

Brief Report: Perceptions of Young Adolescents About a Hypothetical New Peer With Cancer: An Analog Study

Christine C. Gray,¹ PhD, and *James R. Rodrigue*,² PhD

¹*Nemours Children's Clinic, Jacksonville, Florida, and* ²*University of Florida Health Science Center*

Objective: To assess attitudes and behavioral intentions (desire to engage a peer in academic, social, and general activities) of young adolescents toward a hypothetical new peer with cancer and to assess the relationship between attitudes and empathy.

Methods: Two hundred fifty middle school students viewed videotapes of a hypothetical peer (i.e., actor) with or without cancer. Participants completed a measure of empathy and a measure of social desirability before viewing the videotape. Participants completed a measure of attitudes and a measure of behavioral intentions after viewing the videotape.

Results: Participants gave significantly higher ratings of behavioral intention (e.g., were more accepting) to the peer with cancer than to the healthy peer. Also, participants with high empathy reported more favorable impressions toward the hypothetical new peer than did participants with low or moderate empathy. Female participants had more favorable attitudes and behavioral intentions toward the hypothetical new peer than did male participants.

Conclusions: The social perceptions of young adolescents about peers with cancer may be less negative than previously hypothesized.

Key words: *cancer; peer perceptions; empathy; adolescent.*

For children with cancer, school absences, physical activity restrictions, interruption of daily activities, changes in physical appearance, and required lifestyle modifications may increase vulnerability to social difficulties (LaGreca, 1992). The work of Robert Noll and Marilyn Stern and their colleagues has comprehensively expanded our knowledge base about the peer relationships of children with cancer (Noll, Bukowski, Rogosch, LeRoy, & Kulkarni, 1990;

Noll, LeRoy, Bukowski, Rogosch, & Kulkarni, 1991; Stern & Arenson, 1989; Vannatta, Gartstein, Short, & Noll, 1998). Collectively, their studies show that social withdrawal among children and adolescents with cancer is quite common and that a cancer stereotype may exist. How peers perceive children with cancer has obvious implications for the development of social relationships. Positive peer perceptions toward children with cancer may facilitate the development and maintenance of healthy social relationships, whereas negative peer perceptions may deleteriously affect social development and growth. Negative peer attitudes also may

All correspondence should be sent to James R. Rodrigue, Department of Clinical and Health Psychology, P.O. Box 100165, University of Florida Health Science Center, Gainesville, Florida 32610-0165. E-mail: jrodrigu@hp.ufl.edu.

affect willingness to engage behaviorally or socially with the child who has cancer.

The purpose of this study was to further examine young adolescents' attitudes and behavioral intentions (desire to engage a peer in academic, social, and general activities) toward a hypothetical new peer with cancer. We also sought to examine the relationships between attitudes about a hypothetical peer with cancer and empathy. We theorized that children with higher levels of empathy, an affective response more appropriate to another person's situation than to one's own situation (Hoffman, 1990), may hold more favorable attitudes about children facing difficult challenges such as cancer. Because empathy for a person who has experienced chronic distress is more likely to promote sustained prosocial action (i.e., versus a single event of helping) (Hoffman, 1990), a relationship between empathy and attitudes would have important implications for the peer relationships of children with cancer.

Using videotapes of children who were actually healthy or who had cancer, we hypothesized that participants would report less favorable attitudes and behavioral intentions toward the hypothetical new peer with cancer than toward the healthy peer. Moreover, we hypothesized that higher levels of empathy would be significantly associated with more favorable attitudes and behavioral intentions toward the peer with cancer. Although gender differences in attitude and behavioral intention ratings were not the primary focus of the study, our expectation from previous research was that girls would rate the hypothetical new peers more favorably than would boys.

Method

Participants

Participants were 250 sixth ($n = 81$), seventh ($n = 84$), and eighth ($n = 85$) graders from four public middle schools in rural northern Florida. Two hundred eighty-five adolescents took part in the study; however, 35 participants were excluded from the final sample due to having three out of four incorrect answers to attention questions following the videotape presentation, being a cancer survivor, or having a friend who has had cancer. Recruitment occurred through a cover letter describing the study

and a parental permission/informed consent form sent home with prospective participants. Seventy-two percent of the sample was Caucasian (22% African American), and 68% were girls. School board regulations prohibited the collection of socioeconomic status (SES) data on individual participants. However, approximately 60% of the students met official low-income eligibility criteria for free or reduced-price meals, and the remainder represented primarily low to middle income families.

Measures

Index of Empathy for Children and Adolescents (IECA) ($\alpha = .78$). The IECA (Bryant, 1982) is a 22-item empathy measure in which items describe situations when empathic feelings may occur (e.g., "Sometimes I cry when I watch TV") and adolescents indicate their level of agreement with the statement using a 9-point rating scale ($-4 =$ very strong disagreement, $+4 =$ very strong agreement). Internal consistency reliability ($\alpha = .79$) and test-retest reliability ($r = .83$) with seventh graders has been reported (Bryant, 1982). Good convergent validity with the adult version of the measure, as well as a measure of acceptance of individual differences, has been shown (Bryant, 1982).

Lie Scale of the Junior Eysenck Personality Questionnaire-Revised ($\alpha = .79$). Corulla (1990) adapted the 19-item Lie Scale from Eysenck's earlier measure for children (Eysenck, Easting, & Eysenck, 1970) to assess the tendency for children to respond in a socially acceptable manner. The scale has been shown to correlate positively with measures of pro-authority attitudes and behaviors (Rigby, 1987). Given the nature of this study, we sought to examine the impact of social desirability on participants' perceptions and to statistically control for their effects if necessary. For this study, three Lie Scale items were modified to make the wording more applicable to the study population. For instance, "Have you ever been cheeky to your parents?" was changed to "Have you ever talked back to your parents?" Participants responded "yes" or "no" to each item, thus yielding a possible score ranging from 0 to 19 (higher scores reflect greater social desirability). This scale has been shown to be the second of four factors in the revised questionnaire (Corulla, 1990).

Adjective Checklist ($\alpha = .82$). The Adjective Checklist (Siperstein, 1980) was originally devel-

oped to assess children's attitudes toward people with handicaps but has been used recently to assess children's attitudes toward peers more generally (e.g., Kury, Rodrigue, & Perri, 1998). Participants were asked to check as many or as few of the 32 adjectives (16 positive and 16 negative that are familiar to children) that best described the person in the videotape (i.e., the one who is moving to their school). The positive or negative value of the adjectives was determined by factor analysis (Siperstein, 1980). The measure is scored by subtracting the number of negative adjectives circled from the number of positive adjectives circled and adding a constant of 20. Scores range from 4 to 36, with scores below 20 indicating more negative attitudes, and scores above 20 indicating more positive attitudes. Wisely and Morgan (1981) found differential results between the adjective checklist and measures of behavioral intention. They hypothesized that adjective checklists tap the cognitive component of attitudes, whereas measures of behavioral intention tap the behavioral aspects.

Foley Questionnaire ($\alpha = .95$). Originally developed to measure children's behavioral intentions toward peers with or without mental retardation or learning disabilities (Foley, 1979), the Foley Questionnaire was modified by Kury et al. (1998) to make its use more appropriate for adolescents. Using a 5-point faces rating scale (1 = I really would not like, 5 = I really would like), participants indicated how much they would like to have the person on the videotape present in each of 10 situations (academic, social, and general activities). Scores range from 10 (most negative) to 50 (most positive). Wisely and Morgan (1981) found similar results using the Foley Scale, a version of the Activity Preference List (Siperstein & Bak, 1977), and a social distance scale used by Siperstein and Gottlieb (1977), demonstrating convergent validity among these three measures of behavioral intention.

Procedure

For the videotape stimulus, actors with cancer were recommended by a pediatric oncologist, and healthy actors were recruited through a local theater organization. From the 15 actor volunteers, we selected 6 actors whose attractiveness was rated by 52 middle school students to be average and not significantly different from each other. All actors were filmed in the same environment, wore similar

clothing (i.e., plain white shirt), and were Caucasian. The actors with cancer wore hats typical of those worn by adolescents with hair loss secondary to chemotherapy or radiotherapy. Half of the videotapes opened with a healthy child introducing the hypothetical new peer as a long-term friend who will be attending a new school. Half of the videotapes contained no such peer introduction. Preliminary analyses revealed no significant differences in attitude and behavioral intention ratings as a function of peer introduction; therefore, these videotape conditions were collapsed, yielding four primary videotape conditions (male actor with cancer, $n = 61$; healthy male actor, $n = 79$; female actor with cancer, $n = 51$; healthy female actor, $n = 59$). These conditions were balanced for grade and gender.

Actors in the healthy (and cancer) conditions said the following:

Hi. My name is Michael/Michelle. My family just moved here because my Dad changed jobs. I'm going to be coming to your school soon, and I'll probably be in some of your classes because I'm about your age. I like to hang out with my friends, watch TV, and listen to music. [You might have noticed that I have cancer. Well, I'm getting treated for it, and the doctors say I'm doing okay. Sometimes I get sick after treatments and I can't do everything I want to do, but usually I feel pretty good.] We're still unpacking and getting registered for school. I think I'll be at school in a day or two. See you then.

Students providing written consent and returning signed parental permission/informed consent forms were included in the study. The majority of students at each school (approximately 85%) failed to return their permission forms. It is unclear whether this was an active decision not to participate or a passive failure to return permission slips, but the latter is suspected. Classrooms were randomly assigned to review one of the videotapes. Participants completed the IECA and Lie Scale (counterbalanced order) before watching any videotape. A practice videotape displaying a hypothetical male peer who would soon be moving to the local community was then shown to focus attention to the tasks at hand and to increase familiarity with the rating scales. Participants then viewed the experimental videotape and completed the Adjective Checklist and Foley Questionnaire (counterbalanced order) and concluded the assessment by answering a few ques-

tions about themselves (e.g., age, gender, ethnicity), the video (as an attention check), and, for the cancer condition only, about knowing someone with cancer. The cancer manipulation was viewed as effective because one of the attention check questions directly examined participants' knowledge of whether the person on the videotape had an illness. Furthermore, on the Adjective Checklist, participants endorsed the adjective "healthy" significantly more often for the healthy peer than they did for the peer with cancer ($\chi^2 [1, N = 250] = 28.95, p < .00001$). A debriefing letter was subsequently distributed to each participant, and they were instructed to share the letter with their parents. All of the procedures were approved by the University of Florida Health Science Center Institutional Review Board.

Results

To examine the influence of health status and empathy on behavioral intentions and attitudes, two 2 (health status) \times 3 (empathy group) analyses of covariance (ANCOVAs) were calculated with social desirability scores as the covariate. Social desirability was used as a covariate because it was significantly correlated with scores on the Revised Foley Scale ($r = .16, p < .01$) and the Revised Adjective Checklist ($r = .23, p < .001$). Other variables (i.e., race, age/grade) were not included as covariates because they were not significantly correlated with measures of behavioral intention and attitudes. We categorized the empathy data using a tertile split of the sample. Scores on the IECA between -44 and 4 comprised the low empathy group ($n = 82$), scores between 5 and 30 comprised the moderate empathy group ($n = 84$), and scores between 31 and 66 comprised the high empathy group ($n = 84$). The ANCOVA using the behavioral intention data revealed a significant main effect for health status, $F(1, 247) = 13.55, p < .001$, although it was not in the hypothesized direction. Specifically, the hypothetical new peer with cancer ($M = 34.93, SD = 6.65$) received significantly higher behavioral intention ratings than did the healthy new peer ($M = 31.23, SD = 8.48$). This ANCOVA also showed main effects for empathy group, $F(2, 243) = 6.122, p < .003$. Post hoc analyses revealed that participants in the high empathy group ($M = 35.05, SD = 7.39$) reported significantly more favorable impressions about the hy-

Table I. Means and Standard Deviations for the Foley Scale in the Two Video Conditions

Participant Empathy	Healthy ($n = 138$) ($M = 31.23$) ($SD = 8.48$)		Cancer ($n = 112$) ($M = 34.93$) ($SD = 6.65$)	
	n	$M (SD)$	n	$M (SD)$
Low empathy ($n = 82, M = 30.98,$ $SD = 8.36$)	43	29.33 (8.83)	39	32.79 (7.51)
Moderate empathy ($n = 84, M = 32.60,$ $SD = 7.54$)	49	30.82 (8.09)	35	35.09 (5.95)
High empathy ($n = 84, M = 35.05,$ $SD = 7.39$)	46	33.46 (8.22)	38	36.97 (5.77)

pothetical new peer than did participants in the low empathy ($M = 30.98, SD = 8.36$) or moderate empathy ($M = 32.60, SD = 7.54$) groups. There was no significant health status by empathy interaction using the behavioral intention data. Means and standard deviations for the behavioral intention data are presented in Table I. The ANCOVA using the attitude data did not reveal any main effects or an interaction effect.

To examine possible gender differences, two 2 (health status) \times 3 (empathy group) \times 2 (participant gender) \times 2 (actor gender) ANCOVAs were calculated with social desirability scores as the covariate. The ANCOVA using the behavioral intention data revealed significant main effects for health status, $F(1, 245) = 12.00, p < .001$, and participant gender, $F(1, 245) = 7.99, p < .005$, as well as a significant participant gender by actor gender interaction effect, $F(1, 245) = 8.39, p < .004$. Post hoc analyses showed that male participants had more favorable behavioral intentions toward the hypothetical male peer ($M = 31.97, SD = 6.48$) than toward the hypothetical female peer ($M = 28.44, SD = 8.37$). Similarly, female participants had higher behavioral intentions toward the hypothetical female peer ($M = 36.28, SD = 8.77$) than toward the hypothetical male peer ($M = 32.81, SD = 6.60$). The ANCOVA using the attitude data revealed significant main effects for participant gender, $F(1, 245) = 7.77, p < .006$, and actor gender, $F(1, 245) = 5.86, p < .016$. Female participants ($M = 25.88, SD = 4.51$) had more favorable attitudes toward the hypothetical new peer than did male participants

($M = 23.55$, $SD = 4.96$), and hypothetical female peers ($M = 25.65$, $SD = 4.78$) were rated more favorably than were hypothetical male peers ($M = 24.73$, $SD = 4.79$).

Discussion

The primary purpose of this study was to examine the social image of a potentially stigmatizing health condition within an adolescent rural population and to examine the relationship between empathy and peer perceptions. Findings indicate that health status does not have a particularly strong effect on social image and acceptance among young adolescents. Participants rated the hypothetical new peer with cancer equally favorably as the healthy hypothetical new peer. Indeed, adolescents reported having significantly more favorable behavioral intentions toward the hypothetical peer with cancer, even after controlling for social desirability. This finding suggests that a diagnosis of cancer in a same-age peer may not be viewed as a socially undesirable condition. Even though this may, at first glance, seem in contrast to previous findings suggesting problematic peer relationships in children with cancer (e.g., Vannatta et al., 1998), the different findings may simply be a matter of perception. Specifically, most prior studies have relied on the perceptions of parents and teachers in assessing the social relationships of adolescents with cancer, rather than on those of adolescent peers. Our results seem to offer more support for Noll et al.'s (1991) sociometric data indicating that children with cancer are liked and accepted by peers to the same degree as healthy children.

There was partial support for the hypothesis that empathy would be associated with young adolescents' perceptions of a hypothetical new peer. Adolescents with more empathy reported a stronger desire to engage the new peer in academic, social, and general activities, when compared to adolescents with low or moderate empathy levels. Perhaps young adolescents with more empathy are better able to understand the underlying emotional and social concomitants of moving to a new school and are better prepared to assist the new peer in acclimating to the demands of the new environment. Of particular importance is that the empathy effect was observed across health status conditions, thus suggesting the absence of a cancer stigma. Adolescents

with high empathy, for instance, may not differentiate between new peers with cancer and those who are healthy in their behavioral intentions.

Gender may play an important role in peer perceptions. Compared to adolescent boys, adolescent girls attributed more positive qualities to the hypothetical new peer and were more likely to express a desire to engage them in social and academic activities upon their arrival at school. Similarly, young adolescents viewed the hypothetical female peer, regardless of health status, more positively. These findings are consistent with research indicating that girls typically show more empathy and prosocial behavior than boys (Zahn-Waxler & Smith, 1992). However, they also suggest that boys may be most vulnerable to negative reactions from others and highlight the need for future research to examine gender differences in the perceptions of adolescents with cancer.

The findings noted here, though encouraging for adolescents with cancer, must be evaluated within their appropriate methodological context. First, study participation was voluntary and limited to those who themselves provided consent and for whom parental consent was obtained. Indeed, this sample represented only about 15% of the young adolescents enrolled at the schools under study. Consequently, it is possible that participants differed systematically from nonparticipants on indices of empathy or perceptions about others, although these differences could not be examined directly. Our sample was predominantly rural, Caucasian, and lower SES, and the results from this study should not be generalized beyond these sample characteristics. Second, perceptions of the hypothetical new peer and empathy were based entirely on self-report and are, therefore, subject to the biases inherent in this type of measurement approach. Third, the use of a brief videotaped vignette of a hypothetical new peer may not involve the participant sufficiently to evoke a true assessment of attitudes and behavioral intentions. Furthermore, in using a videotape, we were not able to examine the degree to which our findings might extend to actual peers who are already integrated into the school environment. This raises a question about whether the analog is an adequate parallel to what typically occurs for children with cancer. Fourth, our assessment of empathy was conducted before presentation of the videotape, which leaves open the possibility that an assessment of affective empa-

thy in direct response to the videotaped hypothetical new peer would affect the observed relationship between empathy and behavioral intentions.

Received September 2, 1999; revisions received June 14, 2000, and October 24, 2000; accepted November 22, 2000

References

- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development, 53*, 413–425.
- Corulla, W. J. (1990). A revised version of the psychoticism scale for children. *Personality and Individual Differences, 11*, 65–76.
- Eysenck, H. J., Easting, G., & Eysenck, S. B. G. (1970). Personality measurement in children: A dimensional approach. *The Journal of Special Education, 4*, 261–268.
- Foley, J. M. (1979). Effect of labeling and teacher behavior on children's attitudes. *American Journal of Mental Deficiency, 83*, 380–384.
- Hoffman, M. L. (1990). Empathy and justice motivation. *Motivation and Emotion, 14*, 151–172.
- Kury, S. P., Rodrigue, J. R., & Perri, M. G. (1998). Smokeless tobacco and cigarettes: Differential attitudes and behavioral intentions of young adolescents toward a hypothetical new peer. *Journal of Clinical Child Psychology, 27*, 415–422.
- La Greca, A. M. (1992). Peer influences in pediatric chronic illness: An update. *Journal of Pediatric Psychology, 17*, 775–784.
- Noll, R. B., Bukowski, W. M., Rogosch, F. A., LeRoy, S., & Kulkarni, R. (1990). Social interactions between children with cancer and their peers: Teacher ratings. *Journal of Pediatric Psychology, 15*, 43–56.
- Noll, R. B., LeRoy, S., Bukowski, W. M., Rogosch, F. A., & Kulkarni, R. (1991). Peer relationships and adjustment in children with cancer. *Journal of Pediatric Psychology, 16*, 307–326.
- Rigby, K. (1987). "Faking good" with self-reported pro-authority attitudes and behaviors among school-children. *Personality and Individual Differences, 8*, 445–447.
- Siperstein, G. N. (1980). *Development of the Adjective Checklist: An instrument for measuring children's attitudes toward the handicapped*. Unpublished manuscript, University of Massachusetts, Boston.
- Siperstein, G. N., & Bak, J. (1977). *Instruments to measure children's attitudes toward the handicapped: Adjective Checklist and Activity Preference List*. Unpublished manuscript, University of Massachusetts, Boston.
- Siperstein, G. N., & Gottlieb, J. (1977). Physical stigma and academic performance as factors affecting children's first impressions of handicapped peers. *American Journal of Mental Deficiency, 81*, 455–462.
- Stern, M., & Arenson, E. (1989). Childhood cancer stereotype: Impact on adult perceptions of children. *Journal of Pediatric Psychology, 14*, 593–605.
- Vannatta, K., Gartstein, M. A., Short, A., & Noll, R. B. (1998). A controlled study of peer relationships of children surviving brain tumors: Teacher, peer, and self ratings. *Journal of Pediatric Psychology, 23*, 279–288.
- Wisely, D. W., & Morgan, S. B. (1981). Children's ratings of peers presented as mentally retarded and physically handicapped. *American Journal of Mental Deficiency, 86*, 281–286.
- Zahn-Waxler, C., & Smith, K. D. (1992). The development of prosocial behavior. In V. B. Van Hasselt & M. Hersen (Eds.), *Handbook of social development: A lifespan perspective. Perspectives in developmental psychology* (pp. 229–256). New York: Plenum.