An Introduction to the Special Issue on Peer Relations in Youth With Chronic Illness

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Although estimates of the number of children afflicted with chronic illness vary widely, in part due to the difficulty in defining what constitutes a chronic illness, it is clear that most chronic illnesses are on the rise among children (Centers for Disease Control and Prevention, 2009; Van Cleave, Gortmaker, & Perrin, 2010). By definition, these illnesses persist; thus, it is important to examine factors that influence how children live with and manage chronic disease. One potential determinant is the social environment. According to Bronfenbrenner’s social ecological theory (1986), there are different contextual levels of the social environment, ranging from the immediate social environment to the macrosystem, which emphasizes the larger cultural context. Within the microsystem, the social context most often studied in relation to childhood chronic illness is the family. There is a substantial body of research showing that the family plays an important role in how a child adjusts to different chronic illnesses (Helgeson & Palladino, 2012; Kazak, Schneider, & Kassam-Adams, 2010).

Another important facet of that microsystem that is widely acknowledged by researchers to play a role in children’s adjustment to chronic illness is peer relationships. Despite widespread agreement that peer relationships are important to children and become increasingly important as the child moves through adolescence into adulthood (Fuligni, Eccles, Barber, & Clements, 2001; Larson & Verma, 1999), there is much less research on the role of peer relationships in childhood chronic illness. This dearth of research was the impetus for this special section.

There are two primary questions one can ask in regard to the role of peer relationships in chronic illness. First, what is the impact of chronic illness on peer relationships specifically and social functioning more broadly? Second, what is the impact of peer relationships on psychological and physical health for those with chronic illness? The articles in the present issue address these two questions.

Impact of Chronic Illness on Peer Relationships

A recent meta-analytic review of the literature compared the social functioning of youth with and without chronic illness and concluded that youth with chronic physical disease had worse social functioning compared with healthy peers (Pinquart & Teubert, 2012). The effects were larger for diseases associated with larger impairments in functioning (e.g., cerebral palsy, spina bifida) than diseases with smaller impairments in functioning (e.g., diabetes). Across disorders, the effects were larger when based on parent than child report. A second meta-analysis reached similar conclusions in comparing the social competence of children with and without chronic illness (Martinez, Carter, & Legato, 2011); decreased social competence was found among those with chronic illness. Like the first meta-analysis, the size of the effect was moderated by the nature of the chronic illness, with the largest effect sizes appearing for illnesses associated with neurological impairments (e.g., spina bifida) and no significant effects appearing for children with asthma or diabetes. Another important moderator was informant. Again, corroborating the first meta-analysis, the largest effect size appeared for parent report, a smaller effect size appeared for self-report, a marginal effect size appeared for peer report, and the effect size for teacher report was not significant.

The question of whether peer relationships and social functioning differ between children with and without chronic illness was examined by several studies in the current issue, via multiple methods and multiple informants. Several studies focused on peer informants via the Revised
Class Play method (RCP; Masten, Morison, & Pellegrini, 1985). This is a method in which the children in the classroom of a child with chronic illness rate each other in terms of who they would cast as characters in a play. From these ratings, indices of social functioning are derived. All children rate each other without knowing the true purpose of the study or that the target child in the classroom is the focus of the study. Using this method, Salley et al. (2015) found that brain tumor survivors were lower in leadership-popularity and higher in sensitivity-isolation and victimization compared with classmates. However, the two groups were rated as equally prosocial, and there was a trend for brain tumor survivors to be viewed as less aggressive-disruptive compared with classmates. By contrast, a study of children who had had a traumatic brain injury revealed no differences in self-ratings on the RCP between the target group and the comparison group of peers with a history of orthopedic injury (Wolfe et al., 2015). Self and peer ratings were generally in agreement, with one exception. Comparisons between self and peer ratings on victimization/rejection depended on the severity of the injury. Children with severe injuries rated themselves as lower in victimization/rejection than their peers rated them, whereas children with mild/moderate injuries rated themselves as similar in victimization/rejection as peers. Thus, the classmates of children with more severe injuries perceived the child as being more victimized and rejected than the target children rated themselves.

The RCP was used by Alderfer et al. (2015) to examine the effect of cancer on siblings rather than the children with cancer. Siblings of children with cancer were compared with peers, and no differences were found between the two groups on any dimension of social functioning via peer report or self-report, with one exception. Siblings of children with cancer reported more prosocial behavior than the comparison group. By contrast, parents reported that siblings of children with cancer had improved social functioning compared with parents of controls. A meta-analytic review of siblings of children with chronic illness, conducted over 10 years ago (Sharpe & Rossiter, 2002), revealed a significant effect on peer activities/social competence that was moderated by the nature of the chronic illness. The largest group differences were shown for bowel disease and cancer, and no group differences were found for cystic fibrosis, cardiac disease, or seizure disorders. Once again, group differences were larger when based on parent than child report.

Other studies in this issue compared youth with and without chronic illness from the perspective of the youth themselves and their parents. In a study of children with neonatal brachial plexus injuries (NBPI; an injury that occurs during birth), those with NBPI reported more social difficulties than youth with burn injuries (Mentrikoski et al., 2015), and parents corroborated these claims. In a study of emerging adults, those with type 1 diabetes reported less support from friends than the comparison group but similar levels of friend conflict (Helgeson et al., 2015). This same study also examined romantic relationships and found similar levels of support and conflict between emerging adults with and without type 1 diabetes.

All of the studies reviewed thus far have relied on questionnaire-based data collections. One exception is a study that compared the social behaviors of children with spina bifida and their peers via observation (Holbein et al., 2015). Children were observed in their homes engaging in a series of tasks with their best friend. Children with spina bifida were less involved in their interactions, were less confident in asserting themselves, and engaged in more off-task behavior, leading the authors to conclude that children with spina bifida had a less adaptive interaction style compared with peers. However, the authors also noted that the two groups were similar in terms of displays of positive and negative affect, eye contact and listening skills, and collaboration.

Another way to approach the question of how chronic illness impacts friendship is to examine whether children with chronic illness affiliate with those who have the same illness. Helms, Dellon, and Prinstein (2015) examined adolescents with cystic fibrosis and found that 43% had at least one friend who had cystic fibrosis. Their relationships with friends who did and did not have cystic fibrosis were comparable in many ways: time spent with friend, duration of friendship, and negative aspects of friendship. However, adolescents rated their relationships with those who did not have cystic fibrosis as higher in friendship quality than those with cystic fibrosis.

Once differences in social functioning between youth with and without chronic illness are identified, one can ask whether we are able to predict those differences. Two studies in this special issue addressed this question. Holbein et al. (2015) focused on neuropsychological predictors and found that social language and attention abilities predicted the observational interaction codes in which they found differences between children with and without spina bifida. The authors concluded that language and communication skills are critical to the development of friendship. Similarly, Wolfe et al. (2015) found that higher executive function was associated with more favorable peer ratings. Specifically, higher executive function was associated with peers rating the child with traumatic brain injury higher on positive characteristics and lower on negative characteristics.
Thus, several themes emerge from these studies. First, many studies employed multiple informants (Alderfer et al., 2015; Lennon, Klages, Amaro, Murray, & Holmbeck, 2015; Mentrikoski et al., 2015; Salley et al., 2015; Wolfe et al., 2015), as this was a specific request made in the call for papers—and findings differed across informants. When comparing children with and without chronic illness on social parameters, parents report larger differences than the children do. This is consistent with previous meta-analyses in the area (Martinez et al., 2011; Pinquart & Teubert, 2012). What is the meaning and significance of this discrepancy? One possibility is that parents are more accurate reporters, having access to a wider array of information than children, and that children do not notice or detect impairments in their social functioning or relationships. If that is the case, interventions ought to be aimed at increasing self-awareness and social awareness in children so that some social functioning deficits can be remedied. However, it is also possible that children are more accurate reporters of their social relationships than parents, and that parents are sensitized to the fact that they have a child with a chronic illness and attribute social difficulties to the chronic illness. In that case, one would certainly not want to target the child, but it may be important to address parent distress and educate parents on normative childhood social interactions.

Second, the nature of the chronic illness influences whether there are differences in social functioning between children with chronic illness and healthy children, such that larger differences are found in the case of more severe disease or more severe impairments (Wolfe et al., 2015). Finally, there are similarities between children with and without chronic illness in some domains of social competence, as noted by Helgeson et al. (2015), Holbein et al. (2015), Salley et al. (2015), and Wolfe et al. (2015). It is important to keep in mind the ways in which children with chronic illness are similar to their peers and to capitalize on the strengths of children with chronic illness.

Impact of Peer Relationships on Health

Several studies in the special section evaluated the association of peer relations and social functioning to psychological and physical health. Some studies evaluated both the positive and negative features of relationships (Helgeson et al., 2015; Helms et al., 2015), and one study distinguished between friendships and romantic relationships (Helgeson et al., 2015).

In a longitudinal study, Lennon et al. (2015) found that social competence was related to lower internalizing symptoms in children with spina bifida over a 2-year period, and mediated the association between neuropsychological functioning and internalizing symptoms. These relations were observed for teacher reports of internalizing symptoms but not parent report or self-report.

The positive aspects of peer relationships revealed inconsistent relations to outcomes across three studies. In the study of NBPI, classmate support was associated with a higher self-concept and fewer social difficulties, as reported by youth (Mentrikoski et al., 2015). In a cross-sectional study of children with cystic fibrosis in which outcomes were reported by parents, Helms et al. (2015) showed that positive features of friendship were linked to enhanced quality of life but also lower rates of adherence. Helgeson et al. (2015) evaluated both friendships and romantic relationships among emerging adults with and without type 1 diabetes in a three-wave study and found that (a) romantic relationships were stronger predictors of outcomes than friend relationships, and (b) those with diabetes benefitted less from romantic support compared with peers. Specifically, romantic support was related to higher levels of distress and more disturbed eating behavior among emerging adults with diabetes.

Past literature in this area has focused more on the supportive than the unsupportive aspects of friendships among youth with chronic illness. Helms et al. (2015) examined a negative relations index and found that it was associated with lower rates of adherence among children with cystic fibrosis. Helgeson et al. (2015) found that conflict with friends and conflict with romantic partners predicted poor outcomes, but that romantic conflict was more strongly associated with some outcomes among emerging adults with than without diabetes. In addition, romantic conflict was linked to poor self-care behavior.

Taken collectively, the studies that link aspects of peer relationships to health outcomes reveal mixed associations of the supportive aspects of peer relationships. There are several possible explanations for these inconsistent findings. It may be that strong connections to peer relationships benefit one’s self-concept and psychological health but at the expense of enacting adaptive health behaviors. That is, immersion in peer relationships may detract from self-care (Palladino & Helgeson, 2012). It is also possible that strong connections to peers make concerns over fitting in with peers more salient, leading to elevated distress. Fewer studies focus on the negative aspects of peer relationships, but those that do tend to find strong links between conflictual aspects of peer relationships and poor health outcomes.
Future Directions

The studies in this special section examined a number of different chronic illnesses. The previously conducted meta-analyses in this area universally find that the nature of the chronic illness is a moderator of the social functioning differences between children with and without chronic illness. It is important to move beyond studying specific disorders to identifying dimensions that might underlie these disorders that could explain the differences. For example, Martinez et al. (2011) found that the size of the effect was larger for neuropsychological disorders than other disorders, which might suggest that social deficits can be linked to neuropsychological functioning. There are other dimensions of chronic illness that could be studied, such as the visibility of the illness/impairments, severity, and even stigma associated with the illness.

In terms of methods, the studies reviewed here utilized a wide array of methods ranging from self-report to observation to peer ratings using the RCP. Although these studies are difficult to execute and the data potentially difficult to obtain, longitudinal studies are needed in this area to determine at what age difficulties appear and how they manifest themselves over time. None of the studies in this issue examined age, and many studies evaluated groups of children with chronic illness that span large age ranges, making it difficult to address how age influences the association of peer relationships to health outcomes.

Many of the studies examined in this special issue focused on generic measures of friend support, friend conflict, or social functioning. Future research should use more disease-specific measures of relational support and conflict. The disease-specific measures may reveal stronger links to health outcomes and help to shed light on the aspects of peer relationships that are most meaningful in the context of chronic illness.

Finally, future research could also make some distinctions among peer relationships. Do children with chronic illness benefit more from support from friends or classmates? Are they harmed more by negative interactions with classmates than friends? As children transition through adolescence and emerging adulthood, it is especially important to study whether chronic illness has an effect on the evolution of romantic relationships and the implications of support from and conflict with romantic partners on health.

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