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Exploring the Relationship of Mental Health and Spirituality to Family Functioning: Does Spirituality Add to Our Understanding?

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Adolescent mental health symptomology has been strongly linked to adolescent problematic behavior, including delinquency and family issues. Adolescent spirituality however, while demonstrating some evidence as a protective factor against some problematic outcomes, such as delinquent behavior, has not been as thoroughly explored in relation to other more well-established factors such as family functioning. There is little understanding, for example, as to whether spirituality may act as a protective factor for overall family functioning, particularly in the presence of other identified factors. This study sought to examine the relationship of adolescent spirituality and mental health with family functioning in a sample of incarcerated adolescent males. A longitudinal design was employed to measure both spirituality and mental health during incarceration and post discharge from a boot camp. Results support the likely importance of adolescent spirituality as a protective factor for family functioning.

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According to the most recent data from the Office of Juvenile Justice and Delinquency Prevention (Hockenberry, Wachter & Sladky, 2016), over 50,000 youth were held in some type of residential facility during 2014. Residential facilities are inclusive of a wide variety of modalities including detention, residential treatment, youth prisons, wilderness programs, group homes, and boot camps.

In the US, each state and family court have discretion over placement decisions and some states utilize these residential facilities more than others. For example, California has 169, Texas has

90 while Vermont has 2 juvenile justice facilities (Hockenberry et al., 2016; Mulder, 2010). Facilities also vary with regard to philosophy and services provided to youth. Although all facilities are required to provide education, some also provide mental health counseling, skills training, vocational services, substance abuse counseling, etc. Despite the differences of approach or treatment, all residential facilities have the same fundamental goals: to enhance the safety of the community and the youth and to assist youths so that they can be returned to their families and communities to become productive, healthy members of society. In turn, achieving these goals becomes critical in order to not only prevent immediate delinquency and subsequent recidivism but also prevent adolescents from reoffending into their adult lives.

One theoretical approach that dovetails with residential facility goals and may elucidate the reduction of adolescent delinquent behavior is Hirschi's (1969) Social Control theory. The theory postulates that delinquency can be prevented or reduced by strengthening the social ties between the individual and society. Social ties are fostered through: a youth's attachment to family and social relationships; a youth's commitment to conventional goals and achievements such as school or employment; a youth's involvement with activities that support the achievement of desired goals or status in the community; and a youth's belief in the moral legitimacy of the social value system (Hirschi, 1969).

The identification of critical factors that either directly or indirectly, increase the likelihood of maladaptive adolescent behaviors is one area of adolescent research that provides some support for this theory. Theoretically, these factors are responsible for maintaining the social connection between the adolescent and society. Often times, these factors are categorized as either risk or protective factors (Hawkins, Catalano, & Miller, 1992; Shader, 2001). Risk factors are those characteristics that increase the probability of negative behavioral outcomes (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997). Furthermore, empirical studies have identified risk factors for serious juvenile offending which include: multiple family problems; inability to self-regulate or control impulses; antisocial peers; academic problems; poor social skills; mental health problems; lower IQ; and poor problem-solving skills (Loeber, Farrington, Stouthamer-Loeber, & Raskin-White, 2008; Mulder, 2010; Sentse, Veenstra, Lindberg, Verhulst, & Ormel, 2009).

Similarly, protective factors tend to moderate the impact of risk factors for any particular outcome, reducing the potentially harmful consequences of risk factors (Pollard, Hawkins, & Arthur, 1999). Losel and Farrington (2012) identified these as: above-average intelligence, low impulsivity, enhanced anxiety, prosocial attitudes, high heart rate, close relationship to at least one parent, intensive parental supervision, medium SES of family, strong academic achievement, positive school bonding and school climate, nondeviant peers, and living in a nondeprived and nonviolence neighborhood. In addition to these identified factors, Salas-Wright, Vaughn, Hodge, and Perron (2012) and Bert (2011) found family religiosity/spirituality to have a buffering effect for youth, and youth involved with religion were less likely to engage in delinquency.

So, theoretically, if residential facilities could enhance protective factors, while simultaneously reducing the impact of risk factors, a possible result might be the strengthening of social ties, particularly family relationships. Improving family connections would, hopefully, reduce current delinquent behavior, which could lead to less recidivism, prevent further problematic

behavior as the adolescent develops, and reduce the risk of poor emotional and behavioral outcomes. In an effort to provide more empirical information about the relationship of possible protective factors, particularly with adolescents involved in the juvenile justice system, this study explores the contribution of adolescent spirituality, while controlling for mental health symptoms, and family functioning.

Family Functioning

The concept of family functioning can be divided into several major components: parental discipline, monitoring and family relationships (cohesion, roles, and emotional warmth), all of which have been strongly associated with youth delinquency and other poor behavioral outcomes (Farrington, 1994; Hoeve, Blokland, Dubas, Loeber, Gerris, & Van der Laan, 2008). Many studies have found adolescents more likely to develop delinquency if they were subject to inadequate parental monitoring, inconsistent discipline, poor parent-child relationships, and a high level of inter-parental conflict (Bronte-Tinkew, Moore, Capps, & Zaff, 2006; Henneberger, Durkee, Truong, Atkins, & Tolan, 2013; Macmillan, McMorris, & Kruttschnitt, 2004; Sentse et al., 2009).

Positive family relationships and family functioning are also protective factors for the continuation of criminal behavior into adulthood (Aiyer, Williams, Tolan, & Wilson, 2013; Diamond, Morris, & Caudill, 2011). Schroeder, Giordano, and Cernkovich (2010) specifically found that positive bonds with parents, even into adulthood were a strong predictor of desistance to crime. Longitudinal studies have also linked poor family cohesion with later physical aggression by youth (Andreas & Watson, 2009; Henneberger, Varga, Moudy, & Tolan, 2016). Similarly, Aiyer, Williams, Tolan, and Wilson (2013) have established that parental discipline and monitoring practices and overall positive parenting are consistently associated with a reduction in recidivism for youth involved in the juvenile justice system.

Mental Health

There is significant evidence generally linking adolescent mental health and family functioning (Farrington, 1994; Gorman-Smith, Tolan, & Henry, 2000; Henneberger et al., 2013; Hoeve, et al., 2009; Sentse et al., 2009). Family functioning also has long been noted as an important factor for understanding externalizing, or aggressive behavior and delinquency in youth (Farrington, 1994; Gorman-Smith, et al., 2000; Henneberger, Durkee, Truong et al., 2013; Hoeve, et al., 2009; Sentse et al., 2009). Additionally, family functioning has implications toward overall well-being in adolescents and academic success (Webster-Stratton, Reid, & Stoolmiller, 2008).

Further, additional research suggests that mental health problems in adolescence often interact with important environmental factors and that continued exposure to parental criminal behavior and poor family functioning can be key links to future onset of disruptive behavioral disorders like attention-deficit disorder, oppositional deviant disorder, and conduct disorder (Acri et al., 2017; Sentse et al., 2009).

Mental health issues are of particular importance for adolescents involved with the juvenile justice system. Overall, the evidence suggests that mental health issues are considerably higher than the general population (Cocozza, Stein, & Blau, 2005; Esposito, Lee, Hicken, Porter, &

Herting., 2017; Fries, Schmorrow, Land, Margolis, Heany, Brown, Barbaree, & Hirdes, 2013; Massoglia, 2008; Rapp-Paglicci 2005). Frisman, Lin, Rodis, Grzekak, & Aiello (2017) argue that courts are often reluctant to divert youths to mental health programs because treatment of mental health issues alone might not result in acceptable changes in behavior. As a result, mental health issues for those incarcerated is a widespread concern (Fraser et al., 2009).

In fact, there is substantial evidence that a majority of juvenile offenders have multiple mental disorders, making comorbidity the rule rather than the exception (Rapp-Paglicci 2005). Studies indicate that approximately 18–22% of the general youth population suffers from a mental disorder while between 40 and 90% of youth involved with the juvenile justice system have one or more mental disorders (Abram, Teplin, McClelland, & Dulcan, 2003; Cocozza et al. 2005; Frasier et al., 2009; Fries et al., 2013). Pliszka, Sherman, Barrow, & Drick, (2000) found 15–42% of detained youth had major affective disorders such as bipolar and depression; 20–46% of juvenile offenders also met the criteria for ADHD, and 50–90% met the criteria for conduct disorder. According to a study by McGarvey and Waite (2000), 40% of incarcerated youth met the criteria to receive special education, and nearly 50% of their sample scored 6 years below their chronological age on language achievement scores.

The research on comorbid juveniles suggests that these youths are more likely to abuse substances, to have been physically abused, to be a minority, and to have a parent with criminal involvement (Abram, et al., 2003; Rosenblatt, Rosenblatt, & Biggs, 2000). In general, comorbid youth tend to have a worse prognostic picture, more peer rejection and a higher risk for adult criminality; they also report more family dysfunction, trauma, sexual abuse, high-risk sexual behaviors, school problems, and affiliation with deviant peers than juvenile offenders without a mental disorder (Abram et al., 2003; Fraser et al., 2009; Lederman, Dekof, Larrera, & Li, 2004).

Adolescent Spirituality

Adolescent spirituality is strongly associated with protection from many negative adolescent outcomes, including internalizing problems (Pearce, Little, & Perez, 2003), and externalizing behavior problems, which often lead to recidivism (Pearce, Jones, Schwab-Stone, & Ruchkin, 2003; Sinha, Cnaan, & Gelles, 2007). Findings from the National Longitudinal Study on Adolescent Health, found that adolescents who placed more importance on prayer and religion had higher levels of self-esteem and lower levels of alcohol and cigarette use than those who did not (Wong, Rew, & Slaikeu, 2006).

Further, spirituality is related to stronger inter-personal relationships and more prosocial behavior (Desrosiers & Miller, 2008; Furrow, King, & White, 2004). Specifically, prior studies suggest youth who had higher levels of religious commitment and involvement were less likely to engage in delinquent behavior (Baier & Wright, 2001; Johnson, Li, Larson, & McCullough, 2000). Individual religiosity in youth has been shown to be inversely related to delinquency in the general population as well as among specific ethnic and racial groups (Harris, 2003; Wills, Yaeger & Sandy, 2003). Marsal (2009) found an association between spirituality and less engagement in risky behaviors for youth and less association with a deviant peer group. Likewise, Good and Willoughby (2014) found higher personal spirituality consistently predicted more positive adjustment in terms of overall well-being and academic orientation.

Adolescents who have reported high levels of spirituality tend to report fewer mental health problems, though the relationship is stronger for older males than for younger females (Allen, Phillips, Lee Roff, Cavanaugh, & Day, 2008). According to Allen et al. (2008), spirituality may reduce the risk number of stressors, including antisocial behaviors and cultivate a sense of personal meaning that mediates stress and facilitates coping. Furthermore, it provides a network of like-minded persons who can serve as a social network and foster the development of psychological resources, which can enhance self-esteem and a sense of personal worth.

The relationship of spirituality, particularly adolescent spirituality, and family functioning is not as clear with a noticeable lack of direct available research (Good & Willoughby, 2014; Mahoney & Cano, 2014). Some research explored adolescent religiosity and found that adolescents from harsh-parenting families with low levels of religiousness were at higher risk of substance use and self-control issues when compared with adolescents who endorsed higher levels of religiousness from similar parents (Mahoney & Cano, 2014). Related findings suggest that a personal commitment to religious beliefs, rather than extrinsic religiosity is associated with positive parental relationships (Regnerus & Smith, 2005; Regnerus & Burdette, 2006). Similarly, research that utilized spirituality rather than religiosity found a positive association between adolescent spirituality and a positive parental relationship (Good & Willoughby, 2014; Desrosiers, Kelley, & Miller, 2010).

The influence of parental spirituality may confound the relationship however; some evidence suggests that adolescent overall psychological well-being may be connected to participation in religious services with parents (Petts, 2011). The relationship may be further complicated as additional research has found that children's participation in religious practices was largely dependent on the mother's frequency in reported engagement with particular religious services. In addition, maternal participation in religious services was positively associated with greater overall life satisfaction, suggesting that maternal participation served as an organizational platform for social networking which ultimately affected the family (Bert, 2011). Therefore, these findings suggest that spirituality may have some impact on family functioning but that the exact mechanism is not specifically clear (Bert, 2011; Mahoney & Cano, 2014). Perhaps part of the issue lies in the fact that adolescents are significantly affected by religious and social identities, practices, and cultures, in ways which they may not be able to identify or begin to explain to others (Bert, 2011).

There appears, then, to be sufficient theoretical and indirect empirical support for some relationship between adolescent spirituality, mental health symptomology and family functioning. One issue with the study of spirituality in general and adolescent spirituality specifically, however, is measurement; it is often inconsistent and fails to account for the complex nature of the concept (Dew, Daniel, Armstrong, Golston, Triplett, & Koenig 2008; Rew & Wong, 2006; Wong et al., 2006). Allen et al. (2008) further explain that issues with studying religiousness and spirituality on mental health have also been stifled due to complications with operationalizing religiosity. Historically, research often utilized single items or unidimensional constructs, yet, recently, there has been a growing acceptance that spirituality is most accurately conceptualized as a number of related dimensions.

Later attempts at measurement have increased the number and scope of spiritual dimensions including self-identification or affiliation, forgiveness, formal religious practice, private spiritual practice, global recognition of importance or centrality, belief, and spiritual experience (Hill & Pargament, 2008; Hill & Hood, 1999; Hood, Spilka, Hunsberger & Gorsuch, 1996; King & Crowther, 2004). While the exact number or nature of dimensions is often debated, there appears to be a general consensus that spirituality is best conceptualized as multidimensional (Fetzer Institute, 2003; Hill & Pargament, 2008; Hill & Hood, 1999; King & Crowther, 2004).

In summary, the literature suggests that adolescent spirituality may be an important protective factor for outcomes related to delinquency, such as family functioning. It would be particularly important to know how spirituality may impact family functioning while accounting for a very important factor such as mental health. Lastly, it is important that adolescent spirituality needs to be conceptualized from a multidimensional perspective.

This study sought to add to the existing knowledge by exploring the possible contribution of adolescent spirituality to family functioning. Further, the study anticipates identifying the relationship between spirituality and mental health symptomology in a sample of incarcerated adolescent males. Through the use of longitudinal data and three multidimensional measures (spirituality, mental health and family functioning) the following research questions were addressed:

1. Do spirituality and mental health change during the incarceration period?
2. Are spirituality and mental health related to family functioning (3 months post-discharge)

METHOD

Program Description

The adolescents sampled in these analyses were incarcerated in a facility serving a large suburban and rural population (more than 11 counties). In general, this facility housed many of the State's most difficult cases, many with multiple violent offenses. The facility was operated in the style of a "boot camp" that included military protocols including ranks (for example, adolescents were identified as cadets) and uniforms. There was an emphasis on discipline and courtesy. While the adolescents remained incarcerated in a locked facility, complete with barbed-wire topped fences, this facility was unique in that many of the stereotypical "boot camp" procedures, such as chain gangs and harsh disciplinary consequences were not utilized.

Formal education was provided by the local school district within the facility with a teacher student ratio of 12:1. There was a strict daily schedule that, in addition to work detail also included therapeutic programs to address mental health and spiritual needs. The cadets were assessed at intake and often participated in both individual and group therapy, depending on the particular issue(s). Although the focus of the facility was incarceration of adolescents and little resources were available for family services, the facility administration did attempt to provide informal resources for parents, including week-end social activities whenever possible.

Religious and spiritual services (Bible study) were provided on Sundays and at various times during the week depending on cadet interest. While these services were intended to be non-denominational they were essentially Christian.

Procedure and Design

After approval from the university's full institutional review board, data were collected from the adolescent cadets over a two-year period utilizing a longitudinal design. The research protocol involved surveying the cadets within a week of initial assignment to the Boot Camp (T1). Cadets were then surveyed again within a week of discharge (T2). Finally, discharged cadets were contacted approximately five months after discharge for a follow-up survey (T3). Additionally, the statewide law enforcement databases were checked for recidivism on a monthly basis after discharge (T2). Because of difficulty tracking cadets after discharge, no data was collected after six-months from discharge (T2).

Sample

The total number of cadets incarcerated during the study period was 167. Due to discharge before completing measures (N = 9) or unwillingness to participate in the study (N = 6) or inability to contact for follow-up after five months (N = 14), the analyzed sample consisted of 138 adolescent cadets. The ages ranged from 12 to 17 years (m = 15.2, sd = 1.14). The number of days incarcerated ranged from a low of 55 days to 484 days (m = 222.4 days, sd = 65.92). The largest reported race was Caucasian (41%) followed by Hispanic (29%) and African-American (29%). Almost all of the cadets identified themselves as generally Christian (87%) followed by the specific Christian denomination of Catholic (8%) or No Affiliation (3%).

The most common reported offense for incarceration was Theft (25%), including theft or burglary of home or car, Assault (17%) including that of a family, stranger or police officer, and Violation of Probation (11%). Many cadets (43%) had multiple offenses.

A majority of sampled cadets (73%) reported at least one mental health issue with the majority being anger issues (53%), followed by depression (36%).

Measures

Family Functioning

The Family Assessment Device (FAD), based on the McMaster Model of family functioning, assesses familial structural, organizational properties, and the patterns of transactions among family members (Epstein, Baldwin, & Bishop, 1983). The scale measures six dimensions of family functioning: Problem Solving (PS) (example item: "We usually act on our decisions regarding problems"). This dimension is concerned with the family's ability to resolve issues. Communication (C) (example item: You can't tell how a person is feeling from what they are saying). This dimension tests the family's communication style, i.e. clarity and directness. Roles (R) (example item: "When you ask someone to do something, you have to check that they did it") is conceptualized as determining whether the family has established behavioral patterns and if such patterns are generally equitable. Affective Responsiveness (AR) (example item: "We are reluctant to show our affection for one another") assesses the family's range of emotional responses. Affective Involvement (AI) (example item: "We show interest in each other when we

can get something out of it”). This FAD dimension taps the extent of family investment in each other’s concerns and activities. Behavior Control (BC) (example item: “We have rules about hitting people”) measures the expectations and standards, if any, of family behavior. There is also one overall score, the General Functioning scale (G), which assesses a family’s overall health and pathology (example item: “Planning family activities is difficult because we misunderstand each other”).

The FAD consists of 53 items rated with a 4-point Likert-type response format and has previously been found to have strong reliability and validity (Miller, Epstein, Bishop, & Keitner, 1985). The Chronbach’s alpha scores for this study ranged from a low of .79 (Affective Responsiveness) to .94 (Roles).

Spirituality

The spirituality of the clients was measured using the short form of the Multidimensional Measurement of Religiousness/Spirituality (MMRS). This 47-item instrument measures spirituality and religiousness through the use of 8 subscales. These scales include: Daily Spiritual Experience, which measures the perception of the transcendent in daily life (example item: “I find strength and comfort in my religion”); Beliefs, which seeks to determine the cognitive aspects of spiritual beliefs (example item: “Do you believe there is a life after death?”); Forgiveness measures the degree to which individuals might forgive themselves, others and God (example item: “I have forgiven those who hurt me”); Private Religious Practices assess private spiritual or religious practices or rituals (example item: “How often do you pray privately in places other than at church or synagogue?”); Religious/Spiritual Coping measures the degree an individual utilizes their spiritual beliefs in challenging situations (example item: “I think about how my life is part of a larger spiritual force”); Organizational Religiousness, which is the degree of participation in organized religion (example item: “How often do you go to religious services?”); Values, which seeks to measure the spiritual criteria that individuals use to justify actions (example item: “My whole approach to life is based on my religion”), and an Overall Spiritual ranking.

There are three additional sections that survey Religious and Spiritual History, Denominational Affiliation and the amount of money contributed to religious organizations. These subscales provide several measures of each of the three domains of practice, belief, and experience as delineated by Miller and Thoreson (1999). The psychometrics indicate that this is a very reliable instrument (Fetzer Institute, 2003; Walters, Tonigan, Miller & Underwood, 2000). For this study, the Chronbach’s alpha scores ranged from a low of .76 (Beliefs) to a high of .95 (Daily Spiritual Experiences).

Mental Health Symptomology

Mental health symptoms were measured utilizing the MAYSI-2 (Massachusetts Youth Screening Instrument) (Grisso, Barnum, Flecher, Cauffman, & Peuschold, 2001; 2012), which was designed specifically for evaluating psychological distress of youth in the juvenile justice system. The MAYSI-2 measures symptoms on seven dimensions, Alcohol/Drug Use (A/D) (8 items, example item: “Have you used alcohol or drugs to help you feel better?”); Angry-Irritable (A/I) (9 items, example item: “Have you lost your temper easily, or had a “short fuse?”);

Depression-Anxiety (D/A) (9 items, example item: “Have nervous or worried feelings kept you from doing things you want to do?”); Somatic Complaints (SC) (6 items, example item: “Have you had bad headaches?”); Suicidal Ideations (SI) (5 items, example item: “Have you felt like killing yourself?”); Thought Disturbance (5 items, example item: “Have you seen things that other people say are not really there?”); Traumatic Experiences (TE) (5 items, example item: “Have you ever seen someone severely injured or killed (in person- not in movies or on TV)?”).

Studies (Archer, Stredny, Mason, & Arnau, 2004; Cruise, Dandreaux & Marsee, 2004; Grisso et al., 2001; Grisso et al., 2012) have found strong reliability with measures of internal consistency ranging from .61 to .86. The MAYSI-2 has been found to correlate with the CBCL-YSR (Grisso et al. 2001; 2012), the MACI (Rasmussen, Watt, & Diener, 2004), the MMPI (Espalage et al., 2003), and the DSM-IV (Wasserman et al., 2004). Median item-total correlations ranged from .35 to .62 for various scales.

Demographic Information

Demographic information was also collected for each cadet. This information was collected from parents and boot camp records. This information included: age, ethnicity, days of incarceration, parental income and parental education.

DATA ANALYSES AND RESULTS

Research Question 1:

Pretest to posttest change (Research Question 1) for the Family Functioning and Spirituality dimensions was examined utilizing paired t-Test analyses. First, two mental health (MAYSI) scales resulted in significant change. The Angry-Irritable scale (MAYSI A/I) demonstrated significant change from admission to the Boot Camp (T1) (M= 4.41, SD= 2.42), to discharge from Boot Camp (T2) (M= 3.29, SD= 1.96), ($t = 3.94, p = .002$). Similarly, the Depressed-Anxious dimension (MAYSI D/A) also had significant results from (T1) intake (M= 2.87, SD= 1.65) to (T2) discharge (M= 1.78, SD= 0.99), ($t = 3.08, p = .006$).

After performing the t-tests, two spirituality scales demonstrated significant change. First, the Daily Spiritual Experience dimension (MMRS: DSE) demonstrated significant change from admission to the Boot Camp (T1) (M= 18.22, SD= 3.27), to discharge from Boot Camp (T2) (M= 25.04, SD= 4.63), ($t = 4.77, p = .000$). The Private Religious Practices dimension (MMRS: Pvt. Practice) also had significant results from (T1) intake (M= 18.25, SD= 6.16) to (T2) discharge (M= 20.87, SD= 4.63), ($t = 2.46, p = .020$). Additional Pre-Post comparison statistics are available from Table 1.

Mixed-model repeated-measures ANOVAs were conducted in an effort to determine the impact of potentially important demographic factors on any pretest–posttest changes. Due to the number of analyses, the Type I error rate was adjusted to .001 with a Bonferroni correction. There were no significant results, suggesting that any demonstrated changes in either the Family Functioning or Spirituality dimensions were invariant to the measured demographic factors, including age, ethnicity, days of incarceration, parental income and education.

Table 1. *Pretest (T1) posttest(T2) changes of mental health and spirituality.*

Scale	Pretest (T1)		Posttest (T2)		Pre-Post Comparison	
	m	SD	M	SD	<i>t</i>	<i>p</i>
MAYSI A/I	4.41	2.42	3.29	1.96	3.94	.002**
MAYSI D/A	2.87	1.65	1.78	0.99	3.08	.006**
MMRS Daily Spiritual Experience	18.22	3.27	25.04	4.63	4.77	.000***
MMRS Pvt. Practice	18.25	6.16	20.87	7.35	2.46	.020*

N = 138; **p* < .05, ***p* < .01, ****p* < .001

Research Question 2:

Next, significant mental health and spirituality dimensions were regressed on family functioning to determine any possible relationship of these factors (Research Question 2). First, all study variables were tested for significant correlations (Table 2). The tested variables included all dimensions of mental health, spirituality and family functioning at follow-up (T3). The Angry-Irritable scale (MAYSI A/I) was significantly correlated with the Daily Spiritual Experience dimension (MMRS: DSE) ($r = -.34$, $p < .05$). It was also significantly correlated with both the Communication scale (FAD: C) ($r = .39$, $p < .01$) and the Behavior Control dimension (FAD: BC) ($r = .41$, $p < .01$).

Table 2. *Correlation results for mental health, spirituality, and family functioning (T3).*

	MAYSI A/I	MAYSI D/A	MMRS Forgiveness	MMRS DSE	FAD C (T3)	FAD BC(T3)
MAYSI A/I	--					
MAYSI D/A	.562*	--				
MMRS Forgiveness	-.190	-.181	--			
MMRS DSE	-.336*	-.347*	.503**	--		
FAD C (T3)	-.389**	-.371**	.303*	.352*	--	
FAD BC (T3)	-.409**	-.399**	.204	.393*	.522**	--

N = 138; **p* < .05, ***p* < .01

Similarly, the Depressed-Anxious (MAYSI D/A) scale was also significantly correlated with the Daily Spiritual Experience dimension (MMRS: DSE) ($r = -.35$, $p < .05$). Further, it also demonstrated significant correlations with both the Communication scale (FAD: C) ($r = -.37$, $p < .01$) and the Behavior Control dimension (FAD: BC) ($r = .40$, $p < .01$).

The Communication dimension (FAD: C) was significantly correlated with both the Forgiveness (MMRS: Forgiveness) ($r = .30, p < .05$) and Daily Spiritual Experience (MMRS: DSE) ($r = .35, p < .05$) spirituality dimensions. The Behavior Control dimension (FAD: BC) was significantly correlated with the Daily Spiritual Experience (MMRS: DSE) ($r = .39, p < .05$) spirituality dimension.

Further, the demographic variables (age, ethnicity, days of incarceration, parental income and education) were also tested. No demographic variables produced significant results with any of the study variables.

Hierarchical regression analyses were then conducted to determine any added predictive impact of significantly correlated spirituality dimensions on family functioning variables while including mental health factors (Tables 3 & 4). The first overall analysis (Table 3), included the mental health predictors Angry-Irritable (MAYSI A/I) and Depressed-Anxious (MAYSI D/A) in the first model with Communication dimension (FAD: C) as the dependent variable. The result produced a significant overall result, $F(3, 137) = 11.28, p = .023$, with both predictors significant.

The spirituality variables Daily Spiritual Experience (MMRS: DSE) and Forgiveness (MMRS: Forgiveness), were then added in the second model, which was also significant, $F(5, 137) = 19.72, p = .005$. Only the Daily Spiritual Experience (MMRS: DSE) was additionally significant. Further, the addition of this variable explained an additional 10% of the variance in empathy (Table 3).

Table 3. Regression results for family functioning (FAD C) from mental health and spirituality.

Variable	Model 1			Model 2			ΔR^2
	B	t	R ²	B	t	R ²	
MAYSI A/I	.292	2.57**	.18	.291	2.52**	.28	.10
MAYSI D/A	.277	2.38**		.276	2.35**		
MMRS DSE				.288	2.40*		
MMRS Forgiveness				.098	0.772		
F for ΔR^2			11.28*			19.72**	

N = 138; * $p < 0.05$, ** $p < 0.01$.

The procedure was repeated with Behavior Control dimension (FAD: BC) as the dependent variable (Table 4). The first overall analysis (Table 3), included the mental health predictors Angry-Irritable (MAYSI A/I) and Depressed-Anxious (MAYSI D/A) in the first model. The result produced a significant overall result, $F(3, 137) = 13.54, p = .015$, with both predictors significant.

The spirituality variable Daily Spiritual Experience (MMRS: DSE) was then added in the second model, which was also significant, $F(4, 137) = 20.27, p = .002$. The Daily Spiritual Experience

(MMRS: DSE) was additionally significant. Further, the addition of this variable explained an additional 11% of the variance in empathy (Table 4).

Table 4. Regression results for family functioning (FAD BC) from mental health and spirituality.

Variable	Model 1			Model 2			ΔR^2
	B	t	R ²	B	t	R ²	
MAYSI A/I	.298	2.76**	.19	.311	2.93**	.30	.11
MAYSI D/A	.247	2.51**		.250	2.39*		
MMRS DSE				.291	2.68**		
F for ΔR^2			13.54*			20.27**	

N = 138; * p < 0.05, ** p < 0.01.

DISCUSSION

This study examined mental health, spirituality and family functioning among a sample of male youth incarcerated in a boot camp setting. While this particular facility did not employ many of the harsh tactics often reported by Boot Camps, it did incorporate some general features. Generally, Boot Camps are highly controversial for several reasons. First, the military-like culture and harsh disciplinary methods create concern. It is not unusual that procedures and strategies in these facilities include: yelling at youth, strong use of confrontation, military drilling, wearing military style uniforms, the use of seclusion as punishment, and heavy emphasis on stringent physical fitness (i.e., push-ups, long-distance running, etc.) (Benda, 2005).

Secondly, these facilities have a long history of poor outcomes including a lack of reduction in recidivism, little improved family functioning, increase in youth anger, insignificant reduction in symptoms for Conduct Disorder, and lack of improved attitudes (Benda, 2005; Benda, Toombs, & Peacock, 2003a; Benda, Toombs, & Peacock, 2003b; Henggeler & Schoenwald, 1994; Jeter, 2010). Similarly, evidence suggests that such approaches are contra-indicated for youth, especially for those with a personal history of abuse which may be a fairly significant percentage of juveniles in these types of systems (Henggeler & Schoenwald, 1994; MacKenzie, Wilson, Armstrong, & Gover, 2001).

Despite reported difficulties with these facilities, Boot Camps remain popular in some areas in the United States (Ravenell, 2002). Clearly, the persistence of boot camps strengthens the necessity to include them in research efforts. Perhaps, a greater understanding of these facilities and their operations may highlight potential, effective strategies or protective factors, which could serve to improve outcomes for these youths and their families.

Several interesting results confirm the importance of mental health symptoms and also suggest that spirituality may be important for this Boot Camp population, providing ameliorative effects for poor family functioning. First, there was significant change on two mental health dimensions over the period of incarceration. These dimensions tapped both internalized (MAYSI D/A) and externalized (MAYSI A/I) mental health symptoms. Whether changes were due to specifically-

targeted interventions, incarceration or simply maturation is difficult to extrapolate due to the lack of a comparison group.

Many of the therapeutic interventions in the Boot Camp however, addressed individual adolescent behavior and greater prosocial responses to daily relational challenges. Some of the therapeutic interventions, such as anger management and psychotropic medication, were employed with the intention of improving the cadet's depressive symptoms or emotional regulation. It is likely therefore, that any improvement in mental health symptomology was directly affected by these symptom-focused therapeutic interventions.

There were also significant increases for two measured spirituality dimensions: Daily Spiritual Experience and Private Religious Practices. As part of the Boot Camp curriculum, there were voluntary weekly worship services along with Bible studies and individual "spiritual guidance" meetings. The increase in the Practices dimension may have been driven by outliers as individuals who very infrequently attended services prior to incarceration participated in the offered Sunday services, although descriptive analyses did not demonstrate significant distributive abnormality.

It is certainly likely that any increase in religious and spiritual services could have contributed to an increased awareness of the cadet's spirituality and explain the overall increase in Daily Spiritual Experience scores. Further, although the participation rate in spiritual services was approximately 68 % at any given time, there may have been an interactive effect as religiously participating cadets mixed in daily activities with non-participants. It is also possible that more clinical interventions may have been either interpreted or applied in a spiritual manner, depending on the cadet's perspective.

Case managers and social workers working with the cadets reported anecdotal support for these results. Several of the cadets suggested utilizing more "religious" precepts, such as the Ten Commandments in learning alternative conflict resolutions and "forgiving" perceived transgressions by other cadets. It may be that for those adolescents subscribing to particular spiritual values, there was some application of these spiritual beliefs in daily life.

The other study results also support the importance of spirituality for family functioning, even when controlling for mental health symptoms. First, these results support the link identified in previous research between mental health and family functioning (Farrington, 1994; Gorman-Smith et al., 2000; Henneberger et al., 2013; Hove et al., 2009; Sentse et al., 2009). Clearly, improvement in individual adolescent functioning is related to overall family functioning; perhaps addressing adolescent mental health symptoms while incarcerated can lead to a direct improvement in family communication efforts. Such results are probably not surprising.

The overall regression results also suggest however, that dimensions of both mental health and spirituality may contribute to overall family functioning. So, while Forgiveness was not significant, Daily Spiritual Experience was a significant predictor for family communication (FAD: C) and behavioral control (FAD: BC), even including the significant mental health factors

(MAYSI A/I; MAYSI D/A). The addition of this spiritual dimension resulted in a 10% increase in the variance for family communication (FAD: C) and 11% for behavioral control (FAD: BC).

This spirituality dimension attempts to gauge the ordinary experience of an individual to the transcendent (Underwood, 2011). It is interesting to note that this dimension not only changed over the incarceration period but also demonstrated significance as a protective factor for family functioning. This supports previous findings that emphasize the more intrinsic spiritual dimensions as important for solid parental relationships (Good & Willoughby, 2014; Desrosiers et al., 2010). These results slightly extend the previous work as there is some evidence that not only is spirituality important for perceptions of the parental relationship but also for impacting the manner in which the family operates.

So, while extant literature suggests that there may be some association between adolescent spirituality and family relationships, these results provide some empirical evidence of at least some influence of spiritual awareness and the application of that awareness in everyday life to family functioning (Good, & Willoughby, 2014; Mahoney & Cano, 2014). Specifically, the role of spirituality appears to be important for both the communication and clarity of rules aspects of family operations.

The exact nature of any mechanism, however, is complicated by the complex nature of the parent-child relationship. For example, some of the cadets may have fairly religious families and that family norms would include important religious or spiritual components. The influence of such factors was not considered in this study and may have played an important role in the outcomes. In fact, some evidence has demonstrated that family spirituality/religiosity acts as a protective factor and contributes to children and youths' positive adjustment, coping skills, and reduced externalizing behaviors (Bert, 2011; Boyatzis, Dollahite, & Marks, 2006; Salas-Wright et al., 2012). Further, related research has found that parental spirituality/religiosity may have some effect on older adolescents use of substances (Stewart, 2001).

Still, while there is likely always some parental influence on adolescents, the fact that these young men were incarcerated for a lengthy time and were not under the direct influence of family mores gives some credibility that this was truly the adolescent's own spirituality and may provide additional evidence to distinguish between adolescent and parental spirituality (Petts, 2011).

These findings were anecdotally further validated by reports from parents visiting their incarcerated adolescents. Parental comments suggested that they were surprised and enthused about the increased respect for the family unit, improved communication and the necessity of following family rules. Similarly, parents, for the most part, noticed an improvement in respect and willingness to cooperate with them.

A few parents reported an increase in their sons' spirituality, particularly in that the young men expressed an interest in continuing to attend church once discharged. One mother was extremely happy with her son's spiritual change and claimed that she believed he had experienced a spiritual conversion.

Clearly, with these regression models there is substantial unexplained variance in the relationship of spirituality and family functioning so there are likely additional factors that may also prove to be highly significant in the overall equation. Still, these results highlight the importance of both mental health and spirituality specifically for family functioning. Further, the significance of Daily Spiritual Experience in both models demonstrates that spirituality, and particularly an everyday spiritual awareness and application, may be an important consideration in improving family functioning.

These results also tend to support Hirschi's Social Control theory (1969) by providing some evidence that protective factors such as improving mental health symptoms and spirituality can positively link youth to society. While the influence of mental health on family functioning may not be surprising, spirituality also appears to have some protective effects. Improvements in family functioning might subsequently provide a protective effect for delinquent behavior and may also act as a conduit for replicating prosocial values and goals. Finally, further attention might focus on other dimensions of spirituality. It is possible that additional spiritual dimensions, such as religious social attachments and spiritual values may also impact family functioning.

LIMITATIONS

Several limitations should be considered when interpreting the study results. First, the sample size was fairly small. While there was adequate power for the conducted analyses, it is likely that a larger sample would provide greater confidence in the statistical results. Analyses were conducted to demonstrate that data loss was not due to pre-test variables, which should boost confidence in the study statistical results.

Secondly, using this sample of convenience has several possible implications involving generalizability. Only male, incarcerated adolescents from one southeastern state were utilized in the sample. Participants in the sample may differ significantly in some unmeasured manner from other incarcerated populations or non-incarcerated adolescents. Further, this sample was a fairly culturally-homogenous group and it is possible that spirituality results obtained here may not be universally generalizable. While there is substantial debate as to universality of spiritual concepts, it is likely that culture plays a significant differentiating role in any related outcomes.

Thirdly, the study did not utilize a comparison group design. It is possible that the individual characteristics of the facility acted as a confounding factor in the study results. As mentioned in the Program Description, this facility did not operate as a traditional boot camp but was nonetheless, a locked, "prison-like" facility. It is possible that simply being incarcerated or fear of punishment while affiliated with the juvenile justice system post-discharge impacted the results. Despite the fact that the post-discharge results were often completed after the adolescent was no longer in contact with the juvenile justice system, it is possible that "experiencing" the system may confound these outcomes.

Lastly, this sample was analyzed after five months from discharge. This follow-up time was utilized primarily as the risk of being unable to contact study participants rose considerably after

this time. While this is a fair amount of time to gauge meaningful change, it is possible that these results would vary significantly over further increased time. Further research should attempt to confirm the reliability of these results through the use of longer follow-up periods and more rigorous designs. Additionally, it would be helpful to utilize samples from other institutions to control for any possible institutional or gender influence.

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