MIDDLE-CLASS MOTHERS’ PERCEPTIONS
OF PEER AND SIBLING VICTIMIZATION
AMONG CHILDREN WITH ASPERGER’S SYNDROME
AND NONVERBAL LEARNING DISORDERS

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This article describes the yearly prevalence and frequency of peer and sibling victimization as reported by a large national sample of middle-class mothers of children with Asperger’s syndrome and nonverbal learning disorders. An anonymous, mailed survey was sent to families solicited from two national Internet sites for parents of children with Asperger’s and nonverbal learning disorders using the Comprehensive Juvenile Victimization scale and three questions designed to measure peer shunning. The overall prevalence rate reported by mothers of peer victimization was 94%. Mothers reported that almost three-quarters of their children had been hit by peers or siblings in the past year and 75% had been emotionally bullied. On the more severe end of peer victimization, 10% of the children were attacked by a gang in the past year and 15% were victims of nonsexual assaults to the genitals. Peer shunning also was common. A third of the children had not been invited to a single birthday party in the past year, and many were eating alone at lunch or were picked last for teams. Peer shunning was significantly correlated with peer bullying and assault. The high rates of peer shunning and peer victimization reported suggest that children with Asperger’s and nonverbal learning disorders may require further scrutiny and attention concerning their victimization experiences by peers and siblings. Implications for nursing professionals are reviewed.

Children with Asperger’s syndrome (AS) and nonverbal learning disorders (NLD) are receiving growing national attention due to the uniqueness of their disability, improved diagnosis and consequent rising numbers, a

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paucity of literature on treatment, and parental frustration with lack of services and professional understanding (Osborne, 2000; Klin, Volkmar, & Sparrow, 2000). Children with AS and NLD have been described as “perfect victims” when it comes to victimization by their peers because of their profound lack of social skills (Klin et al., 2000, p. 6).

Investigators have examined the prevalence of peer victimization in schools and communities and its negative sequelae on children (Bowers, Smith, & Binney, 1994; Finkelhor, Mitchell, & Walak, 2000; Slep, 1995; Hodges, Malone, & Perry, 1997). Peer victimization has been described as “an endemic community problem” (Sourander, Helstela, Helenius, & Piha, 2000). Little peer victimization research has investigated the experiences of children with specific types of neurocognitive disabilities such as AS or NLD.

The purpose of this study was to explore and describe the prevalence and frequency of peer and sibling victimization and peer shunning as reported by mothers of children with AS and NLD. In addition, it examined the relationship between child characteristics such as the child’s age, gender, and diagnosis and their association with peer and sibling victimization.

**ASPERGER’S SYNDROME AND NONVERBAL LEARNING DISORDERS**

Asperger’s syndrome is a neurocognitive disorder on the autism spectrum and is characterized by major difficulties in social competencies, motor coordination, and visual-spatial difficulties. Asperger’s syndrome occurs in 1 of 200 children in the child psychiatric population (Volkmar & Klin, 1998).

Children with AS often have profound difficulties deciphering such nonverbal behavior as tone of voice, gestures, facial expressions, jokes, nuances, and body language. As a result, the ability to understand the feelings of others is challenging. In addition, these children do not learn easily from new experiences, become acutely anxious about changes in routine and unfamiliar experiences, and therefore have difficulty with flexibility and change (Rourke, 1995). Children with AS also have unusual patterns of interests and behavior that can become obsessive.

Of every 10 children with a learning disability, 1 has a nonverbal learning disorder (Rourke, 1995). The term “nonverbal learning disorder” has been described as a set of neurocognitive deficits, caused by white matter damage in the right hemisphere. Nonverbal learning disorder includes significant problems in social competencies, academic performance, visual-spatial abilities, and motor coordination (Harnadek & Rourke, 1994; Rourke, 1995). Like children with AS, these children also have difficulties with nonverbal communication. Children with AS and NLD have very similar neurocognitive profiles (Klin et al., 2000). However, the child with AS is considered by many clinicians to present with more serious social deficits than the child with NLD (Freid, R., Director of Neurodevelopmental Center, North Shore Children’s Hospital, Salem, MA, personal communication, April 9, 2001). There is some debate whether AS is a more severe variant of nonverbal learning disorders (Brumback, Harper, & Weinberg, 1996; Volkmar & Klin, 1998).

**PEER VICTIMIZATION AND CHILDREN WITH DISABILITIES**

Short- and long-term negative health outcomes for children in the general population have been attributed to peer victimization. Greater incidences of depression, low self-esteem, anxiety, loneliness, and lower academic achievement have been recorded (Hodges et al., 1997; Ladd & Ladd, 1998; Olweus, 1992; Slep, 1995). In one study of children in general, victimization during middle school predicted depression and low self-esteem 10 years later in adulthood (Olweus, 1992).

Cognitively and physically disabled children are at greater risk for peer victimization and exclusion than their nondisabled peers (Lewellyn, 1995; Morrison, Furlong, & Smith, 1994; Santiach & Kavanagh, 1997; Thompson, Whitney, & Smith, 1994). Among children with disabilities, severity of a child’s disability has been associated with lower peer acceptance in mainstreamed settings (Cook & Semmel, 1999). Children’s attitudes toward their peers who have disabilities are more important in determining if they will interact with them than teacher or parent attitudes toward children with disabilities (Roberts & Lindsell, 1997). Children with disabilities cite peer relationships and exclusion from school life as ongoing problems (Lightfoot, Wright, & Sloper, 1998). Lack of friends and social exclusion can increase a child’s risk for peer bullying and assault (Hodges et al., 1997; Ladd & Ladd, 1998). In this study, peer shunning or the social exclusion by peers is examined as another form of peer victimization.

Child characteristics such as age and gender also have been associated with the likelihood of being victimized by peers. For example, bullying is supposed to decrease with age, and boys tend to be physically victimized at greater rates than girls are (Crick & Bigbee, 1998; Sourander et al., 2000). However, these studies have focused primarily on children without disabilities.

The aims of this study were twofold: one was to explore and describe preliminary data on mothers’ perceptions of the prevalence and frequency of peer victimization and peer shunning of their children with AS and
NLD. Two, the study was to examine the relationship between such child characteristics as age, gender, and diagnosis with peer victimization. Knowledge resulting from this study may help to expand professional understanding of the social and structural determinants of peer victimization in children with AS and NLD.

METHOD

Sample and Procedure

Family participation was obtained by posting a letter of invitation to parents on two international Internet web sites for parents of children with NLD and AS (online Asperger’s syndrome information and support: http://www.udel.edu/bkirby/asperger; http://www.nldontheweb.org). Although 70% of the United States population owns a computer (Cole, 2000), Internet samples exclude parents who do not own a computer, which would tend to be families with less education and income. It does offer the advantage, however, of accessing a large sample of children with these less common disabilities.

Parents were asked to send their mail address if they were interested in participating in a study on raising a child with AS or NLD. Data were obtained from an anonymous survey sent out to families of children with AS and NLD in fall 1999. Three weeks after the initial mailing, a reminder postcard was sent out. Six weeks after the first mailing, a second survey was sent out to all households.

The cover letter specified that the index child must have a confirmed diagnosis of NLD or Asperger’s, and not be in the process of diagnosis, and children between 4 and 17 years of age. Any surveys that deviated from these criteria were not included. Parents who sent in surveys stating that their child had a primary diagnosis of higher functioning autism or right hemisphere disorder or attention deficit disorder and hyperactivity, for instance, were excluded from the analyses.

Of the 728 surveys mailed out, 509 parents responded, yielding a 70% response rate. Among families who met the eligibility requirements, a total of 411 surveys were completed by mothers and used for this data analysis. Mothers’ surveys were used for this study because few fathers responded.

Sample Characteristics

Child Characteristics

A total of 411 youth between the ages of 4 and 17 were in the sample, with a mean age of age of 10.48 years (SD = 3.30). Males were 82% of the youth, and 18% were female. Of the 411 youth, 75.4% had a diagnosis of AS, 15.3% had a diagnosis of NLD, and 9.2% had a diagnosis of AS and NLD. The mean age at diagnosis for the child was 8.42 (SD = 3.26). For purposes of analyses, children with a diagnosis of AS and NLD were categorized as AS; thus, there were two categories in the analysis: AS and NLD without AS.

Mothers’ Characteristics

The mothers’ ages ranged from 23–58 with a mean of 41 years (SD = 5.62) and the majority were Caucasian (98%). The median annual income for over half of the households was between $60,000 and $79,000. As expected from the Internet sampling frame, households with college-educated parents were overrepresented: 35% of the sample had a college education and an additional 25% had greater than a baccalaureate education. The vast majority were married (89%). In terms of employment, 62% of the mothers worked outside the home.

MEASURES

Definition and Measurement of Peer Victimization and Peer Shunning

Peer and sibling victimization were measured using a scale from the Juvenile Victimization Questionnaire (JVQ) (Hamby & Finkelhor, 1999). The JVQ, an instrument designed to measure comprehensive juvenile victimization, contains questions on different domains of victimization such as conventional crime, child maltreatment, and peer and sibling victimization. The peer and sibling questions were used for this survey. Six items were used that ask about the frequency within the past year of various peer experiences. One of the items on dating violence was thrown out because none of the mothers said that their child was dating. The items included were:

- How often in the last year your child was hit by peers or siblings at home or school or out in the community?
- What is the number of times your child has been physically attacked by a gang or group of kids?
- What is the number of times your child has been kicked or hurt in his/her private parts (nonsexual genital assaults)?
- How many times did any kids, including sisters and brothers, pick on your child by chasing him or her, trying to scare him or her, grabbing your child’s hair or clothes, or making your child go somewhere or do something he or she did not want to (bullying)?

For purposes of analyses, children with a diagnosis of AS and NLD were categorized as AS; thus, there were two categories in the analysis: AS and NLD without AS.
• How often did your child “get scared, sick, or feel really bad because of being called names, saying mean things, or told that they didn’t want him or her around anymore (emotional bullying)?

The response categories were never, once, twice, 3–5 times, 6 or more times. Scoring involved taking the midpoints of categories 3–5, and for the final category, 6 or more times, 8 was chosen as the midpoint. All scores were summed for total scores. Standard JVQ scoring was used. There appears to be evidence for the construct validity of the JVQ peer victimization items from the Youth Internet Safety Survey (Finkelhor et al., 2000).

In this survey, overall victimization was correlated with posttraumatic stress symptoms. Further, in that survey, gang victimization was significantly correlated with delinquency and substance abuse (Hamby, S. L., personal communication, April 9, 2001).

Peer shunning was measured by three questions created by the investigator and intended to be answered if the child was between the ages of 5 and 14. The questions included:

• How many times was the child invited to a birthday party in the last year by a friend? (Response choices ranged from 0 times to 1, 2, 3, or 4 or more times).
• How often was the child picked last or almost last in school for team activities? (Response choices were never, rarely, sometimes, often, and always)
• How often did the child sit alone at lunchtime during school? (Response choices were never, rarely, sometimes, often, and always.)

Overall prevalence rates were scored using dichotomous yes/no answers to the items. For example, for the question related to birthday parties, none was categorized as “no” and all other answers were categorized as “yes.” For the questions related to eating alone at lunch and being picked last for teams, “never” was categorized as “no” and all the other responses were categorized as “yes.”

**Mother and Child Characteristics**

The following characteristics were obtained in a demographic section of the questionnaire: age of child, age of parent, income, education level, gender of child, and diagnosis that was defined as Asperger’s (with or without NLD) versus NLD only.

**DATA ANALYSES**

Descriptive and bivariate statistics were used to summarize the data. Because there were no comparison studies on peer victimization for children with disabilities, these data was compared with two national studies on peer victimization of children in the general population where similar items were used (Finkelhor & Wolak, 1995; Finkelhor et al., 2000).

**RESULTS**

**Yearly Prevalence Rates of Peer Victimization**

Peer victimization was common. Fully 94% of the mothers reported that peers had victimized their child in some fashion within the past year. The most frequently reported method of peer victimization was bullying by peers and siblings, reported by 75% of the respondents. This was followed by peer or sibling assaults (73%). The least reported type of victimization, and the most severe, was peer gang attacks, where 10% of the parents reported that their child had been attacked by a gang of kids in the past year (Table 1).

The overall prevalence rates for peer shunning show that in the past year, 33% of the sample (35%) respondents reported that their child had not been invited to a friend’s birthday party, 31% reported that their child was almost always picked last for teams, and 11% reported that their child sat alone at lunchtime everyday.

When specific types of peer victimization from this study were compared with rates from two national samples of children (see Table 1), the differences were notable. Peer and sibling assault was eight times higher

| Table 1. Yearly prevalence rates of juvenile victimization for children with Asperger-spectrum disorders compared with two national youth samples |
|---------------------------------|-----------------|-----------------|-----------------|
| **AS/ NLD (n = 411)** | **Internet (n = 1501)** | **NYVIP (n = 2000)** |
| Hit by peers and siblings | 73 | 9 | 25 |
| Attacked by a gang | 10 | 2 | – |
| Nonsexual genital assaults | 15 | – | 10 |
| Bullying | 55 | 13 | – |
| Emotional bullying | 75 | – | – |

for the sample of children with AS and NLD than for a national sample of youth in a large Internet safety study (Finkelhor et al., 2000). They also were twice as high as a large representative sample of children in a National Youth Victimization Project (Finkelhor & Wolak, 1995). The rate of gang attacks was five times higher for children with AS or NLD than the national Internet sample. Reported bullying rates for the children with AS and NLD were four times as high as those in the national Internet sample. Finally, nonsexual genital assaults also were higher for the children with AS and NLD (see Table 1).

**Age and Frequency of Peer Victimization**

The frequency of gang assaults peaked at the ages of 6, 10, and 15 years, with a sharp decline after age 15. Because the incidence was so small, the average number of assaults was very low. The frequency of nonsexual assaults also peaked at the ages of 6, 9, 12, and 15 with a steep decline after age 15.

The frequency of bullying by age also showed peaks at the ages of 6, 8, and 10. Children of these ages were being bullied an average of three to four times a year. The frequency of emotional bullying suggested that emotional bullying increased steadily with age and peaked at approximately age 13, when it slowly declined. However, even at age 17, the children were being emotionally bullied on an average of three incidents a year.

The breakdown of the frequencies for peer shunning suggests that peer shunning occurred at high rates. If the two highest frequency ratings are collapsed for each item, more than 50% of the sample had never or only been to a birthday party once in the last year, and more than half are almost always or often picked last for teams. A third of the sample always or often sits alone at lunch.

**Child Characteristics Associated with Peer Victimization and Shunning**

The analyses in this section are based on the bivariate Pearson correlations for each of the independent variables (child characteristics) and the dependant variables (peer victimization and shunning variables). Gender and diagnosis were dichotomized and converted to dummy codes for analyses.

The correlations of child characteristics with the peer victimization variables were evaluated at the item level and few resulted in significance (Table 2). Diagnosis and gender were positively correlated with getting hit, and age of the child was negatively correlated with getting hit. The correlations are listed in Table 2.
hit. Younger male children with AS were more likely to be hit by peers and siblings.

None of the independent variables was correlated with gang attacks and nonsexual genital assaults. Only age of the child was positively correlated with emotional bullying. The older the child, the more likely he or she was shunned by peers. In addition, all three of the shunning variables were positively correlated with three of four of the peer victimization variables, particularly bullying and emotional bullying.

**DISCUSSION**

This research describes estimates of the yearly prevalence and frequency of peer and sibling victimization and yearly prevalence rates for peer shunning, according to the perceptions of mothers of children with Asperger's syndrome and nonverbal learning disorders. It also explores the extent to which three characteristics of the child were related to the prevalence of peer victimization and peer shunning.

**Table 3. Bivariate correlations of peer shunning with peer victimization and child characteristics**

<table>
<thead>
<tr>
<th>Peer victimization</th>
<th>No birthday parties</th>
<th>Picked last for teams</th>
<th>Eats alone at lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer shunning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hit</td>
<td>-.09</td>
<td>.08</td>
<td>.02</td>
</tr>
<tr>
<td>Attacked by gang</td>
<td>.05</td>
<td>.18**</td>
<td>.15**</td>
</tr>
<tr>
<td>Genital assaults</td>
<td>.10**</td>
<td>.09</td>
<td>.16**</td>
</tr>
<tr>
<td>Bullied</td>
<td>.11*</td>
<td>.12*</td>
<td>.13*</td>
</tr>
<tr>
<td>Emotionally bullied</td>
<td>.18**</td>
<td>.27**</td>
<td>.23**</td>
</tr>
</tbody>
</table>

**Child characteristics**

| Age                          | .16**               | .19**                 | .27**              |
| Sex                          | -.10*               | -.06                  | .05                |
| Diagnosis                    | .48**               | .21**                 | .14*               |

*p < .05; **p < .01.

**Prevalence of Peer and Sibling Victimization and Peer Shunning**

A major finding of this study is the extent to which mothers reported that their child with AS or NLD was being attacked by groups of children, assaulted, bullied, emotionally bullied, and shunned. Reported rates were high.

Caution is always important when making comparisons. Peer and sibling assault and bullying rates were high compared with rates in two national studies (Finkelhor & Wolak, 1995; Finkelhor et al., 2000). The Internet study (Finkelhor et al., 2000) had quite similar family characteristics as this study; it included mostly white middle-class, educated parents with over 50% having a baccalaureate education or higher, and incomes of greater than $50,000. The children varied slightly from this study sample in that the children in the Internet study were between the ages of 10–17 and there was a more equal ratio of boys and girls; this may be because Asperger’s syndrome is more common in boys than girls. Additionally, data obtained from the Internet study were taken from the child directly. In this study the data were obtained from the mothers. This may actually represent an underestimate since victims tend to report higher rates of victimization than caregivers (Finkelhor & Araji, 1986).

The National Youth Victimization Project (Finkelhor & Araji, 1995) was a study of a nationally representative sample of children between the ages of 10 and 16 and therefore had greater numbers of lower income parents with less education as participants. Both these national studies used phone interviews to collect their data directly from the child, which usually yields higher response rates than mailed surveys such as this one (Finkelhor & Araji, 1986). Although these samples are not exactly equivalent to this one, the comparisons remain valid in providing some preliminary insight into the possible significance of peer victimization for children with AS and NLD.

Another important finding is the reported rates of gang attacks (or attacks by groups of children) and nonsexual genital assaults. Although less common types of peer attacks, these forms of peer victimization are more severe and the rates were considerably higher for children with AS and NLD than for children in the two national studies (Finkelhor & Wolak, 1995; Finkelhor et al., 2000). These forms of peer victimization have been associated with greater rates of posttraumatic stress in child victims (Finkelhor & Wolak, 1995). Further study into these forms of victimization are warranted.

Data on age differences and peer victimization suggest that junior high school and high school children with AS and NLD are at greatest risk for peer shunning, bullying, and gang attacks. This is a time when social
skills are increasingly in demand and become more sophisticated. The clinical literature also suggests that adolescence is a time when children with NLD and AS are vulnerable to depression and anxiety (Rourke, 1995). These peer victimization and peer shunning findings suggest a need for further research to understand if the depression and anxiety are related to peer shunning and victimization.

Child characteristics were only selectively associated with some of the shunning and victimization items, which suggests a need for further inquiry. However, the items that were significant reinforced the observations by clinicians that children with AS may have more severe social deficits than children with NLD (Freid, R., personal communication, April 9, 2000). It also reinforced the data that proposed younger male children may be more vulnerable to assault (Crick & Bigbee, 1998).

Even without comparison rates, the likelihood of being shunned by peers was common for these children. Peer acceptance and the ability to make and keep friends are particularly important for children with neurocognitive disabilities (Whitney, Nabuzoka, & Smith, 1992). These findings support related literature that indicate children with learning disabilities are chosen less often than their non-learning disabled schoolmates for school activities and have fewer social supports to turn to when they are being teased or bothered by other children (Geisthardt & Munsch, 1996). Having friends also may provide a buffer from peer bullying and physical victimization. In this study, being shunned by peers was significantly associated with bullying and assault.

**LIMITATIONS**

The current study has limitations as an exploratory examination of the issues. Although the sample is large and drawn nationally, it is not a representative sample of children with AS and NLD. In particular, it did not include parents who do not have access to computers, and the sample characteristics suggest it is a middle-class sample. In fact, it may be that victimization rates here reflect underestimates since children from lower socioeconomic status families are not well represented. These rates also are a result of maternal reports, not those of the child. It is possible that they underestimate the incidences, as these children may not report every incident of victimization or shunning.

On the other hand, it is also possible that these mothers may have exaggerated the rates of victimization for their children. Concerns about the reliability of a mother's memories also may be an issue. However, much of the child victimization research over the past 20 years has relied on the memories of mothers and caregivers.

In addition, conclusions cannot be drawn about the victimization experiences of children with AS and NLD and children with other neurocognitive disorders. It is not clear if these rates would be the same for children with dyslexia or attention deficit hyperactivity disorder, for instance.

Finally, due to the wording of three of the peer victimization questions, it is not possible to determine separate rates for peer versus sibling on the assault (hitting or bullying) items. A significant percentage of the hitting and bullying may have occurred by siblings although this makes it no less important. Anecdotal reports suggest, however, that peer bullying is significant for these children (Klin et al., 2000).

**IMPLICATIONS**

The findings of this study are important for pediatric, school, community, and mental health nurses. Nurses need to assess children with AS and NLD for peer shunning, victimization and negative health outcomes in a variety of settings. Pediatric nurses cognizant of these findings might begin to track victimization at annual visits, for instance. Nurses can advocate for services for these children in special education meetings and other school and community arenas. The findings hint to a need for social skills programs for junior and high school children with AS and NLD.

These results have implications for inclusion policies that increasingly place students with disabilities in general education environments for the entire school day with the end goal of greater social benefits for the child. These findings suggest that proactive interventions to facilitate peer acceptance and prevent peer and sibling victimization are needed. Nurses in school and community systems are often the vanguard of health programs, and these could include education on tolerance and antibullying education. Peer shunning needs to be addressed as part of community attempts to integrate children with disabilities into mainstream school and community activities.

Research initiatives by nurses with this population of children are needed. The empirical knowledge base on the experiences of children with Asperger's and nonverbal learning disorders and their families is scant.

**REFERENCES**


