

ABSTRACT

RADE, CANDALYN B. Correlates and Moderators of Public Attitudes toward Ex-Offenders: A Meta-Analysis. (Under the direction of Dr. Roger E. Mitchell).

According to the Bureau of Justice Statistics, one out of every 50 American adult residents is under the supervision of community corrections annually (Maruschak & Parks, 2012), and almost two-thirds of a million people were released from state and federal prisons in 2011 alone (Carson & Sabol, 2012). Unfortunately, ex-offenders who return to the community after incarceration face many barriers to successful reentry including negative attitudes from the public, consisting of stigma, punitiveness, social distance, and general negative attitudes. Negative attitudes toward ex-offenders can exacerbate barriers to reentry; for example, by reducing employment opportunities and straining personal relationships (Varghese et al., 2010; Wakefield & Uggen, 2010). However, inconsistent operationalization and measurement of attitudes toward ex-offenders have led to contradictory results about the direction and size of associations.

The present study used a meta-analytic approach to summarize the extant research on the correlates of public attitudes toward ex-offenders and the moderating effect of sexual offense history. Systematic literature searches revealed 56,438 studies using 63 combinations of keywords. After removal of duplicates, study titles were evaluated for inclusion, and 1,064 relevant studies remained for further evaluation. A total of 15 studies met inclusion criteria, consisting of 67 unique effect sizes and 6,578 total participants. Results revealed small weighted mean correlations. People who identify as politically conservative, those with less education, and those who have no previous contact with an ex-offenders tended to report more negative attitudes. Moderation analyses were limited by available data; however, there

was significant variability in most correlates, suggesting the presence of moderators. Across all moderation analyses effect sizes were larger (but not significant) for attitudes toward ex-offenders with nonsexual offense histories, compared to those with sexual offense histories.

Overall, findings revealed small associations between correlate variables and attitudes suggesting public, ex-offender, and community characteristics do not strongly predict public attitudes toward ex-offenders. However, political affiliation, education, and interpersonal contact may be relevant correlates to understanding and improving negative attitudes. These results also suggest the need for additional research regarding public attitudes toward ex-offenders and continued investigation of moderating variables. Specifically, an insufficient number of studies was available to conduct analyses of several ex-offender (i.e., offense history, race/ethnicity, rehabilitation participation) and community (i.e., crime prevalence) characteristics. Additionally, evaluation of interpersonal contact as a moderator was a key aim of the study, but ample data were not available to assess these moderation effects. Future research should assess how ex-offender characteristics, community characteristics, and interpersonal contact are associated with public attitudes. Finally, results may provide direction for interventions and policy; specifically, anti-stigma efforts should not focus on public demographic characteristics necessarily, but rather explore ways to incorporate interpersonal contact into anti-stigma interventions and reduce stigma related to criminal histories.

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Correlates and Moderators of Public Attitudes toward Ex-Offenders: A Meta-Analysis

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BIOGRAPHY

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Introduction

The vast number of people arrested, incarcerated, under correctional supervision, and released into the community illustrates the magnitude of criminal justice involvement and the need for transitional and reentry efforts in the United States. With the largest incarceration rates in the world, the United States has approximately 16.1 million adults who are current or former felons (Uggen, Manza, & Thompson, 2006; Wakefield & Uggen, 2010). According to the Bureau of Justice Statistics, one of every 34 American adult residents, 2.9% of the adult population, was under the supervision of state or federal correctional authorities in 2011 (Glaze & Parks, 2012) and about one of every 50 American adult residents was under the supervision of probation or parole in 2011 (Maruschak & Parks, 2012). Offender reentry specifically demands attention as close to two-thirds of a million (688,384) people were released from state and federal prisons in 2011 alone (Carson & Sabol, 2012). Unfortunately, men and women who reenter the community after incarceration face barriers to successful reintegration such as seeking employment, obtaining health care, engaging in treatment for mental and/or substance use disorders, and reuniting with family. However, negative attitudes toward ex-offenders compound each aspect of reentry (Brooks, Visser, & Naser, 2006; Clear, Rose, & Ryder, 2001; Pager, 2003; Schnittker & Bacak, 2013; Wakefield & Uggen, 2010; Western, 2002).

Negative attitudes as a barrier to successful reentry

Negative attitudes toward previously incarcerated individuals are a barrier to successful reentry (Wakefield & Uggen, 2010), resulting in stereotyping, social rejection, discriminating behaviors, and loss of social status (Phelan, Link, & Dovidio, 2008). Many

studies have discovered that the general public commonly holds negative attitudes toward and desires social distance from ex-offenders (e. g., Hirschfield & Piquero, 2010; Leverntz, 2011; Manza, Brooks, & Uggen, 2004; Park, 2009). Additionally, one study showed that ex-offenders' view of their own social status was negatively associated with level and duration of contact with the justice system; specifically, lowest subjective statuses were reported by those who were incarcerated, followed by people who were arrested, people who committed a crime, and people who did not commit a crime (Schnittker & Bacak, 2013). In particular, research suggests that negative attitudes detrimentally affect ex-offenders in terms of their employment outcomes as well as their personal relationships and social interactions.

First, finding employment after incarceration contributes to successful community reentry and a reduced likelihood of recidivism (Uggen, 2000); however, employer attitudes may serve as a barrier to obtaining employment (Clear et al., 2001; Pager, 2003; Varghese, Hardin, Bauer, & Morgan, 2010). For example, a study of 275 students found that in hypothetical vignettes, applicants with a criminal record were less likely to be hired than those without a criminal record regardless of race or type of charge (misdemeanor vs. felony; Varghese et al., 2010). Similarly, a study of 39 qualitative interviews with local community members of neighborhoods with high-incarceration rates indicated that employers were often wary of hiring ex-offenders or being located in communities in which many ex-offenders live due to negative perceptions of the neighborhood and its residents (Clear et al., 2001).

Second, family members provide support to ex-offenders before and during reentry (Fontaine, Gilchrist-Scott, Denver, & Rossman, 2012; Naser & La Vigne, 2006) and the weight of multiple stressors, including negative attitudes of the general public, can interfere

with this crucial support base (Wakefield & Uggen, 2010). Incarceration of a spouse, parent, sibling, or child is associated with strained interpersonal and marital relationships, child behavioral problems and delinquency, and isolation (Wakefield & Uggen, 2010).

Prejudice, stigma, and social distance

Prejudice and stigma theories provide a foundational understanding of the attitudes, beliefs, and behaviors ingroup members have about outgroup members and can be applied to understand the problems and consequences of negative attitudes in the lives of ex-offenders. Prejudice was originally described as “antipathy” toward groups or individuals because of incorrect beliefs (Allport, 1954, p. 10); however, through continued analysis and evaluation, it has been restructured to include more subtle biases and prejudices, including paternalism and sexism (Dovidio, Glick, & Rudman, 2005). Prejudice theory analyzes the nature of social cognitions, sociocultural processes, and intergroup contact as they relate to the development and maintenance of rigid and incorrect beliefs, prejudice, and stereotypes (Dovidio et al., 2005). Similarly, stigma is the process through which individuals or groups are rejected by others based on differences in physical characteristics, personal character, identity, or flaws (Goffman, 1963). An essential component of stigma is its ability to depersonalize, dehumanize, and devalue outgroup members based on a variety of characteristics or flaws (Dovidio, Major, & Crocker, 2000; Goffman 1963). Based on these conditions, “ex-offender” may be a potentially stigmatizing characteristic, subject to public prejudice.

Stigma and prejudice models are considered to be complementary, emphasizing normal processes that occur among all individuals, and can generally be applied to any discriminated group, including ex-offenders (Phelan et al., 2008). Stigma and prejudice

toward ex-offenders can be manifested as barriers to accessing services in the community, inequality when seeking employment, and exclusion from social settings (Clear et al., 2003; Pager, 2003; Schnittker & Bacak, 2013; Varghese et al., 2010; Wakefield & Uggen, 2010). Following this complementary approach, the present study will use the term ‘stigma’ to refer to stigma or prejudice, and as a measure of public attitudes toward ex-offenders.

Social distance is a way of conceptualizing specific attitudes toward outgroup members by identifying ingroup desired proximity from outgroup members. Specifically, ingroup members may or may not feel sympathy or demonstrate concern for outgroup members, but they can share the specific attitude of not wanting outgroup members as neighbors, coworkers, or family members (Park & Burgess, 1921). Not-in-my-backyard (NIMBY) describes the sentiments of desired social distance from outgroups and locations considered dangerous or risky (Wolf, 1987). In accordance with social distance theory, community members may report support for ex-offender rehabilitative and reentry efforts provided they happen in another community. For example, people do not want to live near or work with an ex-offender, but they report support for governmental housing and employment assistance policies (Hardcastle, Bartholomew, & Graffam, 2011). Sex-offenders in particular are subject to social distance and exclusion (Viki, Raggett, Tait, & Wiltshire, 2012) and are among the most discriminated against ex-offender sub-group. This desire to keep ex-offenders at a comfortable distance often results in restrictions and barriers in domains such as education, employment, housing, and voting rights, presenting additional challenges for successful community reintegration (Porgorzelski, Wolff, Pan, & Blitz, 2005).

Correlates of attitudes toward ex-offenders

In order to effectively facilitate offender reentry, it becomes increasingly important to understand the correlates that make stigmatizing attitudes toward ex-offenders more or less likely. These correlates of public attitudes toward ex-offenders may be categorized as representing public characteristics, ex-offender characteristics, and characteristics of the local community.

Public demographic characteristics. There is a long history of examining the ways in which public demographic variables are associated with attitudes toward a variety of criminal justice issues including capital punishment, sentencing, rehabilitation, and reentry. More recent work has begun to assess public demographic correlates of attitudes toward ex-offenders, with emphasis on public sex, race/ethnicity, political affiliation, religion, age, income, and education. Despite agreement across a preponderance of previous studies that public demographic characteristics are associated with attitudes toward formerly incarcerated individuals, the significance, effect, and direction of these correlates remain unclear.

A majority of studies show that women compared to men demonstrate less favorable attitudes toward ex-offenders (Dreiling, 2011; Leverntz, 2011; Mancini, Shields, Mears, & Beavers, 2010; Miksaj-Todorovic & Budjanovic, 2000; Piquero et al., 2011; Willis, Malinen, & Johnson, 2013). For example, a study of adult community members in New Zealand found that female participants, compared to male participants, reported significantly more desired social distance from sex offenders in the community ($t = -3.22, p < .01$; Willis et al., 2013). However, some cases have failed to find a significant sex effect present (Dawson Edwards, 2008; Hirschfield & Piquero, 2010; Locke, 2011; Park, 2009; Rogers, Hirst, & Davies,

2011). Despite disagreement in the literature about the significance of participant sex as a correlate, a comprehensive review revealed no studies in which male participants have *more* negative attitudes toward ex-offenders compared to females.

Similarly, studies consistently find that White or non-minority participants report less favorable attitudes toward ex-offenders compared to Black, Hispanic, and other minority participants (Hirschfield & Piquero, 2010; Leverentz, 2011; Locke, 2010; Mancini et al., 2010; Piquero et al., 2011). One study of U.S. residents reported that White participants, compared to Black participants ($t = -2.21, p < .05$) or Hispanic participants ($t = -2.44, p < .05$), were more likely to report stigmatizing attitudes (Hirschfield & Piquero, 2010). Yet, some studies have not found racial or ethnic identity as a statistically significant correlate of attitudes toward ex-offenders (Comartin, Kernsmith, & Kernsmith, 2009; Dawson Edwards, 2007; Park, 2009) and a comprehensive literature review did not reveal any studies in which minority participants have *more* negative attitudes toward ex-offenders.

Identification as politically conservative (Hirschfield & Piquero, 2010; Locke, 2010; Mancini et al., 2010) or a Republican (Park, 2009) is significantly associated with less favorable attitudes toward ex-offenders compared to identification as politically liberal or a Democrat. For example, a study of U.S. residents found that conservative participants were more likely ($t = 3.54, p < .05$) and liberal participants were less likely ($t = -1.79, p < .05$) to report stigmatizing attitudes toward ex-offenders compared to politically moderate participants (Hirschfield & Piquero, 2010). However, a few studies have found contradicting results demonstrating that political ideation has a non-significant relationship with attitudes

toward ex-offenders (Dawson Edwards, 2007) or that politically moderate participants report less favorable attitudes toward ex-offenders (Leverntz, 2011).

Although religious beliefs and affiliation are commonly studied as correlates of public attitudes toward capital punishment, sentencing, and other justice-related outcomes (e.g., Applegate, Cullen, Fisher, & Ven, 2000; Evans & Adams, 2003; Unnever, Cullen, Applegate, 2005), they are an infrequently studied correlates of public attitudes toward ex-offenders specifically. Consistent with literature measuring other justice-related attitudinal variables, one study of college students found that self-identification as Christian was associated with less favorable attitudes toward ex-offenders and reentry ($r = -0.13, p < 0.01$; Park, 2009). A comprehensive review of the literature revealed no studies in which people who self-identify as Christian also reported more favorable attitudes toward ex-offenders compared to people who are not Christians. However, strong beliefs common to Christianity (and other religions), such as forgiveness ($r = 0.11, p < 0.01$; Park, 2009), were associated with *more* favorable attitudes toward ex-offenders. Distinguishing between religious beliefs and affiliations may provide a more accurate assessment of the relationships between religion and attitudes. Specific religious beliefs are infrequently studied as correlates of attitudes toward ex-offenders; therefore, this study will evaluate religious affiliation rather than beliefs.

Lastly, three public demographic variables—age, income, and education—frequently reveal no significant differences in attitudes toward ex-offenders. First, although some studies have revealed that older participants (Brown, 1999; Hirschfield & Piquero, 2010; Piquero et al., 2011) demonstrate less favorable attitudes toward ex-offenders, a majority of

studies reveal that age is a non-significant correlate of public attitudes toward ex-offenders (Comartin et al., 2009; Dawson Edwards, 2007; Dreiling, 2010; Locke, 2010; Mancini et al., 2010; Park, 2009). Second, income most often has a non-significant association with attitudes toward ex-offenders (Dawson Edwards, 2007; Hirschfield & Piquero, 2010; Mancini et al., 2010). A few studies, however, have reported that participants with higher incomes (Locke, 2010) or lower incomes (Comartin et al., 2009) report less favorable outcomes. Third, some studies report that having less education is associated with less favorable attitudes toward ex-offenders (Comartin et al., 2009; Piquero et al., 2011; Willis et al., 2013); however, many studies have identified that education is a non-significant correlate (Hirschfield & Piquero, 2010; Locke, 2010; Mancini et al., 2010; Park, 2009). The amount of variability in the literature for each correlate emphasizes the need for a meta-analysis to identify the significance, strength, and direction of the relationships between public demographic characteristics and attitudes toward formerly incarcerated individuals.

Ex-offender characteristics. The characteristics of ex-offenders may also influence public attitudes toward the formerly incarcerated and their reentry. Although three correlates are most frequently studied—type of offense, race/ethnicity, and participation in a rehabilitation program—strength and direction of the associates between ex-offender characteristics and public attitudes vary in the extant literature.

First, the public demonstrates more negative attitudes toward ex-offenders with a history of violent crimes compared to non-violent crimes (Hardcastle et al., 2011; Rogers et al., 2011). Members of the general public also report significantly less support for voting right reinstatement for violent ex-felons compared to ex-felons generally (Manza et al.,

2004). Second, the public demonstrates more negative attitudes toward ex-offenders belonging to a minority race or ethnicity (Pager, 2003). For example, in the United States, Black ex-offenders are less favored when seeking employment compared to White ex-offenders (Pager, 2003). Third, people report more negative attitudes toward ex-offenders who have not participated in a rehabilitation program compared to ex-offenders who have participated in rehabilitation (Hardcastle et al., 2011; Rogers et al., 2011).

Additionally, ex-offender age and mental illness diagnosis may be relevant correlates of public attitudes toward ex-offenders. Although offender age has often been assessed as a correlate of public attitudes toward sentencing and other justice-related outcomes with varied results (e. g., Bensimon & Bodner, 2012; Rogers & Ferguson, 2011), a comprehensive review revealed no studies that evaluated ex-offender age as a correlate of public attitudes toward ex-offenders specifically. The public also may demonstrate more negative attitudes toward ex-offenders with mental illnesses compared to ex-offenders without mental illnesses (LeBel, 2008; Locke, 2010). For example, one study identified that people reported more desired social distance from an ex-offender with a diagnosis of major depressive disorder compared to the an ex-offender diagnosed with another mental illness (bipolar disorder, schizophrenia, panic disorder), without mental illness, or with a chronic medical disorder (Locke, 2010). However, this correlate is also infrequently assessed.

Community characteristics. Although less frequently studied, community and contextual factors may influence public attitudes toward ex-offenders. Current research suggests there are differences between reported attitudes toward ex-offenders based on a community's size and crime prevalence. Individuals from large, urban communities report

less negative attitudes toward ex-offenders compared to people living in non-urban communities (Hirschfield & Piquero, 2010; Mackey & Courtright, 2000). For example, in a random sample of 235 registered voters from four neighborhoods in Massachusetts, neighborhood location was a significant correlate of punitiveness after controlling for public demographic variables ($ps < .05$). Citizens of urban neighborhoods with high to moderate crime prevalence are more likely to report less punitive attitudes compared to those living in non-urban and suburban neighborhoods with moderate to low crime prevalence (Leverntz, 2011). Community diversity, proximity to a prison, and local laws about reentry may also be relevant correlates of attitudes toward ex-offenders, but are rarely assessed and, therefore, will not be considered in this meta-analytic study. Consequently, the present meta-analysis will evaluate community size and crime prevalence in efforts to clarify the relationship between community variables and public attitudes toward ex-offenders.

Moderator variables

In addition to the associations of public, ex-offender, and community characteristics with attitudes toward ex-offenders, it is hypothesized that contact with individuals who previously have been incarcerated and sexual offense history have a moderating effect on each of the identified public, ex-offender, and community characteristic correlate relationships.

Interpersonal contact. Contact theory posits a negative relationship between interpersonal contact and prejudice, such that an increase in contact with outgroup members predicts a decrease in prejudice (Allport, 1954; Pettigrew & Tropp, 2005, 2006). When manipulated, direct and indirect contact can reduce negative attitudes toward outgroup

members (Clement et al., 2012; Pettigrew & Tropp, 2006; Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004). To date, the direct effects of contact on stigma have been demonstrated across multiple studies in which participants who reported interpersonal contact with ex-offenders (Gibson, Roberson, & Daniel, 2009; Hirschfield & Piquero, 2010; Park, 2009), and sex-offenders specifically (Willis, Levenson, & Ward, 2010; Viki et al., 2012), reported more favorable attitudes toward the same population. For example, one study of 2,282 American adults revealed that having a close friend, family member, or colleague who was involved with the criminal justice system was associated with more favorable attitudes ($t = -7.11, p < .05$; Hirschfield & Piquero, 2010). However, some research has identified a non-significant relationship between contact and attitudes (Dreiling, 2010). Although a systematic review revealed no studies that have evaluated the moderating role of contact in relationships between correlates and public attitudes toward ex-offenders, the empirical literature sets a precedent for interpersonal contact as a moderator of stigma toward other populations (e. g., Christ et al., 2010; Cunningham & Melton, 2013; Dhont & Van Hiel, 2011).

Sexual offense history. Sex offenders make up the most prevalent offense history subgroup analyzed in the extant literature of public attitudes toward ex-offenders. Overall, the public demonstrates more negative attitudes toward individuals who have been convicted of a sexual crime such as sexual assault against children (Hardcastle et al., 2011), sexual assault (Hulsey, 1991), or any sexual offense (Manza et al., 2004; Willis et al., 2010). For example, in a nationwide sample of U.S. residents, participants reported the least favorable attitudes towards ex-felons convicted of a sexual offense compared to general ex-felons and

those convicted of a violent crime ($t = 3.13, p < .05$; Manza et al., 2004); results suggest that ex-offenders with a sexual offense history may experience additional barriers to successful reentry.

Due to the theoretical and empirical support, presence of contact with ex-offenders and sexual offense history were evaluated for moderating effects on the relationship between all correlate variables and attitudes toward ex-offenders.

Present study

As demonstrated, recent attention has been directed to public attitudes toward ex-offenders; however, limitations in the current literature impede the ability to draw clear conclusions about these attitudes. Specifically, inconsistent operationalization and measurement of attitudes toward ex-offenders to include various measures of negative attitudes, stigma, punitiveness, and social distance may lead to contradictory results about the significance of correlates. Additionally, insufficient sample sizes in some studies may impede the ability to detect significant effects. Therefore, a meta-analysis is needed to empirically synthesize extant literature on the characteristics associated with public attitudes toward ex-offenders and the potential moderating effects of interpersonal contact and sexual offense history. This meta-analytic study sought to evaluate the following five hypotheses: 1) public demographic characteristics—sex, race/ethnicity, religion, and political affiliation—are correlates of public attitudes toward ex-offenders; public education, age, and income will not emerge as correlates of public attitudes; 2) ex-offender characteristics—type of crime, race/ethnicity, and participation in rehabilitation—are correlates of public attitudes toward ex-offenders; 3) community characteristics—community size and crime prevalence—are

correlates of public attitudes toward ex-offenders; 4) interpersonal contact with an ex-offender has a moderating effect on the association of public, ex-offender, and community characteristics with public attitudes toward ex-offenders, such that the presence of contact is associated with more positive attitudes; and 5) an ex-offender's sexual offense history has a moderating effect on the association of public, ex-offender, and community characteristics with public attitudes toward ex-offenders, such that a nonsexual offense history is associated with more positive attitudes compared to a sexual offense history.

Methodology

Literature search

Studies for the meta-analysis were identified through searches in PsycINFO, Web of Science, National Criminal Justice Reference Service Abstracts (NCJRS), and ProQuest Dissertation & Theses electronic databases. Keyword searches were conducted using a two-part search term system; all possible combinations were employed, consisting of one criminal justice term (*incarcerat**, *offend**, *inmate*, *felon**, *misdemeanant*, *crim**, *prison**, *convict**, *recidiv**) paired with one attitudinal term (*attitud**, *stigma**, *punitiv**, "social distance", *contact*, *familiar**, "public opinion"). For each included study, cited references were screened against inclusion criteria to ensure all relevant studies were identified. Additionally, emails inquiring about additional relevant studies that may meet inclusion criteria were sent to prominent authors and researchers who were also contacted about data requests.

Initial literature searches revealed 56,438 studies, with 21,493 from PsycINFO, 18,107 from Web of Science, 8,955 from NCJRS, and 7,883 from ProQuest, many of which were duplicates. A review of reference lists, cursory searches, and contact with authors

identified an additional 73 studies. After a removal of all duplicate studies, each record title was evaluated for inclusion and 1,064 relevant studies remained for further evaluation against inclusion criteria. The literature search resulted in a final total of 15 studies that met all inclusion criteria (see Figure 1).

Inclusion criteria

The current study included all published and unpublished empirical research that met the following inclusion criteria: 1) study sample was taken from the general public (including students) and does not include criminal justice professionals; 2) included at least one outcome variable assessing attitudes toward ex-offenders in the community, including measures of general attitudes, stigma, punitiveness, or desired social distance from ex-offenders, and excluding all other attitudinal items such as those related to currently incarcerated offenders, capital punishment, jury decisions, and sentencing; 3) reported necessary data to calculate effect size (e.g., means, standard deviations, correlation values, sample size) for at least one correlate variable, or able to obtain additional data from the study authors; 4) source included peer reviewed journals, dissertations, theses, conference presentations, government reports, and unpublished/in press manuscripts; 5) record written in English or reliable translation available; 6) produced (e. g., published, presented) between January 1, 1990 and September 30, 2013 which allowed for a review of the contemporary empirical literature.

Variable coding

General procedures. For all published and unpublished studies meeting inclusion criteria, relevant information regarding the study, sample, and effect size were extracted and

coded according to a comprehensive coding manual. When exact sub-group sample sizes were not reported or able to be obtained from study authors, equal group sample sizes were assumed.

Outcome variables. Attitudes toward ex-offenders were operationalized to include measures of general attitudes, stigma, punitiveness, and social distance toward ex-offenders, with higher values representing more negative attitudes (continuous when available; positive/neutral attitudes = 0, negative attitudes = 1).

Correlate variables. Public demographic characteristics were coded for all studies when available. Correlates included sex (female = 0, male = 1), race/ethnicity (majority = 0, minority = 1), education (continuous when available; less education = 0; more education = 1), religious beliefs (Christian = 0, other religion = 1), political affiliation (conservative/Republican = 0, other political affiliation = 1), age (continuous when available; younger age = 0, older age = 1), and household income (continuous when available; < \$50,000 = 0, \geq \$50,000 = 1). Ex-offender characteristics were coded for all studies when available. Correlates included criminal offense history (violent = 0, non-violent = 1; sexual offense = 0, nonsexual offense = 1; felony = 0, misdemeanor = 1; as defined by the original study), race/ethnicity (majority = 0, minority = 1), and rehabilitation participation (no = 0, yes = 1). Community characteristics were coded when available. Correlates included community size (non-urban = 0; urban = 1; as defined by the original study) and crime prevalence (low crime = 0, high crime = 1; as defined by the original study). Sample size (n) and effect size (r) were coded for each correlate variable reported.

Moderator variables. Contact with an ex-offender and sexual offense history were assessed for moderation effects for all correlate variables. Presence of contact was operationalized as the reported presence of any type of contact, direct (face-to-face contact) or indirect (all other forms of contact), and coded for all studies when available (contact absent = 0, contact present = 1). Ex-offender sexual offense history as defined by the original study was coded for each study when explicitly stated and available (sex offense = 0; nonsexual offense = 1).

Inter-rater reliability

All studies were coded by the first author. A random sample of 25% of all articles coded was selected for coding by an additional rater to establish inter-rater reliability (n = 4 studies, k = 17 unique effect sizes). The additional rater participated in a thorough training on all coding procedures, including the coding of two practice studies. Reliability was calculated for relevant effect-size level and study-level coding decisions (i.e. each relevant variable coded was characterized as a coding decision) using Cronbach's alpha, Cohen's kappa, and percentage agreement. Reliability was consistent with accepted benchmarks, with values between 0.61 - 0.80 considered "substantial" (Landis & Koch, 1977), between 0.80 - 0.90 considered "strong" (McHugh, 2012), and greater than or equal to 0.75 considered "excellent" (Fleiss, Levin, & Paik, 2003). At least substantial levels of inter-rater reliability were established for both effect size-level and study-level variable. Excellent levels of inter-rater reliability were produced for effect size coding ($ICC_2 = 1.00$, 100% agreement). For additional effect size-level variables ICC_2 values ranged from 0.62 (82% agreement) for type of ex-offender characteristic to 1.00 (100% agreement) for six effect size-level variables (i.e.,

type of community characteristic, presence of interpersonal contact, type of effect size calculation, p -value, sample size). Inter-rater reliability for study-level variables ranged from 67% agreement (Kappa = 0.50) for population location to 100% agreement (Kappa = 1.00) for seven study-level variables (i.e., type of publication, publication year, type of population, presence of each of the four types of dependent variable). All disagreements were resolved by consensus. Additionally, a review of all effect sizes was conducted by the first author to verify the accuracy of coded effect sizes.

Data analysis

All analyses were conducted using the Hunter and Schmidt random-effect model of meta-analysis (Hunter & Schmidt, 1990, 2004), identified as the most accurate approach to estimate random-effects and mean reliability estimates of categorical variables (Mason, Allam, & Bannick, 2007). The random-effects model assumes variability among population parameters and utilizes a random variable of effect to calculate weights and estimate mean effect sizes (Hunter & Schmidt, 2000; Schulze, 2004), resulting in more conservative estimates of effect size.

To allow for aggregation of studies, correlation effect size r was recorded for all available relationships between public, ex-offender, and community characteristics with attitudes toward ex-offenders. When a product-moment correlation coefficient was not reported or available from the study authors, r was calculated according to the appropriate conversion formulas (Lipsey & Wilson, 2001) and a calculation program created by Wilson (2001a, 2001b). Specifically, means and standard deviations ($k = 32$), F -ratios ($k = 3$), or t -values ($k = 1$) were used to calculate r for continuous data, and frequencies ($k = 12$) or chi-

squares ($k = 1$) were used to calculate r for categorical data. Several studies reported multiple effect sizes and used multiple outcome measures for a single correlate within one sample. Therefore, these effect sizes ($k = 22$) were averaged, producing a mean effect size estimate for the sample to avoid the biases associated with treating each effect size as independent ($k = 11$). For example, if a study reported the relationships between political affiliation and two outcome measures, social distance and stigma, for the same sample, these were averaged together. Additionally, a conservative approach was employed for studies that reported a non-significant effect without providing specific data to approximate an effect size by coding these studies as $r = 0$ ($k = 4$).

Individual study effect sizes were aggregated and weighted by study sample size to produce a mean weighted effect size for all studies and to calculate the weighted observed variance using the Hunter and Schmidt random-effects model (Arthur, Bennett, & Huffcutt, 2001; Schmidt & Hunter, 2015). Sample-weighted effect sizes are intended to reduce sampling bias in aggregate estimates. Additionally, corrections were applied to individual effect sizes of three artificially dichotomized variables (public education, $k = 7$; public age, $k = 1$; public income, $k = 5$) to correct for associated biases (Schmidt & Hunter, 2015). Corrected and non-corrected meta-analysis results are presented (see Tables 3 and 2, respectively). However, corrected results are discussed in text. An effect size cut-off rule was implemented that considered any weighted effect sizes less than $\bar{r}_w = 0.10$ as negligible to interpretation.

Homogeneity of variance was assessed using the Q statistic to detect the extent to which observed variance is due to sampling error or artifact biases. When significant, the Q

statistic in combination with a percent of variance accounted for by the sampling error and artifacts (*PVA*) less than 75% suggests the presence of moderation (Arthur et al., 2001; Schmidt & Hunter, 2015). Moderation analyses were conducted when sufficient data were available using a subset approach (Schmidt & Hunter, 2015), by performing separate analyses within each subset (i.e., any contact present and any contact not present; sexual offense history and no sexual offense history). Differences in mean effect sizes, reduced variances within subsets, and credibility intervals that do not overlap demonstrated the presence of a moderation effect (Arthur et al., 2001; Schmidt & Hunter, 2015). All analyses were conducted in Microsoft Excel 2013 and SPSS, version 20.

Results

Descriptive statistics

The 15 studies included in the meta-analysis produced 67 effect sizes, with a total sample size of 6,578. Included studies were produced between 2004 and 2012, with a majority conducted in the United States (86.7%). Across all studies, a majority of the samples included members of the general public (60.0%), with additional samples of students (20.0%) and employers (13.3%). Most the studies assessed attitudes toward sex offenders specifically (86.6%), less than half (40.0%) assessed attitudes toward ex-felons, and few (13.3%) assessed attitudes toward violent offenders (may exceed 100% because offense histories are not mutually exclusive). Two studies did not specify the type of criminal history (13.3%).

Measures of attitudes included a variety of categorical and continuous variables that assessed public attitudes toward ex-offenders. Social distance measures, such as comfort

working with an ex-offender (Martinez, 2012), tolerance of sex offenders living in the local community (Levenson, Brannon, Fortney, & Baker, 2007), and pre-existing social distance scales, were most prevalent (52%). Despite varied operationalization, all outcome variables assessed public attitudes toward ex-offenders in the community (see Table 1 for additional descriptive statistics data).

Public demographic characteristics

Small weighted mean correlations were found between public demographic characteristics and attitudes toward ex-offenders, with values ranging from 0.02 for age to -0.11 for political affiliation. Two correlates were associated with public attitudes: political conservatives ($\bar{r}_w = -0.11$, 95% CI = -0.18, -0.04) and member of the public with less education ($\bar{r}_{wc} = -0.10$, 95% CI = -0.18, -0.04) report more negative attitudes toward ex-offenders compared to members of the public with non-conservative political beliefs and those with more education. Based on the established effect size benchmark ($\bar{r}_w < 0.10$), public sex, race/ethnicity, age, and income produced small effect sizes that were considered negligible to interpretation ($\bar{r}_{ws} < -0.08$; see Table 2 and 3). Religious affiliation was not analyzed because effect size data were only available for one study that met inclusion criteria.

Moderation. There was a significant amount of variability in all public characteristic correlates (all Q s significant at $p < 0.05$), suggesting the presence of moderating variables. Providing additional support for the presence of moderators, percent of variance accounted for by the standard error and artifacts (PVA_{se}) was less than the 75% benchmark (Arthur et al., 2001; Schmidt & Hunter, 2015) for all correlates. When tested as a moderator, sex

offense history reduced the amount of variability present; however, many subset correlates continued to demonstrate significant homogeneity values (public sex, non-sex offender subgroup; public race, sex offender subgroup; public education, both subgroups) and some credibility intervals contained zero (public sex, non-sex offender subgroup; public race, sex offender subgroup; public education, non-sex offender subgroup), suggesting the need for additional analysis of moderators had the data permitted further analysis. Across moderation analyses, effect sizes were larger, but not significant, for attitudes toward ex-offenders with no sexual offense history compared to those with a sexual offense history. Additionally, sufficient data were not available to assess the presence of contact as a moderator for any public demographic characteristic correlates and to assess sex offense history as a moderator for three of the six correlations, namely public political affiliation, age, and income (see Table 2 and 3).

Ex-offender characteristics

Small weighted mean correlations were found between ex-offender characteristics and public attitudes toward ex-offenders. As hypothesized, the public reported more negative attitudes toward ex-offenders with a history of violent crime compared to ex-offenders with a non-violent criminal history ($\bar{r}_w = -0.09$, 95% CI = -0.20, 0.01), however this fell below the established benchmark ($\bar{r}_w < -0.10$). Additionally, sexual offense history, felony offense history, ex-offender race/ethnicity, and rehabilitation participation were not analyzed as correlates because effect size data were only available for one study that met inclusion criteria within each category (see Table 2).

Moderation. There was a significant variability in the violent criminal history correlate (Q significant at $p < 0.01$; $PVA_{se} = 28\%$), suggesting the presence of moderating variables, yet, as noted earlier, there were not enough data to analyze possible moderators (see Table 2). Additionally, only one effect size was included for each of sexual criminal history, felony criminal history, and ex-offender race/ethnicity correlates; therefore, these correlates were not analyzed for moderating effects.

Community characteristics

A small weighted mean correlation was found between community size and public attitudes toward ex-offenders. Members of the public who live in smaller, rural communities compared to those living in larger, urban communities reported more negative attitudes toward ex-offenders ($\bar{r}_w = -0.09$, 95% CI = -0.16, -0.01), but this fell below the established benchmark ($\bar{r}_w < -0.10$; see Table 2). Additionally, no effect size data were reported for community crime prevalence as a correlate of public attitudes and, therefore, it was not analyzed in the present meta-analysis.

Moderation. The homogeneity of variance test was not significant ($p > 0.05$), but the standard error accounted for over half of the variance ($PVA_{se} = 56\%$), potentially indicating the presence of moderating variables (see Table 2); however, there were not sufficient data to analyze possible moderators. The second community characteristic, crime prevalence, was not assessed because there were no reported effect sizes for this correlate in any studies that met inclusion criteria.

Interpersonal contact

Because the presence of interpersonal contact with an ex-offender could not be included in the moderation analyses, post-hoc analyses were conducted to assess contact as a correlate of attitudes toward ex-offenders. A small weighted mean correlation was found between interpersonal contact and public attitudes. Specifically, members of the public who reported no previous contact with an ex-offender compared to those who reported any type of contact with an ex-offender (including personal experience with the criminal justice system) demonstrated more negative attitudes toward ex-offenders ($\bar{r}_w = -0.12$, 95% CI = -0.18, -0.06). Providing additional support for this association, the test of homogeneity was not significant ($Q = 4.52$, $p > 0.05$), and the standard error and artifacts accounted for two-thirds of the variance ($PVA_{se} = 66\%$), nearing the 75% threshold. These results suggest that moderation effects may not be present for the direct association between contact and public attitudes toward ex-offenders (see Table 2).

Discussion

Negative public attitudes toward ex-offenders are a known barrier to ex-offender reentry and community reintegration (e.g., Wakefield & Uggen, 2010). However, differences, if any, in public attitudes as a function of public, ex-offender, and community characteristics are less clearly understood. This meta-analysis represents the first comprehensive assessment of the correlates of public attitudes toward ex-offenders and the moderating effect of sexual offense history.

Summary of findings

Small effect sizes across all correlate variables suggest that traditionally studied public, ex-offender, and community characteristics may not strongly predict public attitudes toward ex-offenders. The strongest public characteristic effect size was found between political affiliation and negative attitudes. Specifically, participants who self-identified as politically conservative or Republican report more negative attitudes toward ex-offenders. Although providing a conclusion that is consistent with most (Hirschfield & Piquero, 2010; Locke, 2010; Mancini et al., 2010; Park, 2009) but not all previous literature (Dawson Edwards, 2007; Leverntz, 2011), results are supported by theories that conservative political beliefs are associated with support for policies that are more punitive toward crime and subscription to dispositional attributional styles. Research suggests that conservatives are more likely to support punitive policies due to commonly held dispositional attributions which consider that all individuals, including ex-offenders, are responsible for their actions and, therefore, the consequences of those actions (e.g., Jacobs & Carmichael, 2002; Grasmick & McGill, 1994).

The second strongest effect size among the public characteristic correlates was education. Results indicated that participants with less education report more negative attitudes toward ex-offenders. However, extant literature has been inconsistent (see Brown, 1999; Comartin et al., 2009; Dawson Edwards, 2007; Dreiling, 2010; Hirschfield & Piquero, 2010; Locke, 2010; Mancini et al., 2010; Park, 2009; Piquero et al., 2011). Because of the limited support for this relationship in the literature, a theory explaining the association between education and negative attitudes toward ex-offenders has yet to be established.

However, one possible explanation could be tied to the relationship between education and political affiliation. Research from a variety of disciplines suggests that people with higher educational attainment are more likely to report more liberal political beliefs, and particularly liberal social beliefs (e.g., Gross & Fosse, 2012; Phelan, Link, Stueve, & Moore, 1995; Schoon, Cheng, Gale, Batty & Deary, 2010). Yet, educational attainment may not be associated with support for all liberal political beliefs (e.g., Phelan et al., 1995) or criminal justice attitudes, specifically. Future research should continue to investigate possible mechanisms for the relationship between education and attitudes toward ex-offenders.

This study initially proposed to assess interpersonal contact for moderation effects. However, due to insufficient data it was tested as a correlate of public attitudes toward ex-offenders and produced the largest association among all correlates assessed in this study. As postulated by interpersonal contact theory (Allport, 1954; Pettigrew & Tropp, 2005, 2006), members of the public who report not having any type of contact with a current offender or ex-offender also report more negative attitudes toward ex-offenders. Regardless of personal, ex-offender, or community characteristics, members of the public who experience interpersonal contact with someone who is currently or was previously incarcerated may display more positive attitudes toward ex-offenders. However, these findings do not take into account the type (e. g. face-to-face contact) or quality (e. g. positive vs. negative contact) of interpersonal contact, which may influence the effect of contact on public attitudes.

Moderation analyses revealed that effect sizes tended to be larger for attitudes toward ex-offenders with a history of no sexual offenses, compared to ex-offenders with a history of sexual offenses (although not significantly different). These findings suggest that across

public demographic groups there may be a stronger consensus of negative attitudes toward sex offenders compared to non-sex offenders. However, subgroup analyses were not significant, indicating that attitudes toward ex-offenders may not be a function of sexual offense history. Additionally, few studies (13.4%) assessed attitudes toward non-sex offenders, which may have limited the power of subgroup analyses. Together, results suggest that alternative moderation effects may be present to explain the significant heterogeneity and low amounts of variance explained by sample error and artifacts.

Implications for research

In general, results indicate that few public demographic characteristics and no ex-offender or community characteristics are correlates of public attitudes toward ex-offenders. Additionally, these relationships do not vary as a function of sex offense history. Although small effect sizes and non-significant moderation effects may be attributed to non-representative samples, poor primary study methodology, or insufficient power, that does not appear to be the case here. Most of the primary studies assessed samples representative of the general public, with only a small portion containing convenience samples of students (20%, $n = 3$). In fact, studies implemented rigorous and representative sampling procedures such as random digit dials (Comartin et al., 2009; Mancini et al., 2010; Manza et al., 2004; Perkins et al., 2009; Piquero et al. 2010), door-to-door surveys (Burchfield, 2012), and recruitment within local community establishments (Levenson et al., 2007; Locke, 2011). Additionally, post-hoc power analyses revealed that all weighted effect sizes (but not all subgroup moderation analyses) had ample sample sizes to detect small significant effects at $\alpha = 0.05$

and all but two (violent offense history, community size) at $\alpha = 0.01$ (power = 0.80; Cohen, 1992).

Given that the included studies implemented strong methodology and that weighted effect sizes had ample power, it may be concluded that the assessed correlates of public attitudes toward ex-offenders are simply not relevant. This is not necessarily bad news. With the possible exceptions of political affiliation, education level, and interpersonal contact, results suggest that resources may be better spent exploring other correlates of attitudes. That is, other correlates may be stronger predictors and serve to explain more variability in public attitudes toward ex-offenders. The literature asserts that negative attitudes are a barrier to reentry; therefore, results from this study suggest that we should begin asking what else there is to learn about attitudes toward ex-offenders by beginning to look in other places for explanations for negative attitudes, such as the attitudes of family members and peers, ex-offender participation in rehabilitation, and local legislation. Because presence of any contact emerged as the strongest correlate, one direction for future research may be more in depth study of the effects of interpersonal contact, including comparisons of indirect and direct contact, and manipulation of contact based on type and quality of contact. Additionally, results revealed that ex-offender correlates (e.g., rehabilitation participation, age, mental illness diagnosis) and community level correlates (e.g., crime prevalence, local laws) are infrequently assessed. Future study of these variables may be the logical progression of research.

Implications for practice

Results also have implications for the creation and implementation of anti-stigma interventions to reduce the barriers to reentry. Small effect sizes across correlates suggest that the differences in attitudes between participant groups are small. Therefore, efforts to improve public attitudes should not necessarily target certain demographic groups or greatly tailor material to these specific participants. Rather, interventions may choose to primarily emphasize ways of reducing stigma as a function of criminal histories. The contributing factors of negative attitudes toward ex-offenders in general compared to sex offenders in particular might vary, and thus, anti-stigma interventions for these two ex-offender populations should also vary. For example, interventions to reduce the impact of stigma on ex-offender employment may begin with educating employers about recidivism rates of ex-offenders in general, and sex offenders in particular, and details about local hiring policies.

Findings also provide support for the application of interpersonal contact theory to improve attitudes toward ex-offenders. According to this theory, interventions that incorporate contact may have an impact on improving public attitudes. However, the strategy of incorporating contact into interventions can vary, including face-to-face contact, vicarious contact, and educational-based contact. However, the success of these anti-stigma interventions may be dependent of the modality (e. g., face-to-face) and nature (e. g. perceived as positive or negative) of the contact established. Face-to-face interventions have been demonstrated to successfully reduce negative attitudes toward other stigmatized groups (Pettigrew & Tropp, 2006). Examples of interventions intended to reduce stigma toward people diagnosed with a serious mental illness have begun to assess the effectiveness of

education-based and media-based contact in addition to face-to-face contact (Clement et al., 2012; Corrigan, Larson, Sells, Niessen, & Watson, 2007; Corrigan, Morris, Michaels, Rafacz, & Rüsçh, 2012; Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004). Therefore, future research should continue to investigate the role of interpersonal contact on public attitudes toward ex-offenders and build upon the previous literature by evaluating multiple ways of establishing and maintaining positive interpersonal contact to reduce the barrier to reentry caused by negative public attitudes.

Additionally, results may inform ways to reduce the effects of other barriers to reentry that are compounded by stigma. Prior literature has concluded that ex-offenders face multiple barriers to successful reintegration in areas such as employment, housing, health care, treatment for mental and/or substance use disorders, and family support; however, negative attitudes compound each aspect of reentry (Brooks et al., 2006; Clear et al., 2001; Pager, 2003; Schnittker & Bacak, 2013; Schnittker & John, 2007; Wakefield & Uggen, 2010; Western, 2002). Therefore, the reduction of stigma toward ex-offenders has the potential to also reduce other barriers to community reintegration, such as employment and social relationships.

First, to reduce the effects of stigmatizing attitudes towards ex-offenders on employment outcomes, many cities, counties, and states across the U.S. have begun fair-hiring initiatives to “Ban the Box” on employment applications that requiring applicants to report criminal history (National Employment Law Project, 2014). As of September 2014, 13 states and 69 cities or counties in the United States have established a state law or fair-chance policy to help reduce the barriers to employment associated with a criminal record (National

Employment Law Project, 2014). Postponing disclosures about criminal records is suggested to afford each applicant the opportunity for assessment based on merit and personal disclosure of the circumstances of their criminal history to employers. Fair-hiring legislation demonstrates a proactive effort to reduce the consequences of negative attitudes toward ex-offenders on employment outcomes.

Second, incarceration strains personal relationships, and loved ones of ex-offenders frequently experience stigma by association (Clear et al., 2001; Wakefield & Uggen, 2010). Negative public attitudes are not reserved for ex-offenders, but may diffuse to friends, families, and communities as well. Therefore, anti-stigma interventions should not only target ways to reduce stigma toward ex-offenders, but also toward an ex-offender's friends and family. Intervention programs may wish to also address this barrier using an interpersonal contact theory framework. Specifically, establishing public contact with a spouse, sibling, child, or close friend of an ex-offender may be associated with more positive attitudes toward friends and family of ex-offenders in general. Future research should consider these and other mechanisms to reduce the strain of stigma on personal relationships between ex-offenders and loved ones.

Strengths and limitations

This meta-analysis used systematic and comprehensive literature searches of the published and unpublished literature, capturing a small number of relevant studies ($n = 15$). Despite efforts to include all available research that met inclusion criteria, including thorough literature searches, inclusion of work that were not published, and contact with authors in the field, some relevant studies may not have been identified through search procedures, or effect

size data were not available for inclusion. In addition to this possible limitation of the meta-analysis as a whole, several limitations of the individual studies included in the analyses should also be considered.

First, analyses may be limited by the content and quality of studies included. As is common to all meta-analyses, this study was limited by the quality of the research of each individual study. Sources were included regardless of methodological rigor or quality to allow for the most comprehensive analysis; however, this may hinder the reliability and validity of results. Although, as previously discussed, the included studies demonstrated methodological rigor through random and representative sampling procedures. The present study also accounted for sampling biases through the use of sample size weighted correlations and had ample power for all analyses. General biases associated with population variability were also addressed by adhering to the random-effects model, which produces more conservative estimates of effect sizes. Moreover, artifact corrections were applied to artificially dichotomized correlates to control for associated biases.

Second, literature searches revealed inconsistency in the measurement of outcome variables. Although all included outcome measures assessed negative attitudes toward ex-offenders, across studies the operationalization and measurement of attitudes, stigma, punitiveness, and social distance varied. Findings of small effect sizes may be due in part to this measurement inconsistency. In particular, social distance by definition can assess the discord between general attitudes and attitudes about proximity (Park & Burgess, 1921). Therefore, aggregating effect sizes of social distance with other attitudinal measures may dilute true public feelings toward ex-offenders. For example, it is plausible that within one

sample, participants may have reported positive attitudes toward ex-offenders in general, but also reported wanting social distance from the same ex-offenders in their local community.

A meta-regression comparing different attitudinal outcome measures was considered as a part of this study to measure this possible limitation, but sufficient data were not available to conduct these additional analyses. To the extent that varying operationalization and measures of attitudes, social distance, stigma, and punitiveness are used, significant differences in a meta-regression might be expected. Therefore, increased attention should be directed toward developing consistent measures of attitudes toward ex-offenders and reentry. Examples may be drawn from existing measures of attitudes toward currently incarcerated offenders and sex offenders, such as the Attitude toward Prisoners scale (ATP; Melvin, Gramling, & Gardner, 1985), the Attitudes toward Sex-offenders scales (ATS; Hogue, 1993), and the Community Attitudes toward Sex Offenders scale (CATSO; Church, Wakeman, Miller, Clements, & Sun, 2008), which are utilized more consistently.

Third, multiple variables of public (religious affiliation and specific religious beliefs), ex-offender (variety of criminal histories, race/ethnicity, rehabilitation participation, age, diagnosis of serious mental illness), and community characteristics (crime prevalence) that were identified as potential correlates of attitudes could not be assessed due to insufficient data. This was particularly surprising for public religious beliefs, as this correlate is frequently identified as a significant correlate of attitudes toward current offenders and other criminal justice outcomes, such as capital punishment and punitive sentencing (e. g., Applegate, Cullen, Fisher, & Ven, 2000; Evans & Adams, 2003; Unnever et al., 2005). As previously discussed, these correlates have limited support in extant literature as predictors of

attitudes toward ex-offenders; however, exploration of their relationship with negative attitudes in future research would allow for more comprehensive literature synthesis.

Lastly, data were not present to assess interpersonal contact as a moderator of the relationship between attitudes toward ex-offenders and public, ex-offender, and community characteristics. Additionally, significant levels of heterogeneity suggest the presence of moderation in almost all correlates, but, again, there were not sufficient data to test for post-hoc moderation effects of interpersonal contact. Future research should investigate the direct relationships between interpersonal contact and public attitudes toward ex-offenders and the moderation roles of contact and other potential moderators to address these deficiencies in homogeneity.

Conclusion

This study marks the first meta-analysis of the correlates and moderators of public attitudes toward ex-offenders. Overall, findings showed small effect sizes between public, ex-offender, and community characteristics and public attitudes toward ex-offenders. However, political affiliation, education, and interpersonal contact emerged as significant correlates of negative attitudes. Results suggest that members of the public with more conservative political beliefs, less education, and no contact with someone who had been incarcerated report more negative attitudes toward ex-offenders. Findings may inform the direction of future research to explore new correlates of attitudes and also suggest the importance of incorporating interpersonal contact as part of interventions to reduce stigma, and ultimately reduce associated barriers to successful ex-offender community reentry.

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APPENDICES

Table 1. *Descriptive Statistics of 15 Studies of Negative Attitudes toward Ex-offenders*

Category	<i>n</i> (%)	<i>M</i> (SD)	Median	Range
Study Sample Size		438.53 (356.75)	400	42-1,380
Year Produced		2009.07 (2.40)	2009	2004-2012
Record Type				
Thesis/Dissertation	11 (73.3)			
Published Journal Article	4 (26.7)			
Study Location				
United States	13 (86.7)			
European Country	1 (6.7)			
Australia/New Zealand	1 (6.7)			
Population Type				
General Public	9 (60.0)			
Students	3 (20.0)			
Employers	2 (13.3)			
Mixed Populations	1 (6.7)			
Offense History ^a				
Violent Offense	2 (13.3)			
Sexual Offense	13 (86.6)			
Felony Offense	6 (40.0)			
Outcome Measure Type ^b				
Negative Attitudes	9 (60.0)			
Punitiveness	2 (13.3)			
Social Distance	12 (80.0)			

Note: *n* = 15 studies. ^aTotals may exceed 100% because offense histories are not mutually exclusive. ^bTotals may exceed 100% due to evaluation of more than one outcome measure in some studies.

Table 2. *Weighted Mean Effect Sizes of Negative Attitudes toward Ex-Offenders*

Correlates	<i>k</i>	<i>n</i>	\bar{r}_w (σ_p)	PVA (%)	95% CI _w	80% Cred.	$Q_{(k-1)}$
<i>Public Characteristic</i>							
Sex, (Female=0)	10	4,297	-0.07 (0.07)	32.54	-0.13, -0.02	-0.16, 0.02	30.81***
Sex Offender	6	2,839	-0.05 (0.02)	81.01	-0.13, -0.05	-0.12, -0.12	7.42
Non-Sex Offender	2	711	-0.13 (0.14)	20.03	-0.23, -0.03	-0.27, 0.00	10.02**
Race/Ethnicity, (Majority=0)	8	3,645	-0.07 (0.07)	32.17	-0.12, -0.01	-0.15, 0.02	24.93***
Sex Offender	4	2,212	-0.04 (0.07)	27.47	-0.10, 0.02	-0.13, 0.05	14.59**
Non-Sex Offender	2	686	-0.07 (0.03)	71.73	-0.15, 0.01	-0.12, -0.03	2.80
Education	7	3,302	-0.08 (0.05)	45.35	-0.13, -0.03	-0.15, -0.09	15.47*
Sex Offender	5	2,604	-0.08 (0.04)	52.79	-0.13, -0.03	-0.13, -0.03	9.49*
Non-Sex Offender	2	698	-0.10 (0.07)	35.34	-0.19, -0.01	-0.19, -0.01	5.68*
Religious Affiliation, (Christian=0)	1	-	-	-	-	-	-
Political Affiliation, (Conservative=0)	5	2,510	-0.11 (0.08)	24.51	-0.18, -0.04	-0.21, -0.01	20.44***
Sex Offender	1	-	-	-	-	-	-
Non-Sex Offender	2	532	-0.05 (0.01)	95.40	-0.14, 0.04	-0.07, -0.03	2.10
Age	6	2,447	0.01 (0.09)	24.10	-0.06, 0.08	-0.10, 0.12	24.96***
Sex Offender	4	1,944	0.00 (0.09)	19.47	-0.08, 0.08	-0.12, 0.12	20.59***
Non-Sex Offender	1	-	-	-	-	-	-
Income	7	2,408	0.02 (0.05)	49.11	-0.03, 0.08	-0.04, 0.09	12.25*
Sex Offender	5	1,885	-0.01 (^a)	607.53	-0.05, 0.02	^a	0.66
Non-Sex Offender	1	-	-	-	-	-	-
<i>Ex-offender Characteristic</i>							
Offense History, (Violent=0)	3	719	-0.09 (0.10)	28.23	-0.20, 0.01	-0.23, 0.04	10.67**
Offense History, (Sexual=0)	1	-	-	-	-	-	-
Offense History, (Felony=0)	1	-	-	-	-	-	-
Race/Ethnicity, (Majority=0)	1	-	-	-	-	-	-
Rehabilitation Participant, (No=0)	1	-	-	-	-	-	-
<i>Community Characteristic</i>							
Community Size, (Small/Rural=0)	2	838	-0.09 (0.04)	56.42	-0.16, -0.01	-0.14, -0.03	3.55
Crime Prevalence, (Low=0)	0	-	-	-	-	-	-
Contact, (No Contact=0)	3	1,377	-0.12 (0.03)	66.47	-0.18, -0.06	-0.16, -0.08	4.52

Note. *k* = number of effect sizes; *n* = total number of participants; \bar{r}_w = weighted mean effect size; σ_p = standard deviation of sampling error; PVA = proportion of variance accounted for by sampling error and attenuating artifacts; 95% CI_w = confidence interval of weighted mean effect size; 80% Cred = credibility interval of corrected standard deviation; $Q_{(k-1)}$ = chi-square homogeneity test; ^a = negative residual variance resulted in inability to calculate standard deviation of sampling error; **p* < .05; ***p* < .01; ****p* < .001

Table 3. *Corrected Weighted Mean Effect Sizes of Negative Attitudes toward Ex-Offenders*

Corrected Public Characteristic Correlates	k	n_c	$\bar{r}_{wc} (\sigma_{pc})$	PVA _c (%)	95% CI _{wc}	80% Cred. _c	$Q_{(k-1)c}$
Education	7	2,252	-0.10 (0.07)	40.05	-0.16, -0.03	-0.18, -0.01	17.54**
Sex Offender	5	1,698	-0.09 (0.06)	48.50	-0.15, -0.03	-0.17, -0.02	10.23*
Non-Sex Offender	2	554	-0.10 (0.10)	27.98	-0.21, 0.00	-0.22, 0.02	7.17**
Age	6	1,780	0.02 (0.10)	24.23	-0.07, 0.10	-0.12, 0.15	24.85***
Sex Offender	4	1,277	0.00 (0.11)	19.50	-0.10, 0.10	-0.14, 0.15	20.58***
Non-Sex Offender	1	-	-	-	-	-	-
Income	6	1,804	0.03 (0.06)	49.05	-0.04, 0.09	-0.05, 0.10	12.28*
Sex Offender	4	1,368	-0.01 (^a)	630.73	-0.06, 0.03	^a	0.64
Non-Sex Offender	1	-	-	-	-	-	-

Note. All values and analyses corrected for artificially dichotomized independent variable. k = number of effect sizes; n_c = corrected total number of participants; \bar{r}_{wc} = corrected weighted mean effect size; σ_{pc} = corrected standard deviation of sampling error; PVA_c = corrected proportion of variance accounted for by sampling error and attenuating artifacts; 95% CI_{wc} = corrected confidence interval of weighted mean effect size; 80% Cred. _c = corrected credibility interval of corrected standard deviation; $Q_{(k-1)c}$ = corrected chi-square homogeneity test; ^a = negative residual variance resulted in inability to calculate standard deviation of sampling error and credibility interval; * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 1. Results of Systematic Literature Search

