
Prognostic Indicators of Treatment Response for Adults with Anxiety

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As the field has moved beyond initial efficacy trials for the treatment of anxiety disorders, it becomes more crucial to consider the variants and complications that may arise in treatment. Although efficacious treatments for anxiety disorders have been developed, findings related to prognostic indicators of treatment response remain an important research priority. In particular, clinicians and researchers alike need information on translating nomothetic findings into idiographic treatment plans, addressing related conditions that frequently co-occur with anxiety disorders, and overcoming clinical impasses that may complicate treatment.

Nature of the Problem

This chapter will explore several factors that contribute to complexity in effectively conceptualizing and treating anxiety disorders in adults. Anxiety is frequently comorbid with other acute and enduring disorders, which has important implications for effective treatment (e.g., Brandes & Bienvenu, 2009; Huppert, 2009; Zahradnik & Stewart, 2009). For the purposes of this chapter, comorbidity is defined as having co-occurring

clinically significant symptoms of both an anxiety disorder and another disorder at some time across the lifespan. Additionally, several therapeutic variables complicate the treatment of anxiety disorders. Transdiagnostic and integrative treatments are presented as promising means of addressing complications that arise in the treatment of comorbid and complex presentations of anxiety disorders.

Anxiety Disorders and Axis I Comorbidity

Anxiety disorders are frequently comorbid with other acute conditions. The following sections address Axis I disorders that frequently co-occur with anxiety, as well as etiological theories of their co-occurrence and considerations for treatment.

Multiple anxiety disorders. Comorbid acute disorders are complicating factors that may serve as important prognostic indicators for the effective treatment of anxiety disorders. Co-occurrence of two or more anxiety disorders in the same individual tends to be more the rule than the exception (e.g., Brown & Barlow, 1992; Kessler et al., 1996; Wittchen, Zhao, Kessler, & Eaton, 1994). Brown, Campbell, Lehman, Grisham, and Mancill (2001) examined comorbidity among anxiety disorders in a clinical sample. Among anxiety disorders, generalized anxiety disorder (GAD) and posttraumatic stress disorder (PTSD) were especially likely to co-occur with other disorders. Additionally, it is useful to examine comorbidity

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as a function of primary disorders. For example, while Specific Phobia has been highly comorbid with other anxiety disorders, it frequently presents as a less severe condition that co-occurs with other more debilitating anxiety disorders (Brown et al.). Thus, it may be that some forms of multiple anxiety disorder comorbidity, such as Panic Disorder and GAD, are more likely to complicate prognosis than others, such as any primary anxiety disorder and secondary Specific Phobia (Brown & Barlow, 1992). Although evidence suggests that comorbidity rates decrease after treatment for a primary anxiety disorder (e.g., Borkovec, Abel, & Newman, 1995; Brown, Antony, & Barlow, 1995), comorbidity rates tend to be substantially higher in those with more severe conditions (Kendall, Kortlander, Chansky, & Brady, 1992; Kessler et al., 1994) and severity serves as a negative prognostic indicator (Keller et al., 1992). As such, comorbidity of anxiety disorders may significantly complicate the clinical picture.

Anxiety disorders and comorbid depression. Unipolar depression and anxiety are frequently comorbid in adults, adolescents, and children, in both clinical and community samples (e.g., Angold, Costello, & Erklani, 1999; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Maser & Cloninger, 1990; Merikangas, Dierker, & Szamari, 1998; Mineka, Watson, & Clark, 1998). Although comorbidity exists across many disorders, the strength of association between anxiety and depression denotes a unique relationship (Axelson & Birmaher, 2001; Lewinsohn, Rohde, & Seeley, 1995). Also, rates of comorbidity between anxiety and depression remain elevated even after controlling for comorbidity with other disorders (Lewinsohn, Zinbarg, Seeley, Lewinsohn, & Sack, 1997).

The overlap between anxiety and depression is particularly important as those with the comorbid condition experience more impairment than those with pure presentations of either disorder. As compared to non-comorbid presentations of the disorders, comorbid anxiety-depression is associated with greater symptom severity (Bernstein, 1991; Coryell et al., 1988; Mitchell, McCauley, Burke, & Moss, 1988), higher rates of suicidal behavior (Lewinsohn et al., 1995; Reich et al., 1993; Rohde, Clarke, Lewinsohn, Seeley,

& Kaufman, 2001), higher rates of mental health treatment utilization but poorer treatment response (Brent et al., 1998; Emslie, Weinberg, & Mayes, 1998; Lewinsohn et al., 1995), higher medical costs (Marciniak et al., 2005), and an increased risk of recurrence (Emslie et al., 1998). The presence of comorbid depression is also a negative prognostic indicator for anxiety disorder treatment outcome, as it has been shown to decrease the likelihood of remission of each of the disorders (Bruce et al., 2005).

Anxiety disorders and substance use. Substance use disorders also frequently co-occur with anxiety disorders, although there appear to be some differences among the anxiety disorders in their rates of comorbidity with substance use. First, although specific phobias are relatively prevalent in the population, they are less likely to be associated with substance use than GAD, Panic Disorder, Social Phobia, and PTSD (Zahradnik & Stewart, 2009). Additionally, drug use disorders are more frequently associated with anxiety disorders than alcohol use disorders (Zahradnik & Stewart). As it may be problematic to group drug use disorders into a homogenous category, further research is needed to explore drug use disorder by specific substances.

Several models have been proposed to explain the co-aggregation of anxiety disorders and substance use. Some models suggest that those with anxiety disorders may use substances to “self-medicate,” or reduce emotional distress or affect-relevant withdrawal symptoms (Kushner, Sher, & Beitman, 1990). Alternatively, it is possible that anxiety symptoms result from chronic substance use (Kushner, Abrams, & Borchardt, 2000). For example, prolonged tobacco use may contribute to the development of panic disorder by producing chronic withdrawal symptoms, reduced health quality, or both (Breslau & Klein, 1999; McLeish, Zvolensky, Del Ben, & Burke, 2009). It may also be that a third factor related to individual differences underlies both anxiety and substance use. Anxiety sensitivity, or the tendency to fear bodily sensations most associated with anxiety, has been linked to both anxiety and substance use (Stewart & Kushner, 2001), suggesting its possible role as a third variable.

Generally, the literature supports the self-medication hypothesis for anxiety–substance use comorbidity (see Zahradnik & Stewart, 2009 for review). However, self-medication models may be limited in describing the complex relationship between anxiety disorders and substance use following the onset of both conditions (e.g., Stewart, 1996). Other models suggest that anxiety disorders and substance use reinforce one another over time through a mutual maintenance process, and their comorbidity is best explained by a complex transactional relationship. Thus, anxiety and substance use may co-occur through bidirectional negative effects (e.g., Zvolensky, Schmidt, & Stewart, 2003).

Anxiety disorder–substance use disorder comorbidity has important implications for effective treatment, as the comorbid conditions often result in less effective treatment for either condition, and higher rates of relapse to substance use (e.g., Bruce et al., 2005; Kushner et al., 2000). Treatment approaches designed to address anxiety–substance use comorbidity generally follow one of three treatment formats: sequential, parallel, or integrated (Zahradnik & Stewart, 2009). Sequential treatments first address one disorder then move on to the other in discrete stages. As clinicians commonly believe mental health issues cannot be effectively treated until substance use is controlled (Riggs & Foa, 2008), substance use disorders generally take first treatment priority over anxiety disorders. Parallel treatments ensure treatment for both disorders simultaneously; however, treatment is often conducted by different providers, so coordination of care represents a potential problem (Randall, Book, Carrigan, & Thomas, 2008). Lastly, integrated models of anxiety–substance use treatment attempt to create a hybrid treatment comprising intervention strategies that are effective in treating each disorder independently (Randall et al.). Ultimately, although integrated treatments may be the most promising, quality of care for anxiety–substance use is limited by systemic issues that tend to focus health care on discrete problems and not the full clinical picture (e.g., Weiss, Najavits, & Hennessy, 2004). Additionally, development and empirical evaluation of integrated treatments remains limited.

Anxiety Disorders and Comorbid Personality Disorders

Rates of comorbid anxiety and personality disorders range from 35 to 65% (Sanderson, Wetzler, Beck, & Betz, 1994; Skodol et al., 1995), and findings with regard to the impact on treatment outcome are mixed. Personality disorders interfere in instrumental and social relationships and are thought to impact the therapeutic process as well (Crits-Christoph & Barber, 2002). To date, none of the ten personality disorders have consistently been related to poor treatment prognosis, and no one anxiety disorder is sensitive to concomitant personality disorders on treatment outcome (Dreessen & Arntz, 1998). However, some patterns have emerged in the literature.

Models of comorbidity. An important first step is to examine the theoretical underpinnings of the relationship between anxiety and personality disorders. Researchers have proposed several models of the relationship between Axis I and Axis II disorders, including linear (i.e., causal), nonlinear (i.e., reciprocal), and common etiological models (Brandes & Bienvenu, 2009). Linear models suggest that either personality disorders are risk factors for anxiety disorders or personality disorders are consequences of anxiety disorders. Support for linear models has been partially established by several prospective and longitudinal studies. For example, controlling for the presence of Axis II disorders in adolescence, negative affectivity in adolescence predicted the onset of anxiety disorders in adulthood (Krueger, 1999). Similarly, higher negative affectivity predicted four-symptom panic attacks in adolescents (Hayward, Killen, Kraemer, & Taylor, 2000), and high neuroticism and low extraversion predicted the onset of PTSD in survivors of severe burns (Fauerbach, Lawrence, Schmidt, Munster, & Costa, 2000). Additionally, early experiences of anxiety disorders may influence developing personalities. Anxiety disorders in adolescence were shown to predict the development of personality disorders later in life, particularly Cluster C disorders (Goodwin, Brook, & Cohen, 2005;

Kasen et al., 2001). Findings that support a causal relationship in two directions (i.e., that personality disorders influence the development of anxiety disorders, and that early anxiety impacts the development of personality disorders) suggest that a bidirectional, reciprocal model may offer a better explanation than either linear model.

Beyond these, models that address common etiologies and overlap in Axis I and Axis II criterion are informative. Both anxiety disorders and Cluster C personality disorders are characterized by fear and avoidance; therefore, it is not surprising that these Axis I disorders would be particularly susceptible to comorbidity with Cluster C disorders. However, Saulsman and Page (2004) found that all personality disorders were associated with high neuroticism and disagreeableness, which lends an explanation for the comorbidity between anxiety and Cluster A and B disorders as well as Cluster C. Additionally, it has been shown that anxiety disorders are related to a personality style characterized by behavioral inhibition to the unfamiliar (Brandes & Bienvenu, 2009). This personality style may reflect a risk factor for the development of anxiety disorders, or it may be a marker of a range of inherited traits that includes anxiety disorders (Bienvenu & Stein, 2003).

Specific associations between personality disorder clusters and anxiety disorders. Due partly to similarities in diagnostic criteria (e.g., anxious, fearful traits), Cluster C personality disorders co-occur most often with anxiety disorders (Sanderson et al., 1994). Further, specific associations have been supported for particular Axis I and Axis II disorders that commonly co-occur, perhaps due to etiological relationships. Particularly high rates of PTSD were found in those with Borderline personality disorder while elevated rates of Social Phobia were found in patients with Avoidant personality disorder (McGlashan et al., 2000). Skodol et al. (1995) found Panic Disorder associated most highly with Borderline, Avoidant, and Dependent personality disorders; Social Phobia associated with Avoidant personality disorder; Obsessive-Compulsive Disorder (OCD) associated with Avoidant and Obsessive-Compulsive personality disorder; and Specific Phobia was not associated with any personality disorder.

Anxiety disorders and co-occurring personality disorders have also been identified empirically. In a longitudinal study of patients with anxiety disorders, the Harvard/Brown Anxiety Research Project (HARP) found 24% of patients to have at least one co-occurring personality disorder, with the most common diagnoses being Avoidant, Obsessive-Compulsive, Dependent, and Borderline personality disorders. Patients with Social Phobia and GAD were more likely to be diagnosed with a co-occurring personality disorder than those with other anxiety disorders (Sanderson et al., 1994). Taken together, findings suggest that anxiety disorders may co-occur with each of the three personality disorder clusters but also display some specific associations (e.g., Social Phobia and Avoidant personality disorder) at particularly high rates.

Many of the studies examining anxiety disorders and co-occurring personality disorders have focused the prevalence of the concomitant relationship and the relationship with symptom severity rather than the effects on treatment outcome. Additionally, a majority of the studies have been conducted on individuals with Panic Disorder (with or without Agoraphobia). In one study, co-occurring Panic Disorder and personality disorders were related to a more severe clinical picture (as indicated by more symptoms and suicidal behaviors; Ozkan & Altindag, 2005).

Effect of comorbidity on prognosis of anxiety disorders. In their review of the literature, Crits-Christoph and Barber (2002) suggest that personality disorders have shown a consistent adverse impact on the treatment outcome of a wide range of Axis I disorders. One way in which personality disorders may impede treatment of anxiety disorders is through difficulty establishing rapport and strong alliance, which is an indicator of treatment outcome (Ackerman et al., 2002). Individuals with personality disorders have difficulties developing relationships and trusting others, which may impair therapeutic rapport and lead to early termination and attrition (Ackerman et al.). Second, personality disorders may impede treatment simply by heightening the severity of the pathology in general. Third, personality disorders may impede treatment of Axis I disorders because individuals with Axis II

pathology frequently show impairments in self-insight, which may hinder treatment response. However, limited insight is a frequent complication to treatment and is not uniquely associated with personality disorders. Finally, unlike the ego-dystonic nature of Axis I disorders, personality disorders are frequently more ego-syntonic in nature. Because many of the underlying traits between Axis I and Axis II disorders are similar, it may be difficult to treat ego-dystonic symptoms that are related to an ego-syntonic trait. For example, the fear and avoidance based Cluster C Personality Disorders (i.e., Avoidant, Dependent, and Obsessive-Compulsive personality disorders) may particularly complicate anxiety disorders, which are also characterized by fear and avoidance. It may be that patients who identify with the fear as being consistent with their nature are less likely to seek treatment and have more difficulty engaging in treatments that seem to challenge their nature.

Despite these possible mechanisms of personality disorder interference in treatment, several factors hinder our ability to make broad conclusions about the impact of personality disorders on the outcome of treatment for anxiety disorders. First, the anxiety disorders have not been equally represented in the extant research, with a majority of the findings relating to Panic Disorder and OCD, and fewer data addressing GAD, Social Phobia, and Posttraumatic Stress Disorder. Second, very few studies have examined personality dimensionally. DSM-V field trials for Axis II disorders are testing dimensional approaches to personality disorders, reflecting a shift in the way personality characteristics are understood. Important information regarding the impact of Axis II disorders may be lost by using the dichotomous classification method. Lastly, most findings have not come from studies of comorbid personality disorders specifically but were secondary analyses of existing data. Thus, the mechanisms by which Axis II disorders impede treatment of Axis I have not been fully explored.

Considerations in interpreting findings. The findings related to co-occurring Axis I and Axis II disorders in treatment outcome studies are equivocal, and research methodologies may play

an important role in the interpretability of the findings. A large body of research supports the assertion that personality disorders hinder treatment response (for a review, see Crits-Christoph & Barber, 2002). However, it may be that the reliability of findings is confounded by the study methods employed (Dreessen & Arntz, 1998). First, conclusions related to the deleterious impact of personality disorders on Axis I treatment outcome often were based on retrospective Axis II diagnoses made by raters who were not blind to the treatment condition (Kringlen, 1965; Lo, 1967; Mancuso, Townsend, & Mercante, 1993; Minichiello, Baer, & Jenike, 1987; Turner, 1987; Vaughan & Beech, 1985). Second, many studies which have concluded that personality disorders hinder treatment outcome are strictly comparing posttreatment symptomology (van den Hout, Brouwers, & Oomen, 2006), although the relative change from pre- to posttreatment severity scores indicates that individuals with and without personality disorders benefit equally from treatment (Dreessen & Arntz, 1998; van den Hout et al., 2006). Third, in both self-report questionnaires and clinical interviews, personality assessments are sensitive to mood states (Hirschfield et al., 1983; Pilkonis, Heape, Ruddy, & Serrao, 1991; Reich, Noyes, Coryell, & O'Gorman, 1986), so it may be that personality assessments are distorted by transiently high levels of anxiety (Stein, Hollander, & Skodol, 1993). Finally, the method of assessment used to make Axis II diagnoses contributes to the varied research findings. Van den Hout et al. (2006) concluded that the presence of personality disorders did not impact response to treatment when the Axis II diagnosis was made with the SCID-II but that it did attenuate treatment response when the diagnosis was determined using an unstructured interview. In light of these considerations, it is critical that the findings related to treatment outcomes of concomitant anxiety and Axis II disorders be interpreted in the context of the study methodologies.

In conclusion, the extant research on co-occurring anxiety and Axis II disorders is inconsistent. While the research findings are inconclusive, clinical experience suggests that the presence of an Axis II disorder interferes with treatment outcome.

Because personality disorders are most detrimental to relational functioning, it is intuitive that a disordered personality would impact the therapeutic bond, a most critical aspect of psychotherapy. However, this clinical intuition has yet to inform the theory related to the mechanism by which Axis II disorders may impact the treatment of anxiety disorders. Thus, in addition to the special considerations for research methods, it is important that future studies are theoretically driven.

Therapeutic Variables in Complications of Anxiety Disorders

In addition to factors of comorbidity discussed above, factors related to the therapist-client relationship may serve as complicating factors in the treatment of anxiety disorders. Factors such as client motivation and therapeutic alliance have been shown to impact treatment outcomes and serve as important prognostic indicators.

Therapeutic alliance. Therapeutic alliance is the bond between therapist and client that engages the client in the therapeutic process. Therapeutic alliance is believed to be an essential factor in the effective treatment of anxiety (Bordin, 1979; Hayes, Hope, VanDyke, & Heimberg, 2007). However, the research on therapeutic alliance and treatment outcomes is in its early stages and its findings remain inconclusive. Hayes et al. (2007) found a significant relationship between session helpfulness and client-rated working alliance, but not observer-rated working alliance. The researchers also found that alliance was associated with the level of engagement the client displayed during therapy. Similarly, Chiu, McLeod, Har, and Wood (2009) reported that poor early treatment therapeutic alliance predicted less improvement in parent-reported anxiety reduction at mid-treatment but not at posttreatment among children receiving cognitive-behavioral therapy (CBT) for anxiety disorders. They also reported that improvement in therapeutic alliance over the course of therapy predicted better posttreatment anxiety reduction. These findings indicate

the importance of therapeutic alliance, especially early in treatment. However, findings on therapeutic alliance remain somewhat divided. Liber et al. (2010) reported that therapeutic alliance did not predict anxiety reduction in children who attended group or individual CBT. Numerous problems remain in studying therapeutic alliance, including measurement sensitivity and lack of variability in therapeutic alliance ratings (e.g., most ratings are high, likely due to demand characteristics). Furthermore, specific client characteristics and therapeutic techniques create difficulties in forming therapeutic alliance.

A client's difficulty forming social relationships may be a consequential variable that interferes with the forming of a therapeutic alliance. Moras and Strupp (1982) reported that clients who form successful personal relationships often form positive therapeutic alliance regardless of theoretical orientation. Similarly, Kokotovic and Tracey (1990) reported that building therapeutic alliance was more difficult when therapists viewed their clients as having poor social relationships. It is intuitive that therapeutic alliance is even more important in cases where clients struggle to build successful personal relationships, such as among those with social phobia. However, research involving social phobia and therapeutic alliance remains inconclusive. VanDyke (2002) reported that strong therapeutic alliance measured after the final session related to low posttreatment symptom severity after controlling for pretreatment severity. Conversely, Woody and Adessky (2002) reported that therapeutic alliance did not significantly relate to group CBT treatment outcomes in clients with social phobia. Neither study reported a relationship between early therapeutic alliance and treatment outcomes, which may suggest that therapeutic alliance is a result of treatment success. Further study is needed to elucidate the complex relationship between client variables, therapeutic alliance, and treatment outcome.

Client motivation. Problems with regard to motivation for treatment are common in individuals with anxiety disorders. Grant et al. (2005) reported that 80–95% of people with social phobia do not

seek treatment and that many people with social phobia only seek treatment after years of tribulations. Clients lacking motivation often display ambivalence in regards to anxiety treatment (Buckner, 2009). Clients are generally aware that excessive anxiety is distressing and interferes in their ability to partake in desirable activities. However, clients may also report hesitation to initiate services or prematurely terminate treatment for fear of others thinking negatively of them (Olfson et al., 2000). Given the importance of client participation in successfully reducing anxiety symptoms, it becomes imperative for clinicians to address client ambivalence during therapy.

Client motivation may be particularly salient when considering exposure therapy, as the treatment may be considered aversive to many clients, particularly when the approach is described before initiated. Indeed, Becker, Zayfert, and Anderson (2004) have reported that many CBT-oriented clinicians believe that the aversive nature of exposure therapy may increase client dropout, despite evidence that clients in exposure-based therapy for PTSD are not more likely to drop out compared to clients in other forms of CBT (Hembree et al., 2003). However, therapeutic alliance can be damaged as a result of conducting exposures at a rate in which clients are not ready for or capable of handling. Furthermore, damage to therapeutic alliance may occur if anxiety symptoms do not abate during an in-session exposure (Hayes et al., 2007). It may be that clients who partake in exposures and do not experience a decrease in anxiety during the exposures or between successive exposures doubt the benefit of continued treatment. A collaborative approach is especially valuable when structuring exposure sessions to help prevent nonadherence and ruptures to the therapeutic alliance.

Treatment Approaches to Address Anxiety Disorder Comorbidity and Complications

Given the range of client and therapeutic variables discussed above that may complicate the treatment of anxiety, it is important to develop

flexible treatments to best address these problems. Although manualized cognitive-behavioral therapies have yielded very strong treatment effects (Norton & Price, 2007), the presence of complicating or negative prognostic variables may require adaptation of treatment models to address the specific case formulations. Transdiagnostic, unified, or integrated cognitive-behavioral treatments are presented as alternatives to disorder-specific protocols that may better address complicating factors of comorbidity, while treatments based on motivational interviewing models have begun to be used as stand-alone or adjunctive therapies for clients demonstrating motivational or relational complications.

Transdiagnostic and unified treatments. The efficacy of cognitive-behavioral therapy for the treatment of anxiety disorders has been well established. Evidence-based treatments have been developed for many specific anxiety disorders including panic disorder and agoraphobia (Craske & Barlow, 2001), GAD (Dugas et al., 2001), OCD (McLean et al., 2001), social phobia (Heimberg & Becker, 2002), and PTSD (Najavits, 2002). However, these studies' use of homogeneous samples (e.g., similar diagnoses, strict exclusion criteria) limits the generalization of these treatment packages for the application to complex factors such as comorbid anxiety, mood, personality, or substance use disorders. Recently, a number of researchers have suggested that a non-diagnosis-specific approach to treatment may allow for greater individualization and treatment flexibility by capitalizing on the common cognitive and behavioral processes that are shared across a range of anxiety, mood, and other emotional disorders (Barlow, Allen, & Choate, 2004; Mansell, Harvey, Watkins, & Shafran, 2009; McEvoy, Nathan, & Norton, 2009; Norton & Hope, 2005). Mansell et al. (2009) specifically suggest that unified or transdiagnostic approaches to treatment may be preferable for clients who do not fit a specific diagnostic category or for clients with complex or highly comorbid presentations. Unified treatment packages begin with an individualized case formulation that focuses on the functional links between the component pro-

cesses of most cognitive-behavioral models of anxiety: maladaptive cognitive appraisals, poor emotional regulation, emotional avoidance, and maladaptive behavior associated with disordered emotion (Barlow et al., 2004; McEvoy et al., 2009; Shafraan, McManus, & Lee, 2008). The importance of an individualized and evidence-based case formulation is particularly significant as the complexity of a given presentation increases. Although the unified approach to the treatment of anxiety disorders is a relatively new idea, research has demonstrated empirical support for the treatment of anxiety disorders utilizing this framework (Erickson, 2003; Erickson, Janeck, & Tallman, 2007; Garcia, 2004; Norton & Hope, 2005).

While there has not been a specific anxiety disorder treatment package designed to accommodate the array of complicating factors that can arise in the treatment of anxiety, it is believed that a unified approach to treatment may represent the most desirable treatment strategy. With a unified approach, clinicians are able to treat the entire clinical picture rather than prioritizing diagnoses and sequentially treating each with diagnosis-specific treatment protocols (Blanchard et al., 2003; Brown et al., 1995; Norton, Hayes, & Hope, 2004).

Integrative treatment for anxiety–substance use comorbidity. The unified approach discussed above may represent an ideal framework for addressing the emotional dysregulation that underlies multiple comorbid anxiety disorder diagnoses as well as comorbid anxiety–depression. However, treatments designed to address both anxiety and substance use may be more difficult to develop and implement. Zahradnik and Stewart (2009) identify integrated and parallel interventions as more promising than sequential interventions in the treatment of anxiety–substance use. Theories that anxiety and substance use reinforce one another over time through mutual maintenance would suggest that integrated treatments may represent the best treatment option, but this has yet to be empirically established. One clear trend is that anxiety–substance use treatments that incorporate

elements of cognitive-behavioral techniques (e.g., ERP for OCD, prolonged exposure for PTSD) perform better than those that do not. Despite difficulties in implementation, Zahradnik and Stewart (2009) identify preliminary results of integrated anxiety–substance use treatment as very encouraging.

Treatment addressing anxiety and comorbid Axis II. Overall, the extant research suggests that standard brief treatments for Axis I conditions often fail when Axis II pathology is also present (Crits-Christoph & Barber, 2002). However, this does not mean that the presence of personality disorders precludes effective treatment of anxiety. Instead, it may be that standard treatment for anxiety needs to be tailored to effectively address the presence of a personality disorder. An example of this is a case study by Walker, Freeman, and Christensen (1994) in which restricted environmental stimulation was used to enhance the exposure treatment of OCD in a patient with schizotypal personality disorder. Although treatment was focused on the OCD, restricted environmental stimulation was incorporated due to the attentional problems found in patients with schizotypal personality disorder. In sum, clinicians should be alert to the presence of a comorbid personality disorder as a potential prognostic indicator. Therapeutic progress should be carefully monitored and the treatment strategy may need to be reevaluated if progress is not made within the period of brief therapy. As effective treatment for Axis II conditions typically requires a longer period of time than treatment for Axis I conditions alone (Kopta, Howard, Lowry, & Beutler, 1994), it may be that a more intensive, longer course of treatment is required to address Axis II comorbidity.

Treatment addressing anxiety and therapeutic barriers. In order to decrease client ambivalence with regard to therapy, motivational interviewing (MI) represents one promising therapeutic technique. MI is a client-centered therapy that augments intrinsic motivation to change by openly discussing and resolving ambivalence to change (Miller & Rollnick, 2002). Comparison studies

conclude that clients receiving MI prior to CBT have superior homework compliance than clients receiving only CBT (Westra & Dozois, 2006). Kertes, Westra, Angus, and Marcus (2010) reported that clients receiving MI prior to CBT viewed their role in therapy as more active, while clients receiving only CBT who viewed their role in therapy as more passive. Simpson and colleagues (2008) noted some success in using MI as an adjunct to exposure and ritual prevention in the treatment of OCD, although the authors note that the intervention is likely to be successful only for patients whose ambivalence keeps them from participating fully in treatment, are able to access this ambivalence in session, and value something more than the status quo. Further study is needed to elucidate the full function of Motivational Interviewing in enhancing treatment for anxiety disorders.

It is also important for therapists to recognize the value of addressing any therapeutic alliance ruptures that may occur in treatment. In a CBT framework, therapeutic alliance is the foundation upon which the technical aspects of the intervention rest, so it is crucial for this alliance to be fostered. Safran and Muran (2000) suggest several direct and indirect ways of repairing a ruptured therapeutic alliance. Direct methods include providing rationale, examining core interpersonal themes with clients, and clarifying any misunderstandings. Indirect methods may involve changing the task or goal, reframing meaning of the task, displaying empathetic characterization, and helping to provide a corrective emotional experience. Overall, it is important for the therapist to recognize any problems in therapeutic alliance early and actively intervene to prevent interference in the therapeutic process.

Conclusions and Future Directions

In conclusion, as the anxiety literature moves beyond first generation efficacy studies, it becomes increasingly important to examine prognostic indicators in the effective treatment of anxiety. One promising area of the research literature is translational research that addresses

narrowing the “scientist-practitioner gap” by implementing empirically supported treatments in the field. It is widely acknowledged that there is a need for more collaboration between clinician and researcher in the design and implementation of psychotherapy outcome research (Goldfried & Wolfe, 1998). This collaboration could help inform the study of integrated treatments that incorporate techniques from different therapeutic perspectives. The field is also in dire need of treatment manuals that provide flexibility and guide the clinician in handling problems that may arise during the course of treatment (e.g., ruptures in therapeutic alliance, homework noncompliance).

An additional direction for future anxiety research concerns the translation of nomothetic findings into idiographic treatment plans relevant to practitioners. Barlow and Nock (2009) discuss that, although the individual serves as the principle unit of analysis in the science of psychology, most psychological studies are conducted by comparing aggregated data from groups of individuals. Problems then result from generalizing a nomothetic result to an idiographic situation. The authors urge researchers to emphasize idiographic strategies that can be integrated into existing nomothetic research approaches in both clinical and basic science settings. While this is a practical and efficient approach, it can also directly address the causal relationships between key treatment-related variables.

Thus, to better understand the clinical picture, it may be necessary for researchers to focus more on individual cases than group averages in treatment response. In a recent poll of leaders of the field, one researcher noted, “it is the non-responders that should generate the research questions” (Donald F. Klein, as quoted in Norton, Asmundson, Cox, & Norton, 2000, p. 94). In this way, future research may best be guided by attending to those who do not respond to standard CBT protocols and attempt to better adapt and tailor treatment to these individuals. Idiographic approaches could then build on nomothetic findings to further advance our knowledge of effective interventions for the complications and variants of anxiety disorders.

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