IMPLICIT THEORIES OF CRIMINAL BEHAVIOR: FOSTERING PUBLIC SUPPORT FOR EX-OFFENDER COMMUNITY REENTRY

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Abstract

Ex-offenders face many barriers during the process of community reentry, including difficulty obtaining housing or employment. These barriers are often the result of stigma and discrimination that can negatively affect domains of functioning and well-being that are central to successful reintegration. Implicit theory suggests that stigmatizing attitudes may be explained through beliefs regarding the invariable (fixed mindset) or malleable (growth mindset) nature of human attributes. Prior work demonstrated how these mindsets can explain attitudes toward ex-offenders and support for community reentry. In this manuscript, we report on two studies that examined whether attitudes toward ex-offenders and support for their reentry can be influenced through a brief mindset-based persuasive reading. In Study 1, we piloted a brief, experimental manipulation among a student sample ($n = 352$) to induce growth mindsets regarding criminal behavior to foster positive attitudes toward ex-offenders and their reentry. In Study 2, we replicated the first study in a community-based sample ($n = 451$) and tested ex-offender race as a potential moderator. Mediation analyses demonstrated a causal pathway between mindset condition, attitudes toward ex-offenders, and support for reentry, and provided empirical evidence that the mindset-based experimental manipulation can foster growth mindsets and support for ex-offender community reentry, regardless of ex-offender race. Findings present directions for developing a potentially low-cost and time-effective strategy that can be disseminated easily through online or other media platforms, and tailored to target specific barriers to reentry. Further research is needed to establish the persistence of effects on attitudinal changes over time.

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Most people who are incarcerated return to the community within their lifetime. To demonstrate, annually almost two-thirds of a million people are released from U.S. state and federal prisons (Carson, 2015), and one in every 36 American adults is under correctional system supervision (Kaeble, Glaze, Tsoutis, & Minton, 2015). However, the transition back into community living presents barriers to adults who are released from jail or prison, including difficulty obtaining housing or employment. These barriers are frequently the result of stigma and discrimination that can adversely affect many domains of functioning and well-being that are central to successful reintegration (Brooks, Visher, & Naser, 2006; Wakefield & Uggen, 2010). For example, when seeking employment, housing, or health care, ex-offenders often receive differential and discriminatory treatment due to their criminal history (Pager & Quillian, 2005; Wakefield & Uggen, 2010). In recognition of the number of ex-offenders returning to community living and the challenges they face, there is increasing national emphasis on policies and practices that reduce reentry barriers, thereby improving the likelihood of successful reintegration (Office of the Press Secretary, 2015).

Given the negative impact of stigma on reentry outcomes, research examining the mechanisms underlying negative attitudes toward ex-offenders may help inform evidence-based reentry practices and policies with the potential to facilitate more successful community reintegration. Such research of these underlying mechanisms may contribute to the development of interventions and public education campaigns to improve public attitudes toward ex-offenders and increase support for their reentry. However, a point of distinction is needed between the constructs of public attitudes toward ex-offenders generally, and support for reentry specifically. Public attitudes toward ex-offenders is a general attitudinal construct, that often is operationalized to include an individual's willingness to associate or spend time with an ex-offender and an overall assessment of ex-offenders' character. Support for ex-offender reentry, in contrast, is a more specific behavioral measure of an individual's endorsement of policies and practices to facilitate and improve community reentry, such as increased taxes to support transitional housing and employment programming. Thus, although related, the two constructs present distinct elements that must be considered when examining stigma and discrimination experienced by ex-offenders during reentry. To that end, we first review predictors of public attitudes toward ex-offenders and public support for reentry before detailing the theoretical approach—implicit theories—taken in the current work.

First, findings of the extant research suggest that both public (e.g., sex, political orientation) and ex-offender (e.g., race, criminal history) characteristics are associated with attitudes toward ex-offenders. To demonstrate, men compared to women (Leverentz, 2011; Willis, Malinen, & Johnston, 2013; but see Hirschfield & Piquero, 2010) and non-White compared to White respondents (Hirschfield & Piquero, 2010; Leverentz, 2011) typically report more positive attitudes toward ex-offenders and their reentry. Self-reported affiliation with Christianity is associated with less favorable attitudes toward ex-offenders and reentry, however, religious beliefs such as forgiveness are associated with more positive attitudes (Park, 2010), illustrating the differences between religious affiliation and beliefs.

Prior research also suggests that younger participants, those with lower incomes, and those with less years of education report more favorable attitudes toward ex-offenders, although findings are mixed (e.g., Comartin, Kernsmith, & Kernsmith, 2009; Hirschfield & Piquero, 2010; Willis et al., 2013). Moreover, a recent meta-analysis found that two public characteristics—political orientation and interpersonal contact—are more strongly associated with public attitudes toward ex-offenders. People with liberal political orientations and those who report interpersonal contact with an ex-offender express more positive attitudes toward ex-offenders, compared to those with conservative political orientations and no prior contact (Rade, Desmarais, & Mitchell, 2016). Moreover, endorsement of belief in a just world (i.e., people get what they deserve and deserve what they get) explains individual differences in negative attitudes toward frequently discriminated against groups (Bizer, Hart, & Jekogian, 2012; Bègue & Bastounis, 2003; Furnham, 2003; Halabi, Statman, & Dovidio, 2015), punitive attitudes (Bègue & Bastounis, 2003; Mohr & Luscri, 1995), and lack of support for reentry (Rade, Desmarais, & Burnette, 2017). These findings suggest that one approach to improving support for ex-offender reentry may be through contact-based intervention, consistent with interpersonal contact theory (Allport, 1954); however, this is not an optimal approach due to limits regarding the generalizability of contacts and feasibility of implementing appropriate interventions (Brewer, 2016; Dixon, Durrheim, & Tredoux, 2005; but see Pettigrew & Tropp, 2006).

Second, prior research suggests that people generally express support for ex-offender reentry and associated services (Garland, Wodahl, & Schuhmann, 2013; Krisberg & Marchionna, 2006). However, this support may be limited to only some ex-offenders based on their criminal history (Garland et al., 2013). For example, members of the public report greater support for employment and housing programs when ex-offenders have participated in offense-related rehabilitation or educational training programs (Hardcastle, Bartholomew, & Gratham, 2011).

Collectively, extant research and theory provides only partial explanations for individual differences in attitudes toward ex-offenders and support for ex-offender reentry. We suggest that the literature on implicit theories and person perception may help complete this explanation. The theoretical framework of implicit theories (or person mindsets) posits that people hold beliefs about the nature of personal attributes (Dweck & Leggett, 1988). Specifically, a growth mindset (incremental theory) is the belief that personal attributes are malleable and can develop over time; whereas, a fixed mindset (entity theory) is the belief that personal attributes are relatively invariable. Across multiple domains, research shows that mindsets predict various outcomes, including goal setting, self-regulation, self-esteem, weight loss, and employee appraisal (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2012; Burnette & Finkel, 2012; Heslin, Latham, & Don, 2005; Nussbaum & Dweck, 2008). Moreover, research suggests that these mindsets may predict attitudes toward criminal justice policies and practices (Chiu, Dweck, Tong, & Fu, 1997; Gervey, Chiu, Hong, & Dweck, 1999; Tam, Shu, Ng, & Tong, 2013). For example, people who endorse growth mindsets, relative to fixed, are less likely to make internal attributions of criminal behavior, less likely to expect offenders to reoffend, and thus less punitive (Tam et al., 2013).
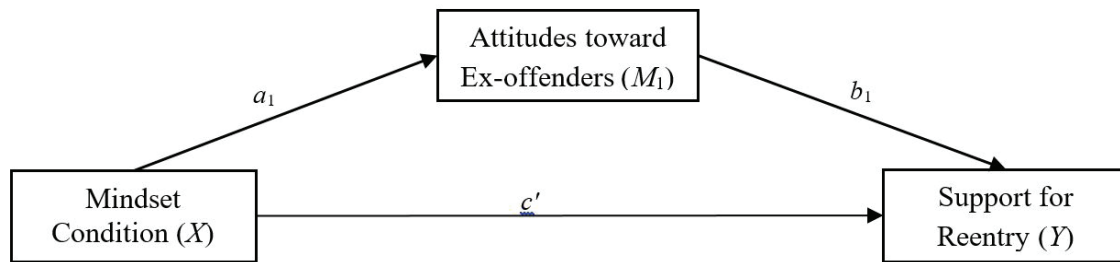
Building on this existing work, we seek to foster growth mindsets to improve attitudes towards ex-offenders and support for reentry. Mindsets can be primed through single-session and long-term interventions. For example, reading a short article presenting persuasive empirical evidence has been used to effectively induce either a growth or fixed mindset among student samples (Burnette, 2010; Nussbaum & Dweck, 2008). Multi-session interventions also have shown to effectively teach growth mindsets (Blackwell, Trzesniewski, & Dweck, 2007). Further research suggests that interventions can create lasting change in mindsets and associated outcomes (Heslin, Latham, & Don, 2005; Yeager et al., 2014). Specifically, some studies have demonstrated that teaching growth mindsets is associated with less stereotypical thinking (Levy, Stroessner, & Dweck, 1998). Therefore, inducing a growth mindset may decrease stigmatizing attitudes and foster support for traditionally marginalized populations, including ex-offenders, providing a potentially effective form of improving support for community reintegration.

The Present Research

Despite the diverse literature investigating public attitudes toward ex-offenders and their reentry, little research has investigated the mechanisms of these attitudes or points of intervention. To these ends, we proposed an integrative mediation model based on the well-established literature of implicit theory to explain public attitudes toward ex-offenders and support for community reentry (Rade et al., 2017). Results of this initial work showed that growth mindsets were associated with more positive attitudes toward ex-offenders, which, in turn, predicted greater support for reentry; however, findings were limited by the assessment of naturally occurring mindsets using a cross-sectional method, rather than experimentally manipulating mindsets of criminal behavior. The following two studies extend this work to examine whether growth and fixed mindsets regarding criminal behavior can be induced in order to influence attitudes towards offenders and their reentry. In Study 1, we piloted a brief experimental manipulation with the aim of inducing growth mindsets to foster positive attitudes toward ex-offenders and support for their reentry. In the second study, we replicated the first in a more generalizable community sample, and additionally tested a potential moderator.

STUDY 1

In Study 1, we developed and piloted a brief, experimental manipulation to examine whether we can foster positive attitudes toward ex-offenders and support for their reentry by promoting growth mindsets. We hypothesized that the growth mindset condition, relative to the fixed mindset condition, would encourage a stronger belief in the malleability of people's behavior—a manipulation check. We also posited that those in the growth mindset condition, compared to the fixed, would report greater support for ex-offender reentry, through more positive attitudes toward ex-offenders (see Figure 1).

Figure 1. Study 1: Statistical diagram of mediation model of the direct and indirect effects of the mindset condition on support for ex-offender reentry through attitudes toward ex-offenders.

Method

Participants. We recruited 400 undergraduate college students enrolled in an introductory psychology course at a large university in a southeastern state. To participate, students needed to be over the age of 18 and not have previously participated in the study. Potential participants accessed the study through an online experiment recruitment platform utilized by the university and provided informed consent prior to engaging in the study. Students who participated received credit toward meeting a course research requirement. Fourteen persons were removed for failing an attention check item and 34 for failing to complete all procedures in the study, resulting in a final sample of 352 students.

Procedures. All participants were randomly assigned to one of two experimental conditions, undergoing similar procedures to those of previous implicit theory research (e.g., Burnette, 2010; Hong, Chiu, Dweck, Lin, & Wan, 1999). Participants read a one page *Psychology Today*-type article that presented evidence either for a growth or fixed mindset of criminal behavior. Specifically, the growth mindset article emphasized the malleable nature of criminal behavior and the potential for successful rehabilitation, with the central message of "Criminal behavior tendencies are malleable." Comparatively, the fixed mindset article emphasized the unchangeable nature of criminal behavior, and the central message was, "Criminal behavior tendencies are fixed at an early age". After reading one of the articles, participants were asked to complete a reading comprehension task, including items which determined the comprehensibility of the article for a high school audience and comments on the most salient evidence from the article. Participants were thanked for their participation in the reading task, and then advanced to complete the "real" study examining beliefs about criminal behavior. Participants completed a survey including explanatory variables, outcome variables, and covariates (described below). The Institutional Review Board at NC State University approved all study procedures.

Measures. We administered an online survey comprised of items to assess mindsets, attitudes toward ex-offenders, support for re-entry, and sociodemographic characteristics, described in the sections that follow.

Manipulation check. We included an item in the survey to ensure that participants understood the core mindset message of the reading conditions. *Criminal behavior mindsets* were assessed using a single item which measured participant rating of the fixed or changeable nature of criminal behavior on a 7-point scale (ranging from 1 = fixed nature of criminal behavior, to 7 = changeable nature of criminal behavior), after completing the reading. Additionally, general *person mindsets* were assessed using the Implicit Person Theory measure (Levy et al., 1998), which measures beliefs about the fixed vs. malleable nature of human attributes using a 6-point scale (ranging from 1 = strongly disagree, to 6 = strongly agree). Four items were reverse coded, responses were summed, and mean scores were calculated, with larger scores indicating a growth mindset.

Explanatory variables. *Attitudes toward ex-offenders* were assessed using a modified 6-item scale measuring attitudes toward people who have been incarcerated (Hirschfield & Piquero, 2010). Items measured participant agreement (ranging from 1 = strongly disagree, to 6 = strongly agree) with statements regarding ex-offender characteristics (e.g., dishonest, dangerous, innocent) and willingness to associate with an ex-offender. Four items were reverse coded, responses were summed, and mean scores were calculated, with larger scores indicating more positive attitudes toward ex-offenders.

Outcome variable. We assessed the primary outcome, *support for ex-offender reentry*, using seven items drawn from the Attitudes toward Prisoner Reentry scale (Park, 2010). Items assessed participant agreement (ranging from 1 = strongly disagree, to 5 = strongly agree) with statements about ex-offender reentry programming (e.g., job training, drug treatment), policy (e.g., early release, funding for reentry programs), and public safety. One item was reverse coded, responses were summed, and mean scores were calculated, with larger scores indicating greater support for ex-offender reentry.

Covariates. Sociodemographic information was also collected and tested for inclusion in the mediation analyses. Participant characteristics included, *race/ethnicity* (dichotomized; 0 = White, 1 = other), *sex* (0 = male, 1 = female), *arrested since the age of 18* (0 = yes, 1 = no), *convicted since the age of 18* (0 = yes, 1 = no), *incarcerated since the age of 18* (0 = yes, 1 = no), *age* (in years), *annual household income* (1 = US$0- US$20,000, 2 = US$20,000- US$40,000, 3 = US$40,000- US$60,000, 4 = US$60,000- US$80,000, 5 = US$80,000-US$100,000, 6 = US$100,000-US$150,000, 7 = >US$150,000), *political orientation* (ranging from 1 = extremely liberal, to 7 = extremely conservative), and *religious affiliation* (1 = Agnosticism, 2 = Atheism, 3 = Buddhism, 4 = Christianity-Protestant, 5 = Christianity-Catholic, 6 = Christianity-Orthodox, 7 = Hinduism, 8 = Islam, 9 = Judaism, 10 = None, 11 = Other). Additionally, we assessed *religious beliefs* using the 5-item Duke University Religions Index (Koenig & Bussing, 2010), which measures religiosity and engagement in religious activities and practices (e.g., prayer, meditation, service attendance). *Belief in a just world* was assessed using the Global Belief in a Just World Scale (Lipkus, 1991). Seven items measured respondent agreement (ranging from 1 = strong disagreement, to 6 = strong agreement) and were summed to produce possible total scores ranging from 7 to 42, with larger scores indicating stronger belief in a just world. *Interpersonal contact* with an ex-offender was assessed using a 14-item Level-of-Contact Report (adapt-

ed from Holmes, Corrigan, Williams, Canar, & Kubiak, 1999) ranging from no contact (i.e., "I have never observed a person that I was aware had previously been incarcerated") to personal contact (i.e., "I have been previously incarcerated").

Data analysis. A priori power analyses indicated that the recruited sample size of 400 participants provided ample power to detect at least a small ($\alpha = 0.14$) and medium ($\beta = 0.26$) path (power = .80; Fritz & Mackinnon, 2007)2007. Descriptive statistics were calculated for all variables, including frequencies and percentages for dichotomous variables and means and standard deviations for continuous variables. We conducted bivariate correlations to investigate the associations between the independent variable (mindset condition), mediator (attitudes toward ex-offenders), and dependent variable (support for ex-offender reentry). Additionally, we conducted independent sample t-tests, one-way ANOVAs, Spearman's rho correlations, and Pearson's correlations to examine the associations between covariates and support for ex-offender community reentry. Significant covariates were retained in the mediation analyses. We conducted mediation analyses using PROCESS model 4 (Hayes, 2013) examining the associations between mindset condition and reentry support, and the indirect effects after adding the mediator to the model. We used bootstrapping procedures (10,000 bootstrap resamples) to create an approximation of the sampling distribution and generate 95% bias-corrected confidence intervals for the indirect effects in the mediation analyses (Hayes, 2013; Preacher & Hayes, 2004). All analyses were conducted using SPSS v.20 (IBM, Armonk, NY) and mediation analyses were conducted using the SPSS PROCESS macro (Hayes, 2013; Preacher & Hayes, 2004).

Results

Descriptive statistics. Participants in Study 1 were between 18 and 50 years of age (see Table 1). A majority were White and female. About a third of participants reported at least "slightly" liberal political orientations (35.0%), whereas a quarter reported a moderate orientation (26.8%), and the remainder reported at least "slightly" conservative political orientations. Religious affiliations of the respondents were varied, with Christianity as the most prevalent (Protestant, Catholic, or Orthodox; 69.2%), followed by no religious affiliation and Agnosticism. Over a third of participants (38.9%) reported rarely or never engaging in private religious activities (e.g., prayer, meditation, reading religious text), although many attended church or religious meetings at least a few times a month (45.7%). Over half of respondents reported personally knowing an ex-offender (56.8%) and one third had a relative who was incarcerated (34.9%). Few reported a personal history of arrest, conviction, or incarceration.

Table 1. Sample Characteristics by Support for Ex-offender Reentry

Sample Characteristics	**Study 1**		**Study 2**	
Categorical Variables	**%**	**t-value**	**%**	**t-value**
Sex				
Male	42.7	0.33	51.6	-1.00
Female	57.3		48.4	

Sample Characteristics	Study 1		Study 2	
Categorical Variables	%	t-value	%	t-value
Race/ethnicity				
White	76.1	-1.79	78.5	0.44
Other	23.8		21.5	
Arrested				
Yes	0.3	0.02	16.9	0.89
No	99.7		83.1	
Convicted				
Yes	0.6	0.03	10.9	0.40
No	99.4		89.1	
Incarcerated				
Yes	0.0	—	6.3	-0.07
No	100.0		93.8	
	%	F	%	F
Religious Affiliation				
Agnosticism	8.8		18.0	
Atheism	7.1		19.1	
Buddhism	1.1		2.2	
Christianity, Protestant	45.9		25.1	
Christianity, Catholic	17.7	6.09***	15.1	3.59***
Christianity, Orthodox	5.7		1.6	
Hinduism	0.6		0.4	
Islam	0.9		0.9	
Judaism	1.1		1.3	
None	9.7		12.6	
Other	1.4		3.8	
Geographic Region				
Northwest	—		18.1	
Midwest	—	—	20.3	1.43
South	—		40.9	
West	—		20.8	
Continuous Variables	M (SD)	r	M (SD)	r
Belief in a Just World	22.81 (5.14)	-0.24***	23.98 (7.37)	-0.18***
Age	19.21 (2.68)	-0.02	35.04 (11.60)	0.01
Religiosity	9.76 (4.28)	-0.29***	7.43 (4.49)	-0.17***
	M (SD)	r_s	*M* (SD)	r_s
Income	4.07 (2.11)	-0.06	3.11 (1.58)	-0.10*
Education	3.27 (1.02)	0.01	4.31 (1.16)	0.05
Contact	8.65 (3.24)	-0.01	9.78 (3.30)	0.11*
Religious Meeting Attendance	3.36 (1.62)	-0.18**	2.06 (1.47)	-0.14**
Private Religious Activity	2.81 (1.79)	-0.16**	2.20 (1.69)	-0.15**
Political Orientation	4.01 (1.56)	-0.42***	3.34 (1.70)	-0.42***

Notes. *p < 0.05, **p < 0.01, ***p < 0.001.

Manipulation check. Participants assigned to the growth mindset condition (M = 5.89, SD = 0.99) rated criminal behavior as more malleable compared to participants in the fixed mindset condition [M = 2.32, SD = 1.29; $t(350)$ = -29.11, p < .001]. Although our experimental manipulation was designed to induce a fixed or growth mindset regarding criminal behavior specifically, we anticipated influencing general person mindsets as well. Indeed, those in the growth mindset condition (M = 3.94, SD = 0.89), compared to the fixed condition (M = 3.47, SD = 0.96), expressed beliefs consistent with a general growth mindset [$t(349)$ = 4.82, p < .001].

Bivariate analyses. Bivariate analyses of covariates revealed significant differences in supportive attitudes toward ex-offender reentry as a function of belief in a just world, political orientation, religious affiliation, and religious practices (see Table 1). Participants who reported less belief in a just world and more liberal political orientations reported greater support for reentry, compared to those with stronger beliefs in a just world and moderate or conservative political orientations. Generally, participants who reported less religiosity (e.g., experience presence of the divine, religious beliefs influence other areas of life), those who attended religious meetings less frequently, and those who engaged in private religious activities less frequently tended to report more support for ex-offender reentry. Additionally, participants from various religious affiliations reported differing levels of support for reentry. Specifically, people affiliated with Agnosticism and Atheism reported more support for reentry compared to participants affiliated with Christianity and Judaism. All other covariates were not associated with supportive attitudes toward ex-offender reentry.

As anticipated, we found direct associations between criminal behavior mindsets, general person mindsets, attitudes toward ex-offenders, and support for ex-offender reentry (see Table 2). That is, people with growth mindsets specific to criminal behavior also held general growth mindsets. Participants who held these growth mindsets reported more positive attitudes toward ex-offenders and more support for ex-offender reentry, compared to those with fixed mindsets. Additionally, participants with more positive attitudes toward ex-offenders also reported more support for reentry. Although, bivariate analyses revealed a significant correlation between attitudes toward ex-offenders and support for their reentry, this value is below the threshold of multicollinearity and suggests that these two variables are indeed measuring two distinct, but related constructs.

Table 2. Descriptive Statistics and Intercorrelations for Variables included in Mediation Models

Measure	M (SD)	Median	α	1	2	3	4	5
Study 1								
1. Mindset Condition	0.49 (0.50)	0.00	--	1.00				
2. Criminal Behavior Mindsets	4.08 (2.12)	4.00	--	0.84***	1.00			
3. Person Mindsets	3.70 (0.95)	3.75	0.92	0.25***	0.20***	1.00		
4. Attitudes toward Ex-offenders	3.09 (0.72)	3.17	0.74	0.11*	0.09	0.18**	1.00	
5. Support for Reentry	3.56 (0.58)	3.64	0.79	0.15**	0.14**	0.24***	0.50***	1.00
Study 2								
1. Mindset Condition	0.48 (0.50)	0.00	--	1.00				
2. Criminal Behavior Mindsets	3.95 (2.55)	4.00	--	0.91***	1.00			
3. Person Mindsets	3.89 (1.23)	4.00	0.96	0.30***	0.31***	1.00		
4. Attitudes toward Ex-offenders	3.07 (0.79)	3.00	0.80	0.12*	0.15**	0.29***	1.00	
5. Support for Reentry	3.66 (0.56)	3.57	0.79	0.06	0.05	0.24***	0.53***	1.00

Note. Study 1, $n = 350$-352; Study 2, $n = 446$-451; Mindset Condition: 0 = Fixed Mindset, 1 = Growth Mindset *$p < .05$; **$p < .01$; ***$p < .001$.

Mediation analyses. Results of our mediation analyses supported the pathway from mindset condition to support for ex-offender reentry through attitudes toward ex-offenders (see Table 3). The total effect of mindsets on support for ex-offender reentry (c) was significant, suggesting that people in the growth mindset condition report more support for ex-offender reentry compared to those in the fixed condition, after accounting for the mediating variable [$F(348) = 7.78$, $p < .006$, Model $R^2 = 0.02$]. Next, we examined the direct effects composing the pathway between mindset condition and support for reentry. Results showed that people in the growth mindset condition reported more positive attitudes toward ex-offenders than those in the fixed mindset condition (a_1), and those with more positive attitudes toward ex-offenders reported more support for reentry (b_1). Overall,

the results supported our hypothesis that public attitudes toward ex-offenders mediates the relationship between mindset condition and support for ex-offender reentry (a_1b_1).

Table 3. Study 1: Regression coefficients for mediation model of mindset condition on support for ex-offender reentry through attitudes toward ex-offenders.

		Attitudes toward Ex-offenders (M_1)		Support for Ex-offender Reentry (Y)		
		Coeff (SE)	95%CI		Coeff (SE)	95%CI
Mindset Condition (X)	a_1	0.95*(0.46)	0.04, 1.86	c'	0.77*(0.38)	0.26, 1.52
Attitudes toward Ex-offenders (M_1)				b_1	0.46***(0.04)	0.37, 0.55
Constant	i_{M1}	17.14***(0.73)	15.71, 18.57	i_Y	15.24***(0.96)	13.35, 17.12
		Conditional Effects				
		Coeff (SE)			95%CI	
Direct Effects	c'	0.77*(0.38)			0.03, 1.52	
Indirect Effects	a_1b_1	0.44*(0.22)			0.03, 0.89	
Total Effects	c	1.21**(0.43)			0.36, 2.06	

Notes. Coeff = OLS unstandardized regression coefficient; SE = Standard Error; CI = Confidence Interval; Mindset Condition, 0 = Fixed Mindset, 1 = Growth Mindset; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

We then assessed the same mediation pathway controlling for all significant co-variates from the bivariate analyses (belief in a just world, political orientation, religious affiliation, religiosity, religious attendance, religious practices) (full results available upon request). Results confirmed the findings of the previous model. The total effect of the criminal behavior mindset condition (c) was again significant [$F(339) = 14.85$, $p < .001$; Model $R^2 = 0.23$]. People in the growth mindset condition, compared to those in the fixed condition, reported more positive attitudes toward ex-offenders, and those with more positive attitudes toward ex-offenders reported more support for reentry. Four of the covariates—belief in a just world, political orientation, religious affiliation, religiosity—demonstrated significant direct associations with attitudes toward ex-offenders. Of these, political orientation and religiosity remained significant covariates of reentry support. Results revealed a significant indirect effect of mindset condition on support for ex-offender reentry through general attitudes toward ex-offenders, even after controlling for the covariates included in the model.

Discussion. Overall, the results of Study 1 provide support for the pathway between mindset condition, attitudes toward ex-offenders, and support for reentry, consistent with prior work (Rade et al., 2017). Further, through a brief reading-based experimental manipulation, we were able to successfully induce either a growth or fixed mindset regarding the nature of criminal behavior. Inducing a growth mindset led to positive attitudes toward ex-offenders, which, in turn, led to support for ex-offender reentry. However, the

implications of these findings are limited by the nature of the sample of undergraduate psychology students. Thus, we conducted Study 2 to increase the generalizability of results to a community sample and to explore a potential moderator: ex-offender race.

STUDY 2

In Study 2, we hypothesized that the mediation pathway from mindsets to support for reentry through attitudes toward ex-offenders will be moderated by ex-offender race. Indeed, the extant literature suggests that ex-offenders of racial and ethnic minorities experience additional discrimination; people of racial minorities, particularly Black males, are disproportionately arrested, incarcerated, and under criminal justice supervision, while also experiencing greater rates of recidivism (Carson, 2015; Hartney & Vuong, 2009; Wheelock, Uggen, & Hlavka, 2011). This disproportionate treatment and racial discrimination is also present in many domains central to ex-offender reentry, such as employment and housing. To demonstrate, recent reviews reveal the presence of racial inequality in hiring practices (Pager & Shepherd, 2008; Quillian, 2006), including screening (Pager, 2003) and selection (Bertrand & Mullainathan, 2004). Collectively, the extant research suggests that public attitudes toward ex-offenders may vary based on an offender's race.

According to implicit theory research, those holding fixed and growth mindsets consider different information when making assessments about human attributes. Specifically, people with fixed mindsets are more 'trait-focused,' relying on meaningful personality and dispositional attributes about people and their behaviors to make stronger judgements based on that information; alternatively, those with growth mindsets may be described as 'process-focused,' considering psychological, situational, and contextual explanations for behavior (Chiu, Dweck, et al., 1997; Molden, Plaks, & Dweck, 2006). That is, people with growth mindsets are less likely to base judgements on the basic traits, qualities, and characteristics of others (i.e., race, offense history) and more likely to consider dynamics of a situation (i.e., potential for rehabilitation and successful reentry). Therefore, we propose that ex-offender race serves as a moderator of the associations between mindset condition and attitudes toward ex-offenders, as well as the direct association between mindset condition and support for reentry (see Figure 2).

Taken together, we hypothesize that people will (1) report more negative attitudes toward Black ex-offenders compared to White ex-offenders, (2) report less reentry support for Black ex-offenders compared to White ex-offenders, and (3) that these associations will be weaker among people in the growth mindset condition relative to the fixed mindset condition.
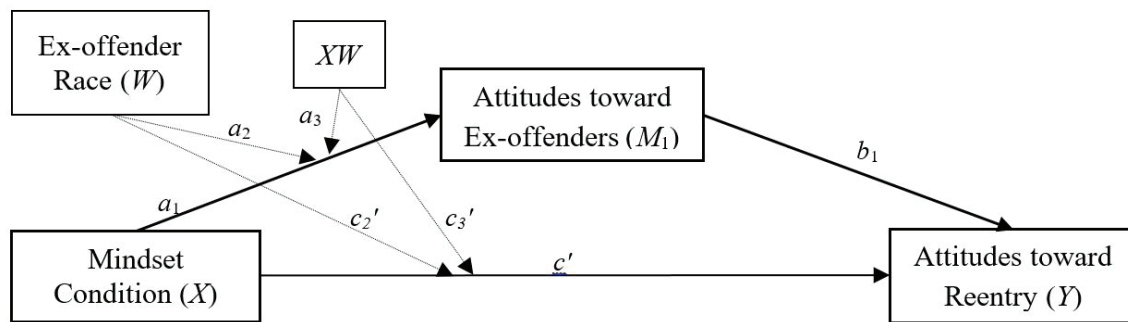
Figure 2. Study 2: Statistical diagram for moderated mediation models of the direct and indirect effects of mindset condition on support for ex-offender reentry through attitudes toward ex-offenders with ex-offender race as a moderator of the relationship between mindset condition and attitudes toward ex-offenders.

Methods

Participants. We recruited 500 adults living in the U.S. through Amazon Mechanical Turk (MTurk) to participate in our online survey. MTurk is an online venue for posting jobs that workers can complete for compensation providing a useful platform for behavioral research (Bartneck, Duenser, Moltchanova, & Zawieska, 2015; Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013; Goodman, Cryber, & Cheema, 2013) across a range of areas, including intergroup forgiveness (Davis et al., 2015) and public opinion about criminal justice issues (Scurich & Monahan, 2016). To be eligible, participants must have been at least 18 years of age and living in the U.S. Participants provided informed consent prior to engaging in the study and were compensated with US $1.00 for their participation.

Procedures. Similar to Study 1, we randomly assigned participants to either a fixed or growth mindset condition in which they read the same one page *Psychology Today*-type article to experimentally manipulate criminal behavior mindsets. Additionally, participants within each mindset condition were randomly assigned to one of two ex-offender race conditions to test for the moderating effects of race. Specifically, participants were prompted to consider either a Black ex-offender or White ex-offender when responding to the survey items about their attitudes toward ex-offenders and support for reentry. For the purpose of this study we assessed only two ex-offender race categories (Black, White), consistent with prior research investigating racial discrimination toward ex-offenders (e.g., Pager, 2003).

As in Study 1, participants completed the online survey including items assessing mindsets, attitudes toward ex-offenders, reentry support, and sociodemographic characteristics. Seven persons were removed for failing an attention check item and 42 persons due to extensive missing data, resulting in a final sample of 451. The Institutional Review Board at NC State University approved all procedures.

Measures. Participants completed the same survey measures from Study 1 to assess *criminal behavior mindset* and *person mindsets* (manipulation checks), *attitudes toward ex-offenders* (mediator variable), and *support for ex-offender reentry* (outcome variable). All sociodemographic variables (*race/ethnicity, arrested since the age of 18, convicted since the age of 18, incarcerated since the age of 18, age, annual household income, political orientation, religious affiliation, religious beliefs, interpersonal contact, belief in a just world*) from Study 1 were used in Study 2. We also assessed *highest level of education* [1 = less than a high school degree, 2 = high school or equivalent, 3 = vocational/technical school, 4 = Bachelor's degree, 5 = Master's degree, 6 = Doctorate degree, 7 = professional degree (MD, JD, etc.), 8 = other] and *geographic region* (1 = Northwest, 2 = Midwest, 3 = South, 4 = West, according to the U.S. Census Bureau regional divisions; U.S. Census Bureau, 2010), as additional sociodemographic covariates.

Data analysis. A priori power analyses indicated that the recruited sample size of 500 provided ample power to detect at least small effects (regression coefficients = 0.14; power = 0.91; Preacher, Rucker, & Hayes, 2007). As in Study 1, descriptive statistics were calculated for all variables. We conducted independent sample t-tests, one-way ANOVAs, Spearman's rho correlations, and Pearson's correlations to examine the associations between covariates and support for ex-offender community reentry. We conducted moderated mediation analyses using PROCESS model 8 (Hayes, 2013). Specifically, we examined the associations between mindsets and reentry support through attitudes toward ex-offenders, and the moderating effects of ex-offender race. We used 10,000 bootstrap resamples and 95% bias-corrected confidence intervals in the moderated mediation analyses (Hayes, 2013; Preacher & Hayes, 2004).

Results

Descriptive statistics. Study 2 participants were between 18 and 75 years of age (see Table 1). A majority were White and about half were male. Half of participants reported at least "slightly" liberal political orientations (53.9%), whereas a quarter reported at least "slightly" conservative political orientations (24.7%), and the remainder reported a moderate orientation. Religious affiliations of the respondents varied, with Christianity as the most prevalent (Protestant, Catholic, or Orthodox; 41.8%), followed by Atheism and Agnosticism; however, a majority of participants reported rarely or never engaging in private religious activities (60.0%) or attending religious meetings and services (69.1%). Most respondents reported personally knowing an ex-offender (71.8%) and over one third had a relative who was incarcerated (37.0%). Even so, few had a personal history of arrest, conviction, or incarceration.

Manipulation check. As in Study 1, results showed successful manipulation of criminal behavior and general person mindsets. Participants assigned to the growth mindset condition ($M = 6.36$, $SD = 0.90$) rated criminal behavior as more malleable compared to participants in the fixed mindset condition [$M = 1.74$, $SD = 1.23$; $t(448) = -45.36$, $p < .001$]. Those in the growth mindset condition ($M = 4.28$, $SD = 1.06$), compared to the fixed condition ($M = 3.54$, $SD = 1.26$), reported beliefs consistent with a general growth mindset [$t(448) = -6.72$, $p < .001$].

Bivariate analyses. Analyses revealed significant differences in public support for ex-offender reentry across sociodemographic characteristics (see Table 1). Specifically, participants who reported less belief in a just world and who held liberal political orientations reported greater reentry support compared to those with strong belief in a just world and moderate or conservative political orientations. Those with smaller household incomes reported more support for ex-offender reentry. Consistent with interpersonal contact theory, participants who reported a closer degree of contact with an ex-offender (e.g., personal friend, family member) reported stronger support for reentry. Lastly, people who reported less religiosity, less attendance at religious meetings, and infrequent participation in private religious activities reported more support for ex-offender reentry. Participants from various religious affiliations reported differing levels of support for ex-offender reentry; people affiliated with Atheism or no religion reported more support for reentry compared to participants affiliated with Christianity. All other sociodemographic covariates were not associated with supportive attitudes toward ex-offender reentry ($ps > .05$).

As in Study 1, we found direct associations between criminal behavior mindsets, general person mindsets, attitudes toward ex-offenders, and support for ex-offender reentry (see Table 2). Participants with growth mindsets of criminal behavior also held general growth mindsets. Those with growth mindsets held more positive attitudes toward ex-offenders and more support for ex-offender reentry, compared to those with fixed mindsets. Participants with more positive attitudes toward ex-offenders also reported greater reentry support.

Moderated mediation analyses. Results of the moderated mediation analyses supported our hypothesized mediation from mindset condition to reentry support through attitudes toward ex-offenders, with ex-offender race as a moderator (see Table 4). Analyses revealed that people in the growth mindset of criminal behavior condition reported more positive attitudes toward ex-offenders (a_1), and those with more positive attitudes toward ex-offenders, reported more support for reentry (b_1). We then examined the conditional direct and indirect effects of mindset condition on reentry support through attitudes toward ex-offenders at the two values of the moderator (Black ex-offender condition; White ex-offender condition) to test for moderated mediation. Results provided partial support for our hypotheses. People reported more negative attitudes toward Black ex-offenders compared to White ex-offenders (a_2); however, support for reentry did not vary based on ex-offender race (c_2'). Moderation analyses showed that people in the growth mindset condition reported significantly more positive attitudes toward Black ex-offenders compared to those in the fixed mindset condition [$t(444) = 2.61$, $p = 0.01$], although attitudes toward White ex-offenders did not differ based on mindset condition [$t(444) = 0.08$, $p = 0.94$]. Moreover, results revealed a significant moderated mediation effect (bootstrap 95%CI = -1.70, -0.11). The mediation pathway between mindset condition, attitudes toward ex-offenders, and support for reentry was significant only within the Black ex-offender condition. Fostering a growth mindset was associated with more positive attitudes toward ex-offenders and greater support for reentry, and this was particularity true for public attitudes toward Black ex-offenders and their reentry.

Table 4. Study 2: Regression coefficients for moderated mediation model of the mindset condition on support for ex-offender reentry through attitudes toward ex-offenders with ex-offender race as a moderator of the relationship between mindset condition and attitudes toward ex-offenders.

		Attitudes toward Ex-offenders (M_1)		Support for Ex-offender Reentry (Y)		
		Coeff (SE)	95%CI		Coeff (SE)	95%CI
Mindset Condition (X)	a_1	2.05**(0.63)	0.82, 3.29	c'	0.13(0.45)	-0.76, 1.02
Attitudes toward Ex-offenders (M_1)				b_1	0.44***(0.03)	0.37, 0.50
Ex-offender Race (W)	a_2	3.80**(1.40)	1.06, 6.54	c_2'	0.26(1.00)	-1.70, 2.23
XW interaction	a_3	-1.95*(0.89)	-3.71, -0.20	c_3'	-0.08(0.64)	-1.33, 1.17
Constant	i_{M1}	14.93***(0.98)	13.00, 16.86	i_Y	19.15***(0.97)	17.24, 21.06

	Conditional Effects of Ex-offender Race (W)	
Direct Effects	Coeff (SE)	95%CI
0 (Black Ex-offender)	0.13(0.45)	-0.76, 1.02
1 (White Ex-offender)	0.05(0.45)	-0.83, 0.93
Indirect Effects	Coeff (Bootstrap SE)	Bootstrap 95%CI
0 (Black Ex-offender)	0.89*(0.27)	0.39, 1.48
1 (White Ex-offender)	0.05(0.29)	-0.53, 0.61

Notes. Coeff = OLS unstandardized regression coefficient; SE = Standard Error; CI = Confidence Interval; Mindset Condition, 0 = Fixed Mindset, 1 = Growth Mindset; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

We then added the significant covariates from the bivariate analyses to our moderated mediation model (belief in a just world, income, interpersonal contact, political orientation, religiosity, religious practices, religious attendance, and religious affiliation). Results confirmed previous findings. Even after controlling for all included covariates, the association between criminal behavior mindset condition and support for reentry was mediated by attitudes toward ex-offenders and differed in strength as a function of ex-offender race (full results available upon request). Moreover, three of the covariates—belief in a just world, interpersonal contact, and political orientation—demonstrated significant direct associations with attitudes toward ex-offenders. Of these, political orientation remained a significant covariate of reentry support. Taken together, results revealed a significant indirect effect of mindsets on support for ex-offender reentry through general attitudes toward ex-offenders, even after accounting for the covariates and moderator.

Discussion. Study 2 provides support for our hypothesized moderated mediation model, further evidence of the malleability of criminal behavior mindsets, and some support for the moderating effects of ex-offender race. Specifically, the brief, mindset-based reading successfully induced a growth or fixed mindset regarding criminal behavior in

a large community-based sample. Findings revealed that fostering a growth mindset led to more positive attitudes toward ex-offenders and, ultimately, greater support for ex-offender reentry. As anticipated, people reported more negative attitudes toward Black ex-offenders compared to White ex-offenders. Findings showed that facilitating a growth mindset created more positive attitudes toward Black ex-offenders and more support for their reentry; however, the moderated mediation effect did not remain once we controlled for other correlates.

GENERAL DISCUSSION

The current research explored mindsets as a mechanism to explain and improve public attitudes toward ex-offenders and support for their reentry. Study 1 extended previous research that mindsets are associated with support for reentry, through general attitudes toward ex-offenders (Rade et al., 2017). Through the successful manipulation of group differences in mindsets regarding criminal behavior, findings provide evidence of the causal pathway from mindset condition to attitudes to support for reentry. Fostering a growth mindset regarding criminal behavior led to greater support for ex-offender reentry, even after controlling for relevant sociodemographic characteristics. Building upon these results, Study 2 replicated findings of the first study in a community-based sample and tested the moderating effect of ex-offender race. Findings provided further support for our mediation model and partial support for our hypothesis regarding race-based discrimination. Attitudes toward ex-offenders mediated the association between mindset condition and support for ex-offender reentry regardless of public sociodemographic covariates. Although, people reported more negative attitudes toward Black ex-offenders compared to White ex-offenders, facilitating a growth mindset of criminal behavior was associated with more positive attitudes toward Black ex-offenders and more support for their reentry, suggesting that growth mindsets buffer the effect of ex-offender race on public attitudes and reentry support.

Prior research has demonstrated that growth mindsets, relative to fixed mindsets, are associated with less punitive attitudes and decreased support for punishment (Chiu, Dweck, et al., 1997; Tam et al., 2013). In the current research, findings across both studies extended this work, showing that mindsets can also predict support for criminal justice policies and practices, specifically ex-offender reentry. However, mindsets frequently function as a set of central beliefs that influence thoughts and thereby behaviors (Burnette, 2010; Molden et al., 2006). Our mediation models support this relationship between mindsets, attitudes, and behaviors. Consistent with the criminology literature (e.g., Hirschfield & Piquero, 2010; Leverentz, 2011; Mancini, Shields, Mears, & Beaver, 2010), findings demonstrate that characteristics of the public (i.e., political orientation, religious beliefs, interpersonal contact) and of the ex-offender (i.e., race) partially explain attitudes toward ex-offenders. In particular, political orientation consistently is a significant covariate of attitudes toward ex-offenders and reentry support. The association between political orientation and support for punitive policies may be attributable in part to the tendency for people of conservative political orientations to hold disposi-

tional attributions (Grasmick & McGill, 1994). Similarly, dispositional attributions of criminal behaviors are associated with punitive attitudes and policies (Cochran, Boots, & Heide, 2003; Grasmick & McGill, 1994; Maruna & King, 2009; Templeton & Hartnagel, 2012), as are fixed mindsets. Reliance on these dispositional attributions is more common among people with fixed mindsets, whereas those with growth mindsets tend to use situational attributions when making judgements about people and their behaviors (Chiu, Hong, & Dweck, 1997; Gervey et al., 1999; Molden et al., 2006).

As shown in the present studies, these associations between mindsets, personal characteristics, attributions, and personal attitudes are not straightforward. Rather, the current work presents some of the underlying mechanisms and factors, which contribute to the complexity of public attitudes toward ex-offenders and reentry. In particular, findings extend mindset theory, demonstrating a strong ability to prime mindsets regarding criminal behaviors and providing a promising avenue for future mindset-based intervention development. Thus, future research should continue to investigate how these and other potential approaches can contribute to understanding and improving ex-offender community reentry.

Findings suggest that a growth mindset-focused intervention has the potential for improving public attitudes toward ex-offenders and increasing support for community reentry, which has implications for policy and practice. Across the U.S., for example, there is a growing emphasis on reducing reentry barriers and improving ex-offender community reintegration at the federal, state, and local levels (e.g., Office of the Press Secretary, 2015). Our findings suggest that these efforts could benefit from components that aim to foster growth mindsets of criminal behavior among the general public, as well as more specific audiences (e.g., practitioners, policy makers, employers), through public education campaigns. To demonstrate, mindset-based interventions could be tailored in two distinct ways. First, we suggest that growth mindset-based interventions could target attitudes toward specific domains of community reintegration, such as employment or housing. For example, mindset-based interventions could be incorporated into employer education programs, which, in turn, may lead to willingness to work with or hire ex-offenders and foster support for employment training programs. Second, a growth mindset-based intervention approach could be adapted and applied to reducing discrimination toward other groups and their criminal justice involvement, such as adults with mental illnesses or homeless adults. On the whole, brief interventions that encourage growth mindsets may be modified to target stigmatizing attitudes toward marginalized groups, and develop support for policies and practices that seek to decrease discrimination.

Limitations and Future Directions

Findings should be considered within the context of a few limitations. Although Study 2 improved on Study 1's ability to generalize findings to members of the public, our sample of MTurk participants consisted of people with more advanced education and represented fewer racial and ethnic minorities, compared to the general U.S. population, and all participants were residents of the U.S. Future research should continue to explore the application of mindset theory to explaining public attitudes toward criminal justice policies

and practices in more representative samples. Additionally, the readings used in the present research were one-shot experimental manipulations and we did not assess whether or not they created lasting effects on mindsets. Nor, did we capitalize on longer-term more powerful approaches to shifting mindsets (e.g., Burnette & Finkel, 2012; Blackwell et al., 2007). Future research should explore intervention development and include multiple assessment points to determine the long-term effects of fostering growth mindsets on public attitudes toward ex-offenders and reentry support. Findings also are limited by the self-report nature of the explanatory and outcome variables, which may be subject to social desirability biases and possible demand characteristics. Thus, future work may consider using behavioral assessments, perhaps continuing to draw from social psychological approaches (e.g., Duckworth & Yeager, 2015; Fang, Kang, & Liu, 2004).

Finally, the present research offers only an initial contribution to the literature of the ways in which implicit theory may be applied to explaining attitudes toward the criminal justice system and community reintegration process. We did not intend to induce growth or fixed mindsets regarding particular aspects of reentry, but rather the nature of criminal behavior generally. However, extant research suggests that beliefs regarding the fixed and malleable qualities of human nature are domain specific (e.g., Chiu, Hong, et al., 1997; Dweck, Chiu, & Hong, 1995; Dweck & Leggett, 1988; Levy et al., 1998). Mindsets of criminal behavior may vary across domains, including employability, morality, and redeemability (see Maruna & King, 2009), or vary based on ex-offender characteristics (e.g., repeat offenses, type of offense, age of offender). Moreover, our research investigated public attitudes; however, future research should also investigate how implicit theories may explain ex-offender mindsets regarding their own rehabilitation and reentry. For example, ex-offenders holding a growth mindset may be more open to participating in rehabilitation programming due to a belief in their ability to change and avoid risks of recidivism.

Conclusion

Community reintegration is an ongoing concern for ex-offenders and members of the general public alike, and there is a growing emphasis on improving rehabilitation and reducing reentry barriers. Therefore, these studies sought to explain and foster support for ex-offender reentry through the application of mindset theory. In this research, we presented findings from two studies, which empirically tested a mediation model of the ways mindsets of criminal behavior were both directly and indirectly associated with supportive attitudes toward reentry. Findings demonstrated that participants in the growth mindset condition, relative to the fixed mindset condition, reported more positive attitudes toward ex-offenders, which in turn, were associated with more support for reentry. Ongoing research is needed to investigate the long-term effects of mindsets on attitudes regarding criminal justice policies and practices, as well as extend the theoretical application to ex-offender mindsets about their own rehabilitation and reentry. We hope this initial application of the longstanding implicit theory literature to the context of ex-offender reentry fosters such inquiries.

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