



## Original Article

## Direct and indirect associations between experiential avoidance and reduced delay of gratification

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## ABSTRACT

The ability to delay gratification and wait for larger long-term rewards is crucial for maximizing outcomes in commonly valued areas of living such as career, health, and relationships. Past research suggests that emotional distress impairs this ability to delay gratification. Research also indicates that persons who exhibit higher levels of experiential avoidance, the tendency to negatively evaluate and avoid emotion and cognition, tend to report higher levels of distress. There is limited research to date on the direct or indirect relationships between experiential avoidance and delay of gratification. The current study was designed to assess these relationships in order to integrate findings from the literature on experiential avoidance and delay of gratification. Two hundred and two university students provided ratings of their experiential avoidance, depression, anger, and delay of gratification. Results indicated these variables were moderately and significantly correlated. Path analysis suggested that experiential avoidance has a direct relationship with delay of gratification, and an indirect relationship through higher depression and anger. These findings suggest that acceptance-based behavior therapies that reduce experiential avoidance and distress may potentially enhance delay of gratification.

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## 1. Introduction

Over the past six decades, delaying gratification – the tendency to give up immediate pleasure in pursuit of long-term rewards – has been identified as a fundamental skill necessary for physical health, positive social functioning, educational and occupational achievement, and financial stability (Baker & Hoerger, 2012; Funder & Block, 1989; Hoerger, Quirk, & Weed, 2011). By early adolescence, most people develop a basic capacity for delaying gratification (Hoerger et al., 2011). In contrast to this finding, however, many adults demonstrate a resounding failure to delay gratification. Recent reviews emphasize that the failure to delay gratification can have significant consequences for individuals and societies, including substance use, health problems, low educational attainment, relationship problems, consumer debt, risky sexual behavior, and criminality (Hoerger et al., 2011; Mischel et al. 2011; Ramanathan & Menon, 2006). Recent initiatives by the National Institutes of Health (NIH, 2008, 2009) have called for immediate, targeted research aimed at identifying

mechanisms responsible for failed efforts to delay gratification. In synthesizing past research and theory, we developed a theoretical model of emotional processes that attempts to explain individual differences in the tendency to delay gratification.

Emotional distress plays a key role in reducing delay of gratification (Metcalfe & Mischel, 1999). For instance, negative feedback and distressing thoughts reduce delay of gratification in experimental studies (Mischel, Ebbsen, & Zeiss, 1972; Schwarz & Pollack, 1977; Seeman & Schwarz, 1974), and measures of neuroticism, depression, and anger are associated with reduced delay of gratification (Hoerger et al., 2011; Tice, Bratslavsky, & Baumeister, 2001). It is argued that distress activates highly emotional and speedy decision making processes that are controlled by short-term contingencies. Once activated, these decision making processes increase the probability that smaller short-term rewards will be chosen (Metcalfe & Mischel, 1999). These studies demonstrate, in a general way, that emotional distress hinders delay of gratification. Yet, emerging research suggests the need for greater specificity and integration in conceptual models explaining how aspects of emotional distress influence delay of gratification. Notably, anger and depression are consistently related to difficulties with delay of gratification, whereas anxiety is an inconsistent predictor of delay of gratification (Hoerger et al., 2011).

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Anger appears to be a critical factor that is proximally related to delay of gratification. Anger is positively correlated with various measures of impulsivity (Ramírez & Andreu, 2006), and this association is evident in the constellation of impulsive decision-making, inability to delay gratification, and anger commonly observed among adults with cluster B personality traits (American Psychiatric Association, 2000). In addition to impulsive decision-making, these individuals often present with great difficulty regulating intense anger and struggle to resolve problems effectively (Gerhart, Ronan, Russ, & Seymour, 2013). Anger may have this proximal influence on impulsive reactions, such as failures to delay gratification, due to its association with high autonomic arousal and the activation of behavioral approach systems (Carver & Harmon-Jones, 2009). Anger arousal may be especially detrimental to sources of delayed gratification that are interpersonal in nature, such as the enhancement of intimate relationships or occupational advancement (Mischel, Ayduk, & Mendoza-Denton, 2003).

Anger is a functional emotion that tends to originate in response to frustration, environmental threats, and other negative effects such as sadness and depression (Berkowitz & Harmon-Jones, 2004). Given that anger is commonly observed among depressed individuals (Novaco, 2010), depressed affect may exert its influence on delay of gratification indirectly. Subjective feelings of depression commonly lead to secondary feelings of increased anger, irritability, and frustration (Berkowitz & Harmon-Jones, 2004; Gardner & Moore, 2008). The relationship between anger and depression is explained in part by the common utilization of angry rumination, other ineffective emotion regulation skills (Besharat, Nia, & Farahani, in press), and hostile attribution biases by depressed individuals (Riley, Treiber, & Woods, 1989). It has been suggested that subjective feelings of depression may reduce delay of gratification through the pathway of anger (Miller, Gaughan, Pryor, & Kamen, 2009), and this is the first known investigation to test that hypothesis.

Effective emotional regulation strategies are needed to modulate stronger feelings of depression and anger that may hinder delay of gratification. This multidimensional process of emotional regulation requires individuals to observe, understand, and accept emotional states while simultaneously inhibiting behaviors and action urges that may interfere with long-term goals and other valued outcomes (Gratz & Roemer, 2004; Stevens, Gerhart, Goldsmith, Heath, Chesney, & Hobfoll, 2013). Individuals differ greatly in their emotional regulation strategies, with some approaching emotional distress proactively, and others avoiding their emotions at all costs. *Experiential avoidance* tends to be an ineffective emotional regulation process whereby individuals attempt to escape, minimize, or avoid unwanted thoughts and emotions (Bond et al., 2011; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). The process is implicated as a basic mechanism of psychopathology, which paradoxically increases the salience, intensity, and control exerted by distressing emotions. People high on this trait are less psychologically flexible and tend to report more anger, depression, and general emotional distress (Bond et al., 2011; Kashdan, Breen, Afram, & Terhar, 2010). Treatment outcome research with a clinical sample indicated that changes in experiential avoidance mediated treatment-related changes in depression. Moreover, time-lagged relationships revealed that higher experiential avoidance predicted less change in depression, but not vice-versa, suggesting experiential avoidance influences psychological distress (Berking, Neacsiu, Comtois, & Linehan, 2009). Individuals higher on experiential avoidance have also reported addressing life problems in an impulsive or careless manner (Gerhart, Ronan, Seymour, & Holman, 2011), indicating that it may play a fundamental role in explaining deficits in delay of gratification.

Based on the theoretical model of Acceptance and Commitment Therapy (ACT; Hayes, Luoma, Bond, Masuda, & Lillis, 2006),

a relationship between experiential avoidance and a diminished ability to delay gratification could help illuminate why individuals prone to avoidant and inflexible coping have difficulty with committed action and the pursuit of long-term values. That is, experiential avoidance may interfere with delay of gratification by amplifying psychological distress, which then translates to greater control of behavior by escape and avoidance contingencies that minimize distress in the short-term. As a result, the salience of longer-term goals and values – such as health and relationship satisfaction – are diminished, and committed action decreased.

In summary, we hypothesized that experiential avoidance would be associated with reduced delay of gratification, with the relationship mediated by subjective feelings of depression and subsequent anger. More precisely, we hypothesized that experiential avoidance would be positively associated with depression, depression would be positively associated with anger, and anger would be negatively associated with delay of gratification. We tested the fit of the hypothesized model using path analysis and compared it to plausible alternative models. In the first alternative model, the order of anger and depression were alternated such that experiential avoidance was positively associated with anger, anger was positively associated with depression, and depression was negatively associated with delay of gratification. In the second alternative model, depression and anger were treated as indicators of a composite distress variable. Thus, the current investigation was designed to provide the conceptual specificity necessary for understanding the emotional processes underlying individual differences in delaying gratification.

## 2. Method

### 2.1. Participants and procedures

After receiving ethical approval from the local Institutional Review Board, we recruited 202 undergraduate participants from a large public university in the Midwestern U.S. Participants were 19.5 years old on average ( $SD=3.0$ ) and mainly female (77.2%) and White (91.6%). They completed all study measures online via *SurveyMonkey.com*, due to the ethical and practical benefits of Internet-mediated research (Hoerger & Currell, 2011).

### 2.2. Measures

The Acceptance and Action Questionnaire Version II (AAQ-II; Bond et al., 2011) is a 10-item self-report measure of experiential avoidance. Sample items include “I worry about not being able to control my worries and feelings” and “It’s OK if I remember something unpleasant” (reverse coded). Respondents rate items on a scale from 1 (Never True) to 7 (Always True). The range of possible scores was 10–70. The AAQ-II possesses adequate validity, test–retest reliability, and internal consistency (Bond et al., 2011). The measure was scored so that higher scores indicated higher experiential avoidance. The measure did not specify a specific time-frame, but rather assessed experiential avoidance in general. In the current sample internal consistency was high,  $\alpha=.86$ .

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) is a 20 item self-report measure of depressive symptoms on which participants endorse the frequency of various symptoms (e.g., “I had crying spells”) during the past week using a 4-point Likert-type scale, from 0 (Rarely or None of the Time) to 3 (Most or All of the Time). The range of possible scores was 0–60. The CES-D has demonstrated adequate internal consistency, test–retest reliability, and construct validity. Since its

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