

The development and maintenance of friendship in high-functioning children with autism

Maternal perceptions

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ABSTRACT The current study investigated mothers' perceptions of the development of friendship in high-functioning children with autism and in typically developing children. Fourteen mothers in each group (autism, typical) completed the Childhood Friendship Survey regarding their children's friendships. Main results indicated that both groups (autism and typical) tended to have same-gender and same-age friendships. However, friendships of children with autism differ compared with typical children's friendships on number of friends, friendship duration, frequency of meetings, and type of activities. Half of the friendships in the autism group were mixed (friendship with a typically developing child). Mixed differed from non-mixed friendships in that mixed pairs met and played mostly at home, whereas non-mixed pairs met and played at school. Factors contributing to the development and formation of friendship in each group are discussed.

KEYWORDS
friendship;
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A unified definition of friendship, accepted by all researchers, does not yet exist. However, most researchers tend to perceive friendship as a close, intimate affective tie between children that is based on reciprocal and stable (6 months and above) social interactions with a peer (e.g. Buhrmester, 1990; Dunn, 1993; Hartup, 1992; Howes, 1983). Friendship is a significant social experience for children, enabling them to develop and practice fundamental prosocial behaviors, such as mutual caring, emotional support, empathy, liking, intimacy, and sharing. Yet, at the same time, friendship requires certain skills such as the ability to compromise, the

capacity to understand and consider another child's perspective, emotional regulation capabilities, and efficient strategies for conflict resolution (Asher et al., 1996; Buhrmester, 1996; Hartup and Sancilio, 1986; Howes, 1996; Newcomb and Bagwell, 1996). Recent research on social information processing has stressed that the quality of children's peer relationships will have an influence on each stage in the processing of social situations, and that a close peer friendship will motivate a child to embark on more complex social information processing and to take into consideration the friend's point of view on the situation (Lemerise and Arsenio, 2000). Thus, friendship requires social skills; but, at the same time, the experience of friendship helps in developing these skills. Furthermore, the formation of friendship involves interrelations in all areas of development including cognitive and linguistic abilities, symbolic thinking, emotional understanding and expressiveness, and representational capacities (Dunn, 1993; Hartup, 1996; Hartup and Sancilio, 1986; Howes, 1992; Parker and Gottman, 1989). The lack of friendship is correlated with later adjustment problems (Parker et al., 1995).

Children with autism frequently have difficulties establishing friendships. A failure to develop peer relationships appropriate to developmental level is a diagnostic criterion for these children (DSM-IV: American Psychiatric Association, 1994). Furthermore, different theoretical approaches to these children's social-emotional deficits have also led to pessimistic predictions regarding the feasibility of friendship in children with autism. The affective view of social-emotional deficits in autism predicts difficulties in developing affective closeness and intimacy with a friend, which are considered to be essential functions of typical friendship (Hobson, 1993; Kanner, 1943; Wimpory et al., 2000). The theory of mind view of the core deficit in autism – emphasizing the child's difficulty in understanding that other people have different thoughts, desires, and feelings – predicts crucial difficulties in the reciprocity and empathic prosocial behaviors (e.g. comforting, caring, complimenting, listening) necessary for friendship development (Waterhouse and Fein, 1997).

Despite consensus that friendship constitutes a major area of difficulty for children with autism, recent empirical evidence suggests that friendship is an actual experience at least for high-functioning children with autism, who reported having at least one best friend and whose reports were verified by their mothers (Bauminger and Kasari, 2000). The potential for such a complex social experience as friendship seems to correspond with other higher social-emotional capabilities of high-functioning children with autism, as compared with their lower-functioning counterparts with autism. For example, the former are more likely to initiate social behaviors in peer interaction, reveal higher sensitivity and responsiveness

to social bids, and understand a larger repertoire of emotions that includes complex affects such as pride or embarrassment (Bacon et al., 1998; Kasari et al., 2001; Sigman and Ruskin, 1999; Stone and Caro-Martinez, 1990).

Moreover, friendship may be a particularly advantageous social framework for the development of social skills in high-functioning children with autism. It offers a one-on-one social experience with a familiar peer whose benefits include continuity over time; greater predictability owing to the fact that children learn to know one another's interests and to develop shared play routines; and a more ongoing, secure, and structured social experience in which to practice social activities, feelings, and skills such as cooperation, social initiation, play skills, taking another person's perspective, and sharing (see review in Bauminger and Kasari, 2001). However, friendship is an overlooked area of research in autism; therefore, we know very little about its development in these children.

The challenging nature of friendship for children with autism, due primarily to the aforementioned key problematic prosocial, affective, and reciprocal behaviors, implies that these children will need help in the development and maintenance of this type of peer relationship. One important source of support for these children's formation and maintenance of friendships may lie in their parents' ongoing support and guidance. Parents may also offer crucial information on their child's friendship formation process, by virtue of their access to the child's relationships outside educational and clinical settings (e.g. in the neighborhood). In Stone and Lemanek (1990), parents' reports on the social deficits of their young children with autism were consistent with the findings of experimental investigations on this age group (e.g. lack of peer and imaginative play; lack of imitation skills) substantiating parents' reliability as an information source about their children with autism. Wimpory and colleagues (2000) also investigated parents' reports on the social engagement of their pre-diagnosed youngsters with autism. Although parents were not aware of their child's diagnosis (thus could not be influenced by their knowledge), they could accurately delineate specific abnormalities in their children's ability to form person-to-person non-verbal communication and interpersonal contact and in triadic person-person-object interactions, which differentiated the autism sample from a control group of children with developmental delays. In addition, parents' perceptions of emotional expressiveness among their children with autism (at younger and older ages) have corroborated the body of recent empirical findings asserting evidence of emotional reactions in these children (Capps et al., 1993). Likewise, several recent studies have emphasized the importance of empirically examining parents' perceptions in diverse domains related to autism such as inclusion (Kasari et al., 1999), sleep problems (Schreck and Mulick,

2000), and developmental regression (Davidovitch et al., 2000). In spite of the acknowledgment of parents' potential major role as informants about the different social abilities and experiences of their children with autism, a paucity exists in empirical investigations of parental perceptions concerning these children's friendships. The current study, examining mothers' perceptions of friendship in high-functioning children with autism, undertook to narrow this gap in the literature.

This study explored several aspects of the process via which friendships are developed and maintained in autism, as reported by mothers. These aspects included whether friendship is indeed an actual relationship for high-functioning children with autism; what helps these relationships begin and persist; how stable and continuous the relationships are; who the friends are; and what type of mutual activities they experience. The current study had three aims: (1) to examine mothers' perceptions of the differences between friendship in high-functioning children with autism and typically developing children in respect of the number of friends, friend's disability status (typical development or special education), age of best friend, gender of best friend, friendship duration, frequency of meetings, and types of activities; (2) to describe the characteristics of non-mixed friendships (between a child with autism and another child in special education) and mixed friendships (between a child with autism and a typical peer) in high-functioning children with autism; and (3) to identify factors that may contribute to the development and maintenance of friendship in children.

Method

Participants

The current sample comprised mothers of 28 children: 14 high-functioning children with autism and 14 children with typical development (two girls, 12 boys each). Children with autism were matched to the group of typically developing children on chronological age, full-scale IQ determined by the WISC-R (Wechsler, 1974), gender, and maternal education (see Table 1).

Mean chronological age was 10.45 years ($SD = 2.57$, range 8.25–17.10) for the children with autism and 11.72 years ($SD = 2.70$, range 8.66–16.50) for the typically developing children. Mean full-scale IQ score as measured on the WISC-R was 88.36 ($SD = 14.81$) for the children with autism and 96.64 ($SD = 6.54$) for the typically developing group. Children with autism were recruited through the Special Education Department in the Israeli Ministry of Education. All (but one) of the children in the autism sample were included in regular schools, in special

Table 1 Sample characteristics

	<i>Autism</i> (<i>n</i> = 14)	<i>Typical</i> (<i>n</i> = 14)
Child's chronological age (years, months): ^a		
Mean (SD)	10.45 (2.57)	11.72 (2.70)
Range	8.25–17.10	8.66–16.50
Child's full-scale IQ: ^a		
Mean (SD)	88.36 (14.81)	96.64 (6.54)
Range	71–117	83–106
Child's verbal IQ: ^c		
Mean (SD)	86.79 (12.86)	94.64 (5.51)
Range	73–120	87–104
Child's performance IQ: ^a		
Mean (SD)	92.29 (17.81)	99.79 (10.09)
Range	71–131	82–118
Child's gender: male/female ^a	12/2	12/2
Mother's education: ^{a, b}		
Mean (SD)	6.64 (1.39)	5.71 (1.43)
Mother's chronological age (years, months): ^a		
Mean (SD)	45.04 (7.24)	44.68 (5.90)
Range	33.75–56.00	34.66–53.66

^a No significant differences between groups on children's chronological age, performance IQ, full-scale IQ, or gender, or on mothers' education or chronological age. IQ scores are based on the WISC-R.

^b Mother's education was calculated according to a 1–8 scale (1 = less than 7th grade; 2 = junior high graduate; 3 = some high school; 4 = high school graduate; 5 = some college; 6 = special training after high school; 7 = college graduate; 8 = graduate school/professional training).

^c $p < 0.05$.

education classes, and spent several hours per day in regular classes on an individual basis. Thus, the majority of children with autism had opportunities to meet with typically developing children as well as with another child having atypical development. Typical children were recruited from local public schools.

Prior to participation in this study, all of the children with autism had been diagnosed by a licensed psychologist not associated with the current study. All children met the criteria for autistic disorder described in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994), including (1) onset prior to 36 months of age; (2) qualitative impairment in social interaction; (3) qualitative impairment in communication (e.g. deficits or abnormalities in language development or deficits in play, particularly symbolic play); and (4) restricted and repetitive stereotyped behaviors, which may include bizarre responses to various aspects of the environment, such as resistance to change.

The Autism Diagnostic Interview–Revised (ADI–R; Lord et al., 1994)

was administered to the parents of the children by the authors of this article to verify diagnosis and to provide additional information about the children's developmental histories. The ADI-R focuses on meeting criteria for autism in three main areas: reciprocal social interaction; communication and language; and repetitive, restrictive, and stereotyped behaviors. The child also needs to show evidence of developmental delay or deviance prior to the age of 36 months. All 14 children met criteria for autism on all four ADI-R domains.

As seen in Table 1, the 14 mothers of children with autism ranged in age from 33.75 to 56.00 years (mean = 45.04, SD = 7.24). Two mothers (14.3 percent) had a high school education or less, four mothers (28.6 percent) had vocational or technical training, and eight mothers (57.1 percent) had a college or advanced degree. The 14 mothers of children with typical development ranged in age from 34.66 to 53.66 (mean = 44.68, SD = 5.90). Their educational level was distributed as follows: two mothers (14.3 percent) had a high school education or less, nine mothers (64.3 percent) had vocational or technical training, and three mothers (21.4 percent) had a college or advanced degree. The two groups of mothers did not significantly differ in chronological age or educational level.

Measures

Buysse's (1991) parents' Early Childhood Friendship Survey was used as a framework for asking mothers about their children's friendship. The Buysse (1991) survey consists of closed and open-ended questions evaluating the nature, development, and maintenance of friendship in typical children and in children with atypical development. The survey includes three sections. Section 1 consists of 19 questions that address the child's mutual friendships (characterized by a mutual interest in spending time or playing together), such as, 'Does your child currently have one friend who, in turn, thinks of your child as a friend?' (yes/no); 'Where do they meet?' (school/home/both); 'Does this friend have a disability?' (yes/no); 'How long have the children been friends?' (months); 'What helped this friendship to start?'; 'What can parents or teachers do to help the formation of friendship?' Section 2 includes unilateral friendship in which the target child initiates interactions with a peer who does not reciprocate; and section 3 includes unilateral friendship in which the target child does not reciprocate to a peer who initiates. Each mother in the current study reported at least one mutual friendship for her child. Also, the majority of mothers of the older children, in both groups, commented that they could not reliably report on their children's unilateral connections; thus these two sections (section 2 and 3) were excluded from the analyses.

Procedure

Children in the current study were part of a more extensive project examining social-emotional aspects in high-functioning children with autism. As part of this project three meetings were held with each child, two at school and one at home. The home visits were conducted by the first author. During these home visits with the child, mothers completed several questionnaires, including the Friendship Survey and a demographic questionnaire.

Results

Between-group differences on friendship

The study's first aim was to examine differences between the two groups of mothers' perceptions of their children's friendships, comparing the friendships of high-functioning children with autism and the friendships of typically developing children. A set of t-test analyses was executed to examine group (autism and typical) differences on number of friends, friendship duration, and frequency of meetings. All three analyses were significant. Mothers of children with typical development perceived their children as having more friends ($t(26) = 2.33, p < 0.05$), for a longer time ($t(26) = 2.36, p < 0.05$), and with more frequent meetings ($t(26) = 3.52, p < 0.01$) compared with mothers of high-functioning children with autism (see Table 2 for means, SDs, and ranges).

Table 2 Friendship characteristics in high-functioning children with autism and in typically developing children

Friendship categories	Autism (<i>n</i> = 14)		Typical (<i>n</i> = 14)		Group differences	
	Mean (range)	SD	Mean (range)	SD	<i>t</i>	<i>p</i>
Number of friends	2.50 1–5	1.16	4.00 1–7	2.08	2.33	0.05
Friendship duration (months)	21.80 6–72	19.96	44.57 6–120	30.02	2.36	0.05
Frequency of meetings	2.79 1–8	2.01	5.38 3–8	1.80	3.52	0.01

Note: friendship meeting frequency was calculated on an eight-point scale ranging from 1 to 8: 1 = meeting less than once a week, and 2–8 representing meeting frequency during the week (i.e. 2 = once a week; 3 = twice a week; . . . ; 8 = seven times a week).

Next, the two groups were compared on the friend's age and disability status (typical development or special education). The majority of children in both groups (64 percent in the autism group and 93 percent in the typically developing group) had friends in their own age range (within one year), with a non-significant Fisher exact test. In the group of children with autism, four children had younger friends (1 year younger or below), and one child had an older friend (1 year older or more). Among the typically developing children, only one child had a younger friend. In terms of the friend's disability status, high-functioning children with autism were significantly more likely to choose another child with special needs as a friend, compared with typically developing children (50 versus 7 percent, respectively). Fisher's exact test yielded significant group differences, $p < 0.05$. In addition, the majority of friendships in both groups were also same-gender friendships. Only one of the mothers with typically developing children identified a mixed-gender friendship, and only two mothers of children with autism identified mixed-gender friendships.

Last, we asked the mothers to describe the types of activities in which their children were involved when they met. The most frequent activities among friends reported by the mothers of children with autism were: playing board games (eight pairs); watching TV or video together (seven pairs), and playing on the computer (six pairs). Activities reported by these mothers in lower frequencies included talking together (also by telephone) or playing ball games (basketball or football) (three pairs for each activity), as well as pretend play or eating together (two pairs for each activity). The following activities appeared among mothers' reports only once: playing at the private family swimming pool, running together in the room for no particular reason, doing artwork where each child worked on a separate project, going out together in the company of parents, playing hide and seek, riding bikes, climbing trees, and playing with plastic building blocks.

The most frequent activity among friends reported by the mothers of children with typical development was playing ball games (basketball and football) (11 pairs). 'Going out' activities, such as going to the movies, going to the mall to 'hang out' with other children or to shop, and attending parties or other peer activities (e.g. an evening bonfire) together were cited by half the mothers (seven pairs). Other relatively frequent activities in the typical group were spending time on the computer (five pairs) and watching TV or pretend play (four pairs for each activity). Activities with very low frequency were studying together (three pairs), as well as talking, telling jokes, and eating together (two pairs in each activity). Activities that appeared only once were: drawing, riding on a skateboard, looking for and taking care of cats, selling objects, sleeping together, playing hide and seek, and running away from school.

Altogether, two activities – play on the computer and watching TV – were reported at relatively high frequencies by mothers in both groups. On the other hand, typically developing children frequently played different ball games and went out together with their friends, whereas children with autism frequently played board games with their friends.

In summary, according to mothers' perceptions, friends in both groups (typical and autism) tended to be of the same gender and age as the target child. However, friendships among children with autism were found to differ from typically developing children's friendships on their number of friends, friendship duration, and the frequency of meetings. Also, children with autism were significantly more likely to form a friendship with another child having a disability and were involved in different activities with their friends, as compared with the typically developing children.

Within-group differences on mixed and non-mixed friendship

The study's second aim was to examine the characteristics of 'mixed' friendships between a child with autism and a typically developing peer, and the characteristics of 'non-mixed' friendships between a child with autism and another child having a disability. Owing to the fact that only seven children with autism were in each group (mixed and non-mixed), only descriptive analyses were performed for each friendship type.

With regard to the seven non-mixed friendships reported for the high-functioning children with autism, five children were friends with another child who had a pervasive developmental disorder (PDD) or high-functioning autism, one child had a friend with cerebral palsy and a normal IQ, and one child had a friend with mild mental retardation (MR). The latter was the only non-mixed friendship of mixed gender: between the boy with autism and a female friend with MR. In terms of the friends' ages in these non-mixed relationships, two children with autism were more than a year older than their PDD and MR friends, and one child with autism was younger than his friend with PDD. The mean duration of non-mixed friendships was 19.6 months ($SD = 16.9$, range: 6–48 months). Four non-mixed pairs played both at school and at home, and three pairs played only at school.

With regard to the seven mixed friendships reported between the high-functioning children with autism and typically developing friends, one friend was the non-biological brother of the child with autism, and one friend was the child of the mother's best friend. Two typical friends were significantly younger than the child with autism (2 years and 8 months; 1 year and 3 months). Also, one mixed-gender friendship was reported: a female with autism had a typical male friend. In terms of the duration of friendship, mean duration for the mixed friendships was 24 months (SD

= 23.7, range 6–72 months). Five pairs played only at home, and two pairs played both at home and at school.

The most frequent joint activity reported for non-mixed friendships was playing board games (in six out of the seven pairs). Talking together (also by telephone) was reported for three different non-mixed pairs. Playing on the computer and watching video and/or TV were each reported for two different non-mixed pairs. Playing pretend play, playing ball games, running in the room for no particular reason, and going out with the company of parents each appeared very seldom (only once).

The most frequent activity reported by mothers for their children's mixed friendships with typically developing peers was watching video and/or TV together, appearing in five out of the seven mixed pairs. Four mixed pairs played on the computer, and two pairs each played board games, ate together, and played ball games. Pretend play, playing at the private family swimming pool, doing separate artwork projects, playing hide and seek, riding bikes, climbing trees, and playing with building blocks each appeared only once.

In sum, non-mixed pairs mainly played board games, whereas mixed pairs tended to watch video and/or TV and play on the computer together.

Factors contributing to the formation of friendship in children

The third aim of the current study was to identify the factors that contributed to the development and maintenance of friendship in children according to mothers' perceptions. Three main questions in the Friendship Survey were analyzed: (1) 'How did your child's friendship start?', (2) 'What helped this friendship begin and persist?', and (3) 'How can parents/teachers help in the formation and maintenance of friendship?'

Children with autism

In terms of the first question – how this friendship started – all seven mothers who reported non-mixed friendships for their children with autism noted that studying in the same class and spending time in after-school activities contributed to the formation of their children's friendships. Out of the seven mothers who reported mixed friendships for their children with autism, four noted that the friendships started based on contacts formed between both parents, and three stated that the friendships started because both children studied in the same class or were enrolled in the same kindergarten when they were younger. In addition, three mothers provided additional factors that also contributed to their children's mixed friendship: one mother had noted that her son's relationship in a 'Big Brother' program had developed into a friendship (with the help of contact between the parents); one mother emphasized the children's common

interests in the computer and in animated film; and one mother noted her child's strong desire for friends.

Mothers' responses to the second question – 'What helped this friendship begin and persist?' – were as follows. Among the seven mothers who reported non-mixed friendships for their children with autism, two said that the friends' same level of functioning and of social activity was important. Several answers appeared only once: mutual interest; the characteristics of the friend (i.e. high social expressiveness); the characteristics of the child with autism (i.e. friendliness and expression of high social interest); close proximity; the older age of the child with autism, thus enabling his ability to be more dominant in the relationship; and help from the teacher. One mother said she did not know.

Among the seven mothers who reported mixed friendships for their children with autism, three emphasized the typical friend's characteristics, such as warmth, openness, responsiveness, and kindness. Other responses included common areas of interest, e.g. computers (three mothers); parental involvement and contact with the friend's parents (three mothers); close proximity (two mothers); and the friend's small size, thus the child with autism does not feel threatened by him (one mother).

All 14 mothers said that their child's development and maintenance of friendship was highly dependent on their ongoing support. Mothers provided several suggestions regarding the ways they could help their child with autism in forming and maintaining friendship: (1) providing opportunities for her child to meet with other children and arranging continuous ongoing meetings after school; (2) helping her child with autism to find an 'appropriate' friend and encouraging her child to initiate contact with this friend; (3) supporting the ongoing process of friendship by physically bringing the friend over and taking her child to the friend's house; by helping the children find shared activities; and by taking the children to fun activities, such as to see a movie or eat a pizza; and (4) initiating contact with the friend's parents (some also noted that they became friends owing to their children's mutual interest).

Mothers also identified several ways in which teachers can contribute to the formation of friendship in children with autism. Mothers suggested that teachers can: (1) identify potential pairs in class who share common areas of interest, or who demonstrate mutual interest in one another; (2) arrange shared activities for the 'identified pairs' to experience, such as working together on shared projects; (3) incorporate conversations on friendship (e.g. what a friend is, why we need friends, how we choose friends, what we can do with friends) within the didactic program; (4) teach skills that facilitate the child's social competence and social understanding; (5) inform parents about the potential friendships that have been

identified in class; (6) help in creating open communication between parents of both children; and (7) help in finding strategies for conflict resolution between friends. Lastly, mothers pinpointed cooperation, shared efforts, and open communication between parents and teachers as key factors in the development of friendship in these children.

In summary, five factors were identified by the mothers of the children with autism as contributing to their child's ability to form friendship:

- 1 The characteristics of the friend. In non-mixed friendship, mothers emphasized the importance of a similar level of functioning, and the social expressiveness and sensitivity of the friend. In mixed friendship, the typical friend's characteristics (e.g. openness, responsiveness, warmth) were considered as important.
- 2 A high level of social interest and social activity in the child with autism.
- 3 Close proximity, such as studying in the same class and/or living in close proximity (neighbors).
- 4 Shared areas of interest (such as computer games).
- 5 Active support from the parents and the child's teacher.

Typically developing children

Regarding the first question, 13 of the mothers of typically developing children reported that their children's friendships had started at school or even in kindergarten for several children. One mother said that their love of football connected her son and his friend. Three types of responses were provided to the second question, concerning what helped this friendship begin and persist: (1) shared areas of interest, similar style, and chemistry, reported by nine of the mothers; (2) close proximity, reported by five mothers; and (3) the kindness of the friend, reported by five mothers. In terms of how parents and/or teachers can facilitate the development and maintenance of friendship, seven mothers stated that they cannot help or do not want to get involved or to interfere with their child's social relationships. For example, one mother said: 'It depends only on the children themselves.' Four mothers said that parents can encourage their child to meet with a friend after school; two mothers suggested that parents can bring their child to a friend's house; and one mother said that parents can invite the friend's parents on shared outings.

Six mothers of typically developing children suggested ways in which teachers can foster the formation of friendships: two mothers recommended that the teacher sit the two children together; two mothers suggested that the teacher should arrange shared after-school activities for the children; and two mothers emphasized cooperation between home and school, for example, where the teacher notifies the parents about the

children's interest in one another. In summary, in contrast to mothers of children with autism, mothers of typically developing children reported less responsibility for and less involvement in their children's friendship. It seems that the major difference between the two groups of children (autism and typical) lies in the fact that friendship in children with typical development may be formed more spontaneously, and the friends are not heavily dependent on mediation of the children's close social environment, whereas in children with autism the support from the environment appears crucial for the development and maintenance of peer friendships.

Discussion

The current study sought to gain insight into the formation and maintenance of friendship among high-functioning children with autism, through the perspectives of their mothers. Although the question of whether intimate friendship is possible in autism remains debatable, children with autism and their mothers reported that they do have friends (Bauminger and Kasari, 2000). Based on mother reports in the current study, children with autism do indeed have at least one mutual friendship. However, it seems that very rarely do these friendships emerge spontaneously and persevere without the help and mediation of others in the child's close social environment, such as parents and teachers, in contrast to the case of typically developing children. All mothers of children with autism emphasized that their own support in the creation and maintenance of their children's friendship was crucial, whereas only half of the mothers of typically developing children thought so. Other differences were notable between the groups with autism and typical development: children with autism had less stable friendships, met their friends less often, and were involved in different activities with their friend. Activities preferred by children with autism and their friends were more structured (i.e. board games), providing clear, explicitly stated rules and/or activities that do not require high levels of social exchange. In contrast, typically developing friends preferred activities with a high level of social engagement (i.e. ball games or going out together).

Different types of friendships for the child with autism were seen to emerge through different circumstances. Children with autism were reported as having both typical and atypical children as their friends. Yet, it appears that the majority of non-mixed friendships were struck up at school, with other children having a disability who attended the same class or school setting, whereas most mixed friendships commenced at home, with typical peers from the neighborhood, or with children somehow connected to the family. Perhaps non-mixed friendships can be formed more

spontaneously via natural opportunities for social interaction in school, whilst mixed friendships with a typical peer need more support from the child's social environment (e.g. parents). Nevertheless, mixed and non-mixed friendships seemed to share several commonalities, such as a similar duration and similar percentages of same-gender friendships and similar-age friendships.

Mothers of children with autism identified various characteristics of the partner in their children's friendships. It seems that a typically developing child's kindheartedness and humanity are important factors in his or her ability to form a friendship with a child with autism. In terms of non-mixed friendship, the two children's similarity in level of functioning and the level of social expressiveness exhibited by the friend who has a disability were cited. For mothers in both samples (autism and typical), shared areas of interest, close proximity, and the characteristics of the friends were considered to be chief contributors to the formation of friendship.

One limitation of the current study is its reliance on a single source of information to investigate friendship in children with autism. Parents are considered to be important informants regarding early childhood friendship and friendship in children with special needs (Buisse, 1991; Guralnick et al., 1995). Studies suggest a high correspondence between caregiver perceptions of friendship and other methods of measuring friendships (Buisse, 1993; Roopnarine and Field, 1984; Rubenstein and Howes, 1976). In the current study, albeit the fact that half of the mothers in the typical sample thought that they could not (or did not need to) help their children in the formation of friendship, they still provided a thorough description of their children's mutual friendships. Moreover, mothers of children with autism were very much involved in their children's friendships; therefore, it is reasonable to assume that their reports furnish important insights into the nature of these friendships. Yet, parents may report more mutual friendships in children with disabilities than noted by the teacher's or child's report (Bauminger and Kasari, 2000). One explanation for the parent-teacher gap is inherently related to the unique characteristics of friendship in children with disabilities. Owing to the fact that friendships may develop only or mostly in the child's home (as found in the current study for mixed friendships), teachers may not know about these relationships. In terms of the parent-child gap in friendship reports, children with autism exhibit perceptions of friends that differ from typical children's (Bauminger and Kasari, 2000; Hobson, 1993). Thus, it is difficult to rely solely on the self-reports of children with autism. It is, of course, imperative to conduct direct observations on these children's friendships. Indeed, it seems that a more qualitative study design that observes these children's behaviors and listens to their conversations with friends can

significantly promote our understanding of the nature of friendship in autism (Meyer et al., 1998).

Finally, the current article adds to the study on friendships in autism by providing parental perspective on these friendships. Findings of the current study verified data collected based on children's self-report (Bauminger and Kasari, 2000) which noted that high-functioning children with autism do have friends. Mothers in the current study took our understanding a step further to the understanding of the process of formation and maintenance of friendship in these children. Thus, a more integral, multiple source examination of childhood friendship in high-functioning children with autism is gathered. According to maternal report, friendship is an actual social experience for children with autism, although it may differ in quality from that of typically developing children. The role of the environment is crucial to the development and maintenance of friendship in high-functioning children with autism.

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