Learning Experiences and Anxiety Sensitivity in Normal Adolescents

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The present study examined the relationships between learning experiences with respect to somatic symptoms and levels of anxiety sensitivity in youths. Fifty-two normal adolescents aged 12 to 14 years were interviewed about their learning experiences with anxiety-related and nonanxiety-related somatic symptoms and completed the Childhood Anxiety Sensitivity Index. Results showed that informational learning to some extent contributed to adolescents’ anxiety sensitivity levels. That is, parents’ transmission of the idea that somatic symptoms might be dangerous was significantly associated with levels of anxiety sensitivity. Other learning experiences such as parental reinforcement or observational learning were not found to be related to anxiety sensitivity. It can be concluded that learning experiences seem to play a small but significant role in the development of high levels of anxiety sensitivity.

KEY WORDS: anxiety sensitivity; learning experiences; adolescents.

Anxiety sensitivity refers to the fear of anxiety-related sensations that are interpreted as having potentially harmful somatic, psychological, or social consequences, and hence give rise to significant anxiety (e.g., Reiss, 1991). Research in both adult and child populations has provided evidence for the notion that anxiety sensitivity should be considered as a vulnerability factor to anxiety disorders, in particular panic disorder (e.g., Rachman, 1998; Silverman & Weems, 1999). As to the origins of this vulnerability factor, Reiss and McNally (1985) have posited that anxiety sensitivity could arise from either genetic factors or learning experiences or both. Interestingly, Stein, Jang, and Livesley (1999) examined the heritability of anxiety sensitivity in 179 monozygotic and 158 dizygotic twin pairs. These authors found that anxiety sensitivity has a strong heritable component, accounting for nearly half of the variance in anxiety sensitivity levels ($h^2 = .45$).

However, these data also suggest that the greatest proportion of the variance in anxiety sensitivity levels (i.e., 55%) is attributable to environmental influences. More specifically, it has been suggested that childhood learning experiences play a role in the development of heightened anxiety sensitivity (e.g., Stein et al., 1999).

Recently, Watt, Stewart, and Cox (1998) investigated the role of childhood learning experiences in the development of anxiety sensitivity. A large sample of young adults participated in a retrospective assessment of their childhood and adolescent instrumental, vicarious, and informational learning experiences with respect to anxiety-related (dizziness, shortness of breath, palpitations) and nonanxiety-related (colds) somatic symptoms. More specifically, subjects were questioned about their experience with such somatic symptoms and asked to indicate whether the symptoms had been accompanied by special attention from parents or whether they had received instructions to refrain from provoking situations or both (instrumental conditioning), whether their parents had modeled, and were rewarded for, fear reactions to their own somatic symptoms (observational learning), and whether their parents had given them the idea that the experience of such somatic symptoms is harmful (informational learning).

Anxiety sensitivity levels were assessed by means of...
the Anxiety Sensitivity Index (Reiss, Peterson, Gursky, & McNally, 1986). Results showed that subjects with high levels of anxiety sensitivity reported significantly more instrumental, vicarious, and informational learning experiences in relation to anxiety-related symptoms than subjects with lower levels of anxiety sensitivity. However, a similar pattern of findings emerged when examining subjects’ learning experiences with respect to nonanxiety-related somatic symptoms (i.e., colds). That is, high anxiety sensitivity subjects reported more learning experiences in relation to colds than low anxiety sensitivity subjects. Altogether, these results confirm the notion that learning experiences play a role in the development of high levels of anxiety sensitivity, but also indicate that these learning experiences are not specific to anxiety-related symptoms but rather involve parental reinforcement of sick-role behavior related to somatic symptoms in general (Watt et al., 1998; Watt & Stewart, 2000).

The current study further examined the connection between learning experiences and anxiety sensitivity. Although previous studies have relied on retrospective accounts of adult subjects’ past learning experiences with respect to somatic symptoms (Watt et al., 1998; Watt & Stewart, 2000), the present investigation examined instrumental, observational, and informational learning in youths. A small sample of normal adolescents (N = 52) was interviewed about their learning experiences with anxiety-related and nonanxiety-related somatic symptoms and completed the Childhood Anxiety Sensitivity Index (CASI; Silverman, Fleisig, Rabian, & Peterson, 1991) to measure their levels of anxiety sensitivity. In addition, the Diagnostic Interview Schedule for Children (DISC; National Institute of Mental Health, 1992) was administered to assess adolescents’ symptoms of anxiety disorders. Administration of the DISC enabled us to test the common notion that anxiety sensitivity is related to anxiety disorders symptoms and to investigate whether there was a direct connection between learning experiences and anxiety disorders symptoms.

METHOD

Subjects and Procedure

Fifty-two adolescents aged between 12 and 14 years (23 boys and 29 girls; mean age = 12.3 years, SD = 0.5) were recruited from a normal secondary school. Written informed consent was obtained from parents and adolescents before participation in the study; approximately 50% of those invited agreed to participate in the study. All subjects were tested individually in a separate room at school. First, they were interviewed with the Learning Experiences Interview (LEI), then they completed the CASI, and finally the DISC was administered.

Assessment

The LEI was based on the expanded version of Ehlers’ Learning History Questionnaire (Ehlers, 1993; see Watts et al., 1998) and consisted of three parts. Part I pertained to subjects’ experience of pain symptoms. Subjects were first asked what type of pain symptoms (headache, stomachache) they had most often and to indicate on a 7-point scale (anchors: 1 = less than once per year, 7 = several times per week) how frequently they suffered from that pain symptom. Then, 17 questions pertaining to their learning experiences in relation to pain were asked: 7 questions had to do with parents’ reinforcement of pain symptoms (e.g., “When you have pain, do your parents allow you to stay home from school?”), “When you have pain, do you receive special care, for example nice food or sweets?” and 10 questions pertained to parents’ transmission of the idea that the pain symptom might be dangerous (e.g., “Do your parents warn you of the possible dangers of your pain symptoms?”). Part II of the LEI was concerned with subjects’ experience of anxiety-related symptoms. Subjects first had to specify which anxiety-related symptom (dizziness, shortness of breath, racing heartbeat, nausea) they had most often and to rate the frequency of that symptom on a 7-point scale. In passing, it should be noted that although such symptoms are typical for anxiety, no connection was drawn to anxiety in the instructions, as these symptoms also occur for reasons other than anxiety (e.g., asthma, allergies, flu) and every symptom occurrence was of interest (see Ehlers, 1993). Next, as in part I, 17 questions referring to learning experiences in relation to that anxiety-related symptom were asked: again 7 questions pertaining to parents’ reinforcement of the symptom and 10 questions concerning parents’ transmission of anxiety. Part III pertained to the observation of others’ somatic symptoms. Subjects were asked whether their father, mother, or another close person suffered from either pain or anxiety-related symptoms and they were asked to answer 15 questions concerning modeling experiences of sick-role behavior: 6 questions referred to the reinforcement of symptoms (e.g., “Does he/she stay home from work when he/she suffers from these symptoms?”) and 9 questions to the transmission of anxiety (e.g., “Does he/she worry about his/her symptoms?”). All questions...