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How is Spontaneous Self-Affirmation Linked to Self-Esteem? A Cross-Lagged Examination

[Brief Report]

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Abstract

The present research utilized a cross-lagged model over a four-month period to explore relationships between self-affirmation and self-esteem in a sample of adolescents from low-income households. We hypothesized a directional relationship wherein greater self-affirmation at Wave 1 would be associated with increased self-esteem four months later at Wave 2. Wave 1 data were collected from 144 adolescents in fall 2019, with Wave 2 data collected in spring 2020. Cross-lagged models supported the hypothesis. Greater self-affirmation at Wave 1 was associated with greater self-esteem four months later ($\beta = 0.26, p < .001$), whereas self-esteem at Wave 1 did not predict changes in self-affirmation four months later. Results support the conceptualization that self-affirmation bolsters self-esteem over time among certain adolescents.

Keywords: self-affirmation, self-esteem, adolescents, cross-lagged analysis
Highlights

- Provides insight into the relationship between self-affirmation and self-esteem among adolescents from low-income households.
- Reflecting on positive aspects of one’s self when threatened (i.e., self-affirmation) was linked to increased self-esteem four months later.
- Results support the conceptualization that self-affirmation may bolster self-esteem over time.
- Assisting youth in developing habitual self-affirming responses to perceived threats could potentially offer long-term benefits to their self-image.
How is Spontaneous Self-Affirmation Linked to Self-Esteem? A Cross-Lagged Examination

Self-affirmation theory proposes that people are strongly motivated to maintain a positive self-concept; when encountering threats to their self-concept many will respond by engaging psychological defenses to neutralize the threat or by bolstering their positive self-perceptions through self-affirmation (Sherman & Cohen, 2006; Steele, 1988). That is, when people encounter a situation that suggests they are not entirely competent, adequate, moral, and/or stable (e.g., receiving a poor performance evaluation or an insult) they may often either utilize a defense like denial or rationalization to dispel that suggestion, or they may remind themselves of other positive and important aspects of their identity (e.g. their role as a parent or their affinity for acting kindly) to restore their positive self-perceptions.

Experimental self-affirmation manipulations have shown that self-affirmation can temporarily increase or restore a person’s self-concept (Cohen & Sherman, 2014), but less is known about how spontaneous and naturalistic self-affirmation contributes to positive and stable self-perceptions (i.e., self-esteem). While experimental research has sometimes shown that self-affirmation can boost self-esteem (Sherman & Cohen, 2006) and cross-sectional data have indicated a strong association between more spontaneous self-affirmation and self-esteem (Harris et al., 2019), it is unknown whether those who spontaneously engage in self-affirmation tend to have higher self-esteem, or whether those with high self-esteem just happen to self-affirm more. Therefore, the present study utilized a cross-lagged panel design to examine directional relationships between self-affirmation and self-esteem in a sample of low-income adolescents over a four month period.
The Relationship between Self-Affirmation and Self-Esteem

Self-esteem refers to a global positive or negative attitude that a person holds toward themselves (Hank & Baltes-Götz, 2019; Rosenberg et al., 1995), and reflects intrapersonal processes that are influenced by recursive feedback from varied internal and external sources (Hank & Baltes-Götz, 2019). There is evidence that engaging in positive processes, such as self-affirmation, is associated with, and may influence, self-esteem (Harris et al., 2019; Sherman & Cohen, 2006), which suggests the need to examine its directional association with self-affirmation.

Self-affirmation theory (Sherman & Cohen, 2006; Steele, 1988) holds promise for understanding some of the psychological processes associated with how self-esteem is maintained and bolstered. This theory suggests that, people are motivated to maintain a self-concept marked by competence, adequacy, morality, and stability (Steele, 1988). Motivation affects how people respond to information that threatens their self-concept. People may engage in self-affirmation to protect or restore their self-concept from threatening information, such as by thinking about their personal strengths, considering their most important personal values, or reflecting on meaningful and positive relationships. Substantial evidence from experimental studies has demonstrated the function that self-affirmation plays in protecting self-concept from a host of different threats to identity—including threats from stereotypes, health-risk information, academic evaluations, and stress (Cohen & Sherman, 2014; Harris & Epton, 2009; Sherman & Cohen, 2006). Yet, this vast array of literature may not directly generalize to more spontaneous and organic processes which occur in response to threats to self-concept.

Fortunately, recent work has examined self-affirmation as an individual difference. In numerous studies, Harris and colleagues (2019) established that the tendency to report
responding to threats by spontaneously self-affirming—as measured by their Spontaneous Self-Affirmation Measure (SSAM)—parallels experimental findings. For instance, those reporting higher spontaneous self-affirmation were more open-minded in their responses to threatening health material. Of importance to the current study, spontaneous self-affirmation was positively associated with trait self-esteem; specifically, mean sample-size weighted latent correlation between the SSAM and the Rosenberg Self-Esteem Scale across independent studies was .46, with values ranging from .42 to .55 (Harris et al., 2019). However, these studies were cross-sectional and did not establish the direction of the relationship between self-esteem and spontaneous self-affirmation.

**Overview**

Understanding predictors of self-esteem may be important because of self-esteem’s positive links to psychological well-being and physical health (Freire & Ferreira, 2020; Hank & Baltes-Götz, 2019; Wouters et al., 2013), and negative links to increased delinquency, mental illness, substance use, as well as lower satisfaction of one’s life and relationships (Boden et al., 2008; Walker et al., 2020). Although there is cross-sectional and experimental evidence that self-affirmation may influence self-esteem, to date no research has examined this relationship over time via cross-lagged analyses. Therefore, the present study examined a sample of low-income adolescents over a 4-month period in a cross-lagged panel design. We hypothesized a directional relationship wherein self-affirmation would be positively associated with self-esteem over time, controlling for overlap between variables measured at the same time as well as at different time-points.
Method

Participants

Adolescents ($N = 144$) from predominantly low-income households provided data at both Wave 1 and Wave 2 (Gender, Female = 72%, Male = 28%, Trans < 1%; Age, $M = 15.62$, $SD = 0.72$, Range = 14-17; Race/Ethnicity, Black/African American = 58%, White/European American = 19%, Hispanic/Latinx = 10%, Asian American = 4%, Multi-Racial/Ethnic = 4%, Self-Identified Race/Ethnicity not listed, 3%, Native American = 1%). The entire sample reported that their families were part of governmental assistance programs such as Temporary Assistance of Needy Families, Free/Reduced Lunch, or Cash Assistance.

Measures

**Self-Affirmation.** The 13-item Spontaneous Self-Affirmation Measure (SSAM) assesses individual differences in the tendency to self-affirm when perceiving threats (Harris et al., 2019). Specifically, participants rate how often they find themselves thinking about three different aspects of themselves—strengths and attributes, values, and social relationships—when feeling “threatened or anxious by people or events.” Responses were on a 5-point scale where 1 = *Disagree completely* and 5 = *Agree completely*. In the present study, six items were presented to participants (two from each subscale) to limit demands on participants. Specifically, the two highest loading items (range .85–.93) from each of the three first-order factors of the SSAM (see Table 1 in Harris et al., 2019) were chosen, with one exception: the item “things I believe in” (.84), was selected as the second item from the values and principles factor as the wording seemed less abstract and more suitable for adolescent participants than the items “thinking about my principles” (.88) and “thinking about my values” (.87). The average score of all six items was utilized. Internal consistency was satisfactory at Wave 1 ($\alpha = 0.85$) and Wave 2 ($\alpha = 0.91$).
Self-Esteem. The Single-Item Self-Esteem Scale (Robins, Hendin, et al., 2001) was used to assess global self-esteem, and has been designed as a brief alternative to the Rosenberg Self-Esteem Scale. Participants answer the single item, “I have a high self-esteem” on a 5-point scale, with responses ranging from 1 = *not very true of me* to 5 = *very true of me*. Evidence for validity has come from large samples that demonstrate similar longitudinal stability and predictive validity as the Rosenberg Self-Esteem Scale (Robins, Tracy et al., 2001).

**Procedure**

The present study recruited participants through partner sites that included traditional high schools and alternative schools. Parent permission, child assent, and/or informed consent were obtained for participation in the research component of a grant-funded program that provided healthy relationship education to at-risk youth (e.g., foster care exposure, from low-income households) in an urban [blinded] county. Because the larger research project focuses on relationship education program evaluation, variables examined in this manuscript do not overlap with previous studies, and this particular study was not preregistered. Sites hosted one to four groups, with a total of 14 groups of students participating. Data collection occurred during group meeting times at partner sites; Wave 1 data were collected in August/September of 2019 and Wave 2 data were collected in January/February of 2020. Researchers communicated the voluntary nature of participation and obtained verbal assent before each wave of data collection. Research assistants distributed iPads, and each participant independently completed Qualtrics-based surveys. Once participants completed surveys, staff members distributed $10 gift cards as incentives. Participant identification numbers linked surveys across waves. All study procedures were approved by the institution of record’s Institutional Review Board.

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2 Data will not be shared because informed assent and consent documents did not specify this to participants as a possibility.
Results

First, descriptive statistics and bivariate correlations were calculated (see Table 1). A cross-lagged panel analysis was then conducted using the mean and variance adjusted weighted least squares (WLSMV) estimator in Mplus 7 to examine the effects of self-affirmation on self-esteem across Wave 1 and Wave 2; the WLSMV correction allowed for the single-item self-esteem measure to be specified as an ordinal measure (Muthén & Muthén, 2020). Cross-lagged panel analyses account for overlap between variables measured at the same time (e.g., the relationship between self-affirmation and self-esteem at Wave 1 as well as self-affirmation and self-esteem at Wave 2), and the correlation between the same variables at different time-points (e.g., the relationship between self-esteem at Wave 1 and self-esteem at Wave 2). Therefore, such analyses do not establish causality, but do provide evidence that one variable influences another variable over time without receiving reciprocal influence (Kearney, 2017). To examine the directional relationship between self-affirmation and self-esteem, we calculated chi-square difference tests wherein equality constraints were systematically imposed on both cross-lagged paths and compared to a fully saturated model (i.e., a model with all possible paths). Post hoc power analyses in G*Power 3.1 (Faul et al., 2009) indicated that detecting small, medium, and large effect sizes in the present sample ($N = 144$) would respectively require power ($1 - \beta$) equal to 0.23, 0.97, and 0.99.

In support of the hypothesis, the pattern of results indicated that self-affirmation may influence self-esteem over a four-month period without receiving reciprocal influence. As shown in Figure 1, the fully saturated model indicated that self-affirmation predicted higher self-esteem four months later ($\beta = 0.26$, $p < .001$), whereas self-esteem at Wave 1 did not predict changes in adolescents’ utilization of spontaneous self-affirmation ($\beta = -0.02$, $p = .853$). Difference tests
confirmed the differences between these cross-lagged paths. When the hypothesized cross-lagged path (Wave 1 self-affirmation predicting Wave 2 self-esteem) was allowed to be freely estimated (but the alternative cross-lagged path was constrained), a chi-square difference test indicated that the model was not statistically different from the fully saturated model, $\chi^2(df = 1) = 0.34, p = .854$, and demonstrated adequate goodness of fit to the data, RMSEA = 0.00, 90% CI = [0.00, 0.12], CFI = 1.00, TLI = 1.10, WRMR = .04. In contrast, when the alternative cross-lagged path (Wave 1 self-esteem predicting Wave 2 self-affirmation) was allowed to be freely estimated (but the hypothesized cross-lagged path was constrained), a chi-square difference test indicated that the model was statistically different from the fully saturated model, $\chi^2(df = 1) = 13.89, p < .001$, and demonstrated poor fit to the data, RMSEA = 0.30, 90% CI = [0.17, 0.45], CFI = 0.79, TLI = −0.28, WRMR = 0.56.

**Discussion**

The results of the current research provide empirical evidence that supports the role of self-affirmation in the maintenance of self-esteem. Our findings demonstrate that when youth are confronted with perceived challenges or threats, those who tend to report spontaneously responding by self-affirming their strengths, values, and/or social relationships retain higher self-esteem four months later. This finding complements experimental investigations on topics like addressing stereotype threat, that have found self-affirmation can help increase performance on cognitive and academic tests among negatively-stereotyped youth and professionals (Steele, 2010). Our findings demonstrate that when self-affirmations occur spontaneously, without outside manipulations, they are associated with improvements in the global self-perceptions of adolescents from low-income households over time. This is an important addition to cross-
sectional research, which has found positive correlations between individual differences in self-affirmation and self-esteem among college students (Harris et al., 2019).

Identifying predictors of self-esteem among adolescents is important because of self-esteem’s contribution to individual’s well-being, health, and success throughout adolescence and into adulthood (Hank & Baltes-Götz, 2019). The habit of self-affirming in the context of a perceived threat is a trainable skill and a strategy that could be easily scaffolded by teachers, clinicians, or other individuals invested in youth well-being and success (Yeager & Walton, 2011). Based on our results, it may be worthwhile to explore whether it is possible for interventions to elude long-term changes in youths’ tendency to engage in self-affirmation, which may hold potential benefits for their global self-esteem.

Limitations

The results require replication to generalize the findings beyond our relatively small but relatively diverse sample of adolescents from low-income households. The present study’s results may generalize best to low-income adolescents who self-select into supplementary educational opportunities, but replication is needed to generalize to other adolescent and adult populations. The present study’s design provided a stronger argument for directional influence than cross-sectional studies, but it is possible that unobserved variables could have influenced the direction and magnitude of the reported path coefficients. Though identifying the temporal order of associations between self-affirmation and self-esteem provides additional evidence for the potential of self-affirmation oriented interventions with youth, the present study’s findings cannot establish causation. Importantly, the present two wave design did not allow for the disentanglement of between-person and within-person associations over time; it is unclear whether the present results represent trait or state changes that occurred. To disentangle this,
future research may consider utilizing multiple waves of data and estimating random-intercept cross-lagged panel models. Additionally, separate validation studies with the briefer self-affirmation measure we utilized can improve the generalizability of the conclusions.

**Conclusion**

This investigation demonstrated that youth from low-income households who engage in higher levels of spontaneous self-affirmative behaviors when facing perceived threats are likely to report positive increases in their self-esteem over time. Importantly, there was no evidence of a reciprocal effect; having a higher self-esteem did not predict more subsequent engagement in self-affirmation. This provides evidence for a temporal order in how self-affirmation and self-esteem are associated among many youth. Individual differences in spontaneous self-affirmation may help explain why some adolescents display mental resilience in the face of threats, while others in similar circumstances experience reductions in self-esteem. Moreover, the present study suggests that assisting youth in developing habitual self-affirming responses to perceived threats could potentially offer long-term benefits to their self-image.
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http://dx.doi.org/10.1016/S0065-2601(06)38004-5


https://doi.org/10.3102/0031122X10370324
Table 1

Bivariate Correlations and Means

<table>
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<th>2</th>
<th>3</th>
<th>4</th>
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<td>1</td>
<td>Wave 1 Self-Affirmation</td>
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<td>5.72 (2.09)</td>
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<td>2</td>
<td>Wave 1 Self-Esteem</td>
<td>.25**</td>
<td>—</td>
<td></td>
<td>3.28 (1.22)</td>
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<td>3</td>
<td>Wave 2 Self-Affirmation</td>
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<td>.09</td>
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<td>5.67 (2.20)</td>
</tr>
<tr>
<td>4</td>
<td>Wave 2 Self-Esteem</td>
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<td>.48***</td>
<td>.14</td>
<td>3.52 (1.14)</td>
</tr>
</tbody>
</table>

**p < .01. ***p < .001.
Figure 1. Model with All Cross-Lagged Paths. Path coefficients represent standardized betas.

***p < .001.