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Cognitive Attributions in Depression: Bridging the Gap between Research and Clinical Practice

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Abstract

Individuals seeking treatment for depression often are struggling with maladaptive cognitions that impact how they view themselves and the world. Research on cognitive attributions that underlie depressed mood focuses on the phenomenon of negative cognitive style, in which depressed people tend to view undesirable occurrences in life as having internal, stable, and global causes. Based on research, clinicians have developed various techniques that seek to modify depressive attributions in order to alleviate symptoms of depression. In this article, the authors review the literature on attributions in depression, present clinically relevant interventions based on empirical support, provide case examples, and summarize future directions and recommendations for researchers and practitioners.

Keywords

attribution; depression; negative cognitive style

Two employees at the same company are fired from their jobs. The first employee thinks, "The boss was pretty unfair! I need to pay better attention to the boss's expectations so that I can do better on the next job." The second employee thinks, "I'm an idiot! I will never get another job, and I'm a failure at everything I try." These individuals are apt to experience quite different emotions in response to their thoughts, the latter feeling much more hopeless and dejected. This begs the question, why do these two people have such different thoughts about and emotional reactions to the same life experience? Attribution theories of depression were formulated to answer these questions, and in the process better understand the etiology and maintenance of depression. These theories posit that the ways in which individuals interpret life events contributes to their mood state and to the likelihood that they will experience clinical depression. Theory and subsequent empirical evidence about the role of attributions in depression have paved the way for effective therapeutic approaches focused on altering these maladaptive thinking patterns. In this article, we present the attribution

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theories of depression, discuss basic psychological research testing these theories, and provide information about how this research can inform interventions, including specific techniques for working with individuals with depression.

Attributional Models of Depression

In his *learned helplessness model of depression*, Seligman (1975) proposed that the way individuals view negative events may impact their affective experience. This initial theory was further refined in the *reformulated learned helplessness theory* (Abramson, Seligman, & Teasdale, 1978) and the subsequent *hopelessness theory of depression* (Abramson, Metalsky, & Alloy, 1989), which incorporated the idea that individuals' attributions (i.e., personal explanations for the cause of an event) are critical in determining whether or not they will become depressed when faced with a negative event. Specifically, these models propose that depression-prone individuals have a depressogenic *inferential style* that predisposes them to view the causes of negative life events as being internal ("my fault"), global ("affects everything in my life"), and stable ("always going to happen"). Further, such individuals tend to have the opposite attributional pattern for positive events, ascribing them to external, specific, and unstable causes (Seligman, Abramson, Semmel, & von Baeyer, 1979). According to hopelessness theory, when a person prone to depressogenic thinking, often referred to as a *cognitive vulnerability,* faces a negative event, he or she will be more likely than those without the vulnerability to make negative causal inferences about the situation, therefore engendering feelings of general hopelessness about the future that promote depression (Abramson et al., 1989). However, in these theories, cognitive vulnerability is considered a contributory, but not necessary, cause of depression. As will be addressed later, there are many other biological (e.g., neurotransmitters, inflammation) and environmental factors (e.g., maltreatment) that may foster depression.

In the almost 40 years since attribution models of depression were introduced, the relationship between attributional style and depression has received considerable empirical attention. In just the first five years following the inception of these models, over 100 studies on the topic were published (Sweeney, Anderson, & Bailey, 1986). The literature has continued to expand, enhancing our understanding of the role of attributions in the onset and course of depression.

Research Support

Early reviews confirmed the consistent, concurrent association between depression and negative attributions for negative events in diverse samples of adults (Sweeney et al., 1986) and youth (Joiner & Wagner, 1995). However, these reviews provided less consistent evidence to support associations between depression and external, unstable, and specific attributions for positive events, and therefore, most of the subsequent research focuses on negative attributions for negative events. Recent studies have utilized retrospective and longitudinal designs and focused on the links between attributional style and the course and severity of depression over time, as well as other factors that may influence the attribution-depression relationship.

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Is Negative Attributional Style a Risk Factor for Depression?

Retrospective and prospective longitudinal studies confirm the hypothesis that a negative attributional style, especially in interaction with negative life events, confers vulnerability to the development and recurrence of depression. First, in retrospective studies of non-depressed adults, individuals with depressogenic attributional styles were more likely to have experienced depression in the past, had a greater number of depressive episodes, and had more severe episodes, compared to those without depressogenic attributions (Alloy, Lipman, & Abramson, 1992). Additionally, individuals who had remitted from a past depressive episode had more negative cognitive styles than did never-depressed individuals (Haeffel et al., 2005). Other findings from the Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) Project showed that, when followed over time, young adults with negative attributional styles (the high-risk group) were significantly more likely than those without such styles (the low-risk group) to develop clinically significant depressive episodes (Alloy et al., 2006). This was true for both first onsets of depression and for recurrences, suggesting that negative attributional style may continue to confer vulnerability over the long-term course of the disorder. Additional evidence showed that, over time, high-risk CVD participants experienced a more severe and chronic course of depression than low-risk participants (Iacoviello, Alloy, Abramson, Whitehouse, & Hogan, 2006).

Several studies also confirm that negative attributional styles are particularly likely to predict prospective depressive symptoms and episodes when individuals are confronted with negative life stressors (e.g., Hankin, Abramson, Miller, & Haeffel, 2004; Joiner, 2000). Importantly, this vulnerability-stressor interaction may be specific to the prediction of mood symptomatology, as numerous studies have failed to find support for this model for other types of psychopathology, including anxiety (e.g., Alloy et al., 2004; Hankin, et al., 2004), substance use disorders (Alloy et al., 2004), and externalizing symptoms (Robinson, Garber, & Hilsman, 1995).

What Other Factors are Involved?

In addition to confirming attributional theories of depression, research has sought to better understand the relationship between attributional style, life stressors, and depressive symptoms. Several lines of inquiry have examined factors that may influence attributional style itself or its link to depression. Such investigations have rested on the assumption that, although stress and cognitive style interact to confer risk for depression, inclusion of additional factors may explain individual differences in attributional style or its prediction of depression. Studies that incorporate gender, temperament and personality, and rumination in their models have received the most attention in the literature, and therefore, are discussed below.

First, given that beginning in adolescence, females are twice as likely to become depressed as males (e.g., Hankin et al., 1998), several studies have explored gender differences in attributional style or in its prediction of depression. Studies of both adults and adolescents demonstrate gender differences in attributional style, with females showing more depressogenic attributions (Hankin & Abramson, 2002). In other studies, attributional style itself did not differ between males and females, but the relationship between attributional

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style and depression was stronger for females than males (Abela & McGirr, 2007). Additionally, a recent meta-analysis (Hu, Zhang, & Yang, 2015) showed that gender significantly moderated the correlation between attributional style and depression, with females more vulnerable to the effects of negative cognitive style. In their elaborated cognitive vulnerability-transactional stress model of depression, Hankin and Abramson (2001) postulated that gender differences in depression may arise both because females are more likely than males to experience negative life events and because females have greater cognitive vulnerability to depression than males.

Second, temperament and personality may impact an individual's cognitive vulnerability. Hankin and Abramson (2001) suggested that personality constructs such as neuroticism or negative emotionality may represent a pre-existing vulnerability that increases the likelihood of both experiencing negative events and forming negative attributions. Consistent with this, Lakdawalla and Hankin (2008) found that individuals who were high in negative cognitive vulnerability and emotionality were more likely to develop depressive symptoms over time if they had experienced stressors. Mezulis, Hyde, and Abramson (2006) also found that temperament, specifically negative withdrawal (characterized by avoidance of novel situations, becoming easily upset, and having high sensitivity to negative stimuli), moderated the relationship between stressors and cognitive vulnerability. Evidence also suggests that personality disorders may impact attributional style. For example, among inpatients with depression, those with personality disorders, particularly borderline personality disorder, were more likely to exhibit cognitive vulnerability than those without personality disorders (Rose, Abramson, Hodulik, Halberstadt, & Leff, 1994). In addition, in the CVD project, the high-risk group showed a significantly higher rate of personality disorder diagnoses and was rated higher on personality disorder dimensions, compared to the low-risk group (Smith, Grandin, Alloy, & Abramson, 2006).

Third, several studies examined the role of rumination (i.e., the tendency to persistently and passively focus on one's negative affect and the implications of distress) in moderating the relationship between attributional style and depression. For example, Robinson and Alloy (2003) found that the association between attributional style and prospective major depression was stronger among CVD participants who engaged in stress-reactive rumination (i.e., the tendency to ruminate in response to stressful events), compared to those who did not tend to ruminate in response to stressors. Similarly, Ciesla and Roberts (2007) showed that the combination of negative attributional style and high ruminative tendencies predicted depressive symptoms over time in the context of life stressors.

In sum, numerous investigations have expanded the attribution model of depression by including additional factors (e.g., gender, temperament and personality, and rumination). Although more research is certainly needed, there is evidence for the following: (1) females may be more likely to have a negative attributional style, and their negative attributions may be more likely to impact their mood; (2) individuals who are high in neuroticism and negative withdrawal, and those with personality disorders, may be at greater risk for developing negative attributions in the face of stress; and (3) the tendency to ruminate may intensify the predictive association between attributional style and depression.

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How Does Attributional Style Develop?

Evidence suggests that attributional style first emerges as a vulnerability factor for depression during the transition from late childhood to early adolescence (Abela, 2001; Cole et al., 2008). With the development of abstract reasoning and formal operational thought in early adolescence, youth begin to make generalizations from specific behaviors, conceptualize and their self-worth, and make social comparisons (Garber & Flynn, 1998). Indeed attributions not develop into relatively stable styles until late childhood or early adolescence (Cole et al., Gibb & Alloy, 2006), which may explain why the hopelessness theory tends to receive support in studies with adolescents and adults than with children (Lakdawalla, Hankin, & Mermelstein, 2007).

Mezulis and colleagues (2006) proposed a model of the developmental origins of attributional style. They suggested that individuals begin to learn and practice making inferences response to negative life events in childhood. This learning process is influenced by both internal characteristics (e.g., the child's temperament) and external explicit or implicit parenting factors. For example, having a temperament high in negative emotionality might make children especially vulnerable (Mezulis et al., 2006). Similarly, when children routinely observe their parents making negative inferences about negative events, they may learn to make similar attributions, leading to habitual negative thinking styles. Parents also may explicitly model negative attributions about their children's behavior after negative events, leading children to internalize this feedback (Hankin et al., 2009). Research shows associations between parents' verbal criticism of their children and the children's tendency to make self-blaming attributions negative events (e.g., Jaenicke et al., 1987). Over time, with repeated negative life events, the possessing the temperamental or parenting risk factors would internalize and crystalize cognitive schemas, leading to a relatively stable negative attributional style. Indeed, among adolescents, a greater history of negative life events and maternal negative attributions for events their children's lives are both associated with adolescents' greater cognitive vulnerability to depression (Garber & Flynn, 2001). Similarly, Alloy et al. (2001) found that both mothers and fathers of undergraduates with high cognitive vulnerability to depression reported that they provided more negative feedback about the causes of stressful events when the student was a child than did parents of students with low cognitive vulnerability.

Implications for Treatment

Although research supports the relative stability of attributional style as a "trait-like" factor by early adolescence (Cole et al., 2008), there is also evidence that attributional styles can change over time into adulthood (Romens, Abramson, & Alloy, 2009). The mutability of attributional styles holds promise for intervention. This premise sparked the development of psychosocial treatments and prevention programs that (1) encourage awareness of negative attributional style as a risk factor for depressive episodes, and (2) provide various methods for helping clients create greater psychological distance between themselves and their depressive attributions, thereby diminishing their tendency to dominate experience and limit the client's capacity for enjoyment of life.

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Increasing Awareness of Negative Attributional Style

The advent of attributional models and other cognitive theories (e.g., Beck, 1970) influenced the development of therapies designed to directly challenge and modify negative cognitive styles. These therapies fall under the general heading of cognitive-behavioral therapy (CBT) for depression, and their central emphasis is on the modification of dysfunctional beliefs, expectations, and attributions. Other models of psychotherapy for depression have emerged that place greater emphasis on promoting acceptance, activating goal-directed or values-driven behavior, and/or fostering better interpersonal relationships. Although these approaches also incorporate an awareness of negative attributions into their conceptual and procedural framework, they tend to emphasize altering the context in which cognitions occur or the meanings attached to them, rather than changing the content of the cognitions themselves (Forman, Herbert, Moitra, Yeomans, & Gellar, 2007). In either case, the value of fostering explicit awareness of the script-like and pervasive nature of depressive attributions and expectations, and the power they have to influence behavior and shape life experience, is perhaps the central clinical implication of the research on attributions in depression.

Over time, individuals with depression create ongoing, repetitive narratives about events in their lives and their roles in these events. By being familiar with their themes, therapists can facilitate increased awareness of the narratives and then help find new ways to loosen them, allowing the client to entertain a more flexible worldview that permits a range of responses. As a first step, clinicians can provide psychoeducation about negative attributions and help clients recognize that their explanatory conventions have become habitual and are present in everyday situations.

For example, a clinician can ask the client to picture the following scenario: “You are walking down the street and see someone you know. You wave to the person and say hello, but he/she does not acknowledge you and just walks by.” The clinician can ask the client what thoughts he might have in this situation and how he might feel. Gathering this kind of information will expose the client to his most common assumptions that occur spontaneously without reflection and are often believed to be true, as well as to the emotional experience that attends the narrative. To complete this exercise, the clinician can help the client recognize this familiar narrative as a private conversation that is habitual and occurs at least partially independent of the actual facts, with which it may or may not be consistent. The goal is for the client to grasp that it is not the facts themselves that drive the story he tells, but rather something more internal and automatic – a narrative that is colored by a pervasive depressive attributional style. Once the therapist has brought awareness to negative attributions over several sessions and taught the client to recognize these attributions when they happen in the client’s life, the therapist can begin to work with the client to loosen these attributions, using one or more awareness-based strategies.

Questioning thoughts—The hallmark of cognitive interventions for depression is the direct identification of dysfunctional, distorted thinking patterns that are presumed to directly affect the client’s negative mood and reduced goal-directed behavior. Central to these patterns are the attributions that make up the depressive attributional style. Depressive attributions and expectations can be directly questioned on rational grounds, thereby helping

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the client examine and challenge the validity and utility of the thoughts. It is preferred that clients, with the help of the therapist, develop their own strategies for questioning negative attributions. As many clients are ambivalent to change, therapists can employ motivational interviewing techniques to help foster collaboration, intrinsic motivation, and commitment to change (Westra & Aviram, 2013). Inasmuch as clients often have subscribed to their negative thinking narratives for some time, it may be more beneficial for clinicians to use direct questioning to help depressed clients reassess their thinking patterns, such as, "What is the worst that could happen, and how could you cope?" (Beck, 2011).

Practicing acceptance—In contrast to the disputational approach that is traditional in cognitive therapy for depression, a stance of non-judgmental acceptance that is central to acceptance-based treatments for depression supports active awareness of private and painful thoughts without attempting to change their content or frequency (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Clients can learn to accept both the cognitions associated with negative cognitive style and the attending negative affect without trying to change it. Seeing thoughts as the familiar, predictable content in a habitual negative attributional "script" can help clinicians encourage clients to "disconnect" from thoughts, recognizing they are merely thoughts and not necessarily reality (Hayes et al., 2006). For a depressed client who tells herself, "I am a failure," the therapist might help to label the narrative instead as, "I am having the familiar thought that I am a failure".

Acceptance strategies may be especially useful for clients with highly stable, relatively entrenched cognitive styles, for whom questioning, disputation, and other strategies aimed at direct modification of the thoughts themselves might prove ineffective. The disputational approach relies heavily on the ability of clients to be convinced that their depressogenic system of explanations is illogical, inaccurate, irrational, or otherwise flawed and can be modified in more rational and realistic ways. However, the finding that negative attributional style is highly stable among adults who develop depression over time suggests that direct modification of these intractable beliefs might not be effective for certain clients with inflexible, highly stable cognitive styles. Acceptance-based work skirts the problem to some degree by emphasizing a change not in the beliefs themselves, but in the importance one attaches to the beliefs.

Practicing mindfulness—Mindfulness-based techniques have become increasingly popular, either as a primary aspect of the approach or an incorporated element in a larger treatment framework. Many mindfulness exercises involve meditation, either guided by the therapist or unguided, in which a person focuses on the present moment and notices thoughts as they happen, without assigning any meaning or judgment to these thoughts. Mindfulness practice may be especially useful for people who experience rumination. As discussed above, repetitive, negative thinking may amplify the effects of negative attributions because rumination brings these attributions to mind frequently, with the client becoming further entangled in them. By teaching mindfulness skills to individuals who experience depressive rumination, therapists may help clients learn to disengage from rumination and become more focused on the present moment. Formal mindfulness practice is associated with decreased rumination, which, in turn, is associated with significantly decreased depressive

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symptoms (Hawley et al., 2014). As the antithesis of rumination, mindfulness can mitigate self-judgments and promote experiential awareness instead of avoidance.

Fostering Directed Action and Behavior Change

In addition to the above, therapists also can encourage behavior change that is congruent with the client's goals. Impairment in goal-directed behavior is a hallmark of major depression and serves to perpetuate and worsen the condition by reducing the client's contact with reinforcing conditions and valued experiences. Through interventions that involve action, clinicians can indirectly impact negative attributions by focusing on changing behaviors that, in turn, undermine these rigid schemas.

Behavioral activation—Many individuals who are depressed have difficulty becoming motivated to effectively engage with the world. Negative attributional style contributes to overall inaction because depressed individuals' negative attributions are discouraging and hopelessness-inducing. In the short-term, behavioral interventions that include steps such as goal-setting, self-assertiveness, and scheduling of activities may be more helpful than cognitive change strategies for people who are severely depressed (Dimidjian et al., 2006).

Such behavioral interventions also can occur organically when the client is encouraged to participate in pleasant activities and/or socialize with others. Often referred to as behavioral activation, this strategy involves engaging in activities that clients typically are unmotivated to do (e.g., physical exercise) or avoid doing out of fear or guilt (e.g., being more assertive in making one's life better). By taking steps to engage in activities, clients can begin to notice how acting contrary to negative attributions (e.g. "I am unlovable, so why bother reaching out to people) can undermine their narratives, alleviate anhedonia, and provide a sense of self-efficacy. Behavioral activation strategies might be particularly well-suited for certain types of clients, such as children, elderly adults, and other individuals with poor metacognitive skills (e.g., Freed, Chan, Langer, & Thompson, 2003). Further, behavioral interventions also may be an important component to working with ruminative clients, as chronic rumination and goal-directed behavior tend to be somewhat incompatible. For some, behavioral strategies may have a quicker impact on mood than cognitive techniques that tend to require time and practice.

Encourage values-based action—As clients begin to notice that they can be active agents in loosening their negative attributional narratives via behavior change, clinicians can encourage values-based action, in which clients work on concrete goals that are congruent with their value systems (i.e., life directions, such as family, career, and spirituality; Hayes et al., 2006). Identifying goals and values and encouraging courses of committed action in pursuit of those (like behavioral activation) can help incite behavior change that might lead to durable and significant behavior change.

Examining and Strengthening Interpersonal Relationships

Depressive attributional frameworks generate expectations and interpretations that, among other things, can be highly disruptive to interpersonal relationships. After clinicians have helped clients understand how negative attributions have infiltrated their narratives,

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clinicians can probe for instances when these narrative frameworks have been troublesome in the client's relationships. Indeed, interpersonal psychotherapies for depression are centered on the view that major depression largely occurs in the context of disturbances in interpersonal relationships (Weissman & Klerman, 1990); a major focus is on taking action to improve the quality of the client's relationships.

One of the authors was working with a depressed teacher, prone to negative attributional style. She became highly distressed and demoralized after she received a complaint from one student's parent about her teaching style. This parent's single comment subsequently developed into a major theme in her narrative, containing the thoughts, "I am a terrible teacher," "I will never improve no matter how hard I try," and "I am an imposter." Taking these thoughts to heart, the teacher became unmotivated to be creative in her classroom and found herself becoming frequently impatient with her students. After bringing these attributions into awareness, the clinician worked with this client to explore and enact more adaptive patterns of interaction with students, parents, colleagues, and others that were less limited by her attributional habits. With the clinician's help, the teacher was able to realize that her negative attributions were damaging her relationships with her students, their parents, and her coworkers, which facilitated her ability to change these patterns.

Other Clinical Considerations

Stressful Life Events

The finding that attributional style interacts with negative life events to confer risk for depression is another area for clients to be aware of during treatment. Therapists can help clients become better aware of the reciprocal nature of the relationship between negative events and depressive attributional style in their own particular circumstances. Clients may be unaware of or underestimate the impact of stressful events in their lives, attributing these events to their own failings and weaknesses instead. Gaining a more realistic and balanced appreciation of the role that negative life events play in shaping and solidifying negative attributions and expectations about themselves and their future may be useful in helping to reduce the hopeless and self-castigating conversations that depressed clients tend to have with themselves. Research indicating that this link is relatively specific to depression can be used to underscore the importance of attending to the interaction of depressive cognition and stressful experience for clients experiencing depression.

One of the authors was working with a woman who sought help dealing with the aftermath of the discovery of her husband's extramarital affair. The affair had ended and the couple was in marital therapy, but she was struggling with what her first major depressive episode,. She was becoming increasingly despondent, self-blaming, and hopeless about her life. It became clear that although she may have never had a full-blown depressive episode before, the tendency towards self-blame and pessimism, especially in the face of negative events, was nothing new. She had long considered herself to be self-deprecating, a bit cynical, and pessimistic, but she had never really grasped that this framework carried the potential for depression, or that this potential had been activated in a powerful way by the intensely painful experience of discovering her husband's infidelity. Making those connections helped her feel less at the mercy of a force that she felt had swelled up from within and engulfed

her. Though still in much pain, she began to take a more active approach in therapy, setting goals and assigning herself tasks designed to help her feel less overwhelmed and to move forward with her life in a more deliberate manner.

Gender

Awareness of the tendency for stressful life events and negative style to interact in ways that exacerbate the risk of major depressive episodes may be an especially important consideration in working with female clients. Their vulnerability makes them potentially more prone to seeing themselves as to blame when bad things happen. Females may be especially vulnerable in marital and family relations, a context in which men tend to receive more benefit and women tend to bear more responsibility for keeping the family and/or household running smoothly (Bianchi, Milkie, Sayer, & Robinson, 2000). In the case discussed above, the client may have begun as furious with her husband, but she reserved her harshest judgments for herself. He had betrayed, but she had failed. He was ashamed, but she was broken. He would survive and find someone else, but she would be crushed and alone. One observation that was especially upsetting to her was that although her husband was genuinely sorry and seemed motivated to improve the relationship, he was not depressed or down on himself like she was. Understanding how relationship stress and trauma may be viewed and processed differently by male and female clients, as in this case, can help focus the clinical work in ways that are more context sensitive and that better address the complexity of the client’s attributional response.

Temperament/Personality

Research reviewed above has suggested that aspects of temperament or personality may put people at risk for both increased life stress and a greater tendency towards negative attributional style. Clients who report a chronic pattern of negative withdrawal, characterized by avoidance of novel situations, high sensitivity to negative stimuli, and a tendency to become easily upset, are at risk for the development of depressive cognitive style when they experience significant life stress. Helping such clients to be mindful about how they respond to stressful experiences is particularly important given their dispositional tendencies towards depressogenic thinking and avoidant behavior, and thus, this topic should be a central component of therapeutic conversation.

The role of both acceptance-based and self-assertive values-directed action strategies seems especially useful in this context. Clients with a strong tendency towards avoidance will easily talk themselves out of engaging in goal-directed behavior, either on feasibility or utility grounds, or likely both. Although this avoidance may be driven by sensitivity to negative affect (e.g., anxiety, guilt), the depressive attributional framework provides convincing justification for continued and persistent inaction. Interventions that emphasize a combination of fostering acceptance of negative private experience and commitment to overt behavior change strategies might prove especially well-suited to those clients with more chronic, pervasive, personality-based avoidance tendencies that put them at increased risk for recurrent depression.

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Establishing a Working Alliance and the Expectation that Therapy can be Helpful

It is widely held that success in psychotherapy is built on a foundation of client hopes and positive expectations that the therapy can work (Wampold, 2010). In turn, positive expectations that set the stage for successful therapy may stem from client beliefs that the therapist is caring, offers a credible explanation for the problem (the rationale) and the treatment (the ritual), and is competent to help (Frank & Frank, 1991). This is particularly important—and challenging—with depressed clients, who often begin therapy with pessimistic and skeptical pronouncements about the prospects for improvement, a stance that is completely consistent with their attributional style. What's a hopeful therapist to do?

At the outset of therapy with depressed, hopeless clients, clinicians should aim to gain the client's confidence in the enterprise by demonstrating a level of understanding of the experience that exceeds what they have been told by the client. This is similar to the Rogerian notion of "advanced empathy," in which the therapist demonstrates an intuitive appreciation of the client's experiences and meanings at a level that is beyond that which the client has directly expressed, or may even be fully aware of herself. Knowledge of the basic research on attribution theory is helpful in this regard, as clinicians can use their familiarity with the research to demonstrate an accurate understanding of the nature of depressive thinking that the client is experiencing, without having to be told all of the details. Demonstrating an accurate understanding of the attributional framework through which clients view their experience, and explaining how this attributional set fuels their hopelessness, withdrawal, and surrender can go a long way towards the establishment of a credible rationale for the problem and the therapy to come. The importance of getting the client to have some early faith in the therapist's grasp of the problem and competence to help with it is especially critical with depressed clients, who are clear examples of the types of people Frank and Frank (1991) described as demoralized.

Familiarity with depressive attributions and their consequences also helps therapists keep in abeyance their own tendency to be discouraged by a formidable display of client pessimism and lack of faith at the onset of therapy. One of the authors recently began therapy with a client in his 60s--whom we shall call Paul--who complained of a life-long history of relatively intractable depression. Paul opened the first session with the warning that he had seen many therapists, had tried everything, and nothing had really made a dent; furthermore, he did not see how this new therapy experience promised to be different. After a few seconds, the therapist responded by saying, "Well, I have to say I'm kind of relieved to hear that." The therapist went on to explain to the suddenly more interested and curious Paul that he had just given the therapist full permission to try anything and to fail spectacularly. The therapist was not dissuaded by Paul's pessimistic warnings and doubts, nor did he take them personally, because he understood how important it is for someone who sees the world the way Paul does to set the stage for failure and disappointment. The therapist then ventured the guess that although these expectations for failure were powerful and as familiar and trusted as old friends, maybe somewhere in there was a guy who was at least hoping that something different could happen here; otherwise why bother showing up? So on some level, perhaps even Paul must get that these pessimistic beliefs do not automatically *have* to be truth. Paul raised his eyebrows, nodded slowly, and said simply, "Maybe."

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Conclusions

Altogether, strategies that promote awareness, acceptance, and behavior change can all be useful for fostering cognitive flexibility. By teaching clients to loosen their connection to thoughts, be aware of the present moment, accept negative affect, and create goals that are geared towards values and investing in interpersonal relationships and social connections, interventions can alter how individuals relate to their cognitions associated with negative attributional style. Further, recent advances in cognitive change strategies include self-administered interventions and versions that can be conducted over the Internet (e.g., Griffiths & Christensen, 2006). By translating these strategies for treating depression into varieties that require minimal resources, treatment will become more accessible to a wider audience.

Directions for Future Research and Practice

Although several treatment modalities have gained empirical support for depression, future research is needed to broaden our understanding of how to best alleviate depressive symptoms via attributional style. Foremost, cognitive bias modification (CBM) is a relatively new approach developed to directly change information-processing biases associated with depression (Koster, Fox, & Macleod, 2009). Related to attributional biases, the notion that individuals with depression tend to have negative interpretations of ambiguous information and attentional biases towards threatening stimuli forms the basis of the experimental paradigms used to change these tendencies.. A recent meta-analysis of this growing literature suggests that CBM is able to directly alter cognitive biases and was stronger in altering interpretations than attention biases (Hallion & Ruscio, 2011). However, so far, these paradigms have yielded small to no effect on treatment outcomes of anxiety and depression (Cristea, Kok, & Cuijpers, 2015). Nevertheless, the crucial role of cognitive styles in the development and maintenance of depression suggests that this may be a useful strategy in helping individuals change their cognitive appraisals. New directions for this research include designing novel targets, including attribution biases, and using innovative paradigms in hopes of developing the utility of this method in a therapeutic context (Macleod, Koster, & Fox, 2009).

Along with interventions aimed at altering negative cognitions, an innovative, promising line of research involves promoting positive attributional style. As a mechanism of resilience, an enhancing attributional style involves the tendency to ascribe stable and global causes to positive events, which promotes hopefulness (Kleiman, Liu, & Riskind, 2013). Enhancing attributional style, predicts decreases in negative, dependent (i.e., self-caused) life events over time (Kleiman et al., 2013). Thus, it may be useful for clinicians to work with depressed patients on building positive cognitive styles to treat depressed mood and break the stress-generation cycle. Breeding optimism may foster more confidence, agreeableness, and proactive monitoring of well-being in patients. Thus, in addition to promoting awareness about the attributions for negative experiences, clinicians could help depressed clients to identify positive events in their daily lives, such as satisfactory feedback at work, enjoyable interactions with loved ones, or personal accomplishments, such as engaging in housework or exercise. Clinicians can guide clients through an understanding of the causes and

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consequences of these positive events. A depressed person who does not typically give herself credit for being a good employee may attribute positive feedback at work to external, unstable, and specific causes (e.g., “My boss was in a good mood today so he complemented me,” “This will never happen again,” and “I may have performed adequately in my meeting today, but I am not a good employee otherwise”). Clinicians could help clients to identify these patterns, and work with them to find evidence for internal, stable, and global attributions for positive events.

Thus, future research aimed at developing interventions for those with cognitive vulnerabilities to depression could benefit from including avenues to boost enhancing cognitive style, which may promote resilience to and recovery from depression. More research is also needed evaluating programs that teach parents how to provide positive attributional feedback to their children and model more benign inferences for stressful events, as well as interventions that teach partners how to provide adaptive inferential feedback (see Alloy et al., 2001). Interventions in schools that promote generating more positive interpretations of stressful life events could also be explored. By adding a positive psychological component to typical interventions for depression, clinicians and researchers may better learn how to build and maintain resilience in individuals who have a cognitive vulnerability for depression.

For over 40 years, from learned helplessness theory to internet-based interventions for depression, psychologists have studied how attributions impact mood. Researchers and clinicians have amassed a broad knowledge base on how to identify, label, restructure, and be mindful of the negative attributions associated with depression. However, there is still much information to gain by continuing to study negative cognitive style and how to best intervene in order to break the attribution-depression cycle.

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