



8-20-2019

## Staying Out: Reentry Protective Factors Among Rural Women Offenders

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### Repository Citation

Staton, Michele; Dickson, Megan F.; Tillson, Martha; Webster, J. Matthew; and Leukefeld, Carl G., "Staying Out: Reentry Protective Factors Among Rural Women Offenders" (2019). *Behavioral Science Faculty Publications*. 65.

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Digital Object Identifier (DOI)

<https://doi.org/10.1080/08974454.2019.1613284>

### Notes/Citation Information

Published in *Women and Criminal Justice*, v. 29, issue 6.

This is an Accepted Manuscript version of the following article, accepted for publication in *Women and Criminal Justice*. Staton, M., Dickson, M. F., Tillson, M., Webster, J. M., & Leukefeld, C. (2019). Staying out: Reentry protective factors among rural women offenders. *Women & Criminal Justice*, 29(6), 368-384.

<https://doi.org/10.1080/08974454.2019.1613284>

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# HHS Public Access

Author manuscript

*Women Crim Justice*. Author manuscript; available in PMC 2020 August 26.

Published in final edited form as:

*Women Crim Justice*. 2019 ; 29(6): 368–384. doi:10.1080/08974454.2019.1613284.

## Staying Out: Reentry Protective Factors Among Rural Women Offenders

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### Abstract

The current study examines protective factors for women who transition from county jails to rural Appalachian communities, areas with limited health and behavioral health services. The study included drug-using women recruited from three jails in rural Appalachia and were followed 12-months post-release. Analyses focused on differences between women who remained in the community and those who returned to custody, as well as a multivariate model to determine protective factors for re-entry success. At the bivariate level, staying out of jail was associated with being older, having a job, not using drugs, stable housing, receiving health treatment, and having prosocial peers. In the multivariate model, the most robust predictors of staying out of jail were drug use abstinence, health care utilization, and prosocial peers. Most research on criminogenic needs associated with re-entry success have focused on men, and most focused on re-entry to urban communities where services and resources are more accessible. These findings have important implications for criminal justice systems to implement re-entry programs for women offenders during the transition to the community.

### Keywords

re-entry; rural; Appalachia; women; offenders

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Declaration of Interest

Declarations of interest: none. We acknowledge that none of the authors of this paper have any conflicts of interest to report.

## Introduction

Women are the fastest growing demographic group in the criminal justice system with a 700% increase between 1980 and 2016, a rate twice as high as that of men (The Sentencing Project, 2018). National data from jail inmates indicate that over two-thirds (72%) of women met diagnostic criteria for substance use disorder (compared to 62% of men), and more than half (60%) reported active drug use in the month before arrest (compared to 54% of men; Bronson, Stroop, Zimmer, & Berzofsky, 2017). The rates of incarcerated women are even more pronounced in small states severely impacted by the opioid epidemic. In Kentucky, for example, the incarceration rate of women is nearly twice the national average, with numbers increasing nearly 30% in the last five years (Cheves, 2017). A recent study found that among women randomly selected from Kentucky jails in rural Appalachia, 97% reported problems with illicit drug use in the year prior to incarceration (Staton et al., 2018).

Periods of incarceration can be particularly disruptive to women's families and communities. While the majority of women will be returning to their communities following release from jail, there is limited research on protective factors associated with community re-entry for women. Re-entry research is critically needed because women's needs during community transition are complex, and even more so in geographical areas where resources are limited, such as in rural communities. The current study examines re-entry protective factors for women who transition from county jails to rural Appalachian communities, areas with fewer health and behavioral health services and resources than suburban and urban areas. This study proposes to 1) describe re-entry protective factors for rural women transitioning from jail to their community; 2) examine differences in re-entry protective factors among women who "stay out" and those who return to custody; and 3) examine unique predictors of re-entry success among rural women.

## Literature Review

### Women offender re-entry

An estimated 95% of individuals incarcerated in state prisons and jails will be released to the community (James, 2015). "Re-entry" is the period of transition between leaving the institution (jail or prison) and returning to the community. Re-entering individuals often lack some of the basic living skills needed for successful reintegration into society, and may face challenges including obtaining employment (due to criminal records, stigma, and limited education), housing (due to financial difficulties or rental and public housing restrictions), and public assistance (Li, 2018; Petersilia, 2005; Webster et al., 2014). Reintegration with families and other supportive social networks, as well as navigating health insurance and systems of healthcare (for physical, mental, or behavioral health services), can also be challenging (Dickson et al., 2018; Petersilia, 2001).

While the number of women re-entering the community is less than men (Kaeble, 2017), the unique issues faced by women during this time of transition are significant. Incarcerated women report higher rates of mental health problems, more frequent victimization, and substance use issues (Bronson et al., 2017; Staton-Tindall et al., 2007), leading to more significant health and behavioral health treatment needs upon re-entry. Women offenders are

also often economically marginalized, with high rates of unemployment compared to re-entering men (Flowers, 2010). Additionally, a woman's parenting experiences and the importance placed on motherhood can add to re-entry stress (Koski & Costanza, 2015), particularly since many of these women lose custody of their children during incarceration (Allen, Flaherty, & Ely, 2010). These findings suggest that at the point of the criminal justice system, women face a number of significant health, mental health, and economic challenges, that in the absence of intervention during periods of incarceration, remain considerable risks during the re-entry period. Thus, the need to understand possible protective factors for women during community re-entry is critical.

These re-entry challenges have been associated with recidivism. In fact, terms like "recidivism" and "reincarceration" are commonly used as the primary outcome of re-entry studies (e.g. Link & Hamilton, 2017; Stahler, et al., 2013). Nationally, about 43% of all offenders are re-arrested within one-year post-release, and that percentage has been shown to increase more than 80% over a nine-year period post-release, with percentages remaining fairly consistent for both women and men over time (Alper, Durose, & Markman, 2018).

Studies have shown that certain factors increase the likelihood of recidivism, such as longer criminal history (i.e. greater number of prior arrests; James, 2015), unemployment (Tripodi, Kim, & Bender, 2010), unstable housing (Makarios, Steiner, & Travis, 2010), neighborhood characteristics (i.e. living in areas with high concentrations of recidivating offenders; Stahler et al., 2013), lack of social ties (Berg & Huebner, 2011), and relapse to substance use (Link & Hamilton, 2017). These factors have been broadly conceptualized as criminogenic needs, or situational and personal factors that increase an individual's risk for offending and recidivism (Andrews & Bonta, 1994; Andrews & Bonta, 2010; Hollin & Palmer, 2006). While factors associated with recidivism are well-documented, the majority of re-entry research has focused on men, largely ignoring the unique needs of women offenders and how they are related to community re-entry outcomes.

### **Rural re-entry**

Much of the research on offender re-entry has focused on urban areas, largely due to the high concentration of re-entering offenders and availability of services (Morenoff & Harding, 2014; Re-entry Policy Council, 2005; Sampson & Loeffler, 2010). While the prevalence of offenders returning to rural communities is considerably smaller than urban areas, the issues faced by rural offenders can be significant due to limited services, geographic dispersion and transportation challenges, and cultural issues like stigma associated with being incarcerated. One study examining re-entry of women offenders who had participated in corrections-based substance abuse treatment found that women released to non-metro areas were significantly less likely than those released to metro areas to access community-based treatment aftercare services (Staton-Tindall et al., 2011), which suggests limited service availability, as well as difficulties with transportation. Transportation is a common re-entry challenge for rural offenders and may be a barrier to obtaining employment and housing, as well as remaining compliant with reporting to probation or parole (Zajac, Hutchison, & Meyer, 2014). Thus, rural offenders may face unique re-entry challenges, including limited affordable rental housing, impoverished communities with

scarce jobs (or jobs that pay insufficient wages; see Ethridge, Dunlap, Boston, & Staton, 2014), and fewer health and behavioral health care providers (Ward, 2015; Wodahl, 2006). In spite of these unique needs, current research is limited to understand factors associated with re-entry in rural communities.

Considering challenges for women re-entering rural communities, a better understanding of possible protective factors that may be associated with re-entry success is critical. By better understanding these factors for rural re-entering women in particular, criminal justice personnel (such as re-entry coordinators or parole officers) can take steps to provide resources and supports to decrease the likelihood of returning to custody. Protective factors are conceptually more valuable than simply the opposite of a risk factor (Polaschek, 2017), which is how protective factors are often studied. Protective factors that have been examined in the literature as buffers when risk factors are present, as the opposite of risk factors, and as factors which operate independent of risks (Yesberg et al., 2015). In this study, protective factors are defined as the re-entry behaviors (e.g., drug use abstinence) and supports (e.g., access to health care, prosocial friends) most strongly associated with staying out of jail by women offenders released to rural Appalachia. For rural women offenders, returning to resource-deprived communities with unique and significant needs, this perspective may be particularly important for informing program development and service provision throughout the re-entry process.

### **Current study**

As noted, much of the re-entry literature focuses on men released from prisons and returning to urban areas. The limited research on women suggests that their re-entry needs are more complex, even in geographical areas where resources are available, like urban or metropolitan areas. The current study examines re-entry protective factors for women who transition from county jails to rural Appalachian communities, areas with fewer health and behavioral health services and resources than suburban and urban areas. This study proposes to 1) describe re-entry protective factors for rural women transitioning from jail to their community; 2) examine differences in re-entry protective factors among women who “stay out” and those who return to custody; and 3) examine unique predictors of re-entry success among rural women.

## **Method**

### **Participants**

As part of a larger, National Institute on Drug Abuse-funded study (R01-DA033866), data were collected from women who were randomly selected and screened from three rural jails in Appalachia (Staton et al., 2018). Adult women were eligible to enroll in the study while they were incarcerated based on: 1) moderate risk of substance abuse based on the NIDA-modified Alcohol, Smoking and Substance Involvement Screening Test (NM-ASSIST) score of 4+ for any drug (NIDA, 2009); 2) residence in a designated Appalachian county; and 3) willingness to participate.

## Procedure

For the larger parent study, participants were included in the sampling frame for recruitment if they had at least 2 weeks to 3 months (as verified by jail records) to serve on their sentence. This time frame was selected in order to ensure that participants would be able to engage in all study activities prior to release. In summary, 900 participants were randomly selected for screening and 11% refused to participate. Of the remaining participants, 111 were released early and 248 did not meet study eligibility criteria. Study random selection and screening procedures have been described elsewhere (Staton et al., 2018).

At baseline, study participants (N=400) completed face-to-face interviews in a private room in each jail using Computer-Assisted Personal Interview (CAPI) software. Research staff were female interviewers from the local Appalachian area, and they were trained on jail facility policies and procedures by jail administrators prior to study implementation. Participants were paid \$25 for the baseline interview, and all study screening and data collection procedures were approved by the university IRB and protected under a federal Certificate of Confidentiality. As part of the baseline interview, study participants also completed a detailed locator form for tracking in the community following release. Jail release dates were monitored through the county jail tracking sites, as well as the statewide offender management system.

Follow-up interviews took place at 3, 6, and 12 months after release in the community to understand re-entry challenges among rural women. Of the 400 participants who completed a baseline assessment in the jail setting, 399 were released to the community during the study period and one participant was transferred to long-term custody in prison. Of those released, 6 refused to complete at least one follow-up interview and 2 were deceased at the time of the 12-month interview. Of the 391 remaining, 12-month follow-up interviews were completed with 349 women (89.3%). Participant locating and tracking methods included phone calls, flyer mailings, internet searches, and social media outlets like Facebook (Dickson et al., 2016). The follow-up interview was conducted face-to-face in a mutually agreed upon location with study participants, and respondents were paid \$25 for each interview and a \$25 completion bonus for completing all study activities following the 12-month interview. For additional information regarding sampling, recruitment, and study procedures, see Staton et al., 2018.

The current study included those participants who had completed the baseline and each of the follow-up interviews (3-, 6-, and 12-month; N=349). As part of the follow-up interviews, participants were asked about their employment, drug use, health, access to substance use treatment and other health services, housing and living environment, peer relationships, and reincarceration during the full 12-month follow-up period. Of the 349 eligible participants, 65 were removed from the study because of missing data, including participants who reported having no peer relationships during the follow-up and thus were not able to respond to peer-specific questions. The removal of these participants resulted in a final sample of 284 for the current analyses.



## Measures

**Sociodemographic characteristics**—To profile the study sample, demographic data were included in each wave of data collection. Measures included *age* (a continuous measure of self-reported age at the time of the interview), *race* (categorized as 1=White, 0=non-White, given the largely homogenous sample in this Appalachian region), *marital status* (1=married/living with someone as married, 0=other), *education* (a continuous measure of total number of years of formal education), *employment* (1=employed either full-time or part-time, 0=not working), *income* (a continuous measure of income from all sources), and *financial instability* (1=self-reported money problems, such as not having enough for food or housing, 0=no money problems).

**Drug use and treatment**—Women were asked to self-report any illicit drug use and injection behaviors during the 12-month period following release. For the current study, relapse to any illicit drug use (1=yes, 0=no) and any injection drug use (1=yes, 0=no) were included as potential correlates of re-entry success. Participants were also asked about substance use treatment participation during the follow-up period (1=attended substance use treatment at any point during the 12 months, 0=did not attend treatment).

**Health and service utilization**—Participants were also asked about their health and health service utilization during the 12-month follow-up period. Specifically, women were asked to self-report the number of days they experienced medical problems and if they were currently being treated for a health problem (1=yes, 0=no). They were also asked if they had a usual source of care, such as a clinic, health center, or doctor's office, if they were sick or needed health advice (1=yes, 0=no) and if they had health care coverage (1=insured for at least one month during the follow-up period, 0=no health care coverage).

**Housing and living environment**—Participants were asked if they lived in stable housing during the 12-month follow-up period (e.g., house or apartment owned/rented by participant, her partner or parents; 1=yes, 0=no), non-stable housing (e.g., temporary shelter or a friend's apartment/room; 1=yes, 0=no), or a hospital or other inpatient/residential facility (1=yes, 0=no). Participants were also asked about whom they lived with during the 12-month follow-up period post-release from jail including living alone (1=yes, 0=no), with a spouse or sexual partner (1=yes, 0=no), with parents or other family members (1=yes, 0=no), or with any friends or adult roommates (1=yes, 0=no) during this time. They were also asked if anyone used alcohol or drugs where they lived (1=yes, 0=no).

**Peer criminality**—Perceptions of peers were examined using the Peer Criminality subscale of the Texas Christian University (TCU) Family and Friends Assessment (Adult version; Joe, Simpson, Greener, & Rowan-Szal, 2004). The Peer Criminality subscale, with a coefficient alpha reliability of .85, consists of 6 items such as “how often they [friends] traded, sold, or dealt drugs” and “how often they [friends] got arrested or had problems with the law.” The possible range for scores is from 10 to 50, with higher scores indicating a higher perceived degree of criminality among peers. In addition to the Peer Criminality subscale, participants were asked if they had used alcohol or other drugs with their friends



(1=yes, 0=no) or with family members (1=yes, 0=no) during the 12-month follow-up period post-release from jail.

**Self-efficacy and satisfaction**—Self-efficacy and life satisfaction were also measured given their potential impact on re-entry success. These constructs were measured using the Strength Self-Efficacy Index (SSEI;  $\alpha=.76$  to  $.78$ ) and the General Satisfaction Index (GSI;  $\alpha=.87$  to  $.88$ ) from the Global Appraisal of Individual Needs (GAIN; Dennis et al., 2008). The SSEI is a count of items (10 total) that individuals consider a strength (Yes=1 point; scores range from 1 to 10), with higher scores indicating that the participant reports greater strengths. The GSI has participants self-report their satisfaction with housing, relationships, activities, and any help they are receiving for other re-entry problems. The index consists of six items that are summed for the total score (Yes=1 point; scores range from 1 to 6). Higher values suggest greater overall satisfaction with life.

**Custody status**—For the current study, the primary variable of interest is “staying out,” or not returning to custody in a jail or prison. Return to custody (or recidivism) was defined through self-report by the participants as being back in jail or prison at any point since being released in the last 12 months. In addition, individuals’ criminal history (defined as number of arrests prior to baseline) was included as additional descriptive information and as a control variable in study analyses.

## Analytic Plan

To address the first aim, descriptive statistics were used to examine protective factors associated with staying out of jail or prison among the randomly selected sample of rural women who completed the baseline and each of the follow-up interviews (3 waves of data over a 12-month post-release period). Specifically, participants’ demographics, drug use and treatment information, health and service utilization, housing, and peer relationships during the follow-up period were examined. For the second aim, these protective factors were examined by custody status in the past 12 months. Because the larger parent study involved delivery of an HIV/HCV risk reduction intervention, preliminary analysis examined potential differences across study variables by intervention condition. There were no significant differences across any of the study variables, so intervention condition was not included in subsequent analyses. Women who remained in the community ( $n = 146$ ) were compared to those who returned to custody ( $n = 138$ ) after re-entry using a series of chi-square tests and  $t$ -tests. Lastly, for the third aim, protective factors that were significantly different by custody status were entered into a multivariate logistic regression model to identify unique predictors of success during re-entry. Criminal history (number of arrests prior to baseline) was included as a control in the logistic regression model. Analyses were conducted using IBM SPSS version 24.0.

## Results

### Re-entry protective factors

As shown in Table 1, of the 284 eligible women participants who completed the baseline and all waves of re-entry follow-up data, the majority were white (98.6%) with an average age of

32.2 (SD=8.1) and an average of 11.3 years of education (SD=2.3). They reported an average of 3.2 arrests prior to the incarceration at baseline.

During the 12-month follow-up period, 39.8% reported either being married or living as married, nearly one-third (31.0%) reported being employed, and more than three-fourths (78.9%) reported having financial problems. Most participants had health care coverage for at least one month during the follow-up (87.3%) and 40.8% were currently being treated for a health problem.

Slightly more than half (51.4%) of study participants stayed out of jail or prison custody during the entire 12-month follow-up period. The majority of women (59.9%) reported at least one relapse to an illicit drug during the follow-up period, with 33.1% also reporting injection drug use. Further, one-fifth (21.1%) reported using either alcohol or other drugs with family members during the follow-up while nearly half (40.5%) reported using with friends. Less than one-third (29.6%) reported receiving substance use treatment during the follow-up. Almost half (44.4%) of participants also reported living in an environment where others were using alcohol or other drugs and 45.1% lived in non-stable housing (e.g., temporary shelter) at some point during follow-up. The majority of participants also reported living with a spouse or sexual partner (55.6%) or with parents or other family members (53.9%) at some point during these 12 months, while few lived alone (3.9%).

Participants reported moderate life satisfaction during the 12-month follow-up period, according to the GAIN GSI. On average, they indicated around 5 areas of strength (out of the possible 10) on the SSEI.

### Group differences by custody status

Bivariate analyses (t-tests and Chi-squares) highlighted a number of significant differences between women who remained in the community during the follow-up period and those who were reincarcerated (see Table 2). Results indicated that individuals who stayed out of jail/prison were older ( $t(281) = -2.30, p = .022$ ) and more likely to be employed during the follow-up period ( $\chi^2(1, N = 284) = 9.12, p = .003$ ). These women were also less likely to report any illicit drug use ( $\chi^2(1, N = 284) = 34.91, p = .001$ ), including injection drug use ( $\chi^2(1, N = 284) = 23.77, p = .001$ ).

Women who stayed out of custody were significantly less likely to report having used alcohol or other drugs with family ( $\chi^2(1, N = 284) = 9.95, p = .002$ ) or friends ( $\chi^2(1, N = 284) = 34.03, p = .001$ ) during the follow-up period. They also reported significantly less involvement with peers who engaged in criminal activities ( $t(282) = 6.51, p = .001$ ). However, living conditions varied. Specifically, participants who remained out of custody were less likely to report having lived with friends or other adult roommates during the follow-up period ( $\chi^2(1, N = 284) = 12.05, p = .001$ ) and to have lived in non-stable housing situations ( $\chi^2(1, N = 284) = 10.85, p = .001$ ). These women also were less likely to report living somewhere where others were using alcohol or other drugs ( $\chi^2(1, N = 284) = 16.07, p = .001$ ).

Other group differences included participants' current health status and scores on indicators of strength and life satisfaction. Women who remained in the community were significantly more likely to report utilization of health care ( $\chi^2(1, N = 284) = 6.27, p = .012$ ), greater life satisfaction (GSI;  $t(264.7) = -5.20, p = .001$ ), and more perceived re-entry strengths (SSEI;  $t(282) = -3.04, p = .001$ ).

### Predictors of re-entry success

A multivariate logistic regression model was used to identify unique predictors of re-entry success, which was defined in this analysis as staying out of custody during the 12 month follow-up period. As shown in Table 3, even when controlling for criminal history, women who reported at least one relapse to illicit drugs during the follow-up period were 60% less likely to stay out of jail/prison ( $p = .005$ ). In addition, utilization of health services was a significant predictor, with women who reported being treated for a health problem being nearly twice as likely to remain in the community in the 12 months post-release ( $p = .045$ ). Peer criminality was also negatively related to re-entry success. Specifically, for every one-point increase on the peer criminality subscale, there was a 4% decrease in the likelihood of a participant remaining out of custody following release ( $p = .026$ ).

### Discussion

The increase in the number of incarcerated individuals nationally has sparked a surge of re-entry research. Most of these studies have focused on male offenders (e.g., Berghuis, 2018; Huynh et al., 2015; Wyse, 2018), and on re-entry to urban areas with high concentrations of offenders, where services and resources are readily available. The current study examines re-entry issues for women in rural communities and possible protective factors that might be associated with re-entry success during the 12 months following jail release.

The targeted rural jail recruitment sites in this study are similar to other small rural jails nationally in that they were managed by locally elected administrators and have fewer opportunities for health and behavioral health services compared to larger, state-run prison facilities (PEW, 2018). As a result, jails often serve as venues for detoxification and short-term abstinence before individuals are released to the community. Despite the limited treatment opportunities in jail and limited access to evidence-based treatment in rural communities, it is important to note that more than half the women in this study (51.4%) did not recidivate during the 12-month follow-up period. This is similar to the national average on return to custody which suggests that 54% of offenders do not recidivate within the first year (Alper, Durose, & Markman, 2018), a finding which is mostly based on males returning to urban areas from prison. In this study, the most robust predictors of staying out of custody during the 12-month follow-up period for rural women were drug use abstinence, health care utilization, and prosocial peers.

In this sample of rural women who had used illicit drugs at baseline, 59.9% reported at least one relapse to illicit drug use during the 12-months post-release. This is consistent with other studies which found a high likelihood of relapse following release from custody (Inciardi, Martin, & Butzin, 2004), as well as high risk for drug overdose (Binswanger et al., 2012). However, among women in the current study who stayed out of custody during the

follow-up period, more than half (57%) self-reported abstinence from any illicit drug use, compared to only 22% of those who returned to custody. In fact, rural women who reported one or more relapse episodes were 60% less likely to stay out of jail. While abstinence from illicit drug use differed by custody status, substance abuse treatment involvement did not and only 30% of women reported engaging in substance abuse treatment during follow-up. While increasing access to substance abuse treatment is an important area of future research, these study findings have implications for alternative pathways to recovery among rural women, as well as other protective factors for re-entry success.

Another significant predictor of staying out of custody for rural women was utilization of health care. These women re-entering rural communities in Appalachia reported medical problems on 57 days out of the year, and more than half (58%) indicated they had a regular place to go for medical care. Women who were more likely to stay out of custody were more likely to report a regular source of health care (62.3%) compared to women who returned to custody (53.6%). Despite reporting having a regular doctor, only a third (33.3%) of women who returned to custody reported receiving treatment for a medical problem compared to 47.9% of those who stayed out of jail. These differences in health care utilization were also possibly related to health insurance since 90% of women who stayed out of jail reported being insured for at least one month compared to 84% of women who returned to jail. These findings are consistent with the re-entry literature which showed that insurance coverage and access to health care are protective factors for successful re-entry (Dickson et al., 2018; Vail, et al., 2017). Health insurance and opportunities for medical treatment are critical for women who have a history of drug use, especially when there are co-occurring health concerns like Hepatitis C, which impacts a high number of women who misuse drugs in rural Appalachia (Strickland et al., 2018) and continues to be an important area for future research in rural communities where health and behavioral health services are more limited.

The final significant predictor of staying out of custody was prosocial peers. The Appalachian culture has been characterized by close networks and relationships (Jones, 2010). In recent years, with the proliferation of rural illicit opioid use, some close-knit networks have served as hubs of illicit drug use and related high-risk behavior (Buer, Leukefeld, & Havens, 2016). Thus, while other studies have highlighted the significance of antisocial peer associates as a criminogenic risk factor of recidivism (van der Knapp et al., 2012), the relationship between high-risk peers and associates may be a heightened risk factor for rural Appalachian women. Findings from this study suggested that women scored slightly higher on perceived peer criminality than other criminal justice-involved women (Staton-Tindall et al., 2011). Women who stayed out of jail during the re-entry period reported significantly lower scores on the index of peer criminality (19.9) compared to those who returned to custody (26.1). Further, in the multivariate model, women scoring lower on peer criminality indicators were significantly more likely to stay out of jail. These findings are also possibly underestimated in that a number of women reported that they did not associate with any peers during the follow-up period. While research has focused on the influence of a high-risk partner on women's sustained drug use and criminal activities (Hearn, et al., 2015; Staton et al., 2017), these study findings have important implications for expanded social support and social network assessments during re-entry planning for women that include a more expanded examination of friendships and peers.

While drug use, medical care, and prosocial peers were the most robust predictors of re-entry success in this study, descriptive findings indicated that women re-entering rural Appalachian communities experienced a number of additional challenges. Specifically, only about a third of women (31%) reported working during the 12 months following release, and the majority (78.9%) reporting having financial difficulties. In comparing group differences, employment was a significant factor between women who stayed out of jail (39% working) versus those who returned to custody (23%). These findings are consistent with research on employment challenges during re-entry, but rates are considerably lower among these rural women (Couloute & Kopf, 2018). This finding could reflect limited employment opportunities in rural Appalachia, but could also suggest employment challenges for rural women specifically, since other research has shown that only 23% of a sample of rural women were working before entering jail (Staton et al., 2018). The lack of variance in employment among these women is not clear and suggests the need to consider employment as an area for future research.

Stable housing is another important area for consideration. A high percentage of women (87%) reported living in a stable housing situation during the re-entry period, with most women reporting living with a partner (56%) or parents (54%). Because the re-entry period examined in this study was 12 months, most of these women reported varying living conditions during the year post-release from jail. A higher percentage of those who reported spending some time in an unstable situation (such as a shelter, treatment facility, other institution) were reincarcerated (55.1%) compared to those who stayed out of jail (35.6%). In addition, women who stayed out of jail (32.9%) were also less likely to report living in a situation where someone used drugs or alcohol compared to women who returned to custody (56.5%). While living situation was not a significant predictor of re-entry success in the multivariate model, group differences are consistent with other studies suggesting that stable housing that supports abstinence from drugs and alcohol is critical for re-entry success (Whipple, Jason, & Robinson, 2016).

This study has limitations. Adult women were enrolled in the study from three rural Appalachian area jails in one state, which may limit generalizability to other substance-using women involved in the criminal justice system in urban areas. All data in this analysis were based on self-report during the 12-month period following release from jail. While self-report is common in social and behavioral research and has been shown to be valid for substance use (Del Boca & Noll, 2000; Rutherford, et al., 2000), it is possible that self-report of sensitive information like drug use and criminal activities may have been biased due to confidentiality concerns, particularly for women who were on community supervision (probation or parole) during the re-entry period. In addition, because the sample was recruited based on high-risk drug use, it is also possible that findings are not generalizable to rural women without a history of substance use. A Certificate of Confidentiality was obtained to increase protections for study participants, but self-reported data may still be a limitation. In addition, follow-up interviews were scheduled with study participants at the place of their choice in the community. While this should have been a place they perceived to be comfortable, it is also possible that the interview environment could have had an impact on study responses.

In conclusion, while these limitations may impact study response and generalizability, this study has important implications for women's re-entry. While a number of descriptive findings emerged when comparing rural women who stayed out of custody compared to those who returned to custody, results suggest that the primary protective factors associated with re-entry success for rural women were drug use abstinence, receiving health care for medical problems, and relationships with peers who are not criminally involved. These findings have important implications for re-entry planning for health and behavioral health treatment, as well as social support assessments as women begin to transition from jail or other correctional facilities to the community. Because health and behavioral health services are limited in rural communities, future research should focus on the delivery of innovative re-entry models in real-world settings to increase access to recovery services, women's health care, prosocial relationships, employment, and supportive housing. While these factors are most consistent with the re-entry literature, there may be a number of other factors (such as history of victimization or domestic violence) that should also be included in future research on women's re-entry success.

## Acknowledgment

Research reported in this manuscript was supported by the National Institute on Drug Abuse of the National Institutes of Health under Award R01DA033866. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. We would also like to recognize the cooperation and partnership with the [state] Department of Corrections and the local jails participating in this study.

## References

- Allen S, Flaherty C, & Ely G (2010). Throwaway moms: Maternal incarceration and the criminalization of female poverty. *Journal of Women and Social Work*, 25, 160–172.
- Alper M, Durose MR, & Markman J (2018). 2018 update on prisoner recidivism: A 9-year follow-up period (2005–2014). Washington, DC: US Dept. of Justice, Bureau of Justice Statistics.
- Andrews DA, & Bonta J (1994). *The psychology of criminal conduct*. Cincinnati, OH: Anderson.
- Andrews DA, & Bonta J (2010). *Rehabilitating criminal justice policy and practice*. *Psychology, Public Policy, & Law*, 16, 39–55.
- Berg MT, & Huebner BM (2011). Reentry and the ties that bind: An examination of social ties, employment, and recidivism. *Justice Quarterly*, 28, 382–410.
- Berghuis M (2018). Reentry programs for adult male offender recidivism and reintegration: A systematic review and meta-analysis. *International Journal of Offender Therapy and Comparative Criminology*. Advance online publication. doi: 10.1177/0306624X18778448.
- Binswanger IA, Nowels C, Corsi KF, Glanz J, Long J, Booth RE, & Steiner JF (2012). Return to drug use and overdose after release from prison: A qualitative study of risk and protective factors. *Addiction Science & Clinical Practice*, 7(3). Retrieved from 10.1186/1940-0640-7-3.
- Bronson J, Stroop J, Zimmer S, & Berzofsky M (2017). *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007–2009*. Washington, DC: US Dept. of Justice, Bureau of Justice Statistics.
- Buer LM, Leukefeld CG, & Havens JR (2016). "I'm stuck": Women's navigations of social networks and prescription drug misuse in central Appalachia. *North American Dialogue*, 19, 70–84. [PubMed: 28736509]
- Cheves J (2017, 11 20). Kentucky locks up more women than most states. Will lawmakers change that? *Lexington Herald-Leader*. Retrieved from <https://www.kentucky.com/news/politics-government/article185696838.html>



- Couloute L, & Kopf D (7 2018). Out of prison & out of work: Unemployment among formerly incarcerated people. Prison Policy Initiative. Retrieved from <https://www.prisonpolicy.org/reports/outofwork.html>
- Del Boca FK, & Noll JA (2000). Truth or consequences: The validity of self-report data in health services research on addictions. *Addiction*, 95, 347–360. [PubMed: 10795351]
- Dennis ML, White MK, Titus JC, & Unsicker JI (2008). *Global Appraisal of Individual Needs: Administration Guide for the GAIN and Related Measures*. Bloomington, IL: Chestnut Health Systems.
- Dickson MF, Staton-Tindall M, Smith KE, Leukefeld C, Webster JM, & Oser CB (2017). A Facebook follow-up strategy for rural drug-using women. *Journal of Rural Health*, 33, 250–256. [PubMed: 27467119]
- Dickson MF, Staton M, Tillson M, Leukefeld C, Webster JM, & Oser CB (2018). The Affordable Care Act and changes in insurance coverage and source of health care among high-risk rural, substance-using, female offenders transitioning to the community. *Journal of Health Care for the Poor and Underserved*, 29, 843–863. [PubMed: 30122668]
- Ethridge G, Dunlap PN, Boston Q, & Staton BH (2014). Ex-offenders in rural settings seeking employment. *Journal of Applied Rehabilitation Counseling*, 45(4), 56–63.
- Flowers SM (2010). *Employment and female offenders: An update of the empirical research*. Washington, DC: US Dept. of Justice, National Institute of Corrections.
- Hearn LE, Whitehead NE, Khan MR, & Latimer WW (2015). Time since release from incarceration and HIV risk behaviors among women: The potential protective role of committed partners during re-entry. *AIDS & Behavior*, 19, 1070–1077. [PubMed: 25183019]
- Hollin CR, & Palmer EJ (2006). Criminogenic need and women offenders: A critique of the literature. *Legal and Criminological Psychology*, 11, 179–195.
- Huynh KH, Hall B, Hurst MA, & Bikos LH (2015). Evaluation of the positive re-entry in corrections program: A positive psychology intervention with prison inmates. *International Journal of Offender Therapy and Comparative Criminology*, 59, 1006–1023. [PubMed: 24618877]
- Inciardi JA, Martin SS, & Butzin CA (2004). Five-year outcomes of therapeutic community treatment of drug-involved offenders after release from prison. *Crime & Delinquency*, 50, 88–107.
- James N (2015). *Offender reentry: Correctional statistics, reintegration into the community, and recidivism* [Report]. Congressional Research Service. Retrieved from <https://fas.org/sgp/crs/misc/RL34287.pdf>
- Joe GW, Simpson D, Greener JM, & Rowan-Szal G (2004). Development and validation of a client problem profile and index for drug treatment. *Psychological Reports*, 95, 215–234. [PubMed: 15460378]
- Jones L (2010). *Appalachian Values*. Ashland, KY: The Jesse Stuart Foundation.
- Kaebler D (2018). *Probation and parole in the United States, 2016*. Washington, DC: US Dept. of Justice, Bureau of Justice Statistics.
- Koski SV, & Costanza SE (2015). An examination of narratives from women offenders: Are gender-specific reentry efforts needed? *Qualitative Sociology Review*, 11(1), 70–89.
- Li M (2018). From prisons to communities: Confronting re-entry challenges and social inequality. *The SES Indicator* (American Psychological Association), 11(1). Retrieved from <http://www.apa.org/pi/ses/resources/indicator/2018/03/prisons-to-communities.aspx>
- Link NW, & Hamilton LK (2017). The reciprocal lagged effects of substance use and recidivism in a prisoner reentry context. *Health and Justice*, 5(8). doi: 10.1186/s40352-017-0053-2.
- Makarios M, Steiner B, & Travis LF III. (2010). Examining the predictors of recidivism among men and women released from prison in Ohio. *Criminal Justice & Behavior*, 37, 1377–1391.
- Morenoff JD, & Harding DJ (2014). Incarceration, prisoner reentry, and communities. *Annual Review of Sociology*, 40, 411–429.
- [NIDA] National Institute on Drug Abuse. (2009) NIDA Modified-ASSIST. Retrieved from <https://www.drugabuse.gov/sites/default/files/pdf/nmassist.pdf>
- Petersilia J (2001). Prisoner reentry: Public safety and reintegration challenges. *The Prison Journal*, 81, 360–375.



- Petersilia J (2005). Hard time: Ex-offenders returning home after prison. *Corrections Today*, 67(2), 66–71.
- Pew Research Center. (2018). Jails: Inadvertent health care providers – How county correctional facilities are playing a role in the safety net. Retrieved from [http://www.pewtrusts.org/-/media/assets/2018/01/sfh\\_jails\\_inadvertent\\_health\\_care\\_providers.pdf](http://www.pewtrusts.org/-/media/assets/2018/01/sfh_jails_inadvertent_health_care_providers.pdf)
- Polaschek DLL (2017). Protective factors, correctional treatment, and desistance. *Aggression & Violent Behavior*, 32, 64–70.
- Re-entry Policy Council. (2005). Report of the Re-entry Policy Council: Charting the safe and successful return of prisoners to the community. New York, NY: Council of State Governments.
- Rutherford MJ, Cacciola JS, Alterman AI, McKay JR, & Cook TG (2000). Contrasts between admitters and deniers of drug use. *Journal of Substance Abuse Treatment*, 18, 343–348. [PubMed: 10812307]
- Sampson RJ, & Loeffler C (2010). Punishment's place: The local concentration of mass incarceration. *Daedalus*, 139(3), 20–31. [PubMed: 21032947]
- The Sentencing Project. (2018). Incarcerated women and girls, 1980–2016. Retrieved from <https://www.sentencingproject.org/publications/incarcerated-women-and-girls/>
- Stahler GJ, Mennis J, Belenko S, Welsh WN, Hiller ML, & Zajac G (2013). Predicting recidivism for released state prison offenders: Examining the influence of individual and neighborhood characteristics and spatial contagion on the likelihood of reincarceration. *Criminal Justice & Behavior*, 40, 690–711. [PubMed: 24443612]
- Staton M, Strickland JC, Tillson M, Leukefeld C, Webster JM, & Oser CB (2017). Partner relationships and injection sharing practices among rural Appalachian women. *Women's Health Issues*, 27, 652–659. [PubMed: 28882550]
- Staton M, Ciciurkaite G, Oser C, Tillson M, Leukefeld C, Webster JM, & Havens JR (2018). Drug use and incarceration among rural Appalachian women: Findings from a jail sample. *Substance Use & Misuse*, 53, 931–941. [PubMed: 29161158]
- Staton-Tindall M, Duvall JL, Leukefeld C, & Oser CB (2007). Health, mental health, substance use, and service utilization among rural and urban incarcerated women. *Women's Health Issues*, 17, 183–192. [PubMed: 17560124]
- Staton-Tindall M, Frisman L, Lin HJ, Leukefeld C, Oser C, Havens JR, ...Clarke, J. (2011). Relationship influence and health risk behavior among re-entering women offenders. *Women's Health Issues*, 21, 230–238. [PubMed: 21315617]
- Staton-Tindall M, McNeese E, Leukefeld C, Walker R, Oser C, Duvall J, Thompson L, & Pangburn K (2011). Treatment utilization among metropolitan and nonmetropolitan participants of corrections-based substance abuse programs reentering the community. *Journal of Social Service Research*, 37, 379–389.
- Strickland JC, Staton M, Leukefeld CG, Oser CB, & Webster JM (2018). Hepatitis C antibody reactivity among high-risk rural women: Opportunities for services and treatment in the criminal justice system. *International Journal of Prisoner Health*, 14, 89–100. [PubMed: 29869584]
- Tripodi SJ, Kim JS, & Bender K (2010). Is employment associated with reduced recidivism? The complex relationship between employment and crime. *International Journal of Offender Therapy and Comparative Criminology*, 54, 706–720. [PubMed: 19638472]
- Vail WL, Niyogi A, Henderson N, & Wennerstrom A (2017). Bringing it all back home: Understanding the medical difficulties encountered by newly released prisoners in New Orleans, Louisiana – A qualitative study. *Health & Social Care in the Community*, 25, 1448–1458. [PubMed: 28370837]
- Van der Knaap LM, Alberda DL, Oosterveld P, & Born MP (2012). The predictive validity of criminogenic needs for male and female offenders: Comparing the relative impact of needs in predicting recidivism. *Law and Human Behavior*, 36, 413–422. [PubMed: 22409284]
- Ward KC (2015). Rural jail reentry: Perceptions of offender needs and challenges in Pennsylvania. Theses and Dissertations (All), 398 Retrieved from <https://knowledge.library.iup.edu/etd/398>
- Webster JM, Staton-Tindall M, Dickson MF, Wilson JF, & Leukefeld CG (2014). Twelve-month employment intervention outcomes for drug-involved offenders. *American Journal of Drug and Alcohol Abuse*, 40, 200–205. [PubMed: 24405160]

- Whipple CR, Jason LA, & Robinson WL (2016). Housing and abstinence self-efficacy in formerly incarcerated individuals. *Journal of Offender Rehabilitation*, 55, 548–563. [PubMed: 28603403]
- Wodahl E (2006). The challenges of prisoner reentry from a rural perspective. *Western Criminology Review*, 7(2), 32–47.
- Wyse J (2018). Older men's social integration after prison. *International Journal of Offender Therapy and Comparative Criminology*, 62, 2153–2173. [PubMed: 29770744]
- Yesberg JA, Scanlan JM, Hanby LJ, Serin RC, & Polaschek DL (2015). Predicting women's recidivism: Validating a dynamic community-based gender neutral tool. *Probation Journal*, 1–16. DOI: 10.1177/0264550514562851
- Zajac G, Hutchison R, & Meyer CA (2014). An examination of rural prisoner reentry challenges [Final report]. Center for Rural Pennsylvania. Retrieved from <http://justicecenter.psu.edu/research/projects/an-examination-of-rural-prisoner-reentry-challenges>

**Table 1.**

Demographics and Re-entry Issues at 12-months Post-incarceration (N=284)

	Mean/%	Mdn	SD	Range
<b>Demographics</b>				
Age at baseline	32.2	31	8.09	18–61
Years of education at baseline	11.3	12	2.34	0–19
Employed at least part time	31.0%	0	0.46	0–1
Married/living as married	39.8%	0	0.49	0–1
Income	\$7,509	\$4,800	\$11,075	\$0–134,000
Had money problems	78.9%	1	0.41	0–1
Intervention group	48.9%	0	0.50	0–1
<b>Drug Use &amp; Treatment</b>				
Any drug use	59.9%	1	0.49	0–1
Any injection drug use	33.1%	0	0.47	0–1
Substance use treatment	29.6%	0	0.46	0–1
<b>Health &amp; Service Utilization</b>				
# of days experiencing medical problems during follow up	56.8	14	88.39	0–360
Currently being treated for a health problem	40.8%	0	0.49	0–1
Had a usual source of care if sick or needed health advice	58.1%	1	0.49	0–1
Insured at least 1 month	87.3%	1	0.33	0–1
<b>Housing</b>				
Stable housing	86.6%	1	0.34	0–1
Non-stable housing	45.1%	0	0.50	0–1
Hospital/inpatient/residential facility	8.8%	0	0.28	0–1
<b>GAIN Self-Efficacy Index (Strengths; 0–10)</b>	5.3	5.5	2.09	0–10
<b>GAIN General Satisfaction Index (0–6)</b>	4.2	4.5	1.69	0–6
<b>Relationships</b>				
Peer Criminality (TCU; 10–50)	22.9	21.67	8.59	10–43.3
Lived alone	3.9%	0	0.19	0–1
Lived with spouse/companion/sexual partner	55.6%	1	0.50	0–1
Lived with parents or other family	53.9%	1	0.50	0–1
Lived with other adult roommates/friends	34.2%	1	0.48	0–1
Did anyone use alcohol or other drugs where you were living during the follow-up?	44.4%	0	0.50	0–1
Did you use alcohol or other drugs with family during the follow-up?	21.1%	0	0.41	0–1
Did you use alcohol or other drugs with friends during the follow-up?	40.5%	0	0.49	0–1
<b>Recidivism &amp; Criminal History</b>				
Reincarcerated at any point during the follow-up period	48.6%	0	0.50	0–1
Average number of arrests prior to baseline	3.2	3.0	1.86	1–10

**Table 2.**

Comparison of those who had been reincarcerated during the 12-month follow-up period (N=284)

	Reincarcerated (n=138)	Not Reincarcerated (n=146)
<b>Demographics</b>		
Age at baseline*	31.1	33.3
Years of education at baseline	11.6	11.0
Employed at least part time**	22.5%	39.0%
Married/living as married	37.7%	41.8%
Income during follow-up period	\$7,925	\$7,119
Had money problems during the follow-up period	83.3%	74.7%
Intervention group	49.3%	48.6%
<b>Drug Use &amp; Treatment</b>		
Any drug use***	77.5%	43.2%
Any injection drug use***	47.1%	19.9%
Substance use treatment	32.6%	26.7%
<b>Health &amp; Service Utilization</b>		
# of days experiencing medical problems during follow up	51.9	61.4
Currently being treated for a health problem*	33.3%	47.9%
Had a usual source of care if sick or needed health advice	53.6%	62.3%
Insured at least 1 month	84.1%	90.4%
<b>Housing</b>		
Stable housing	85.5%	87.7%
Non-stable housing***	55.1%	35.6%
Hospital/inpatient/residential facility	10.9%	6.8%
<b>GAIN Self-Efficacy Index (Strengths; 0–10)***</b>	4.9	5.7
<b>GAIN General Satisfaction Index (0–6)**</b>	3.7	4.7
<b>Relationships</b>		
Peer Criminality (TCU; 10–50)***	26.1	19.9
Lived alone	2.2%	5.5%
Lived with spouse/companion/sexual partner	56.5%	54.8%
Lived with parents or other family	55.1%	52.7%
Lived with other adult roommates/friends***	44.2%	24.7%
Did anyone use alcohol or other drugs where you were living during the follow-up?***	56.5%	32.9%
Did you use alcohol or other drugs with family?***	29.0%	13.7%
Did you use alcohol or other drugs with friends?***	58.0%	24.0%
<b>Average # of arrests prior to baseline</b>	3.4	3.1

\* p .05

\*\* p .01

\*\*\*  
p .001

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**TABLE 3.**  
 Logistic Regression Predicting “Staying Out” During the 12-month Follow-Up Period (N = 284)

	<b>b</b>	<b>S.E.</b>	<b>Odds Ratio</b>	<b>95% CI</b>
Age at baseline	0.002	0.02	1.00	(.97 – 1.04)
Employed at least part-time	0.26	0.33	1.30	(.69 – 2.46)
Any illicit drug use	-0.92	0.33	0.40**	(.21 – .76)
Currently being treated for a health problem	0.60	0.30	1.82*	(1.01 – 3.27)
Lived in a non-stable environment (e.g., temporary shelter or friend’s house)	-0.33	0.29	0.72	(.41 – 1.27)
GAIN Self-Efficacy Index	-0.03	0.08	0.97	(.83 – 1.14)
GAIN General Satisfaction Index	0.16	0.10	1.18	(.97 – 1.44)
Peer Criminality	-0.04	0.02	0.96*	(.92 – .99)
Lived with other adult roommates/friends	-0.44	0.32	0.65	(.35 – 1.20)
Any alcohol/drug use where you lived	-0.12	0.31	0.88	(.48 – 1.63)
# of lifetime arrests prior to baseline	-0.02	0.08	0.98	(.84 – 1.13)
Pseudo $R^2$ (Nagelkerke)			0.28	

\*  $p$  .05

\*\*  $p$  .01