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Commentary

Pain catastrophizing in adolescents:

The impact of attachment style

Isabelle Tremblay and Michael J.L. Sullivan

Over the last decade, pain catastrophizing has received considerable attention. According to Sullivan et al. (2001), pain catastrophizing is a multidimensional construct comprising elements of magnification, rumination and helplessness. In adults as well as in children and adolescents, research has suggested that catastrophizing is an important risk factor for chronic pain and disability and contributes to heightened anxiety and depression (Garnefski et al., 2002; Crombez et al., 2003; Keogh & Eccleston, 2006; Lynch et al., 2006; Lynch et al., 2007). To improve the detection of risk factors, prevention of chronic pain, and treatment of children and adolescents with pain, it is important to obtain an increased understanding of the function of pain catastrophizing as well as to understand why some individuals report a high level of catastrophizing whereas others do not.

Function of pain catastrophizing

Little is currently known about the function of pain catastrophizing. Sullivan et al. (2001) proposed the Communal Coping Model to address the interpersonal functions of pain catastrophizing. It was suggested that individuals with high levels of pain catastrophizing might use exaggerated expression of pain behaviors to solicit the empathy, proximity and support of other individuals. To date, few studies have investigated this hypothesis; the results partially support the model proposed by Sullivan et al. (2001).

From an intrapersonal perspective, the transactional model proposed by Lazarus and Folkman (1984) has frequently been used to explain how the three dimensions of pain catastrophizing are related to different appraisals. According to Lazarus and Folkman (1984), primary appraisals (judgments about whether a stimulus or a situation is a threat) are related to secondary appraisals (beliefs about coping options and their possible effectiveness) and influence whether, and which, coping responses will be attempted. It has been suggested that magnification and rumination may be related to primary appraisal processes in which individuals may focus on and exaggerate the threat value of a painful stimulus whereas helplessness may be related to secondary appraisal processes in which individuals negatively evaluate their ability to deal effectively with painful stimuli (Sullivan et al., 2001).

Even though these two hypotheses have frequently been used to explain the role of pain catastrophizing, the actual state of knowledge on the interpersonal and intrapersonal functions of catastrophizing does not allow us to explain why some individuals adopt this pattern of interactions. One of the possible explanations is that by the development of a particular style of attachment with parents, individuals learn to interact with others, to assess the threat of a situation, and to cope with stressful situations in a particular manner. Some of these reactions might promote the development of

different cognitive strategies and specific pain behaviors expressed by high catastrophizers.

Attachment in psychosomatic medicine

Attachment is defined as the affectional ties that form between infants and their caregivers. These ties bind them together in space and endure over time (Bowlby, 1969). Many studies have shown that attachment style developed during childhood influences how individuals will interact in future relationships (Hazan & Shaver, 1987; Bartholomew, 1990). Bartholomew and Horowitz (1991) designed a model describing the attachment styles in adults which has also been used to classify the attachment styles in adolescents. In this model, it is argued that the two dimensions underlying measures of attachment can be conceptualized as model of self (positive vs. negative) and model of others (positive vs. negative). Bartholomew and Horowitz also pointed out that combinations of the two dimensions can yield four major attachment patterns: (1) secure, (2) preoccupied, (3) dismissing and (4) fearful. In studies conducted to date, preoccupied, dismissing and fearful attachment styles have been subsumed under insecure attachment. Models of self and of others are said to be positive in secure attachment. The securely attached individual is able to trust others and can easily develop romantic or friendship relationships. Bartholomew and Horowitz have suggested that adolescents with preoccupied attachment desire support from others but believe that they do not deserve their help. Fear of abandonment is considered to be a central component in preoccupied attachment. However, individuals with dismissing attachment style are considered to have a positive model of self but a negative model of others. A dismissing attachment style is characterized by the belief that help and support from others is not needed and that others are not trustworthy. Finally, Bartholomew and Horowitz suggested that those with a fearful attachment style have low self-esteem, believe that they do not deserve love from others and do not trust others. Bartholomew (1990) proposes that adolescents cope differently with stressful situations depending on their attachment style.

Increasingly, researchers are examining the impact of attachment styles on health outcomes. Results suggest that individuals with insecure attachment (including preoccupied, fearful and dismissing) use less effective coping strategies (Collins, 1996; Feeney, 2000; Ciechanowski et al., 2002), and report lower self-esteem, increased depression and anxiety as well as decreased efficacy of psychological and medical treatments (Ciechanowski et al., 2001; Ciechanowski et al., 2004). In addition, in the context of pain, it has been shown that individuals with an insecure attachment style report more frequent and severe headaches (Savi et al., 2005). Results of recent studies suggest that pain catastrophizing might moderate the relationship between attachment style, emotional distress and pain experienced. In adults, it has been shown that individuals with insecure attachment report higher levels of catastrophizing, depression and pain (Ciechanowski et al., 2003; Meredith et al., 2005; Meredith et al., 2006; McWilliams & Asmundson, 2007). In addition, results suggest that, in adults with insecure attachment, individuals reporting a positive model of others also report higher levels of catastrophizing (McWilliams & Asmundson, 2007). These studies were conducted with adults and may or may not be generalizable to adolescents.

Reflection on the relationship between attachment style and pain catastrophizing

In the context of pain, two principal hypotheses have been proposed to explain how attachment styles might influence the probability of experiencing a high level of pain catastrophizing. In recent studies, it has been suggested that individuals with insecure attachment might use maladaptive coping strategies such as catastrophizing and pain behaviors to solicit empathy and support from others (Ciechanowski et al., 2001; Ciechanowski et al., 2002; Ciechanowski et al., 2004). However, it is possible that the social function of pain catastrophizing might differ among subtypes of insecure attachment such as preoccupied, dismissing and fearful attachment styles. As was proposed by the Communal Coping Model (Sullivan et al., 2001), it could be suggested that adolescents with a preoccupied attachment style would show a high level of

pain catastrophizing, pain behaviors and emotional distress to obtain more support from friends and family. Fear of abandonment frequently associated with a preoccupied attachment style might promote the development of dependency toward family and friends. On the other hand, individuals with a dismissing or fearful attachment might use pain catastrophizing and pain behaviors to maintain social contact while modulating the level of intimacy of interactions. For individuals with dismissing or fearful attachment who are uncomfortable with intimacy, expression of pain behaviors might be a communication tool that maintains interactional intimacy at a comfortable level.

It has also been proposed that insecure attachment might be related to different appraisals of pain. Results of a recent study showed that, in adults with chronic pain, anxiety over relationships was related to threat appraisals of pain. This finding suggests that the different subtypes of attachment might be related to different appraisals in painful situations (Meredith et al., 2005). These results also support the need for more in depth analysis as well as for studies investigating these questions with pediatric populations. A better understanding of the different functions of pain catastrophizing and of the cognitive mechanisms related to the different attachment styles in pediatric populations would certainly contribute to the improvement of assessment of risk factors to chronic pain in adolescents as well as to the improvement of the efficacy of the interventions.

Conclusion

In brief, the literature suggests that attachment style might be a protective factor or risk factor for physical and psychological health problems. Recent studies suggest that attachment is a variable which might partly explain why some individuals report higher pain catastrophizing and, consequently, increased pain, disability and emotional distress. In a

clinical setting, professionals working with children and adolescents should pay attention to the pattern of interactions between the client and his or her family. In family therapy as well as in cognitive-behavioral treatment, increased attention to this aspect might help to detect the interpersonal risk factors and to understand how certain patterns of interaction maintain the problem.

Our review and reflection has also highlighted that, despite increased interest in explaining the impact of familial factors in children and adolescents with pain, to date, the literature is quite limited. In addition, all studies which have investigated the relationship between catastrophizing and attachment have used self-report measures. Even though these questionnaires can be useful to explore this question, it is possible that there is a considerable overlap in the items of these measures, which could result in an overestimation of the strength of the link between these variables. To overcome these limitations and to explore the mechanisms relating pain catastrophizing and attachment styles in adolescents, observational and experimental studies might help to determine how pain behavior would be different depending on the attachment style presented by the adolescent. Finally, more studies should be conducted to assess the applicability of the attachment model and investigate the role of attachment on painful experiences in younger children.

Isabelle Tremblay, BSc
PhD student in Clinical Psychology, University of Montreal, Canada
email: i.tremblay@umontreal.ca

Michael J.L. Sullivan, PhD
Professor, Department of Psychology, McGill University, Montreal, Canada

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