion specifically, but indeed portrays one of the features which belong to the stage of stranger anxiety typically, namely seeking for eye contact with the trusted adult, the parent. Regarding their 12-year-old son these parents observed:

“He never showed any fear of strangers. Later on he became shy though. Whenever he is confronted with a group of teenagers in the streets, he gets upset, and he will face the ground. When there are strangers around, nowadays he will seek for eye contact with us. He never used to do that before, but now I feel that he is trying to contact us. It is like he tries to measure whether these people are ok.” {RG16}

Although it is atypically, since this boy is already 12 years old instead of the more expected age of eight months, this finding represents an important part of attachment development. When a child seeks for eye contact and hereby naturally reads off the parents’ confirmation, the parents get the opportunity to explain about strangers. This helps the child to learn how to differentiate between who is to be trusted, and who is not. This brings us to the next paragraph, where parents describe a common feature of children with autism. Namely, many children with autism do not seem to be able to differentiate in their behavior between close relatives and others.

3.3 No fear of strangers at all

In line with the previous section, this section also represents examples from the research group only. During answering questions about stranger anxiety, some interviewees

responded contrary to any possible features of fear. Eight out of 19 respondents described their children as not being anxious at all. The mother of a 14-year-old boy stated:

“Last week he joined me visiting the grandmother who stayed in the hospital. He waited outside in the aisle. Later he was gone. I discovered he left with the pastor. He just joined that man even though he doesn’t know him at all.” {RG9}

One can imagine that this is a cause of concern to parents. According to this mother of a 17-year-old boy:

“He does differentiate between people he is familiar with and strangers, but he has no inhibition in approaching a total stranger for a play for example. He could go and join some total strangers, which makes me scared sometimes.” {RG13}

This example was quite equal to what this mother of a 9-year-old girl describes:

“I don’t know if she understands the difference between familiar people or others, but she doesn’t have any problems with strangers at all. I actually never explained to her who is a stranger and who is not. If we visit a restaurant for example, she could be able to approach the strangers at the next table and take their drinks. She doesn’t know the difference at that moment.” {RG2}

According to the parent of a 16-year-old boy:

“Naturally he doesn’t differentiate between people. He responds equally to everybody. Once he just jumped into a man and his child who were walking in the street. He asked him ‘how are you?’. He doesn’t understand why one should not act like that. It just happened recently.” {RG12}

In general, the next quotations represent a kind of curiosity towards strangers due to a lack of distinguishing abilities or maybe a lack of fear. The parents of a 7-year-old boy mentioned:

“He never showed any fear of strangers. He had always been really curious. He made contact with strangers easily. If a stranger would enter the room, he would start questioning things like ‘what is your name and what are you doing here?’ and ‘what kind of shoes are you wearing?’ At that point he would not make eye contact, but he would talk to anyone.” {RG14}

This is in line with the next quotation from the mother of another 7-year-old boy:

“I don’t remember him ever presenting a stage of stranger anxiety. [...] When he was about 3 or 4 years old, he just approached the mailman and asked him all kind of questions like ‘who are you?’ and ‘what are you doing?’. He made contact really easily, it was anything but fear. It is like he only sees the good things in humans. He is really accessible and approaches people easily. We teach him not to. He approaches people so easily, it makes me feel concerned. We try to warn him because we are afraid that one day he will approach some bad person. But we still don’t trust him

because he doesn't seem to understand yet. [...] It is like he lacks the threshold whether it is safe or not. Actually you would expect a 7-year-old to understand. Nevertheless, I expect him to develop this because in some things he is just more slowly, but eventually he will reach that point as well." {RG15}

3.4 Special bond or chemistry

Although it was not included in the interview schedule, some parents in the research group came up with a specific topic while discussing their child's behavior towards strangers. Five out of 19 parents described a so called chemistry between their child and some specific others. To the author's opinion it is worthwhile to address this topic in the research analysis. Obviously, it is something parents of children with autism experience and relate to the research issue. Many people will acknowledge the fact that one can feel a special bond with another person, though not being able to exemplify a reason for that. Apparently, this is not only to be attributed to typically developing people in comparison to individuals with autism. The boy in the next example is 14 years old and did not show stranger anxiety. The mother said:

"He observes people, just like he does with situations. We do not have many acquaintances, so he is not being confronted with many people all the time. But he knows how to sense social things, for example a voice. That is why he likes some people more than others. [...] It is like he feels whether someone is really nice, or faking." {RG11}

The mother of a 12-year-old girl described in the same context: "She can read your soul." {RG6}

These kind of statements were mostly reported after questions about differentiation between other people. The mother of a 7-year-old boy explained:

"There are some specific individuals he likes more than others. There is an uncle, for example, he prefers more than other family members. In a birthday party he will always approach him to sit next to him. He also fancies one of my friends. It is like there is some special connection between them. His preference towards these people is very strong. He accepts a lot from them." {RG15}

3.5 Other issues related to attachment theory

Stranger anxiety is one of the features of the third level of attachment development according to Bowlby (1973). See the first chapter about attachment development where the four levels are explained. Since the interviews were of a semi-structured nature, parents were

able to talk freely about the attachment development of their children. Besides stranger anxiety, two other features are characteristic for the third stage of attachment development, namely *actively staying nearby the caregiver* and *separation anxiety*. These features, and also features belonging to the fourth level, when children have already learned how to cope with physical distance from their caregiver and become confident with that, have been mentioned several times by parents in the research group. Regarding the first and second level, namely the items *not selectively responding to human beings* and *selectively responding to caregivers* respectively, also yielded discussion among some parents. In fact, this paragraph shows the findings of this study which can be put into a more complete attachment theory perspective. Whereas the other paragraphs in this chapter showed findings about stranger anxiety specifically, further, findings which cover the complete sequence of attachment development levels will be briefly defined, in order to showcase some individual development with regard to attachment. Hopefully this will clarify that these children who represent the research group do show some features belonging to attachment development. For instance, this 9-year-old boy, whose parents described features of all levels, except for stranger anxiety. It is remarkable that they observe features that can be interpreted as *selectively being focused on the caregiver (second level)* and *actively staying nearby the caregiver (third level)*, only recently. While perceiving these observations it is important to keep in mind that this is about a nine-year-old boy with matching physical abilities.

“As a baby he was not focused on his mother, like other babies use to do. He didn’t cry when he was hungry and he would not search for her breast. [...] During his first year, we remember him being selectively focused on us only for two times. Once when he felt over. [...] Until last year he would have responded indifferently when I had to leave the house. Ever since last year that has been changed. Now he is constantly chasing me. When I leave unexpectedly, he cries. [...] Ever since that moment he also wants to sleep in our bed. In the middle of the night he comes over and joins us. I don’t know why. It feels like he is a little baby. Before he was able to play in his room quietly and then suddenly he started to chase me. At first we thought it was deprivation of development, but now we consider it as development in progress, because he is more selectively focused on us. He doesn’t respond indifferently anymore when I come to pick him up from daycare centre. [...] He also dares to explore more things. In the shopping mall he walks ahead more than he did before, although he still keeps us in sight.” {RG3}

Another atypical example of attachment development is given by the mother of a 14-year-old boy, who didn’t show any stranger anxiety either:

“He was about one and a half or maybe two years old when he first started to panic when I was out of sight. For example when I went to put the garbage outside or when I took a shower. Even when I went to the bathroom he stayed close to me. [...] This happened until he was eight, then it got less and less. Now he seems to be over it.” {RG9}

Obviously, the stage of attachment development took much longer than we expect according to Bowlby’s theory. Another quotation which indicates a deviant development with respect to attachment development and age is stated by the mother of this 16-year-old boy:

“About a year ago something happened which never has happened before. In the corridors of a supermarket he got lost. He was not able to find us anymore. He got totally upset. From that moment on, for the first time in life, he felt like belonging to us. Since that moment he is more focused on me as a mother. Though it has not come up with stranger anxiety yet.” {RG13}

A final quotation which shows an atypical finding is mentioned by the mother of this 17-year-old boy:

“Until the age of 3,5 he was very aloof, he acted in an unresponsive way. We never knew whether he was able to understand us. [...] By the age of 5 we discovered that he understood everything. [...] There was this stage when he tried to hide himself behind us, when a stranger approached him, but that was more because of being shy, not because of being afraid. [...] Three years ago his father had to go on a trip for work, and our son was not able to let him go. In fact he was 15 years old and he kept on asking for his father. He still has some trouble with that. Whenever we have to go out, he gets upset. He embraces us when we arrive at home and tries to stop us from leaving again.” {RG13}

Evidently, this behavior is not in accordance with a 15-year-old boy. Suddenly experiencing trouble in physical distance, so called separation anxiety, with his parents could be interpreted as deprivation of development, but with regard to delayed attachment development in children with autism, this could be a sign of postponed development. Is he possibly starting to realize who his caregivers actually are? Is this possibly a symptom of development? In the next chapter, all findings will be processed like this. Hence, it can be summarized that the children with autism in the research group present a deviant attachment development. No stranger anxiety had been reported so far. Adjacent to this, some other features emerged, though not in accordance to the developmental levels as stated with specific ages in Bowlby’s theory (1973). Various ages and also various lengths of periods have been described. The question is

whether these findings mean that there is a deviation or failure, or maybe a delay in development.

4 Discussion and conclusion

This final chapter reviews the results of the present research. Limitations of the study will be discussed and further recommendations will be proposed. The discussion will bring the outcomes to a general conclusion.

4.1 Discussion

The focus of this study was on the investigation of the presence of a stage of stranger anxiety in infants with autism when they are about eight months. As the author knows of no research on delayed development of attachment in children with autism, and of no research on stranger anxiety and autism, a qualitative design was called for. Given that typically developing children show such a phase when they are about eight months of age, and a new model, the Socioscheme theory, hypothesizes autism as a delayed development with respect to this subject, it was to be expected that the research group would not report stranger anxiety around eight months.

The results of this study lead to a negative answer to the main research question. The research group, consisting of 19 respondents in two countries, unequivocally did not recognize any kind of stranger anxiety features before one year. Albeit, 4 out of 19 interviewees witnessed typical characteristics consistent with stranger anxiety, but much later than is to be expected. The ages which were mentioned vary widely, nevertheless it seems to amount to delay. The ages whereupon stranger anxiety was recognized by the parents were 2 years {RG1}; 3 years {RG4}; 12 years {RG16}; and 17 years {RG14}. The Socioscheme theory (Delfos, 2002) does not predict a specific duration of delayed attachment, delay concerns many developmental fields who all can be more or less involved. So far, no strong clarification is available yet which supports interpretation of these findings except the Socioscheme theory. However, considering that children with autism spectrum disorders vary in a broad range with regard to different developmental stages, it is possible that also the stage of attachment development has no specific prospective outcome for age. The MAS1P (Delfos, 2011) states a disharmonic developmental profile in individuals with autism, which presumes that development and maturation may occur later than in typically developing children, but not conjugate to a specific age. Thereby, not responding adequately to the demonstrated signal of stranger anxiety could also hamper the development when children are at the maturation point. Regarding this hypothesis, it is to be expected that individuals with autism differ in age in exhibiting stranger anxiety.

As the Socioscheme theory is a new theoretical concept, it is not evidence-based yet. No research has been done so far on slower maturation in some development areas (e.a. social interaction) and accelerated development in other areas in the same time in individuals with autism, as postulated in the Socioscheme theory. Also the MAS1P is a new term. It basically describes the developmental profile which is often highly disharmonic in children with autism. However, the Socioscheme theory attempts to cover all criteria which are important for a theoretical model as formulated by Happé (1994). The Socioscheme theory namely captures already existing theories, and is able to exceed by the use of relevant research findings. Out of here it tries to explain characteristics of autism. Nevertheless, much more research is necessary for a theory becoming evidence-based.

Although only 4 respondents report stranger anxiety later in life, these examples provide us with important information with respect to delayed development. Two of them {RG1 and RG14} show essential characteristics of stranger anxiety: their behavior suddenly changed to unexpected fear towards strangers. Before, these children did not seem to be anxious at all and the parents reported their children being indifferent towards others. But for the parents ‘suddenly’ they started to be afraid of other people in general. Whereas the first mentioned respondent {RG1} observed this stage as already preceded, respondent {RG14} still observes signs of stranger anxiety. Also, two other interviewees {RG4 and RG16} still notice persisting features of stranger anxiety in their child. Nevertheless, respondent {RG16} only announces one main trait, namely seeking for eye contact with the parents, without reporting any other traits of stranger anxiety. Therefore, it cannot be concluded whether this has to be regarded to stranger anxiety specifically. A significant part of the results, namely 15 out of 19, cannot endorse a possible delay of stranger anxiety. Possibly the mature age was not within the realm of the research. Consequently, the present research does not confirm the hypothesis for a delayed stage of stranger anxiety in infants with autism. A question which arises is whether this suggests that stranger anxiety is not about to occur at all, and that the positive results of the present study were only based on coincidence, or whether stranger anxiety can still be hypothesized as delayed, but cannot be proven yet because of limitations of this study. Inspecting that the average age of the research group is only 12.8 years, results are limited. For example, when a research group with a broader range of age and a higher mean age could be implemented, more years of the individual’s lifetime could be investigated. Also, the lack of response to strangers anxiety from the parents as a result of not recognizing the stage is to be taken into account too for absent signals of strangers anxiety.

An interesting finding is that quite some parents of the research group note that their children do not show any fear of strangers at all, which means that they do not seem to understand a distance which is sometimes asked in social situations. Parents express their worries about this issue. Is there maybe a relationship between these two themes? Why are many children with autism not afraid of others and do they seem to be indifferent towards unknown people? A possible explanation could be the fact that children with autism, who did not process a stage of stranger anxiety, lack important knowledge about social interaction, which is partially gained during this phase.

However, some parents report that their children seem to experience this so called chemistry, or special bond, with some specific others. Apparently, they are able to sense this social connection, just like any other person sometimes experiences with specific others. This seems to be inconsistent in the light of how we think individuals with autism perceive social interaction. How can this be placed in view of a delayed attachment development with a postponed stranger anxiety? The theory of the socioscheme shows an empathic development in a male sense, that is more sensitive to negative signals like danger and stress (Delfos, 2011).

Furthermore, the findings of this study demonstrate other items of attachment development which seem to be delayed as well. Traits like *selectively responding to caregivers*, *selectively being focused on the caregiver*, *actively staying nearby the attachment figure*, *separation anxiety*, and *better coping physical distance* were reported, but often later than represented in the control group. Despite the fact that the present study did not focus on these items specifically, these findings are an important addition to the major results.

The current study cannot be compared to other studies since this specific topic has not been investigated yet. Previous research pretended attachment development in children with autism as insecure. In the last decade of the last century, Rogers et al. (1993) assumed later development of secure attachment as a result of development from insecurity to increasing signs of security. The Socioscheme theory presumes a delayed development without considering types of attachment styles. The qualitative data analysis of the present study generated several interesting findings that suggest attachment development in individuals with autism is delayed. Future research should expand in the number of respondents and try to broaden the range of age to capture older individuals with autism.

4.2 Limitations of the study

It is essential to discuss the limitations of this study. There are several limitations. First, it is qualitative research which is less controllable than quantitative research. The research population consisted of 19 respondents. Hence, the number of interviews is small and could therefore bias the results. The diagnose of autism is not always pure, more diagnosis are present in some co-morbidities. The present research did not differentiate between different types of autism. Data were gathered from children with Asperger's disorder, Autistic disorder, and Pervasive Developmental Disorder Not Otherwise Specified. Thereby, difference in IQ was not registered. Autism spectrum disorder can come along with a broad range of IQ. This study did not take the possible effects of level of mental retardation or giftedness into account. Moreover, due to differences in mental health care in Ecuador, diagnoses are usually made by doctors, mostly neurologists, instead of psychologists like in The Netherlands. Some children from the research group in Ecuador might have suffered from a syndrome that causes autistic-like behavior, which basically is not in fact about autism.

The mean age of the research group is rather low. Results concerning a research question about delayed development will be under influence of the range of age. Therefore, a future recommendation would be to elevate the mean age with a narrow standard deviation. Another limitation which must be noted is that most interviews were taken in a different language than the native language of the interviewer. Although a co-interviewer translated from Spanish to Dutch, there is some information loss anyhow, also because this was not a native speaker or professional trained interpreter. The control group was very small, construed from a different perspective than the research group. Also, the control group was confined to only one country. With respect to stranger anxiety, literature does not account for a trigger in the anxiety. Is there an experience that triggers this at the 'right' age? If so, were the signals of intense specific fears the start of stranger anxiety or were this specific anxieties, perhaps even due to traumatic experiences? Ultimately, the fact that findings of the present study were gathered by answers of parents' memories may bias the results. Retrospectively answering questions can be difficult for parents with older children. The research group namely consists of children with an average age of 12.8 already, so it can be questioned whether memories are still reliable over more than one decade. A solution for this problem could be found in a longitudinal research study that involves repeated observations of the same variables over a lifetime of individuals with autism. Early diagnosis of autism would be an important condition to make this possible.

Regarding future recommendations, the above mentioned issues could be taken into account when proposing a follow-up research.

4.3 General conclusion

The findings of this study show that children with autism do not have a stage of stranger anxiety when they are about eight months old till one year old. This was in line with which was expected. Additionally, further analysis of the data provides information that this very important stage of attachment development possibly occurs later in life. Future research with a larger sample size and higher mean age is necessary to examine the same research question. Support of this hypothesis would validate the new insight about autism which states that there is a delayed development, rather than a deficit. Speaking about delayed development leads to much more empowerment and confidence in future maturation. Furthermore, building on such knowledge, parents and caregivers will be able to respond much more adequately to the child's behavior, in order to guide him in his needs.

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Appendices

Parte I: Datos personales / *Deel I: Personalia* / Part I: Personal

1. Nombre, edad, genero de su hijo(a) / *Naam, leeftijd, sekse kind?* / Name, age, sex child?
2. Conformación de su familia? / *Samenstelling gezin?* / Family composition?
3. Edades del padre y la madres? / *Leeftijd ouders?* / Age parents?
4. *Ocupación del padre y la madre?* / *Werk ouders?* / Work parents?
5. Diagnóstico? / *Diagnose?* / Diagnose?
6. Edad en la que hicieron el diagnóstico? / *Leeftijd waarop diagnose is gesteld?* / Age of diagnose?

Parte II

- A. Nos puede contar algo sobre la fase de fijación a la madres/padre su hijo?

Kunt u iets vertellen over eenkennigheid bij uw kind?

Can you tell me something about your child being afraid of strangers?

1. Su hijo ha tenido la fase de fijación a la madre/padre antes de cumplir un año? Eso significa que el niño de repente empieza a tener un apego my fuerte hacia sy madre, padre y adicionalmente experimenta un temor hacia personas extrañas, mientras antes no tenía ese temor.

Heeft uw kind een eenkennigheidsperiode gehad voordat hij/zij één jaar was? Hiermee wordt bedoeld dat een kind opeens angst voor vreemden heeft, terwijl dit voorheen niet zo was.

Can you tell me about how your child behaved towards other people/straingers during his/her first year? This means that he/she is suddenly afraid of strangers, while this wasn't the case before.

2. Su hijo tuvo esta fase a una edad más avanzada?
Heeft hij/zij later een eenkennigheidsperiode gehad?

Did he/she had such a fase later on?

3. Su hijo de vez en caundo tiene esa fijación? Desde cuando?
Is uw kind wel eens eenkennig? Sinds wanneer?

Is your child afraid of strangers sometimes? Since when?

4. Su hijo difencia entre personas conocidas para él/ella y personas extrañas?
Maakt uw kind verschil tussen wie vertrouwd zijn voor hem/haar en wie niet?

Does your child differentiate between people who he/she knows and people he/she doesn't know well?

5. Qué edad mental piensa que tiene su hijo en el tema de la interacción con otras personas?
No se preocupe/ni tenga miedo de decir una edad diferente a la cronológica, eso es posible.
Welke mentale leeftijd denkt u dat uw kind heeft, als u kijkt naar het onderwerp omgang met andere mensen? Wees niet bang om een afwijkende leeftijd te noemen, dat is mogelijk.
Which mental age do you think your child has, if you look at how he response at other people? Don't be afraid to say something aberrant, that is possible.
- B. Usted nos puede contar algo sobre la actitud de su hijo frente a otras personas?
Kunt u iets vertellen over hoe uw kind zich opstelt ten opzichte van andere mensen?
Can you tell something about your child response towards other people?
6. Usted puede describir el comportamiento de su hijo frente al personas extrañas y personas menos conocidas. Por ejemplo, como responde sy hijo cuando llegan extraños a su casa?
Kunt u het gedrag van uw kind ten opzichte van vreemde of minder bekende mensen omschrijven? Hoe reageert uw kind bijvoorbeeld als er vreemden in huis komen?
Can you describe your child's behavior towards strangers or people he/she doesn't know very well. For example, how does your child response when strangers enter your house?
7. Usted puede describir la conducta de su hijo frente a la familia?
Kunt u het gedrag van uw kind ten opzichte van familie omschrijven?
Can you describe your child's behavior towards family?
8. Su hijo tiene temor hacia personas extrañas o su hijo su comporta tranquilo con extraños?
Is uw kind bang van vreemden of gaat uw kind gemakkelijk om met vreemden?
Is your child afraid of strangers or is he easy handling strangers?
9. En el caso de guarderia/centros: cómo es su actitud hacia los profesores/terapeutas y hacia otros niños?
In geval van opvang: hoe is zijn/haar houding naar leidsters en andere kinderen?
In case of daycare: how is his/her attitude towards daycare teachers and other children?
- C. Cómo vive/experimentas usted la conducta de sy hijo hacia usted?
Hoe ervaart u het gedrag van uw kind ten opzichte van u?
How do you experience your child's behavior towards you?
10. Cómo siente/experimenta usted la conducta de su hijo después del medio año de edad?
Era más, menos o de igual manera dirigida hacia usted?
Hoe ervaart u het gedrag van uw kind naar u na het eerste halfjaar? Was het meer of minder of evenveel op u gericht?
How do you experience your child's behavior after the first six months? Was it more or less focused on you, or equal?

11. Cómo se desarrolló la conducta de su hijo hacia usted?
Hoe heeft dit zich ontwikkeld (het gedrag van uw kind ten opzichte van u)?
How has this developed (your child's behavior towards you)?
12. Cómo se siente usted ahora con su conducta (hacia usted)?
Hoe voelt u zich bij dit gedrag nu?
How does that feel for you at this moment?
13. Si llegan personas extraños o menos conocidas a su casa, su hijo se agarra a usted? O su hijo hacía eso antes?
Als er vreemden of minder bekende mensen komen, klampt uw kind zich dan aan u vast? Of heeft uw kind dat gedaan?
How does your child response when strangers or unknown people arrive? Does he/she attach towards you? Or has he/she done that before? Why do you think your child does this?
14. Si llegan personas extraños o menos conocidas a su casa, su hijo busca contacto visual con usted? So su hijo hacía eso antes? En el caso que sí, porque cree usted que su hijo hacía eso?
Als er vreemden of minder bekende mensen komen, maakt uw kind dan oogcontact met u? Of heeft uw kind dat gedaan? Zo ja, waarom denkt u dat uw kind dat doet?
If strangers enter arrive, does your child attach towards you, or has he/she done it before?
15. En el caso de guardería/centros: cómo responde su hijo a la despedida cuando usted le deja y/o cómo responde su hijo cuando le viene a recoger?
In geval van dagopvang: hoe reageert uw kind op uw afscheid bij brengen en/of hereniging bij halen?
In case of daycare: how does your child response at farewell or reunification?