

Introduction and Overview

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The past two decades have witnessed tremendous advances in theory and research on emotion regulation. Specifically, we have gained a more thorough understanding of its developmental trajectory, neuroanatomy, genetic and environmental influences, and interface with cognition. A recent edited book by James J. Gross (2007), *Handbook of Emotion Regulation*, encapsulates the current state of the field. With this advanced knowledge of emotion regulation, the field has begun to turn its attention toward understanding the circumstances under which emotion regulation goes awry.

Psychopathologists have long speculated that problems in emotion regulation play a central role in the development and maintenance of psychiatric disorders and maladaptive behaviors. Indeed, the majority of the disorders found in the current *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association, 2000) include at least one symptom reflecting a disturbance in emotion. Theories of how emotion regulation manifests in, maintains, and contributes to psychiatric problems are now gaining empirical support, which, in turn, has stimulated treatment development.

The goals of our edited book are to (1) provide a compilation of the state-of-the-art frameworks for understanding how problems in emotion regulation characterize, maintain, or cause psychiatric problems that transcend current diagnostic boundaries; (2) describe empirical support for these frameworks, and (3) provide an overview of psychosocial treatments that target these causal and sustaining mechanisms.

Although psychopathology can be classified using a categorical approach, such as that used in the DSM-IV-TR (American Psychiatric Association, 2000), there is a growing consensus that this approach may not

be ideal for all psychiatric disturbances (e.g., Helzer, Wittchen, Krueger, & Kraemer, 2008; Widiger & Clark, 2000; Widiger & Samuel, 2005). For instance, the DSM-IV-TR classification system does not readily accommodate the large percentage of individuals that have comorbid psychiatric diagnoses (Krueger, 2002). There is also evidence that individuals who exhibit subthreshold levels of symptoms for a given disorder appear to be equally impaired and require the same treatment as those who meet diagnostic criteria for the same disorder (e.g., Blanchard et al., 2003; Krug et al., 2008). Another common occurrence that underscores problems with the categorical approach to psychopathology is that some individuals meet diagnostic criteria for one disorder but later in the course of their illness they meet diagnostic criteria for another disorder. An example of this scenario is with the eating disorders, in which a substantial percentage of women who initially meet diagnostic criteria for anorexia nervosa later meet diagnostic criteria for bulimia nervosa (e.g., Fichter, & Quadflieg, 2007; Eddy et al., 2007). There is some evidence that anorexia nervosa and bulimia nervosa are manifestations of the same disorder at differing points in the trajectory (e.g., Eddy et al., 2007). As a result of these and other issues that highlight the problems of using a categorical conceptualization of psychopathology, there has been a call for adopting a different approach to classifying psychopathology. One possible alternative is a transdiagnostic approach. This scheme categorizes disorders based on underlying mechanisms or core disturbances (e.g., attention, emotion; see Harvey, Watkins, Mansell, & Shafran, 2004), and cuts across current DSM-IV-TR disorders.

In this edited volume, we have adopted a transdiagnostic approach to psychiatric disorders by focusing on common manifestations and difficulties in emotion regulation that cut across current diagnostic boundaries. One advantage to this approach is that treatments can be developed to target mechanisms, not disorders, thus potentially reducing the number of evidence-based treatment protocols to sort through. In addition, focusing on mechanisms of action eliminates problems that arise in selecting treatments when patients present with comorbid diagnoses, which is the typical patient presentation in treatment settings (e.g., Harvey et al., 2004).¹

Although we have asked contributors to focus on emotion regulation manifestations and mechanisms rather than specific psychiatric disorders, the contributors have primarily highlighted mechanisms as they relate to mood and anxiety disorders, because the majority of empirical work on problems in emotion regulation has been done in the mood and anxiety disorders. However, contributors have pointed to the relevance of these emotion regulation mechanisms and treatments across a wide swath of

¹The importance of considering mechanisms rather than disorders has also been emphasized by Jacqueline Persons in her book *The Case Formulation Approach to Cognitive-Behavior Therapy* (2008).

disorders, such as eating disorders and psychotic disorders, with an eye toward the need for future research.

Structure of the Book

The book is divided into three sections. Each section reflects our intent to link theories of emotion regulation, mechanisms of emotion regulation that contribute to psychopathology, and treatment approaches that target these mechanisms. One lingering issue in the emotion regulation field relates to defining *emotion* and *emotion regulation*. Because these terms reflect broad areas, varying definitions exist. In order to provide clarity and continuity to the book, we asked each of the contributors to describe how they define emotion and emotion regulation as well as to describe how their conceptualization of emotion and emotion regulation situate emotion regulation problems across disorders. In addition, Bloch, Moran, and Kring (Chapter 4) delineate several definitions of emotion and emotion regulation that are currently used in the field, and they go on to offer a synthesis of these definitions, with an eye toward unifying the next generation of research in this area.

The first section of the book is devoted to models of emotion regulation. Werner and Gross (Chapter 1) start off the section by presenting the "modal model" of emotion, which they use as a framework for understanding emotion regulation. The modal model describes a situation–attention–appraisal–response sequence. More specifically, a psychologically relevant stimulus draws a person's attention, which then requires the person to appraise the stimulus. One's appraisal of the situation will help determine his or her emotional response. Because emotional responses can, in turn, modify the situation the person was initially responding to, a feedback loop is created in which emotional response tendencies can alter the environment. Werner and Gross define emotion regulation as processes that serve to decrease, increase, or maintain one or more aspects of emotion. Many of the contributors in this volume use the same definition of emotion regulation that is used by Werner and Gross.

The next chapter, by Thompson and Goodman, concerns the development of emotion regulation through the lifespan. Thompson and Goodman's chapter provides a developmental framework to understanding emotion regulation, which is helpful in determining whether emotion regulation observed in a specific context is problematic or not. Next, Denny, Silvers, and Ochsner (Chapter 3) present current evidence on the functional neural architecture of emotion regulation. Denny and colleagues' chapter provides a useful overview of brain mechanisms that are involved in emotion and the regulation of emotion. The first section of the book concludes with Chapter 4, by Bloch, Moran, and Kring, who emphasize the importance of achieving conceptual and definitional clarity in the con-

struct of emotion regulation in order to advance our understanding of the role of emotion regulation in psychopathology. The authors highlight the similarities and differences of the most prominent definitions of emotion regulation used by psychopathology researchers. Bloch and colleagues also provide suggestions regarding what features of an emotion regulation definition are most useful and can be broadly applied to the study of psychopathology mechanisms and treatments.

The second section of the book covers specific emotion regulation mechanisms that are relevant to the development and maintenance of psychopathology, with an explicit focus on emotion regulation problems that cut across different disorders. This section starts with Chapter 5, by Boulanger, Hayes, and Pistorello, describing the construct of experiential avoidance. In this chapter, Boulanger and colleagues describe the construct of experiential avoidance and how experiential avoidance impacts emotion regulation. The authors also discuss the implications of experiential avoidance for the development, maintenance, and treatment of psychopathology. The next chapter discusses a specific form of emotional regulation, namely suppression. As Salters-Pedneault, Steenkamp, and Litz (Chapter 6) describe, suppression is an emotion regulation strategy that is used to reduce or down-regulate unwanted emotional experiences. However, the available evidence indicates that suppression is mainly used to reduce negative emotions. Although it is common and can be useful in regulating one's emotions, the habitual use of suppression can lead to emotion regulation difficulties.

Context insensitivity is another mechanism that is implicated in maladaptive emotion regulation. Coifman and Bonanno (Chapter 7) provide an overview of the importance of using the situation to modify one's emotional response, individual differences in context sensitivity and emotional responding, and how context insensitivity can be used to inform clinical treatment. Next, Joormann, Yoon, and Siemer (Chapter 8) highlight how and why cognition plays a critical role in emotion regulation. These authors also provide an overview of individual differences in cognitive processes and describe how these individual differences are linked to psychopathology. The reciprocal relationship between goal regulation and emotion regulation is discussed in Chapter 9 by Johnson, Carver, and Fulford. Evidence that goal dysregulation occurs in psychopathology is provided, and the authors emphasize the way in which some clinical approaches are informed by the importance of addressing goal dysregulation treatment.

Although psychopathology research has mainly focused on the importance of negative emotion, there is accumulating evidence surrounding the critical role of positive emotion in psychopathology. Some of the work in this area discussed in Chapter 9, by Johnson and colleagues, and Chapter 10, by Dillon and Pizzagalli, provides a more comprehensive discussion of how positive emotion can impact psychopathology. These contributors review the importance of positive emotions to the regulation of emotion

generally as well as the regulating of negative emotions specifically. Dillon and Pizzagalli also discuss the empirical evidence implicating impairments in positive emotion in psychopathology. Given that the empirical literature concerning the role of positive emotions in psychopathology is in its early stages, Dillon and Pizzagalli provide valuable suggestions for future research in the area. The last chapter of Part II concerns the role of sleep in emotion regulation. In Chapter 11, van der Helm and Walker review findings from both basic science and clinical science, which highlight emotional processing that occurs during sleep and how this processing affects the subsequent day's reactivity of specific brain regions and associated autonomic networks. This chapter provides a valuable overview of how and why sleep can impact psychological processes such as emotion regulation.

After gaining a more thorough understanding of emotion regulation mechanisms that affect psychopathology, readers will be poised to appreciate the chapters included in the third, and last, section of the book, which describe various treatment approaches in which emotion regulation is a target. Fairholme, Boisseau, Ellard, Ehrenreich, and Barlow (Chapter 12) start off Part III by describing their recently developed unified treatment for mood and anxiety disorders. These investigators describe the theories on which the unified treatment was developed, including Gross's modal model of emotion regulation; provide a description of the various components of the treatment; and conclude with a case example that illustrates how the treatment is implemented. As Boulanger and colleagues describe in Chapter 5, experiential avoidance is a maladaptive emotion regulation strategy that has broad psychopathology implications. Chapter 13 describes acceptance and commitment therapy (ACT) approach, which is based on the experiential avoidance model. Valdivia-Salas, Sheppard, and Forsyth describe the basic tenets of ACT and provide an overview of the empirical evidence demonstrating the efficacy of ACT for a variety of psychiatric disorders, emphasizing its impact on emotion regulation difficulties. Another treatment approach that can target experiential avoidance is mindfulness-based therapy. In Chapter 14, Corcoran, Farb, Anderson, and Segal describe this therapy alongside its connections to emotion regulation as well as the efficacy data for various psychiatric disorders. Next, Mennin and Fresco (Chapter 15) describe a treatment approach that they have developed that explicitly targets emotion regulation difficulties in anxiety. Efficacy evidence for the treatment is presented and the promise the treatment holds for multiple forms of psychopathology is considered. As with the ACT and mindfulness-based interventions, the therapy approach developed by Mennin and colleagues targets multiple mechanisms of emotion regulation.

Recent treatment development efforts have been directed toward modulating attention to impact emotional processes. These treatments are reviewed by Taylor and Amir in Chapter 16. Although treatments in

this area are in their early developmental stages, the efficacy data are impressive. Given that emotion regulation difficulties can and do involve positive emotions, treatment approaches that target positive emotions are essential. Behavioral activation is one such treatment approach. In Chapter 17, Syzdek, Addis, and Martell describe the behavioral theory underlying behavioral activation treatment, review the essential components of the treatment, and describe the efficacy data for the treatment. Although behavioral activation was developed for the treatment of depression, Syzdek and colleagues describe the available efficacy data for other disorders as well as its potential to impact emotion regulation difficulties.

This volume concludes with Chapter 18 by Harvey, McGlinchey, and Gruber, which describes a psychosocial treatment approach for sleep dysregulation problems. As with the other chapters in Part III, treatment targeting sleep problems has transdiagnostic implications given that substantial sleep problems have been noted to exist in nearly all forms of psychopathology (American Psychiatric Association, 2000). As van der Helm and Walker describe in Chapter 11, sleep problems have a direct effect on emotion regulation processes.

Looking Forward

The chapters in this volume make it clear that substantial progress has been made within the field of emotion regulation and psychopathology in a relatively short period of time. Various emotion regulation mechanisms that have an impact on psychopathology have been identified, and treatments have been developed that specifically target these problems. Although much progress has been made, there are several areas in which continued work will be important. One such area is in the continued translation or application of the basic science of emotion regulation to psychopathology. As described by Bloch, Moran, and Kring in this volume, a number of emotion regulation constructs have been identified as having an impact on psychopathology, although these constructs differ in terms of which aspects of emotion regulation are important to psychopathology and the manner in which emotion regulation problems lead to specific symptoms of psychopathology. To advance our understanding of the mechanisms of emotion regulation that are pertinent to psychopathology, we should draw upon basic science of emotion regulation; doing so would allow the psychopathology field to have a clear theory and definition to guide our research.

Another area that will be important to investigate is the assessment of emotion regulation as an outcome measure in treatments that specifically target emotion regulation. As several chapters in this volume have described, a number of treatments specially state as a goal the improvement of emotion regulation skills. These treatments have demonstrated treatment efficacy with a variety of clinical samples. However, treatment

outcome is typically assessed by examining decreases in psychopathology symptom severity. Although there is merit in examining psychopathology as a treatment outcome measure, it is important to investigate whether or not these treatments actually improve the emotion regulation skills that are targeted in the treatment. For instance, it will be important to know whether ACT decreases experiential avoidance and whether mindfulness-based treatments increase mindfulness. It will also be important to examine whether changes in emotion regulation ability mediate psychopathology symptom severity outcome.

As previously described, the current classification system used in DSM-IV-TR has a number of limitations. Within this volume, we have emphasized a transdiagnostic approach to psychopathology, and we have described how this approach can be helpful in understanding emotion regulation problems that occur in a variety of psychiatric diagnoses, and that using such an approach would result in needing only a handful of treatment protocols. Another way to classify psychopathology would be to focus on emotional disturbances, and Berenbaum, Raghavan, Le, Vernon, and Gomez (2003) have argued for such a taxonomy of emotional disturbances. These authors suggest that using a taxonomy for emotional disturbances would result in additional attention to the importance of emotional disturbances in psychopathology as well as provide a framework for understanding emotional disturbances in psychopathology. Berenbaum et al. propose that a taxonomy of emotional disturbances would provide information that is above and beyond (i.e., incremental validity) what is provided with the current DSM classification system. These authors suggest a taxonomy of emotional disturbances that consists of (1) emotional valence disturbances (e.g., excess of unpleasant emotions), (2) emotional intensity/regulation disturbance (e.g., emotional numbing), and (3) emotional disconnections (e.g., emotional awareness). We agree that such taxonomy would foster greater attention to the importance and ubiquity of emotional disturbance in psychopathology, which would, in turn, result in greater research attention to emotion regulation mechanisms in psychopathology and treatment approaches directed at these problems.

Another area where the field could advance is in the assessment methods used to investigate emotion regulation and their applicability to assessing psychosocial treatment outcome (Sloan & Kring, 2007). Research on emotion regulation in psychopathology has most often been conducted in a laboratory setting. Although there are a number of advantages to studying emotion regulation in the laboratory, there are some limitations: in terms of ecological validity. To gain a greater understanding of how people regulate their emotions and the context in which emotion regulation may go awry, it is important to study individuals outside of the laboratory. Fortunately, recent technology advances have made it more possible to study emotion regulation outside of the laboratory. For example, ambulatory psychophysiology has substantially progressed over the past several years,

and some systems have the ability to integrate psychophysiology recording with experience sampling methodology, and prompts for experience sampling are typically linked with substantial changes in psychophysiology activity (e.g., LifeShirt System; ViVoMetrics, Los Angeles, CA). In addition, developments are being made that allow for unobtrusive video and audio recording (e.g., small camera attached to the side of eye glass frames) to be linked with substantial changes in psychophysiology activity. Such recordings allow researchers to be able to objectively examine situations in everyday life in which emotions are elicited and when emotion regulation strategies are used. Moreover, the integration of experience sampling along with psychophysiological recording would allow for the examination of multiple channels of emotional responding to be investigated.

These are just a few suggestions of the ways in which the field of emotion regulation and psychopathology can further progress. Some of these suggested changes are already underway. Given the current interest level in emotion regulation and the number of empirical studies that are currently published within this area, it seems likely that we will continue to advance in our understanding of emotion regulation mechanisms in psychopathology and how best to treat these mechanisms.

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