

Saved, Salvaged, or Sunk:

A Meta-Analysis of the Effects of Faith-Based Interventions on Inmate Adjustment

Lacey Schaefer

School of Social Science, University of Queensland

Tara Sams

School of Criminal Justice, University of Cincinnati

Jennifer Lux

School of Criminal Justice, University of Cincinnati

Abstract

Following the recent economic downturn, the religious roots of American corrections have begun to re-popularize. While faith-based correctional interventions are common, there is very little known about their effectiveness with offender populations. Drawn from 15 studies, 57 effect sizes were calculated to estimate the average impact of religious prison programming on inmate attitudes and disciplinary infractions. Producing a weighted mean effect size of $-.23$ ($g = -.45$ for attitudinal adjustments; $g = -.15$ for institutional misconduct), the results indicate that religious interventions produce a modest but significant alteration to offender values and behaviors.

Keywords: faith-based correctional intervention, offender rehabilitation, inmate adjustment, institutional misconduct

Saved, Salvaged, or Sunk:

A Meta-Analysis of the Effects of Faith-Based Interventions on Prisoner Misconduct

Spirituality and religion have long been associated with criminological theory and criminal justice practices. As colonial America underwent a wealth of change in the 19th century, cures for social disorder were reflected in the criminal justice system. The birth of the penitentiary evidenced the widely held dictum that offenders must be “corrected,” with the name of such institutions itself demanding that penitents pay for their sins (Vold & Bernard, 1986). This moral imperative incited practical interest, as well, as progressives embraced positivism; specifically, if the cause of criminality could be accurately identified, a reversal of the calculus would diminish antisocial tendencies. Correctional intervention therefore sought to distinguish those factors that promoted offending within each individual, and then presented reform tailored to the individual (Rothman, 1980). Historically, religious ideology has suggested that crimes are ultimately committed against god, such that that criminality is equated with evil. Faith-based correctional policy capitalizes upon this notion by insisting that wayward behavior can be redirected by a simple return to holiness, reflected in the idea of penance (O’Connor, 2004).

Contemporarily, the role of religion in the correction of offending remains pervasive, with criminal justice ideals remaining tangled with the tenets of the Christian faith the nation was founded upon (Grimsrud & Zehr, 2002). Biblical promotions are often referenced in discussions of how to rehabilitate offenders (Applegate, Cullen, Fisher, & Vander Ven, 2000; Green, 2013), with the Old Testament recommending retribution toward any wrongdoing, and the New Testament endorsing remedies via restoration (Murphy, 2003). Notably, each of the major world religions encourages acceptance and forgiveness, providing ample instigation for a host of faith-based social services. Within the context of corrections, this motivation to address offenders’

spiritual deficits has birthed a number of interventions. Most recently, the economic downturn has led to a re-popularization of inexpensive moral cures. For instance, the Bush administration made federal funds available for a variety of ‘spiritual revivals,’ including a rash of faith-based prisons and reentry programs; however, an important consideration is that these rehabilitative efforts often do not translate into a precise intervention (Jablecki, 2005). The influence of faith in offender treatment is generally informal, voluntary, and self-guided (Willison, Brazzell, & Kim, 2010). Of those programs with curriculums, many are transitional, readying prison inmates for a return to their communities, and include elements of faith education and mentorship.

Despite accommodating public opinion, several legal barriers have prevented a more structured implementation of faith-based rehabilitative interventions (Cullen, Pealer, Santana, Fisher, Applegate, & Blevins, 2007). First, some interpretations of the Establishment Clause have declared that the endorsement of one particular faith by any correctional facility is unconstitutional, ruling that the church is unrightfully impinging itself upon the State (Odle, 2006). Similarly, faith-based interventions have struggled with issues of employment discrimination in their efforts to balance complementary staff with barring prospective hires on the basis of religion. Finally, programs have been plagued by matters relating to coercion. Though multiple courts have ruled it unconstitutional to punish offenders who refrain from religious exhibition, this ideal remains at odds with the principles of faith-based interventions and the benefits afforded to participants.

Accordingly, capturing the efficacy of these programs has constituted a major methodological hurdle for social science researchers (Sumter, 2006). First, internal validity is difficult to capture, as nonrandom assignment (or no control group at all) predominates research design (Mears, 2007). Self-selection biases are common, with the offenders eligible for faith-

based interventions demonstrating a low offending risk and a high motivation to change (Camp, Klein-Saffran, Kwon, Daggett, & Joseph, 2006). External validity is similarly compromised, with random sampling being an impractical and unethical option. In reference to measurement, researchers have consistently noted that the quantification of an internal spiritual transformation is problematic, making the determination of 'success' a practical impossibility (Hewitt, 2006). Finally, the lack of a clear intervention (e.g., self-reported spirituality) makes operationalization and measurement difficult. For programs with a legitimate experimental manipulation, rates of attrition are generally high, further complicating matters of research design.

Beyond these methodological difficulties, theoretical inconsistencies also abound. Faith-based interventions are generally devoid of evidence-based practices, lacking an explicit causal model of precisely how spirituality might be rehabilitative for offenders (Cropsey, Wexler, Melnick, Taxman, & Young, 2007). As such, correctional quackery dominates, as the lack of supportive evaluations has not served to dissuade their implementation (Latessa, Cullen, & Gendreau, 2002). Indeed, the principles of effective correctional intervention are known (see Andrews & Bonta, 2010), though faith-based programs generally fail to adhere to any. The risk principle is violated, insofar as low-risk offenders are generally the only eligible participants (Jablecki, 2005), and the same dosage intensity is applied to all offenders (O'Connor, 2004). The need principle is disregarded, as irreligiousness is not itself criminogenic (Mears, Roman, Wolff, & Buck, 2007). Though there may be many benefits accrued through participation in religious prison programs (O'Connor, 2004), these advantages may not be capable of reversing the criminal calculus (Johnson, 2007). The responsivity principle may be of greatest capitalization here, as the charismatic authority of religious leaders may be an initial motivation to change; yet, this exploit may not reasonably produce lasting offender desistance.

Yet despite the number of logical inconsistencies noted above, religious interventions have hardly wavered in their receipt of sociopolitical favor. As the recession has birthed a wave of ideological zealots, many calls to a higher power are referenced in suggested cures for crime problems. Yet on what proof of effectiveness are prisons ushering in these programs? Given the regularity with which these interventions are observed, the scarcity of empirical investigation into their worth is unsettling. In producing this paper, we heartily acknowledge that an enumeration of the benefits of faith-based prison programs cannot be achieved through mathematical formulae alone; aside from dichotomous recidivism measures, intermediate outcomes (e.g., an increase in perspective-taking, lessons of forgiveness, exposure to prosocial role models) may be of substantial value. For example, depending on one's goals, the suicide risk reduction gained from participation in weekly worship service may be of greater value or import than a decrease in reoffending rates. Yet, in an era where public service providers are required to do more with less, it is not an inappropriate inclination to desire hard-and-fast results.

Indeed, findings from qualitative evaluations demonstrate generous anecdotal evidence of identity transformations for participants of faith-based correctional interventions (Kerley & Copes, 2009). Offenders report a reduction in antisocial cognitions, as well as an enhancement of prosocial beliefs (O'Connor, 2004). Additionally, prisoners frequently note improvements in their adjustment to institutional culture, as well as to life on the outside once released back into the community (Clear, Hardyman, Stout, Lucken, & Dammer, 2000). Generally, then, these studies support the efficacy of faith-based programs for incarcerated offenders, as the psychological and emotional benefits of spiritual expression and community belongingness are numerous (Kerley, Matthews, & Blanchard, 2005). In reference to the few quantitative

evaluations that have been performed, several studies of traditional recidivism measures note that no differences were observed between program participants and the control group (Mears, 2007).

With these considerations in mind, the present study sought to quantify the average impact of faith-based prison interventions on inmate adjustment. To accomplish this task, a meta-analysis was performed in order to systematically explore whether these interventions work, and if so, what programmatic features contribute to their success. First, we conducted a quantitative synthesis of available studies to determine the relationship between religious programming and inmate adjustment, measured as both attitudinal change and institutional misconduct. Second, we performed supplemental analyses to examine whether certain program characteristics moderate the effectiveness of the intervention on inmate adjustment.

Methods

Given the scarcity of high-quality studies on the effects of faith-based interventions on official recidivism (such as re-arrest or re-imprisonment), more informal dependent variables were chosen. Related to criminal relapse, the present study examines the influence of inmate faith practices and program participation on attitude alterations and prisoner misconduct. Insofar as attitudinal change must precede authentic behavioral change, shifts in criminal values warrant an attentive investigation (Bushway, Thonberry, & Krohn, 2003; Farrington, 2007; Maruna, 2001; Serin & Lloyd, 2009). It is anticipated that a reduction in pro-criminal beliefs births a reduction in institutional rule infractions, making both worthy of examination; though not directly examined in this study, a logical extension is that traditional measures of recidivism would follow this demonstrable pattern of desistance.

Subsequent to a review of the literature, two outcome-specific hypotheses were developed. First, we estimate that the observed effects will be weakest within studies whose

independent variable is self-reported religiousness. Many prisoners describe themselves as ascribing to a faith tradition and there is general continuity in practices that adhere to these beliefs; however, without an explicit point of intervention, spirituality is at best a protective as opposed to rehabilitative factor and expectations for significant behavioral change would be misguided (Baier & Wright, 2001; Evans, Cullen, Dunaway, & Burton, 1995). Second, in accordance with the principles of effective intervention (Andrews & Bonta, 2010), we expect that the most significant outcomes will be observed within more structured programs (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Cullen, 2002; Cullen & Gendreau, 2000; Lipsey, 2009). Interventions that abide by a curriculum, have a designated and trained facilitator, have moderate- to high-intensity dosage, are designed with a target for offender change, and are formally implemented and managed are anticipated to exhibit greater impacts (Latessa, 1999; Latessa, 2002).

Study Collection and Selection

Extensive efforts were made to gather empirical studies relevant to the influence of faith-based interventions on inmate attitudes and behaviors, with more than 100 hours spent locating materials. Academic search engines were consulted first (principally: EBSCO, Academic Search Complete, SAGE, and Dissertation Abstracts International), employing more than two dozen keywords and their varying combinations. Additionally, the bibliographies of published reviews/studies were consulted. Upon completion of the search, a total of 102 relevant studies had been gathered. Unfortunately, the majority of these had to be eliminated from further analysis. Common reasons for study exclusion were due to the investigation being exclusively qualitative, having inadequate statistics available for effect size computations, having inadequate independent variables, and including no quantitative outcome measure of offender change.

Sample of Studies

Overall, 15 studies were yielded following collection and selection procedures (indicated with an asterisk in the references section). Of these, three studies evaluated inmate attitudes (such as criminal thinking, anxiety, and perspective taking), eleven studies examined inmate misconduct, and one study measured both changes in beliefs and institutional infractions. Measurement of the chosen outcome variables was achieved through three routes of data collection: offender self-report ($N = 10$), examination of inmate disciplinary records ($N = 6$), and the solicitation of supplemental reports (such as assessments made by institutional staff; $N = 3$). The format of included studies was largely isolated to journal articles, though one government report and one dissertation were located and met inclusion criteria, with publication dates between 1987 and 2010. All but one of the interventions took place in standard prisons (the exception took place in a specialized faith-based correctional institution), and all but one study collected data within medium-security facilities. Studies were most often conducted nationally (not with a representative sample, but rather with multi-site data collection; $N = 5$), in the South ($N = 4$), and in the Midwest ($N = 3$). Sample size ranged from 38 to 11,789 participants (with one outlier removed, $range = 38 - 1597$, $M = 486$, $SD = 526.59$). Most studies included both males and females in their samples ($N = 6$), or collected data on male participants only ($N = 5$), with a mean age among inmates of 34.74 ($SD = 3.13$); unfortunately, none of the studies included separate results by demographic categories or offending/sanction history. Of those studies that reported attrition, program completion rates ranged from 58 – 83%, though definitions of “success” were largely lax. Eight of the studies included a control group, with participant recruitment stemming mostly from the general population ($N = 11$). Four studies employed a pre-test prior to the point of intervention. While six studies achieved random sample

selection, only one study utilized random participant assignment. Summarily, twelve studies can be classified as quasi-experimental, and three are non-experimental.

Variable Selection

To create an informed and objective coding guide, the fifteen included studies were each skimmed for content. Upon creation of a preliminary codebook, coders examined three randomly selected studies in-depth, revising the coding guide as necessary. Following the template provided by Cooper (2010), the final coding guide included eight sections with a total of 107 items: report characteristics ($k = 7$), study setting characteristics ($k = 7$), sample and participant characteristics ($k = 9$), research design characteristics ($k = 7$), predictor variable characteristics ($k = 18$), outcome variable characteristics ($k = 10$), statistical outcomes and effect size computations ($k = 36$), and coding process characteristics ($k = 3$). Five studies examined the impact of an explicit intervention, while eight included self-reported religiousness as the independent variable. The average program evaluated was of medium intensity ($N = 8$), with no curriculum ($N = 12$), and was facilitated by faith-based prison staff ($N = 3$) or volunteers ($N = 7$). Measured programmatic components included mentorship or spiritual counseling ($N = 6$), bible study ($N = 4$), structured prayer or meditation ($N = 0$), worship service attendance ($N = 6$), church leadership training ($N = 3$), and faith education courses ($N = 4$).

Coding Procedures

Three articles were selected at random, with three researchers coding the studies collectively; disputes over coding classification were resolved, often with a resulting modification made to the coding guide (changes were made to variable operationalizations, thresholds, or category expansion or collapse). Next, studies were randomly assigned to three coders. Once finished with the initial coding, one study from each coder was re-coded by

another team member, with an overall level of agreement across 107 variables just over 94%; discrepancies and disputes were collectively resolved through consensus, with a few studies requiring ad hoc coding. The length of time necessary to code one study ranged from 25 to 120 minutes ($M = 42$, $SD = 24.84$).

Analytical Procedures

The computation formulas provided by Lipsey and Wilson (2001) were adhered to in calculating effect sizes, while supplemental analyses applied the equations noted in prominent meta-analysis handbooks (Cooper, Hedges, & Valentine, 2009; Wolf, 1986). First, to calculate effect sizes, different forms of data were first converted to the standardized mean difference (Cohen's d ; for binary data, $d = ((\sqrt{3}) / \pi)\ln(O)$; for correlational data, $d = 2r / \sqrt{1-r^2}$; for continuous data, d is calculated directly from the descriptive information available). Next, the bias-corrected standardized mean difference (Hedge's $g =$ correction factor $J * \text{Cohen's } d$) was computed with the formula:

$$g = J \times d = \left(1 - \frac{3}{4(n_T + n_C - 2) - 1} \right) \times \frac{\bar{X}_T - \bar{X}_C}{s_p}$$

Effect sizes for each unique independent variable by dependent variable interaction were calculated, for a total of 57 individual estimates (14 effect sizes summarizing the effect of a faith-based intervention on attitudinal dispositions, and 43 effect sizes conveying the impact on prisoner behavioral misconduct. The confidence rating for each effect size was acceptable ($M = 1.70$, $SD = .93$), following the five-point scale advocated by Lipsey and Wilson (2001). Upon calculation of the weighted mean effect size, the heterogeneity of observed results was examined (and subsequent random-effects models were estimated), followed by a meta-mean comparison and hypothesis testing of selected moderator variables. Lastly, post hoc analyses were conducted to explore the influence of numerous potential biases to the observed results.

Results

Of all effect size calculations in which raw differences in values were reported, the treatment group was favored in 18 occurrences, while the control group was favored in 12 occurrences; of these 30 differences, however, only five reached statistical significance. Excluding the one study that reported that institutional infractions were reduced to zero for the experimental group, effect sizes ranged from $-.77$ to $+.44$ (see Figures 1a and 1b for a graphical overview of the dispersion of the standardized mean difference effect sizes). The weighted mean effect size is $-.23$ (for attitudinal shifts, $T_{\bullet} = -.45$; for inmate misconduct, $T_{\bullet} = -.15$), calculated from the following formula:

$$T_{\bullet} = \frac{\sum_{i=1}^k w_i T_i}{\sum_{i=1}^k w_i}$$

To be clear, negative signs accompanying effect sizes indicate a reduction in criminal attitudes and institutional misbehavior; contrarily, positive effect sizes reflect an increase in antisocial beliefs and accompanying inmate misconduct. For evaluations favoring the treatment group (71%), observed effects were somewhat stronger ($ES_{sm} = -.37$, $SD = .28$) than those seen for studies reporting better outcomes for the control group ($ES_{sm} = .15$, $SD = .11$). Using the benchmarks established by Cohen (1988), the mean effect is small; importantly, however, among the average effect sizes on the positive side, the increase in institutional misbehavior was mostly negligible. Further, it is vital to note that the greatest effect size observed ($g = -1.52$) originated from a study evaluating a reentry program that utilizes the principles of effective intervention (O'Connor, Ryan, & Parikh, 1998); specifically, the faith-based efforts were aimed at reducing the recidivism risk and criminogenic needs of inmates.

Moderator Analyses

A homogeneity of standardized mean differences test was conducted to determine whether justification for moderator analyses was present (Shadish, 1996). Cochran's Q (Hedges & Olkin, 1985) was computed through the formula:

$$Q_t = \sum_{i=1}^k w_i d_i^2 - \frac{\left(\sum_{i=1}^k w_i d_i \right)^2}{\sum_{i=1}^k w_i}$$

The results evidenced a significant degree of heterogeneity among the effect sizes, $Q_t = 1207.56$, $p < .001$, warranting investigation into the program and study characteristics that produced such variation, utilizing random-effects modeling (Becker, 2000). Foremost, there were no significant mean differences between minor versus serious forms of inmate misconduct, $t = .268$, $p = .792$, suggesting a comparable effect of faith-based interventions on offender compliance with prison rules. However, there was a wide gap in mean effect sizes between shifts in attitudinal dispositions ($M = -.45$, $SD = .39$) and institutional misbehavior ($M = -.15$, $SD = .29$), $t = -3.054$, $p = .01$. The greater impact observed in criminal values over criminal actions has two plausible explanations. First, the possibility exists that a faith-based intervention is specifically designed to only alter antisocial beliefs, with behavioral change a beneficial side effect. Second, it may be that religious programs aim to improve offender behavior, yet fall short; however, incremental gains are still observed through the differences observed in inmate attitudes. Though related, these speculations are conceptually distinct, as the first refers to the direct intention of the intervention, while the other questions the outcome achieved by the intervention. As of yet, no clear resolution to this discrepancy can be offered.

A number of other evaluation and intervention features proved to influence the strength of the observed effects, as well (see Table 1 for an overview of these relationships). In reference to research methodologies, there were no significant differences in effect sizes between non- and quasi-experimental designs, subject assignment, or statistically equivalent control groups. This finding perhaps questions the “garbage in, garbage out” credo expressed by meta-analysis critics (Borenstein, Hedges, Higgins, & Rothstein, 2009), though it may also demonstrate the pervasive influence of religious programming. Interestingly, however, standardized mean differences varied according to sample selection procedures, $t = 3.484, p < .001$. This disparity between random ($M = -.09; SD = .27$) and non-random ($M = -.38, SD = .36$) samples may support the popular contention that the positive effects observed are simply an artifact of a strong self-selection bias (Camp, Klein-Saffran, Kwon, Daggett, & Joseph, 2006; Swanson, 2009; Young, Gartner, O’Connor, Larson, & Wright, 1995). Finally, there were no significant differences in average effects between faith-based interventions conducted in the South or the Midwest as opposed to other regions, $t = -1.163, p = .113$, despite the argument that stronger cultural traditions of religion will aid in the efficacy of faith-based interventions.

In reference to the qualities of the intervention, surprisingly there were no significant differences in mean effect sizes despite the dependent variable used (offender self-report versus official records, or the seriousness of the infraction), whether the program included an explicit intervention, whether the program directly targeted offender change, whether a curriculum was used, or who facilitated the program (though many of these variables produced large raw differences, these failed to reach statistical significance). Importantly, each of these dichotomous variables showcased differences in effect sizes in the direction predicted; simply, the more structured the program, the greater the influence. The variation between low versus

medium-high dosage intensity neared statistical significance, $t = 1.953, p = .056$, with greater effects observed among the more salient programs, as predicted. Comparably, programs who employed a more rigorous intervention achieved greater effects than those whose independent variable was purely self-reported religiousness ($M = -.44, SD = .37$ versus $M = -.12, SD = .28$), $t = -3.641, p < .001$. As suspected, this difference suggests that an intervention that relies purely on the existing faith beliefs of offenders is not independently capable of producing substantial change among prisoners. Indeed, those faith-based programs that are based on and implemented in accordance with theories of offender rehabilitation birth larger reductions in antisocial attitudes and inmate misconduct.

Judging the qualities of the faith-based program reveals several intriguing findings. There were no significant differences in mean effects on attitude alteration or inmate misconduct despite differences in programmatic components: worship service attendance, faith education courses, or church leadership training. However, interventions with mentorship or individualized spiritual counseling produced larger effects than those programs that excluded this feature, $t = 4.012, p < .001$. Likewise, prison programs that included group bible study as an element of the intervention demonstrated a more substantial impact, $t = 2.246, p < .05$. However, a meta-ANOVA demonstrated no significant within- versus between- group differences in effect sizes among all programmatic components of the intervention, $F = 2.563, p = .076$.

Post Hoc Analyses

To examine the potential for bias in these results, a number of supplemental analyses were performed. First, there was no correlation between effect size and the study sample size, $r = .110, p = .415$, nor was there a significant association between the amount of time it took to code the study and the effect size produced, $r = .120, p = .379$. To address the “file-drawer problem,” (the

concern that only significant evaluations are published) a fail-safe N was calculated using Orwin's (1983) approach. Results indicated that the number of nonsignificant studies necessary to reduce the observed effect size to nonsignificance was much greater than the threshold established by Rosenthal (1979), such that there was no significant publication bias noted. Finally, a number of supplemental sensitivity analyses were performed; we examined different techniques for handling missing data, removed possible outliers, and compared effect sizes according to different measures of study quality (using the Maryland Scale of Scientific Methods to assess study threats to validity; Sherman, Gottfredson, MacKenzie, Eck, Reuter, & Bushway, 1998; see also McGuire et al., 1985), with no substantive changes to the observed results.

Discussion

Religion is frequently cited in discussions of offender treatment, and faith-based programming in prisons have begun to re-popularize (Applegate, Cullen, Fisher, & Vander Ven, 2000; Green, 2013). The present study examined the impact of faith-based interventions on attitudinal change and prisoner misconduct. Meta-analytic results demonstrate a modest but significant improvement in inmate outcomes for participants in religious prison programs, with a weighted mean effect size of $-.23$. Notably, the influence of faith-based interventions was greater with subjective, self-reported psychosocial dependent variables (attitudinal shifts, $T_e = -.45$) than for more objective, official behavioral measures (inmate misconduct, $T_e = -.15$). This discrepancy supports the findings of previous studies, whereby religious involvement provides a number of protective features from the harsh prison environment, but may not translate into legitimate behavioral change while incarcerated or upon release (Baier & Wright, 2001).

Modest support was found for two hypothesized relationships. First, results indicated that the overall average effect of prison interventions was indeed weaker when the independent

variable was self-reported religiousness ($T_e = -.12$ versus $T_e = -.44$). This validates the contention that without an explicit intervention, spirituality may not be capable of instigating significant change in the inmate's actions. Again, this is not to say that there is no value achieved in allowing prisoners to express their faith; yet there is simply no logical reason to believe that a belief in a higher power, consultation of religious texts, or personal prayer would cause someone to desist from offending. In particular, many active offenders engage in these same spiritual behaviors prior to incarceration, diminishing the probability that continuity in the exercise of one's faith would alternatively promote prosociality once imprisoned.

Second, this study speculated that in accordance with the principles of effective intervention, more structured programs would exhibit the strongest impact on improvements in prisoner outcomes. Partial support for this hypothesis was found. Though not statistically significant ($p = .054$), larger effect sizes were observed when an explicit intervention was employed ($T_e = -.37$) compared to those programs that were more informal ($T_e = -.17$). Similarly, a more profound impact on prisoner attitudes and infractions was observed when there was a precise target for offender change ($T_e = -.34$ versus $T_e = -.19$), when a specific curriculum was utilized ($T_e = -.37$ versus $T_e = -.21$), and with medium- or high-intensity dosage compared to low-intensity ($T_e = -.32$ versus $T_e = -.14$) in the studied faith-based program. Certain programmatic features appear to be systematically related to the strength of the impact of religious interventions; however, not many differences reached statistical significance despite vast raw differences, which may be a product of small sample sizes (that is, a shortage of reliable studies to synthesize).

Perhaps most notably, a large difference was observed between the effect size for prison programs that included a mentorship component ($T_e = -.44$) versus those that did not ($T_e = -.11$),

although the number of interventions that contained this feature was small. Intriguingly, bible study was associated with lower rates of misconduct ($t = 2.535, p < .05$), but was not significantly related to alterations in criminal attitudes. This program component involves interpersonal interactions that promote a sense of community, often with outside church volunteers. The social bonds developed through participation in these types of faith-based initiatives may explain why behavior is altered but not personal value systems. It is also possible that inmates are more likely to comply with institutional rules if it earns them freedom from their cells; however, getting to attend bible study may invoke obedience but it does not necessarily require corresponding attitudes. While an encouraging finding (indeed, decreased disciplinary infractions is entirely beneficial), without a corresponding internal change there may be little reason to believe that inmate compliance will translate into long-term law-abiding behavior upon release from prison. Though the development of prosocial ties or the diminishment of opportunity may contribute to desistance (e.g., social bond or routine activity theory; O'Connor, 2004), these advantages alone will likely not reverse the calculus of criminality (Johnson, 2007). The responsivity principle may gain some momentum from religious interventions, though charismatic authority alone is not an adequate catalyst to altering human behavior. Thus, faith-based interventions are most effective in conjunction with evidence-based practices.

While the present study is the first effort to quantitatively synthesize the available research on the effects of faith-based interventions on prisoner behavior, the endeavor is not without a number of limitations. First, the term “faith-based” is used inconsistently (Mears, Roman, Wolff, & Buck, 2006). A lack of reliability in definitional matters, particularly when said operationalizations surround the key variables of interest, and creates a situation in which researchers are essentially comparing apples to oranges. Identifying the characteristics and goals

that are unique to faith-based programs is a critical first step in this process. Though not directly pursued here, an established set of criteria would better equip practitioners and scholars alike to classify and analyze programs. The lack of a clear intervention (e.g., self-reported religiosity) makes operationalization difficult. Refined measures of religiosity are needed to capture this complex concept. Indeed, researchers have consistently noted that the quantification of an internal spiritual transformation is problematic, making any measurement of change a methodological quandary (Hewitt, 2006).

Next, self-selection biases continue to be an obstacle when analyzing faith-based initiatives. Unfortunately, there does not appear to be a quick or easy solution, although the use of matched comparison groups could provide greater confidence in the results. Whether a matter of personal ideologies or perhaps an increased reliance on empiricism and “what works,” researchers are skeptical of the constitutionality, logic, and effectiveness of faith-based correctional policies. A standard rejoinder to advocates is that if a more rigorous sampling strategy were used, a clear picture of “no differences” would emerge. In support of this popular criticism, the present study observed that greater results were seen with non-random (-.38) than with random samples (-.09). At least preliminarily, there is some indication that when participants self-select into the pool of eligible program participants, a desire to change before the intervention is slated to begin will translate into “improved” outcomes.

Related to these two shortcomings is the necessary acknowledgement of the “junk in, junk out” phenomenon common to meta-analytic reviews. Simply, when the quality of the studies being synthesized is poor (as many evaluations themselves confess), the results may be of little meaning. While the authors of the present study assert that rigorous, accepted practices were used to systematically combine the available literature, the studies included in the analyses

may not have trustworthy findings. Clearly then, the results presented herein require a thorough dose of doubt. This is not to say that the outcomes should be discarded entirely, but rather that the findings should be considered in light of the limitations of the contributing studies.

Moreover, this study establishes the necessity of producing more high-quality evaluations of faith-based prison programs. The fact that religious interventions are commonplace correctional programs demands empirical investigation.

Finally, readers should note that although religiosity appears to be an important predictor, attitude change / prosocial inmate conduct while incarcerated may not translate beyond an institutional setting. The effect of faith-based interventions may not result in long-term behavioral change and our findings may reflect only a temporary inmate adjustment. Further research is needed to determine whether faith-based interventions produce desistance beyond prison walls. These explorations should include a careful documentation of the differences in programming among institutional and community settings.

Given these findings, a number of tentative conclusions can be drawn regarding the impact of faith-based programs on prisoner behavior. Evaluations suggest that faith-based interventions increase the number of prosocial peers offenders are exposed to, and diminish opportunity by limiting environments conducive to offending, aiding in the development of a non-criminal identity. This alone does not imply behavioral change, and critics reason that this may be disingenuous and self-serving (Hewitt, 2006). However, there is evidence that attitudinal shifts are achieved, as seen in the moderate average effect size noted here, though the impact of these internal changes remain in question (Burnside, Adler, Loucks, & Rose, 2001). Studies of within-group differences demonstrate that program completers (generally low-risk offenders with high motivation to change; Daggett, Camp, Kwon, Rosenmerkel, & Klein-Saffran, 2008;

Sumter, 2006) exhibit the greatest success. Additionally, interpersonal interaction and accountability increases the probability of successful outcomes, with mentoring programs achieving the strongest findings (Jensen & Gibbons, 2002; Johnson & Larson, 2003). Faith-based programs should seek to emphasize this prosocial component in their rehabilitative efforts, regardless of what feature is the actual catalyst for change.

Comparably, consistencies across evaluations, backed up by the results observed in the present study, reveal what does not work within these programs. First, exclusively faith-based correctional institutions do not appear to reduce criminal tendencies (Aos, Miller, & Drake, 2006). The lack of generalizable skills does not contribute to desistance for offenders; that is, the facets of these intensive interventions do not approximate typical living conditions, such that criminogenic factors are allowed to resume (e.g., going to a worship service each night of the week will not itself teach an inmate how to problem-solve a conflict with another prisoner). Next, penance and personal reflection alone (such as church attendance, scripture consultation, and prayer groups), do not appear salient enough to initiate measurable behavioral change. Though these programmatic attributes may initiate attitudinal shifts, such internal transformations fail to instigate a larger alteration to a more deeply embedded criminal lifestyle. Finally, one-size-fits-all interventions are necessarily doomed to failure, provided that effective programs must be tailored to the individual (Cropsey, Wexler, Melnick, Taxman, & Young, 2007). Though departments of correction aim to streamline resources through the routinization of programs, the most efficacious treatments are individualized to each offender.

Although largely supported by the public, the continued use of religion as a correctional intervention must be grounded in empirical evidence; in the absence of such, the use of these programs amounts to correctional quackery (Latessa, Cullen, & Gendreau, 2002). The present

study demonstrates that quality programs that adhere to the principles of effective intervention and promote prosocial bonds will produce the greatest changes in criminal attitudes and behavior. Faith-based components may certainly be a responsiveness accommodation (Ferguson, Wu, Spruijt-Metz, & Dyrness, 2007), and should therefore be incorporated into effective interventions (e.g., merging parables from sacred texts with cognitive behavior therapy). Responsivity in programming addresses individual barriers and how best to treat the client and their specific needs. Because the majority of faith-based programs are voluntary, it could be inherently argued that faith-based programs meet this principle of effective intervention (O'Connor, 2004). Even further, some offenders lack motivation to change their wayward behavior. Faith-based programs might address this barrier by providing the offender with a "hook for change." That is, the offender might be willing to use the prosocial opportunity of participating in a faith-based program as a catalyst to change his or her behavior and desist from crime (Giordano, Cernkovich, & Rudolph, 2002).

A greater number of systematic evaluations are needed, so that evidence-based practices regarding faith-based programs can be developed. As of yet, research has been largely political, though beneficial intermediate outcomes appear to be consistently achieved. Although generally fueled by emotional moral/religious arguments, sensible policymaking is required. While the role of religion in crime *prevention* is consistently evidenced, this may not apply to offender treatment (Johnson, 2007). The meta-analytic findings discussed herein supply ample instigation for further research. The average effect size is modest, but promising. Accordingly, faith-based interventions for criminal populations must be contextualized not as a panacea or as a failure, but as a program with potential for *aiding* in the rehabilitation of offenders.

References

- Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). New Providence, NJ: Anderson.
- Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically-relevant and psychologically-informed meta-analysis. *Criminology*, 28, 369-404.
- Aos, S., Miller, M., & Drake, E. (2006). *Evidence-based adult corrections programs: What works and what does not*. Olympia, WA: Washington State Institute for Public Policy.
- Applegate, B. K., Cullen, F. T., Fisher, B. S., & Vander Ven, T. (2000). Forgiveness and fundamentalism: Reconsidering the relationship between correctional attitudes and religion. *Criminology*, 719-754.
- Baier, C. J., & Wright, B. R. E. (2001). "If you love me, keep my commandments:" A meta-analysis of the effect of religion on crime. *Journal of Research in Crime and Delinquency*, 38, 3-21.
- Becker, B. J. (2000). Multivariate meta-analysis. In H. E. A. Tinsley & S. D. Brown (Eds.), *Handbook of applied multivariate statistics of mathematical modeling* (pp. 499-525). San Diego: Academic Press.
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. West Sussex, UK: John Wiley & Sons.
- * Burnside, J., Adler, J., Loucks, N., & Rose, G. (2001). *Kainos community in prisons: Report of an evaluation*. Wales: Home Office, Research Development and Statistics Directorate.

Bushway, S. D., Thornberry, T. P., & Krohn, M. D. (2003). Desistance as a developmental process: A comparison of static and dynamic approaches. *Journal of Quantitative Criminology, 19*, 129-153.

* Camp, S. D., Daggett, D. M., Kwon, O., & Klein-Saffran, J. (2008). The effect of faith program participation on prison misconduct: The Life Connections Program. *Journal of Criminal Justice, 36*, 389-395.

Camp, S., Klein-Saffran, J., Kwon, O., Daggett, D., & Joseph, V. (2006). An exploration into participation in a faith-based prison program. *Criminology & Public Policy, 5*, 529-550.

Cooper, H. (2010). *Research synthesis and meta-analysis: A step-by-step approach* (4th ed.). Thousand Oaks, CA: Sage.

Cooper, H., Hedges, L. V., & Valentine, J. C. (Eds.). (2009). *The handbook of research synthesis and meta-analysis*. New York: Russell Sage.

Clear, T. R., Hardyman, P., Stout, B., Lucken, K., & Dammer, H. (2000). The value of religion in prison: An inmate perspective. *Journal of Contemporary Criminal Justice, 16*, 53-74.

* Clear, T. R., & Sumter, M. T. (2002). Prisoners, prison, and religion. *Journal of Offender Rehabilitation, 35*(3), 125-156.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum.

Cropsey, K. L., Wexler, H. K., Melnick, G., Taxman, F. S., & Young, D. W. (2007). Specialized prisons and services: Results from a national survey. *The Prison Journal, 87*, 58-85.

Cullen, F. T. (2002). Rehabilitation and treatment programs. In J. Q. Wilson & J. Petersilia (Eds.), *Crime: Public policies for crime control* (pp. 253-289). San Francisco: ICS Press.

- Cullen, F. T., & Gendreau, P. (2000). Assessing correctional rehabilitation: Policy, practice, and prospects. In J. Horney (Ed.), *Criminal justice 2000: Policies, processes, and decisions of the criminal justice system* (pp. 109-175). Washington, D.C.: National Institute of Justice.
- Cullen, F. T., Pealer, J. A., Santana, S. A., Fisher, B. S., Applegate, B. K., & Blevins, K. R. (2007). Public support for faith-based correctional programs: Should sacred places serve civic purposes? *Journal of Offender Rehabilitation, 45*(3/4), 29-46.
- Daggett, D. M., Camp, S. D., Kwon, O. K., Rosenmerkel, S. P., & Klein-Saffran, J. (2008). Faith-based correctional programming in federal prisons: Factors affecting program completion. *Criminal Justice and Behavior, 35*, 848-862.
- Evans, T. D., Cullen, F. T., Dunaway, R. G., & Burton, V. S., Jr. (1995). Religion and crime reexamined: The impact of religion, secular controls, and social ecology on adult criminality. *Criminology, 33*, 195-224.
- Farrington, D. P. (2007). Advancing knowledge about desistance. *Journal of Contemporary Criminal Justice, 23*, 125-134.
- Ferguson, K., Wu, Q., Metz-Spruijt, D., & Dyrness, G. (2007). Outcomes evaluation in faith-based social services: Are we evaluating *faith* accurately? *Research on Social Work Practice, 17*(2), 264-276.
- * Gerace, A., & Day, A. (2010). Criminal rehabilitation: The impact of religious programming. *Journal of Psychology and Christianity, 29*, 317-325.
- Giordano, P. C., Cernkovich, S., & Rudolph, J. L. (2002). Gender, crime, & desistance: Toward a theory of cognitive transformation. *American Journal of Sociology, 107*, 990-1064.
- Green, D. A. (2013). Penal optimism and second chances: The legacies of American Protestantism and the prospects for penal reform. *Punishment & Society, 15*, 123-146.

Grimsrud, T., & Zehr, H. (2002). Rethinking God, justice, and the treatment of offenders.

Journal of Offender Rehabilitation, 35, 259-285.

* Hall, S. T. (2003). Faith-based cognitive programs in corrections. *Corrections Today, 65*, 108-113; 120; 137.

Hedges, L., & Olkin, I. (1985). *Statistical methods for meta-analysis*. Orlando: Academic Press.

Hewitt, J. D. (2006). Having faith in faith-based prison programs. *Criminology & Public Policy, 5*, 551-558.

Jablecki, L. T. (2005). A critique of faith-based prison programs. *The Humanist, 65*, 11-16.

Jensen, K. D., & Gibbons, S. G. (2002). Shame and religion as factors in the rehabilitation of serious offenders. *Journal of Offender Rehabilitation, 35*, 215-230.

* Johnson, B. R. (1987). Religiosity and institutional deviance: The impact of religious variables upon inmate adjustment. *Criminal Justice Review, 12*(1), 21-30.

Johnson, B. R. (2007). *Thinking about the role of religion in crime prevention, prisoner reentry, and aftercare*. Waco, TX: Baylor Institute for Studies of Religion.

Johnson, B. R., & Larson, D. B. (2003). *The InnerChange Freedom Initiative: A preliminary evaluation of a faith-based prison program*. Philadelphia: Center for Research on Religion and Urban Civil Society.

* Johnson, B. R., Larson, D. B., & Pitts, T. C. (1997). Religious programs, institutional adjustment, and recidivism among former inmates in prison fellowship programs. *Justice Quarterly, 14*, 145-166.

Kerley, K. R., & Copes, H. (2009). "Keepin' my mind right:" Identity maintenance and religious social support in the prison context. *International Journal of Offender Therapy and Comparative Criminology, 53*, 228-244.

- * Kerley, K. R., Matthews, T. L., & Blanchard, T. C. (2005). Religiosity, religious participation, and negative prison behaviors. *Journal for the Scientific Study of Religion, 44*, 443-457.
- * Kerley, K. R., Matthews, T. L., & Schulz, J. T. (2005). Participation in Operation Starting Line, experience of negative emotions, and incidence of negative behavior. *International Journal of Offender Therapy and Comparative Criminology, 49*, 410-426.
- Latessa, E. J. (1999). *Strategic solutions: The International Community Corrections Association examines substance abusers*. Lanham, MD: American Correctional Association.
- Latessa, E. J. (2002). *What Works*. Washington, DC: National Institute of Corrections.
- Latessa, E. J., Cullen, F. T., & Gendreau, P. (2002). Beyond correctional quackery: Professionalism and the possibility of effective treatment. *Federal Probation, 66*, 43-49.
- * Levitt, L., & Loper, A. B. (2009). The influence of religious participation on the adjustment of female inmates. *American Journal of Orthopsychiatry, 79*, 1-7.
- Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and Offenders, 4*, 124-147.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.
- Maruna, S. (2001). *Making good: How ex-convicts reform and rebuild their lives*. Washington, D.C.: American Psychological Association.
- McGuire, J., Bates, G. W., Dretzke, B. J., McGivern, J. E., Rembold, K. L., Seabold, D. R., Turpin, B. M., & Levin, J. R. (1985). Methodological quality as a component of meta-analysis. *Educational Psychologist, 20*, 1-5.
- Mears, D. P. (2007). Faith-based reentry programs: Cause for concern or showing promise? *Corrections Today, 69*(2), 30-33.

- Mears, D. P., Roman, C., Wolff, A., & Buck, J. (2006). Faith-based efforts to improve prisoner reentry: Assessing the logic and evidence. *Journal of Criminal Justice, 34*, 351-367.
- Murphy, J. G. (2003). Christianity and criminal punishment. *Punishment & Society, 5*, 261-277.
- O'Connor, T. P. (2004). What works, religion as a correctional intervention: Part I. *Journal of Community Corrections, 14*(1), 11-27.
- * O'Connor, T. P., & Perryclear, M. (2002). Prison religion in action and its influence on offender rehabilitation. *Journal of Offender Rehabilitation, 35*(3), 11-33.
- * O'Connor, T. P., Ryan, P., & Parikh, C. (1998). A model for churches and ex-offender reintegration. *Journal of Offender Rehabilitation, 28*(1-2), 107-126.
- Odle, N. (2006). Privilege through prayer: Examining Bible-based rehabilitation programs under the Establishment Clause. *Texas Journal on Civil Liberties & Civil Rights, 12*, 277-311.
- Orwin, R. G. (1983). A fail-safe *N* for effect size in meta-analysis. *Journal of Educational Statistics, 8*, 157-159.
- * Pass, M. G. (1999). Religious orientation and self-reported rule violations in a maximum security prison. *Journal of Offender Rehabilitation, 28*(3-4), 119-134.
- Rosenthal, R. (1979). The "file drawer problem" and tolerance for null results. *Psychological Bulletin, 86*, 638-641.
- Rothman, D. J. (1980). *Conscience and convenience: The asylum and its alternatives in progressive America*. Boston: Little, Brown.
- Serin, R. C., & Lloyd, C. D. (2009). Examining the process of offender change: The transition to crime desistance. *Psychology, Crime & Law, 15*, 347-364.
- Shadish, W. R. (1996). Meta-analysis and the exploration of causal mediating processes: A primer of examples, methods, and issues. *Psychological Methods, 1*, 47-65.

Sherman, L. W., Gottfredson, D. C., MacKenzie, D. L., Eck, J., Reuter, P., & Bushway, S. D.

(1998). *Preventing crime: What works, what doesn't, what's promising*. Washington,

DC: National Institute of Justice, Office of Justice Programs, U.S. Department of Justice.

* Sturgis, P. W. (2010). Faith behind bars: An explicit test of the moral community hypothesis in the correctional environment. *Journal of Offender Rehabilitation, 49*(5), 342-362.

* Sumter, M. (1999). *Religiousness and post-release community adjustment* (Doctoral dissertation). Florida State University, Tallahassee, FL.

Sumter, M. (2006). Faith-based prison programs. *Criminology & Public Policy, 5*, 523-528.

Swanson, K. (2009). Faith and moral development: A case study of a jail faith-based correctional education program. *The Journal of Correctional Education, 60*(4), 343-358.

Vold, G., & Bernard, T. (1986). *Theoretical criminology*. New York: Oxford University Press.

Willison, J., Brazzell, D., & Kim, K. (2010). *Faith-based corrections and reentry programs: Advancing a conceptual framework for research and evaluation*. Washington, DC: Urban Institute.

Wolf, F. M. (1986). *Meta-analysis: Quantitative methods for research synthesis*. Newbury Park, CA: Sage.

Young, M. C., Gartner, J., O'Connor, T., Larson, D., & Wright, K. (1995). Long-term recidivism among federal inmates trained as volunteer prison ministers. *Journal of Offender Rehabilitation, 22*, 97-118.

Figure 1a. Stem-and-Leaf Plot of Individual Effect Sizes for Attitudinal Change ($N = 14$)

<i>f</i>	Stem	&	Leaf
1	- 1	.	5
0	- 1	.	
0	- 1	.	
0	- 0	.	
2	- 0	.	77
5	- 0	.	44445
4	- 0	.	2233
0	- 0	.	
2	0	.	00
0	0	.	
0	0	.	

Figure 1b. Stem-and-Leaf Plot of Individual Effect Sizes for Institutional Misconduct ($N = 43$)

<i>f</i>	Stem	&	Leaf
0	- 1	.	
0	- 1	.	
0	- 1	.	
1	- 0	.	9
1	- 0	.	6
9	- 0	.	444444445
8	- 0	.	22233333
9	- 0	.	000001111
10	0	.	0000001111
4	0	.	2223
1	0	.	4

**Table 1: Mean Effect Sizes for
Selected Program and Study Characteristics**

	Attitudinal Change			Institutional Misconduct		
<i>Overall</i>	<i>k</i>	<i>M</i>	<i>SD</i>	<i>k</i>	<i>M</i>	<i>SD</i>
Minimum effect size	--	-1.52	--	--	-.98	--
Maximum effect size	--	.08	--	--	.44	--
Average effect size	14	-.45	.39	43	-.15	.29
<i>Program Characteristics</i>	<i>k</i>	<i>M</i>	<i>SD</i>	<i>k</i>	<i>M</i>	<i>SD</i>
Intervention components						
Church leadership	3	-.37	.10	3	-.12	.27
Faith education	3	-.37	.10	8	-.28	.21
Bible study	10	-.37	.28	7	-.40	.36
Spiritual counseling	14	-.45	.39	7	-.42	.35
Worship service	10	-.37	.28	14	-.19	.24
Defined intervention?						
No	10	-.37	.28	30	-.10	.28
Yes	4	-.66	.58	13	-.28	.30
Target for change?						
No	5	-.53	.60	37	-.14	.27
Yes	9	-.41	.25	6	-.24	.43
Dosage intensity						
Low	4	-.28	.26	24	-.11	.30
Medium	4	-.66	.58	16	-.25	.29
High	6	-.43	.31	3	.00	.04
Independent variable = self-reported religiousness?						
No	10	-.52	.42	9	-.35	.31
Yes	4	-.28	.26	34	-.10	.27
<i>Study Characteristics</i>						
Paper format						
Journal article	8	-.47	.46	31	-.15	.26
Other	6	-.43	.31	12	-.16	.38
Region						
South / Midwest	1	-1.52	--	14	-.24	.29
Other USA	3	-.37	.10	26	-.07	.27
International	6	-.43	.31	0	--	--
Participants' gender						
Male	1	-1.52	--	14	-.23	.21
Female	4	-.28	.26	3	-.48	.13
Mixture	9	-.41	.25	16	-.16	.34
Statistically-matched control group?						
No	7	-.32	.20	17	-.17	.43
Yes	6	-.43	.31	27	-.08	.24
Sampling						
Random	0	--	--	30	-.09	.27
Non-random	14	-.45	.39	13	-.30	.31
Assignment						
Random	3	-.37	.10	0	--	--
Volunteer	11	-.48	.44	22	-.25	.22
Eligibility criteria	0	--	--	12	-.16	.38