Children's Attitudes and Behavioral Intentions Toward a Peer with Tourette Syndrome

Sheri Friedrich, Sam B. Morgan, and Cynthia Devine
University of Memphis

Received June 13, 1994; accepted October 14, 1994

Examined children's ratings of attitudes and behavioral intentions toward a boy presented on videotape, with or without symptoms of Tourette syndrome (TS). Effects of information about TS on these ratings were investigated as well as the influence of gender and grade. Children in Grades 3 and 5 were randomly assigned to one of three conditions: No TS, TS, or TS/information. On the attitude measure, children rated the peer presented with TS less positively than they did the peer presented without TS. On behavioral intention measures, no significant differences were found between conditions. Information about TS did not affect ratings. Implications of these findings as well as limitations of the study are discussed.

KEY WORDS: Tourette syndrome; attitudes; behavioral intentions.

The research literature exploring attitudes toward individuals with Tourette syndrome (TS) is scant while that on promoting understanding and acceptance of this disorder is virtually nonexistent. This void in the literature assumes special importance when one considers the impact that social interactions have on the development of an individual's self-concept and self-worth. Peer interactions, in particular, shape one's identity through play, skills training, acceptance/support,
and feedback (Grusec & Lytton, 1988). Furthermore, children with problems in peer relations show a higher risk for poor social development and later maladjustment (Bierman, 1987; Parker & Asher, 1987).

Because of adversities commonly associated with TS, positive peer relations appear to be especially critical in the social development of a child with TS. TS is often described as a chronic disorder that can be socially disabling. The overt symptoms of TS (vocal and motor tics) are frequently misunderstood and as a result might be labeled as socially inappropriate. This mislabeling may lead to stigmatism and ostracism of the individual with TS (Comings & Comings, 1987; Dedmon, 1986; Robertson, 1989; Stefl, 1984; Stokes, Bawden, Camfield, Backman, & Dooley, 1991). Children with TS often report shame, self-consciousness, and discomfort in social situations (American Psychiatric Association, 1987).

In addition to the socially disabling nature of the tics, children with TS may be socially disadvantaged by decreased social skills and increased mental health needs. Dykens et al. (1990) found that children with TS have a relative weakness in the area of social adaptation as assessed with the Vineland Adaptive Behavioral Scale. Stefl (1984) reported that persons with TS, in comparison to the general population, sought mental health services at a higher rate and perceived their mental health functioning at a lower level. Matthews and Barabas (1985) listed learning disabilities, school phobia, organizational problems, anxiety, anticipation of teasing by peers, and frustration with academic demands as other areas that may contribute to a difficult adjustment for the child with TS. Stokes et al. (1991) found that a large percentage of these children were rated by peers as withdrawn, aggressive, or less popular than same-sex peers.

Although little research is available in the area of social acceptability of individuals with TS, research on other handicaps, such as mental retardation and physical disabilities, has generally indicated that higher educational levels, contact and friendships with individuals with handicaps, information about the particular handicap, and labeling of the handicap are all associated with more positive attitudes and ratings of the handicapped person (Blood & Blood, 1982; Gottlieb & Corman, 1975; Hastorf, Wildfogel, & Cassman, 1979; Jaffe, 1966; Kimbrell & Luckey, 1964; MacMillan, Jones, & Aloia, 1974; Peterson, 1974; Rosenbaum, Armstrong, & King, 1988; Wetstein-Kroft & Vargo, 1984). Matthews and Barabas (1985) have proposed that information is the most critical tool in dealing with illness or disability, because individuals working with persons who are ill or disabled may be uninformed or misinformed about the disorder, which may lead to frustration, negative attitudes, and misunderstandings.

In view of the potential negative attributions that could arise from misunderstanding of TS symptoms (vocal and motor tics), information about TS seems an important aspect in facilitating acceptance of individuals with TS. There is some evidence that education apparently decreases misunderstanding by teachers and teasing by peers (Comings & Comings, 1987; Levi, 1991). Moreover, Bauer and
Shea (1984), in a comprehensive review of TS research and its educational implications, concluded that a focus on empathy, acceptance, and friendship with regard to the individual with TS in the classroom is crucial to promoting positive social interactions.

The general purpose of the present study was to assess children’s attitudes and behavioral intentions toward a peer presented as having TS and to determine if the presentation of information affects children’s ratings of the peer with TS. A better knowledge of such attitudes and associated variables would aid in developing programs to foster in children more positive attitudes toward peers with different types of handicaps. Based on a distinction drawn by Gottlieb and Gottlieb (1977), two types of ratings were used: (a) an adjective checklist to assess stereotypic attitudes and (b) two measures designed to assess behavioral intentions. Specifically, the study attempted to answer the following questions:

1. Do children rate a peer with TS differently than they rate a peer without TS?
2. Does information about TS differentially affect children’s ratings of a peer with TS?
3. Do children show gender and grade differences in these ratings?

We included the gender and grade variables because studies investigating peer ratings of mentally retarded children and/or physically handicapped children have found that gender and age of the responding children may influence their ratings. Most studies have reported that girls express more positive attitudes about disability than do boys (Jaffe, 1966; Rosenbaum et al., 1988; Siperstein, Bak, & Gottlieb, 1977; Voeltz, 1980). In a review of a large number of studies, Ryan (1981) concluded that reactions to disability increase in favorability from early childhood to adolescence, decrease in late adolescence, and increase again in young adulthood.

**METHOD**

**Participants**

The participants were 153 children in the third and fifth grades in three public schools in a large metropolitan area. These children were recruited through a parental permission/informed consent form that was sent home. Each teacher in the involved classes completed a form that ascertained that no child with TS was in the class. Each child was also given a form that asked if he or she had ever heard of Tourette syndrome and, if so, what the disorder is. One child reported that she had heard of TS, so she was excluded from further participation in the study.

The children, at each grade level, were randomly assigned to one of three
Table I. Gender and Racial Distributions of Children in each Condition in the Two Grade Levels

<table>
<thead>
<tr>
<th>Condition</th>
<th>TS/info (n = 51)</th>
<th>TS (n = 49)</th>
<th>No TS (n = 53)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>13</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Grade 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>14</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Black</td>
<td>12</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Grade 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>15</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Black</td>
<td>9</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

conditions (see the next section for a description of the conditions). Table I presents the gender and racial distribution for each condition at the two grade levels. Chi-square tests revealed no significant differences in gender or racial distribution between the two grades within each condition.

**Experimental Conditions**

A fourth-grade boy with experience as a child actor was recruited to portray on videotape a child with TS and a child without TS. He was paid $50 for his participation. He was trained in TS symptomatology by verbal explanation and by viewing two videotapes of children and adults exhibiting symptoms of TS and explaining their disorder. He had also interacted, on numerous occasions, with a child who has TS.

The child actor was filmed in three separate segments representing the three conditions. For the TS/information condition, the child exhibited TS symptomatology while giving the brief description of himself as well as an explanation of his TS. The child presented TS symptoms every few seconds in the form of motor tics that included jerks of the head, neck, shoulders, and arms; no vocal
tics were presented. For the TS condition, the child exhibited the same TS symptomatology while giving only the brief description of himself without the explanation of TS. For the No-TS condition, the child did not exhibit any TS symptomatology and provided only the brief description of himself. The video lasted approximately 100 seconds for the TS/information condition, and approximately 60 seconds for the other two conditions.

The script for TS/information condition, which was identical to that for the other conditions except for the second paragraph, was as follows:

Hi, my name is Billy. I am about the same age as you and I go to school just as you do. My family used to live in a town called Roseville. Roseville is a medium size town that has shopping centers, movie theaters, schools, churches, libraries, and most other things that cities have. My family and I used to go to the zoo, the museum, and the shopping mall. During the summer, we would go to the public swimming pool. Sometimes we would drive to the mountains or to the lake and enjoy the day outdoors. I especially liked it when we went to eat out at McDonald's.

I have Tourette's syndrome, which is a fancy name for a tic disorder. People who have Tourette's syndrome do things and say things that they cannot control. Sometimes, I jerk my head repeatedly or move my hand without meaning to. At other times, I make noises or say a word which disrupts the class. I don't mean to move around or say things, it just happens. My doctor told me that nobody knows for sure what causes Tourette's syndrome but that I shouldn't feel like it's my fault or that I'm doing something wrong.

I like to do many of the things you like to do. I like to play Nintendo and watch TV. I like to ride my bike and play with my friends—and I love to eat pizza and ice cream. My family has just move to your town and I will probably be going to your school. Bye.

The videotapes of the child actor portraying a child with TS were viewed by a variety of individuals (parents of children with TS, a medical doctor who coordinates a TS support group, school psychologists, graduate students, and a child psychologist) to evaluate the accuracy with which the TS symptomatology was displayed. Each individual responded to three items in a five-point Likert format and indicated the degree to which the motor tics presented by the child actor accurately conveyed symptoms of TS. For all three items, the ratings for all individuals indicated strong agreement that the child actor realistically portrayed a child with TS.

**Dependent Measures**

Following the videotape presentation, the children in each condition were asked to complete a demographic form and the following four questionnaires: the Adjective Checklist, the Activity Preference Scale, the Foley Questionnaire, and the modified Foley Questionnaire.

The Adjective Checklist (Siperstein, 1980; Siperstein & Bak, 1977) is an attitudinal measure specifically designed to measure attitudes toward the handicapped. This questionnaire consists of a list of 32 adjectives, with half having a positive value (e.g., smart, neat) and half having a negative value (e.g., dumb,
sloppy). Construct validity relating to the positive or negative value of the adjectives has been confirmed by factor analysis, and internal consistency reliability has been demonstrated through a coefficient alpha of .81 (Siperstein, 1980).

The rater was asked to mark all the adjectives that best described the target child. The checklist was then scored by subtracting the negative adjectives marked from the positive adjectives marked and adding a constant of 20 (Siperstein & Gottlieb, 1977). The possible score range is from 4 to 36, with scores above 20 reflecting more positive attitudes and scores below 20 more negative attitudes.

The Activity Preference Scale (Siperstein & Bak, 1977) is a questionnaire designed to measure behavioral intentions in children. Adequate reliability has been reported, and it has been shown to yield differential ratings of peers with disabilities (mental retardation, physical handicap) as compared to peers without disabilities (Siperstein & Bak, 1977; Wisely & Morgan, 1981). It consists of 30 statements (e.g., “Watch TV together.” “Invite to my house.”) that describe various activities that children may engage in (for the purposes of this study, one statement was deleted due to its reference to cold weather activities that are not engaged in by children in this geographical location). The raters were asked to mark “yes,” “?,” or “no” depending on their desire to engage in the specified activities with the target child. The answers were assigned a numerical value based on which choice was marked (yes = 1, ? = 0, no = —1) and were then summed with a constant of 25 added (Siperstein & Bak, 1977). The possible score range is from —4 to 54; scores above 25 reflect more positive intentions, whereas scores below 25 suggest more negative intentions.

The Foley Questionnaire (Foley, 1979) is also a measure of behavioral intentions. High internal consistency reliability is indicated through a coefficient alpha of .92 (Foley, 1979); the scale has been shown to indicate differences in peer acceptance of children with various types of disability and is highly correlated with the Activity Preference Scale as a measure of behavioral intentions (Foley, 1979; Morgan & Wisely, 1994; Wisely & Morgan, 1981). It consists of 12 items dealing with the subject’s acceptance of the stimulus child in certain situations including academic (“Would you like to have this boy in your reading group?”), social (“Would you like to be this boy’s partner in a game?”), and general (“Would you like to have this boy in your class?”). Each item is followed by five line drawings of faces ranging from a strong smile to a strong frown with the corresponding statements: “I really would like,” “I would like,” “I don’t know,” “I would not like,” and “I really would not like.” Scores can range from 60 (most positive) to 12 (most negative).

In addition to the standard Foley questionnaire, a modified Foley questionnaire was used. The modified version asked the child to respond to all of the items in a manner consistent with how their classmates would respond. The modified Foley questionnaire was used to assess the possibil-
ity that the children's responses were biased in an attempt to appear more favorable.

Procedure

All children for whom parental consent to participate had been granted were advised that their participation was voluntary and that they could withdraw from participation at any time. All children gave oral assent and participated fully in the project. After the children were randomly assigned to one of the three conditions, one lead experimenter and one to two assistant experimenters presented the videotape and the rating scales to the children in small groups.

The lead experimenter provided these initial instructions: "We are going to show you a videotape and then we will ask you to answer some questions about the videotape. Watch the child on the videotape and listen carefully to what he says. Do not talk to your neighbor until after we are completely done with the tape and questionnaire. Any questions?"

The experimenter then showed the videotape for the condition to which the children in the group had been assigned. Following the videotape, a packet (containing a demographic form, an Adjective Checklist, an Activity Preference Scale, a Foley Questionnaire, and a modified Foley Questionnaire) was handed to each child. The lead experimenter then said, "Please answer the questions honestly. Your answers should be based on how you feel and not on how your best friend or neighbor feels. Your answers are private and will not be seen by friends, teachers, or parents. I am going to read the directions and the questions to you. Please follow along with me and don't get ahead of the group. If you need something repeated or have a question, raise your hand. Any questions before we begin?"

Children in all conditions had the directions, questions, and statements in the packet read to them by the lead experimenter. The Modified Foley Questionnaire was introduced with the statement, "Read each question and circle the face and answer that shows how your classmates would feel about the boy in the film." Prior to collecting the packets, the experimenters carefully checked each child's packet to insure that each question/statement had been answered.

RESULTS

The means and standard deviations for each of the four measures under each condition by grade and gender are presented in Table II.

Initially, a 3 (Condition) × 2 (Grade) × 2 (Gender) multivariate analysis of variance (MANOVA) was used to analyze the scores from the four dependent
Table II. Means and Standard Deviations for Three Conditions for Boys and Girls at the Two Grade Levels

<table>
<thead>
<tr>
<th>Measure</th>
<th>Condition</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TS/info (n = 51)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjective Checklist*</td>
<td>Grade 3 Boys</td>
<td>28.69</td>
<td>5.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>27.15</td>
<td>6.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grade 5 Boys</td>
<td>28.73</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>28.29</td>
<td>3.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>28.20</td>
<td>4.6</td>
<td>28.02</td>
<td>5.6</td>
<td>30.89</td>
<td>4.4</td>
</tr>
<tr>
<td>Activity Preference List*</td>
<td>Grade 3 Boys</td>
<td>39.54</td>
<td>16.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>33.00</td>
<td>13.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grade 5 Boys</td>
<td>42.91</td>
<td>13.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>34.21</td>
<td>16.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>37.14</td>
<td>15.1</td>
<td>32.55</td>
<td>12.1</td>
<td>35.30</td>
<td>11.1</td>
</tr>
<tr>
<td>Foley Questionnaire*</td>
<td>Grade 3 Boys</td>
<td>50.85</td>
<td>9.6</td>
<td>48.73</td>
<td>10.7</td>
<td>52.31</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>45.23</td>
<td>12.2</td>
<td>45.64</td>
<td>6.3</td>
<td>44.14</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Grade 5 Boys</td>
<td>48.55</td>
<td>5.3</td>
<td>44.91</td>
<td>7.3</td>
<td>44.56</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>46.14</td>
<td>6.3</td>
<td>45.15</td>
<td>6.4</td>
<td>45.06</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>47.62</td>
<td>8.9</td>
<td>46.04</td>
<td>7.6</td>
<td>46.51</td>
<td>8.1</td>
</tr>
<tr>
<td>Modified Foley Questionnaire*</td>
<td>Grade 3 Boys</td>
<td>41.85</td>
<td>11.1</td>
<td>45.00</td>
<td>5.6</td>
<td>47.62</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>42.85</td>
<td>10.1</td>
<td>46.71</td>
<td>6.9</td>
<td>45.86</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>Grade 5 Boys</td>
<td>40.85</td>
<td>7.4</td>
<td>43.09</td>
<td>7.9</td>
<td>38.67</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>42.29</td>
<td>8.0</td>
<td>44.85</td>
<td>3.8</td>
<td>44.18</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>42.00</td>
<td>9.1</td>
<td>45.02</td>
<td>6.1</td>
<td>44.53</td>
<td>6.9</td>
</tr>
</tbody>
</table>

*Maximum score is 36.
*Maximum score is 54.
*Maximum score is 60.
measures. A significant main effect was found for condition, Wilks' $\lambda = .80, F(8, 276) = 4.01, p < .001$, and for gender, $\lambda = .87, F(4, 138) = 5.03, p < .001$, but no significant two-way or three-way interactions were found.

A univariate $F$ test revealed significant differences between conditions on the Adjective Checklist, $F(2, 141) = 6.09, p < .004$. The Student-Newman-Keuls follow-up test indicated that the children rated the target child without TS more favorably ($M = 30.89$) than they rated the target child in the TS conditions (TS/information $M = 28.20$, TS $M = 28.02$). However, as suggested by the highly similar means for the two TS conditions, the information regarding TS had no significant effect on the children’s ratings of the target child with TS symptomatology.

A univariate $F$ test also revealed a significant effect for gender on the Foley Questionnaire, $F(1, 41) = 5.46, p = .021$. On this behavioral intentions scale, boys rated the target child, across conditions, more favorably than did girls (boys’ $M = 48.62$, girls’ $M = 45.22$).

To assess the possibility that the children’s responses were biased in an attempt to appear more favorable, a MANOVA was used to analyze any significant differences between the Foley Questionnaire and the modified Foley Questionnaire (which required the children to answer in a manner consistent with how they believed their classmates would answer). Significant main effects were found for ratings, $F(1, 141) = 25.11, p < .001$, and significant interactions between condition and rating, $F(2, 141) = 4.74, p < .01$, and gender by rating, $F(1, 141) = 14.21, p < .001$. A follow-up $t$ test, $t(50) = 4.32, p = .001$, indicated that the children in the TS/information condition rated the target child less positively on the modified Foley Questionnaire ($M = 42.00$) than on the original Foley Questionnaire ($M = 47.62$).

**DISCUSSION**

Our primary purpose was to investigate children's ratings of a peer with TS versus a peer without TS and to examine the effects of information about TS on ratings of the child showing TS symptoms. Ratings were obtained with questionnaires that assessed stereotypical attitudes and behavioral intentions. A secondary purpose was to determine if there were gender and grade differences in these ratings.

The results indicate that on the Adjective Checklist children rated the target child without TS symptoms more favorably than they rated the target child with TS symptoms. However, contrary to expectations, information about TS did not improve children's ratings of a peer with TS on the Adjective Checklist. Additionally, there were no significant differences between the experimental conditions on the measures of behavioral intention. These findings suggest that chil-

children make a distinction between stereotypical attitudes and behavioral intentions when rating a peer with and without TS. The children ascribed more positive traits to the child without TS than to the child with TS; however, with regard to their intent about engaging in activities, they made no distinctions between the child without TS and the child with TS.

The results further indicate that children’s stereotypical attitudes and behavioral intentions toward a peer with TS were not made more favorable with brief education about the disorder. One explanation for this lack of effect is that the educational statement provided was not salient enough to be registered and comprehended by children of this age. A positive change in acceptability may have been facilitated by an educational statement that was more specific, detailed, and elaborate. It is worth noting that even though information did not significantly improve children’s ratings of a peer with TS, the children in all the conditions rated the target child in a generally positive manner.

The results also indicate that boys, irrespective of experimental condition, rated the target child more favorably than did girls on one of the questionnaires that measured behavioral intentions. A plausible explanation for this finding is that the target child was male. Although the literature is not entirely consistent on children’s ratings of same-sex and opposite-sex peers, some studies suggest that same-sex ratings tend to be more positive than opposite-sex ratings (Bruininks, Rynders, & Gross, 1974; Siperstein & Gottlieb, 1977; Wisely & Morgan, 1981). It seems logical and developmentally appropriate that third- and fifth-grade boys would be more interested in engaging in activities with a male peer than would third- and fifth-grade girls. However, it should be noted that this significant difference was apparent on only one of the behavioral intention measures and no significant gender differences were found on the stereotypical attitude measure.

The lack of significant differences between the grades may have been a result of the sample selected. It may be that Grades 3 and 5 are too close in age for any developmental difference on stereotypical attitudes and behavioral intentions to appear.

A modified version of the Foley Questionnaire was included in this study in order to reveal possible response biases by the children. This was based on the assumption that children may respond to the items on the questionnaire in a manner they felt was socially acceptable instead of in a manner that represented their true attitudes and behavioral intentions. The children were therefore asked to complete the modified Foley Questionnaire the way they felt their classmates would answer the questions. The results indicate that the children in the TS/information condition rated the target child significantly lower on the modified Foley Questionnaire than they rated the target child on the original Foley Questionnaire. This suggests that the children perceive their classmates as less accepting of an identified TS child exhibiting TS symptoms than they themselves are. A plausible interpretation is that the modified questionnaire may more accurately
reflect the child's own behavioral tendencies by controlling for the social desirability factor.

When interpreting the results of this study, consideration needs to be given to certain limitations. The most apparent limitation is the use of questionnaires versus measurement of an in vivo interaction between a child with TS and his peers. The question remains whether or not actual interactions can be predicted from paper-and-pencil ratings. The discrepancy in results of the modified Foley Questionnaire versus the original Foley Questionnaire raises the question of whether or not responses to questionnaires can be generalized to an actual interaction. These results suggest the possibility that the children responded in a biased manner in order to appear more socially appropriate.

Another possible limitation of this study is the use of a child actor instead of a child diagnosed with TS. A child actor was used in order to avoid any undue discomfort for a child with TS. As mentioned previously, to control for possible limitations caused by using a child actor, the videotapes were viewed by a variety of individuals. Although all individuals concurred that the child actor accurately portrayed a child with TS, he may not have been able to convey the symptomatology as clearly as an actual child with TS. Further, the use of a videotape may have decreased the “realness” of the situation.

In view of these limitations, a more realistic study would be one in which actual interactions between children and a peer with TS are observed and measured. Possibly the presence of an actual child with TS would make the disorder more salient and the information about TS more concrete and tangible. Children might respond more favorably to and show more empathy with an actual child with TS. Naturally, in conducting such an in vivo study with a child with TS and his age-mates, consideration would have to be given to ethical concerns. Other possibilities for future research might include role modeling of positive interactions between a child with TS and his peers or having an authority figure provide education about TS.

Finally, future research might also look at how understanding and empathy affect acceptability of a peer with TS. Helping children to comprehend more realistically the disorder and to experience empathy with someone who has TS might promote more acceptability than would education or provision of information alone. This issue might be investigated by placing a group of children in a situation in which they produce the tics and experience the accompanying frustration that children with TS experience.

REFERENCES


