

EFFECT OF PRIMING WITH ATTACHMENT SECURITY ON POSITIVE AFFECT AMONG INDIVIDUALS WITH DEPRESSION

RAN LIAO

Beijing Normal University and Beijing Wuzi University

SHUO WANG

Beijing Normal University and Beijing Language and Culture University

PENG ZHANG

Beijing Normal University

YA ZHOU

South China Normal University

XIANGPING LIU

Beijing Normal University

We examined the effect of priming with attachment security on positive affect among 54 dependent individuals with depression and 51 self-critical individuals with depression. Participants received attachment security priming after they had completed the Depressive Experiences Questionnaire and the Self-Rating Depression Scale. Results showed that dependent individuals experienced greater positive affect after priming, whereas there was no significant change in positive affect among self-critical individuals. These findings indicate that the 2 types of depression have distinct development and change paths as regards positive affect, as well as different impact factors. Future researchers could further explore the cognitive, emotional, and behavioral differences between individuals with the 2 types of depression, to help improve clinical interventions.

Ran Liao, School of Psychology, Beijing Normal University, and Mental Health and Counseling Center for College Students, Beijing Wuzi University; Shuo Wang, School of Psychology, Beijing Normal University, and Student Counseling Center, Beijing Language and Culture University; Peng Zhang, School of Psychology, Beijing Normal University; Ya Zhou, School of Psychology, South China Normal University; Xiangping Liu, School of Psychology, Beijing Normal University.

This research was supported by Humanities and Social Sciences research project funding of the Ministry of Education of the People's Republic of China (NO. 13YJA190009).

Correspondence concerning this article should be addressed to Xiangping Liu, School of Psychology, Beijing Normal University, No. 19, XinJieKouWai Street, Haidian District, Beijing 100875, People's Republic of China. Email: lxp599@163.com

Keywords: attachment security, priming effect, self-critical depression, dependent depression, depression, positive affect.

Depression is a common mental disorder that is characterized by low mood, retardation of thought, weak willpower, and accompanying physical symptoms (Naicker, Galambos, Zeng, Senthilselvan, & Colman, 2013). Individuals with depression face not only a higher risk of suicide but also seriously impaired social and cognitive functioning (Tanner, Martinez, & Harris, 2014). The morbidity of depression continues to escalate, and it is now the most common mental health disorder worldwide (Cummings, Caporino, & Kendall, 2014).

Researchers have explored how to help individuals with depression relieve their symptoms by inducing positive emotions through the use of medication therapy, cognitive training, and psychological counseling (Monteggia, Malenka, & Deisseroth, 2014). The effect of *attachment security priming*, which involves activating the mental representation of security, on individuals with depression has attracted considerable research attention (Carnelley, Otway, & Rowe, 2015; Herd, 2015; Otway, 2013). According to attachment theory (Bowlby, 1988), humans have an inner working system of attachment behavior that motivates them to seek proximity with protective others (i.e., the attachment object) when in need. A timely, supportive interaction with an attachment object creates a positive working model, entailing a mental representation of a safe relationship between the self and others. In contrast, when the attachment object is not supportive, a negative working system is formed, entailing an insecure mental representation of the relationship between the self and others.

Attachment security priming promotes prosocial behavior, empathy, and altruism (Mikulincer & Shaver, 2015), and also influences positive affect in individuals with depression. For example, Herd (2015) found that patients with depression reported significantly greater positive affect after attachment security priming, compared with those who received neutral priming. Further, Carnelley et al. (2015) found that undergraduates with high levels of depression experienced more positive emotions after attachment security priming, than did those not primed. In addition, Miranda, Andersen, and Edwards (2013) reported that attachment insecurity priming could increase the experience of negative emotions in individuals with depression.

However, the results of attachment security priming are not always positive. Otway (2013) reported that neither attachment security priming nor neutral priming had any significant impact on depressive emotions in patients with depression. Further, Mallinckrodt et al. (2013) found that attachment security priming might reduce positive affect in students with high attachment anxiety.

These inconsistent results raise questions about who benefits from priming; therefore, the different types of depressive personalities must be taken into

consideration. Blatt, Quinlan, Chevron, McDonald, and Zuroff (1982) posited that there are two main depressive tendencies—dependency and self-criticism—which are based on different personality traits. *Dependent individuals* crave a safe relationship, which is externalized as a strong desire for love and acceptance. They need to gain a sense of safety from stable intimate relationships, and tend to establish dependent relationships with others. After experiencing relationship frustration or loss, dependent individuals show obvious signs of anxiety, helplessness, and depression. *Self-critical individuals* pursue self-control and personal achievement, and hold a more internalized, harsh standard for themselves. They are sensitive to self-value-related frustration, such as a career setback or failure to meet a goal, and are likely to feel guilt, a lack of value, and low self-esteem, which lead to depression.

Researchers have found that attachment security priming has a positive impact on the mental representation of relationships, such as achieving a safer and more positive relationship experience, thereby activating more positive affect (Mikulincer & Shaver, 2015). However, others have shown that attachment security priming has no significant effect on self-value or self-esteem (Mikulincer, Shaver, Bar-On, & Sahdra, 2014). Self-critical individuals who are in pursuit of achievement do not give high priority to family, friends, or other intimate relationships; are not easily hurt by damaged relationships; and do not feel depressed after a romantic relationship breakup (Blatt & Zuroff, 1992), which means that attachment security priming may be ineffective for this group. Hence, we hypothesized that dependent individuals would show greater positive affect after priming with attachment security, whereas self-critical individuals would not experience a change in positive affect.

Method

Participants and Procedure

The Beijing Normal University Ethics Committee approved all stages of the current study, and all participants provided written informed consent. We distributed 750 copies of the Depressive Experiences Questionnaire and Self-Rating Depression Scale (see Measures subsection below) to undergraduates on campus at Beijing Wuzi University, then we selected 200 students, all of whom were suffering from depression according to the criteria of the Depressive Experiences Questionnaire, with 100 of them classified as dependent individuals and the other 100 classified as self-critical. Short email invitations to take part in our study were sent to these 200 individuals (age range = 17–27 years), and we received responses from 51 dependent individuals (19 males, $M_{\text{age}} = 20.79$ years, $SD = 2.32$; 32 females, $M_{\text{age}} = 19.78$ years, $SD = 1.41$) and 54 self-critical individuals (16 males, $M_{\text{age}} = 20.06$ years, $SD = 1.44$; 38 females, $M_{\text{age}} = 20.16$ years, $SD = 1.78$). All participants were of Han Chinese ethnicity and were native speakers of the Chinese language.

Participants came to our experiment room to take part in the study within three days of completing the Depressive Experiences Questionnaire and Self-Rating Depression Scale. Participants first responded to the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) then underwent attachment security priming, which was administered by an experiment assistant. After the priming was complete, the participants responded to the PANAS for a second time. The whole procedure lasted about 20 minutes. All participants received US\$5 as compensation and were referred to the Psychological Service Center for Students to address possible negative effects of the priming procedure.

Measures

Self-Rating Depression Scale. The Self-Rating Depression Scale (SDS; Zung, 1965) is a 20-item self-report measure rated on a 4-point Likert scale (1 = *none or a little of the time* to 4 = *most of the time*). Items are keyed with 10 phrased in the positive direction and 10 phrased in the negative direction, as a control for response sets. Higher scores correspond to more frequent experiences of the symptoms. The Chinese version of the SDS has been shown to have good reliability and validity, with a reported Cronbach's alpha of .77 (Duan & Sheng, 2012). Cronbach's alpha here was .83.

Depressive Experiences Questionnaire. The 66-item Depressive Experiences Questionnaire (DEQ; Blatt, D'Afflitti, & Quinlan, 1976) is used to assess the phenomenological experiences of patients with depression. Participants rate each item on a 7-point Likert-type scale (1 = *totally disagree* to 7 = *totally agree*). Fang and Yao (2008) developed a Chinese version of the DEQ, which showed good reliability and validity (Cronbach's alpha = .77 for male participants and .72 for female participants). The DEQ contains two dimensions: dependence (DEQ-A) and self-criticism (DEQ-I). A higher score on a dimension indicates a greater tendency toward that type of depressive experience. In the current study, Cronbach's alpha was .78 for DEQ-A and .82 for DEQ-I.

Positive Affect and Negative Affect Schedule. The 20-item PANAS (Watson et al., 1988) includes 10 positive emotion adjectives and 10 negative emotion adjectives, which are rated on a 5-point Likert scale (1 = *not at all like me* to 5 = *totally like me*). The Chinese version of the PANAS has shown good reliability and validity, with a Cronbach's alpha of .84 for the positive affect dimension and .77 for the negative affect dimension (Qiu, Zheng, & Wang, 2008). In the current study, Cronbach's alpha was .931 for positive affect and .844 for negative affect.

Priming with attachment security. To prime the participants with attachment security, we used the paradigm proposed by Baldwin (1994). An assistant who was blind to the study's purpose read out the following instructions: "Please recall an important person in your life (parent/partner/caregiver/other); when you recall him/her, you feel warm and accepted. What kind of person is he or she? Please recall his/her appearance; face, hair, or eyes; and voice. Think about talking to him/her and being in his/her company. Think about his/her reception

of you when you were together. You have 10 minutes to write down in as much detail as possible a description of him/her, your feelings about him/her, and the relationship between the two of you. What you write is only for yourself, nobody else can read it, and you can take it with you if you wish.”

All data were analyzed using SPSS version 19.0. We processed the data using dependent-samples *t* tests and repeated-measures analyses of variance (ANOVA).

Results

Descriptive Statistics

Results of a dependent-samples *t* test showed that, before priming, there were no significant differences in depression between the two types of individuals with regard to age, SDS scores, or PANAS scores (see Table 1).

Table 1. Differences in Scale Scores Between Dependent and Self-Critical Individuals With Depression

	Dependent (<i>n</i> = 51)		Self-critical (<i>n</i> = 54)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Age (years)	20.16	1.85	20.13	1.67	0.079	.937
SDS	53.47	4.54	51.91	3.55	1.972	.151
PANAS-P	3.76	1.34	3.79	1.24	-0.104	.917
PANAS-N	1.85	0.93	1.64	0.62	1.353	.180

Note. Dependent = dependent individuals with depression, Self-critical = self-critical individuals with depression, SDS = Self-Rating Depression Scale, PANAS-P = positive PANAS subscale, PANAS-N = negative PANAS subscale.

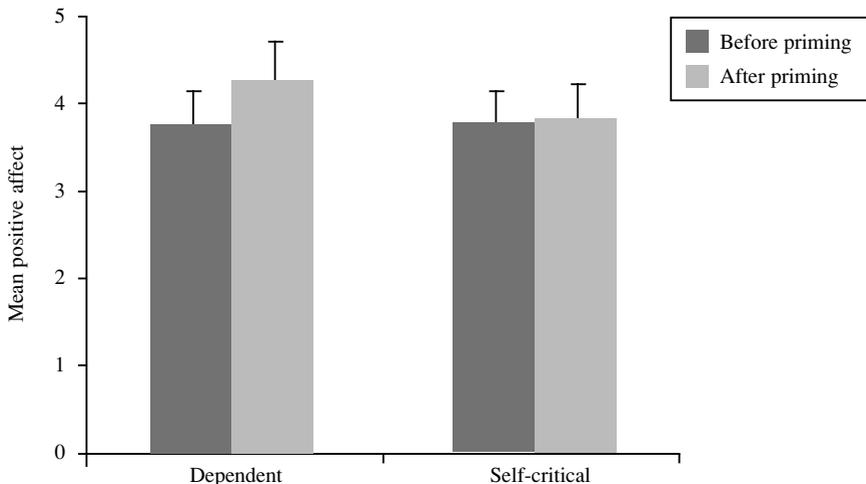


Figure 1. Change in positive affect of dependent and self-critical individuals with depression after priming.

Changes in Positive Affect After Priming

We used a 2×2 (priming group) repeated-measures ANOVA to analyze the data. The results showed that the main effect of the priming was significant, with positive affect being significantly higher after priming than it was beforehand, $F(1, 103) = 8.635, p = .004, \eta_p^2 = .077$. The main effect of group was nonsignificant, $F < 1$, but the interaction between priming and group was significant, $F(1, 103) = 6.505, p = .012, \eta_p^2 = .059$. Results of further simple effects analyses indicated that positive affect was significantly higher after priming than it was beforehand among dependent depressed individuals, $F(1, 103) = 14.6465, p < .001, \eta_p^2 = .124$. However, positive affect showed no significant change after priming among self-critical depressed individuals (see Figure 1).

Discussion

We found that one-time, experiment-based attachment security priming could promote positive affect in individuals with the dependent type of depression, but that this priming had no significant effect on individuals with self-critical depression. This indicates that positive affect in dependent and self-critical individuals might follow different development and change paths.

Dependent individuals are characterized by sensitivity to relationship damage, originating mostly from the experience of being abandoned, neglected, or rejected (Blatt et al., 1982). They are prone to suppressing their own needs or abandoning their autonomy to gain care and affection from others (Zuroff, Santor, & Mongrain, 2005). Thus, the attachment security priming procedure may have activated the mental representation of a warm, positive attachment experience, through conscious or unconscious triggers, satisfying the participants' psychological needs. As such, we found the change shown in dependent individuals after priming attachment security to be unsurprising.

Self-critical individuals frequently experience frustration, guilt, and low self-value (Blatt et al., 1982), and have a strong need to maintain high social status, self-control, and autonomy (Luyten et al., 2007). Thus, their core focus is on their own state, rather than the relationships between themselves and others. It has been shown that self-critical individuals experience poorer relationship quality, weaker social support, and more loneliness compared to dependent individuals (Blatt & Zuroff, 1992), supporting the idea that the former individuals do not place too much importance on these relationships. The attachment security priming procedure we administered in this study may have activated a mental representation of a safe relationship, making the participants in the self-critical group feel more comfortable but having no effect on their core self-cognition. Thus, it was not surprising to us that attachment security priming had no significant impact on positive affect in self-critical individuals with depression.

Our results support the idea that depression and negative affect have a complicated relationship. Findings reported in studies have already confirmed that increased levels of positive affect can mitigate the effects of depression, but determining how to help individuals with depression to experience more happiness needs further exploration. Other than focusing on depressive symptoms and the corresponding negative outcomes, we recommend exploring the sources of, and individual differences in, depression. Understanding psychological activity is difficult because of individual differences in how this is experienced, even though people may appear similar on the outside. Some people with depression are more sensitive to relational factors, whereas others care more about the self. These factors increase the risk for developing mental disorders but also form breakthrough points for clinical intervention. Knowing about patients' individual differences is important for effective treatment, which was a key consideration in the current research.

There are some limitations in our study. First, although there were no significant differences between the two types of depression with regard to severity, there might still have been differences in relation to the evocation and maintenance of their depression. Future researchers should include in their samples both outpatients and inpatients being treated for depression, and discriminate between the different types of depression for the purpose of more precisely controlling the severity of the depression experience. Second, we used conscious attachment security priming without operationally defining the attachment object, which meant that we could not integrate one standard to assess the effect that priming had on the participants. Future researchers should improve the paradigm of attachment security priming to enhance control of related variables. Third, our conclusions are based on a sample of college students from one country, with a small range of ages. To broaden the applicability of our results, it is essential to verify the effect of attachment security priming on wider samples of individuals with depression.

References

- Baldwin, M. W. (1994). Primed relational schemas as a source of self-evaluative reactions. *Journal of Social and Clinical Psychology, 13*, 380–403. <http://doi.org/chpp4t>
- Blatt, S. J., D'Afflitti, J. P., & Quinlan, D. M. (1976). Experiences of depression in normal young adults. *Journal of Abnormal Psychology, 85*, 383–389. <http://doi.org/fq59db>
- Blatt, S. J., Quinlan, D. M., Chevron, E. S., McDonald, C., & Zuroff, D. (1982). Dependency and self-criticism: Psychological dimensions of depression. *Journal of Counseling and Clinical Psychology, 150*, 113–124. <http://doi.org/dq8k6s>
- Blatt, S. J., & Zuroff, D. C. (1992). Interpersonal relatedness and self-definition: Two prototypes for depression. *Clinical Psychology Review, 12*, 527–562. <http://doi.org/fsjc36>
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York, NY: Basic Books.

- Carnelley, K. B., Otway, L. J., & Rowe, A. C. (2015). The effects of attachment priming on depressed and anxious mood. *Clinical Psychological Science, 4*, 433–450. <http://doi.org/bsr4>
- Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2014). Comorbidity of anxiety and depression in children and adolescents: 20 years after. *Psychological Bulletin, 140*, 816–845. <http://doi.org/brzg>
- Duan, Q., & Sheng, L. (2014). Differential validity of SAS and SDS among psychiatric nonpsychotic outpatients and their partners [In Chinese]. *Chinese Mental Health Journal, 26*, 676–679.
- Fang, J., & Yao, S. (2008). An evaluation of the credibility of the Chinese version of the DEQ with a sample of 640 college students [In Chinese]. *Chinese Mental Health Magazine, 3*, 184–188.
- Herd, B. D. (2015). *Psychopathy and attachment: The effect of security priming on psychopathy in a college student sample* (Unpublished master's thesis). Georgia Southern University, Statesboro, GA, USA.
- Luyten, P., Sabbe, B., Blatt, S. J., Meganck, S., Jansen, B., De Grave, C., ... Corveleyn, J. (2007). Dependency and self-criticism: Relationship with major depressive disorder, severity of depression, and clinical presentation. *Depression and Anxiety, 24*, 586–596. <http://doi.org/c7ns9h>
- Mallinckrodt, B., McNett, A. M. S., Celebi, E., Birks, K. M., Tsai, C.-L., & Williams, B. E. (2013). Cognitive primes for attachment security can increase cultural empathy, but also interact negatively with attachment anxiety. *Journal of Social & Clinical Psychology, 32*, 1013–1039. <http://doi.org/brzh>
- Mikulincer, M., & Shaver, P. R. (2015). The psychological effects of the contextual activation of security-enhancing mental representations in adulthood. *Current Opinion in Psychology, 1*, 18–21. <http://doi.org/brzj>
- Mikulincer, M., Shaver, P. R., Bar-On, N., & Sahdra, B. K. (2014). Security enhancement, self-esteem threat, and mental depletion affect provision of a safe haven and secure base to a romantic partner. *Journal of Social and Personal Relationships, 31*, 630–650. <http://doi.org/brzk>
- Miranda, R., Andersen, S. M., & Edwards, T. E. (2013). The relational self and pre-existing depression: Implicit activation of significant-other representations exacerbates dysphoria and evokes rejection in the working self-concept. *Self and Identity, 12*, 39–57. <http://doi.org/fhfzv3>
- Monteggia, L. M., Malenka, R. C., & Deisseroth, K. (2014). Depression: The best way forward. *Nature, 515*, 200–201. <http://doi.org/brzm>
- Naicker, K., Galambos, N. L., Zeng, Y., Senthilselvan, A., & Colman, I. (2013). Social, demographic, and health outcomes in the 10 years following adolescent depression. *Journal of Adolescent Health, 52*, 533–538. <http://doi.org/brzn>
- Otway, L. J. (2013). *Exploring the effects of attachment security priming on depressed and anxious mood* (Unpublished doctoral dissertation). University of Southampton, Southampton, UK.
- Qiu, L., Zheng, X., & Wang, Y. F. (2008). Revision of the Positive and Negative Affect Schedule [In Chinese]. *Chinese Journal of Applied Psychology, 14*, 249–254.
- Tanner, E. K., Martinez, I. L., & Harris, M. (2014). Examining functional and social determinants of depression in community-dwelling older adults: Implications for practice. *Geriatric Nursing, 35*, 236–240. <http://doi.org/brzp>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070. <http://doi.org/ck3>
- Zung, W. W. (1965). A self-rating depression scale. *Archives of General Psychiatry, 12*, 63–70. <http://doi.org/cd3gnc>
- Zuroff, D. C., Santor, D., & Mongrain, M. (2005). Dependency, self-criticism, and maladjustment. In J. S. Auerbach, K. N. Levy, & C. E. Schaffer (Eds.), *Relatedness, self-definition and mental representation: Essays in honor of Sidney J. Blatt* (pp. 75–90). New York, NY: Routledge.

Copyright of Social Behavior & Personality: an international journal is the property of Society for Personality Research and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.