

Commentary

The importance of friendships in youth with chronic pain: The next critical wave of research

"Friendship improves happiness and abates misery, by doubling our joys and dividing our grief"

-Cicero, on friendship

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During adolescence, social worlds undergo substantial shifts in form and function as adolescents spend less time within the family context and more time involved in activities with their peers (Larson & Richards, 1991; Mathur & Berndt, 2006). Friendships, which are special relationships characterized by mutual knowing and platonic affection, have been described as forming the core of positive peer interactions during this developmental stage (Berndt, 2004). These relationships gradually increase in quality such that, by middle adolescence, most youth identify their best friend as their primary source of social support (Furman & Buhrmester, 1992; Bokhorst et al., 2010).

Although there has been burgeoning interest in the broader social functioning of adolescents with chronic pain, we know little regarding their close friendships (Forgeron et al., 2010). This is a remarkable oversight as close friends are central figures in adolescents' social networks and can be important sources of influence for health and well-being (La Greca et al., 2002; Macdonald-Wallis et al., 2012). Moreover, youth with persistent pain may experience a complex set of associated risk factors that set the stage for ongoing peer relationship problems, including low social competence and confidence, greater behavioral avoidance and withdrawal, and lack of empathy for the typical challenges of adolescence (Forgeron et al., 2013). The impact of peer relationship problems

during adolescence can have a profound impact on downstream functioning (Parker & Asher, 1987; Bagwell et al., 1998). Additionally, the absence of strong social relationships is a mortality risk factor comparable to other well-established risk factors such as smoking and obesity (Holt-Lunstad et al., 2010); therefore ongoing peer problems may contribute to pain chronification and disability, forewarning the need for research on the social functioning of youth with chronic pain.

A systematic review concluded that children and youth with chronic pain have fewer friends, are rated as less likeable by peers, may be subjected to higher rates of peer victimization, and are rated by peer and self-report as more isolated (Forgeron et al., 2010). Despite this, it is clear that some youth manage to maintain quality friendships and regular social interaction in spite of significant pain. Notably, Eccleston and colleagues (2008) found that strong peer relationships were correlated with positive self-reported assessment on independence, emotional adjustment, and identity formation for youth with chronic pain, suggesting that strong friendships may play a protective function in the context of chronic pain. Identifying the factors that contribute to friendship maintenance and friendship instability in this population is critical to improving their outcomes.

A call for research

At present, we know surprisingly little about how the friendship experiences of youth with chronic pain impact and are impacted by pain and associated disability. Given that friends have increasing influence over a wide array of behaviors during adolescence, it is surprising that current treatment approaches often fail to consider how close friendships (or lack thereof) may help or harm efforts to improve adjustment and outcomes. Targeted strategies to maintain and strengthen friendships for youth with chronic pain cannot be developed without understanding the underlying mechanisms within their friendship interactions. We call for a systematic program of research addressing the following themes.

The longitudinal course of friendship.

Although youth with chronic pain (and their parents and health care providers) often report concerns regarding social functioning, the nature and extent of their relationship problems has yet to be systematically documented—including whether social difficulties preceded pain onset, or whether they did not appear until much later. Youth with chronic pain report that disruption to friendships occurs after the onset of chronic pain (Forgeron & McGrath, 2008; Meldrum et al., 2009; Forgeron et al., 2013); however, practitioners present a more nuanced picture, noting that some youth with chronic pain appear to have had preexisting social problems that may have contributed to pain onset, pain-related disability, and social avoidance while others seem to maintain positive friendships and social involvement despite pain (Fleischman et al., 2011). Longitudinal research is needed to describe the course of friendships, including how friendship quality, satisfaction, stability, and needs may change over time. Longitudinal and temporal data will also allow for examination of direct and indirect influences of friendship features on pain and pain-related adjustment (e.g. negative interactions with friends influence mood, loneliness, and sleep, which in turn impact pain and disability), as well as the examination of friendship loss and whether it impacts downstream functioning (e.g. relationships within the broader peer group,

transition to college or workforce, romantic relationship initiation and maintenance, marriage).

Predictors of risk. Youth seeking treatment for chronic pain commonly report frequent school absences and restricted involvement in activities as a function of their pain. Missing out on these normative tasks limits opportunities to spend time in the company of peers (Roth-Isigkeit et al., 2005) and may preclude the development and maintenance of rich, shared histories—a hallmark of close friendships. Accordingly, reduced frequency of contact may be a risk factor for relationship instability. Creating and promoting opportunities for youth with chronic pain to participate in alternative activities with their friends—even when they are not attending school full-time—may help them maintain important connections.

Of course, even when youth with chronic pain are able to spend time with their friends, the quality of that interaction may be reduced by unique features of chronic pain. Fatigue, low mood, and irritability commonly co-occur with chronic pain, and may make it difficult to be an enjoyable companion. Cognitive demands associated with pain may make it more difficult to attend to and interpret important social cues (Beck et al., 2011), and may preclude effective listening skills. Lack of reciprocity—resulting perhaps from a decrease in empathy on the part of the youth with chronic pain—may negatively impact friendship quality as well. Youth with pain may display pain behaviors (i.e. excessively talking about pain, cancelling plans due to pain) that they may, or may not, be aware of, which could negatively affect the desire of friends to spend time with these youth. Finally, social information processing differences have been found in youth with chronic pain, including heightened sensitivity to potentially nonsupportive social situations—which may lead them to interpret such situations more negatively than healthy peers (Forgeron et al., 2011). Thus, simply increasing opportunities for interactions with friends may not be an effective strategy on its own. Studies that identify specific mechanisms that influence the quality of these interactions as well as the consequences of friendship interactions on pain-related function are needed in order to design interventions to achieve maximum benefit.

Predictors of resiliency. Clearly, some youth with chronic pain seem to maintain high quality friendships and involvement in important social activities; however, we know little about factors that protect against social difficulties for these youth. Youth with chronic pain who remain socially involved may have greater (premorbid) self-efficacy, social cognitive problem-solving abilities, and general social competence. Importantly, there are a number of interpersonal situations that are difficult to navigate for many adolescents (see Asher & McDonald, 2009), but may be particularly difficult, or experienced with greater frequency, for youth with chronic pain (e.g. group reentry after a period of absence, requesting help from friends, achieving equity in friendships, coping or responding to false accusations, self-disclosing problems, and listening to friends' problems). Studies that systematically examine how adolescents with chronic pain approach and manage these tasks can provide considerable knowledge about the target behaviors and situational variables that contribute to success or failure (see Dodge's body of work on response to provocation among aggressive youth as an exemplar; see Crick & Dodge, 1994). Learning how some youth with chronic pain successfully navigate these challenging social tasks and maintain their high-quality friendships can inform how parents and health care providers teach strategies and skills to those who are struggling with their friendships.

Features of the friends themselves are important to consider as well. Some friends of youth with chronic pain may be more adept at providing meaningful support. Identifying the support provisions (i.e. instrumental, emotional, informational, appraisal) offered by friends, and the extent to which they are perceived as helpful—or are objectively helpful—can provide guidance regarding how friends may be incorporated into intervention efforts. For example, observation studies (both laboratory and naturalistic) involving friendship dyads, in addition to self-report studies, will help determine the types and degree of support friends are able to provide. Understanding the individual social task skills and friendship behaviors that are associated with pain coping and social function are needed to ensure interventions support positive friendships.

Clinical implications

Friends have increasing influence over a wide array of behaviors during adolescence, including school engagement and performance, healthy lifestyle behaviors (e.g. dietary intake, physical activity), and participation in extracurricular activities (Fredricks & Eccles, 2005; Salvy et al., 2011; Fitzgerald, et al., 2012; Estell & Perdue, 2013). Incorporating peer components into prevention and intervention efforts targeting other health conditions has delivered promising results (e.g. Greco et al., 2001; Camacho-Miñano et al., 2011; Stewart et al., 2011) and may be of benefit for youth with chronic pain. For example, incorporating the adolescent's actual friends into peer-based physical activity programs may help encourage resumption of physical activity for the youth with chronic pain. Likewise, group treatment approaches and peer-to-peer support may help promote friendship formation and decrease feelings of loneliness or being different among these youth. Although such approaches may be beneficial, the potential iatrogenic effects must be carefully considered and studied as outcomes. For example, processes including peer contagion (Dishion & Tipsord, 2011), disability training (which we define as competition between peers regarding who is most disabled and how), and repetitive and unhelpful problem-talk (or co-rumination; Rose, 2002) could potentially occur and may exacerbate pain symptoms and disability. Further, incorporating peers into treatment requires self-disclosure of chronic pain status. At present, we do not know the conditions under which self-disclosure of pain status is helpful or harmful, and for whom. Achieving a better understanding of the friendships of youth with chronic pain, including how they may promote or inhibit treatment success, will provide parents and health care providers with useful information for how they can harness the power of peers in recovery efforts. In the meantime, routine assessment of friendship presence, frequency of face-to-face interaction, friendship loss, and friendship quality—both positive and negative, is an important step that can alert clinicians to the presence of a problem that may be interfering with adjustment and outcomes.

Conclusions

In order to provide developmentally appropriate care, the friendships of youth with chronic pain must be carefully considered and studied (Nelson & Nelson, 2010). Research examining the reciprocal influence of chronic pain and friendships, and identification of friendship-related risk and protective factors, offers promise for developing and testing innovative approaches to chronic pain prevention and treatment. Understanding social functioning, particularly peer friendships, in youth with chronic pain is the next critical wave of research in helping youth manage the complexity of chronic pain and develop into healthy young adults.

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References

- Asher SR, McDonald KL. The behavioral basis of acceptance, rejection, and perceived popularity. In: Rubin KH, Bukowski W, Laursen B, editors. *Handbook of peer interactions, relationships, and groups*. New York: Guilford Press, 2009. pp. 232-248. www.worldcat.org/oclc/225874570
- Bagwell CL, Newcomb AF, Bukowski WM. Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Dev* 1998;69:140-153. www.pubmed.gov/9499563
- Beck JE, Lipani TA, Baber KF, Dufton L, Garber J, Smith CA, et al. Attentional bias to pain and social threat in pediatric patients with functional abdominal pain and pain-free youth before and after performance evaluation. *Pain* 2011;152:1061-1067. www.pubmed.gov/21420789
- Berndt TJ. Children's friendships: shifts over a half-century in perspectives on their development and their effects. *Merrill-Palmer Q* 2004;50:206-223.
- Bokhorst CL, Sumter SR, Westenberg PM. Social support from parents, friends, classmates, and teachers in children and adolescents aged 9 to 18 years: who is perceived as most supportive? *Soc Dev* 2010;19:417-426.
- Camacho-Miñano MJ, LaVoi NM, Barr-Anderson DJ. Interventions to promote physical activity among young and adolescent girls: a systematic review. *Health Educ Res* 2011;26:1025-1049. www.pubmed.gov/21680763
- Crick NR, Dodge KA. A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychol Bull* 1994;115:74-101.
- Dishion TJ, Tipsord JM. Peer contagion in child and adolescent social and emotional development. *Annu Rev Psychol* 2011;62:189-214. www.pubmed.gov/19575606
- Eccleston C, Wastell S, Crombez G, Jordan A. Adolescent social development and chronic pain. *Eur J Pain* 2008;12:765-774. www.pubmed.gov/18248750
- Estell DB, Perdue NH. Social support and behavioral and affective school engagement: the effects of peers, parents, and teachers. *Psychol Sch* 2013;50:325-339.
- Fitzgerald A, Fitzgerald N, Aherne, C. Do peers matter? A review of peer and/or friends' influence on physical activity among American adolescents. *J Adolesc* 2012;35:941-958. www.pubmed.gov/22285398
- Fleischman KM, Hains AA, Davies WH. Practitioner perceptions of peer relationships in adolescents with chronic pain. *J Child Health Care* 2011;15:50-58. www.pubmed.com/21451010
- Forgeron PA, Evans J, McGrath PJ, Stevens B, Finley GA. Living with difference: exploring the social self of adolescents with chronic pain. *Pain Res Manag* 2013;18:e115-e123. www.pubmed.gov/24308027
- Forgeron PA, King S, Stinson JN, McGrath PJ, MacDonald AJ, Chambers CT. Social functioning and peer relationships in children and adolescents with chronic pain: a systematic review. *Pain Res Manag* 2010;15:27-41. www.pubmed.gov/20195556

Forgeron PA, McGrath P, Stevens B, Evans J, Dick B, Finley GA, et al. Social information processing in adolescents with chronic pain: my friends don't really understand me. *Pain* 2011;152:2773-2780

www.pubmed.gov/21963240

Forgeron PA, McGrath PJ. Self-identified needs of youth with chronic pain. *J Pain Manag* 2008;1:163-172.

Fredricks JA, Eccles JS. Developmental benefits of extracurricular involvement: do peer characteristics mediate the link between activities and youth outcomes? *J Youth Adolesc* 2005;34:507-520.

Furman W, Buhrmester D. Age and sex differences in perceptions of networks of personal relationships. *Child Dev* 1992;63:103-115. www.pubmed.gov/1551320

Greco P, Pendley JS, McDonell K, Reeves G. A peer group intervention for adolescents with type 1 diabetes and their best friends. *J Pediatr Psychol* 2001;26:485-490. www.pubmed.gov/11700333

Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: a meta-analytic review. *PLoS Med*. 2010;7:e1000316.

www.pubmed.gov/20668659

La Greca A, Bearman K, Moore H. Peer relations of youth with pediatric conditions and health risks: promoting social support and healthy lifestyles. *J Dev Behav Pediatr* 2002;23:271-280.

www.pubmed.gov/12177575

Larson R, Richards MH. Daily companionship in late childhood and early adolescence: changing developmental contexts. *Child Dev* 1991;62:284-300.

www.pubmed.gov/2055123

Macdonald-Wallis K, Jago R, Sterne JA. Social network analysis of childhood and youth physical activity: a systematic review. *Am J Prev Med* 2012;43:636-642.

www.pubmed.gov/23159259

Mathur R, Berndt TJ. Relations of friends' activities to friendship quality. *J Early Adolesc* 2006;26:365-388.

Meldrum ML, Tsao JC, Zeltzer LK. "I can't be what I want to be": children's narratives of chronic pain experiences and treatment outcomes. *Pain Med* 2009;10:1018-1034. www.pubmed.gov/19594848

Nelson TD, Nelson JM. Evidence-based practice and the culture of adolescence. *Prof Psychol Res Pract* 2010;41:305-311.

Parker JG, Asher SR. Peer relations and later personal adjustment: are low-accepted children at risk? *Psychol Bull* 1987;102:357-389. www.pubmed.gov/3317467

Rose AJ. Co-rumination in the friendships of girls and boys. *Child Dev* 2002;73:1830-1843.

www.pubmed.gov/12487497

Roth-Isigkeit A, Thyen U, Stöven H, Schwarzenberger J, Schmucker P. Pain among children and adolescents: restrictions in daily living and triggering factors. *Pediatrics* 2005;115:e152-e162.

www.pubmed.gov/15687423

Salvy SJ, Elmo A, Nitecki, LA, Kluczynski MA, Roemmich JN. Influence of parents and friends on children's and adolescents' food intake and food selection. *Am J Clin Nutr* 2011;93:87-92.

www.pubmed.gov/21048059

Stewart M, Barnfather A, Magill-Evans J, Ray L, Letourneau N. Brief report: an online support intervention: perceptions of adolescents with physical disabilities. *J Adolesc* 2011;34:795-800.

www.pubmed.gov/20488511