Research in Clinical Psychology: Social Exclusion and Psychological Disorders

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Maintaining positive and meaningful social connections is a basic human need (Baumeister & Leary, 1995). Accordingly, social acceptance is linked to physical and emotional well-being, and conversely, social exclusion is linked to a wide range of negative psychological consequences (see chapter "Research in Social Psychology: Consequences of Short- and Long-Term Social Exclusion"). Consistent with these findings, researchers in clinical psychology have proposed that adverse social relationships contribute to the onset of various psychological disorders. Our goal in this chapter is to describe the current state of research on the role of exclusion in promoting the development and maintenance of adult mental disorders, identify limitations to the findings, and provide recommendations for future research.

There is a vast amount of research on the relation between social relationships and psychopathology. In the current chapter, we focus on the role of emotional exclusion, that is, perceiving oneself to be a less valuable member of a relationship or group, as opposed to physical exclusion. Our review of the literature emphasizes evidence derived from clinical samples and from longitudinal and experimental designs, which allow stronger conclusions as to whether exclusion promotes the development of psychopathology. However, disorders where there is a lack of research on exclusion (e.g., specific phobia, hoarding) are omitted.

Anxiety Disorders

Anxiety is clinically defined as apprehension about future events and is commonly associated with negative thoughts, physical sensations, and avoidance. Panic, another clinical concept, is defined as a sudden rush of fear stemming from

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perceived immediate threat. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association [APA], 2013), the major North American handbook for clinical diagnosis of psychological disorders, includes a variety of anxiety-related conditions differentiated by the specific content of the feared event. These include social anxiety disorder (SAD; anxiety about social situations), generalized anxiety disorder (GAD; uncontrollable worry), panic disorder (PD; anxiety about recurrent panic attacks), agoraphobia (fear of being overwhelmed in public places), and specific phobia (fear of specific objects such as animals or situations such as enclosed spaces). There is insufficient research on the link between exclusion and specific phobias to warrant even tentative conclusions, and hence, this disorder is not reviewed here. Two other conditions, obsessive compulsive disorder (OCD, uncontrollable intrusions and compulsive behaviors) and posttraumatic stress disorder (PTSD; ongoing cognitive, emotional, and behavioral symptoms due to traumatic events) are now viewed as distinct from the former disorders but until recently were treated as anxiety disorders and are included here.

Some studies examined exclusion across a range of anxiety disorders, with some research including depressive disorders as well. Longitudinal studies indicate that exclusion by parents and peers throughout childhood and adolescence predicts the later onset of anxiety disorders (e.g., Stapinski et al., 2014; van Oort, Greaves-Lord, Ormel, Verhulst, & Huizink, 2011; Yap, Pilkington, Ryan, & Jorm, 2014). Consistent with those findings, individuals with anxiety disorders report higher frequencies of parental and peer exclusion during childhood and adolescence (e.g., Hovens et al., 2010). Both mild (e.g., lack of parental warmth and peer liking) and severe (e.g., parental emotional abuse, peer victimization) forms of exclusion connoting that victims are not desired members of a relationship or group have been shown to predict anxiety disorders (e.g., Modin, Östberg, & Almquist, 2011; Spinhoven et al., 2010; Stapinski et al., 2014; van Oort et al., 2011). Cohort studies indicate that lower peer liking and parental abuse during childhood predict diagnoses of anxiety disorders and major depression up to 30 years later, which suggests that exclusion may have long-lasting effects (e.g., Modin et al., 2011). The effects of exclusion are generally found to be dose-dependent such that the type and frequency of exclusion predicts the severity of anxiety and number of anxiety and depressive disorder diagnoses (e.g., Hovens et al., 2010). Furthermore, exclusion is a unique predictor of anxiety disorders above and beyond life events not related to exclusion such as parental separation (Hovens et al., 2010) and depression (e.g., Spinhoven et al., 2010; Stapinski et al., 2014). We turn now to research on specific disorders.

Social Anxiety Disorder (SAD)

The effect of exclusion on SAD has received the most research attention among the anxiety disorders with longitudinal, experimental, and retrospective self-report studies all supporting a link between the two. SAD symptoms exist along a continuum, with

individuals who have extremely distressing and dysfunctional symptoms qualifying for a diagnosis. Hence, many studies have examined SAD symptoms, or social anxiety, using nonclinical samples. Longitudinal studies of nonclinical samples indicate that exclusion predicts increased social anxiety and, vice versa, that social anxiety predicts exclusion (e.g., Gazelle & Ladd, 2003). Conversely, one prospective study found that socially anxious children became less so after transitioning to middle school because this reduced their exposure to peers who bullied them in the past (Shell, Gazelle, & Faldowski, 2014). In experimental settings, individuals who have been excluded, by not being given the chance to participate in a game or by being told that a friend did not want to help the individual, became more reluctant to engage in and were more socially anxious in subsequent situations (Fung & Alden, 2016; Gazelle & Druhen, 2009).

Although few studies have compared the effect of exclusion on multiple anxiety disorders, there is emerging evidence suggesting that SAD may have a stronger link to exclusion than other anxiety disorders (e.g., McCabe, Miller, Laugesen, Antony, & Young, 2010; Spinhoven et al., 2010). For example, individuals with SAD retrospectively reported more instances of bullying and teasing compared to those with other anxiety disorders (e.g., McCabe et al., 2010). More research is needed to confirm this relationship.

In addition to promoting the development of social anxiety, exclusion may help to maintain symptoms. Some writers propose that individuals with SAD can become trapped in a negative interpersonal cycle in which social anxiety functions to elicit exclusion, which in turn perpetuates social fears (see Alden & Taylor, 2004). Reliance on *safety behaviors* and visible signs of nervousness are possible mechanisms linking social anxiety and ongoing exclusion. Safety behaviors are actions that the socially anxious person adopts with the intent of preventing negative social outcomes; however, such behaviors can paradoxically elicit exclusion (Plasencia, Alden, & Taylor, 2011; Taylor & Alden, 2011). For example, some individuals with SAD display subtle avoidance behaviors (e.g., low eye contact, less openness) that leads others to desire less future contact (e.g., Plasencia et al., 2011), thereby maintaining social anxiety. Displaying signs of nervousness can arouse discomfort in others and cause others to view them as different, thereby fueling avoidance of the anxious person (e.g., Luchetti & Rapee, 2014; Voncken, Alden, Bögels, & Roelofs, 2008).

Panic Disorder (PD) and Agoraphobia

For the most part, PD and agoraphobia have been studied along with other anxiety disorders or relative to healthy controls. Individuals with PD and agoraphobia have consistently reported more frequent and severe parental and peer exclusion compared to controls (e.g., Arrindell, Emmelkamp, Monsma, & Brilman, 1983; Spinhoven et al., 2010; Stapinski et al., 2014). It is not clear whether this effect is in any way specific to these disorders. Some studies found that individuals across anxiety disorders, except for SAD, reported comparable frequency and severity of past exclusion (e.g., McCabe et al., 2010).

Generalized Anxiety Disorder (GAD)

Retrospective self-report studies found that GAD was associated with severe (e.g., victimization), but not mild (e.g., non-inclusion), forms of exclusion (e.g., Scharfstein, Alfano, Beidel, & Wong, 2011; Stapinski et al., 2014). In a similar vein, individuals with GAD tend to report more severe parental abuse than healthy controls, and longitudinal studies have consistently shown that milder forms of parental exclusion, for example, lack of warmth, does not predict GAD (e.g., Hale, Engels, & Meeus, 2006). Similar to PD and agoraphobia, the link between exclusion and GAD symptoms may reflect a more general effect of exclusion across anxiety and depression (e.g., Spinhoven et al., 2010).

Obsessive-Compulsive Disorder (OCD)

Most studies found that exclusion by peers, but not parents, was associated with OCD symptoms (e.g., Wilcox et al., 2008). Children with OCD tend to report experiencing higher rates of concurrent peer victimization (Storch et al., 2006). However, research has yet to determine whether peer victimization causes OCD symptoms, whether OCD symptoms—especially obsessions related to fears of harming others and tics—elicit victimization, or whether the relation may be due to the effect of exclusion on anxiety symptoms in general (e.g., Simonds & Thorpe, 2003).

Rachman (2010) proposed that exclusion that elicits disgust (e.g., betrayal) may contribute to contamination-related OCD symptoms. Victims of disgust-eliciting exclusion may feel humiliation and disgust towards themselves such that they feel compelled to alleviate these feelings by cleaning (Rachman, Radomsky, Elliott, & Zysk, 2012). One study found that, after experiencing interpersonal trauma, feelings of self-disgust were associated with OCD contamination symptoms, whereas feelings of disgust towards others were associated with PTSD symptoms (Badour, Bown, Adams, Bunaciu, & Feldner, 2012). Research is needed to evaluate this intriguing hypothesis.

Posttraumatic Stress Disorder (PTSD)

Individuals who have been exposed to threatened death, serious injury, or sexual violence tend to experience elevated posttraumatic stress symptoms (e.g., intrusive flashbacks of the traumatic event), but in most cases, symptoms dissipate over time. Those whose symptoms remain elevated, distressing, and dysfunctional for an extended period of time meet criteria for PTSD. When disclosing their trauma experiences for the first time, victims of trauma are met with a wide range of responses from others. Some are met with acceptance and validation, while others are met with a range of exclusion-like responses including disbelief, changing the subject, and

victim-blaming. The latter, more negative responses have been shown to predict greater posttraumatic symptom severity (Belsher, Ruzek, Bongar, & Cordova, 2012).

Research suggests that social acceptance and exclusion are important factors that influence the severity and chronicity of symptoms (see Charuvastra & Cloitre, 2008, for a review). In particular, it was initially proposed that acceptance might buffer the effects of trauma, leading to symptom reduction (Charuvastra & Cloitre, 2008). In support of this notion, longitudinal studies have shown that greater perceived support from close others and the community predict fewer subsequent symptoms and less severe course overall in both civilian and military populations (e.g., Kaniasty & Norris, 2008; Kelley, Britt, Adler, & Bliese, 2014; Koenen, Stellman, Stellman, & Sommer, 2003; Mueller, Moergeli, & Maercker, 2008). In a similar vein, meta-analyses have suggested that lack of social support is one of the strongest predictors of symptoms (e.g., Brewin, Andrews, & Valentine, 2000).

That said, lack of social support does not equate to social exclusion, and more recent findings suggest that instances of severe exclusion may have a bigger impact on symptoms than social acceptance or lack thereof (Charuvastra & Cloitre, 2008). In a longitudinal study, the frequency of peer victimization and bullying predicted subsequent PTSD symptom severity in a sample of youth affected by Hurricane Katrina (Terranova, Boxer, & Morris, 2009). Furthermore, an experimental study found that healthy participants who were excluded by peers in a virtual ball-tossing game exhibited symptoms characteristic of PTSD, including fear and dissociative responses (Mooren & van Minnen, 2014).

Symptoms of PTSD may place affected individuals at greater risk for social exclusion such that exclusion becomes a maintaining factor for the disorder. Although social support initially predicted symptom severity, a cross-lagged longitudinal study showed that this relationship later reversed such that greater severity predicted less support after an extended period of time post-trauma (Kaniasty & Norris, 2008). Importantly, trauma victims are not always outright excluded, but tend to isolate themselves as a result of their lack of interest in social interaction and maladaptive coping strategies (e.g., social withdrawal). Such factors, in conjunction with trauma disclosure, verbal aggression, and other features of PTSD, may produce feelings of discomfort in others that ultimately lead to the exclusion of the traumatized individual (e.g., Hassija & Gray, 2012).

Depression

Depression is characterized by core symptoms of a persistent sadness or loss of interest or pleasure in activities, along with other heterogeneous symptoms such as significant changes in appetite, sleep, and energy (APA, 2013). Along with anxiety disorders, depression is one of the most studied consequences of exclusion. Studies in social psychology have consistently found that exclusion leads to immediate depressive-like symptoms such as low mood (e.g., Williams, Cheung, & Choi, 2000). Meanwhile, research in clinical psychology strongly suggests that exclusion is one factor that

contributes to the development of clinical depression. Findings on depression as a consequence of exclusion closely parallel those on anxiety. The overwhelming consensus from longitudinal studies and retrospective self-reports is that mild and severe parental and peer exclusion during development predicts a diagnosis of major depression in adulthood (e.g., Modin et al., 2011; Platt, Kadosh, & Lau, 2013; Spinhoven et al., 2010). In addition, findings suggest that exclusion may accelerate the development of clinical depression when combined with other negative events. Specifically, the risk of a diagnosis of depression increases when interpersonal loss or stressful life events are combined with a lack of social support (Targosz et al., 2003).

Importantly, evidence suggests that social exclusion does not facilitate the development of clinical depression simply by virtue of being a negative interpersonal event, and that the development of clinical depression is an effect of exclusion above and beyond other consequences such as anxiety. Social exclusion has been shown to increase the risk of a diagnosis of depression and to hasten the onset of major depressive episodes considerably more than loss of social connections due to other causes (see Slavich, O'Donovan, Epel, & Kemeny, 2010, for a review). For example, excluded individuals are twice as likely to develop clinical depression as those who initiated romantic breakups or experienced the death of close others (Slavich et al., 2010). Some propose that the heightened risk of developing clinical depression from exclusion as compared to interpersonal loss may stem from the additional component of social-evaluative threat, which can lead to negative self-appraisals (Slavich et al., 2010). In addition, although depression and anxiety have been shown to be unique and partially independent consequences of exclusion, the exclusion–depression link tends to be stronger when both are present (e.g., Hovens et al., 2012).

Just as social exclusion can facilitate the development of clinical depression, there is evidence that subclinical and clinical depression can elicit further social exclusion, thus creating a feedback loop that maintains the condition. One mechanism through which depression may elicit exclusion is through excessive reassurance-seeking. As a result of reassurance-seeking, depressed individuals tend to be evaluated more negatively (e.g., as sadder, weaker) and are more likely to elicit exclusion than are healthy individuals (see Starr & Davila, 2008, for a meta-analysis). Depression exacerbated by excessive reassurance-seeking then causes further interpersonal exclusion, and thus consolidates the negative interpersonal cycle (Joiner, 1999). In addition to excessive reassurance-seeking, there is evidence that seeking negative self-verifying feedback in close relationships leads to peer exclusion (Joiner, Katz, & Lew, 1997). The receipt of negative feedback by depressed individuals elicits further negative feedback-seeking, leading to greater peer exclusion (Casbon, Burns, Bradbury, & Joiner, 2005).

Somatic Symptom Disorders

Individuals suffering from somatic symptom disorders experience symptoms and illness, such as pain and nausea, without sufficient medical explanations. The defining feature of somatic symptom disorders is excessive preoccupation with physical symptoms and illness (APA, 2013). Meta-analyses suggest that severe parental and

peer exclusion are associated with subsequent development of somatic symptoms (Davis, Luecken, & Zautra, 2005; Gini & Pozzoli, 2013); however, there are caveats to this finding. First, studies have only measured participant experience of somatic symptoms, which is problematic given that such symptoms can have medical bases and concerns about them may therefore be in the normal range. In fact, this confound is not specific to exclusion-related research, but reflects inherent difficulties in conducting research on the somatic symptom disorders in general (e.g., Frances, 2013). Second, the specificity of the somatic symptom disorders as a consequence of exclusion is relatively unknown. In one study, the effect of peer victimization on somatic symptoms was accounted for by depression (e.g., Uusitalo-Malmivaara, 2012). Third, although evidence suggests that exclusion may elicit the experience of somatic symptoms, it remains unknown whether it promotes excessive concern about such symptoms—the crux of somatic symptom disorder.

Eating Disorders

Eating disorders are characterized by persistent disturbances in eating-related beliefs, attitudes, and behaviors (APA, 2013). With respect to social exclusion, much of the relevant research has been conducted on anorexia nervosa and bulimia nervosa, disorders characterized by negative body image and a persistent desire to be thin. Individuals with such disorders may go to extreme measures to achieve thinness, including food restriction and purging. Research has also examined the effects of exclusion on binge eating disorder, characterized by recurrent episodes of excessive food intake with no compensatory behaviors. Retrospective self-reports of childhood abuse and neglect are associated with eating pathology, with emotional abuse more strongly predictive of symptoms and dysfunctional impulsivity than both sexual and physical abuse (e.g., Burns, Fischer, Jackson, & Harding, 2012; Myers et al., 2006). A meta-analysis revealed that appearance-related teasing can play a key role in the development of negative body image, dietary restraint, and bulimic behaviors (Menzel et al., 2010).

Research suggests that binge eating is a maladaptive coping strategy adopted by certain individuals in response to negative affect resulting from exclusion. In a longitudinal study of children ages 8–13, initial frequency of weight-related teasing predicted the subsequent likelihood of *loss of control* eating, an important developmental precursor of binge eating disorder over a 2-year period (Hilbert, Hartmann, Czaja, & Schoebi, 2013). Other studies have also pointed towards an interpersonal model of binge eating (see Ansell, Grilo, & White, 2012). Results from momentary assessments, for instance, suggest that negative affect from interpersonal stressors may mediate the link between interpersonal exclusion and binge/purge behaviors in individuals with bulimia nervosa (e.g., Ansell et al., 2012; Smyth et al., 2009). One caveat is that there were considerable between-individual differences in terms of the negative affect-binge/purge relation (Ansell et al., 2012). Even after merely reading vignettes portraying weight-related teasing, women with histories of binge eating

ate significantly more cookies in an ostensible taste test compared to women with no binge-eating histories, even though the two groups experienced similar levels of negative affect (Aubie & Jarry, 2009). These findings suggest that binge eating is not a general response to high levels of negative affect resulting from exclusion, but rather a maladaptive emotion regulation strategy adopted by certain individuals.

Severe Psychopathology

Bipolar Disorders

Bipolar disorders are defined by alternating periods of mania or hypomania and depression (APA, 2013). A manic episode is a distinct period of abnormally elevated, expansive, or irritable mood, and a hypomanic episode is a lesser version that lasts for a shorter duration.

There is mixed evidence regarding the effect of social exclusion on the onset of bipolar episodes. Childhood maltreatment and trauma may be associated with earlier symptom onset (see Daruy-Filho, Brietzke, Lafer, & Grassi-Oliveira, 2011, for a review). One study found that patients with bipolar disorders reported more severe peer bullying compared to those with unipolar depression (Parker, Fletcher, McCraw, Futeran, & Hong, 2013). By contrast, another study found that parents reported that their adolescent children with bipolar disorders had average or above average functioning in peer relationships prior to disorder onset (Kutcher, Robertson, & Bird, 1998). It is worth noting that research on the topic has exclusively relied on retrospective reports. It is possible that recalled exclusions before onset of symptoms may be contaminated by exclusion experiences after symptom onset. In addition to recall bias, findings may be susceptible to third variables that predispose individuals to both exclusion and bipolar symptoms. Given the lack of well-controlled research, the effect of exclusion on the onset of bipolar symptoms remains uncertain (Daruy-Filho et al., 2011).

After onset, some evidence suggests that social exclusion predicts a worse course of symptom progression. For instance, recalled childhood abuse is associated with more severe course (Daruy-Filho et al., 2011). Longitudinal studies demonstrated that perceived criticism and distress at criticism predict relapse (Miklowitz, Wisniewski, Miyahara, Otto, & Sachs, 2005; Scott, Colom, Pope, Reinares, & Vieta, 2012).

Most of the relevant literature has documented the disruptive effect of symptoms on peer relations. Research suggests that greater symptom severity predicts lower social support, less acceptance by family and peers, and greater victimization (Beyer et al., 2003; Keenan-Miller & Miklowitz, 2011; Siegel, Freeman, La Greca, & Youngstrom, 2015). One study found peer difficulties occurred only after the onset of the disorder, suggesting that exclusion by others may be a response to bipolar symptomatology (Kutcher et al., 1998). Finally, bipolar symptoms may elicit exclusion from society in general.

Findings show that individuals with bipolar disorders experience high levels of stigma, comparable to that experienced by individuals with schizophrenia (Hawke, Parikh, & Michalak, 2013).

Schizophrenia

Schizophrenia is a psychotic disorder characterized by a wide range of abnormalities, usually involving delusions, hallucinations, withdrawal, and avolition (APA, 2013). There has been a recent surge of interest in the role of social exclusion in predicting the onset of schizophrenia, and evidence strongly supports that hypothesis. Longitudinal studies suggest that severe and especially chronic parental and peer exclusion considerably increase the risk of subsequent diagnosis (e.g., Bentall, Wickham, Shevlin, & Varese, 2012; Bonoldi et al., 2013; Schreier et al., 2009; Varese et al., 2012). Several mechanisms underlying the relation have been proposed. For instance, the relationship between exclusion and psychotic symptoms may be mediated by increased anxiety and depression, as well as through stress and immune system responses (e.g., Fisher et al., 2013; van Winkel, van Nierop, Myin-Germeys, & van Os, 2013). Experimental findings suggest that peer exclusion manipulations may induce paranoid delusion-like beliefs in nonclinical samples and state paranoia in high paranoia prone samples (Kesting, Bredenpohl, Klenke, Westermann, & Lincoln, 2013; Westermann, Kesting, & Lincoln, 2012). There are mixed findings as to whether exclusion promotes the development of psychotic symptoms in all individuals or only in those who are genetically vulnerable (e.g., van Os, Linscott, Myin-Germeys, Delespaul, & Krabbendam, 2009; van Winkel et al., 2013). Interestingly, individuals with traits associated with Cluster A personality disorders (i.e., paranoid, schizoid, schizotypal), which are characterized by avoidance of social relationships and being content with social isolation, are less susceptible to social pain elicited by exclusion (Wirth, Lynam, & Williams, 2010).

Exclusion likely influences the course of the disorder. After onset, a dose-dependent relation was observed such that exclusion severity predicted symptom severity, and symptoms declined considerably following reduction in exclusion (Kelleher et al., 2012). In addition, exposure to family members' expressions of negative emotions is predictive of relapse (e.g., Butzlaff & Hooley, 1998).

Evidence suggests that individuals with schizophrenia tend to have poor social functioning, which can exist prior to symptom onset (see Hooley, 2010, for a review). However, it is likely that schizophrenic symptomatology contributes to further exclusion, as reduced social integration is associated with the onset, duration, and severity of symptoms (Killaspy et al., 2014). Symptoms of withdrawal and avolition are likely contributors to the relation (Giacco et al., 2012). In addition, approximately half of individuals with schizophrenia have experienced stigma (Gerlinger, Hauser, Lacluyse, Wampers, & Correll, 2013), and such individuals are at higher risk for both violent and nonviolent victimization (Fitzgerald et al., 2005).

Personality Disorders

Borderline Personality Disorder (BPD)

A personality disorder is a persistent pattern of experience and behavior that is significantly different from what is expected in the individual's culture and that causes distress or impairment (APA, 2013). BPD is characterized by a pattern of instability in interpersonal relationships, self-image, and affect, as well as significant impulsivity (APA, 2013). A defining feature of BPD is hypersensitivity to interpersonal exclusion and this has fostered research on these individuals' experiences of and reactions to social exclusion.

Both longitudinal and retrospective self-report studies demonstrate that BPD patients report higher levels of both mild and severe parental exclusion (e.g., Laporte & Guttman, 2007; Machizawa-Summers, 2007; Widom, Czaja, & Paris, 2009). A few studies examining the effect of peer exclusion found that it tends to increase symptoms over several years (e.g., Wolke, Schreier, Zanarini, & Winsper, 2012). In fact, exclusion predicts BPD symptoms above and beyond depression and other personality disorders (e.g., Dalbudak & Evren, 2015; Zanarini, Frankenburg, Reich, Hennen, & Silk, 2005). Various forms of exclusion have been proposed to increase symptoms, for example, criticism and betrayal (e.g., Kaehler & Freyd, 2012; Whalen, Malkin, Freeman, Young, & Gratz, 2015). Some evidence suggests that exclusion may only increase the risk of a BPD diagnosis in genetically vulnerable individuals. Interestingly, most sisters of women diagnosed with BPD do not meet criteria themselves despite reporting growing up in similar environments (Laporte, Paris, Guttman, & Russell, 2011).

BPD symptoms also elicit social exclusion, and the resulting negative interpersonal cycle maintains the disorder. Longitudinal studies have shown that, during adolescence, parental punishment and lack of warmth have a reciprocal relation with symptoms. In addition, evidence suggests that symptoms predict high levels of physical and psychological aggression in others (Stepp, Smith, Morse, Hallquist, & Pilkonis, 2012). Individuals with BPD tend to be interpersonally sensitive such that they may perceive exclusion even when they are included or over-included (e.g., De Panfilis, Riva, Preti, Cabrino, & Marchesi, 2015; Gutz, Renneberg, Roepke, & Niedeggen, 2015). The perception of exclusion likely elicits rage and aggression in such individuals, which tend to be met with aggression from others in turn, resulting in further exclusion experiences (Berenson, Downey, Rafaeli, Coifman, & Paquin, 2011; Stepp et al., 2012). For example, impulsive behaviors in individuals with BPD can be triggered by their tendency to have extremely polarized negative reactions to social exclusion (Coifman, Berenson, Rafaeli, & Downey, 2012). Interestingly, in individuals with BPD, need for social approval and lack of sociability predicted experiencing aggression 2 years later, indicating that this negative interpersonal cycle may be due in part to ineffective strategies for connecting with others (Stepp et al., 2012).

Other Personality Disorders

Although most research concerning social exclusion has been conducted with borderline personality disorder, several forms of early exclusion have been investigated as risk factors for personality disorders in general. Retrospective reports suggest that severe parental exclusion is associated with personality disorders (e.g., Waxman, Fenton, Skodol, Grant, & Hasin, 2014). Individuals with personality disorders report more severe bullying from peers and even teachers (Hengartner, Ajdacic-Gross, Rodgers, Müller, & Rössler, 2013; Monsvold, Bendixen, Hagen, & Helvik, 2011). By contrast, positive childhood experiences predict resilience and sometimes even remission from personality disorders (Skodol, 2012). Again, emerging evidence also suggests that symptoms may elicit exclusion. For example, a cross-lagged longitudinal study of twins found that parent behavior and psychopathic personality in children had a reciprocal relation over a 5-year period (Tuvblad, Bezdjian, Raine, & Baker, 2013).

Discussion

Research in social and developmental psychology suggests that social exclusion causes a host of consequences that are detrimental to well-being. Empirical research in clinical psychology generally reveals the same pattern; specifically, that social exclusion promotes the development and maintenance of symptoms across disorders. We began by reviewing research on anxiety and depression and summarized strong evidence to suggest that both mild and severe forms of exclusion by parents and peers contribute to the development of these conditions. The effect of exclusion tends to be dose-dependent such that the frequency and type of past exclusion predicts the severity of symptoms and the number of anxiety and depression diagnoses. Examining research for specific anxiety and mood disorders leads us to conclude that the development of social anxiety disorder, posttraumatic stress disorder, and clinical depression may be especially sensitive to exclusion. Specifically, the chances of developing the disorders are increased by even mild forms of exclusion such as low peer liking and lack of social support. On the other hand, the development of panic disorder and generalized anxiety disorder seems to be less dependent on exclusion such that only severe forms, for example, parental abuse and peer victimization, elicit symptoms. Although exclusion tends to occur in individuals with obsessive-compulsive disorder, there is currently no evidence to suggest that exclusion contributes to its development.

The effect of exclusion on somatic symptom disorders remains relatively unknown given inherent problems with the definition of the disorder. There is strong empirical evidence to suggest that symptoms of eating disorders, such as anorexia nervosa and bulimia nervosa, may develop from parental and peer exclusion, especially when exclusion is related to physical appearance. Even in individuals without diagnosable eating disorders, binge eating may represent an attempt to regulate

negative emotions as well as a potential precursor for diagnosis. In the context of severe mental disorders, the role of exclusion in the onset of bipolar disorder remains unknown, although research suggests that it does exacerbate symptoms after onset. By contrast, strong evidence suggests that exclusion is associated with onset, symptom severity, and overall course in schizophrenia. Finally, parental exclusion may contribute to the development of borderline personality disorder, which again highlights the fact that exclusion can have long-term effects of disrupted emotional and interpersonal functioning. However, findings suggest that the relation may be more nuanced. Specifically, the effect of exclusion on borderline personality disorder may depend on its interaction with other factors such as genetics. There is also some evidence that exclusion and other personality disorder symptoms have a reciprocal relation, but more research is needed to determine its exact nature.

For social anxiety disorder, posttraumatic stress disorder, depression, severe mental disorders, and borderline personality disorder, there is also evidence suggesting that symptoms elicit exclusion, which in turn promotes symptoms, thereby forming a negative interpersonal cycle that perpetuates the disorder in question. Various mechanisms may underlie the effect of symptoms on exclusion. Safety behaviors and signs of nervousness in individuals with social anxiety disorder can elicit discomfort in others. For posttraumatic stress disorder, trauma disclosure and social withdrawal result in discomfort in and distancing by others. Depressed individuals may excessively seek reassurance and negative feedback, which in turn elicits dislike from others. Symptoms of severe mental disorders are interpersonally disruptive and are associated with heavy stigma. Individuals with borderline personality disorder have difficulty regulating emotions and may engage in strategies that are damaging to interpersonal relationships. Therefore, exclusion does not only facilitate the development of disorders but may also be an ongoing factor that contributes to their maintenance.

There are also caveats to our conclusions, mostly pertaining to study design. Notably, there has been a lack of studies using rigorous designs to address the effect of exclusion on psychopathology, and hence, our conclusions remain suggestive. Although we focused on research using experimental and longitudinal designs and retrospective self-reports in this chapter, a considerable number of studies examined cross-sectional relations between exclusion and symptoms that were not included here. Of the research we reviewed, some longitudinal studies did not control for exclusion and symptoms at other time points; hence, the relations inferred may generate biased estimates of the relations reported (Cole & Maxwell, 2003). Finally, even though retrospective self-reports generally have reasonable reliability and validity, such designs may still be susceptible to biased recall, especially when question items are open to interpretation (Hardt & Rutter, 2004). Future studies using longitudinal cross-lagged designs and growth curve analysis, as well as retrospective self-report with more structured questions, could yield more conclusive inferences.

Despite these limitations, evidence generally suggests that exclusion facilitates the development and maintenance of a wide range of adult disorders. Most studies we reviewed have not considered the effect of exclusion across the range of psychopathology, but have instead focused on exclusion in the context of different disorders.

Unfortunately, this method of operation has prevented researchers from integrating and categorizing the full range of disruptive consequences of exclusion, which may transcend traditional diagnostic labels. Such transdiagnostic effects may then manifest as symptoms of various disorders. An advantage of a more precise understanding of the dynamics underlying exclusion is that preventative policies and intervention strategies could be made more flexible and efficient. In the remaining portion of the chapter, we propose transdiagnostic effects of exclusion that deserve future research attention and that may explain both the general and specific effects of exclusion on various disorders.

Transdiagnostic Consequences of Exclusion

Recent research suggests that hormonal changes associated with exclusion may manifest as clinical symptoms. One important change resulting from exclusion is activity in the hypothalamic–pituitary–adrenal (HPA) axis, a neuroendocrine system that controls organism reactions to stress and is associated with changes in mood and emotions. Findings suggest that painful feelings from social exclusion, such as childhood abuse, may cause chronic dysregulation in the HPA axis that in turn produces physical and mood symptoms characteristic of anxiety, depressive, somatic, and borderline personality disorders and sensitizes victims to future exclusion (e.g., Eisenberger & Cole, 2012; Heim, Newport, Bonsall, Miller, & Nemeroff, 2001). In particular, dysregulation in the HPA axis has consistently been shown to be more closely associated with exclusion than with diagnostic symptoms (e.g., Fernando et al., 2012). Individual differences in other biochemicals such as oxytocin and progesterone have also been proposed as possible mediators of the exclusion-psychopathology relationship (e.g., Alvares, Hickie, & Guastella, 2010; Maner, Miller, Schmidt, & Eckel, 2010).

In addition to hormonal responses, exclusion may also cause changes to cognitive and affective tendencies, which thereby increase victims' general vulnerability to psychopathology. One effect of exclusion that has received research attention is impaired ability to engage in adaptive forms of emotion regulation. As part of a series of classic studies, Baumeister and colleagues found that exclusion caused victims to consume unhealthier foods (Baumeister, DeWall, Ciarocco, & Twenge, 2005). As mentioned previously, research in clinical psychology has converged on this finding, suggesting that binge eating may have developed as an emotion regulation strategy in response to exclusion (e.g., Steiger, Gauvin, Jabalpurwala, Séguin, & Stotland, 1999). Other research suggests that exclusion may elicit maladaptive emotion regulation strategies in addition to binge eating and that these strategies may increase risk for developing anxiety, depressive, and personality disorders (e.g., Fernando et al., 2014).

So far, we have proposed transdiagnostic factors that may explain the general effect of exclusion across disorders. In addition, current research suggests that there may be factors that explain how exclusion promotes certain symptoms more than others. For example, cognitive-behavioral theorists contend that the development of specific disorders may depend on changes in beliefs following adverse social events.

In other words, the disorder that develops may depend on what victims learn about themselves, others, and social situations from the exclusion experience. Research suggests that there is considerable variation in the lessons that victims take away from exclusion (Leary, Springer, Negel, Ansell, & Evans, 1998). For example, some may perceive themselves as being less socially desirable, whereas others may perceive themselves as less physically attractive. After repeated exclusion in similar circumstances, or when exclusion is severe, such changes may become ingrained beliefs that are characteristic of specific disorders. For example, research suggests that children who fail to gain social approval and attribute failure to personal social incompetence may develop learned social helplessness, which is characteristic of social anxiety disorder, whereas children who are teased about their weight may learn that they need to be thin to be accepted and develop eating disorders (Goetz & Dweck, 1980; Menzel et al., 2010). In addition to beliefs, other research suggests that emotions experienced in response to exclusion may be indicators of subsequent psychopathology. For example, hurt feelings may lead to social anxiety and disgust may lead to obsessive-compulsive disorder (Badour et al., 2012; Fung & Alden, 2016).

Conclusion

Research in clinical psychology suggests that the effects of exclusion are widespread and may facilitate the development and maintenance of most adult mental disorders. For certain disorders, such as social anxiety disorder, depression, and borderline personality disorder, symptoms may in turn elicit exclusion, forming an interpersonal cycle that perpetuates the psychopathology. However, there are limitations in this area of research that need to be addressed. First, the hypothesis that exclusion causes symptoms requires more rigorous tests, for instance, studies with longitudinal and experimental designs that include adequate controls and standardized measures of exclusion. Second, consequences of exclusion have been examined independently in separate diagnostic categories, despite research suggesting that the effects of exclusion may be better conceptualized as transdiagnostic factors. Accordingly, we proposed several transdiagnostic factors that may explain both the shared and the specific effects of exclusion in the context of traditional diagnostic labels. In sum, there is currently moderate support for the hypothesis that exclusion facilitates the development of various forms of psychopathology. To fully understand the effects of exclusion, future research may benefit from a more integrative framework that aims to capture these effects across disorders.

References

Alden, L. E., & Taylor, C. T. (2004). Interpersonal processes in social phobia. *Clinical Psychology Review, 24*, 857–882.

Alvares, G. A., Hickie, I. B., & Guastella, A. J. (2010). Acute effects of intranasal oxytocin on subjective and behavioral responses to social rejection. *Experimental and Clinical Psychopharmacology, 18*, 316–321.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Ansell, E. B., Grilo, C. M., & White, M. A. (2012). Examining the interpersonal model of binge eating and loss of control over eating in women. *International Journal of Eating Disorders, 45*, 43–50.

Arrindell, W. A., Emmelkamp, P. M., Monsma, A., & Brilman, E. (1983). The role of perceived parental rearing practices in the aetiology of phobic disorders: A controlled study. *The British Journal of Psychiatry, 143*, 183–187.

Aubie, C. D., & Jarry, J. L. (2009). Weight-related teasing increases eating in binge eaters. *Journal of Social and Clinical Psychology, 28*, 909–936.

Badour, C. L., Bown, S., Adams, T. G., Bunaciu, L., & Feldner, M. T. (2012). Specificity of fear and disgust experienced during traumatic interpersonal victimization in predicting posttraumatic stress and contamination-based obsessive–compulsive symptoms. *Journal of Anxiety Disorders, 26*, 590–598.

Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology, 88*, 589–604.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529.

Belsher, B. E., Ruzek, J. I., Bongar, B., & Cordova, M. J. (2012). Social constraints, posttraumatic cognitions, and posttraumatic stress disorder in treatment-seeking trauma survivors: Evidence for a social-cognitive processing model. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*, 386–391.

Bentall, R. P., Wickham, S., Shevlin, M., & Varese, F. (2012). Do specific early-life adversities lead to specific symptoms of psychosis? A study from the 2007 The Adult Psychiatric Morbidity Survey. *Schizophrenia Bulletin, 38*, 734–740.

Berenson, K. R., Downey, G., Rafaeli, E., Coifman, K. G., & Paquin, N. L. (2011). The exclusion–rage contingency in borderline personality disorder. *Journal of Abnormal Psychology, 120*, 681–690.

Beyer, J. L., Kuchibhatla, M., Looney, C., Engstrom, E., Cassidy, F., & Krishnan, K. R. (2003). Social support in elderly patients with bipolar disorder. *Bipolar Disorders, 5*, 22–27.

Bonoldi, I., Simeone, E., Rocchetti, M., Codjoe, L., Rossi, G., Gambi, F., … Fusar-Poli, P. (2013). Prevalence of self-reported childhood abuse in psychosis: A meta-analysis of retrospective studies. *Psychiatry Research, 210*, 8–15.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*, 748–766.

Burns, E. E., Fischer, S., Jackson, J. L., & Harding, H. G. (2012). Deficits in emotion regulation mediate the relationship between childhood abuse and later eating disorder symptoms. *Child Abuse & Neglect, 36*, 32–39.

Butzlaff, R. L., & Hooley, J. M. (1998). Expressed emotion and psychiatric relapse. *Archives of General Psychiatry, 55*, 547–552.

Casbon, T. S., Burns, A. B., Bradbury, T. N., & Joiner, T. E. J. (2005). Receipt of negative feedback is related to increased negative feedback seeking among individuals with depressive symptoms. *Behavior Research and Therapy, 43*, 485–504.

Charuvastra, A., & Cloitre, M. (2008). Social bonds and posttraumatic stress disorder. *Annual Review of Psychology, 59*, 301–328.

Coifman, K. G., Berenson, K. R., Rafaeli, E., & Downey, G. (2012). From negative to positive and back again: Polarized affective and relational experience in borderline personality disorder. *Journal of Abnormal Psychology, 121*, 668–679.

Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology, 112*, 558–577.

Dalbudak, E., & Evren, C. (2015). The impact of childhood traumas, depressive and anxiety symptoms on the relationship between borderline personality features and symptoms of adult

attention deficit hyperactivity disorder in Turkish university students. *Nordic Journal of Psychiatry, 69*, 42–47.

Daruy-Filho, L., Brietzke, E., Lafer, B., & Grassi-Oliveira, R. (2011). Childhood maltreatment and clinical outcomes of bipolar disorder. *Acta Psychiatrica Scandinavica, 124*, 427–434.

Davis, D. A., Luecken, L. J., & Zautra, A. J. (2005). Are reports of childhood abuse related to the experience of chronic pain in adulthood? A meta-analytic review of the literature. *The Clinical Journal of Pain, 21*, 398–405.

De Panfilis, C., Riva, P., Preti, E., Cabrino, C., & Marchesi, C. (2015). When social inclusion is not enough: Implicit expectations of extreme inclusion in borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment, 6*, 301–309.

Eisenberger, N. I., & Cole, S. W. (2012). Social neuroscience and health: Neurophysiological mechanisms linking social ties with physical health. *Nature Neuroscience, 15*, 669–674.

Fernando, S. C., Beblo, T., Schlosser, N., Terfehr, K., Otte, C., Löwe, B., … Wingenfeld, K. (2012). Associations of childhood trauma with hypothalamic-pituitary-adrenal function in borderline personality disorder and major depression. *Psychoneuroendocrinology, 37*, 1659–1668.

Fernando, S. C., Beblo, T., Schlosser, N., Terfehr, K., Otte, C., Löwe, B., … Wingenfeld, K. (2014). The impact of self-reported childhood trauma on emotion regulation in borderline personality disorder and major depression. *Journal of Trauma & Dissociation, 15*, 384–401.

Fisher, H. L., Caspi, A., Poulton, R., Meier, M. H., Houts, R., Harrington, H., … Moffitt, T. E. (2013). Specificity of childhood psychotic symptoms for predicting schizophrenia by 38 years of age: A birth cohort study. *Psychological Medicine*, *43*, 2077–2086.

Fitzgerald, P. B., de Castella, A. R., Filia, K. M., Filia, S. L., Benitez, J., & Kulkarni, J. (2005). Victimization of patients with schizophrenia and related disorders. *Australian and New Zealand Journal of Psychiatry, 39*, 169–174.

Frances, A. (2013). DSM-5 somatic symptom disorder. *Journal of Nervous and Mental Disease, 201*, 530–531.

Fung, K., & Alden, L. E. (2016). *Once hurt, twice shy: Hurt feelings contributes to the development of social anxiety.* Manuscript submitted for publication.

Gazelle, H., & Druhen, M. J. (2009). Anxious solitude and peer exclusion predict social helplessness, upset affect, and vagal regulation in response to behavioral exclusion by a friend. *Developmental Psychology, 45*, 1077–1096.

Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis-stress model of internalizing trajectories in childhood. *Child Development, 74*, 257–278.

Gerlinger, G., Hauser, M., Lacluyse, K., Wampers, M., & Correll, C. U. (2013). Personal stigma in schizophrenia spectrum disorders: A systematic review of prevalence rates, correlates, impact and interventions. *World Psychiatry, 12*, 155–164.

Giacco, D., McCabe, R., Kallert, T., Hansson, L., Fiorillo, A., & Priebe, S. (2012). Friends and symptom dimensions in patients with psychosis: A pooled analysis. *PLoS One, 7*, e50119.

Gini, G., & Pozzoli, T. (2013). Bullied children and psychosomatic problems: A meta-analysis. *Pediatrics, 132*, 720–729.

Goetz, T. E., & Dweck, C. S. (1980). Learned helplessness in social situations. *Journal of Personality and Social Psychology, 39*, 246–255.

Gutz, L., Renneberg, B., Roepke, S., & Niedeggen, M. (2015). Neural processing of social participation in borderline personality disorder and social anxiety disorder. *Journal of Abnormal Psychology, 124*, 421–431.

Hale, W. W., III, Engels, R., & Meeus, W. (2006). Adolescent's perceptions of parenting behaviors and its relationship to adolescent generalized anxiety disorder symptoms. *Journal of Adolescence, 29*, 407–417.

Hardt, J., & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry, 45*, 260–273.

Hassija, C. M., & Gray, M. J. (2012). Negative social reactions to assault disclosure as a mediator between self-blame and posttraumatic stress symptoms among survivors of interpersonal assault. *Journal of Interpersonal Violence, 27*, 3425–3441.

Hawke, L. D., Parikh, S. V., & Michalak, E. E. (2013). Stigma and bipolar disorder: A review of the literature. *Journal of Affective Disorders, 150*, 181–191.

Heim, C., Newport, D. J., Bonsall, R., Miller, A. H., & Nemeroff, C. B. (2001). Altered pituitary-adrenal axis responses to provocative challenge tests in adult survivors of childhood abuse. *The American Journal of Psychiatry, 158*, 575–581.

Hengartner, M. P., Ajdacic-Gross, V., Rodgers, S., Müller, M., & Rössler, W. (2013). Childhood adversity in association with personality disorder dimensions: New findings in an old debate. *European Psychiatry, 28*, 476–482.

Hilbert, A., Hartmann, A. S., Czaja, J., & Schoebi, D. (2013). Natural course of preadolescent loss of control eating. *Journal of Abnormal Psychology, 122*, 684–693.

Hooley, J. M. (2010). Social factors in schizophrenia. *Current Directions in Psychological Science, 19*, 238–242.

Hovens, J. G. F. M., Giltay, E. J., Wiersma, J. E., Spinhoven, P., Penninx, B. W. J. H., & Zitman, F. G. (2012). Impact of childhood life events and trauma on the course of depressive and anxiety disorders. *Acta Psychiatrica Scandinavica, 126*, 198–207.

Hovens, J. M., Wiersma, J. E., Giltay, E. J., van Oppen, P., Spinhoven, P., Penninx, B. H., & Zitman, F. G. (2010). Childhood life events and childhood trauma in adult patients with depressive, anxiety and comorbid disorders vs. controls. *Acta Psychiatrica Scandinavica, 122*, 66–74.

Joiner, T. E. J. (1999). A test of interpersonal theory of depression in youth psychiatric inpatients. *Journal of Abnormal Child Psychology, 27*, 77–85.

Joiner, T. J., Katz, J., & Lew, A. S. (1997). Self-verification and depression among youth psychiatric inpatients. *Journal of Abnormal Psychology, 106*, 608–618.

Kaehler, L. A., & Freyd, J. J. (2012). Betrayal trauma and borderline personality characteristics: Gender differences. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*, 379–385.

Kaniasty, K., & Norris, F. H. (2008). Longitudinal linkages between perceived social support and posttraumatic stress symptoms: Sequential roles of social causation and social selection. *Journal of Traumatic Stress, 21*, 274–281.

Keenan-Miller, D., & Miklowitz, D. J. (2011). Interpersonal functioning in pediatric bipolar disorder. *Clinical Psychology: Science and Practice, 18*, 342–356.

Kelleher, I., Connor, D., Clarke, M. C., Devlin, N., Harley, M., & Cannon, M. (2012). Prevalence of psychotic symptoms in childhood and adolescence: A systematic review and meta-analysis of population-based studies. *Psychological Medicine, 42*, 1857–1863.

Kelley, C. L., Britt, T. W., Adler, A. B., & Bliese, P. D. (2014). Perceived organizational support, posttraumatic stress disorder symptoms, and stigma in soldiers returning from combat. *Psychological Services, 11*, 229–234.

Kesting, M., Bredenpohl, M., Klenke, J., Westermann, S., & Lincoln, T. M. (2013). The impact of social stress on self-esteem and paranoid ideation. *Journal of Behavior Therapy and Experimental Psychiatry, 44*, 122–128.

Killaspy, H., White, S., Lalvani, N., Berg, R., Thachil, A., Kallumpuram, S., … Mezey, G. (2014). The impact of psychosis on social inclusion and associated factors. *International Journal of Social Psychiatry, 60*, 148–154.

Koenen, K. C., Stellman, J. M., Stellman, S. D., & Sommer, J. F., Jr. (2003). Risk factors for course of posttraumatic stress disorder among Vietnam veterans: 14-year follow-up of American legionnaires. *Journal of Consulting and Clinical Psychology, 71*, 980–986.

Kutcher, S., Robertson, H. A., & Bird, D. (1998). Premorbid functioning in adolescent onset bipolar I disorder: A preliminary report from an ongoing study. *Journal of Affective Disorders, 51*, 137–144.

Laporte, L., & Guttman, H. (2007). Recollections of parental bonding among women with borderline personality disorder as compared with women with anorexia nervosa and a control group. *Australian Journal of Psychology, 59*, 132–139.

Laporte, L., Paris, J., Guttman, H., & Russell, J. (2011). Psychopathology, childhood trauma, and personality traits in patients with borderline personality disorder and their sisters. *Journal of Personality Disorders, 25*, 448–462.

Leary, M. R., Springer, C., Negel, L., Ansell, E., & Evans, K. (1998). The causes, phenomenology, and consequences of hurt feelings. *Journal of Personality and Social Psychology, 74*, 1225–1237.

Luchetti, S., & Rapee, R. M. (2014). Liking and perceived probability of victimization of peers displaying behaviors characteristic of anxiety and depression. *Journal of Experimental Psychopathology, 5*, 212–223.

Machizawa-Summers, S. (2007). Childhood trauma and parental bonding among Japanese female patients with borderline personality disorder. *International Journal of Psychology, 42*, 265–273.

Maner, J. K., Miller, S. L., Schmidt, N. B., & Eckel, L. A. (2010). The endocrinology of exclusion: Rejection elicits motivationally tuned changes in progesterone. *Psychological Science, 21*, 581–588.

McCabe, R. E., Miller, J. L., Laugesen, N., Antony, M. M., & Young, L. (2010). The relationship between anxiety disorders in adults and recalled childhood teasing. *Journal of Anxiety Disorders, 24*, 238–243.

Menzel, J. E., Schaefer, L. M., Burke, N. L., Mayhew, L. L., Brannick, M. T., & Thompson, J. K. (2010). Appearance-related teasing, body dissatisfaction, and disordered eating: A meta-analysis. *Body Image, 7*, 261–270.

Miklowitz, D. J., Wisniewski, S. R., Miyahara, S., Otto, M. W., & Sachs, G. S. (2005). Perceived criticism from family members as a predictor of the one-year course of bipolar disorder. *Psychiatry Research, 136*, 101–111.

Modin, B., Östberg, V., & Almquist, Y. (2011). Childhood peer status and adult susceptibility to anxiety and depression. A 30-year hospital follow-up. *Journal of Abnormal Child Psychology, 39*, 187–199.

Monsvold, T., Bendixen, M., Hagen, R., & Helvik, A. (2011). Exposure to teacher bullying in schools: A study of patients with personality disorders. *Nordic Journal of Psychiatry, 65*, 323–329.

Mooren, N., & van Minnen, A. (2014). Feeling psychologically restrained: The effect of social exclusion on tonic immobility. *European Journal of Psychotraumatology, 5*, 1–7.

Mueller, J., Moergeli, H., & Maercker, A. (2008). Disclosure and social acknowledgement as predictors of recovery from posttraumatic stress: A longitudinal study in crime victims. *The Canadian Journal of Psychiatry/La Revue Canadienne de Psychiatrie, 53*, 160–168.

Myers, T. C., Wonderlich, S. A., Crosby, R., Mitchell, J. E., Steffen, K. J., Smyth, J., & Miltenberger, R. (2006). Is multi-impulsive bulimia a distinct type of bulimia nervosa: Psychopathology and EMA findings. *International Journal of Eating Disorders, 39*, 655–661.

Parker, G., Fletcher, K., McCraw, S., Futeran, S., & Hong, M. (2013). Identifying antecedent and illness course variables differentiating bipolar I, bipolar II and unipolar disorders. *Journal of Affective Disorders, 148*, 202–209.

Plasencia, M. L., Alden, L. E., & Taylor, C. T. (2011). Differential effects of safety behavior subtypes in social anxiety disorder. *Behavior Research and Therapy, 49*, 665–675.

Platt, B., Kadosh, K. C., & Lau, J. Y. F. (2013). The role of peer exclusion in adolescent depression. *Depression and Anxiety, 30*, 809–821.

Rachman, S. (2010). Betrayal: A psychological analysis. *Behavior Research and Therapy, 48*, 304–311.

Rachman, S., Radomsky, A. S., Elliott, C. M., & Zysk, E. (2012). Mental contamination: The perpetrator effect. *Journal of Behavior Therapy and Experimental Psychiatry, 43*, 587–593.

Scharfstein, L., Alfano, C., Beidel, D., & Wong, N. (2011). Children with generalized anxiety disorder do not have peer problems, just fewer friends. *Child Psychiatry and Human Development, 42*, 712–723.

Schreier, A., Wolke, D., Thomas, K., Horwood, J., Hollis, C., Gunnell, D., … Harrison, G. (2009). Prospective study of peer victimization in childhood and psychotic symptoms in a nonclinical population at age 12 years. *Archives of General Psychiatry, 66*, 527–536.

Scott, J., Colom, F., Pope, M., Reinares, M., & Vieta, E. (2012). The prognostic role of perceived criticism, medication adherence and family knowledge in bipolar disorders. *Journal of Affective Disorders, 142*, 72–76.

Shell, M. D., Gazelle, H., & Faldowski, R. A. (2014). Anxious solitude and the middle school transition: A diathesis × stress model of peer exclusion and victimization trajectories. *Developmental Psychology, 50*, 1569–1583.

Siegel, R. S., Freeman, A. J., La Greca, A. M., & Youngstrom, E. A. (2015). Peer relationship difficulties in adolescents with bipolar disorder. *Child & Youth Care Forum, 44*, 355–375.

Simonds, L. M., & Thorpe, S. J. (2003). Attitudes toward obsessive-compulsive disorders: An experimental investigation. *Social Psychiatry and Psychiatric Epidemiology, 38*, 331–336.

Skodol, A. E. (2012). Personality disorders in DSM-5. *Annual Review of Clinical Psychology, 8*, 317–344.

Slavich, G. M., O'Donovan, A., Epel, E. S., & Kemeny, M. E. (2010). Black sheep get the blues: A psychobiological model of social exclusion and depression. *Neuroscience and Biobehavioral Reviews, 35*, 39–45.

Smyth, J. M., Wonderlich, S. A., Sliwinski, M. J., Crosby, R. D., Engel, S. G., Mitchell, J. E., & Calogero, R. M. (2009). Ecological momentary assessment of affect, stress, and binge-purge behaviors: Day of week and time of day effects in the natural environment. *International Journal of Eating Disorders, 42*, 429–436.

Spinhoven, P., Elzinga, B. M., Hovens, J. G. F. M., Roelofs, K., Zitman, F. G., van Oppen, P., & Penninx, B. W. J. H. (2010). The specificity of childhood adversities and negative life events across the life span to anxiety and depressive disorders. *Journal of Affective Disorders, 126*, 103–112.

Stapinski, L. A., Bowes, L., Wolke, D., Pearson, R. M., Mahedy, L., Button, K. S., … Araya, R. (2014). Peer victimization during adolescence and risk for anxiety disorders in adulthood: A prospective cohort study. *Depression and Anxiety, 31*, 574–582.

Starr, L. R., & Davila, J. (2008). Excessive reassurance seeking, depression, and interpersonal exclusion: A meta-analytic review. *Journal of Abnormal Psychology, 117*, 762–775.

Steiger, H., Gauvin, L., Jabalpurwala, S., Séguin, J. R., & Stotland, S. (1999). Hypersensitivity to social interactions in bulimic syndromes: Relationship to binge eating. *Journal of Consulting and Clinical Psychology, 67*, 765–775.

Stepp, S. D., Smith, T. D., Morse, J. Q., Hallquist, M. N., & Pilkonis, P. A. (2012). Prospective associations among borderline personality disorder symptoms, interpersonal problems, and aggressive behaviors. *Journal of Interpersonal Violence, 27*, 103–124.

Storch, E. A., Ledley, D. R., Lewin, A. B., Murphy, T. K., Johns, N. B., Goodman, W. K., & Geffken, G. R. (2006). Peer victimization in children with obsessive-compulsive disorder: Relations with symptoms of psychopathology. *Journal of Clinical Child and Adolescent Psychology, 35*, 446–455.

Targosz, S., Bebbington, P., Lewis, G., Brugha, T., Jenkins, R., Farrell, M., & Meltzer, H. (2003). Lone mothers, social exclusion and depression. *Psychological Medicine, 33*, 715–722.

Taylor, C. T., & Alden, L. E. (2011). To see ourselves as others see us: An experimental integration of the intra and interpersonal consequences of self-protection in social anxiety disorder. *Journal of Abnormal Psychology, 120*, 129–141.

Terranova, A. M., Boxer, P., & Morris, A. S. (2009). Changes in children's peer interactions following a natural disaster: How predisaster bullying and victimization rates changed following Hurricane Katrina. *Psychology in the Schools, 46*, 333–347.

Tuvblad, C., Bezdjian, S., Raine, A., & Baker, L. A. (2013). Psychopathic personality and negative parent-to-child affect: A longitudinal cross-lag twin study. *Journal of Criminal Justice, 41*, 331–341.

Uusitalo-Malmivaara, L. (2012). Global and school-related happiness in Finnish children. *Journal of Happiness Studies, 13*, 601–619.

van Oort, F. V. A., Greaves-Lord, K., Ormel, J., Verhulst, F. C., & Huizink, A. C. (2011). Risk indicators of anxiety throughout adolescence: The TRAILS study. *Depression and Anxiety, 28*, 485–494.

van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: Evidence for a psychosis proneness–persistence–impairment model of psychotic disorder. *Psychological Medicine, 39*, 179–195.

van Winkel, R., van Nierop, M., Myin-Germeys, I., & van Os, J. (2013). Childhood trauma as a cause of psychosis: Linking genes, psychology, and biology. *The Canadian Journal of Psychiatry/La Revue Canadienne de Psychiatrie, 58*, 44–51.

Varese, F., Smeets, F., Drukker, M., Lieverse, R., Lataster, T., Viechtbauer, W., … Bentall, R. P. (2012). Childhood adversities increase the risk of psychosis: A meta-analysis of patient-control, prospective- and cross-sectional cohort studies. *Schizophrenia Bulletin, 38*, 661–671.

Voncken, M. J., Alden, L. E., Bögels, S. M., & Roelofs, J. (2008). Social exclusion in social anxiety disorder: The role of performance deficits, evoked negative emotions and dissimilarity. *British Journal of Clinical Psychology, 47*, 439–450.

Waxman, R., Fenton, M. C., Skodol, A. E., Grant, B. F., & Hasin, D. (2014). Childhood maltreatment and personality disorders in the USA: Specificity of effects and the impact of gender. *Personality and Mental Health, 8*, 30–41.

Westermann, S., Kesting, M. L., & Lincoln, T. M. (2012). Being deluded after being excluded? How emotion regulation deficits in paranoia-prone individuals affect state paranoia during experimentally induced social stress. *Behavior Therapy, 43*, 329–340.

Whalen, D. J., Malkin, M. L., Freeman, M. J., Young, J., & Gratz, K. L. (2015). Brief report: Borderline personality symptoms and perceived caregiver criticism in adolescents. *Journal of Adolescence, 41*, 157–161.

Widom, C. S., Czaja, S. J., & Paris, J. (2009). A prospective investigation of borderline personality disorder in abused and neglected children followed up into adulthood. *Journal of Personality Disorders, 23*, 433–446.

Wilcox, H. C., Grados, M., Samuels, J., Riddle, M. A., Bienvenu, O. J. III, Pinto, A., … Nestadt, G. (2008). The association between parental bonding and obsessive compulsive disorder in offspring at high familial risk. *Journal of Affective Disorders, 111*, 31–39.

Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the internet. *Journal of Personality and Social Psychology, 79*, 748–762.

Wirth, J. H., Lynam, D. R., & Williams, K. D. (2010). When social pain is not automatic: Personality disorder traits buffer ostracism's immediate negative impact. *Journal of Research in Personality, 44*, 397–401.

Wolke, D., Schreier, A., Zanarini, M. C., & Winsper, C. (2012). Bullied by peers in childhood and borderline personality symptoms at 11 years of age: A prospective study. *Journal of Child Psychology and Psychiatry, 53*, 846–855.

Yap, M. B. H., Pilkington, P. D., Ryan, S. M., & Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders, 156*, 8–23.

Zanarini, M. C., Frankenburg, F. R., Reich, D. B., Hennen, J., & Silk, K. R. (2005). Adult experiences of abuse reported by borderline patients and axis II comparison subjects over six years of prospective follow-up. *Journal of Nervous and Mental Disease, 193*, 412–416.