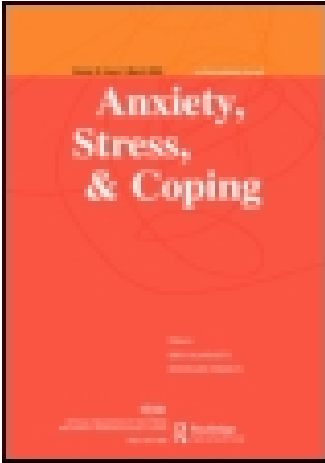


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## ANXIETY, SELF-PREOCCUPATION AND ATTENTION

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A cognitive view of anxiety is outlined that emphasizes the role self-preoccupation plays in attention and information processing. Two applications of this theoretical approach are given, one in the area of test anxiety and the other relating to cognitive therapies for anxiety.

**KEY WORDS:** Anxiety, test anxiety, self-preoccupation, self-related cognitions, attention, information processing.

Cognitive, behavioral and physiological factors play important roles in anxiety. While there is general agreement about the need to incorporate these factors in any comprehensive anxiety construct, there are differences among existing theories in the emphasis given to each of them. In this article, I describe a cognitive view of anxiety that focuses on the role self-preoccupation plays in behavioral and physiological outcomes. According to this view, how well people perform, how anxious they feel in particular situations, and their levels of physiological activation are powerfully influenced by self-related thoughts. Self-related thoughts are significant influences over behavior because they direct attention in idiosyncratic ways. This article discusses the role these thoughts play in adaptation and maladaptation.

The cognitive view of anxiety grows out of the conceptualization that personality can be understood from an information-processing perspective. Cognitive events include the ways in which a person searches the environment for cues, selects cues that are relevant to thought and action, integrates new information with old, and makes decisions that result in observable behavior. Self-preoccupying cognitive events are as much behavior as a muscle twitch or a signature on a piece of paper. However, cognitive events are not directly observable and inferential support for their existence must come from behavior that can be observed.

Self-preoccupation has attentional properties because it leads people to focus on environmental cues to which they are especially sensitive (Strack, Blaney and Ganellen, 1985). The amount and type of self-preoccupation influences the degree to which the person is receptive to the available stimulus information and the amount of physiological arousal. Task-oriented persons who are deeply immersed in their jobs will be especially attentive to cues that might contribute to job completion. Students who are worried about failure will be especially attentive to stimuli suggestive of possible evaluations of their work. Paranoid persons will be especially attentive to cues that relate to their distinctive systems of ideation. To the extent that the self-preoccupied person attends to environmental cues, the cues are dealt with by the person's distinctive information-processing system. A major research challenge is the identification and measurement of individual differences involved in information processing.

A preoccupied individual is engrossed in thought. Illustrative preoccupations include worry over the future of humanity, concern about food shortages throughout

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the world, fearful thoughts about snakes or failing in school, and anger over perceived slights and insults. The range of self-preoccupations is narrower because it is limited to being involved in thought about oneself. Self-preoccupation may intrude on information processing at three points: attention to environmental cues, encoding and transformation of this information, and selection of an overt response. The cognitive preoccupations of the angry person may interfere with the veridical perception of environmental cues, their interpretation, and decisions about responses to them. Similarly, but probably for different reasons, the person engulfed in sexual fantasies may also experience maladaptive functioning at these stages of information processing. There are many clinical examples of the diversity of cognitions with which persons become self-preoccupied, the degree to which self-preoccupation influences attentiveness to external cues, and the ways in which information from the environment is stored, retrieved and acted upon. Self-preoccupation is not restricted to the domain of worry or anxiety.

### ANXIOUS SELF-PREOCCUPATION

Anxious self-preoccupation consists of heightened concern over one's inadequacies and shortcomings. The anxious person is concerned about present or potential dangers, threats, and the inability to cope with them. This does not mean that danger and threat necessarily cause anxious self-preoccupation. Self-preoccupation of any type is a function not only of objective life events but also of the interpretation placed on those events by the individual. Whether self-preoccupation occurs depends on the skills a person has learned in coping with dangers and threats. The anxious person often seems deficient in these skills.

Patterns of self-preoccupying thought function as templates or schemas that direct attention to salient aspects of the environment and interpersonal relationships. However, the person may have articulated neither these templates nor their functional relationship to behavior. Self-preoccupations not only interfere with or otherwise influence performance, but also serve to direct attention to personally salient problems that require solutions. A generalized tendency toward self-preoccupation seems to be a stable personality characteristic that leaves individuals vulnerable to high levels of interfering thought in particular kinds of situations. However, other personal characteristics may serve as protection from high levels of cognitive interference under stress even in otherwise vulnerable individuals. For instance, after a situation in which subjects were asked to recall recent negative events they had experienced, subjects low in perceived social support reported a greater increase in cognitive interference than subjects high in perceived social support (Sarason and Sarason, 1987).

A task confronting anxiety researchers is identification of the operations and transformations individuals perform on information that result in high levels of worry and anticipations of unpleasant outcomes. Accomplishing this task will require empirical inquiry into the assumptions, strategies and expectancies of people falling at different points along the continuum of anxious self-preoccupation, as well as into the rules by which they label and make judgments about whether an environmental event represents a personal threat. It is encouraging that this challenge has been taken up by researchers who are assessing persons' expectations and attributions, and other elements of their cognitive worlds (Kendall and Hollon, 1981; Merluzzi, Glass and Genest, 1981).

## TEST ANXIETY, SELF-PREOCCUPATION AND ATTENTION

Because of its delimited content domain and the ubiquitousness of personal concerns about taking tests and being evaluated, test anxiety has been studied widely from a research standpoint (Sarason, 1980). Evidence of a negative correlation between test anxiety and performance in evaluative situations has led to a wide variety of experiments aimed at evaluating hypotheses about the processes that may be involved. Evidence has accrued showing the deleterious influence of high levels of test anxiety on information processing and performance. This negative influence is heightened by evaluational stressors. The more complex, more demanding the task, the stronger the influence.

There usually is more to test anxiety than a history of failure experiences. Test-anxious people process their objective successes and failures in distinctive ways, and their anxiety is related importantly to how they, and significant others in their lives, evaluate their test-taking experience. Every teacher can think of bright, successful students who, contrary to what one would expect, spend inordinate amounts of time worrying about whether they can meet the next academic challenge they must face. Proneness to self-preoccupation and, most specifically, to worry over evaluation is a powerful component of what is referred to as test anxiety.

While both general and test anxieties are usually defined as complex states that include cognitive, emotional, behavioral and bodily components, most anxiety measures yield only one global score. Wine (1982) has pointed out that it is not immediately obvious how to identify the active or most active ingredients in this complex and has suggested that test anxiety might fruitfully be reconceptualized primarily in terms of cognitive and attentional processes aroused in evaluational settings. In order to assess separately several components of a person's reactions to test situations, an instrument, the Reactions to Tests (RTT), has recently been created (Sarason, 1984). It consists of four factor analytically derived scales:

*Tension* ("I feel distressed and uneasy before tests")

*Worry* ("During tests, I wonder how the other people are doing")

*Test-Irrelevant Thought* ("Irrelevant bits of information pop into my head during a test")

*Bodily Reactions* ("My heart beats faster when the test begins".)

While these scales are positively intercorrelated, the correlations are low enough to justify comparisons among them concerning their predictive value. In one study, the RTT was related to performance on a difficult digit-symbol task under evaluative conditions (Sarason, 1984). The Worry scale was more consistently related to performance and post-performance reports of cognitive interference than were the other scales. The Tension scale approached the Worry scale as a predictor of performance.

The RTT has been related to physiological measures obtained during a test-taking situation. Burchfield, Sarason, Sarason and Beaton (1983) examined the relationship of the RTT to physiological indices gathered while college students worked on tasks of the type found in intelligence tests. Both the Tension and Worry scales were significantly correlated with skin conductance (GSR) and finger-tip temperature changes during performance. There were no significant correlations with EMG changes. Interestingly, the Task-Irrelevant Thinking and Bodily Reactions scales were

unrelated to the physiological change measures. More studies dealing with relationships among components of anxiety, performance variables and physiological measures are needed (Deffenbacher, 1986).

Experimental studies have shown test-anxious people to be sensitive to a variety of interventions. Emphasis on the evaluational component of a situation heightens the self-preoccupation of those prone to be test anxious and lowers their performance. Reassuring instructions, modeling and relaxation training often have salutary effects on the performance of test-anxious people (Sarason, 1980).

## THERAPEUTIC APPLICATION OF THE COGNITIVE VIEW OF ANXIETY

A major development in research on the cognitive view of anxiety has been its application to therapeutic situations. Beck (1986) has developed one of the most influential cognitive therapies. He believes that the core psychological problem in anxiety disorders is a vulnerability growing out of the individual's tendency to devalue his or her problem-solving ability as well as to exaggerate the degree of threat in a problematic situation. The anxious individual perceives many threats to social relationships, freedom and self-identity. From this perspective, self-preoccupying thoughts about these perceptions mediate the relationship between eliciting events on the one hand, and behavioral and physiological response patterns on the other.

Three steps are involved in cognitive therapy: (1) Conceptualizing the patient's problem, (2) choosing strategies and tactics to deal with it, and (3) assessing the effectiveness of those strategies and tactics. In cognitive therapy, the therapist encourages the patient to talk openly about his or her fears and concerns, and conveys empathy for the patient's anxiety. The Socratic method is used to help the patient become aware of what his or her thoughts are, examine them for cognitive distortions, and substitute for them more realistic thoughts.

Beck's theory of cognitive therapy argues that each of us has an inner voice. When that voice interferes with our ability to function adequately, the unproductive thoughts must be replaced by productive ones. By correcting thinking errors and having patients work on pertinent homework assignments, they can develop not only improved ways of thinking but also more effective, less anxiety-producing behaviors.

## CONCLUSIONS

The study of anxiety from a cognitive perspective has led to productive lines of inquiry with regard to both research and clinical practice. While all people experience self-preoccupation, self-related thoughts become maladaptive when they are excessively preoccupying and when they interfere with task-oriented thinking and attention to situational realities. Further research and theory is needed concerning (1) interactions among cognitive, behavioral, and physiological systems, (2) ways to help people articulate their self-preoccupying thoughts, (3) assessment of profiles of intrusive thoughts, and (4) interventions directed toward modifying the cognitive mediators of maladaptive behavior. Studies of anxiety that involve experimental and therapeutic interventions are in agreement that self-related worries and fears can be influenced. The influence process, in turn, affects observable behavior.

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