Ansiedad y Estrés
ISSN: 1134-7937
2003, 9(2-3), 255-270

APPLIED COGNITIVE PSYCHOLOGY: IMPLICATIONS OF COGNITIVE PSYCHOLOGY FOR CLINICAL PSYCHOLOGY AND PSYCHOTHERAPY

Michael W. Eysenck

Royal Holloway University of London, Reino Unido

Resumen: La psicología cognitiva ha realizado numerosas contribuciones a la psicología clínica, y en este trabajo se consideran especialmente aquellas referidas al estudio de los trastornos de ansiedad. Se pueden delinear cuatro grandes contribuciones. Primera, el enfoque cognitivo ha contribuido al desarrollo de modelos complejos que muestran los principales procesos y estructuras cognitivas relevantes para entender los trastornos de ansiedad. Segunda, los estudios controlados de laboratorio permiten la investigación en mayor detalle de los sesgos cognitivos en pacientes ansiosos de lo que generalmente es factible en contextos más naturalistas. Tercera, el enfoque cognitivo aporta evidencia relevante respecto a si los sesgos cognitivos juegan un papel en el desarrollo y mantenimiento de los trastornos de ansiedad. Cuarta, el creciente conocimiento sobre los trastornos de ansiedad derivado de los estudios cognitivos ha tenido efectos beneficiosos para la práctica terapéutica de diferentes y significativas maneras. En suma, la psicología clínica se ha beneficiado considerablemente de la teoría y la investigación del enfoque cognitivo.

Palabras Clave: Psicología cognitiva, Psicología clínica, Trastornos de ansiedad, Sesgos cognitivos.

Abstract: Cognitive psychology has made numerous contributions to clinical psychology, and these contributions are considered especially with reference to the anxiety disorders. It is argued that there are four major contributions that can be identified. First, the cognitive approach has led to the development of complex models showing the main cognitive processes and structures of relevance to an understanding of anxiety disorders. Second, controlled laboratory studies permit a more detailed investigation of cognitive biases in anxious patients than is generally feasible in more naturalistic settings. Third, the cognitive approach provides relevant evidence with respect to the issue of whether cognitive biases play a role in the development and maintenance of anxiety disorders. Fourth, the enhanced understanding of the anxiety disorders that has arisen from the cognitive approach has had beneficial effects on therapeutic practice in a number of significant ways. In sum, it is claimed that clinical psychology has benefited considerably from cognitive theory and research.

Key words: Cognitive psychology, Clinical psychology, Anxiety disorders, Cognitive biases.

Titulo: *Psicología cognitiva aplicada: Implicaciones de la psicología cognitiva en la psicología clínica y la psicoterapia*

Introduction

There are numerous ways in which cognitive psychology might conceivably have influenced clinical psychology in the past and might do so in the future. However, it will be assumed here that clinical psychology has benefited in four main ways from cognitive psychology. First, theoretical ideas that have been developed within cognitive psychology have influenced the understanding that clinical psychologists and others have of the problems of those suffering from mental disorders, and of appropriate forms of therapy. Second, cognitive psychology (with its emphasis on tightly controlled experimental studies) has provided more definitive empirical evidence than can typically be obtained within the confines of therapy. Third, there has been much controversy on the issue of whether

* Dirigir la correspondencia a: Michael W. Eysenck, Ph.D. Department of Psychology, Royal Holloway University of London, Egham, Surrey, TW20 0EX, UK

cognitive factors are of causal relevance to the development of mental disorders. Research within cognitive psychology offers the prospect of illuminating this complex issue. Fourth, some of the theoretical and empirical contributions emerging from the cognitive approach have direct implications for therapeutic interventions.

There is another general point that is of particular importance. It would be misleading to regard the relationship between cognitive psychology and clinical psychology as a uni-directional one flowing from cognitive psychology to clinical psychology. In fact, there are clearly bi-directional influences of cognitive psychology on clinical psychology and of clinical psychology on cognitive psychology. Accordingly, an attempt will be made to reflect this bi-directionality in the rest of this article.

There is a final point that needs to be made at the outset. It would not be very fruitful to attempt to cover the whole of clinical psychology here. There are several reasons for this, but the main one is that the coverage of any given disorder would inevitably be very brief and superficial. Accordingly, the focus will be primarily on some of the main anxiety disorders. This will be done for two key reasons. First, cognitive psychology has made substantial contributions to our understanding of the anxiety disorders, and is arguably more relevant to the anxiety disorders than to most other mental disorders. Second, and more pragmatically, my knowledge of anxiety disorders is greater than my knowledge of other kinds of disorder, and so it is more feasible to provide a more informed view of the relevance of cognitive psychology to the anxiety disorders than to other mental disorders.

Theoretical models of disorders

One of the criticisms that has been made of the cognitive approach to mental disorders is that it often seems to achieve little more than a re-description of the symptoms experienced by patients with mental disorders. There is certainly a danger of this with respect to many of the anxiety disorders. For example, the central feature of generalised anxiety disorder is persistent worry, and massively exaggerated cognitions about the likelihood of future negative consequences of their actions are found in many patients with obsessive-compulsive disorder. However, this criticism is not applicable to the increasing number of cognitive models of anxiety disorders which seek to provide a complex, integrative view of their underlying cognitive processes and structures. In order to illustrate the value of such models, we will briefly consider the cognitive model of social phobia that was proposed by Rapee and Heimberg (1997) and the related model put forward by Clark and Wells (1995).

What is common to the theoretical approaches of Rapee and Heimberg (1997) and of Clark and Wells (1995) is the notion that social phobics attend excessively to their own behaviour and to their own physiological symptoms. As a consequence, according to Clark and Wells (1995), social phobics attend relatively little to external stimuli (e.g., reactions of others in social situations), and thus do not obtain accurate feedback on the social impression they are making. Rapee and Heimberg (1997) add the notion that social phobics compare a mental representation of the self as seen audience with an appraisal of the audience's expected standard. They also claim that social phobics form a judgement of the probability and consequence of negative evaluation from the audience.

According to Clark and Wells (1995), social phobics have an interpretive bias involving an unduly negative view of the adequacy of their social behaviour, evi-

dence for which was reported by Stopa and Clark (1993). Clark and Wells (1995) also addressed the key issue of the factors responsible for maintaining this interpretive bias in the absence of concrete evidence to support it. They argued that social phobics attribute the failure of their perceived inadequate social behaviour to have dire consequences to their use of safety-seeking behaviours. Support for this argument was reported by Wells et al. (1995), who found that social phobics admit to using a wide range of safety-seeking behaviours (e.g., avoiding eye contact; talking less; avoid talking about themselves).

Clark and McManus (2002) have recently developed the earlier model of Clark and Wells (1995), and have summarised the range of cognitive biases that are present in social phobics. These biases include the following: "Interpretation of external social events; detection of negative responses from other people; the balance of attention between external and self-processing; the use of internal information to make inferences about how one appears to others; recall of negative information about one's perceived, observable self" (Clark & McMannus, 2002, p. 92).

As should be clear from this very brief description, the theoretical models of Rapee and Heimberg (1997) and of Clark and Wells (1995) move considerably beyond the symptoms reported by social phobics. They present coherent accounts of the underlying mechanisms that are responsible for the key symptoms of social phobia. Such accounts go considerably beyond any simple re-description of the symptoms of social phobia in cognitive terms.

Experimental research

It is often assumed that the cognitive approach within clinical psychology closely approximates to the cognitive approach as practised by cognitive psychologists. However, MacLeod (1993) argued that this assumption was incorrect so far as research reported in the early 1990s is concerned. MacLeod's (1993, p. 170) key point was that clinical researchers, "saw the adoption of cognitivism as a means of legitimising the study and analysis of self-report data yielded by the introspective appraisal of mental events...the enhancement of the self-report data, yielded by introspection, as an acceptable source of information concerning mental processes, must place our discipline clearly outwith the boundaries of legitimate science."

MacLeod (1993) had concrete evidence to support his position based on considering two journals for the year 1991: Cognitive Psychology and Cognitive Therapy and Research. He found that 100% of experiments in Cognitive Psychology had the measurement of overt responses as the main dependent variable(s). However, the comparable figure for Cognitive Therapy and Research was only 28%, with most researchers placing heavy reliance on introspective evidence. Thus, there may well be legitimate concerns that the experimental method is not being applied with full rigour so far as cognitive research within clinical psychology is concerned. In addition, it is clear that there are numerous cognitive processes occurring below the level of conscious awareness (see Eysenck & Keane, 2000). It is necessarily the case that introspective evidence is unable to elucidate such processes.

Lang (1988) made somewhat related criticisms of cognitive approaches to mental disorder based on patients' self-reports of their beliefs. For example, he was dubious whether explaining the onset of panic attacks in patients with panic disorder as being due to catastrophic misinterpretations of their bodily symptoms constituted an explanation at all. Instead, he argued

that what was involved was little more than a re-description of the patient's symptoms.

MacLeod (1993) and Lang (1988) can be regarded as having exaggerated the problems caused by the reliance that is sometimes placed on introspective evidence. For example, the assessment of symptom severity or of changes in symptom severity must inevitably rely on self-report evidence. As McNally (2001, pp. 519-520) pointed out, "A methodological pluralism is warranted. Sometimes self-reports are just as useless and misleading as the critics charge. But sometimes, depending on one's question, they can be precisely what is needed." Lang's (1988) point that it is non-explanatory to attribute a given set of symptoms to certain beliefs may possess some validity. However, if that is used as the starting point for the development of a fully-fledged theoretical model, then there are fewer concerns. More specifically, combining self-report information with other kinds of information (e.g., behavioral; physiological) can enrich our understanding of mental disorders.

As was discussed earlier, cognitive therapists (e.g., Beck & Emery, 1985) have consistently argued that patients with anxiety disorders have exaggerated and unduly negative interpretations of ambiguous and threatening situations. For example, patients with generalised anxiety disorder tend to worry excessively about a range of social and personal issues. However, the fact that generalised anxiety disorder patients have more intense worries than healthy individuals does not show conclusively that their interpretations are exaggerated. Another possibility is that their personal circumstances are intrinsically worse and more threatening than is the case for healthy individuals. In other words, their interpretations may reflect reality rather than being exaggerated.

The above issue can only adequately be addressed by comparing the interpretations of generalised anxiety disorder patients and healthy individuals with respect to the same stimuli or situations. This has been done in several studies. For example, Eysenck et al. (1991) presented ambiguous and neutral sentences to patients with generalised anxiety disorder and healthy controls. Subsequent recognition-memory performance indicated that the patients had an interpretive bias for the ambiguous sentences, whereas the healthy controls did not. Signal-detection analysis of the data revealed that this finding was not due to response bias, but instead was due to group differences in sensitivity.

Interpretive bias has also been found in social phobics. For example, Stopa and Clark (2000) presented patients with social phobia, comparably anxious patients with a different anxiety disorder, and non-patient controls with ambiguous scenarios and with unambiguous scenarios involving mildly negative events. The patients with social phobia were the group most inclined to interpret ambiguous social events in a negative or threatening way, and they also interpreted unambiguously mildly negative social events in a more negative way.

Finally, consider the claimed catastrophic beliefs of panic disorder patients with respect to their own physiological symptomatology. It could be argued that these beliefs do not reflect an exaggerated cognitive response to their symptoms but rather occur because they actually have a considerably more responsive physiological system than healthy individuals. The evidence here is somewhat inconsistent and conflicting. However, the typical finding in studies of biological challenge is that panic disorder patients differ little or not at all from healthy individuals in their physiological responsiveness (e.g., Gaffney et al., 1998; Rapee et al., 1992). Thus, these findings

implicate cognitive factors as playing the major role in the catastrophic beliefs of patients with panic disorder.

In sum, there is convincing evidence from several anxiety disorders that many of the beliefs and other cognitions they possess represent, at least in part, an exaggerated view of the threateningness of external and/or internal stimuli. Of course, it is not denied that objectively adverse personal circumstances can also make a substantial contribution to those beliefs and other cognitions.

Causality

There is plentiful evidence that patients suffering from anxiety disorders have various cognitive biases and distortions (e.g., Beck & Emery, 1985). There is also evidence that the cognitive biases possessed by patients with anxiety disorders are often no longer present or are attenuated after they have received effective treatment (see Eysenck, 1992). Such evidence is limited in some ways, primarily because it is essentially correlational in nature. It still leaves the very complex issue of whether these cognitive biases are the cause or the consequence of the anxiety disorder, or whether the influences are bi-directional. This issue is of fundamental importance. If it were the case that cognitive biases lack causal efficacy in terms of influencing experienced anxiety, then this would seriously damage the entire cognitive approach to understanding and treating the anxiety disorders. Conversely, if cognitive biases do systematically influence experienced anxiety, then this would suggest that such biases may play an important role in the development and maintenance of anxiety.

Although there is no straightforward way of obtaining clear-cut evidence, cognitive research has started to provide relevant evidence. For example, Mathews and Mackintosh (2000) used various procedures in order to induce healthy participants to display an interpretive bias for ambiguous information. When these procedures required the participants actively to generate personally relevant meanings, then the resultant interpretive bias produced increases in state anxiety. As Mathews and Mackintosh (2000, p. 602) concluded, "These findings provide evidence consistent with a causal link between the deployment of interpretative bias and anxiety."

In similar fashion, MacLeod et al. (2002) investigated the effects of inducing a selective attentional bias for threat-related stimuli. Their key finding was that healthy participants who were trained to develop an attentional bias responded with a more negative mood state when exposed to a stressful anagram task than did those who did not receive such training. The implication of this finding is that the possession of an attentional bias can have causal effects on the experience of anxiety and other negative mood states.

Other evidence consistent with the notion that cognitive biases can influence subsequent symptoms of disorder was reported by Schmidt, Lerew, and Jackson (1997, 1999). They assessed anxiety sensitivity (a dimension of individual differences relating to a tendency to have an interpretive bias for physiological symptoms) in young adults prior to undergoing a stressful period of military basic training. Schmidt et al. (1997) found that high scorers on anxiety sensitivity were approximately four times as likely to experience a panic attack during military training as the rest of the sample. Schmidt et al. (1999) obtained similar findings, and also found that anxiety sensitivity predicted the occurrence of panic attacks even when previous history of panic attacks and trait anxiety were controlled for.

Some of the most convincing evidence that cognitive biases can exert causal effects on experienced anxiety was reported by Mathews and MacLeod (2002). They discussed several unpublished experiments in which attentional bias was experimentally manipulated. There was consistent evidence that training individuals to attend selectively to threat produced increased anxiety in a subsequent stressful situation. In one of the experiments, students high in trait anxiety received 7,500 training trials designed to produce an opposite attentional bias in which they selectively avoided attending to threat. Other students high in trait anxiety also received 7,500 training trials, but no attempt was made to manipulate their pre-existing attentional biases. The key finding was that the former group showed a substantial reduction in trait anxiety as a result of the training they received, whereas the latter group showed no change. This finding is especially impressive, because it is generally assumed that an individual's level of trait anxiety is relatively durable and difficult to alter.

In sum, there is accumulating evidence that attentional and interpretive biases induced by means of experimental manipulations can have direct effects on individuals' levels of experienced anxiety. We thus have firmer evidence than hitherto that cognitive biases can have causal effects on individuals' emotional state. However, as Mathews and MacLeod (2002, p. 349) pointed out, "It remains uncertain whether induced biases are really the same as those occurring naturally in clinically anxious patients. The biases induced in most of the studies described here are likely to be very transient compared with those occurring naturally." It will be important in future research to try to demonstrate that cognitive biases induced under laboratory conditions can be long-lasting.

Predisposing factors

It is clearly of importance to pursue the causality issue as far as possible. The notions that patients with anxiety disorders have various cognitive biases, and that at least some of these cognitive biases may influence the development and maintenance of the disorder, leave open the issue of the factors responsible for these cognitive biases in the first place. In general terms, it has often been assumed within the cognitive approach (e.g., Eysenck, 1997) that these cognitive biases often have their origins in specific kinds of experiences. We will consider three examples to illustrate the value of the cognitive approach in suggesting factors that might play a role in the aetiology of anxiety disorders.

The symptoms associated with a panic attack include shortness of breath, feeling of choking, and feeling dizzy. As might be expected, of the cognitive biases associated with panic disorder, the central one is an interpretive bias associated with one's own internal physiological symptoms. Accordingly, it is a reasonable assumption that some of the cognitive biases of panic disorder patients are based in part on factors producing concern about one's internal state, especially those relating to the respiratory system. There is some support for this assumption. Zanbergen et al. (1991) compared the lifetime prevalence of respiratory diseases in patients with panic disorder, patients with obsessive-compulsive disorder, and patients with eating disorder. The key finding was that the panic disorder patients had a significantly higher incidence of respiratory diseases than did patients in either of the other two groups.

Verburg et al. (1995) reported more detailed findings on the lifetime prevalence of respiratory disorders in panic disorder patients. They found that 43% of their panic disorder patients had suffered from one or more respiratory diseases at some

point in their lives, compared to only 16% of patients suffering from other anxiety disorders. The difference between panic disorder patients and those with other anxiety disorders was especially large for bronchitis, which is one of the most serious respiratory diseases. The fact that there was no difference between panic disorder patients and other anxiety disorder patients in the incidence of non-respiratory diseases suggests that panic disorder patients did not have a general tendency to over-report their previous diseases.

It has often been assumed (Salkovskis, 1985; Salkovskis, Richards, & Forrester, 1998) that the central interpretive bias in many cases of obsessive-compulsive disorder is an exaggerated sense of responsibility. Therefore, it is worth considering life situations in which there is a genuine increase in responsibility, because such situations might act as a partial trigger for the development of an exaggerated sense of responsibility. An obvious example is pregnancy and childbirth, since the mother has enormous responsibility for the well-being of her new-born infant. As predicted, there is evidence that pregnancy and childbirth are associated with an increase in obsessive-compulsive symptoms (see Jones, 2001, for a review). For example, Ingram (1961) found that pregnancy and childbirth were precipitating factors in 27% of female patients who were suffering from obsessive-compulsive disorder. Buttolph and Holland (1990) found that 69% of women with obsessive-compulsive disorder reported that the onset or worsening of the disorder was associated with pregnancy and/or childbirth. Neziroglu, Anemone, and Yaryura-Tobias (1992) found that 23% of female obsessive-compulsive disorder patients with children reported that the onset of the disorder occurred during pregnancy.

According to a theory proposed by Eysenck (1997), the central interpretive bias found in social phobics is an exaggeratedly negative view of the adequacy of their own social behaviour. There are several factors that might lead individuals to develop such a cognitive bias, but presumably factors causing genuine problems in social situations are likely to be of most relevance. One such factor is extraversion, given that the major component of extraversion is sociability (H.J. Eysenck & M.W. Eysenck, 1985). Thus, it might be predicted that individuals low in extraversion, and thus low in sociability, would be more predisposed to develop social phobia than individuals high in extraversion. There is supporting evidence if the findings of Stemberger, Turner, and Beidel (1995) are compared with those of Enright and Beech (1990). Stemberger et al. (1995) found that patients with generalised social phobia were on average more than one standard deviation below the population mean on extraversion. In contrast, Enright and Beech (1990) found that patients with obsessive-compulsive disorder or various other anxiety disorders were slightly introverted, but the degree of introversion was markedly less than that in the social phobics studied by Stemberger et al. (1995).

Several groups of patients were compared by Bienvenu et al. (2001) with respect to their extraversion scores. The mean extraversion score for social phobics was almost one standard deviation below the population mean, which was much lower than the extraversion scores for simple phobics, panic disorder patients, or patients with major depression. However, patients with agoraphobia had comparably low extraversion scores to the social phobics. It is worth noting that the social phobics' extraversion scores were more extreme than their scores on the other personality factors that were assessed (i.e., neuroticism; openness; agreeableness; and

conscientiousness). It remains to be established whether the low extraversion scores of social phobics pre-date the onset of social phobia, or whether the disorder itself has introverting effects. However, it cannot simply be the case that having an anxiety disorder in and of itself has a pronounced introverting effect. The reason is that, as pointed out above, patients with most anxiety disorders do not especially low scores on measures of extraversion.

Implications for therapy

It has been argued so far that cognitive psychology has helped to provide an enhanced understanding of the anxiety disorders. If this is, indeed, the case, then it would seem probable that the cognitive approach would have influenced the development of treatment. A few examples of ways in which this has happened will be considered next.

As we have seen, there is plentiful evidence that patients with various anxiety disorders show a selective attentional bias, in which they focus attention disproportionately on threat-related internal and/or external stimuli. What are the implications of this for therapy? According to Wells (1990), patients with panic disorder selectively attend to their own internal physiological symptoms, and this plays a significant role in their catastrophising cognitions. Wells (1990) proposed an Attentional Training Technique to reduce the intensity of self-focus, to increase attentional control, and to produce a greater breadth of attentional focus. Wells, White, and Carter (1997) argued that social phobics also have an excessive tendency to self-focus, and this tends to prevent them from processing external information that disconfirms their negative beliefs. Wells et al. (1997) found that attentional training produced long-lasting beneficial effects on patients suffering from panic disorder or social phobia. Subsequently, Wells and Papageorgiou (1998) found in a treatment study of social phobics that exposure therapy plus attentional training was significantly more effective than exposure therapy on its own.

It is of key importance in cognitive and cognitive-behaviour therapy to reduce or eliminate the interpretive biases possessed by patients with anxiety disorders. In order to do that, it is important to have an understanding of the factors serving to maintain such unrealistic biases. In the case of social phobia, as was discussed earlier, it was assumed that safety-seeking behaviours of various kinds serve to maintain the interpretive bias that the social phobic's social behaviour is profoundly inadequate. It follows that therapeutic procedures designed to reduce or eliminate the use of safety-seeking behaviours should increase the effectiveness of therapy.

Clark and Wells (1995) identified the safety-seeking behaviours used by social phobics. They found that social phobics admitted to using safety-seeking behaviours such as avoiding eye contact, talking very little or not at all, ignoring other people, and avoiding discussion of themselves. Social phobics believe mistakenly that these safety-seeking behaviours serve to minimise the probability of social catastrophe.

It is often claimed that exposure therapy is effective because it allows patients to disconfirm their unrealistically negative views about the dangers of social situations. If that is the case, then exposure therapy should be maximally effective if patients systematically avoid safety-seeking behaviours, since these behaviours are likely to prevent disconfirmation of those negative views.

Morgan and Raffle (1999) assessed the relevance of safety-seeking behaviours in a treatment study on social phobia. Some social phobics receiving exposure therapy

(e.g., giving talks in public settings) were instructed carefully not to use safety-seeking behaviours, whereas the others were deliberately not given these instructions. The key finding was that the social phobics who were instructed to avoid safety-seeking behaviours derived more benefit from therapy. However, the patients not instructed to avoid safety-seeking behaviours also showed improvement, which led Battersby (2000, p. 871) to "question whether the elimination of safety behaviors alone or the interaction of this and some element(s) of the usual program produced the improvement in the safety group."

It is probably the case that safety-seeking behaviours are important in nearly all anxiety disorders. For example, patients with panic disorder have catastrophic cognitions (e.g., about being paralysed with fear). According to such patients, such catastrophes have been avoided because they use safety-seeking behaviours (e.g., holding on to people or distracting themselves, Salkovskis, Clark, & Gelder, 1996). Salkovskis et al. (1999) carried out a treatment trial in which patients having panic disorder with agoraphobia were placed in an exposure situation, and they were carefully instructed to use (or to avoid using) safety-seeking behaviours. Those patients who had avoided using safety-seeking behaviours showed a greater reduction in catastrophic beliefs and in anxiety.

Another way of assessing the validity of the cognitive approach to the anxiety disorders is to consider what the cognitive approach has contributed to the identification of some of the factors which predispose towards the development of anxiety and other disorders.

Conclusions

The two goals of achieving an understanding of mental disorders and of developing effective forms of treatment for mental disorders have been approached from a variety of perspectives. It has been claimed here that the cognitive approach has already been able to contribute much towards the achievement of both goals. At the same time, however, it is not denied that other approaches (e.g., behavioral) also have much to contribute, and often complement the cognitive approach.

It has been argued in this article that the cognitive approach has proved itself of value in several different ways. At one time, much of the emphasis within the cognitive approach was on specific cognitive biases possessed by patients suffering from anxiety disorders or other forms of mental disorder. However, this piecemeal approach has increasingly been replaced by more systematic and complex cognitive models of the range of cognitive biases associated with any given disorder and of the ways in which they are inter-related. This has proved of value with respect to several disorders, of which social phobia is a good example.

A key aspect of the cognitive approach is that it provides a range of experimental techniques and methods which can be used to compare patients with various mental disorders either with each other or with healthy groups. Research based on such techniques has revealed very clearly that patients with anxiety disorders possess several cognitive biases, some of which are relatively specific to any given disorder. Such research has indicated that the cognitive processes of anxious patients are biased compared to those of healthy individuals, and do not simply reflect the stressful circumstances in which they exist.

The fact that patients with various anxiety disorders possess a number of attentional and interpretive biases does not in and of itself demonstrate that the cognitive approach is of value in producing an understanding of the disorders. The central

reason for this is that simply finding that highly anxious individuals are more likely than less anxious individuals to have cognitive biases is correlational evidence. As such, it cannot be interpreted in an unequivocal fashion, and might reflect the impact of high anxiety on cognitive processing rather than the reverse. Recently, however, several researchers have shown that experimentally-induced cognitive biases (attentional and interpretive) can have causal effects on experienced anxiety. This is a major breakthrough in terms of establishing the value of the cognitive approach.

In general terms, what is of central importance within cognitive therapy and cognitive-behavior therapy is to eliminate (or at least to reduce substantially) the various cognitive biases possessed by patients. Suggestive support for the notion that there is a causal relationship between reducing cognitive biases and therapeutic effectiveness has been obtained in several treatment studies. For example, Hofmann (2000) conducted a therapy trial on social phobics using exposure therapy, video feedback, and didactic training. In line with the Clark and Wells (1995) model of social phobia, Hofmann (2000) found that the social phobics initially had high levels of negative self-focused thoughts. However, the incidence of such thoughts decreased by approximately two-thirds during the course of therapy. Of most interest, it was found that individual reductions in the incidence of negative self-focused thoughts correlated +0.74 with reductions in the symptoms of social phobia.

One of the greatest successes of the cognitive approach as applied to treatment for the anxiety disorders is the way in which this approach has suggested developments and refinements of therapy. For example, effective forms of cognitive therapy have been developed which reduce selective attentional biases and which reduce or eliminate patients' use of safety-seeking behaviours.

In sum, the cognitive revolution has had several highly beneficial effects on abnormal and clinical psychology. Most cognitive approaches to mental disorders are of relatively recent origin (say, within the past 20 years), and it is clear that much has been accomplished in that time. However, it is clearly the case that there is much to be done to develop the cognitive approach further so that cognitive and cognitive-behavior therapy can become even more effective than is currently the case.

References

Battersby, M. (2000). Response to 'Does reducing safety behaviours improve treatment in patients with social phobia?' *Australian and New Zealand Journal of Psychiatry, 34,* 871-872.

Beck, A.T., & Emery, G. (1985). *Anxiety disorders and phobias: A cognitive perspective.* New York: Basic Books.

Bienvenu, O.J., Nestadt, G., Samuels, J.F., Costa, P.T., Howard, W.T., & Eaton, W.W. (2001). Phobic, panic, and major depressive disorders and the five-factor model of personality. *Journal of Nervous and Mental Disease, 189,* 154-161.

Buttolph, M.L., & Holland, A.D. (1990). Obsessive-compulsive disorders in pregnancy and childbirth. In M.A. Jenike, L. Baer, & W.E. Minichiello (Eds.), *Obsessive-compulsive disorders: Theory and management (2nd. Ed.).* St. Louis, MO: Mosby.

Clark, D.M., & McManus, F. (2002). Information processing in social phobia. *Biological Psychiatry, 51,* 92-100.

Clark, D.M., & Wells, A. (1995). A cognitive model of social phobia. In R.G. Heimberg, M.R. Liebowitz, D.A.Hope, & F.R. Schneier (Eds.), *Social phobia: Diagnosis, assessment*

and treatment (pp. 69-93). New York: Guilford Press.

Enright, S.J., & Beech, A.R. (1990). Obsessional states: Anxiety disorders or schizotypes? An information processing and personality assessment. *Psychological Medicine, 20*, 621-627.

Eysenck, H.J., & Eysenck, M.W. (1985). *Personality and individual differences.* New York: Plenum.

Eysenck, M.W. (1992). *Anxiety: The cognitive perspective.* Hove,UK: Lawrence Erlbaum Associates Ltd.

Eysenck, M.W. (1997). *Anxiety and cognition: A unified theory.* Hove, UK: Psychology Press.

Eysenck, M.W., & Keane, M.T. (2000). *Cognitive psychology: A student's handbook (4th. Ed.).* Hove, UK: Psychology Press.

Eysenck, M.W., Mogg, K., May, J., Richards, A., & Mathews, A. (1991). Bias in interpretation of ambiguous sentences related to threat in anxiety. *Journal of Abnormal Psychology, 100*, 144-150.

Gaffney, F.A., Fenton, b.J., Lane, L.D., & Lake, C.R. (1988). Hemodynamic, ventilatory, and biochemical responses of panic patients and normal controls with sodium lactate infusion and spontaneous panic attacks. *Archives of General Psychiatry, 45,* 53-60.

Hofmann, S.G. (2000). Self-focused attention before and after treatment of social phobia. *Behaviour Research and Therapy, 38,* 717-725.

Ingram, I.M. (1961). Obsessional illness in mental hospital patients. *Journal of Mental Sciences, 107*, 382-402.

Jones, R.N (2001). *The role of responsibility beliefs in obsessive-compulsive phenomena during pregnancy and the puerperium.* Unpublished Research Project for DClin Psy, Royal Holloway University of London.

Lang, P.J. (1988). Fear, anxiety, and panic: Context, cognition, and visceral arousal. In S. Rachman & J.D. Maser (Eds.), *Panic: Psychological perspectives.* Hillsdale, NJ: Erlbaum.

MacLeod, C. (1993). Cognition in clinical psychology: Measures, methods or models? Behaviour Change, 10, 169-195.

MacLeod, C., Rutherford, E., Campbell, L., Ebsworthy, G., & Holker, L. (2002). Selective attention and emotional vulnerability: Assessing the causal basis of their association through the experimental manipulation of attentional bias. *Journal of Abnormal Psychology, 111,* 107-123.

Mathews, A., & Mackintosh, B. (2000). Induced emotional interpretation bias and anxiety. *Journal of Abnormal Psychology, 109,* 602-615.

Mathews, A., & MacLeod, C. (2002). Induced processing biases have causal effects on anxiety. *Cognition and Emotion, 16*, 331-354.

McNally, R.J. (2001). On the scientific status of cognitive appraisal models of anxiety disorder. *Behaviour Research and Therapy, 39*, 513-521.

Morgan, H., & Raffle, C. (1999). Does reducing safety behaviours improve treatment response in patients with social phobia? *Australian and New Zealand Journal of Psychiatry, 33*, 503-510.

Neziroglu, F., Anemone, R., & Yaryura-Tobias, J.A. (1992). Onset of obsessive-compulsive disorder in pregnancy. *American Journal of Psychiatry, 149*, 947-950.

Rapee, R.M., Brown, T.A., Antony, M.M., & barlow, D.H. (1992). Response to hyperventilation and inhalation of 5.5% carbon dioxide-enriched air across the DSM-III-R anxiety disorders. *Journal of Abnormal Psychology, 101,* 538-552.

Rapee, R.M., & Heimberg, R.G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy, 35,* 741-756.

Salkovskis, P. (1985). Obsessional-compulsive problems: A cognitive behavioural analysis. *Behaviour Research and Therapy, 25*, 571-583.

Salkovskis, P.M., Clark, D.M., & Gelkder, M.G. (1996). Cognition-behaviour links in the persistence of panic. *Behaviour Research and Therapy, 34*, 453-458.

Salkovskis, P.M., Clark, D.M., Hackmann, A., Wells, A., & Gelder, M.G. (1999). An experimental investigation of the role of safety-seeking behaviours in the maintenance of panic disorder with agoraphobia. *Behaviour Research and Therapy, 37,* 559-574.

Salkovskis, P.M., Richards, C., & Forrester, E. (1998). The cognitive behavioural approach to understanding obsessional thinking. *British Journal of Psychiatry, 173*, 53-63.

Schmidt, N.B., Lerew, D.R., & Jackson, R.J. (1997). The role of anxiety sensitivity in the pathogenesis of panic: Prospective evaluation of spontaneous panic attacks during acute stress. *Journal of Abnormal Psychology, 106*, 355-364.

Schmidt, N.B., Lerew, D.R., & Jackson, R.J. (1999). Prospective evaluation of anxiety sensitivity in the pathogenesis of panic: Replication and extension. *Journal of Abnormal Psychology, 108*, 532-537.

Stemberger, R.T., Turner, S.M., & Beidel, D.C. (1995). Social phobia: An analysis of possible developmental factors. *Journal of Abnormal Psychology, 104,* 526-531.

Stopa, L., & Clark, D.M. (1993). Cognitive processes in social phobia. *Behaviour Research and Therapy, 31*, 255-267.

Stopa, L., & Clark, D.M. (2000). Social phobia and interpretation of social events. *Behaviour Research and Therapy, 38*, 273-283.

Verburg, K., Griez, E., Meijer, J., & Pols, H. (1995). Respiratory disorders as a possible predisposing factor for panic disorder. *Journal of Affective Disorders, 33*, 129-134.

Wells, A. (1990). Panic disorder in association with relaxation induced anxiety: An attentional training approach to treatment. *Behavior Therapy, 21, 27*3-280.

Wells, A., Clark, D.M., Salkovskis, P., Ludgate, J., Hackmann, A., & Gelder, M. (1995). Social phobia: The role of in-situation safety behaviours in maintaining anxiety and negative beliefs. *Behavior Therapy, 26*, 153-161.

Wells, A., & Papageorgiou, C. (1998). Social phobia: Effects of external attention on anxiety, negative beliefs, and perspective taking. *Behavior Therapy, 29*, 357-370.

Wells, A., White, J., & Carter, K. (1997). Attention training: Effects on anxiety and beliefs in panic and social phobia. *Clinical Psychology and Psychotherapy, 4*, 226-232.

Zanbergen, J., Bright, M., Pols, H., Fernandez, I., De Loff, C., & Griez, E. (1991). Higher lifetime prevalence of respiratory diseases in panic disorder? *American Journal of Psychiatry, 148*, 1583-1585.

.

Resumen en castellano

La Psicología Clínica se ha beneficiado de las aportaciones de la Psicología Cognitiva en cuatro grandes aspectos: (1) las aportaciones teóricas de la Psicología Cognitiva han influido en el conocimiento y comprensión que los psicólogos clínicos tienen de los problemas mentales y las formas adecuadas de tratarlos; (2) la Psicología Cognitiva, y su énfasis en los estudios experimentales estrictamente controlados, ha proporcionado evidencia empírica más definitiva que la que se puede obtener en el contexto de la terapia; (3) ha habido mucha controversia entorno a si los factores cognitivos tienen una relevancia causal en el desarrollo de los trastornos mentales y la investigación en Psicología Cognitiva ha aportado evidencia determinante en este sentido; y (4) algunas aportaciones teóricas y empíricas de la Psicología Cognitiva tienen implicaciones directas en la intervención terapéutica.

El hecho es que existen influencias claras de tipo bi-direccional entre la Psicología Cognitiva y Clínica, y la Psicología Clínica y Cognitiva, que reflejaremos a lo largo de este trabajo. Para ello, nos centraremos especialmente sobre los principales trastornos de ansiedad, debido a dos razones fundamentales: una, la Psicología Cognitiva ha realizado aportaciones más sustanciales para la compresión de los trastornos de ansiedad que para otros trastornos; y dos, siendo pragmáticos, mi conocimiento de los trastornos de ansiedad es mayor que mi conocimiento sobre otros trastornos, y para mí, es más factible proporcionar información sobre la relevancia de la Psicología Cognitiva en los trastornos de ansiedad que en otros trastornos.

Modelos teóricos de trastornos

Cada vez existe un número mayor de modelos cognitivos sobre los trastornos de ansiedad que tratan de proporcionar una visión compleja e integradora de los procesos y estructuras cognitivas que subyacen a los trastornos. Dos valiosos ejemplos son los modelos sobre la fobia social de Rapee & Heimberg (1997) y Clark & Wells (1995).

Ambos modelos se basan en la noción de que los fóbicos sociales tienden a atender excesivamente a su propia conducta y a sus propios síntomas fisiológicos. En consecuencia, prestan poca atención a los estímulos externos y no obtienen el feedback adecuado de la

impresión social que están causando. Además, se forman un juicio de la probabilidad y consecuencias de que la audiencia les evalúe negativamente.

Ambos modelos van más allá de la mera descripción sintomática de la fobia social, presentando una visión coherente sobre los mecanismos subyacentes responsables de los síntomas principales de la fobia social.

Evidencia experimental

Los estudios experimentales en diversos trastornos de ansiedad muestran evidencia suficientemente convincente de que muchas de las creencias y otras cogniciones que los pacientes manifiestan, representan en parte una visión exagerada del potencial amenazador de la estimulación externa y/o interna; sin negar, por descontado, que las circunstancias objetivas personales adversas puedan además contribuir sustancialmente a dichas creencias y cogniciones.

Causalidad

Existe evidencia suficiente para afirmar que los pacientes con trastornos de ansiedad presentan diferentes sesgos y distorsiones cognitivas. Parece también evidente que, tras un tratamiento efectivo del trastorno, dichos sesgos cognitivos se atenúan o desaparecen. Esta evidencia es, no obstante, limitada porque es, en esencia, de naturaleza correlacional. Por tanto, queda todavía una cuestión pendiente de gran importancia por dirimir, y es, si los sesgos cognitivos son causa o consecuencia del trastorno de ansiedad, o si esta relación es bi-direccional.

Si los sesgos cognitivos influyen sistemáticamente en la experiencia de la ansiedad, entonces podría sugerirse que dichos sesgos tendrían un papel importante en el desarrollo y mantenimiento de los trastornos de ansiedad. Aunque todavía no se han obtenido pruebas definitivas de ello, la investigación cognitiva ha empezado a aportar evidencias relevantes en este sentido.

En resumen, se está acumulando evidencia en el sentido que los sesgos atencionales e interpretativos inducidos experimentalmente tienen efectos directos sobre los niveles de ansiedad experimentada por los individuos. Hasta ahora la evidencia, por tanto, sugiere que los sesgos cognitivos pueden tener efectos causales en el estado emocional de los individuos. Es importante que la investigación futura trate de demostrar que dichos sesgos cognitivos inducidos en condiciones de laboratorio son estables y duraderos.

Factores predisponentes

La idea de que los pacientes con trastornos de ansiedad presentan sesgos cognitivos y que, al menos, algunos de esos sesgos pueden influir en el desarrollo y mantenimiento del trastorno deja abierta la cuestión de los factores responsables de los mismos. Desde la perspectiva cognitiva, generalmente se asume que estos sesgos cognitivos se originan a raíz de experiencias específicas y particulares. Tres ejemplos pueden servir para ilustrar el valor del enfoque cognitivo a la hora de sugerir factores que pueden ser relevantes en la etiología de los trastornos de ansiedad.

Algunos síntomas asociados al ataque de pánico incluyen dificultades en la respiración, sensación de ahogo y mareos. Como sería esperable, el trastorno de pánico conlleva asociado un sesgo interpretativo referido a los síntomas fisiológicos internos del indivi-

duo. En este sentido, es razonable pensar que algunos de los sesgos cognitivos del trastorno de pánico se basen en parte en la preocupación sobre el estado interno del individuo, en particular del sistema respiratorio. Existe evidencia empírica cada vez más consistente que señala que los pacientes con trastorno de pánico presentan mayor incidencia de alteraciones respiratorias que pacientes con otros trastornos mentales.

El sesgo interpretativo principal en la mayoría de los casos de trastorno obsesivo-compulsivo es un sentido exagerado de la responsabilidad. Consecuentemente, es importante considerar aquellas situaciones vitales donde exista un incremento real de la responsabilidad, debido a que dichas situaciones pueden actuar como gatillos desencadenantes de un sentido exagerado de la misma. Un ejemplo obvio es el embarazo y el parto, ya que durante ese proceso las madres suelen desarrollar una gran responsabilidad y preocupación por el bienestar del recién nacido. En este sentido, existe evidencia de que el embarazo y el parto están relacionados con un incremento en la sintomatología obsesivo-compulsiva.

El sesgo interpretativo principal en fobia social es una visión negativa exagerada de la adecuación del comportamiento social del individuo. Uno de los factores que pueden favorecer este sesgo está relacionado con la extraversión, ya que el componente principal de esta característica de personalidad es la sociabilidad. En este sentido, puede predecirse que aquellos individuos que puntúan bajo en extraversión, y por consiguiente en sociabilidad, estarían más predispuestos a desarrollar fobia social que aquellos que puntúan alto en extraversión. Existe evidencia empírica en este sentido, ya que diversos estudios señalan que los fóbicos sociales puntúan más bajo en extraversión que la población normal y que pacientes con otros trastornos de ansiedad. Queda no obstante por determinar si esta baja extraversión existía previamente a la aparición de la fobia social o si el trastorno en sí mismo produce “efectos introversores” en su evolución.

Implicaciones terapéuticas

Como se ha podido comprobar, la Psicología Cognitiva ha contribuido a una mejor comprensión de los trastornos de ansiedad; por ello, es probable que también pueda influir en el desarrollo de estrategias de intervención. Consideraremos a continuación algunos ejemplos en este sentido.

Existe una amplia evidencia sobre el hecho de que los pacientes con trastornos de ansiedad presentan sesgos de atención selectiva mediante los que focalizan desproporcionadamente su atención sobre la estimulación interna y/o extena de carácter amenazante. ¿Qué implicaciones tiene esto para la terapia?. De acuerdo con Wells (1990), los pacientes con trastorno de pánico atienden selectivamente a sus propios síntomas fisiológicos internos y esto produce efectos importantes en las cogniciones catastrofistas. Wells (1990) ha propuesto la “Técnica de Entrenamiento Atencional” (Attentional Training Technique) para reducir la intensidad de la autofocalización, incrementar el control atencional y producir una mayor amplificación del foco atencional. En esta misma línea, los pacientes fóbico sociales presentan una tendencia excesiva a la autofocalización, que evita procesar adecuadamente la información externa que no confirme sus creencias negativas. Wells et al. (1997) han encontrado que el entrenamiento atencional produce efectos beneficiosos a largo plazo tanto para los pacientes que sufren de trastorno de pánico como para los fóbico sociales.

Otro aspecto importante es reducir o eliminar los sesgos interpretativos que presentan los pacientes con trastornos de ansiedad y, para ello, es importante comprender los factores que sirven para mantener dichos sesgos irrealistas. En el caso de la fobia social, que hemos visto antes, se asumen que las conductas de protección de diversas clases (evitar la mirada, hablar poco o no intervenir en una conversación, ignorar a otras personas, etc) sirven para mantener los sesgos interpretativos en la dirección de que la conducta social del fóbico social es profundamente inadecuada. Consecuentemente, aquellas estrategias de intervención diseñadas para reducir o eliminar el empleo de conductas de protección, deberían incrementar la efectividad de la terapia.

La terapia de exposición se ha mostrado efectiva en este sentido porque permite a los pacientes no confirmar su visión negativa irrealista sobre los peligros de las situaciones sociales. La exposición podría maximizar su eficacia aún más si los pacientes consiguen evitar sistemáticamente la puesta en marcha de conductas de autoprotección, ya que sirven para evitar no confirmar dicha visión negativa.

Es probable que las conductas de protección sean importantes en casi todos los trastornos de ansiedad. Por ejemplo, los pacientes con trastorno de pánico presentan cogniciones catastrofistas relacionadas con llegar a "verse paralizados por el miedo" y, consecuentemente, utilizan conductas de protección como apoyarse en otras personas, distraerse de la situación, etc. Salkovskis et al. (1999) encontraron que los pacientes con trastorno de pánico con agorafobia que evitaban utilizar dichas conductas de protección, mostraban mayores reducciones en sus cogniciones catastrofistas y en la ansiedad experimentada.

Conclusiones

Dos de los objetivos principales de diversas perspectivas teóricas son la compresión detallada de los trastornos mentales y el desarrollo de formas efectivas de intervención terapéutica. La perspectiva cognitiva está en disposición de contribuir significativamente a la consecución de ambos objetivos; sin negar que otros enfoques, como el conductual, lo hayan hecho notoriamente y a menudo complementen el enfoque cognitivo.

Uno de los aspectos valiosos del enfoque cognitivo es el énfasis puesto en que los pacientes con diversos trastornos de ansiedad y otros trastornos mentales presentan sesgos específicos que contribuyen al desarrollo y mantenimiento de dichos trastornos. Este aspecto está siendo actualmente reemplazado por modelos más complejos donde se contempla un rango de sesgos cognitivos relacionados con un trastorno y las formas en que dichos sesgos están inter-relacionados. La fobia social es un buen ejemplo de ello.

Otro aspecto fundamental del enfoque cognitivo es que ha utilizado un amplio rango de estrategias experimentales para comparar pacientes con diversos trastornos mentales con población sana. De la evidencia experimental se deduce que, en comparación con los sujetos sanos, los pacientes con trastornos de ansiedad presentan procesos cognitivos sesgados que no están relacionados simplemente con las circunstancias estresantes que los provocan. De hecho, los estudios recientes sugieren que la inducción experimental de sesgos cognitivos (atencionales e interpretativos) provocan efectos causales sobre la experiencia de ansiedad.

En general, un aspecto central en la terapia cognitiva y cognitivo-conductual es eliminar (o al menos reducir sustancialmente) los diversos sesgos cognitivos que presentan los pacientes. En este sentido, diversos estudios clínicos encuentran que existe una relación

causal entre la reducción de los sesgos cognitivos y la eficacia terapéutica. Esto ha propiciado la aparición de estrategias de intervención que aportan un mayor refinamiento en la terapia cognitiva, como son el empleo de técnicas para reducir los sesgos en atención selectiva y reducir o eliminar las conductas de protección.

En suma, la revolución cognitiva ha propiciado enormes efectos beneficiosos para la Psicología Anormal y Clínica. La mayoría de los enfoques cognitivos de los trastornos mentales tienen un origen reciente (en los últimos 20 años) y sus contribuciones también lo son. Sin embargo, queda mucho por hacer para que las terapias cognitiva y cognitivo-conductual sean mucho más efectivas de lo que actualmente lo son.