

THE INTERNATIONAL ENCYCLOPEDIA OF DEPRESSION

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researchers have developed specific assessment procedures to differentiate between these diagnostic entities. Examples include the Screening Assessment of Depression–Polarity, a clinician-administered instrument, and the Mood Disorder Questionnaire, a self-report inventory.

Cultural Differences

Of particular importance regarding interindividual differences is the influence of differing ethnic and cultural backgrounds. Sensitivity to this concern first involves ensuring that a depression measure has been competently back-translated into a foreign language when used with a non-English-speaking sample. In addition, for a depression measure to be valid within a given sample, research needs to demonstrate that it actually addresses constructs that have meaning within that culture of interest. Whereas some similarities exist in the expression of depression across various cultures, differences occur with regard to predominate symptom features. In the United States, depression is often detected by sad mood or decreased interest in activities, whereas predominant depression features in Latino and Mediterranean cultures include headaches and “nerves,” fatigue and “imbalance” among Asian cultures, and “problems of the heart” in Middle Eastern countries (APA, 2000). Many measures of depression that were initially developed in Western cultures have, in fact, been demonstrated to be applicable across a variety of cultures and have been translated into numerous languages, such as the Beck Depression Inventory, the Patient Health Questionnaire, and the Zung Self-Rating Depression Scale. However, depression measures have also been specifically developed for non-Western cultures, including the Vietnamese Depression Scale and the Chinese Depressive Symptom Scale.

Future Directions

It is important to note that during the past several decades, the actual definition of

depression has changed, as documented across the various *Diagnostic and Statistical Manuals for Mental Disorders*. As such, an important future concern involves the need for current measures of depression to be revised or new measures to be developed in order for them to be consistent with such definitional changes (Nezu et al., 2009).

In addition, future research should focus on improving the assessment of depression among (a) differing ethnic populations, (b) medical populations experiencing symptoms that overlap with depression, (c) individuals residing in rural areas, (d) persons in lower socioeconomic levels and poor literacy rates, (e) the elderly (especially those experiencing cognitive difficulties), and (f) the disabled.

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See also

Beck Depression Inventory
Clinically Useful Depression
Outcome Scale
Diagnostic and Statistical Manual of
Mental Disorders

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Attachment

In the third volume of his *Attachment and Loss* trilogy, Bowlby (1980) wrote about the way attachment insecurities may contribute to later development of depression. Bowlby argued that individuals who experience

negative interactions with their attachment figures (close relationship partners—usually primary caregivers during childhood—who provide protection, comfort, and support), are more likely to develop psychopathologies in general and depression in particular.

According to attachment theory, human beings are equipped with an innate attachment behavioral system, which regulates proximity-seeking behaviors. When encountering threats or stressors, infants are motivated to restore their sense of security by seeking proximity to their attachment figures. Over time, the attachment figures and the interactions with them are internalized as mental representations or working models. These mental representations include knowledge about the self, the relationship partners, and the social world.

A sensitive and responsive parenting style is likely to lead individuals to internalize positive representations of the self (as worthy of love and support) and others (as dependable and likely to provide love and support). Individuals holding such representations are thought to have a secure attachment style. An inconsistent or rejecting parenting style, on the other hand, is likely to lead individuals to internalize negative representations of the self (as not worthy of love) and others (rejecting, neglecting, unreliable, and not helpful). Individuals holding such representations are said to have an insecure attachment style. Once formed, these attachment styles are thought to be relatively stable and tend to influence people's cognitions, emotions, and behaviors.

Individual differences in adult attachment are most commonly conceptualized in terms of two dimensions of insecurity. The first dimension, attachment avoidance, results from encountering consistent rejections from attachment figures. It is characterized by a strong preference for self-reliance, reluctance to get close or show emotions to relationship partners, as well as discomfort with letting others depend on oneself. Avoidantly attached people tend to downplay their emotions in an attempt to deactivate their attachment system.

The second dimension, attachment anxiety, is thought to result from encountering inconsistent and intrusive caregiving behaviors. It is characterized by a strong desire for closeness to—and protection from—relationship partners, and a hypervigilance toward cues of partner rejection or unavailability. Anxiously attached people tend to ruminate on negative experiences, be preoccupied with negative thoughts and emotions, and present themselves as helpless and needy.

Currently, there are two main approaches to measure individual differences in adult attachment styles. One approach, mainly used by social psychologists, is based on self-reports. As research on attachment progressed, self-report measures evolved from assessing attachment in terms of three or four types (e.g., secure, anxious, dismissing-avoidant, and fearful-avoidant) to assessing it along the above-mentioned anxiety and avoidance dimensions. The other approach, mainly used by clinical and developmental psychologists, is based on interviews. The most widely used of these measures is the Adult Attachment Interview (AAI). In the AAI, adults are asked to describe their parents and the relationships they had with them during childhood. The responses are scored primarily in terms of discourse coherence rather than the content. The coherency of the overall responses is assumed to reflect the interviewee's "state of mind with respect to attachment" and is used to assign the interviewee into one of the three major "state of mind" categories (autonomous—corresponding to a secure style, preoccupied—corresponding to an anxious style, and dismissing—corresponding to an avoidant style).

To date, hundreds of studies have shown that individual differences in attachment style, measured either via self-reports or interviews, are correlated with relationship satisfaction, well-being, forms of coping with stress and regulating affect, and mental health. One of the central findings coming out of this literature is that attachment security provides a resilience resource that reduces the likelihood to develop psychological disorders.

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Early Attachment Experiences and Later Vulnerability to Depression

Bowlby (1980) suggested that depression may result from a failure to form secure, supporting bonds with one's primary caregivers. This lack of secure bonds might be either due to the actual loss of a caregiver (because of death or prolonged separation) or due to rejection or inconsistent care from a caregiver. Individuals who experienced such events (e.g., prolonged separation or rejection), are more likely to form negative perceptions of the self, which include feelings of being abandoned, unwanted, unlovable, and unable to form and maintain affectional bonds. As a result, these individuals are at a higher risk to develop depression.

Studies that tested the effects of caregiving quality or separation during early childhood on later depression provided empirical support for Bowlby's ideas. For example, individuals who lost one or both of their parents in childhood (due to either separation or death) were found to be more likely to show depressive symptoms in adulthood as compared to individuals who did not experience such loss. Likewise, individuals who reported receiving insensitive caregiving from their attachment figures in childhood were more likely to show depression in adulthood. Beyond this correlational evidence, there is also experimental evidence showing that individuals who reported low-quality maternal caregiving were more likely to show an attention bias toward negative stimuli (which can be interpreted as an index of vulnerability to depression), as compared to individuals who reported high-quality maternal caregiving.

Individual Differences in Adult Attachment Style and Depression

Cross-Sectional Studies

Numerous studies focusing on individual differences in adult attachment style have found positive associations between attachment insecurities and depressive symptoms. In a recent comprehensive review, Mikulincer and

Shaver (2007) identified more than a hundred studies investigating this association in nonclinical samples, with most of them using self-reports to assess attachment style. Regardless of the attachment measure used, these studies consistently showed that anxious attachment was positively associated with depression in nonclinical samples. Results were more mixed with respect to avoidant attachment. Whereas some researchers reported positive associations between avoidance and depression, others reported null findings.

Mikulincer and Shaver (2007) noted that although anxiety seems to be more strongly associated with depression than avoidance, this discrepancy is less pronounced when researchers examined how anxiety and avoidance relates to different facets of depression. Thus, anxiously attached individuals' chronic preoccupation with emotional closeness and reassurance-seeking from relationship partners make them more vulnerable to interpersonal facets of depression, such as being overly dependent and lacking autonomy. Conversely, avoidant individuals' excessive preference for self-reliance makes them more vulnerable to intrapersonal facets of depression, such as perfectionism or self-criticism. Indeed, research has shown that attachment anxiety was positively correlated with dependency, concern about what others think, and pleasing others; whereas attachment avoidance was positively correlated with perfectionism, need for control, and defensive separation.

Studies conducted with clinically depressed individuals found similar positive associations between insecure attachment and depression. Using self-report measures, several studies found that fearful-avoidant individuals (those who are high on both attachment anxiety and avoidance) were more likely to suffer from major depression. Findings based on the AAI were less consistent. Whereas some researchers found individuals diagnosed with depression to be more often classified as having a dismissing state of mind, other researchers found that these individuals were actually more likely to be classified as having a preoccupied state of mind.

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and Shaver (2007) noted that anxiety seems to be more strongly associated with depression than avoidance, and this is less pronounced when remixed how anxiety and avoidance represent different facets of depression. In attached individuals' chronic relationship with emotional closeness and distance from relationship partners, more vulnerable to interpersonal rejection, such as being overly dependent on others. Conversely, individuals' excessive preference for closeness makes them more vulnerable to rejection. Indeed, research on attachment anxiety was positive with dependency, concern for others, and pleasing others; whereas avoidance was positively associated with self-reliance, need for control, and competition.

with clinically depressed individuals found similar positive associations between insecure attachment and depression. On self-report measures, that fearful-avoidant attachment style (high on both attachment anxiety and avoidance) were more associated with depression. Findings were less consistent. Insecurely attached individuals were more often in a negative state of mind, and these individuals were more likely to be classified as depressed.

Various explanations were suggested to account for these conflicting findings. One of these explanations is related to the studies' inclusion criteria for the depressed sample. Dozier, Stovall-McClough, and Albus (2008) noted that studies excluding individuals with comorbid internalizing symptoms (such as symptoms of borderline personality disorder) found dismissing state of mind to be associated with depression. In contrast, studies excluding individuals with comorbid externalizing symptoms (such as symptoms of conduct disorder) found preoccupied state of mind to be associated with depression. Another explanation is the depression subtype. Research has shown that patients with bipolar disorder were more likely to be classified as dismissing as compared to patients with major depressive disorder or dysthymia.

Longitudinal Studies

In line with cross-sectional findings, longitudinal investigations also confirmed the hypothesis that insecure attachment predicts depressive symptoms. Using self-report measures, numerous researchers reported that during college years (a time of transitioning to young adulthood for many people), attachment insecurity prospectively predicts depressive symptoms assessed 6 weeks to 2 years later. Longitudinal studies conducted with participants experiencing other important life transitions also found a positive correlation of attachment insecurity and level of depressive symptoms. For example, women's attachment anxiety assessed prenatally was found to predict elevated postpartum depressive symptoms. Moreover, one's partner's attachment style was also found to affect one's own levels of depression. For example, husbands' attachment security predicted reduction in wives' depressive symptoms over a 6-month period; whereas husbands' avoidant attachment was found to be positively associated with the persistence of wives' depressive symptoms.

Direction of the Relationship

Although it is theoretically more plausible to expect that attachment insecurity leads

to depression, it may also be the case that depression heightens attachment insecurity. Findings from recent experimental studies have favored the former hypothesis over the latter one. In one of these studies, participants were primed with either the phrase "Mommy and I are one" (a prime which might create a sense of closeness to an attachment figure) or an attachment-unrelated control phrase, and then their depressive symptoms were assessed using a self-report measure. The negative correlation between attachment security and depressive symptoms was found to be stronger among participants primed with the attachment-related phrase as compared to those primed with the control phrase. This finding provides some support for the hypothesis that a sense of security lowers depressive symptoms. One explanation for this finding can be that the security prime strengthens the association circuits in memory related to maternal closeness and security, and weakens the association circuits related to negative self views.

A different way to examine the direction of the link between attachment and depression is by investigating whether experimentally increasing depressive mood would lower the sense of attachment security. In studies using this strategy, participants were exposed to either a depressive, neutral, or happy mood induction, and then their attachment styles were assessed. Results of these studies revealed that there were no self-reported or interview-based attachment style differences between the different mood induction conditions (depressed vs. happy or neutral). Taken together, these studies provide two preliminary conclusions: (a) There might be a causal link between attachment insecurity and depression; and (b) the direction of the link seems to be such that changes in attachment insecurity are likely to bring changes in depressive symptoms. Before a more decisive conclusion could be drawn, however, more empirical evidence showing that elevation of the sense of attachment security can reduce depressive symptoms is needed.

Process Models

Recently, researchers have started to investigate the process underlying the relationship between attachment insecurities and depression. This line of research identified many mediating factors. Among cognitive factors, low self-esteem, dysfunctional attitudes about one's self-worth, low self-reinforcement (ability to value, encourage, and support oneself), and maladaptive perfectionism were found to mediate the relationship between both types of insecure attachment and depressive symptoms. When looking separately at each of the insecurities, changes in self-efficacy beliefs, self-concealment (predisposition to conceal intimate and negative personal information), and self-splitting (inability to integrate different images of oneself) were found to mediate only the relationship between attachment anxiety and depressive symptoms, whereas incoherency and low emotional intensity of autobiographical memories were found to mediate the relationship between attachment avoidance and depressive symptoms.

Among interpersonal factors, negative events in interactions with close others (family members, peers, and romantic partners), and inability to meet autonomy and relatedness needs were found to mediate the association between both types of attachment insecurities and depressive symptoms. Loneliness and need for reassurance were found to mediate the association between attachment anxiety and depressive symptoms, whereas discomfort with self-disclosure was found to mediate the association between attachment avoidance and depressive symptoms. Similarly, different emotion regulation strategies were found to mediate the links between each of the attachment insecurities and depressive symptoms. Thus, emotional reactivity (a strategy characterized by hypersensitivity to stimuli in the environment) was found to mediate the association between attachment anxiety and depressive symptoms, whereas emotional cutoff (a strategy characterized by distancing from others in times of intense emotional experiences) was found to mediate the association

between attachment avoidance and depressive symptoms.

Unfavorable contextual factors were also found to moderate the association between attachment insecurities and depressive symptoms. Insecure people, who usually lack psychological resources to cope effectively with stress, would be expected to be more likely to develop depression when they face socioeconomic, environmental, or interpersonal stressors. In line with this reasoning, anxious women who experienced stressful life events were found to show higher levels of depressive symptoms as compared to anxious women who did not experience such stress.

Finally, dyadic factors may interact with attachment security to affect depressive symptoms. Thus, not only that one's attachment style may affect his or her partner's levels of depression (as mentioned above), but dyadic factors may moderate this link. For example, it was found in married couples that spouses' attachment insecurity was related to lower depressive symptoms when marital satisfaction was high than when it was low. Similarly, husbands' high social support and low anger weakened the effects of wives' attachment anxiety on their own postpartum depressive symptoms. When examining husbands' depressive symptoms, it was found that husbands' perceptions of their wives as unresponsive decreased the husbands' sense of attachment security, which, in turn, increased their depressive symptoms. Taken together, these findings indicate that having a secure and supporting partner mitigates the effects of having an insecure attachment style on depression; whereas having an insecure and unresponsive partner exacerbates these effects.

Attachment and Response to Treatment of Depression

Individual differences in attachment style were also found to be associated with responses to therapy aiming to alleviate depression. Studies conducted with people who participated in therapy programs for

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sion and positively associated with time to
stabilization (time to consistently obtain
low-depressive symptom scores) among re-
mitted individuals.

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See also

Anaclitic and Introjective Depression
Early Adversity
Internal Working Models
Maltreatment

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Attention

Distractions constantly challenge our ability to stay on task—a "New E-mail Message" note appears on your computer screen as you attempt to work; a ringing cell phone distracts your driving. The ability to achieve and maintain goal-focused behavior in the face of distraction is critical for surviving and thriving in our world. This highlights the importance of attention, which is the ability to select what is most relevant for current task goals. Attention developed to help the brain solve a computational problem of information overload. For example, during perception of natural scenes, there is a multitude of incoming sensory input, which cannot all be fully analyzed by a limited-capacity perceptual system within the human brain. Under these circumstances, attention serves to restrict sensory processing

in favor of the most relevant subset of items in order to ensure that the behavior of the organism is guided by the most relevant information.

Attention is a multidimensional system known to be dysfunctional in depression (Ingram, 1990). Therefore, understanding the computational structure and neuroanatomical basis of attention is a crucial step in treating attentional dysfunction associated with depression. Here, we review what is known about attention from this body of research and introduce our work investigating the influence of mindfulness training on the attention system. Our initial studies suggest that mindfulness training may improve attention by improving the ability to select information. We explore the hypothesis that these attentional effects may contribute to the efficacy of mindfulness-based clinical interventions in the treatment of depression relapse.

The Human Attention System

Attention comprises three functionally and neuroanatomically distinct cognitive networks. These networks carry out the operations of alerting, orienting, and conflict monitoring. Alerting consists of achieving and maintaining a vigilant or alert state of preparedness; orienting restricts processing to the subset of inputs that are relevant for the current task goals; and conflict monitoring prioritizes among competing tasks and resolves conflict between goals and performance. Two basic paradigms have been used to investigate attentional subsystems: the attentional spatial cuing paradigm and the flanker paradigm (see Fan, McCandliss, Sommer, Raz, & Posner, 2002, for an overview).

Attentional spatial cuing paradigms provide a means to behaviorally index attentional alerting and orienting. In this paradigm, participants sit at a computer and perform a visual computer task similar to a simple video game. They are to attempt to detect a target that is presented after either informative or neutral spatial cues. Informative cues provide spatial information