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Broken Hearts and Battered Lives: Adverse and Abusive Life Histories and Externalized Responses to Anger as Pathways to Illicit Drug Use Among Incarcerated Women

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Most incarcerated women suffer from adverse and abusive life histories, including adverse childhood experiences (ACEs), such as sexual, physical, emotional abuse, and neglect, and intimate partner violence (IPV). In addition, many have difficulties regulating their anger expression and most participate in illicit drug use. Although many have offered explanations for these relationships, the current study is among the first to utilize an integrated feminist pathways and general strain theory (GST) approach to explain them. Using data from a stratified random sample of all incarcerated women in Oklahoma ($N = 441$), we explore the linkages between ACEs, IPV, the externalized expression of anger, and heavy illicit drug use. Our findings indicate that childhood physical and sexual abuse are significantly associated with externalized responses to anger. However, the effects of childhood adversities, particularly sexual abuse, on heavy illicit drug use are mediated by externalized responses to anger suggesting that anger plays a significant role in women's pathways to illicit drug use. In contrast, and somewhat surprisingly, being a victim of IPV was negatively related to externalized responses to anger and not significantly related to illicit drug use. Implications for the importance of utilizing an integrated feminist pathways and GST approach in future research are offered.

Keywords abusive life histories, anger, feminist pathways, general strain theory, illicit drug use

INTRODUCTION

Most incarcerated women in the United States have experienced adversities including physical, sexual, and psychological abuse in childhood and adulthood (Bowles, DeHart, & Webb, 2012; DeHart, 2008; Lynch, Fritch, & Heath, 2012; Messina & Grella, 2006; Miller et al., 2011; Owen, 1998; Radatz & Wright, 2017; Salisbury & Van Voorhis, 2009; Sharp, 2014; Sharp, Peck, & Hartsfield, 2012). These negative life events have also been linked to low anger control, depression, posttraumatic stress disorder (PTSD), and illicit drug use prior to prison (DeHart, 2008; Friestad, Ase-Bente, & Kjelsberg, 2014; Lynch et al., 2012; Mair, Cunradi, & Todd, 2012; Marotta 2017; McClellan, Farabee, & Crouch, 1997; Messina & Grella, 2006; Messina, Grella, Burdon, & Prendergast, 2007; Owen, 1998; Radatz & Wright, 2017; Salisbury & Van Voorhis, 2009; Sharp, 2014; Sharp et al., 2012). Although there have been a number of

explanations offered for these relationships, the current study is among the first to utilize an integrated feminist pathways and general strain theory (GST) approach to explain the linkages between adverse and abusive life histories, externalized anger expression, and illicit drug use in the lives of incarcerated women in Oklahoma.

Oklahoma has the highest female incarceration rate in the nation with 151 of every 100,000 women behind bars; which is more than double the national rate. Indeed, from 2014 to 2015, whereas most states decreased their female incarceration rates, Oklahoma is one of the few states that saw an increase. The most recent statistics indicate that the female incarceration rate in the state of Oklahoma is the highest it has been since the Bureau of Justice Statistics began tracking numbers in 1978 (Carson & Anderson, 2016). Moreover, Oklahoma consistently ranks among the bottom states for women's mental health, women's economic security, and access to health insurance and higher education (Hess et al., 2016). Collectively, these conditions paint a bleak picture for Oklahoma women, often placing them on a path toward prison (Hess et al., 2016; Sharp, 2014). These factors are intensified by individual adverse childhood experiences (ACEs), such as sexual, physical, emotional abuse, and childhood neglect as well as further victimization in adulthood, especially by intimate partners. Such adverse and abusive life experiences across the life course are not only pathways to prison, but they are also associated with anger, PTSD, depression, and illicit drug use. Indeed, research consistently shows that women prisoners are significantly more likely to have histories of childhood abuse and intimate partner violence (IPV) when compared to non-incarcerated women (Bowles et al., 2012; Friestad et al., 2014; Radatz & Wright, 2017; Sharp, 2014), and that their victimization is often related to mental health problems (e.g., depression, PTSD) and illicit drug use (DeHart, 2008; Friestad et al., 2014; McClellan et al., 1997; Owen, 1998; Salisbury & Van Voorhis, 2009; Sharp, 2014).

Although much research suggests that incarcerated women suffer from traumatic life histories, we are less certain as to how such negative life events relate to the expression of anger and heavy illicit drug use. In this study, we seek to add to literature on women's pathways to prison by utilizing an integrated theoretical framework of feminist pathways approaches (Belknap & Holsinger, 2006; Daly, 1992; Messina et al., 2007; McDaniels-Wilson & Belknap, 2008; Owen, 1998; Salisbury & Van Voorhis, 2009; Sharp, 2014) and Agnew's (1992, 2006) GST to help highlight the significance of negative experiences as "push" factors into crime. To our knowledge, our work is among the first to utilize an integrated feminist pathways and GST approach to explain them (for an exception, see Sharp, 2014). In the current study, we use data from a stratified random sample of incarcerated women in Oklahoma ($N = 441$) and an integrated feminist pathways and GST approach to examine how both childhood adversities and IPV as well as associated externalized responses to anger relate to deviant/criminal coping (i.e., heavy illicit drug use) among women prisoners.

BACKGROUND

Incarcerated Women's Adverse and Abusive Life Histories

Much research documents adverse and abusive experiences in the lives of incarcerated women. For example, women who have spent time in prison are significantly more likely than never-incarcerated women to report histories of extensive adverse childhood experiences as

well as adulthood IPV (Bowles et al., 2012; Friestad et al., 2014; Lynch et al., 2012; McClellan et al., 1997; Owen, 1998; Salisbury & Van Voorhis, 2009; Sharp, 2014; Whitfield et al., 2003). In fact, much research has suggested that adverse childhood experiences are linked to negative outcomes in adulthood, including mental health problems, risky behaviors such as substance abuse, and IPV (Anda et al., 2002; Bowles et al., 2012; Dong et al., 2004; Dube, Anda, Felitti, Edwards, & Croff, 2002; Dube et al., 2003; Felitti et al., 1998; Friestad et al., 2014; Kubiak, Fedock, Kim, & Bybee, 2017; Messina et al., 2007; Miller et al., 2011; Sharp et al., 2012; Whitfield, Anda, Dube, & Felitti, 2003). IPV is a pattern of abusive behavior committed by one partner against another in intimate relationships, such as marriage, dating, or cohabitation. IPV can involve physical, verbal, psychological, emotional, sexual, and economic abuse as well as other forms of intimidation, threat, and violence (Breiding, Nasile, Smith, Black, & Mahendra, 2015). On average 60–70% of women prisoners report IPV experiences just prior to their incarceration (DeHart 2008; Fogel & Belyea, 1999; Greene, Haney, & Hurtado, 2000; Lynch et al., 2012; McDaniels-Wilson & Belknap, 2008; Slocum, Simpson, & Smith, 2005). Moreover, most women who end up in prison have reported life histories filled with oppression, strain, and victimization, with upward of 70–90% indicating experiences with abuse including both childhood abuse and IPV (Bowles et al., 2012; Cook, Smith, Tusher, & Raiford, 2005; Greene et al., 2000; Lynch et al., 2012; Messina et al., 2007; Owen, 1998; Radatz & Wright, 2017; Sharp, 2014). Together, these findings illustrate the difficulties in the lives of incarcerated women which are dominated by adversity and abuse.

Abusive Life Histories and Externalized Responses to Anger Among Incarcerated Women

Anger involves an emotional response to perceived threat, insult, frustration, or injustice (Agnew, 1992, 2006). Anger can vary in its intensity and mode of expression (i.e., externalized, internalized) (Spielberger, Jacobs, Russell, & Crane, 1983). Externalized anger refers to a negative mood state that may culminate in verbally or physically aggressive behavior (i.e., blowing up at others, throwing things at others). Internalized anger describes tendencies to hold anger in, suppressing its outward expression. Moreover, internalized anger involves a state of tension, high energy, and externalized blame (Spielberger et al., 1983; Spielberger, Rehiser, & Sydeman, 1995). Although everyone experiences circumstances that can make them angry, the expression of anger, either as highly suppressed or highly expressed, and the inability to control one's anger can be problematic (Spielberger et al., 1983; Spielberger et al., 1995; Spielberger, 1996). Indeed, early and/or chronic adverse experiences and IPV have been linked to repressed anger (Sigfusdottir, Farkas, & Silver, 2004; Springer, Sheridan, Juo, & Carnes, 2007), especially among incarcerated women (DeHart, 2008; Kubiak et al., 2017; Suter, Byrne, Byrne, Howells, & Day, 2000; Owen, 1998; Sharp, 2014; Sharp et al., 2012). Furthermore, much research suggests that women with experiences of victimization in childhood and/or adulthood are predisposed to suffer from PTSD, depression, and other negative emotional states, including anger (Broidy & Agnew, 1997; DeHart, 2008; Friestad et al., 2014; Grella, Lovinger, & Warda, 2013; Kubiak et al., 2017; McClellan et al., 1997; Owen, 1998; Piquero & Sealock, 2004; Lynch et al., 2012; Salisbury & Van Voorhis, 2009; Sharp, 2014; Sharp et al., 2012; Suter et al., 2000).

Because anger is associated with strong emotional responses to perceived threat, insult, frustration, and injustice, much research suggests that anger—more than any other emotion—creates pressure for action, lowers inhibitions, and creates a desire for retaliation or revenge (Agnew, 1992, 2006; Broidy & Agnew, 1997; Broidy, 2001; Spielberger 1996 Spielberger et al., 1983, 1995). Moreover, angry individuals are less likely to accurately assess the situation and effectively communicate with others, and are less concerned with the potential consequences of deviant or criminal behavior (Agnew, 1992, 2006; Broidy & Agnew, 1997). The relationship between anger and criminal or deviant coping responses (i.e., illicit drug use) may be particularly prevalent in the lives of incarcerated women who are exposed to a wide variety of adverse and abusive life experiences and oppressive circumstances.

Abusive Life Histories and Illicit Drug Use in the Lives of Incarcerated Women

In addition to suffering abusive life histories and low anger control, many women prisoners report problems with illicit drug use before going to prison (DeHart, 2008; Greene et al., 2000; Lynch et al., 2012; Marotta, 2017; Owen, 1998; Salisbury & Van Voorhis, 2009; Sharp, 2014; Sharp et al., 2012). Furthermore, under-controlled/overexpressed anger (i.e., blowing up, taking it out on things or others) has also been found to be a common experience among women prisoners with abusive life histories and histories of illicit drug use (DeHart, 2008; Kubiak et al., 2017; Owen, 1998; Sharp, 2014; Sharp et al., 2012). Past research suggests that some women cope with the pains of childhood abuse, other adverse childhood experiences, IPV, and anger through illicit drug use (DeHart, 2008; Kubiak et al., 2017; Sharp et al., 2012). Thus, adverse and abusive childhood experiences can increase the likelihood of deviant and criminal coping, including illicit drug use, and other negative experiences across the life course, such as IPV and incarceration (Anda et al., 2002; DeHart, 2008; Felitti et al., 1998; Friestad et al., 2014; Kubiak et al., 2017; Lynch et al., 2012; Mair et al., 2012; McClellan et al., 1997; Messina & Grella, 2006; Messina et al., 2007; Owen, 1998; Radatz & Wright, 2017; Salisbury & Van Voorhis, 2009; Sharp, 2014). Undeniably, incarcerated women with adverse and abusive life histories consistently report negative health outcomes, including anger, as well as substance dependence prior to prison (DeHart, 2008; Kubiak et al., 2017; Lynch et al., 2012; McClellan et al., 1997; Owen, 1998; Radatz & Wright, 2017; Sharp, 2014), but the linkages among these experiences are less established in prior work.

THEORETICAL FRAMEWORK

An Integrated Feminist Pathways and General Strain Theory Approach

Feminist pathway approaches focus on how experiences of abuse and oppression of women and girls narrow their options and can place them on a trajectory where deviance or crime (e.g., illicit drug use) may be a response to managing their difficult experiences. In particular, feminist pathways approaches highlight the ways women endure inequality, a lack of social power, and oppressive circumstances that can lead to life-long trauma and abuse. For some women—especially those without strong prosocial support systems—crime and deviance become acceptable coping mechanisms. Feminist pathway approaches often consider how childhood abuse

“pushes” girls into further negative experiences, such as drug and alcohol use, running away from home, living on the streets, and other circumstances that can increase their likelihood of experiencing further oppression and victimization including involvement in the criminal justice system (Belknap & Holsinger, 2006; Chesney-Lind, 1989; Daly, 1992; McDaniels-Wilson & Belknap, 2008; Messina et al., 2007; Owen, 1998; Salisbury & Van Voorhis, 2009; Sharp, 2014). For some, deviant and criminal behavior, such as prostitution and theft, may become necessary for survival but may also lead to lifelong experiences in and out of the correctional facilities starting with juvenile detention (Chesney-Lind, 1989; Daly, 1992). Furthermore, concurrently, these abusive environments can increase the likelihood of experiencing negative emotional states, such as anger, depression, and PTSD (Acoca, 1998; Greene et al., 2000; Kubiak et al., 2017; McClellan et al., 1997; Salisbury & Van Voorhis, 2009; Sharp et al., 2012). Together, these negative experiences in childhood can operate as pathways to incarceration (Owen, 1998; Sharp, 2014). For example, in one of the most in-depth analyses of women’s pathways into crime to date, Owen (1998) uncovered how women’s experiences with a “multiplicity of abuse,” including the continuation of childhood abuse into adult relationships, placed them on pathways leading to “spiraling marginality” and ultimately to crime and deviance to cope (Owen, 1998, p. 41). In these ways, feminist pathways approaches highlight the unique oppressive experiences and structural disadvantages that women endure and frame women’s involvement in crime as often motivated by survival, self-defense, poverty, and coping with abuse.

Although feminist pathways provide a theoretical link between adverse and abusive histories and women’s subsequent involvement in crime and deviance, feminist pathways approaches are less clear about how and why some traumatic experiences lead to crime and deviance and others do not. For example, Daly’s (1992) work provides a nuanced understanding of how girls’ experiences with childhood abuse lead to the use of drugs to cope with their abuse; however, it is less clear why childhood abuse may *not* result in crime and deviance. Furthermore, emotional responses to abuse, including anger, as central mechanisms that may lead to crime and deviance are often missing from these explorations.

GST (1992, 2006) is a theoretical approach that speaks to some—but not all—of these gaps. In particular, GST outlines three major sources of strain: (a) the presence of negatively valued stimuli (e.g., childhood abuse or IPV), (b) the loss of positively valued stimuli (e.g., death of parent, parental separation or divorce), and (c) the failure to achieve positively valued goals. The latter involves a gap between what an individual expects and actually receives or aspires to versus the actual outcome. The degree of strain experienced by the individual is also increased when the outcome is seen as unjust or unfair. Moreover, the magnitude, duration, recency, and incidence (Agnew calls this “clustering”) increase the likelihood that strain will result in criminal behavior (Agnew, 1992, 2006). In the lives of women prisoners, it is clear that all three sources of strain are frequently present. By focusing on the specificities of certain types of negative life events, GST contributes to our understandings of how and why *some* adverse and abusive life experiences may lead to crime and deviance and others may not.

Much like feminist pathways approaches, GST (Agnew, 1992, 2001, 2006) suggests that strain of victimization is strongly linked to deviant and criminal coping. However, unlike feminist pathways, GST suggests that strain does not in and of itself lead to crime and deviance. Instead, deviant or criminal behavior is a response to negative emotions resulting from strain, especially anger. Thus, GST outlines that various strains will be associated with deviant behavior through their effect on mediating negative emotions. These negative emotions are an essential component to

GST and may be particularly relevant in the lives of women prisoners. For example, Sharp et al. (2012) found that compared to those without histories of childhood abuse, women prisoners who experienced childhood abuse were significantly more likely to use drugs daily to cope with anger. Thus, experiences with anger may operate as central mechanisms that may lead to crime and deviance for *some* women but not others, in line with GST.

Previous research has shown that GST is informative in increasing our understanding of the gendered pathways into deviance. Indeed, multiple studies indicate that men and women experience different types of strain, differ in their emotional responses to strain, and cope with strain differently (Broidy & Agnew, 1997; Broidy, 2001; Hay, 2003; Jang, 2007; Piquero & Sealock, 2004; Sharp, Brewster, & Love, 2005; Sharp et al., 2012; Tyler, Kort-Butler, & Swendener, 2014). In particular, men tend to externalize their emotional responses to anger with crimes against others, whereas women are more likely to internalize their anger with self-destructive forms of deviance such as drug use or disordered eating (Broidy & Agnew, 1997; Hoffmann & Su, 1997; Sharp, Terling-Watt, Atkins, Gilliam, & Sanders, 2001; Sharp et al., 2005). It is noteworthy to mention that it is not just the emotional response that is important but also the expression of that emotion. Previous GST research suggests women and men tend to express their negative emotions differently (De Coster & Zito, 2010). Indeed, some research suggests that responses to anger are central to understanding self-destructive deviant/criminal coping behaviors (i.e., illicit drug use) among women prisoners (DeHart, 2008; Kubiak et al., 2017; Owen, 1998; Sharp et al., 2012). Thus, the *expression* of rather than the *experience* of negative emotions may play a more critical role in a gendered understanding of how strain may lead to deviant behavior and criminal coping.

In using a lens that is sensitive to gender differences in explorations of GST as seen in previous work (Broidy & Agnew, 1997; Broidy, 2001; Hay, 2003; Jang, 2007; Piquero & Sealock, 2004; Sharp et al., 2005, 2012; Tyler et al., 2014), it becomes clear that GST can be informative to understanding women's involvement in crime and deviance. However, the ways that oppression and inequality play a significant role in women's lives and may relate to strain, crime, and deviance are less clearly delineated in GST and are more developed in feminist pathways approaches.

Although GST alone lacks the capacity to fully explain female offending (Belknap & Holsinger, 2006), it does however point to the importance of looking at what types of strain may impact the lives of women (e.g., childhood abuse, IPV, oppression) and how these may differ from the strains in the lives of men. Furthermore, GST clearly delineates the significance of emotional states, especially anger, as central mechanisms that relate to crime and deviance. Equally important, GST also provides explanations for why not all women who experience adversity and abuse engage in crime. In particular, GST posits that certain types of strain lead to negative emotional states that may be associated with crime and deviance. Furthermore, GST suggests that there are additional elements including social support, self-esteem, and self-efficacy that can all reduce the likelihood that people will cope with negative emotions and strain through crime and deviance (Agnew, 2006).

Together, both feminist pathway approaches to understanding crime and GST place a similar emphasis on the role of strains and stressors in subsequent involvement in deviance and criminal behavior. However, neither theoretical approach fully captures women prisoners' experiences with abuse, anger, and illicit drug use. By integrating the ways feminist pathways approaches emphasize women's unique experiences with oppression, inequality, and structural

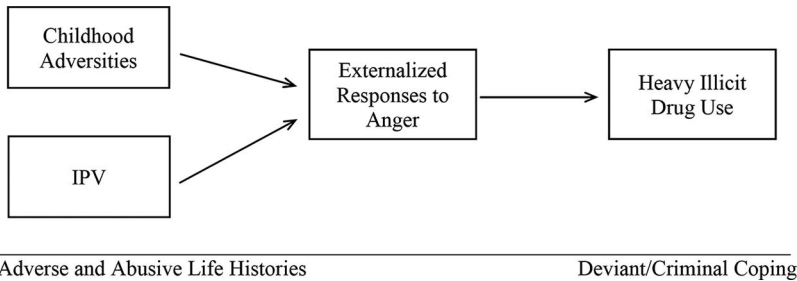


FIGURE 1 Integrated feminist pathways and GST theoretical model illustrating adverse and abusive life histories and the mediating effect of externalized responses to anger on heavy illicit drug use.

disadvantages as they relate to crime with GST's emphasis on anger and abuse as central mechanisms that relate to crime and deviance, the strengths of these two theoretical frameworks work together to help us better understand how abusive experiences in childhood and adult relationships relate to externalized responses to anger and illicit drug use among women prisoners. Specifically, we see externalized responses to anger as a potential mediating mechanism between strainful life events (adverse and abusive histories) and deviant or criminal coping (see Figure 1).

The Current Study

In the current study, we use data from a stratified random sample of all incarcerated women in Oklahoma ($N = 441$) and an integrated feminist pathways and GST approach to explore the relationships between adverse and abusive life experiences in childhood and adulthood, externalized responses to anger, and illicit drug use. Based on our proposed theoretical framework and prior research on women prisoners, we expect to find that: (a) women who report experiencing childhood adversities (particularly abuse) and/or IPV will be more likely to report externalized responses to anger and heavy illicit drug use before going to prison, and (b) externalized responses to anger will mediate the relationship between experienced childhood adversities and adult IPV and heavy illicit drug use among women prisoners.

DATA AND METHODS

Sample

The data for this study come from the Oklahoma Study of Incarcerated Women and Their Children (2008, 2009). Participants at the only four facilities that house women prisoners in the state of Oklahoma were given a 25-page paper/pencil questionnaire during the spring of 2008 and 2009.¹ The researchers were not provided access to the full population nor demographics about the full population, instead, the Oklahoma Department of Corrections provided the researchers with random samples of 500 women prisoners both years of data collection that were stratified by age, race, and security level. Controlling for demographics, the researchers

assigned each woman with a randomly generated identification number, the list was sorted by identification numbers, and the first 1 – N women were selected from each list for each facility. Confirmatory comparisons of the study sample with the full population demographics conducted by the Oklahoma Department of Corrections confirmed that the study sample did not differ statistically from the Oklahoma's women prisoner population on any of the selected demographics. Out of 500 women sampled each year, 297 women completed questionnaires in 2008 and 301 women completed questionnaires in 2009 for a total of 598 respondents. Completion of the questionnaire was voluntary. The response rate for each year was approximately 60%. After excluding records with missing data on key variables in our study, the final current study sample consisted of 441 women.

Measures

Childhood Adversities

Drawing from prior work on ACEs (Felitti et al., 1998), respondents were asked about their adverse and abusive experiences while they were growing up (during their first 18 years of life). *Childhood physical neglect* was coded 1 if the respondent reported that she did not feel protected as a child, did not have enough to eat, often had to wear dirty clothes, or had nobody to take her to the doctor when she was sick. Those that did not indicate any of these experiences were coded 0. *Childhood emotional neglect* was coded 1 if the respondent reported that she did not feel loved as a child, that there was nobody who made her feel important, that nobody looked out for her well-being, or that she thought her parents wished she was never born. Those that did not indicate any of these experiences were coded 0. *Childhood emotional abuse* was coded 1 if the respondent reported that she was called names as a child. *Childhood physical abuse* was coded 1 if the respondent reported “yes” to ever being physically abused as a child, and *childhood sexual abuse*² was coded 1 if the respondent reported “yes” to ever being sexually abused as a child. Those indicating “no” were coded 0.

Family member incarcerated was coded 1 if a participant reported that a member of their household was incarcerated during the first 18 years of her life. *Battered mother* was coded 1 if the participant reported that her father had ever been violent to her mother or stepmother during the first 18 years of her life. *Parental separation or divorce* was coded 1 if participants reported their parents had ever been separated or divorced during the first 18 years of her life. Affirmative answers to questions asking whether the respondent had *lived with someone with a mental illness* or *lived with someone with substance use* during the first 18 years of her life were each coded as 1. All others were coded 0.

Victim of IPV

To measure intimate partner violence, participants were asked if they had ever been involved in domestic violence. The possible responses were “no,” “yes, I have been a victim of domestic violence,” “yes, I have been the perpetrator of domestic violence,” and “both.” If the participant responded, “yes, I have been a victim of domestic violence,” she was coded 1 representing *IPV victim* and all other responses were coded as 0.³

Externalized Responses to Anger

GST suggests that negative emotions in response to strains are the central mechanism leading to deviant and criminal coping behaviors (Agnew, 1992, 2001, 2006). The current study focuses on anger expression. Specifically, respondents were asked, “Sometimes bad things happen in our lives to make us angry. Which of the following do you do when you’re angry?,” with eight possible responses. The responses were (1) “blow up,” (2) “take it out on other(s),” (3) “take it out on things,” (4) “withdraw,” (5) “shutdown,” (6) “work it out,” (7) “talk it out,” and (8) “cry.”⁴ Factor analysis with Varimax rotation indicated three factors with eigenvalues greater than 1: coping through externalized anger (affirmative responses to items 1 through 3), coping through internalized anger (affirmative response to items 4 and 5), and healthy coping (affirmative response to items 6 through 8). Positive responses to “blow up,” “take it out on others,” and “take it out on things” were summed to form the variable *Externalized Responses to Anger* (Cronbach’s alpha .801; eigenvalue = 2.955) ranging from 0 to 3. We did explore the effects of internalized and healthy responses to anger on heavy illicit drug use; however, we did not include them in the final models presented here because neither internalized nor healthy responses to anger were significantly related to illicit drug use.

Heavy Illicit Drug Use

Because the majority of women in our sample had used one or more drugs in the year prior to incarceration and almost all indicated using marijuana, we focused on heavy use of illicit drugs other than marijuana.⁵ *Heavy illicit drug use* was measured using the question, “At the time of your arrest, how often were you using the following drugs?”: “crack or freebase cocaine,” “cocaine (snorting or shooting),” “amphetamine/meth/speed/,” “heroin,” “speedball (heroin and cocaine),” “other opiates or narcotics,” “barbiturates,” “tranquilizers,” “PCP/angel dust,” and “LSD, MDA, X.” Available response categories were “1 or more times a day,” “2–6 times a week,” “once a week,” “2 or 3 times a month,” “once a month or less,” and “no response or N/A/did not use.”⁶ We then collapsed these categories into a dichotomous variable to estimate heavy use of any these illicit substances. Responses of “1 or more times a day” and “2–6 times a week” for any of these substances were coded 1 and all others were coded 0.

Control Variables

Demographic characteristics were utilized as controls. *Age* was measured by respondents’ self-identified age in years and ranged from 18 to 69. Race/ethnicity was measured through self-identification. The possible responses categories were White, African American, Native American, Hispanic, and Other. In the analyses, we recoded this variable into dummy variables with *African American* representing those self-identified as African American, *Native American* representing those who identify as Native American, and *White* representing those who self-identified as White. Due to the small number of Hispanic respondents, we collapsed them into the “Other” category, which is labeled as *Other/Hispanic* representing those self-identifying as Hispanic or “Other.” The reference category in the analyses was *White*. *Number of children* was measured by asking participants how many children they have had.

Education was measured by asking participants to report their level of education prior to prison. The possible response categories were “8th grade or less,” “9th–11th grade,” “high school graduate or GED,” “Vo-tech school,” “up to 2 years of college (no degree) or associates degree (2 years),” “more than 2 years of college but no degree,” “4 years of college (degree),” and “post-graduate school.” In the analyses, we recoded this variable into dummy variables representing *education = high school*, *education > high school*, with less than high school representing the reference category. Marital status was measured by asking participants their marital status at the time they were arrested for the offense for which they were currently serving time for. The possible responses were “married,” “not married but living with a male partner,” “not married but living with a female partner,” “divorced,” “separated,” “widowed, no partner,” and “widowed living with partner.”⁷ In the analyses, we recoded this variable into dummy variables representing *cohabitation* (affirmative responses to not married but living with a male partner, not married but living with a female partner, and widowed but living with a partner), *not married/widowed* (affirmative responses to divorced, separated, and widowed no/partner), with married representing the reference group. Incarcerated offenses were measured by asking the women what the most serious crime for which she was presently serving time. The possible responses were alcohol- or drug-related offenses, crimes against people, and property-related crimes.

Statistical Analysis

To examine the links between childhood adversities, IPV, anger expression, and heavy illicit drug use (see Figure 1), a series of regression models was run utilizing Baron and Kenny’s (1986) three-step framework for formal mediation analyses. First, we examined whether childhood adversities and IPV were associated externalized responses to anger using Poisson regression. We chose Poisson because our coding of anger led to “counts” of the number of anger expressions, indicated by respondents, with each additional expression of anger representing more externalized responses to anger. Table 2, Models 1 and 2 include childhood adversities and IPV, respectively. Model 3 included both childhood abuse and IPV. Finally, Model 4 included childhood adversities and IPV variables as well as demographic controls. Second, we examined whether childhood adversities and IPV were associated with heavy illicit drug use using binary logistic regression. In Table 3, Models 1, 2, and 3 examined whether childhood adversities and IPV were associated with heavy illicit drug use. In Model 4, we examined the mediating effects of externalized responses to anger on the relationships between childhood adversities, IPV, and heavy illicit drug use. To formally assess whether the proportion of the association between childhood adversities, IPV, and heavy illicit drug were reduced after adding externalized responses to anger into the same model, the strength of the mediation was tested using the Sobel-Goodman Test (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Sobel, 1982).

RESULTS

Descriptive Characteristics of Oklahoma Women Prisoners

Table 1 presents the basic descriptive statistics for the variables in the analyses. The most commonly experienced childhood adversities were emotional neglect (74.1%), parental separation

TABLE 1
Sample Characteristics (N = 441)

	<i>Range</i>	<i>Frequency</i>	<i>Percent</i>
Childhood adversities			
Childhood physical neglect	0–1	215	48.8
Childhood emotional neglect	0–1	327	74.1
Childhood emotional abuse	0–1	262	59.4
Childhood physical abuse	0–1	238	54.0
Childhood sexual abuse	0–1	259	58.7
Family member incarcerated	0–1	118	26.8
Battered mother	0–1	163	37.0
Parental separation or divorce	0–1	308	70.0
Lived w/someone with mental illness	0–1	218	49.4
Lived w/someone with substance use	0–1	260	59.0
Intimate partner violence			
Victim of IPV	0–1	274	62.1
Negative emotionality			
Externalized responses to anger, mean	0–3		1.0
Illicit drug use			
Heavy illicit drug use	0–1	274	62.1
Demographics			
Age, mean	18–65		36.0
Number of children, mean	0–9		2.5
Race			
White (reference category)	0–1	214	48.5
African American	0–1	94	21.3
Native American	0–1	57	12.9
Other/Hispanic	0–1	76	17.2
Education at incarceration			
Education <high school (reference category)	0–1	193	43.8
Education = high school	0–1	123	27.9
Education >high school	0–1	125	28.3
Marital status			
Married (reference category)	0–1	75	17.1
Cohabiting	0–1	140	31.7
Not Married/Widowed	0–1	226	51.2
Incarcerated offense			
Alcohol- or drug-related offenses		245	55.6
Crimes against people		106	24.1
Property related crimes		89	20.3

or divorce (70.0%), emotional abuse (59.4%), sexual abuse (58.7%), physical abuse (54.0%), and having lived with someone with substance abuse (59.0%). The least common experiences were having an immediate family member in prison (26.8%), and having a mother that was battered (37.0%). On average, 62.1% of the women were victims of IPV and heavily used illicit drugs before going to prison. Approximately half of the women (54.2%) reported using externalized responses to anger when bad things happened in their lives.

The average age of the sample of women prisoners was 36 with approximately two children. There were 214 Whites (48.5%), 94 African American (21.3%), 57 Native American (12.9%), and 76 Other/Hispanic women (17.2%). Education levels were low, with 193 (43.8%) women

TABLE 2
Poisson Regression Results Predicting Externalized Responses to Anger Considering Childhood Adversities and Intimate Partner Violence ($N = 441$)

	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
Childhood adversities								
Physical neglect	1.051	(.117)			1.042	(.116)	1.038	(.120)
Emotional neglect	1.114	(.130)			1.118	(.130)	1.116	(.133)
Emotional abuse	.895	(.102)			.891	(.102)	.985	(.116)
Physical abuse	1.347**	(.170)			1.384**	(.176)	1.392**	(.176)
Sexual abuse	1.265**	(.156)			1.244*	(.154)	1.219*	(.149)
Family member incarcerated	1.403***	(.156)			1.385***	(.155)	1.203	(.136)
Battered mother	1.083	(.156)			1.064	(.124)	1.129	(.133)
Parental separation or divorce	.991	(.120)			.992	(.121)	.879	(.109)
Lived w/ someone with mental illness	1.220	(.141)			1.259*	(.146)	1.255*	(.147)
Lived w/ someone with substance use	.929	(.109)			.924	(.109)	.962	(.113)
Intimate partner violence								
Victim of IPV			.765***	(.076)	.752**	(.076)	.774**	(.081)
Demographics								
Age							.965***	(.006)
African American							1.321*	(.185)
Native American							1.143	(.185)
Other/Hispanic							.996	(.144)
Number of children							1.053	(.032)
Education = high school							1.090	(.032)
Education >high school							.741*	(.107)
Not married/widowed								
Cohabiting								
Constant	0.532***	(.089)	1.073	(.077)	0.619**	(.108)	1.704	(.546)
Pseudo R2	0.038		0.010		0.045		0.150	

Notes. Results are in incident rate ratios; numbers in () are standard errors; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

having less than high school education, 123 (27.9%) reporting high school graduation or General Education Diploma (GED), and the remaining 125 (28.3%) reporting education beyond high school including vocational and college. Marriage was not common in the sample, with 75 (17.1%) women reporting been married, 140 reporting cohabitation (31.7%) and the remaining 226 women (51.2%) reporting they were not married, separated, divorced, or widowed prior to incarceration. The most common offense types for which these women were currently incarcerated⁸ included alcohol- and drug-related offenses (55.6%), crimes against persons (24.1%), and property related crimes (20.3%), which closely matches the breakdown of the incarcerated offenses of the women's prison population in Oklahoma (ODOC, 2015).

The Effects of Childhood Adversities and IPV on Externalized Responses to Anger

In Table 2, we examine the effects of childhood adversities and IPV on externalized responses to anger using Poisson regression. In Model 1, women who experienced childhood physical abuse (IRR = 1.347, $p \leq .01$), childhood sexual abuse (IRR = 1.265, $p \leq .05$), and having an immediate family member in prison while growing up (IRR = 1.403, $p \leq .001$) were significantly more likely to have expressed anger than those who did not, as predicted. In Model 2, we examined

the effects of being an IPV victim on externalized responses to anger. We find that women who did experience IPV were less likely to have used externalized responses to anger ($IRR = .765$, $p \leq .001$) than women who did not experience IPV. In Model 3, we examined the effects of both childhood adversities and IPV on externalized responses to anger simultaneously in accordance with the first part of our theoretical model that blends feminist pathway approaches and GST (see Figure 1). Overall, the effects of childhood adversities and IPV remained statistically significant and in the same direction as Models 1 and 2. Moreover, in Model 3, having lived with someone with a mental illness became statistically significant and positively related to externalized responses to anger ($IRR = 1.259$, $p \leq .05$) when IPV was added to the model. With the inclusion of the demographic controls in Model 4, all of the childhood adversity and IPV experiences noted in previous models remained significantly related to externalized responses to anger with the exception of having an incarcerated family member. Moreover, age ($IRR = .965$, $p \leq .001$) and not married/widowed ($IRR = .741$, $p \leq .05$) were negatively related to anger expression, whereas being African American ($IRR = 1.321$, $p \leq .05$) was positively related to anger expression in comparison to being White. The pseudo- R^2 was .150 for the full model.

The Effects of Childhood Adversities, IPV, and Externalized Responses to Anger on Heavy Illicit Drug Use

In Table 3, we examined the effects of childhood adversities, IPV, and externalized responses to anger on heavy illicit drug use using binary logistic regression. In Model 1, three measures of childhood adversity were related to heavy illicit drug use. Women who experienced childhood sexual abuse were 89.8% ($OR = 1.898$, $p \leq .001$) more likely to report using heavy illicit drugs than those who did not. Similarly, women who had a battered mother were 111.5% ($OR = 2.115$, $p \leq .001$) more likely to have used illicit drugs heavily before prison as compared to those without a battered mother. Women who lived with someone with a substance abuse problem were also 63.8% ($OR = 1.638$, $p \leq .05$) more likely to report heavy use of illicit drugs than those who did not. Surprisingly, in Model 2 our results indicated that being an IPV victim was not significantly related to heavy illicit drug use. In Model 3, we examined whether externalized responses to anger mediated the relationships between childhood adversities, IPV, and heavy illicit drug use, as suggested in our full theoretical model that blends feminist pathway approaches and GST (see Figure 1). As expected, we found that externalized responses to anger were significantly related to heavy illicit drug use and the inclusion of externalized responses to anger entirely washed out the significant effects of childhood sexual abuse on heavy illicit drug use. Specifically, women who experienced a one-unit increase in externalized responses to anger were 36.6% ($OR = 1.336$, $p \leq .001$) more likely to report heavily using illicit drugs. However, other experiences of childhood adversity (having a battered mother, $OR = 2.105$, $p \leq .05$, and living with someone with a substance abuse problem, $OR = 1.681$, $p \leq .05$) remained significantly related to heavy illicit drug use even with the inclusion of externalized responses to anger in Model 3. In addition, as seen in Model 2, being an IPV victim is not significantly related to heavy illicit drug use. In Model 4 demographic variables were added and being African American ($OR = .379$, $p \leq .001$) was the only demographic variable significantly related to heavy illicit drug use. Although no measures of childhood abuse were significant in Model 4, three other measures of childhood adversity were significant: having a battered mother

TABLE 3
 Logistic Regression Results Predicting Heavy Illicit Drug Use Considering Childhood Adversities, Intimate Partner Violence, and Externalized Responses to Anger ($N = 441$)

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Proportion of total effect mediated by anger expression</i>
Childhood adversities					
Physical neglect	.712 (.163)		.751 (.178)	.779 (.197)	
Emotional neglect	.694 (.173)		.714 (.181)	.773 (.203)	
Emotional abuse	1.235 (.286)		1.371 (.324)	1.280 (.317)	
Physical abuse	1.120 (.164)		1.234 (.154)	1.301 (.153)	
Sexual abuse	1.898*** (.467)		1.780 (.455)	1.756 (.458)	41.5%***
Family member incarcerated	1.058 (.266)		.997 (.261)	1.154 (.316)	
Battered mother	2.115*** (.542)		2.105** (.552)	1.842* (.500)	–
Parental separation or divorce	1.021 (.241)		1.005 (.238)	1.118 (.284)	
Lived w/ someone with mental illness	.718 (.172)		.700 (.168)	.589* (.152)	–
Lived w/ someone with substance use	1.638* (.387)		1.681* (.390)	1.161* (.400)	–
Intimate partner violence					
Victim of IPV		1.264 (.252)	1.501 (.329)	1.420 (.321)	
Negative emotion					
Externalized responses to anger			1.366*** (.149)	1.482*** (.178)	
Demographics					
Age				1.012 (.013)	
African American				.379*** (.115)	
Native American				.831 (.292)	
Other/Hispanic				.704 (.222)	
Number of children				1.030 (.071)	
Education = high school				.849 (.230)	
Education >high school				.910 (.252)	
Not married/widowed				1.300 (.373)	
Cohabiting				1.120 (.363)	
Constant	1.340 (.437)	1.438** (.252)	.853 (.307)	.601 (.414)	
Pseudo R^2	.055	.010	.073	.123	

Note. Results are in odds ratios; numbers in () are standard errors; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

(OR = 1.842, $p \leq .05$), living with someone with a mental illness (OR = .589, $p \leq .05$), and living with someone with a substance abuse problem (OR = 1.161, $p \leq .05$). To confirm the mediation effect of externalized responses to anger on the relationship between childhood sexual abuse and heavy illicit drug use, we used the Sobel-Goodman mediation test (MacKinnon et al., 2002; Sobel, 1982). In line with our predictions as outlined in our theoretical model (see Figure 1), externalized responses to anger mediated 41.5% ($p \leq .001$) of the total effect of childhood sexual abuse on heavy illicit drug use. The pseudo- R^2 was .123 for the full model.

DISCUSSION AND CONCLUSION

The current study sought to add to the growing literature on women's pathways to prison by utilizing an integrated feminist pathways and GST theoretical approach to help highlight the

significant effects of negative life experiences, including adverse childhood experiences and IPV, as “push” factors into crime. Specifically, we utilized this approach to examine: (a) whether women who report adverse childhood experiences and/or adult IPV were more likely to report externalized responses to anger as well as heavy illicit drug use before coming to prison and (b) whether externalized responses to anger mediated the relationship between experiencing adverse childhood experiences and adult IPV and heavy illicit drug use. We found that for women prisoners in Oklahoma, some adverse childhood experiences—particularly physical abuse, sexual abuse, having an immediate family member go to prison, and having lived with someone with a mental illness—increased the likelihood of externalized responses to anger. These patterns are in line with our integrated feminist pathways and GST theoretical model and demonstrate that childhood adversities are related to the expression of anger as suggested by previous research (Kubiak et al., 2017; Sharp et al., 2012; Suter et al., 2000). Furthermore, our study is unique in that it focuses on externalized expressions of anger as they are linked to deviant and criminal coping behaviors (i.e., heavy illicit drug use) among incarcerated women.

Surprisingly, women who experienced IPV were less likely to have externally expressed anger than women who did not report IPV. It could be that women who endure IPV experience other negative emotions, such as depression, PTSD, and guilt, which has been documented in previous work (DeHart, 2008; Fogel & Belyea, 1999; Grella et al., 2013; Lynch et al., 2012; Salisbury & Van Voorhis, 2009). Moreover, victims of IPV may have learned to avoid outward expressions of anger, perhaps in fear of retaliation of abusive partners, and thus may internalize their abuse experiences through feelings such as self-blame and feelings of shame (i.e., feeling she deserved to be hit or called names), loss of control or powerlessness, and suicidal feelings.

Next, we found that women reporting adverse childhood experiences, particularly sexual abuse, having a battered mother, and having lived with someone with a substance abuse problem were significantly more likely to report heavy illicit drug use before coming to prison. Indeed, much research suggests that adverse childhood experiences, particularly childhood abuse, are directly linked to illicit drug use (Bowles et al., 2012; Daly, 1992; Friestad et al., 2014; Marotta, 2017; McClellan et al., 1997; Messina & Grella, 2006; Messina et al., 2007; Salisbury & Van Voorhis, 2009; Sharp, 2014; Sharp et al., 2012). Feminist pathways literature has argued that women’s pathways into crime often begin with childhood abuse, particularly sexual abuse, which leads to running away from home and ending up on the streets. Once on the streets, they are exposed to additional abuse, delinquent peers, and illicit placing them on a trajectory to prison (Acoca, 1998; Belknap & Holsinger, 2006; Daly, 1992; DeHart, 2008; Owen, 1998; Sharp, 2014). Surprisingly, childhood physical abuse and having an immediate family member go to prison were not directly related to illicit drug use, which has been documented in previous work (Bowles et al., 2012; Felitti et al., 1998; Dube et al., 2003; Friestad et al., 2014; Kubiak et al., 2017; Messina et al., 2007). However, those studies did not examine the mediating effects of anger set forth in GST. Although we did not find a direct relationship between childhood physical abuse, having an immediate family member go to prison, and heavy illicit drug use, both adverse childhood experiences increased the likelihood of externalized responses to anger. It could be that outwardly aggressive and violent behaviors (as opposed to illicit drug use) are more common coping responses among women prisoners who experienced childhood physical abuse and who had an immediate family member go to prison.

Additionally, experiencing IPV was not directly related to illicit drug use among the women prior to prison. This finding suggests that more recent trauma and victimization may not be

more predictive of illicit drug use, which conflicts with the premise of GST (Agnew, 2006) and previous work (DeHart, 2008; Fogel & Belyea, 1999; Grella et al., 2013; Lynch et al., 2012; McClellan et al., 1997; Salisbury & Van Voorhis, 2009). It could be that for women prisoners, chaotic and abusive home environments in childhood are more predictive of heavy illicit drug use than IPV. Additionally, they may have become addicted to illicit drugs in adolescence, prior to becoming involved in IPV relationships. In fact, much research suggests that childhood adverse experiences can lead to a wide variety of negative outcomes in adulthood including IPV and illicit drug use (Anda et al., 2002; Bowles et al., 2012; Dong et al., 2004; Dube et al., 2002, 2003; Felitti et al., 1998; Friestad et al., 2014; Kubiak et al., 2017; Messina et al., 2007; Sharp et al., 2012; Whitfield et al., 2003).

Furthermore, we explored the mediating role of externalized response to anger as conceptualized in our theoretical model. We found that externalized responses to anger mediated 41.5% of the relationship between childhood sexual abuse and heavy illicit drug use, which is quite large. We found that the robustness of externalized responses to anger ($OR = 1.482$, $p \leq .001$) overpowered the direct effects of childhood sexual abuse on heavy illicit drug use. This finding suggests that the expression of anger (i.e., externalized responses to anger) is likely a central mechanism in understanding illicit drug use among women prisoners with adverse and abusive life histories. Moreover, women who experience childhood sexual abuse may be using drugs to help alleviate the negative affective responses associated with anger, which in turn may generate more criminal behavior and increase the risk of ending up in prison (Kubiak et al., 2017; Sharp et al., 2012). This important finding supports our integrated feminist pathways and GST theoretical model as well as prior feminist pathway approaches and GST literature that demonstrate that criminal coping, such as illicit drug use, may be used to address other negative affective states, such as anger, PTSD, and/or depression, in response to abuse (Broidy, 2001; Hay, 2003; Jang, 2007; Piquero & Sealock, 2000, 2004; Salisbury & Van Voorhis, 2009; Sharp et al., 2001, 2005; Tyler et al., 2014). However, it is important to note that the externalized expression of anger did not mediate the significant positive effects of other childhood adversities (having a battered mother and living with someone with a substance problem) on heavy illicit drug use. Thus, more research is needed to tease out these complex relationships.

Finally, we also found some interesting racial differences among African American and White women prisoners that are worth noting. GST suggests that compared to Whites, African Americans, in particular, experience qualitatively unique types of strain (e.g., racial discrimination) and are at a higher risk of victimization, poverty, and family instability, which may engender more negative emotions and criminal coping (Agnew, 2006). Our findings only partially support this supposition. Although African American women prisoners were significantly more likely to have externalized responses to anger than White women prisoners, African American women prisoners were significantly *less* likely to report heavy illicit drug use prior to incarceration when compared to White women. It could be that for African American women externalized responses to anger are associated with other criminal coping behaviors, such as the use of violence (e.g., self-defense), especially when enduring IPV, or property crimes. Indeed, past research suggests that African American women who experience IPV are less inclined to label themselves as “victims” and more inclined to fight back (Potter, 2008). In contrast, White women may be more likely to turn to illicit drug use because they may be less inclined to see other coping behaviors, such as fighting back, as viable options to cope with abuse.

Our findings extend both feminist pathways and GST literature by providing a better understanding of how both adverse childhood experiences and IPV as well as accompanying externalized responses to anger relate to deviant or criminal coping behavior (i.e., illicit drug use) among women prisoners. Consistent with feminist pathways and GST literature, many of the women in our sample experienced enduring strains in childhood and IPV in adulthood and developed negative emotions as well as substance dependence (DeHart, 2008; Friestad et al., 2014; Kubiak et al., 2017; Lynch et al., 2012; McClellan et al., 1997; Messina & Grella, 2006; Messina et al., 2007; Owen, 1998; Radatz & Wright, 2017; Salisbury & Van Voorhis, 2009). More than half of the women in our sample experienced childhood abuse, parental separation or divorce, or lived with someone with a substance abuse problem before they reached the age of 18. Moreover, the majority of the women experienced IPV, externalized anger when bad things happen, and had problems with heavy illicit drug use. However, our results show that childhood adversities (not IPV) were related to externalized anger and illicit drug use.

Together, our results indicate that the effects of childhood sexual abuse on heavy illicit drug use are mediated by externalized expressions of anger. These findings show the applicability of an integrated feminist pathways and GST approach to explain the linkages between childhood sexual abuse and illicit drug use as well as GST's ability to address the relationships between anger expression and subsequent deviant and criminal coping behaviors among women prisoners who experience structural disadvantages and oppressive life circumstances. Moreover, it is important to note because we know that Oklahoma incarcerates proportionately more women than anywhere else in the United States (Carson & Anderson, 2016), we could predict that the established relationships between childhood sexual abuse, externalized responses to anger, and illicit drug use in our stratified random sample of women prisoners may be even stronger in states that are more restrictive in their incarceration of women.

Overall, the current study offers three important contributions to the literature. First, the findings provide strong support for the inclusion of anger expression as a measurement of negative emotional states in studies that examine the relationships between victimization and criminal coping. Moreover, our results indicate that adverse and abusive life experiences are strongly related to the expression of anger in our stratified random sample of Oklahoma's incarcerated women. Second, our results indicate that the effect of childhood sexual abuse on heavy illicit drug use is mediated by externalized responses to anger suggesting that anger plays a significant role in women's pathways to illicit drug use and incarceration. This finding adds to a growing body of feminist pathways and GST research on the linkages between victimization and women's deviant or criminal coping behaviors (Belknap & Holsinger, 2006; Daly, 1992; Kubiak et al., 2017; McDaniels-Wilson & Belknap, 2008; Owen, 1998; Piquero & Sealock, 2000; Sharp, 2014; Slocum et al., 2005; Tyler et al., 2014). Finally, the findings of this study suggest that an integrated feminist pathways and GST theoretical approach can help us better understand how adverse and abusive life experiences relate to the expression of anger and illicit drug use among women who experience enduring oppression. Based on the findings of this study, both criminological theorists and policy makers should consider the influences of childhood adversities (i.e., child sexual abuse) on externalized responses to anger in understanding women's pathways to prison, especially via heavy illicit drug use. An integrated feminist pathways and GST approach is especially important to such investigations.

Limitations and Future Research

Although the results from this study are informative and can be generalized to women prisoners in Oklahoma, a few limitations are worth noting. First this study does not test GST in its entirety. The roles of social support, self-esteem, and self-efficacy, for example, may moderate the relationships between childhood sexual abuse and heavy illicit drug use. Thus, further investigations that examine additional elements of GST would be informative. Additionally, this study only examined one measure of negative emotions: externalized responses to anger. Much GST research suggests that women experience high levels of other negative emotions, such as depression, guilt, and anxiety (Agnew, 2006; Broidy & Agnew, 1997; Broidy, 2001; Hay, 2003; Piquero & Sealock, 2004). Additional research that examines depression, guilt, and other mental health issues associated with adverse and abusive experiences and illicit drug use would expand these findings (Lynch et al., 2012; McClellan et al., 1997). Furthermore, our measure of IPV is limited. Measures of IPV that consider various types of IPV (e.g., physical, sexual, psychological, coercive control) are preferable as seen in previous work (DeHart, 2008; Friestad et al., 2014; Kubiak et al., 2017; Lynch et al., 2012; Marotta, 2017; McClellan et al., 1997; Messina & Grella, 2006; Messina et al., 2007; Owen, 1998; Radatz & Wright, 2017; Salisbury & Van Voorhis, 2009; Sharp, 2014; Sharp et al., 2012). Moreover, our measure of IPV is quite conservative because we only considered the experiences of IPV victims. Future research should consider examining how women's perpetration of IPV may be linked to both externalized and internalized anger. Such explorations might also incorporate analyses of racial differences in anger, IPV, and coping behaviors as found in the current study and other existing research (e.g., Potter, 2008). Furthermore, IPV measures that investigate the severity, frequency, and duration of abusive experiences could also expand the current study's findings (Agnew, 1992, 2001, 2006).

Implications

Because the vast majority of the women prisoners in our sample were victims of one or more types of violence in both childhood and adulthood, it is imperative that all prisons implement programming to help women prisoners understand the complexities of victimization and accompanying negative emotions they may experience, including anger. Appropriately, such intervention programs should be mindful of the specific needs of survivors of abuse (Belknap, 2003). Moreover, based on our findings that adverse and abusive experiences are linked to heavy illicit drug use through externalized responses to anger, correctional programs should implement anger management therapies that are designed to help women improve emotional regulation of their anger including partnering substance abuse therapies with anger-focused therapies. Furthermore, our results indicate that a high percentage of women use illicit drugs heavily prior to their incarceration. As a result, correctional treatment and/or intervention programs for women should directly address the linkages between women's development of substance abuse problems and their past experiences with trauma and abuse, and should also recognize that trauma is a primary reason for developing drug addiction (Belknap, 2003).

Concluding Remarks

The results of this study suggest that adverse and abusive life experiences can operate as “push” factors into heavy illicit drug use and that externalized responses to anger may play a significant role in mediating these relationships. To best understand women’s pathways to prison, further exploration is needed to understand the linkages between strains of adverse and abusive experiences, anger expression, and deviant or criminal behavior (i.e., illicit drug use). Overall, the findings of the current study expand on previous feminist pathways and GST research indicating that an integrated feminist pathways and GST approach is central to understanding the relationships between childhood adversities, IPV, externalized responses to anger, and heavy illicit drug use among women prisoners.

NOTES

1. One of authors was present during the administration of the survey to answer any clarification questions asked by participants.

2. The women were not provided with a formal definition of sexual abuse during data collection; however, one of the authors was present during survey administration to answer any questions or provide clarification to participants.

3. Only 19 (4.3%) women reported, “yes, I have been the perpetrator of domestic violence” and a minority (15.4%, $n = 68$) indicated that they were “both” a perpetrator and a victim of domestic violence. We did explore the effects of being “both” a perpetrator and a victim of domestic violence on anger and heavy illicit drug use; however, we did not include these experiences in the final models presented here because the findings did not reveal any significant results related to being both a perpetrator and a victim of domestic violence. It may be that a physical response to IPV (i.e., perpetration) was the coping mechanism these women used to deal with strains of IPV rather than drug use. In other words, drug use did not appear to be a coping mechanism among women who were both a perpetrator and a victim of domestic violence.

4. We did not use a pre-existing scale to measure externalized responses to anger. The items presented here were developed by the authors.

5. This study focuses on illicit drug use, so alcohol use was not included. Even so, research indicates that victimization and negative emotions, such as anger or depression, are linked to alcohol use among women prisoners (Sharp et al., 2012).

6. We did not use a pre-existing scale to measure heavy illicit drug use. The items presented here were developed by the authors.

7. Only 20 (4.4%) of the women reported that they lived with a female partner prior to incarceration. We did explore the effects of living with a female partner on externalized responses to anger and heavy illicit drug use; however, we combined these experiences with living with a male partner because the analyses did not reveal any significant results related to living with a female partner. Moreover, we did not find any significant difference between women who lived with a female partner and those who lived with a male partner prior to going to prison in our models.

8. We included incarceration offense type for descriptive purposes. We did explore the effects of incarceration offense type on heavy illicit drug use; however, we did not include them in the final models presented here because the findings did not reveal any significant results related to incarceration offense type. We note that previous research does demonstrate a link between alcohol and drug use, drug-related offenses, crimes against persons, and property-related crimes (Bowles et al., 2012; McClellan et al., 1997; Owen, 1998).

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