Coping and Social Adjustment in Pediatric Oncology: From Diagnosis to 12 Months

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Received 10 November 2019; revisions received 14 July 2020; accepted 3 August 2020

Abstract

Objective Children diagnosed with cancer experience stress associated with their diagnosis and treatment and are at heightened risk for problems in social adjustment. This study investigated the association between coping with cancer-related stress and problems in social adjustment across the first year after a pediatric cancer diagnosis. **Methods** Mothers of children (ages 5–17 years) with cancer (N=312) were recruited from two children's hospitals. Mother's reported on their child's social adjustment and coping near diagnosis (T1) and 12 months (T2). **Results** Primary, secondary control, and disengagement coping were significantly associated with concurrent social adjustment at 12 months. The bivariate associations between baseline primary and secondary control coping and social problems 12 months later were no longer significant in a multivariate regression model. **Conclusions** These findings inform our understanding of the association between coping with cancer. Interventions teaching primary and secondary control coping strategies for cancer-related stress sors may offer some benefit to concurrent youth social adjustment. Further research is needed on how best to support social adjustment in this population over time.

Key words: coping; longitudinal; pediatric cancer; social problems.

Introduction

Children diagnosed with cancer face a myriad of unanticipated and often uncontrollable stressors associated with their diagnosis and treatment (Rodriguez et al., 2012). They are also at risk of experiencing problems in social adjustment (e.g., Christiansen et al., 2015; Pinquart & Shen, 2011), which bears implications for their overall quality of life (Anthony et al., 2014). The way in which children cope with cancer-related stress (Compas et al., 2014), as well as their social adjustment (e.g., Martinez et al., 2011; Pinquart & Shen, 2011), are two important areas that have largely been investigated independently. Although an association between coping and social adjustment has been demonstrated in typically developing children (e.g., Clarke, 2006), it has received limited empirical attention in studies of children with cancer.

Social adjustment refers to the extent to which children attain socially desirable and developmentally appropriate goals (Yeates et al., 2007), and is the component of social competence that has most often been investigated in pediatric oncology (e.g., Hocking

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et al., 2015; Pinquart & Shen, 2011). Children may experience challenges in social adjustment early in the diagnosis and treatment trajectory, and these may continue into survivorship (e.g., Christiansen et al., 2015; Font-Gonzalez et al., 2016). One frequently studied index of social adjustment is the Social Problems scale of the Child Behavior Checklist (CBCL), which assesses difficulties in peer relationships as well as immature social behaviors. A meta-analysis indicated a moderate level of impairment on the Social Problems scale (g = .58) across studies of children with cancer (Pinquart & Shen, 2011).

Importantly, many children diagnosed with cancer do not experience deficits in social adjustment (Christiansen et al., 2015; Martinez et al., 2011). Research has identified several factors associated with greater impairment in social adjustment in children with cancer, including central nervous system (CNS) treatment intensity (e.g., Vannatta et al., 2007), brain tumor diagnosis (e.g., Macartney et al., 2014), and vounger age at diagnosis (Brinkman et al., 2012). A further factor that may explain the heterogeneity in social adjustment of children diagnosed with cancer is the way in which children attempt to cope with the stress of a cancer diagnosis and treatment. A widely recognized model of social competence outlined by Yeates et al. (2007), applied in pediatric oncology (e.g., Hocking et al., 2015), supports coping as an affective process influencing youth social adjustment.

Coping with cancer-related stress is especially important to examine in children diagnosed with cancer given the multitude of cancer-related stressors they face, including those associated with daily/role functioning, physical effects of treatment, and uncertainty about cancer (Rodriguez et al., 2012). The stressors faced by children with cancer have highlighted the need for a thorough understanding of how these children cope with cancer-related stress. Coping has been defined as controlled, volitional efforts to regulate cognitions, emotions, behavior, physiological reactions and the environment in response to stress, and can include either engaging with or disengaging from the stressor (Compas et al., 2001). A model of coping that draws on Weisz and colleagues' (e.g., Band & Weisz, 1990; Rudolph et al., 1995) model of child/adolescent perceived control (i.e., the capacity to cause an intended outcome) identifies three types of coping-primary, secondary control, and disengagement coping. Primary control coping involves efforts to directly act on the source of stress or one's emotions (e.g., problem solving and emotional expression), secondary control coping involves efforts to adapt to the source of stress (e.g., acceptance and cognitive reappraisal), and disengagement coping involves efforts to orient away from the source of stress or one's emotions (e.g., avoidance or denial; Compas et al., 2012; Connor-Smith et al., 2000).

Secondary control coping may be an especially important predictor of child adjustment, and particularly child social adjustment. Secondary control coping encompasses efforts to adapt to source of stress (e.g., cognitive reappraisal, positive thinking, acceptance), and is considered to be most beneficial in coping with uncontrollable cancer-related stressors (Rodriguez et al., 2012). Secondary control coping has been associated with better emotional adjustment across children with chronic illnesses (Compas et al., 2012), including children recently diagnosed with cancer coping with disease-related stress (Compas et al., 2014). Further, secondary control coping with social stressors has been found to be associated with fewer social problems in children with acute lymphocytic leukemia (Campbell et al., 2009) and brain tumor survivors (Robinson et al., 2015). Secondary control coping with disease-related stress specifically has been associated with better social adjustment in children with a diabetes (Jaser & White, 2011).

Overall, coping is an important factor which influences social adjustment. During the first year from diagnosis youth face a preponderance of cancer-related stressors which they must cope with, and secondary control coping is generally the most adaptive coping strategy for the often uncontrollable stressors these youth face. However, little is known about the influence of coping with cancer-related stress on social competence. Findings from other pediatric populations suggest that secondary control coping with disease-related stress is associated with better social adjustment. However, this remains to be investigated in children diagnosed with cancer. Further, a limitation of previous studies is the cross-sectional nature of analyses, which does not allow the assessment of the impact of coping on social adjustment over time. Therefore, in this study we examine the longitudinal associations between coping with cancer-related stress and social problems in children diagnosed with heterogeneous cancers across the first year from diagnosis. It was hypothesized that secondary control coping would be associated with fewer social problems at 12months, within and across time, controlling for social problems at T1.

Materials and Methods

Procedure

Data were obtained as part of a larger study in which children with cancer and their parents were recruited from two pediatric oncology centers in the Midwestern and Southern United States. Institutional Review Boards at both academic medical centers approved all study procedures. Eligible families had children who: (a) were ages 5–17 years old, (b) had a new cancer diagnosis or recent recurrence, (c) were receiving treatment by an oncologist, and (d) had no premorbid developmental disability.

At T1, on average 2 months after the diagnosis or relapse of the child's cancer (M=2.0; SD = 1.6 months; interquartile range = 29–78 days), mothers completed reports on the child's coping and social problems as well as family demographic characteristics. At T2, at ~12 months (M=11.7; SD = 2.5 months; interquartile range = 315–386 days), mothers were asked to complete the same questionnaires. Informed consent was obtained from the participating caregiver. Families were compensated at each time point.

Participants

Of the 386 families who were approached for the larger study, 87% or 336 families were enrolled. Three hundred and twelve mothers participated in this study. Mothers provided reports on their children, who were on average 10.7 years old (SD = 3.9) at diagnosis; 47.1% (N = 147) of children were female. Races represented in the sample included 83% (N = 259),9.9% Caucasian African-American (N=31), 1.0% Asian (N=3), whereas the remainder reported "Other" for their race (6.1%; N=19). Cancer diagnoses included leukemia (36.2%; N = 113), lymphoma (26.6%; N = 83), brain tumor (7.1%; N=22), and other solid tumor (30.1%;N = 94). Two hundred and eighty-one families (90.1%) were recruited after initial diagnosis and thirty-one (10.8%) after a relapse. Youth with new diagnoses and relapses were included in order to be inclusive of all children who received a cancer diagnosis during the period of recruitment. At T2, 51.5% (N=161) of children were receiving treatment, whereas 46% (N = 143) were off treatment. Treatment information was not available for 2.6% (N=8) of children, largely due to lack of access to medical records when a child's treatment was transferred to another center. Mothers reported on 331 children with cancer at T1 and 219 of these mothers provided follow-up reports of child coping and social problems at T2. Nineteen children died between T1 and T2 and were therefore not included in the analyses (T1, N=312). Other reasons for attrition included being unable to reach the family, no longer wanting to participate due to time constraints or severity of child's illness, or switching care to another hospital.

Mothers who completed both time points did not significantly differ from those who were lost to follow-up with regard to child race, child ethnicity, cancer diagnosis type, mother report of child coping, or mother report of child social problems at T1, p's >.10. There was a significant association between

relapse status and attrition; families of children who had relapsed at T1 (10.5% of the current sample) were less likely to participate at T2 ($X^2 = 8.38$, p < .01).

Measures

Demographic and Medical Data

Mothers provided demographic information, including age and family income. Mothers gave permission for the research staff to access medical data, including the child's diagnosis and treatment type. Diagnosis type was dichotomized as brain tumor versus leukemia, lymphoma, and other solid tumor given that youth diagnosed with brain tumors have been found to experience greater problems in social competence than those with other cancer diagnoses (e.g., Barrera et al., 2005; Schulte et al., 2018). Treatment intensity was categorized at four levels according to the Intensity of Treatment Rating scale 2.0 (ITR-2; Werba et al., 2007). The ITR-2 was used as data collection was primarily completed prior to publication of the ITR-3 (Kazak et al., 2012). Treatments were classified as least intensive (e.g., Wilms' tumor-stages I and II), moderately intensive (e.g., acute lymphoblastic leukemia-standard risk), very intensive (e.g., Ewing sarcoma), or most intensive (e.g., relapse protocols).

Social Adjustment

Mothers' reports of their children's social adjustment were assessed with the CBCL Social Problems scale (Achenbach & Rescorla, 2001). Reliability and validity are well established for the CBCL, and normative T scores are derived from parents' reports on a nationally representative sample of children and youth ages 6-18 years old. T scores are presented in tables, but raw scores were used in analyses. The Social Problems scale on the CBCL assesses immature social behaviors, as well as difficulties in peer relationships, via 11 items. Examples of items from this scale include: "clings to adults or too dependent," "gets teased," "not liked," "too dependent," "prefers being with younger children," and "lonely." This scale can be broadly understood as representing problems in social adjustment (Hocking et al., 2014; Schulte & Barrera, 2010).

Children's Coping

The Responses to Stress Questionnaire-Pediatric Cancer version (RSQ-PC; Compas et al., 2014a; Connor-Smith et al., 2000) was used to obtain mothers' reports of their children's coping with cancer-related stressors. The RSQ-PC contains 57 items reflecting voluntary (coping) and involuntary (automatic) stress responses of children/adolescents to cancer-related stressors. Mothers were asked to rate each item with regard to the degree/frequency with

which their child used a specific coping strategy when faced with the cancer-related stressors rated on a 4-point scale (1 = not at all to 4 = a lot). The factor structure of the RSO has been supported in confirmatory factor analytic studies with children and adolescents from a wide range of ethnic and cultural backgrounds coping with a variety of stressors (e.g., Yao et al., 2010). The coping scales include primary control coping (i.e., problem solving, emotional modulation, emotional expression), secondary control coping (i.e., acceptance, cognitive restructuring, positive thinking, distraction), and disengagement coping (i.e., avoidance, denial, wishful thinking). Using the standard method for scoring the RSQ, and to control for response bias and individual differences in base rates of item endorsement, proportion scores were calculated by dividing the total score for each factor by the total score for the RSQ (Connor-Smith et al., 2000). Internal consistencies for T1 and T2 mother report on child coping, respectively, were primary control, $\alpha =$.73/.75; secondary control, $\alpha = .87/.87$; and disengagement, $\alpha = .71/.79$.

Data Analyses

Preliminary analyses (bivariate correlation and *t*-tests) were conducted in SPSS (version 24). Children's secondary control coping at T2 was examined as a concurrent predictor of children's social adjustment at T2. Then, children's secondary control coping at T1 was examined as a predictor of children's social adjustment at T2. Regression analyses included medical and demographic covariates. In order to utilize participants with partial data, all multiple linear regression analyses were conducted with the AMOS program of SPSS (Arbuckle, 2013) using full information maximum likelihood (FIML) to handle missing data (children who died were not included in the analyses). This method is chosen because FIML makes fewer assumptions about missingness and is more robust to violations of such assumptions in comparison to other methods for handling missing data such as listwise, casewise deletion, or simple imputation (Little et al., 2014; Widaman, 2006). To control for the possible effects of child age, family income, relapse status, type of cancer diagnosis, and treatment intensity, these variables were included as covariates in the regression analyses.

Results

Preliminary Analyses

Descriptive Statistics

Means and SDs are presented in Table I for mother report of children's coping on the RSQ and levels of children's social problems from the CBCL. Means T scores on the Social Problems scale were M = 53.73

(SD = 5.57) at T1 to M = 54.42 (SD = 6.37) at T2. These indicated, on average, mild levels of social problems, with mean *T* scores ranging from ~0.37 to 0.44 SDs above a normative mean of 50.

Correlation and t-Test Analyses

Correlation analyses are presented in Table II. Greater use of T1 and T2 primary control coping, T1 and T2 secondary control coping, older age, and higher income were all significantly associated with fewer social problems at T2. T1 and T2 disengagement coping was not associated with social problems at T2. There were no significant differences on social problems at T2 as a function of diagnosis type, relapse status, or treatment intensity.

Linear Multiple Regression Analyses (Table III) Associations Between T2 Coping and Social Problems at T2

Greater use of T2 primary control coping ($\beta = -.24, p < .001$), secondary control coping ($\beta = -.16, p < .01$), disengagement coping ($\beta = -.24, p < .001$), and younger age ($\beta = -.13, p < .05$) were associated with more T2 social problems when accounting for T1 social problems ($\beta = .59, p < .001$), while family income, treatment intensity, diagnosis type, and relapse status were all non-significant (model $R^2 = .52$; Table III).

Associations Between T1 Coping and Social Problems at T2

Younger child age ($\beta = -.12$, p < .05) was associated with fewer T2 social problems when accounting for T1 social problems ($\beta = .61$, p < .001), while T1 primary, secondary control, disengagement coping, family income, treatment intensity, diagnosis type, and relapse status were all non-significant (model $R^2 = .48$).

Discussion

Children diagnosed with cancer experience cancerrelated stress (Rodriguez et al., 2012), as well as psychosocial sequelae associated with their diagnosis, including difficulties in social adjustment (e.g., Pinquart & Shen, 2011). The association between coping and emotional adjustment is well established (Compas et al., 2012, 2017). However, the association between coping and social adjustment in pediatric populations, particularly pediatric oncology, is less well documented. Specifically, there is limited knowledge on how coping with disease-related stress impacts social adjustment in children newly diagnosed with cancer. Further, a significant limitation of previous research on the association of coping with social adjustment in pediatric populations is the largely cross-sectional

	M	SD	Borderline clinical range	Clinical range
T1 Social Problems	53.71	5.63	5.8%	2.7%
T2 Social Problems	54.42	6.37	10.7%	4.2%
T1 Primary Control Coping	0.30	0.19		
T1 Secondary Control Coping	0.46	0.28		
T1 Disengagement Coping	0.22	0.14		
T2 Primary Control Coping	0.29	0.19		
T2 Secondary Control Coping	0.43	0.28		
T2 Disengagement Coping	0.27	0.15		
1 0	Ν	%		
Annual family income				
25,000 or under	85	28.4		
25,001-50,000	87	29.1		
50,001-75,000	44	14.7		
75,001-100,000	34	11.4		
100,001 or more	49	16.4		
Diagnosis				
Leukemia, lym-	290	92.9		
phoma, and other				
solid tumor				
Brain tumor	22	7.1		
Treatment intensity				
Least intensive	7	2.3		
Moderately intensive	120	40.1		
Very intensive	123	41.1		
Most intensive	49	16.4		

Table I. Descriptive Statistics: Social Problems, Secondary Control Coping, Medical and Demographic Variables

Note. Means and SDs are presented for the full sample. Social problems are presented as normalized *T* scores from the CBCL (Child Behavior Checklist). Secondary control coping is presented as a ratio score from the RSQ-PC (Responses to Stress Questionnaire-Pediatric Cancer version). Borderline clinical range $T \ge 65$ (expected = 7%). Clinical range $T \ge 70$ (expected = 2%).

Table II. Preliminary Analyses: Correlations BetweenCoping, Demographic and Medical Variables and T2 SocialProblems

	T2 social problems
T1 primary control coping	17*
T1 secondary control coping	23**
T1 disengagement coping	.08
T2 primary control coping	22**
T2 secondary control coping	23**
T2 disengagement coping	.02
Child age	19**
Annual family income	22**

p* < .05; *p* < .01; and ****p* < .001.

nature of the analyses (e.g., Jaser et al., 2011; Van Dijk et al., 2009). The findings from this study address this important gap in the literature by investigating the longitudinal association between coping with cancer-related stress and problems in social adjustment in a large sample of children diagnosed with cancer, across the first year from a cancer diagnosis.

Our hypothesis of the effect of secondary control coping on social adjustment was only partially

supported. Although concurrent multiple linear regression analyses revealed that greater use of secondary control coping was associated with fewer social problems in children diagnosed with cancer 12 months post-diagnosis, greater use of primary control and disengagement coping were also significantly associated with fewer social problems at 12 months. In addition to many uncontrollable cancer-related stressors youth with cancer continue to face at 12 months postdiagnosis (for which secondary control coping may be most adaptive), it is possible that as children transition through and off treatment they may have greater opportunities to use primary control coping for some controllable stressors (e.g., using problem solving to participate in choosing follow-up medical appointment dates). Effective use of primary control coping strategies with cancer-related stressors may also translate to use of primary control coping with social stressors, which has been associated with greater social adjustment (e.g., Jaser & White, 2011). The negative association between T2 disengagement coping with concurrent social problems in the regression analyses suggests a suppressor effect, as the non-significant

	Child T2 coping \rightarrow Child T2 social problems			Child T1 coping \rightarrow Child T2 social problems		
	b	β	R^2	b	β	R^2
			.52			.48
Intercept	11.44***	_		5.18**	-	
SP T1	0.67	.59***		0.69	.61***	
PCC	-19.42	24***		-6.79	08	
SCC	-7.72	16**		-4.66	10	
DC	-21.60	24***		-2.41	02	
Child age	-0.09	13*		09	12*	
Family income	-0.09	05		10	05	
Treatment	-0.10	03		06	02	
Diagnosis type	0.11	.01		12	01	
New versus relapse	0.20	.02		0.05	.01	

Table III. Linear Multiple Regression Analyses Examining the Associations Between Coping and Social Problems

Note. PCC = primary control coping; SCC = secondary control coping; DCC = disengagement coping; SP = social problems. *p < .05; *p < .01; and ***p < .001.

bivariate association between T2 disengagement coping and T2 social problems was small but positive. However, it is also possible that use of disengagement coping in the context of other coping strategies may offer some benefit (Wadsworth, 2015). For example, children may benefit from brief breaks when feeling overwhelmed.

Longitudinal analyses indicated that, although there were significant bivariate associations between primary and secondary control coping with later social adjustment, there was no significant impact of coping near diagnosis on social problems 12 months later in the multivariate regression analysis. The impact of coping with cancer-related stress on social adjustment is clearly limited over time. There are several potential reasons for this. First, the strength of the association between coping and social adjustment may be attenuated over time by the variability in child experiences across their first year from a cancer diagnosis. The length of the study period, impeded by the secondary nature of the study analyses, may have been too long to see an impact of coping on later social adjustment. Second, the way in which children cope during the acute distress period following diagnosis (Katz et al., 2018) may not be reflective of their general use of coping strategies over time and therefore may be a poor predictor of later social adjustment. Third, it is possible that the impact of coping may have been stronger in a subset of youth at high risk for distress or challenges in social adjustment. In this study, all families with a child newly diagnosed with cancer were invited to participate. In general, most families of children diagnosed with cancer are often at Universal (low) risk for distress, and are resilient despite expected stress at diagnosis (Kazak et al., 2015). Finally, coping facilitates the immediate enactment of social skills (Yeates

et al., 2007), which impact concurrent social adjustment, but does not specifically lead to new social skills. It is possible that an important (and variable) factor affecting the social adjustment of children across their first year from a cancer diagnosis may be the generation of new social skills (e.g., how to answer questions from their peers about their diagnosis, how to develop new social hobbies compatible with treatment restrictions). Overall, the findings from this study provide a foundation of knowledge regarding the association between coping and social adjustment. Future studies will hopefully expand upon these findings to enhance our understanding of the constructs of coping and social adjustment in children diagnosed with cancer.

Older age was found to be associated with fewer social problems. This finding is consistent with previous research (Bonner et al., 2008; Brinkman et al., 2012). Older children tend to have a larger, more established social network (La Greca & Bearman, 2003), and therefore may have an easier time maintaining interaction with others throughout diagnosis and early treatment. Conversely, younger children with cancer may experience greater difficulties in social problems than older children/adolescents. Younger children may be more susceptible to neurocognitive effects (Krull et al., 2018) which influence social adjustment (Yeates et al., 2007). However, in analyses using CBCL T scores which are normed for age and gender, age was not a significant predictor of social problems across all linear multiple regression analyses. Further research is needed to clarify the associations between age, coping, and different facets of social adjustment in children diagnosed with cancer.

Contrary to previous research, treatment intensity was not a significant predictor of child social

problems. The analyses in this study included a measure of overall treatment intensity, whereas others have found that intensity of CNS treatment more specifically predicts poorer social adjustment (e.g., Vannatta et al., 1998, 2007). Cranial radiation has been associated with increased risk for neurocognitive deficits due to compromised white matter integrity (Mabbott et al., 2006), and impairments in neurocognitive functioning have in turn been associated with impairments in social adjustment in children with cancer (Desjardins et al., 2020; Willard et al., 2017). Overall, although treatment intensity did not predict social problems beyond coping, it is possible that CNS treatment specifically may have produced a stronger effect.

There were several methodological strengths to this study. First, this was the first study examining the longitudinal association between coping and problems in social adjustment in children with cancer. Second, the sample of children recently diagnosed with cancer was relatively large. This sample size allowed for the inclusion of several covariates of interest in the analyses, including controlling for prior social problems. Third, data was collected early in the treatment process. Understanding early processes is important in order to understand pathways of adjustment and identify potential targets and timing of interventions. The development of early interventions is particularly important, given that impairments in social adjustment have been found to increase over time (e.g., Kullgren et al., 2003). Indeed, in this sample, the percentage of children experiencing borderline impairment and clinical impairment in social problems almost doubled across time points.

Although this study contained notable strengths, several limitations may also be described and present important areas for future research. First, this is a secondary analysis from a larger study primarily aimed at investigating coping and emotional adjustment in families of children diagnosed with cancer. As such, this study used single informant (mother) report of child coping and problems in social adjustment and did not include peer report data on child social competence (e.g., Salley et al., 2014) or data to assess CNS treatment intensity as others have done (e.g., Vanantta et al., 2007). Second, although FIML was used in the regression analyses to account for missing data, a further limitation is the magnitude of sample attrition between T1 and T2. Notably, children who had relapsed were less likely to participate at T2. Relapse status was therefore included in all regression models even though it was not significantly associated with coping or T2 social problems. Third, this study assessed social adjustment, which represents only one of the three domains of social competence (Yeates et al., 2007). Research examining the association between other

domains of social competence (i.e., social information processing, social interaction) and coping is needed. Fourth, this study included data from the first year following a pediatric cancer diagnosis. Further longitudinal data is needed to understand how the association between coping and problems in social adjustment may change over time, particularly as these children age and transition into survivorship. Finally, although the analyses controlled for several variables, the size of the effects for coping remained small in the concurrent regression analyses and were not significant in the longitudinal regression analyses.

Overall, this study provides the first longitudinal examination of coping with cancer-related stress and social adjustment within the first year of a child's cancer diagnosis. Several directions for future research are possible from this foundation. First, future studies which include peer report of child social adjustment (e.g., Salley et al., 2014), or direct observation of child social competence (e.g., Katz et al., 2011) are needed to optimally capture the impact of coping on youth social competence. Second, research is needed in order to better understand factors distinguishing coping and socialemotional processes in families of youth newly diagnosed with cancer versus those who have a relapse diagnosis. Although relapse was not associated directly with coping in this study, it is possible relapse status may be associated with other factors associated with child coping, such as parent coping, or perceived illness severity. Third, although the findings offer support of the influence of coping with cancer-related stressors on social adjustment, the small or non-significant effect sizes for coping indicate it is likely that other factors also influence social adjustment in this population and need further investigation. Importantly, we did not examine social isolation (e.g., absence from school due to treatment), which impacts the psychosocial adjustment of youth diagnosed with cancer (Christiansen et al., 2015). Further, several other constructs noted to influence social competence (Yeates et al., 2007) were not explored in this study (e.g., parenting, social information processing) and warrant further empirical attention. Teaching coping is clearly not the optimal singular target for intervention to improve the social competence of children diagnosed with cancer. However, given the impact of coping on the emotional adjustment of children diagnosed with cancer (e.g., Compas et al., 2014, 2017), a secondary benefit (in addition to improving emotional adjustment) to teaching coping to youth diagnosed with cancer may be to their concurrent social adjustment. Future research may investigate whether multifaceted intervention approaches including both targeted social skills and coping strategies would offer optimal benefit to the social competence of children diagnosed with cancer.

Funding

This research was supported by grant R01CA118332 from the National Cancer Institute, a gift from Patricia and Rodes Hart, intramural funding from The Research Institute at Nationwide Children's Hospital, and a doctoral research fellowship by the Fonds de Recherche Sante Quebec.

Conflicts of interest: None declared.

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