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Growth motivation moderates a self-serving attribution bias in the health domain

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ABSTRACT

Past research on the self-serving attribution bias has shown that people typically protect their self-worth by attributing shortcomings to external factors to avoid personal responsibility. Subsequent work suggests that this pattern is attenuated among individuals highly motivated to achieve personal growth. We attempted to conceptually replicate past research on this moderating effect in a novel context. After measuring personality variation in growth motivation, participants ($N = 126$ college students) were randomly provided feedback implying that they were less healthy than their peers (*failure*), healthier than their peers (*success*) or a no feedback *control*. We found that among participants receiving failure feedback, growth motivation negatively predicted the extent to which participants attributed health outcomes to luck. While the expected pattern of the self-serving attribution bias was implied at very low levels of growth motivation, failure caused high growth-motivation participants to believe that their health was less influenced by chance factors.

1. Introduction

An individual suffering poor health may wonder why they find themselves in that position. Some may blame health troubles on themselves and think of ways in which they could have made healthier choices to exercise more, set aside more time for sleep, or changed their diet. In other words, people could take personal responsibility for their current situation and subsequently work to improve their future behavior. Others may write off poor health as bad luck or a genetic inevitability, a conclusion foregone long before they could have intervened. This implies that there is no room for future improvement which cannot undo factors beyond one's control.

What accounts for this diversity of reactions to a negative situation? A central process in explaining this variation is the *self-serving attribution bias*, the tendency to attribute personal success to internal causes and failure to external causes (Sedikides, Campbell, Reeder, & Elliot, 1998; Zuckerman, 1979). For instance, a student is more likely to credit their intelligence for an “A” on an exam but a teacher's unfairness for an “F” (Noel, Forsyth, & Kelley, 1987). Other research shows that wrestlers with winning records more frequently attributed their success to internal factors (e.g., hard work) while losing wrestlers attributed their records to external factors (De Michele, Gansneder, & Solomon, 1998).

The self-serving attribution bias allows the individual to bolster or maintain a sense of self-worth while minimizing negative aspects of the self (Hepper, Gramzow, & Sedikides, 2010). Substantial evidence for this claim has been provided by several comprehensive meta-analyses, suggesting threats to one's self-concept elicit heightened attribution of personal failures toward external causes (Campbell & Sedikides, 1999; Mezulis, Abramson, Hyde, & Hankin, 2004). For example, people are most likely to enact this bias during self-relevant tasks, when attention is focused on the self specifically, particularly among individuals with initially high levels of self-esteem (Campbell & Sedikides, 1999). These empirical findings support the view that the self-serving bias is most likely under those conditions in which the self would be threatened by failure. In contrast, the self-serving bias is substantially smaller in samples with depression compared to non-clinical controls, further demonstrating that the bias appears primarily among those motivated to maintain a positive view of the self (Mezulis et al., 2004).

1.1. Individual differences in the self-serving attribution bias

While this tendency has been reliably shown under some conditions, there is important personality variability in the self-serving bias. One early study (Knee & Zuckerman, 1996) found that the self-serving bias did not appear among participants who reported both a low *Control* orientation and a high *Autonomy* orientation as measured by the General Causality Orientations Scale (Deci & Ryan, 1985). This measure assesses variability in three broad clusters of motivations by asking people which of three responses to a scenario best reflects their personality. Some responses represent an Autonomy orientation, a focus on

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the pursuit of personal interests and growth. Other response suggest a Control orientation, a focus on external determinants of behavior such as rewards (e.g., money). Finally, a third cluster of motives is referred to as the Impersonal orientation, a pattern of abdicating agency by not allowing either personal or external motives to shape one's behavior.

Knee and Zuckerman (1996) proposed that the lack of a self-serving attribution bias among low Control/high Autonomy participants may be due to the combination of low ego investment in external rewards (reflected by low *Control* orientation) and high motivation to pursue personal growth and learning reflected in an *Autonomy* orientation (for further evidence of the relationship between Autonomy and growth, see Lee, Sheldon, & Turban, 2003). Further support for this view was found in later research (Knee & Zuckerman, 1998) suggesting that low Control/high Autonomy oriented participants were least likely to rely on defensive coping strategies, such as denial or distraction.

More recent work specifically targeting growth motivation, a desire to explore, learn, and expand one's abilities, shows that this motive specifically moderates the presence of a self-serving attribution bias (Bauer, Park, Montoya, & Wayment, 2015). In fact, one study found that individuals with higher growth motivation tended to make more internal attributions for failure, at least among those relatively high in self-esteem (Park, Bauer, & Arbuckle, 2009). Among participants lower in self-esteem, this link was decoupled. This pattern suggests that people seeking to improve themselves take greater responsibility for their shortcomings, but only when they feel secure enough to do so. Other research has shown that women low (vs. high) in growth motivation responded to negative feedback by self-handicapping on a future task; specifically, low-growth motivation women were more likely to select sample materials that would decrease their likelihood of succeeding on a future task (Brown, Park, & Folger, 2012). Put another way, high (vs. low) growth-motivated women responded to an initial failure with less motivation to establish a clear external attribution for future failure.

1.2. Current research

Although Park et al. (2009) focused specifically on academic failures, such findings may generalize to other domains. The goal of the present study is to conceptually replicate and extend this initial work treating growth motivation as a central moderator of the self-serving attribution bias.

We do so in two crucial ways: first, we extend this analysis to health, a practically important domain in which individuals commonly make external attributions to genetics, medical professionals, and a host of other targets one could blame (Luszczynska & Schwarzer, 2005; Wallston et al., 1978). This concern is practically important as individuals who avoid personal responsibility for contributing to health outcomes may fail to take active steps to eat well, avoid risk factors for serious disease (e.g., smoking), exercise, or any other actions that have been shown to minimize health risks. In fact, inaction on these kinds of preventative behaviors has been found to be a leading driver of health problems and health cost (Thorpe et al., 2007). We are familiar with no research to date that has explored the possibility that growth motivation may moderate the self-serving attribution bias in this context specifically, so this is an important area for further exploration.

Secondly, the current study improves upon several methodological limitations of past research testing whether growth motivation moderates the self-serving attribution bias. While initial work by Knee and Zuckerman (1996, 1998) implies that growth motivation is a moderator of the self-serving attribution bias, it relies on *Autonomy* orientation as an indicator of this motive. This is not precisely a measure of the motivation to pursue growth per se and thus there is value in specifically measuring growth motivation. While Park et al. (2009) used a more complete, multidimensional assessment of growth motivation, their assessment of the self-serving attribution bias was limited to a single item, bipolar scale. Because this measure does not independently assess attributions, it limits our knowledge of whether differences in the self-serving bias are being driven by changes to internal attributions, external attributions, or both. In the current project, we leverage validated measures of both growth motivation and attributions for health outcomes to provide a clearer test of the moderating role of growth motivation in the self-serving attribution bias.

Past research demonstrates that high growth participants fail to show the same defensiveness indicated among those lower in growth motivation, but why this pattern occurs is an open question. External attributions for failure, such as blaming poor health on genetics or bad luck, impose barriers to personal improvement. Accordingly, we predicted that growth motivation would predict *lower* relative attributions to external sources of health outcomes, particularly when participants were told that they were falling short in this domain.

2. Method

2.1. Participants

Participants were 137 undergraduates at the University of Southern Mississippi who participated for course credit. We employed no a priori rule regarding sample size and instead merely aimed to recruit the largest sample size possible by the end of the semester.[1] No data were collected after analysis.

Of the initial sample, 10 participants were excluded from analysis *a priori* for failing a comprehension check (described below) and one for failing to complete the primary outcome measure. One-hundred twenty-six participants comprised the final sample for analysis (105 Women, 21 Men; M_{age} = 20.76, SD_{age} = 4.23; 48 White/65 Black/2 Hispanic or Latino/6 Asian/5 Native American). All data and model syntax are publicly available at https://osf.io/7sb2u/.

2.2. Materials and procedures

2.2.1. Growth motivation

After providing demographic information, participants completed the Personal Growth Initiative scale (PGIS-II; Robitschek et al., 2012). Participants rated their agreement (1 = *Strongly Disagree*; 7 = *Strongly Agree*) with 16 statements assessing their motivation to pursue personal growth (e.g., "I set realistic goals to make changes in myself"; "I actively work to improve myself") with higher scores indicating greater growth motivation. Primary analysis employed a full composite of the items to attain a general aggregate of growth motivation (α = 0.92, M = 4.75, SD = 0.69). However, the scale is comprised of four subscales assessing separate facets: 1) Readiness for Change, the extent to which individuals feel prepared for growth (α = 0.81, M = 4.86, SD = 0.82); 2) Planfulness, the extent to which individuals actively set growth goals (α = 0.86, M = 4.88, SD = 0.77); 3) Using Resources, the extent to which individuals take advantage of growth opportunities in their environment (α = 0.76, M = 4.18, SD = 1.05); and 4) Intentional Behavior, an assessment of participants' intrinsic motivation to improve (α = 0.81, M = 5.07, SD = 0.74).

2.2.2. Health feedback

Following completion of PGIS-II, participants were asked to complete a fabricated health assessment comprised of 16 items asking about diet, sleep habits, exercise, and family health history. The purpose of the quiz ostensibly was to provide an objective assessment of each participants' health. In truth, participants were randomly assigned to one of three feedback conditions. In the *Failure* condition (n = 42),

[1] A post-hoc power analysis using the observed parameters for the significant interaction in the current study and 10,000 simulations yielded an estimated power of 0.712 to detect that effect. This falls short of the standard criterion of 0.80, although post hoc power analysis is widely considered problematic (e.g., Lakens, 2014 blog post) so this result must be interpreted with some caution.