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Gender-Specific Programming and Trauma-Informed Approaches

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ABSTRACT

Yoga has been making its way into juvenile detention centers, but little research has looked at the possible effects of yoga on this special population of individuals. The purpose of this paper is to review the relevant literature available on the effects of yoga on youth involved with the justice system and its potential for rehabilitation. Notably, the objective here is to highlight the need for gender-specific programming, specifically those designed with women and girls in mind. This paper takes a gender-responsive and trauma-informed approach when discussing literature on alternative rehabilitation and, importantly, identifies the gaps in previous research while offering ways of improvement. The findings in this review highlight the need for trauma-informed care and gender-specific programming. Importantly, this review identifies the need for race-sensitive programming while addressing cultural, historical, and gender-based issues within the field of criminology and criminal justice. Overall, we find that gender-specific programs are useful but lack in implementation and program evaluation. With that said, more research is needed in this area of study.

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INTRODUCTION

With the increase in delinquency among youth and especially so for girls (Miazad, 2002; Harris & Fitton, 2010; Sickmund & Puzzanchera, 2014), identifying specific pathways to address delinquency and curb repetition and future criminal activity has been an influential agenda. To date, programming created and offered to youth in the justice system has mainly been geared towards boys. Oftentimes because boys have been and continue to be the most commonly involved with the justice system. Additionally, most research and data collection has primarily focused on boys (Simpson et al., 2018; Chesney-Lind et al., 2008). Thus, less is known about girls, their pathways to the justice system, and their programming needs. Notably, even less is known about girls of color who have become increasingly involved with the justice system. Thus, the following sections highlight gender-specific programming—particularly trauma-informed approaches and the need to reimagine and redesign programs through a gender-sensitive and race-sensitive lens.

Proper programming that addresses pathways and unresolved or suppressed trauma is integral to trauma-informed and gender-specific programming. Research shows that youth who are involved with the justice system experience high rates of trauma. For example, 90 percent of all youth involved with the justice system report exposure to at least one traumatic event at some point in their life (Ballard-Green, 2016; Dierkhising et al., 2013; Ford & Blaustein, 2013). Trauma can develop from many things, but the most common among youth involved with the justice system are violence, abuse, and neglect (Dierkhising et al., 2013). In general, trauma leaves a long-lasting imprint on the nervous system. This imprint leads to impairments in social, emotional, and cognitive abilities (Morris & Rao, 2013), known to be risk factors for at-risk behavior, delinquency, and future criminality. Thus, it could be argued that by healing trauma and the adverse effects of trauma, at-risk behavior can be reduced or eliminated.

It is essential to note that gender differences in trauma exist. Although boys and girls experience similar rates in trauma, girls experience a higher prevalence of emotional, physical, and sexual trauma (Dehart & Lynch, 2021; Goodkind, 2005). Because of this, there has been an increased focus on generating gender-specific, trauma-informed programming. This paper systematically reviews the status of alternative-based programs for youth involved with the justice system. Specifically, this paper reviews yoga, mindfulness, and meditation practice and highlights the strengths, gaps, and limitations of these practices and especially so for gender-specific programs. By doing so, the paper introduces the major elements necessary for successful and meaningful gender-based programs, and further notes how trauma-informed yoga incorporates these elements in its approach to rehabilitation.

RISK-FACTORS FOR FEMALE DELINQUENCY

Although girls don't represent much of the delinquent cases at hand, they happen to be the "fastest-growing population within the juvenile justice system" (Miazad, 2002; Mallicoat, 2019, p.281). Between the 1980s and early 2000s, the Unified Crime Reports (UCR) reported a nine percent increase in girls' involvement in juvenile delinquency (Mallicoat, 2019). Although some would argue that this increase came during a time of "tough on crime" policies, which evidently "spilled over into the juvenile" justice system affecting both boys and girls (Mallicoat, 2019, p.282), it still begs the question of why the recent increase. Specifically, why is it that girls now make up 25 percent of all referred delinquency cases and 30 percent of all juvenile arrests (Pasko & Lopez, 2016), and why is it that the proportion of girls in the system increased at a higher rate than the proportion of boys—if the spillover had affected both? (Sickmund & Puzzanchera, 2014). Some scholars have suggested this increase is a result of the "up-criming" of girls or taking a harsher approach to sentencing girls for less severe crimes compared to boys (e.g., family disputes, status offenses, substance use, running away) (Saar et al., 2015; Strom et al., 2014). As a result of this continuous increase, it is imperative to identify the link between girls and delinquent behavior (Steffensmeier et al., 2005). Although structural factors, such as the "tough on crime" policies and the increase in arrest and punishment exist (Carr et al., 2008; Feld, 2009), this paper focuses on individual risk factors.

Various individual risk factors have been identified, such as family dysfunction, substance abuse, physical abuse, sexual abuse, mental abuse, mental health, school failure, and delinquent friends (Mallicoat, 2019; Moffitt et al., 2001). Of these, three remerged as the most significant risk factors for girls' when it came to involvement with the justice system.

These are family relationships, history of physical/sexual abuse, and substance abuse (Mallicoat, 2019; Saar et al., 2015; Sickmund & Puzzanchera, 2014). Thus, the focus on family relationships, physical/sexual abuse, and substance abuse is vital in understanding why girls get involved in juvenile delinquency and importantly, how gender-specific programming should be implemented.

Family

Research shows that strong bonds to family help shield adolescents from delinquency (Bourdin & Ronis, 2012). Bourdin and Ronis (2012) found that non-delinquent girls had more substantial and more positive social bonds with family members than delinquent girls. It should not be surprising that family conflict is a risk factor for juvenile delinquency (De La Rue & Espelage, 2014). Previous studies demonstrate that some girls are arrested and charged because of domestic disputes with parents, which essentially led them down a path of delinquency (Acoca, 1998; 1999). Recent research has found that when looking at gender, girls are more likely than boys to be arrested for assault against their parents (Strom et al., 2014). To date, research has identified dysfunctional families, single-parent households (Vanassche et al., 2014), family violence, and family criminality (Van der Put et al., 2014) as all too common in the lives of delinquent girls. The increasing focus on social support for girls highlights the importance of family relationships and its potential to reduce recidivism and trauma symptoms. Unfortunately, girls, unlike boys, rarely receive support from the family once they are placed under supervision (Johnson et al., 2011; Salisbury & Van Voorhis, 2009), even though family support is beneficial and would prove to be an effective tool towards curbing delinquency (Bloom et al., 2002).

Physical and Sexual Abuse

Physical, emotional, and sexual abuse are other risk factors associated with delinquent girls (Mallicoat, 2019; Saar et al., 2015). Simkins and colleagues (2004) interviewed women and girls detained in juvenile detention or adult facilities and found that 80 percent reported trauma. Of those polled, 43 percent experienced sexual abuse and 57 percent experienced physical abuse. In 2006, Belknap and Holsinger found that 58.9 percent of girls in their sample had been sexually abused and that in most cases, this sexual abuse came from loved ones. More recent research shows that girls are two to four times more likely than boys to report sexual abuse and assault (Dierkhising et al., 2013). In two states (California and Oregon), over 80 percent of girls involved with the justice system had been victims of at least one physical or sexual abuse (Saar et al., 2015). As a result, girls oftentimes resort to running away from home, which is usually the first indicator of trouble at home and involvement with the justice system. This phenomenon has been coined the "Sexual Violence to Prison Pipeline" (Saar et al., 2015, p. 5). This phenomenon states that girls involved with the justice system are involved in delinquency as a response to trauma or some form of abuse (Saar et al., 2015). For example, running away from home has been used as a survival strategy for girls who suffer from abuse at home. Unfortunately, running away from home is a status offense and leads to involvement with the justice system and eventually greater control over the girl (DeHart & Lynch, 2021; Chesney-Lind, 1989). Thus, gender-specific programs need to address the specific circumstances of girls and, importantly, implement trauma-informed approaches that address and heal the harm done to girls by the family and the justice system.

Substance Abuse

Chesney-Lind & Sheldon (2004) find that girls who suffer physical, sexual, or mental abuse oftentimes rely on substance use as a coping mechanism. Research indicates that between 60 to 87 percent of all girls under some form of supervision through the justice system have a substance use disorder

(Chesney-Lind & Okamoto, 2001; Prescott, 1997). As high as these estimates are, this number may still be an undercount of girls who are using substances. Research has noted that only 53 percent of all justice agencies that deal with youth conduct universal screenings for substance use (Belenko et al., 2017; Scott & Dennis, 2015) regardless of the well-known prevalence of abuse among youth in the justice system (Roberts-Lewis, 2010). Thus, it is imperative to view substance use as a response to trauma. Or in other words, as a negative coping mechanism (McKenna et al., 2020; Saar et al., 2015). Research has extensively documented drug addiction (DeHart, 2008; Fine, 1992) as a coping mechanism for physical, sexual, and psychological abuse (DeHart, 2008) and other forms of victimization. It is without a doubt that youth who are involved with the justice system, and especially girls, suffer from substance abuse along with a multitude of other risk factors, including mental health concerns.

Mental Health

Highlighting the above risk factors leads us to question the overall mental health status of girls involved with the justice system: how do these risk-factors affect the mental health status of girls? Up to 70 percent of youth involved with the justice system meet the criteria for a mental health disorder (Shufelt & Cocozza, 2010). Between family dysfunction, abuse, and substance use, these youth, especially girls, are susceptible to other consequences such as trauma and PTSD, depression, and anxiety (Shufelt & Cocozza, 2006). Regardless of this knowledge, the aid to youth' mental health has yet to surface (Goldstein, Olubadewo, Redding, and Lexcen, 2005). Early studies examining the mental health status of youth involved with the justice system have found that those who participate in treatment have half the violations than those who do not participate in treatment (Goldstein et al., 2005; Lewis et al., 1994). The mental health status of youth involved with the justice system is often overlooked and rarely ever treated, especially in secure settings (Desai et al., 2006; Goldstein et al., 2005). This is partially due to an emphasis on short-term mental health programs in the juvenile system (Kumm et al., 2019). Youth are most likely to be diagnosed with a mental health disorder prior to adjudication (Teplin et al., 2005), highlighting the need for early intervention—even before the youth is "officially" in the system. In addition to determining which programs are useful for youth who are involved with the justice system, and to better understand and effectively treat girls within the justice system, the underlying causes—predominantly those of mental health and substance use disorders and trauma, must be addressed (Bilchik, 1998; Grande et al., 2012). Given the difficulty of providing mental health treatment to justice-involved youth in general and the differences in prevalence and type of mental health concerns between genders, Grande and colleagues (2012) advocate for modifying the ways youth involved with the justice system are assessed and treated.

The Take-Away

Despite the well-known risk factors and the high rates of mental health problems, youth involved with the justice system have yet to systematically receive appropriate treatment within the justice system (Kretschmar et al., 2015). As a result, the justice system is ill-equipped to manage and assist youth properly. Detention centers, for example, lack sufficient programs and ways of dealing with the mental health needs of youth, especially those who have experienced trauma (Kretschmar et al., 2015). Foley (2008) found that only a select few programs target risk factors associated with victimization and delinquency (these risk factors include but are not limited to: abuse, family relationships, mental health, etc.). Further, Foley (2008) found a lack of providing adequate services for girls, particularly gender-specific

programming (Zahn et al., 2008). This lack of providing appropriate resources is problematic as youth who are not carefully assessed nor adequately treated, are at risk of continuing towards a path of delinquency and having future contact with the criminal justice system (Hennessey et al., 2004). This is where gender-specific programming is crucial, specifically those that address the needs of girls who are involved with the justice system. The following section will review trauma and alternative programming literature before digging deep into gender-specific programs and trauma-informed yoga.

Trauma & Alternative Rehabilitation for Youth Involved with the Justice System

As described above, most adolescents involved in the justice system have experienced some trauma in their life (Ballard-Green, 2016; Dierkhising et al., 2013; Ford & Blaustein, 2013). Trauma can be described as "the inability for an individual or community to respond in a healthy way (physically, emotionally, and/or mentally) to acute or chronic stress" (Wolpow et al., 2009, p. 2). Traumatic events may be perceived as shocking, terrifying, sudden, or potentially life-threatening (Buffington et al., 2010). The length of time and severity of trauma impacts the body differently for everyone, and hence the individual response to trauma may also vary (Black et al., 2012). Early research on trauma involved the works of Felitti and colleagues (1998) and their research on Adverse Childhood Experiences (ACEs). This research examined the effect of seven, now ten, different types of negative experiences (e.g., witnessing violence, substance use in the household, parental incarceration) on health (Anda et al., 2010; Felitti et al., 1998; Centers for Disease Control [CDC], 2013). Further research has indicated that experiencing a higher number of ACEs is related to affective and somatic disturbances, intimate partner violence (IPV), substance use, difficulty with anger and stress, and engaging in self-harm or self-destructive behaviors (Black et al., 2012). In a sample of youth who were incarcerated for violent offenses, 72.27 percent reported at least one ACE (Craig et al., 2019). On average, youth involved in the justice system report between 1 and 4 ACEs (Craig et al., 2019; Baglivio et al., 2015) and youth with more ACEs are more likely to be involved in the justice system (Baglivio et al., 2015). Among youth involved with the justice system, for every additional ACE, youth are at an increased risk of residential commitment (Zettler et al., 2018). The effects of trauma are wide-ranging and prevalent in samples of youth involved with the justice system.

Trauma causes psychological stress, which influences brain development and functioning among youth involved with the justice system and affects stress, emotions, memory, learning, attention, and behavior (Evans-Chase, 2014; Feierman & Ford, 2016; van der Kolk, 2015). Specifically, trauma impacts the amygdala, or the "emotion center" of the brain (Ernst et al., 2005; Francati et al., 2007). When in a heightened state of awareness and emotion, an individual may react in three ways: fight, flight, or freeze (Kahneman, 2013). Trauma reactions may occur during the initial traumatic event and in situations that are triggering or remind the individual of the traumatic event (Meiser-Stedman et al., 2009). The prefrontal cortex is also impacted by trauma (Gillespie et al., 2012). When a traumatic event occurs, the "older" parts of the brain (e.g., the amygdala and other parts of the brain focused on survival needs) take over and reduce executive functioning and can increase impulsivity (van der Kolk, 2015). To address these adverse effects of trauma, somatic interventions and trauma-informed practices emphasizing the mind-body connection are imperative.

Mindfulness meditation programs that focus on attention, body awareness, emotional regulation, and change in perspective are utilized within justice facilities that house youth. Today, research has shown that a consistent and long-term practice of mindfulness meditation, which increases relaxation, reduces

rumination, and increases the sense of well-being, helps address physical and mental health concerns as well as substance use issues in youth involved with the justice system (Shonin et al., 2013; Silva, 2017). Mindfulness also promotes positive psychological states, prefrontal structural changes, and self-regulation among youth involved with the justice system (Epstein & Gonzales, 2017; Gillespie et al., 2012; Shonin et al., 2013). In addition, incorporating yoga, art, and music as well as individual-based needs helps improve the lives of adolescents and reduce symptoms of trauma. However, there is still limited research on yoga and art-based interventions for the at-risk adolescent population, especially for girls.

Deitz and Rajan (2017) conduct semi-structured qualitative interviews over the phone with directors of 13 organizations to find out more about the implementation and availability of the programs they provide. The 13 organizations included in the analysis provided yoga-based programming for at-risk youth across the country. Deitz and Rajan (2017) found limited availability for yoga-based interventions for at-risk youth in the analysis. Namely, they found significant barriers existed for implementation because of lack of funding and non-rigorous research. Thus, they noted that the key barriers could be eliminated by better funding opportunities and higher quality of research. This study comes with limitations of course. First, the sample size of 13 organizations was small and thus limited the ability to generalize these findings across other organizations that offer yoga to at-risk youth. Second, the authors incorporated all yoga-based interventions serving the at-risk youth population, which may be a limitation because there is no way of knowing how all the programs run. Thus, there is a need for further understanding of how each program is developed, how it is implemented, how it works, and its effects on a specific subgroup of at-risk adolescents in addition to understanding the barriers faced and ways to overcome these barriers of implementation.

Methods

This literature review utilized peer-reviewed research studies that examined the effects of trauma-informed approaches (yoga, mindfulness, and meditation) on youth involved with the justice system. The search terms were yoga, trauma-informed yoga, mindfulness, meditation, trauma, trauma-informed approaches, youth, adolescent girls, and gender. Databases used for this search included the following: Google Scholar, Web of Science, AMED, PubMed, Cochrane Database of Systematic Reviews, and the University of Texas at Dallas Library. Because the available research on the use of trauma-informed approaches for youth involved in the justice system is limited and relatively new—especially for girls, we included all studies that were considered peer-revived research articles and excluded all studies that were not peer-reviewed (i.e., dissertations, law reviews, and program or government reports). Notably, we included research studies published after 2000 that focused on youth (boys and girls) in various settings (detention, residential programs, and those in the community) and their involvement in yoga, meditation, or mindfulness programs. A total of 13 studies were analyzed and key information can be found in Table 1.

Yoga, Mindfulness, and Meditation for Youth Involved with the Justice System

One of the first studies to ever look at the effects of yoga on adolescents was Derezotes (2000). This study examined the impact of "Yoga, Breathing, and Meditation" training program with male adolescents charged with sex offenses via in-depth interviews. The findings in this study show that all 14 of the boys in the study had used the techniques learned during and after post. The techniques were used to help the youth sleep better and to reduce anger and stress.

Table 1: Reviewed Research Studies

Author & Year	Method	Sample	Measurement	Findings	Limitations
Deitz & Rajan (2017)	Semi-structured qualitative interviews.	13 organizations.	Availability of yoga-based programs to at-risk youth.	Limited availability, barriers for implementation, lack of finances, and none-rigorous research.	Small sample, not generalizable.
Derezotes (2000)	In-depth face-to-face interviews.	14 adolescent boys, 8 parents, and 2 social workers.	Effects of Yoga, Breathing, and Meditation on males with sex offenses.	None of the boys relapsed. All boys used techniques on their own. Boys had a reduction in stress and control on anger.	Small sample, included only boys.
Himelstein et al. (2011)	Survey measures of self-regulation, mindfulness, and stress.	32 adolescent boys.	Effects of Mind Body Awareness (MBA) on self-regulation, mindfulness, and stress.	There is support for mindfulness-based interventions and potential for MBA to effectively treat male adolescents.	Small sample, 15 adolescents did not complete the program, no control group.
Evans-Chase (2013)	Survey measures of self-regulation and suppression of aggression.	27 adolescent boys.	Effects of internet-based mindfulness meditation vs. guided relaxation on self-regulation and suppression of aggression.	There is support for mindfulness meditation to increase interactional self-regulation. Guided relation was better for the suppression of aggression among younger youth	Small sample, included only boys.
Fishbein et al. (2016)	Survey measures of Dysregulation, Stress, Mood, Drug Use, Behavior, Mindfulness, and Physiological Assessment	85 high-risk adolescents, 46% male and 54% female.	Mindful yoga on substance use and risk of dropping out.	Decrease in alcohol use, improvements in social functioning, increase in sustained attention, and beneficial effects on psychological well-being	Relatively small sample with self-selection into study.

Barrett, 2017	Participant observation and open-ended interviews.	10 males, ages 18 to 24.	Effects of Alternative to Incarceration (ATI) program on males with felony offenses.	Reduction in stress, improvements in emotional regulation, improvements in anger management and impulse control.	Small sample, no control group, and self-selection into study.
Simpson et al. (2018)	Review of research studies.	13 studies.	Effects of mindfulness-based interventions on youth with criminal offenses.	Ethnicity was poorly characterized in the studies, poor quality of methods used, limited research on females, underrepresentation of females, a need for gender-based programs.	Limited number of studies reviewed, potential of publication bias.
Chesney-Lind et al. (2008)	Review of research studies.	8 program evaluations.	Gap in gender-specific programming and services for girls.	There is a gap in the programming that is offered vs. what is needed. A need for continued care and wraparound services.	Review of different programs. Not specific to yoga, mindfulness, or meditation.
Harris & Fitton (2010)	Introduced The Art of Yoga Project and provides curriculum.	Introduces goals, objectives, and experiences of the program.	Effects of Patanjali's eight limbs of Yoga on self-awareness, self-respect, and self-control.	Yoga is well-suited for overlooked populations of young women. AYP provides comprehensive continuum of care for at-risk girls.	Overview of AYP, how it works, and how it runs.
Haggerty (2013)	Self-reported measures of self-regulation and navigating interpersonal relationships.	101 adolescent girls.	Effects of Yoga on emotional regulation and interpersonal relationships.	Improvements in self-regulation and abilities to navigate interpersonal relationships. Reports of consciousness of emotions and potential to improve focus.	Big drop-out rate, small post-test sample (n=12), court-ordered participation, and self-reported data.
Houser (2015)	Utilized surveys and semi-structured interviews.	34 adolescent girls.	Effects of Yoga on different types of complex trauma.	Mental health symptoms decreased, decrease in trauma symptomatology, increase in calm mood over time.	Group based yoga intervention. Differences between groups.

Middleton et al. (2019)	Self-reported surveys and semi-structured interviews.	101 adolescent girls.	Process evaluation of The Art of Yoga Project.	Improvements in emotional regulation. Positive improvements on feelings of anger and anxiety. Increase in self-reflection, self-awareness, and self-acceptance. Decrease in impulsivity, increase in empathy, and positivity about body image and future.	Small sample, high turnover and attrition, several years of data collection.
Flocks et al. (2016)	Review of research and overview of evaluating PACE.	Introduces PACE as a prevention, intervention, and diversion service for girls ages 12 and 17.	Evaluation of PACE includes one-on-one interviews.	A need for trauma-informed and gender-specific interventions.	Review of literature and PACE. No specific findings.
Foley (2008)	Review of research studies.	12 gender-specific programs.	Effects on substance use, impulsivity, mental health, aggression, and antisocial behavior.	Changes in substance use, aggression, suicide ideation, and recidivism rates. Finds that gender-specific programs do not provide adequate services for girls. There is a need to include female risk-factors when constructing gender-based programs.	Review of different programs. Not specific to yoga, mindfulness, or meditation.

The boys in the sample stated that the training helped avoid sexual reoffending as it helped reduce stress and helped control anger. All but one boy felt they developed spiritually due to the yoga and meditation training. Additionally, the training helped raise self-esteem, creating loving relationships and self-reflection. In the follow-up interviews, boys noted that they experienced increased mindfulness over time and that some even designed their meditation practices outside the classroom. Moreover, Derezotes (2000) found that boys made gradual progression from practicing yoga to prevent future abuse, continue their practice, and make their practice a part of their personal identity which included caring for themselves and others. It is important to note that those who discontinued the classes felt more depressed, stressed, overwhelmed, and angry over time compared to those who completed the program. This study is limited in sample size and specific offense type but nonetheless shows the potential of the "Yoga, Breathing, and Meditation" intervention.

Himelstein and colleagues (2012) tested the feasibility of implementing an hour-long, once-a-week, 10-week mindfulness-based intervention to a group of adolescents who were incarcerated. The Mind Body Awareness (MBA) program was implemented to a sample of 32 youth involved with the justice system. The MBA program itself consisted of discussion topics, mindful meditation, and group activities. Both pre-test and post-test measures were collected, measuring specifically MBA's effects on self-regulation, mindfulness, and stress among the group of adolescents who were incarcerated. The findings from the MBA program show support for mindfulness-based interventions and the potential of MBA to treat male adolescents who are incarcerated effectively. Although this study shows promise, it is essential to note that there was no control group and that 15 of the 32 participants did not complete the program due to release. Nevertheless, the results suggest a promising intervention, at least for the boys in this study.

Similarly, Evans-Chase (2013) evaluated the effects of a mindfulness meditation program as an intervention to addressing adverse mental health outcomes and low self-esteem in a sample of youth involved with the justice system. Although a small sample, 27 males involved with the justice system were randomly assigned to either an 8-week mindfulness mediation class or an 8-week guided relaxation class. All of the youth completed pre-test and post-test measures, which included a self-reported measure of self-regulation. Evans-Chase (2013) found support for mindfulness meditation to increase interactional self-regulation among the sample of youth involved in the justice system. Between the two classes, the participants in the guided relaxation classes showed more significant improvement on the Suppression of Aggression scale than those of the mindfulness meditation classes. There were no differences between the control and treatment groups for impulse control or self-regulation. With that said, it must be noted that attrition rates were high and may affect the generalizability of the findings in this study.

Fishbein and colleagues (2016) investigated the potential effects of a mindful yoga intervention on substance abuse and the risk of dropping out among a sample of at-risk adolescents. The study, conducted in a nontraditional high school with students one-to-two years behind on course work, sampled students at risk of dropping out. Fishbein and colleagues (2016) recruited three cohorts of students into their sample. Two cohorts were from the high school while one cohort was from the middle school (in the same school district). The sample size of 85 students led to 40 in the control group and 45 in the experimental group with slightly more than half (54 percent) of the participants being female. Importantly,

59 percent of the sample was African American, and 17 percent of the sample was Hispanic with only 9 percent of the sample identifying as White. Students in the study ranged between the ages of 14 and 20 with a mean age of 16. The intervention itself entailed a 50-minute mindful yoga class offered three times a week. The pre-test and post-test showed that at-risk youth displayed reduced substance use and improvements in social skills after the intervention. Specifically, those who took mindful yoga classes reported reducing alcohol use compared to those who did not participate in the mindful yoga class. In addition, the teachers of the students had reported that students taking mindful yoga classes had improved their social skills and showed a much longer attention span in class than those who were not participating in the mindful yoga class. Overall, the authors concluded that the mindful yoga intervention provides at-risk youth beneficial effects on their psychological well-being (Fishbein et al., 2016). Regardless, the study included a small sample and utilized self-selection to gather participants, contributing to the potential for selection bias. Critical to this paper, no gender differences were evaluated in this study.

Barrett (2017) utilized an all-male sample of participants ranging from ages 18 to 24 to explore what benefits, if any, arise from yoga and mindfulness. The study took place in New York City through an alternative to incarceration (ATI) program for individuals ages 16 to 24, facing felonies. Participants in the ATI program spent anywhere between six to nine months participating in daily programming, including yoga and mindfulness practices. Utilizing participant observation and open-ended interviews with ten males, Barrett (2017) found participation in the ATI program beneficial to its participants. Specifically, participation in the ATI program showed a reduction in stress and significant improvements in emotional regulation among the sample. In addition, a number of the participants reported that they were provided the tools necessary to manage their anger and impulse control on their own. Altogether, these findings indicate that the one-hour-long, twice-a-week sessions of yoga and mindfulness had contributed positively towards the rehabilitation of young men. Thus, Barrett (2017) concluded that mindfulness-based interventions foster desistance and reduce recidivism among young individuals involved in the justice system. Nevertheless, as the studies discussed earlier, small sample size and selection bias are limitations in this study. Importantly, the data collected for this study come from an ongoing program which has no direct start or end date—meaning that individuals can join and leave as they want and thus, pre-test and post-test measures are unavailable.

More recently, Simpson and colleagues (2018) conducted a systematic review of literature on mindfulness-based interventions among youth involved in the justice system. The 13 studies utilized in this review included mindfulness-based intervention programs which incorporated breath, body awareness and some form of mindful movement. These programs were offered to groups of adolescents who were in prison or in community rehabilitation during the study period. Simpson and associates (2018) found limited evidence for mindfulness-based interventions and note a handful of limitations instead. For example, they pointed out that the quality of methods utilized led to the limited evidence of mindfulness-based interventions—mainly due to the wide range of mindfulness-based intervention programs utilized in these studies. In other words, the programs differed from one another, and it was hard to determine what, if anything, in the program was effective. Importantly, there is limited research on female delinquency and gender-based programming as females continue to be underrepresented in research. Nevertheless, there is a potential of publication bias in the review and thus, future researchers should consider a broader scope of published and unpublished papers like those of clinical studies.

Gender-Specific Yoga, Art, & Mindfulness-Based Programs

It was not until the late 1900's that gender-specific research and programming had gained momentum (Zosuls et al., 2011). This momentum, mainly due to the increase of girls involved in the justice system, paved the way for gender-specific programs for girls. These programs, usually designed to address the specific needs of girls, focused on identifying risk factors for female delinquency which were mentioned above (Chesney-Lind et al., 2008; Garcia & Lane, 2010). Thus, gender-specific programs focus on victimization, trauma, and girl delinquency (Belknap & Holsinger, 2006). These programs are designed to respond to the mental, physical, and emotional needs of at-risk girls. They focus on improving their health, reducing depression, reducing post-traumatic stress disorder (PTSD), and reducing low self-esteem among other things (Hodge et al., 2015; McCabe et al., 2002). In a nutshell, gender-specific programs promote a focus on the specific needs of the girls entering the justice system. Not all gender-specific programs are universal nor are they all-encompassing. Although gender-specific programs exist, that is not to say that all justice facilities are equipped to implement them. Further, they may not be ready to handle girl's trauma from physical, sexual, or emotional abuse, as well as mental health issues—faced by so many girls (Day et al., 2015; Tille & Rose, 2007). Regardless, gender-responsive programming has become more popular, leading the way for more exploration and research.

Chesney-Lind and colleagues (2008) examined the use of gender-specific programs designed for girls involved in the justice system. They found that the girls in the program had reported that their needs were not being met. In other words, the tools the program was offering were not the tools the girls needed. For instance, the program provided tools for healing and managing trauma, which was a good start but, it did not provide any education about pregnancy and childbirth which was something the girls wanted and many needed. The lack of resources in the programs should not come as a surprise as delinquency has for the longest time been associated with boys and hence programs have been developed with the needs of boys in mind. It is thus evident that more attention is needed when it comes to creating gender-specific programs. There should be a focus on creating continues care with wraparound services post release for girls involved with the justice system, especially those who are pregnant and have children.

Harris and Fitton (2010) introduced a gender-specific program called The Art of Yoga Project (AYP) which incorporates yoga, arts, and creative writing into a curriculum designed for girls in the justice system. AYP aim to provide girls with the tools necessary to create positive lives during and after incarceration. The AYP curriculum involves yoga practice, meditation, breathing excises, creative arts and discussion. AYP offers a program designed by women for women, providing comprehensive services to young girls and women during and after incarceration, something Chesney-Lind and colleagues (2008) deemed essential in program development for at-risk girls. Furthermore, like Chesney-Lind (2008), Harris and Fitton (2010) conclude on the importance of gender-responsive programming and how programs like yoga and the arts can be designed and implemented with girls and women in mind.

Haggerty (2013) also evaluated The Art of Yoga Project. As mentioned above, The AYP utilizes a combination of yoga, creative arts, and mindfulness. It also incorporates trauma-informed, strengths-based, gender-responsive approaches in its teachings. In this specific evaluation, the program was delivered three times a week for 12 weeks inside a justice facility for girls. The study focused on the effect of yoga and creative arts on the girls' ability to regulate emotions and navigate interpersonal relationships. The findings from this evaluation show that a

higher percentage of youth involved with the justice system reported consciousness, presence, and control of emotions at the mid-point evaluation compared to the pre-test and post-test. However, the attrition rate was high. For example, two weeks before the program, 101 girls had filled out pre-test, between week six and eight, only 75 girls remained in the program and by the 12th week only 12 girls had stayed active throughout the entirety of the study. With that said, researchers need to devote some time and effort in ensuring participation throughout the program and increasing response rates potentially through incentives or certifications.

Houser (2015) also looked at the effects of yoga and the effects of group yoga for adolescent girls who suffered from trauma. This study assessed the effectiveness of group yoga across different trauma experiences. Two groups, one in Denver and one in Ontario, participated in the study, which lasted a total of six weeks and offered 90-minute sessions of yoga once a week to a total of 34 participants. The analysis shows a decrease in mental health symptoms from pre-test to post-measures in all 34 participants. However, although the scores from both groups decreased from pre-test to post-test measures, the effects were only significant for the Denver group. Notably, the scores from the two groups showed a decrease in trauma symptoms but again, only the Denver group was significant. In addition, significant differences were also found in avoidance symptoms and mood changes throughout the six-week program in the Denver group. Overall, this study found that youth involved in the justice system who participated in group-based yoga had experienced better regulation as far as their emotions, sensations, acceptance, coping and nonjudgmental attitudes.

Middleton and associates (2019) examined the effects of The Art of Yoga Project on a sample of youth ages 12 to 18 who were involved with the justice system. In their analysis of the program, Middleton and colleagues (2019) collected pre-test and post-test data on stress, self-esteem, self-regulation, and mindful awareness. Middleton and colleagues (2019) found a modest improvement in self-control and self-respect among the sample of girls in their analysis, but the results were not significant. Overall, their findings showed participant satisfaction and improvement in self-reported emotional regulation among the sample of girls. Importantly, they showed significance of immediate mood differences before and after each class in the adolescent girls and, the girl's engagement in the practices outside the classroom. Overall, Middleton and colleagues (2019) work adds to the growing body of research supporting the potential of mindfulness, meditation, and movement-based interventions to help heal trauma and improve the lives of girls involved with the justice system.

Flocks et al. (2016) explored how childhood trauma (psychological, physical, and sexual abuse, violence, substance abuse, mental health, suicide, and imprisonment) leads to social, emotional, and cognitive impairments in adolescent girls. Assessing the effects of a specific program called "PACE" offered to girls in Florida as a school-based program, this study highlighted the importance of viewing childhood trauma through a gendered lens. For example, it was noted that girls are not only exposed to different traumatic events (emotional, physical, and sexual abuse) in their life but that they also responded to these traumatic events in a different way than did boys. While both girls and boys experienced anger and post-traumatic stress, girls also experienced depression, anxiety, and suicide ideation. Importantly, when girls experienced trauma, they were more vulnerable to the "school-to-prison pipeline" than were boys (Flocks et al., 2016, p.9-10). Like in other studies, Flocks and colleagues (2016) noted the importance of gender-specific programming and community-based programs post-release. Thus, there is a need to incorporate programs in and out of the system, so girls are provided wraparound services throughout their transitions.

DISCUSSION

Trauma-Informed Yoga for Girls Involved with the Justice System

Trauma-informed yoga creates a supportive environment for participants who have suffered a traumatic event. This environment allows the participant the opportunity to find ways in which they can regulate their emotional state. This regulation of the emotional state is made possible through the practice of yoga (Shonin et al., 2013; Silva, 2017; Derlic, 2020). Yoga, specifically trauma-informed yoga, aids in resetting the nervous system so that trauma that arises can be released through mindful practice (Shonin et al., 2013; Derlic, 2020). For some time now, scholars and practitioners alike have found trauma-informed yoga to be effective in treating adult populations with a variety of mental health disorders ranging from stress, anxiety, aggression, as well as criminogenic risk factors (Derlic, 2020; Auty et al., 2017; Muirhead & Fortune, 2016; Griera & Clot-Garrell, 2015; Bowen et al., 2006; Duncombe et al., 2005). The following section reviews trauma-informed yoga, its implementation in the justice system for youth, and the effects of such programs on girls involved with the justice system.

In 2014, the Substance Abuse and Mental Health Services Administration (SAMHSA) developed six principles as critical components of trauma-informed care. These six principles are safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment, voice, choice, and consideration for historical, gender, and cultural identities (SAMHSA, 2014). In addition, regulation of emotions, processing trauma, developing healthy relationships, and enhancing youth competency in multiple aspects of their lives are among the common goals of empirically validated trauma-informed curricula.

Cognitive-behavioral therapy (CBT) approaches to reducing recidivism are among the most common interventions and are suggested by the risk-needs-responsivity model (Bonta & Andrews, 2010; Shonin et al., 2013). Shonin and colleagues (2013) described "third-wave CBT" as traditional cognitive-behavioral approaches that also focus on the mind-body connection through transformative present moment awareness, meditation, mindfulness, and yoga. These practices are ideal for trauma victims as mindfulness reduces stress and anxiety while promoting well-being and self-esteem that may have been negatively impacted by trauma (Shonin et al., 2013). These practices also support individuals in labeling and moderating their affective states (Shonin et al., 2013). Practicing asana (postures), breathing, and meditation can also reduce states of hyper-vigilance and hyper-arousal common among youth involved in the justice system who have been traumatized (Shonin et al. 2013). Additionally, the focus on "loving-kindness" in yoga fosters self-acceptance, respect, and growth in interpersonal relationships (Shonin et al., 2013).

The Trauma-Sensitive Yoga Curriculum developed by the Justice Resource Institute is one example of a validated trauma-informed yoga program. This program has a focus on invitational language in yoga. For example, when teachers cue a pose (or asana), they switch their language to invite individuals to participate in the pose rather than giving directions. Providing the option and opportunity to engage in a pose may seem small, but survivors of trauma may have had their sense of autonomy and independence stripped from them due to the trauma (Justice et al., 2018; Van der Kolk, 2015). Thus, invitational language gives some of that power of choice back to the youth (Justice et al., 2018). In addition to invitational language, this program focuses on personal experimentation with an acceptance of yoga looking different for each participant. What matters most is the choice and curiosity of asanas. In other words, the

most important thing in the practice is the practitioner having the choice to move in and out of postures as they see fit for them.

Yoga instructors also carefully select poses and pacing for youth who have been traumatized. Youth involved with the justice system who have been victims of sexual violence may feel exposed and vulnerable in the happy baby pose, with their feet spread hip-distance apart in the air (Justice et al., 2015). As such, an instructor may avoid this pose. Additionally, many instructors invite participants to close their eyes at multiple points in their practice. Youth involved with the justice system who have experienced trauma may feel uncomfortable or even scared closing their eyes, especially in a justice facility. To address this, yoga instructors may invite youth to keep their eyes open, close them, or find a soft gaze, emphasizing choice and empowering youth to do what feels right from them and their bodies. Yoga instructors may also repeat sequences and poses in multiple sessions to help youth master the poses, feel competent, and increase self-esteem.

Beyond asana practices, breathing and meditation are implemented as the primary vehicles of improving self-control and self-regulation. Both the parasympathetic nervous system and prefrontal cortex are impacted by trauma (Shonin et al., 2013). The inner calmness created through meditation, yoga, and mindfulness affect the parasympathetic nervous system, and the increased awareness of breathing improves prefrontal cortex functioning (Shonin et al., 2013). As the yoga sessions are held in group formats, opportunities for co-regulation, modeling, and peer support are available to youth as well. These skills can help youth in interpersonal relationships both inside and outside of the justice facility. Trauma-informed yoga can address multiple risk factors girls involved in the justice system face. The skills they learn on the mat can be translated "off the mat" and perhaps in the utilization of breathing techniques during stressful times, or meditative practices to regulate the body.

In addition to being trauma-informed, yoga programs within the justice system, especially those created for adolescents, should be gender-responsive. It is important to keep in mind the variety of different backgrounds and cultures that girls come from and the pathways that lead them to delinquency and the justice system in the first place. Importantly, gender-specific programs need to focus on aiding the adverse effects of the justice system and the trauma associated with incarceration. These programs should recognize the unique risk factors and experiences girls in the system have. Experiences of violence and abuse are common among girls in the system. Each intervention should take this into consideration to better understand the girls' behaviors and reactions and how to best support girls in their healing process. Gender-responsive and trauma-informed yoga can support this in the poses, sequencing, timing, and class themes. Further, relationships with parents and romantic partners may be troubling for some girls in the justice system (De La Rue & Espelage, 2014; Strom et al., 2014). Yoga classes focusing on themes of empowerment and emphasizing the importance of girls' voices, independence, and the ability to play an active role in their life can address some of the adverse outcomes from complex and sometimes abusive relationships. Derezotes (2000) found that youth wanted to establish caring relationships with others, and needed empowerment, flexibility, and parental and community involvement. Chesney-Lind and colleagues (2008) found that the majority of the girls in their sample needed someone to talk to, to confide in, and someone who showed them that they cared about them and were willing to provide safety. Girls also noted that they needed access to counseling and education. Specifically, they wanted counseling for abuse suffered and education about sex, pregnancy, childbirth, and parenting (Chesney-Lind, 2008). Yoga providers should think critically about how to embed these themes and support girls in meeting these needs. Finally, providing yoga classes specifically for girls can give the

space needed for them to process and share their emotions without concern for men and boys in the room. Girls-only support and treatment groups have been found to be beneficial and viewed positively by both participants and providers (Day et al, 2015; Palidofsky & Stolbach, 2011).

Race and Intersectionality

Among youth involved in the justice system, whether confined and in residential placement across the United States, Black girls are the fastest-growing population (Crenshaw et al., 2015; Morris, 2013). This increase may be due to racist and sexist policies in multiple institutions and stereotypes of Black girls and other girls of color. However, these stereotypes about race/ethnicity worsen girls' experiences in the justice system (Irvine & Canfield, 2017). One of the six principles of trauma-informed care is the need to address cultural, historical, and gender issues (SAMHSA, 2014). The history and current policies of the criminal legal system are based, in part, to systemic racism, impacting not only the current practices but also the racial and ethnic makeup of those who come into contact with the system. Further, trauma researchers have identified racial discrimination and systemic racism as traumatic experiences that can lead to both complex and generational trauma. Specifically, Crosby (2016) advocates for incorporating critical race theory, which views racism as a systemic issue and emphasizes the intersectionality of identities, into trauma-informed care. Crosby (2016) explains that successful practices must understand how cultural mistrust of the system is a common experience among individuals of color. Crosby (2016) suggests enhancing cultural competency among practitioners and hiring professionals of color within the justice system to address these issues.

Policy Recommendations

Future research should consider the needs of Black and Brown girls who are oftentimes forgotten when it comes to programming in the justice system in general and adolescent facilities in particular. Involving Black and Brown yoga teachers in justice systems may be the first step to creating and offering race-sensitive yoga interventions for girls of color. Programs that lack in racial and gender sensitive may fail to gain participation by individuals who need them the most as they often cannot relate to the yoga instructors (due to different backgrounds, cultures, etc.). However, trauma-informed yoga may in fact be the vehicle through which gender and race needs are addressed. With that, we advocate for more yoga practitioners of color within justice facilities, especially those working with youth. At the very least, yoga practitioners working within justice involved youth should complete cultural competency training regularly.

Beyond addressing the intersecting identities of girls in the system, more programs should focus on the specific needs that girls within the justice system need. These include but are not limited to sex education, pregnancy classes, childbirth classes, and parenting classes. These needs can be incorporated into thematic teachings that are oftentimes utilized in yoga classes. For example, each yoga class starts off with a theme—whether that be peace, forgiveness, or gratitude—these themes are often used to fully integrate the class into one topic or subject matter that the individual is invited to feel and deal with in a healthy way. Thus, it is possible to integrate teachings of safe sex, healthy pregnancy, childcare, and parenting into the thematic teachings. We recommend that practitioners and future researchers consider incorporating such themes into their practices as girls within the justice system continue to ask for them.

Practitioners should also implement aftercare and wraparound services for youth involved in the justice system—and girls specifically. These services would ideally be community-based so youth have access to yoga and meditation in their own communities with

the potential for family and friends to participate, which could help build strong bonds and reduce future involvement in criminality. Community-based programs may allow easy access to programming that may otherwise be out of reach for these youth due to travel or funding (Derezotes, 2000). Community-based programming further translates practice on the mat into everyday life (e.g., breathing, principles of non-harming, asanas to focus on the body, meditation, etc.). Finally, aftercare and wraparound services should focus on therapeutic and treatment approaches rather than simply a surveillance and probation approaches. Integrating yoga, meditation, and mindfulness practices into the aftercare services would align well with aftercare goals of stabilizing youth as they re-enter into the community.

Future researchers should also consider program evaluations and the use of more robust methodological evaluations of yoga, meditation, and mindfulness programs (Derlic, 2020; Foley, 2008). These evaluations should address the fidelity of programs as they are each implemented in unique settings with various youth populations involved with the justice system. Attrition must also be considered in these evaluations. Perhaps examining the differences in youth who complete the programs and those who do not would highlight the gaps and limitations associated with the two. We also advocate for the use of mixed methods to evaluate the programs. Quantitative data may provide information regarding changes in mental health or substance use rates, and recidivism and misconduct within the facility. On the other hand, qualitative data can provide useful insight into the perceptions of programs and specific factors that contribute to the success of individual programs. These evaluations should include samples of youth involved in the justice system and service providers (both facility staff and yoga instructors) to understand multiple perspectives. Learning more about the men and women who teach yoga to youth involved in the justice system is also vital as no research exists on yoga instructors in the system to date. Finally, as has been discussed throughout this paper, gender differences must be considered, either via mixed-gender samples with independent gender analyses or girls-only samples.

Moreover, as new programs are being constructed, developers of these programs should seek to address as many risk factors as possible (Foley, 2008). For girls, the specific risk factors of violence, trauma, and relationships should be addressed and so too should their needs and wants. Yoga programs should also consider how different types of trauma (e.g., complex, developmental, generational) may differentially and uniquely impact each youth in the justice system. However, practitioners should approach the class assuming every individual could have experienced some trauma and seek to avoid re-traumatization while promoting healing through the practice of yoga, mindfulness, and meditation. Lastly, yoga programs now offer yoga teacher training (YTT) to incarcerated men and women (e.g., Yoga Behind Bars). These programs should also consider YTT for youth who are involved with the justice system. YTT can offer the youth an opportunity to heal through self-practice and training, and bring yoga to the community. Doing so may create a positive and life-changing opportunity that can potentially help other youth in the community and keep the YTT youth out of the justice system. Finally, a broader scope of published and unpublished research papers should be considered, as publishing bias may leave out critical information related to process and outcome.

REFERENCES

Acoca, L., & Dedel, K. (1998). Identifying the needs of young women in the juvenile justice system. Journal of the Office of Juvenile Justice & Delinquency Prevention, 6(1), 4-8.

Acoca, L. (1999). Investing in girls: A 21st century strategy. Juvenile Justice, 6, 2-21.

Anda, R. F., Butchart, A., Felitti, V. J., & Brown, D. W. (2010). Building a framework for global surveillance of the public health implications of adverse childhood experiences. American Journal of Preventive Medicine, 39(1), 93-98.

Auty, K. M., Cope, A., & Liebling, A. (2017). A systemtic review and meta-analysis of yoga and mindfulness meditation in prison: Effects of psychological well-being and behavioral functioning. International Journal of Offender Therapy & Comparative Criminology, 61, 689-710.

Baglivio, M. T., Wolff, K. T., Piquero, A. R., & Epps, N. (2015). The relationship between adverse childhood experiences (ACE) and juvenile offending trajectories in a juvenile offender sample. Journal of Criminal Justice, 43(3), 229-241.

Ballard-Green, D. K. (2016). The use of meditation and yoga as a treatment tool for juvenile offenders in Residential Treatment Centers for relapse prevention.

Barrett, C. J. (2017). Mindfulness and rehabilitation: Teaching yoga and meditation to young men in an alternative to incarceration program. International Journal of Offender Therapy & Comparative Criminology, 61(15), 1719-1738.

Belenko, S., Knight, D., Wasserman, G. A., Dennis, M. L., Wiley, T., Taxman, F. S., ... & Sales, J. (2017). The Juvenile Justice Behavioral Health Services Cascade: A new framework for measuring unmet substance use treatment services needs among adolescent offenders. Journal of Substance Abuse Treatment, 74, 80-91.

Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. Feminist Criminology, 1(1), 48-71.

Bilchik, S. (1998). Mental health disorders and substance abuse problems among juveniles. Washington, DC: US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Black, P. J., Woodworth, M., Tremblay, M., & Carpenter, T. (2012). A review of trauma-informed treatment for adolescents. Canadian Psychology/Psychologie Canadienne, 53(3), 192.

Bloom, B., Owen, B., Deschenes, E. P., & Rosenbaum, J. (2002) Moving towards justice for female juvenile offenders in the new millennium: Modeling gender-specific policies and programs. Journal of Contemporary Criminal Justice, 18(1), 37-56

Bonta, J., & Andrews, D. (2010). Viewing offender assessment and rehabilitation through the lens of the risk-need-responsivity model. Offender Supervision: New Directions in Theory, Research & Practice, 19-40.

Borduin, C. M., & Ronis, S. T. (2012). Research note: Individual, family, peer, and academic characteristics of female serious juvenile offenders. Youth Violence & Juvenile Justice, 10(4), 386-400.

Bowen, S., Witkiewitz, K., Dillworth, T. M., Chawla, N., Simpson, T. L., Ostafin, B. D., Ostafin, B. D., Larimer, M, E., Blume, A. W., Parks, G. A., & Marlatt, G. A. (2006) Mindfulness meditation and substance use in an incarcerated population. Psychology of Addictive Behaviors, 20, 343-347

Buffington, K., Dierkhising, C. B., & Marsh, S. C. (2010). Ten things every juvenile court judge should know about trauma and delinquency. Juvenile & Family Court Journal, 61(3), 13-23.

Carr, N. T., Hudson, K., Hanks, R. S., & Hunt, A. N. (2008). Gender effects along the juvenile justice system: Evidence of a gendered organization. Feminist Criminology, 3(1), 25-43.

Centers for Disease Control and Prevention (CDC. (2013). Prevention and control of seasonal influenza with vaccines. Recommendations of the Advisory Committee on Immunization Practices--United States, 2013-2014. MMWR. Recommendations & Reports: Morbidity and Mortality Weekly Report. Recommendations & Reports, 62(RR-07), 1.

Chesney-Lind, M. (1989). Girls' crime and woman's place: Toward a feminist model of female delinquency. Crime & Delinquency, 35(1), 5-29.

Chesney-Lind, M., & Sheldon, R. G. (2004). Girls, delinquency, and juvenile justice Belmont. Wadsworth.
Chesney-Lind, M., & Okamoto, S. K. (2001). Gender matters: Patterns in girls' delinquency and gender responsive programming. Journal of Forensic Psychology Practice, 1(3), 1-30.

Chesney-Lind, M., Morash, M., & Stevens, T. (2008). Girls troubles, girls' delinquency, and gender responsive programming: A review. Australian & New Zealand Journal of Criminology, 41(1), 162-189.

Crenshaw, K., Ocen, P., Nanda, J. (2015). Black girls matter: Pushed out, overpoliced and underprotected. African American Policy Forum, Center for Intersectionality & Social Policy Studies.

Craig, J. M. (2019). The potential mediating impact of future orientation on the ACE–crime relationship. Youth Violence & Juvenile Justice, 17(2), 111-128.

Crosby, S. D. (2016). Trauma-informed approaches to juvenile justice: A critical race perspective. Juvenile & Family Court Journal, 67(1), 5-18.

Day, J. C., Zahn, M. A., & Tichavsky, L. P. (2015). What works for whom? The effects of gender responsive programming on girls and boys in secure detention. Journal of Research in Crime & Delinquency, 52(1), 93-129.

DeHart, D. D. (2008). Pathways to prison: Impact of victimization in the lives of incarcerated women. Violence Against Women, 14 (12), 1362-1381.

DeHart, D., & Lynch, S. M. (2021). Women's and girls' pathways through the criminal legal system: Addressing trauma, mental health, and marginalization. Cognella Academic Publishing.

De La Rue, L., & Espelage, D. L. (2014). Family and abuse characteristics of gang-involved, pressured-to-join, and non–gang-involved girls. Psychology of Violence, 4(3), 253.

Deitz, R., & Rajan, S. (2017). Access and barriers to implementing yoga-based interventions for at-risk adolescent youth. International Journal of Health Promotion & Education, 55(1), 30-41.

Derlic, D. (2020). A systematic review of literature: Alternative offender rehabilitation—prison yoga, mindfulness, and meditation. Journal of Correctional Health Care, 26(4), 361-375.

Desai, R. A., Goulet, J. L., Robbins, J., Chapman, J. F., Migdole, S. J., & Hoge, M. A. (2006). Mental health care in juvenile detention facilities: A review. Journal of the American Academy of Psychiatry & the Law Online, 34(2), 204–214.

Derezotes, D. (2000). Evaluation of yoga and meditation trainings with adolescent sex offenders. Child & Adolescent Social Work Journal, 17(2), 97-113.

Dierkhising, C. B., Ko, S. J., Woods-Jaeger, B., Briggs, E. C., Lee, R., & Pynoos, R. S. (2013). Trauma histories among justice-involved youth: Findings from the National Child Traumatic Stress Network. European Journal of Psychotraumatology, 4(1), 20274.

Duncombe, E., Komorosky, D., Wong-Kim, E., & Turner, W. (2005). Free inside: A program to help inmates cope with life in prison at Maui community correctional center. California Journal of Health Promotion, 3(4), 48-58.

Epstein, R., & González, T. (2017). Gender & trauma—Somatic interventions for girls in juvenile justice: Implications for policy and practice. The Center on Poverty & Inequality, The Art of Yoga Project.

Ernst, M., Nelson, E., Jazbec, S., McClure, E., Monk, C., Leibenluft, E., Blair, J., & Pine, D. (2005). Amygdala and nucleus accumbens in response to receipt and omission of gains in adults and adolescents. NeuroImage 25, 1279–91.
Evans-Chase, M. (2013). Internet-based mindfulness meditation and self-regulation: A randomized trial with juvenile justice involved youth. Journal of Juvenile Justice, 3(1), 63-79.

Feierman, J., & Ford, J. D. (2016). Trauma-informed juvenile justice systems and approaches.

Feld, B. (2009). Violent girls or relabeled status offenders? An alternative interpretation of the data. Crime & Delinquency 55, 241-265.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. American Journal of Preventive Medicine, 14(4), 245-258.

Fine, M. (1992). Disruptive voices: The possibilities of feminist research. University of Michigan.

Fishbein, D., Miller, S., Herman-Stahl, M., Williams, J., Lavery, B., Markovitz, L., ... & Johnson, M. (2016). Behavioral and psychophysiological effects of a yoga intervention on high-risk adolescents: A randomized control trial. Journal of Child & Family Studies, 25(2), 518-529.

Flocks, J., Calvin, E., Chriss, S., & Prado-Steiman, M. (2016). The case for trauma-informed, gender-specific prevention/early intervention programming in reducing female juvenile delinquency in Florida. Northwestern Journal of Law & Society. Policy, 12, 1.

Foley, A. (2008). The current state of gender-specific delinquency programming. Journal of Criminal Justice, 36(3), 262-269.

Ford, J. D., & Blaustein, M. E. (2013). Systemic self-regulation: A framework for trauma-informed services in residential juvenile justice programs. Journal of Family Violence, 28(7), 665-677.

Francati, V., Vermetten, E., & Bremner, J. D. (2007). Functional neuroimaging studies in posttraumatic stress disorder: Review of current methods and findings. Depression & Anxiety, 24(3), 202-218.

Garcia, C. A., & Lane, J. (2010). Looking in the rearview mirror: What incarcerated women think girls need from the system. Feminist Criminology, 5(3), 227–243.

Gillespie, S. M., Mitchell, I. J., Fisher, D., & Beech, A. R. (2012). Treating disturbed emotional regulation in sexual offenders: The potential applications of mindful self-regulation and controlled breathing techniques. Aggression & Violent Behavior, 17(4), 333-343.

Goldstein, N., Olubadewo, O., Redding, R. E., & Lexcen, F. (2005). Mental health disorders: The neglected risk factor in juvenile delinquency. Juvenile Delinquency: Prevention, Assessment, & Intervention, 85-110.

Goodkind, S. (2005). Gender-specific services in the juvenile justice system: A critical examination. Affilia, 20(1), 52-70.

Grande, T. L., Hallman, J. M., Underwood, L. A., Warren, K. M., & Rehfuss, M. (2012). Treating detained juveniles: Measuring mental health traits and gender differences. Review of European Studies, 4, 14.

Griera, M., & Clot-Garrell, A. (2015). Doing yoga behind bars: A sociological study of the growth of holistic spirituality in penitentiary institutions. Religious Diversity in European Prisons: Challenges & Implications for Rehabilitation 141-157

Haggerty, M. K. (2013). An evaluation of a yoga and creative arts program for incarcerated female youth. Saint Mary's College of California.

Harris, D. A., & Fitton, M. L. (2010). The art of yoga project: A gender-responsive yoga and creative arts curriculum for girls in the California juvenile justice system. International Journal of Yoga Therapy, 20(1), 110-118.

Hennessey, M., Ford, J. D., Mahoney, K., Ko, S. J., & Siegfried, C. B. (2004). Trauma among girls in the juvenile justice system. Los Angeles, CA: National Child Traumatic Stress Network.

Himelstein, S., Hastings, A., Shapiro, S., & Heery, M. (2012). Mindfulness training for self-regulation and stress with incarcerated youth: A pilot study. Probation Journal, 59(2), 151-165.

Hodge, J. P., Holsinger, K., & Maziarka, K. (2015). Assessing the status of gender-specific programs through the lens of juvenile justice staff. Women & Criminal Justice, 25(3), 184-200.

Houser, M. E. (2015). A mixed methods evaluation of the effectiveness of a group yoga intervention as an adjunctive trauma therapy for adolescent girls.

Irvine, A. & Canfield, A. (2017). Reflections on new national data on LGBQ/GNCT youth in the justice system. LGBTQ Policy Journal 7.

Johnson, J. E., Esposito-Smythers, C., Miranda Jr, R., Rizzo, C. J., Justus, A. N., & Clum, G. (2011). Gender, social support, and depression in criminal justice–involved adolescents. International Journal of Offender Therapy & Comparative Criminology, 55(7), 1096-1109.

Justice, L., Brems, C., & Ehlers, K. (2018). Bridging body and mind: Considerations for trauma-informed yoga. International Journal of Yoga Therapy, 28(1), 39-50.

Kahneman, D. (2013). Thinking Fast and Slow. Farrar, Straus & Giroux.

Kretschmar, J. M., Butcher, F., Kanary, P. J., & Devens, R. (2015). Responding to the mental health and substance abuse needs of youth in the juvenile justice system: Ohio's Behavioral Health/Juvenile Justice Initiative. American Journal of Orthopsychiatry, 85(6), 515.

Kumm, S., Maggin, D., Brown, C., & Talbott, E. (2019). A meta-analytic review of mental health interventions targeting youth with internalizing disorders in juvenile justice facilities. Residential Treatment for Children & Youth, 36(3), 235-256.

Lewis, D. O., Yeager, C. A., Lovely, R., Stein, A., & Cobham-Portorreal, C. S. (1994). A clinical follow-up of delinquent males: ignored vulnerabilities, unmet needs, and the perpetuation of violence. Journal of the American Academy of Child & Adolescent Psychiatry, 33(4), 518-528.

Mallicoat, S. L. (Ed.). (2019). Women, Gender, and Crime: A Text/reader. SAGE Publications,.

McCabe, K. M., Lansing, A. E., Garland, A. N. N., & Hough, R. (2002). Gender differences in psychopathology, functional impairment, and familial risk factors among adjudicated delinquents. Journal of the American Academy of Child & Adolescent Psychiatry, 41(7), 860-867.

McKenna, N. C., Golladay, K. A., & Holtfreter, K. (2020). Integrating general strain theory and trauma-informed principles into the study of older adult victimization. Journal of Trauma & Dissociation, 21(2), 187-200.

Meiser-Stedman, R., Dalgleish, T., Glucksman, E., Yule, W., & Smith, P. (2009). Maladaptive cognitive appraisals mediate the evolution of posttraumatic stress reactions: A 6-month follow-up of child and adolescent assault and motor vehicle accident survivors. Journal of Abnormal Psychology, 118(4), 778.

Miazad, O. (2002). The gender gap: Treatment of girls in the US juvenile justice system. Human Rights Brief, 10(1), 3.
Middleton, L., Harris, D. A., & Ackerman, A. R. (2019). A mixed-methods process evaluation of the Art of Yoga Project for girls in custody. The Prison Journal, 99(4), 38S-60S.

Moffitt, T. E. Caspi, A., Rutter, M. & Silva, PA (2001). Sex differences in antisocial behaviour: Conduct disorder, delinquency, and violence in the Dunedin Longitudinal Study. Psychological Medicine, 32(8), 1475-1476.

Morris, M. C., & Rao, U. (2013). Psychobiology of PTSD in the acute aftermath of trauma: Integrating research on coping, HPA function and sympathetic nervous system activity. Asian Journal of Psychiatry, 6(1), 3-21.

Morris, M. W. (2013). Education and the caged bird: Black girls, school pushout and the juvenile court school. Poverty & Race, 22(6), 5-7
Muirhead, J., & Fortune, C. A. (2016). Yoga in prisons: A review of the literature. Aggression & Violent Behavior, 28, 57-63.

Palidofsky, M., & Stolbach, B. C. (2012). Dramatic healing: The evolution of a trauma-informed musical theatre program for incarcerated girls. Journal of Child & Adolescent Trauma, 5(3), 239-256.

Pasko, L., & Lopez, V. (2018). The Latina penalty: Juvenile correctional attitudes toward the Latina juvenile offender. Journal of Ethnicity in Criminal Justice, 16(4), 272-291.

Prescott, L. (1997). Adolescent girls with co-occurring disorders in the juvenile justice system. Delmar, NY: GAINS Center.

Roberts-Lewis, A. C., Welch-Brewer, C. L., Jackson, M. S., Kirk, R., & Pharr, O. M. (2010). Assessing change in psychosocial functioning of incarcerated girls with a substance use disorder: gender sensitive substance abuse intervention. Journal of Offender Rehabilitation, 49(7), 479-494.

Salisbury, E., & Van Voorhis, P. (2009). Gendered pathways: An empirical investigation of women probationers' paths to recidivism. Criminal Justice & Behavior, 36, 541-66.

Saar, M. S., Epstein, R., Rosenthal, L., & Vafa, Y. (2015). The sexual abuse to prison pipeline: The girls' story.

Scott, C. K., & Dennis, M. L. (2015). Juvenile Justice National Survey preliminary findings and juvenile justice community supervision agency report: Feedback for participating agencies. Chicago, IL: Chestnut Health Systems.

Shufelt, J. L., & Cocozza, J. J. (2006). Youth with mental health disorders in the juvenile justice system: Results from a multi-state prevalence study (pp. 1-6). Delmar, NY: National Center for Mental Health & Juvenile Justice.

Shonin, E., Van Gordon, W., Slade, K., & Griffiths, M. D. (2013). Mindfulness and other Buddhist-derived interventions in correctional settings: A systematic review. Aggression & Violent Behavior, 18(3), 365-372.

Shufelt, J. L., and J. J. Cocozza. (2010) Youth with mental health disorders in the juvenile justice system: results from the multi-state prevalence study. Research & Program Brief.

Sickmund, M., & Puzzanchera, C. (2014). Juvenile offenders and victims: 2014 national report. Pittsburgh, PA: National Center for Juvenile Justice.
Silva, J. (2017). Yoga as an adjunctive treatment for youth who have experienced complex trauma. University of Hartford

Simkins, S. B., Hirsh, A. E., Horvat, E. M., & Moss, M. B. (2004). The school to prison pipeline for girls: The role of physical and sexual abuse. Children Legal Rights. Journal, 24, 56.

Simpson, S., Mercer, S., Simpson, R., Lawrence, M., & Wyke, S. (2018). Mindfulness-based interventions for young offenders: A scoping review. Mindfulness, 9(5), 1330-1343.

Steffensmeier, D., Schwartz, J., Zhong, H., & Ackerman, J. (2005). An assessment of recent trends in girls' violence using diverse longitudinal source: Is the gender gap closing? Criminology, 43(2), 355-406.

Strom, K. J., Warner, T. D., Tichavsky, L., & Zahn, M. A. (2014). Policing juveniles: Domestic violence arrest policies, gender, and police response to child–parent violence. Crime & Delinquency, 60(3), 427-450.

Substance Abuse and Mental Health Services Administration (2014) SAMHSA's concept of trauma and guidance for a trauma-informed approach. HHS Publication.

Tille, J. E., & Rose, J. C. (2007). Emotional and behavioral problems of 13-to-18-year-old incarcerated female first-time offenders and recidivists. Youth Violence & Juvenile Justice, 5(4), 426-435.

Teplin, L. A., Abram, K. M., & McClelland, G. M. (1996). Prevalence of psychiatric disorders among incarcerated women: I. Pretrial jail detainees. Archives of General Psychiatry, 53(6), 505-512.

Vanassche, S., Sodermans, A. K., Matthijs, K., & Swicegood, G. (2014). The effects of family type, family relationships and parental role models on delinquency and alcohol use among Flemish adolescents. Journal of Child & Family Studies, 23(1), 128-143.

Van der Kolk, B. A. (2015). The body keeps the score: Brain, mind, and body in the healing of trauma. Penguin Books.

Van der Put, C. E., Creemers, H. E., & Hoeve, M. (2014). Differences between juvenile offenders with and without substance use problems in the prevalence and impact of risk and protective factors for criminal recidivism. Drug & Alcohol Dependence, 134, 267-274.

Wolpow, R., Johnson, M. M., Hertel, R., & Kincaid, S. O. (2009). The heart of learning and teaching: Compassion, resiliency, and academic success.

Yoga Teacher Training for Incarcerated People. (n.d.). Retrieved from https://yogabehindbars.org/programs/

Zahn, M. A., Day, J. C., Mihalic, S. F., & Tichavsky, L. (2009). Determining what works for girls in the juvenile justice system. A summary of evaluation evidence. Crime & Delinquency, 55, 266-293.

Zettler, H. R., Wolff, K., Baglivio, M., Craig, J. M., & Epps, N. (2018). The racial and gender differences in the impact of adverse childhood experiences on juvenile residential placement. Youth Violence & Juvenile Justice, 16(3), 319-337.

Zosuls, K. M., Miller, C. F., Ruble, D. N., Martin, C. L., & Fabes, R. A. (2011). Gender development research in sex roles: Historical trends and future directions. Sex Roles, 64(11-12), 826-842

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