Childhood Learning Experiences in the Development and Maintenance of Anxiety Disorders

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Anxiety disorders are the most common of all mental health problems, affecting approximately one in 10 people, both children and adults (CMHA, 2010). Various factors have been implicated in the development and maintenance of anxiety disorders including biological (e.g., genetics, psychophysiology, temperament), personality (e.g., anxiety sensitivity or fear of arousal-related sensations), interpersonal (e.g., attachment), cognitive (e.g., information processing), preparedness, and behavioural (learning). Research indicates that environmental factors, such as learning, contribute more to the etiology and maintenance of anxiety than do genes (Eley, 2001).

Learning theory models suggest that the etiology and maintenance of anxiety disorders rest on three primary mechanisms: (1) classical conditioning, (2) vicarious conditioning, and (3) operant conditioning. Classical conditioning involves the pairing of a neutral stimulus, event, or situation with a meaningful *unconditioned stimulus* (US) that elicits an *unconditioned response* (UR). After enough pairings, the individual will respond to the neutral stimulus, which is now referred to as the *conditioned stimulus* (CS) because it produces the *conditioned response* (CR). For example, if an individual experiences arousal-related sensations, such as dizziness or heart palpitations (CS), at the time of some intrinsically frightening event, such as an unexpected panic attack coming 'out of the blue' (UCS), then the individual might learn to fear the occurrence of such bodily arousal sensations (CR) in the future. Bouton, Mineka, and Barlow (2001) have argued that the conditioning that may occur in a vulnerable individual (e.g., someone with high anxiety sensitivity or low perceived control) during initial panic attacks may set the context for the development of panic disorder with and without agoraphobia. Direct traumatic conditioning experiences (e.g., severe teasing in childhood) have been implicated in the development of social phobia, as well as specific phobias (see Mineka & Zinbarg, 2006). On the other hand, research
shows that most people cannot recall a traumatic conditioning event when their phobia began. Murray and Foote (1979) found that most college students who were afraid of snakes could not recall a bad experience with snakes; indeed, three who had been bitten by snakes reported no fear at all. Instead, students reported learning their fears through vicarious conditioning (see Barlow, 2002).

Vicarious conditioning refers to learning by observing the consequences of others’ behaviour (Bandura, 1986). Information acquired through vicarious learning could be conveyed through either physical demonstration or verbal transmission. Observational learning could account for the development of anxiety if a parent modeled fear reactions to particular stimuli (e.g., spiders, public speaking) in the presence of their child, and/or verbally transmitted their beliefs about the harmfulness of these stimuli to the child. Mineka and Zinbarg (2006) cite the case of a boy who developed a strong and persistent vomiting phobia after witnessing his grandfather vomit while dying. As an adult, the severity of his phobia caused him in one instance to contemplate suicide when he was nauseous and feared vomiting. Maternal modeling of fear has been shown to impact young children’s fear and avoidance behaviour. Dubi et al. (2008) found that toddlers (aged 15-20 months) showed heightened fear and avoidance to both fear-relevant (rubber snake or spider) and fear-irrelevant stimuli (rubber mushroom or flower) following negative (vs. positive) reactions from their mothers.

The verbal information pathway seems to be a particularly potent means of fear acquisition. For example, a recent study by Muris, van Zwol, Huijding, and Mayer (2010) found that fear beliefs of children aged 8-13 years were influenced by information provided by the parent. Parents were provided with information about an unknown animal, and instructed to describe a series of imaginary confrontations with this animal to their child. Results indicated
that changes in children’s fear of the animal were a function of the type of information provided by the parent. Children of parents who received negative information showed a significant increase in self-reported fear, whereas children of parents who received positive information showed a significant decrease in self-reported fear. Parents who appeared anxious when depicting negative information were more likely to transfer a fear of the unknown animals to their child.

With operant conditioning (or instrumental learning), the individual's behavior is 'instrumental' in getting something he/she wants (i.e., positive reinforcement) or removing something he/she does not want (i.e., negative reinforcement). Reinforcement increases the probability that the behavior will occur in the future. Instrumental learning could contribute to the development of anxiety if a child displays or complains about anxiety symptoms and is rewarded in some way, such as being allowed to miss school (i.e., negative reinforcement) or being afforded special attention (i.e., positive reinforcement).

Harvey, Ehlers, and Clark (2005) investigated the role of learning experiences in the development of social phobia. As compared to a control group, adult participants with social phobia rated their parents as less likely to encourage them to engage in social events (exposure) and as being more emotionally cold. Similar results have been found with children and adolescents. For example, Bogels, van Oosten, Muris, and Smulders (2001) found that low family sociability and perceived overprotectiveness were associated with social anxiety in a sample of eight to 18-year-olds. Barrett, Rapee, Dadds, and Ryan (1996) found that avoidance behaviour increased significantly in anxious children following family discussion of ambiguous stimuli. The authors concluded that avoidant behaviour may be reinforced in families with
anxious children, what they called the “family enhancement of avoidant response” (FEAR) effect.

Of course, learning pathways are not mutually exclusive. In a study of children aged 6-8 years, Field and Storksen-Coulson (2007) found that direct negative experience (without prior information) or threat information (without a subsequent negative experience) produced similar effects. When combined, however, the effect was significantly magnified.

Clearly, learning plays an important role in the development of anxiety disorders. Models of learning will be refined as research clarifies the relative contributions of learning, genetics, and other factors such as culture. For example, Essau, Leung, Conradt, Cheng, and Wong (2008) found a significant correlation between anxiety symptoms and learning history (instrumental, vicarious and informational) with anxiety-related behaviour among German, but not Chinese, adolescents, which might reflect differences in socialization practice. More research is needed to delineate the respective contribution of these various factors, as well as to understand how they interact. Better understanding of the underlying factors and mechanisms of fear acquisition should lead to improvements in the assessment, treatment, and prevention of anxiety and its disorders.
References


