FEMALE OFFENDERS' EGOCENTRIC SOCIAL NETWORKS AND ACCESS TO NEEDED RESOURCES

By

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ABSTRACT

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Criminological frameworks and research emphasize the importance of social capital for desistance from crime. However, it is unclear why deficits exist in networks and how differences among offenders' semiregular interaction partners are related to resource access. For women in the criminal justice system, an understudied population, research has produced rich narratives highlighting the importance of social support during the correctional process. But, few scholars have assessed offender characteristics that are associated with resource access and the structural and compositional characteristics of female offenders' social networks and network members have yet to be studied. The present study utilizes innovative social network software and egocentric social network methods and techniques to collect data on women offenders' semiregular interaction partners. Two key research objectives are to 1) present a descriptive assessment of women's social support networks and access to social capital through these networks and 2) identify participant (e.g., financial hardship, limited education), network member (e.g., age, gender, criminal history), tie (e.g., closeness, frequency of contact), and network characteristics (e.g., density, proportion kin) that are associated with access to resources commonly needed by women. To collect the data, face-to-face interviews were completed with a sample of 160 justice-involved women (50 who were on parole and 110 who were on probation) about their 1313 network members.

The research involves a two-study design. The first study examines women's access to resources from individuals who they "know" based on a 26-item resource generator. Single-level

analyses are used to examine the prediction of access to *political social capital* and *personal and problem-solving social capital,* two dimensions of the resource generator. The second study focuses on dyadic social capital and the structure and composition of women's networks. Multilevel regression models are tested to predict access to resources from specific network members. In the first study, on average, women had access to nearly three-quarters of the 26 resource generator items but demonstrated resource deficits in relation to political social capital (i.e., elected officials, someone who works at City Hall). Assessment of the connection between participant characteristics and access to personal and problem-solving capital suggest that women who attained higher levels of education were more likely to have access to social capital. In regard to political social capital, women who reported increased employment and financial needs (i.e., unemployed, unable to pay bills without help from family or friends) and women who had recently been arrested were less likely to have access to social capital.

Findings from the second study suggest that, on average, women possess eight semiregular interaction partners. One-third of network members had previously been involved with the law and many were substance users. On average, crime-involved and/or substance-abusing ties accounted for approximately half of women's access to social capital. Networks were moderately dense and comprised of mostly women. Older participants and those with higher employment and financial needs were less likely to be tied to individuals who provided access to social capital. Network members who were older in age, employed, and emotionally close to the participant were particularly helpful in providing women access to resources. A test of an interaction effect between network characteristics revealed that for women with loosely-knit networks (i.e., low density), increases in the proportion of kinship ties within the network was associated with reduced access to social capital. Implications of the research are discussed.

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CHAPTER 1: INTRODUCTION

Statement of the Problem

Recently, social network research techniques have been applied to criminal justice settings to understand the importance of social ties among individuals and groups in a variety of settings. Specifically, social network analysis (SNA) has been used to understand gang culture (Baron & Tindall, 1993; Morselli, 2010; Papachristos, Braga, Piza, & Grossman, 2015), prison power structures (Kreager et al., 2016), and white-collar crime (Baker & Faulkner, 2004). *Egocentric* SNA, which has been employed infrequently, emphasizes exchanges between the *ego*, or a single actor or offender, and his or her *alters*, or interaction partners (Burt, 1984; 1985). Applications in criminology have yielded key findings regarding co-offending behaviors among adolescents (McGloin & Piquero, 2010) and patterns of juvenile delinquency in academic settings (Haynie & Osgood, 2005). Consequently, scholars have called for an increase in the use of SNA methods to understand the support networks and behaviors of offending populations (Papachristos, 2011). Women in the criminal justice system are one subset of the correctional population that could benefit from the advancement in research on social capital available through network members (Haynie & Soller, 2014).

The literature demonstrates that a large number of women are under court supervision (Heberman & Bonczar, 2015), and that many of them need access to resources due to poverty, disability or unemployment, living in high crime and low resource neighborhoods, and various crisis situations, such as running out of money or not having a place to live (e.g., Cobbina, Morash, Kashy, Smith, 2014a; Morash, 2010). Members of personal social networks can provide access to such resources (Wellman & Frank, 2001), but women offenders have especially limited networks (Richie, 2001; Cobbina et al., 2014a), in part due to the stigmatizing

effects of a conviction (Carter & Feld, 2004). There is rich qualitative research that has examined the effects of social support on women's experiences in the criminal justice system, desistance from crime, and substance abuse treatment outcomes (Collica, 2010; Leverentz, 2006; Lewandowski & Hill, 2009; Strauss & Falkin, 2001; Valera, Chang, Hernandez, & Cooper, 2015). These studies provide key contributions to understanding female offenders' experiences in the criminal justice system. However, the applicability to probationers is unclear, as these studies assess imprisoned, recently incarcerated, or treatment-based populations. Community-based offenders under probation supervision may possess unique network characteristics and resource activation strategies due to their uninterrupted residency in their local communities. Notably, a larger proportion of women in the criminal justice system – nearly one million – are not sentenced to prison terms but instead remain within communities under correctional supervision (Kaeble et al., 2015a; Kaeble et al., 2015b).

A few studies of female offenders have examined the connection between social capital and resource accessibility. Reisig et al. (2002) conducted research on 402 female felons regarding their core network members and access to resources. Findings from the research suggest that female offenders who were economically disadvantaged (income less than $8,000 annually), younger, and those with limited education received lower levels of social support. Women with higher income and education had larger networks and more social support. Bui and Morash (2010) also carried out a study of the social networks of female parolees who had no official record of a crime 21 months following their release from prison. Based on the findings, the authors emphasized the importance of correctional programming that strategically connects women with network members who fulfill unmet needs. Although these studies provide some insight into the importance of network members, they provide limited information about

structural characteristics of female offenders' networks and offenders' access to resources through network support. Given the connection between networks and recidivism, the improved understanding of the network and network member characteristics that provide access to resources could inform the design of interventions aimed at helping women improve their networks.

Significance of the Study

The present research is unique in its application of egocentric (i.e., focused on the individual) social network analysis techniques in a criminal justice context. Social network theorists posit increased resource access as resulting from network characteristics such as network members' closeness or proportional characteristics (e.g., percent female). However, the structural and compositional characteristics of female offenders' social networks and network members have yet to be studied. Criminological frameworks and research emphasize the importance of social capital for desistance from crime but fail to examine why deficits exist in networks and how differences among offenders' semi-regular interaction partners are related to resource access. Besides filling gaps in knowledge, the project's design improves upon prior methodological limitations (i.e., failure to elicit information on negative social ties, data collection methods that do not identify all network members), presents the social network questions as the focus of the research interview to reduce risk of participant fatigue, and expands beyond prior core network research that considers just five to ten kin or friends.

CHAPTER 2: LITERATURE REVIEW

Women in the Criminal Justice System

Incarceration rates in the United States are on the decline (Bronson & Carson, 2019; Zeng, 2019). The number of individuals under supervision in the United States adult correctional systems steadily decreased by approximately one-quarter million people between 2007 and 2016 (Kaeble & Cowhig, 2018). However, these changes are not consistent across subgroups. While male incarceration (in jails) rates decreased by 12% (from 2005 to 2017), female incarceration rates grew by 10% (Zeng, 2019). In fact, women are the fastest growing segment of the criminal justice system and doubled the pace of growth for imprisonment, in comparison to men, since 1980. As of 2016, women represented approximately one-quarter of probationers and 13% of parolees in the United States (Kaeble, 2018), totaling more than 1 million citizens. Several criminal justice policies have contributed to the populations rapid growth in representation. The War on Drugs, expansive policing tactics, and punitive sentencing policies for nonviolent offenders have cast a wider net for women who engaged in primarily drug-related and financial crimes (Bronson & Carson, 2019).

Women who are involved in the criminal justice system face unique barriers to reintegration into their communities post-incarceration, as well as during probation supervision. A felony conviction and/or conviction for a substance-related crime commonly inhibits women from gaining access to various public resources (i.e., food assistance and housing vouchers), and restricts opportunities to gain employment in certain fields (i.e., many medical or personal care professions), housing in certain areas, and access to educational institutions. These barriers in resource access directly conflict with the requirements of supervision (i.e., securing stable housing, gaining employment, and educational) and require that women utilize their personal

support networks to leverage social support from friends and family to maintain their freedom and avoid supervision violations. For these reasons, social capital is crucial for successful navigation of correctional supervision requirements.

Social Capital, Social Support and Crime-Involved Women

Social capital has been defined as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition..." (Bourdieu, 1986, pp. 248-249). Women in the criminal justice system have been documented as lacking adequate social capital and their minority representation in the criminal justice system has resulted in limited research and theoretical development surrounding the risks, needs, and offending patterns of the population. Specific to social support, a review of the literature suggests that Reisig, Holtfreter, and Morash's (2002) work is the only study that has quantitatively examined the connection between network characteristics and women's social support. The study provided insight into the key characteristics of the participants, but it provides limited information about the network member characteristics that are associated with activation of support. Further, the methods used did not allow for an assessment of the structural characteristics of women's networks. This is important because it limits the implications for practice. It is much easier to advise women to strategically alter their network to gain access to social support (i.e., building relationships with church members) than it is to advise a woman to immediately change her circumstances (i.e., undereducation, unemployed).

Various scholars have informed the ways in which we think about the implications of individuals sharing certain types of relationships (i.e., relationship strength) with network members and the importance of structural network characteristics (i.e., density and clustering;

Barnes, 1972; Burt, 1976; Granovetter, 1973; Lin, 2000; Marsden, 1982; Simmel, 1950). Network-based concepts serve as a bridge for understanding social support outcomes. For example, Song (2019) discussed *social integration*, or the extent to which individuals participate in networks (Brissette, Cohen, & Seeman, 2000), as an influencer of the quality and quantity of social capital and social support. My dissertation data allows for the examination of these network-based concepts, and it presents the opportunity to integrate them with social support concepts from feminist criminologist (i.e., gendered pathways to crime; Salisbury & Van Voorhis, 2009). Beyond the contribution of information regarding women in the criminal justice system, the research models the utility of egocentric network analysis as a tool for informing community-based criminal justice practices that aim to serve women from increasingly economically disparate communities.

For women involved with the criminal justice system, Morash et al. (2015) documented extremely high need for help in finding and keeping affordable, safe, and clean housing and a moderately high need for obtaining either welfare benefits or disability payments. Moreover, even women who received financial assistance of these types scored high on financial/employment problems, and a majority of the women lived in poverty. Thus, access to assistance in negotiating with agencies that administer financial benefits, provide job training, and assistance in finding and keeping employment are areas of high need for resources for this population. Likewise, social networks could be an important source of financial help in the form of loans and tangibles such as food, temporary housing, or a long-term place to live.

The Social Network Analysis Framework and Its Utility

Social network analysis is a method that offers a sophisticated assessment of network composition and structure. The method has been used to understand prison power structures

(Kreager et al., 2016), white collar crime (Baker & Faulkner, 2004), and gang culture (Baron & Tindall, 1993; Morselli, 2010; McNally & Alston, 2006; Papachristos, Braga, Piza, & Grossman, 2015), but has less often been applied to assess the attributes of a single crime-involved individual's network (in contrast to the networks of multiple individuals in a bound environment). *Egocentric* SNA (Burt, 1984; 1985) places emphasis on a single actor (the woman offender/ego), the people the focal actor nominates as semiregular interaction partners (alters), and the exchange between each person in the network and the woman (tie characteristics). Additionally, data are collected on the interconnections between the network members and the structure of these interconnections.

The theory and methods of SNA provide a framework and tools for identification of the full range of social network members, the measurement of social network characteristics, and the individual characteristics of both the offender and the network members that are related to an offender's access to resources through their relationships with network members. Network function is an important dimension of social networks. It refers to the support, or exchange of resources, that occurs between an individual and his/her network members (Perry, Pescosolido, & Borgatti, 2018). Exchanges in resources can occur in the form of emotional (e.g., discussing topics of concern) or instrumental support (e.g., providing transportation), and for crime–involved individuals can be essential for navigating correctional experiences and emergency situations. Emotional support has been connected to incarcerated offender's well-being and desistance post release (Barrick, Lattimore, & Visher, 2014; Clone & Dehart, 2014). Instrumental support, which has been broadly conceptualized as involving direct assistance or tangible aid, has also been connected to desirable correctional outcomes (Barrick, Lattimore, & Visher, 2014; Sullivan, Mino, Nelson, & Pope, 2002).

Access to Resources. Social network researchers use what are called resource generators to measure individuals' social capital (Snijders, 1999; Van der Gaag & Snijders, 2005). Specifically, the tool provides a list of resources (e.g., a small sum of money) and asks the respondent to identify whether any network member is able to meet that specified need. Resource generators have gained traction in the Netherlands (Van der Gaag & Snijders, 2005), UK (Webber & Huxley, 2007), and Canada (Wellman et al., 2005) but have only recently been introduced in a US context (Foster & Maas, 2016). Resource generators serve as a strong supplement to name generators (which identify network members) and interpreters (which identify characteristics of and resources from each alter), because they measure access to resources through the entire network without causing considerable interviewer/interviewee fatigue. Specifically, in the dissertation research, women were asked about access to a wide range of key resources through network members by using a resource generator, and for each network member, they were asked about access to just a small subset of resources.

Hypothesized Influences on Access to Resources. The research will identify predictors of both access to resources from anyone in the network and access through each network member. The SNA literature and research on women offenders have identified several specific characteristics of the female offender, network members, ties, and network that would be expected to explain resource access. The next section reviews the literature that informed decisions regarding which variables to include in the analyses.

Offender Characteristics. Some characteristics of women offenders have been shown to limit their ability to build networks that provide access to resources. *Financial/unemployment problems and employment strengths/needs.* Crime-involved women with economic disadvantage and limited education tend to have especially few social network members to "talk to" and "hang

out with," and who provide them financial assistance (Reisig et al., 2002). *Incarceration.* Women with time in prison face unique barriers to building social networks due to loss of contact with prior network members and current networks that include offenders they met in prison (e.g., Cobbina, 2010).

Network Member and Relationship (Tie) Characteristics. The primary network member characteristics considered in prior SNA research include age, types of relationship with each network member, and gender (Cornwell, 2009; McPherson et al., 2006, 2008; Van Der Gaag & Snijder, 2005; Wellman & Frank, 2001). Key tie level variables include the frequency of contact (Cornwell, 2009), closeness to the network member (Cornwell, 2009), and past drug use and criminal activities between the offender and network member (McGloin & Piquero, 2010).

Network Characteristics. Social network composition (e.g., size, proportion kin) also may be key to understanding whether an offender has access to a particular needed resource. For example, Wellman and Frank's (2001) work on receiving support from personal networks found that networks with a higher percentage of female network members were more likely to provide financial support. Furthermore, that research found a cross-level interaction effect for resource access when female alters were nested in mostly female networks. A thorough review of the literature suggests that no prior research has measured these network characteristics for women (or men) who have been on probation or parole.

Research Purpose and Objectives

Emphasis was placed on SNA methodologies to gather information on social interactions between women and their network members (Burt, 1984; Wellman, 1993; Wellman, Carrington, & Hall, 1988). With the exception of McGloin and Piquero (2010), who studied co-offending networks among juvenile offenders, the egocentric SNA method has not previously been used to

study an offender sample. By collecting data on networks early in the interview, the problem of participant fatigue that occurs when network data is collected in the middle or at the end of a large study is avoided (Paik & Sanchagrin, 2013). Using already collected demographic information allowed personal network data to be the first and primary component of the data collection for the dissertation research. Network data findings will inform the literature by presenting a description of the compositional and structural network characteristics that are associated with resource access, and of how women could strengthen their social networks to access needed resources. The two-study research design aims to answer the following research questions:

Study 1: Crime-Involved Women's Access to Collective Social Capital.

Research Question 1: What types of resources are accessible to justice-involved women from people that they "know"?

Research Question 2: Are participants' demographics, recent involvement with the law, and employment/financial and educational experiences associated with access to *total social capital* and *political social capital*?

Study 2: Crime-Involved Women's Access to Dyadic Social Capital.

Research Question 3: What is the composition and structure of justice involved women's social support networks?

Research Question 4: What types of resources are accessible dyadically to justice-involved women?

Research Question 5: How are women's dyadic access to resources affected by the exclusion of substance-abusing and/or crime-involved network members?

Research Question 6: Do women who were under probation supervision differ significantly from women who were under parole supervision on key network and social capital measures?

Research Question 7: What offender, network member, tie, and network characteristics are associated with access to resourceful ties (i.e., ties that provide access to at least one type of social capital)?

Research Question 8: For network members who provide at least one type of social capital (i.e. resource-rich ties), what offender, network member and tie characteristics are associated with access to additional types of social capital?

CHAPTER 3: RESEARCH METHODOLOGY

Research Design

The research involved a two-study design. The first study examines justice-involved women's access to collective social capital and the predictors of increased access to collective social capital. The second study examines participants' dyadic access to social capital and the participant, network members, tie, and network characteristics that were predictive of access to social capital. For the second study an interactive, computerized method was used to: (1) elicit a detailed list of people in women offenders' social networks (name generators), (2) gather information on network members' characteristics (name interpreters; e.g., age, race, employment status, access to resources), (3) identify the network structure or interconnections among female offenders' network members, and (4) collect data on each offenders' financial/employment situation, educational strengths, educational needs, and access to social capital.

Sampling

Original Study Sampling. All of the women had previously participated in a study of the risks and needs of women under correction supervision. Inclusion criteria for the original study were: 1) one or more felony convictions, 2) a history of substance abuse, and 3) a supervision period of two to three months with the current agent. The 379 (out of 402) women retained through the third wave of interviews were supervised by 72 agents located in 16 rural and urban counties. The sample was racially diverse (48% White only, 32.2% Black only, 17.9% multi-racial women of color, including Hispanic, 1.3% unclear, and .5% Native American) and women ranged from 18 to 60 years of age (M = 33.9, SD =10.6). Probationers represent 75.7% of the initial sample; the remaining women were on parole. Women were experiencing extreme economic disadvantage represented by difficulty gaining employment (Unemployed but able to

work, 44.1%; Part-time or unable to work due to child, health, or family needs, 37.2%; Fulltime, 18.7), having an income less than $10,000 per year (80.7, *n* =306), and most (56.5%) living in neighborhoods with at least 2 indicators of crime or neighborhood disorder. Current data on the sample indicates that the women retained in the study vary considerably in their recidivism to date, with some having no recidivism and some with multiple new arrests and convictions.

Network Study Sampling. For the current study, 160 women were randomly selected from the 304 women who were still in contact with the project at the completion of a fourth wave of interviews. Stratified random sampling was used to select 80 women who were on probation and 80 who were on parole at the time of the original interview. At the time of the initial interview (between 2011-2012), 80 of the 304 women were parolees. Network interviews were completed with 45 of the 80 women. Interviews could not be completed with the remaining 35 women because 12 had moved to a different state, 10 could not be located for an interview, five were deceased, four did not want to participate in an interview, three were in prison, and one was in a substance abuse treatment facility.

Of the 304 women who were still in contact with the project at the completion of the fourth wave of interviews, 224 were probationers. Forty-one women were ineligible for inclusion in the network study because they participated in pilot interviews that gathered information on their networks. Of the 169 probationers randomly selected for inclusion in the study, interviews were completed with 115. Fifty-four women were selected for an interview but were not included in the study due to the following barriers: 17 were contacted for an interview but did not arrange an interview date, 14 had moved to a different state, nine declined inclusion in the research, five were deceased, two could not be located for an interview, and two were incarcerated. The remaining 19 women were not randomly selected for inclusion in the research.

Five women who were originally categorized as probationers had been to prison prior to the network interview. These participants were recategorized as parolees. Of the 160 women included in the present study, 50 had previously been under parole and 110 had previously been under probation supervision.

As shown in Table 1, the sample is racially diverse (46.9% White only, 31.9% Black only, 20.0% multiracial women of color, including Hispanic, 0.01% Native American, and 0.01% Unclear). Women ranged from 25 to 66 years of age (M = 41.18; SD = 10.83) and more than half of the participants reported making less than US$10,000 per year ($n$ = 93, 58.1%). Approximately one-half of the participants had obtained full-time (n = 56, 35.0%) or part-time (n = 29, 18.1%) employment; 26.9% (n = 43) were unemployed, but unable to work due to poor health, student status, and/or responsibilities to care for family or children.

Table 1. Ego and Alter Descriptive Characteristics

Characteristic	*n*	Prop	*M*	*SD*	Min	Max
Participants (*N* = 160)						
Age			41.18	10.83	25	66
Race/Ethnicity						
White Only	75	.47				
Black Only	51	.32				
Multiracial including Hispanic	32	.20				
Native American	1	.01				
Unclear	1	.01				
Employment						
Full-Time	56	.35				
Part-Time	29	.18				
Unable to Work[a]	43	.27				
Unemployed	32	.20				
Income Less Than $10,000	93	.58				
Employment/Financial Needs			3.21	2.28	0	9
Educational Strengths			2.02	1.20	0	4
Educational Needs			0.35	0.67	0	3
Network Members (*N* = 1313)[b]						
Age			44.40	14.84	17	93
Proportion Female	818	.62				
Race/Ethnicity						
White Only	770	.59				
Black Only	449	.34				
Multiracial including Hispanic	72	.05				
Other[c]	22	.02				
Education[d]			3.92	1.61	1	7
Employed[e]	851	.71				
Substance use together						
Alcohol	447	.34				
Marijuana	276	.21				
Heroin or prescription pills	65	.05				
Crack cocaine	107	.08				
No Criminal History	878	.67				
Frequency of Contact			3.82	1.37	1	5
Emotional Closeness			4.04	1.19	1	5
Geographical Distance[f]			3.70	1.34	1	6
Relationship Length			4.40	0.96	1	5
Networks (*N* = 159)						
Network Size			8.26	4.30	2	25
Density			0.49	0.23	0	1

[a] Due to child/family care, poor health, student status, etc. [b] Includes the networks of 159 participants. [c] Includes 11 Arab, 7 American Indian or Alaskan Native, 3 Asian, and 1 Native Hawaiian/Pacific Islander network members. [d] Includes education level for 1,246 members. Excludes 67 "Don't Know" responses. [e] Excludes 9 "Don't Know" responses. [f] Includes geographic distance for 1282 network members.

Data

A series of semi-structured interview questions were used during face-to-face interviews with 160 female offenders regarding their 1313 network members. *NetworkCanvas* (Hogan et al., 2016), an interactive, computerized method for data collection, engaged participants in a process to: (1) elicit a list of individuals in women offenders' social networks, (2) gather information on network members' characteristics, and (3) identify network members who provided access to various types of social capital. Additional survey data were collected on women's education strengths, educational needs, employment/financial status, and broader network support.

Procedure

The interviews were completed between December 2017 and January 2019. Participants were compensated with $40 in the form of cash at the completion of the interview. Each interview took approximately 1.5 hours to complete and was conducted in the privacy of the participant's residence or in an isolated area of a public establishment within their communities (e.g., coffee shops, libraries). All of the data were collected by the researcher (n = 49) and a hired research interviewer (n = 111). To ensure informed interviewing techniques, the lead researcher shadowed the primary interviewer on three occasions throughout the data collection period. The researchers abided by the Institutional Review Board (IRB) guidelines required by the affiliated institution.

Study 1: Crime-Involved Women's Access to Collective Social Capital

Overview. The first study examines 1) justice-involved women's access to social capital from their entire networks (i.e., collective social capital) and 2) the participant characteristics and experiences that are associated with access to social capital. Social capital is measured using a

26-item resource generator that allows for the examination of both the presence or absence of access to each type of capital and the nature of the relationship (i.e., acquaintance, friends, family member, or partner) shared with the person or people in women's networks who could grant access to each resource. An exploratory factor analysis revealed that there were two dimensions of support embedded in the 26-item tool, *personal and problem-solving capital* and *political social capital.* Poisson regression models are tested to assess the connection between justice-involved women's experiences and differential access to total and domain-specific access to social capital.

Measurement. ***Predictor Variables.*** The Women's Risks/Needs Assessment (WRNA) was developed by the National Institute of Corrections and the University of Cincinnati to predict women's recidivism (Van Voorhis, Salisbury, Wright, & Bauman, 2008). The study utilizes a revised versions of the subscales published in 2013 after the revalidation of the instrument (Van Voorhis, Bauman, & Brushett, 2013). The tool is not used in its entirety because many of the subscales are not relevant to resource accessibility. The following subscales are utilized in the analyses: Employment/Financial Problems, Educational Strengths, and Educational Needs. Employment/Financial problems is a nine-item scale that includes questions pertaining to women's employment status, difficulty finding work, access to a vehicle, ability to pay bills without help from family members and friends, recent experiences of homelessness, residency where at least one household member has full-time year round employment, and possession of a checking and savings account. On average participants reported three employment financial needs (M = 3.21; SD = 2.28; range = 0 – 9; a = .70).

Educational needs is a four-item scale that was used to measure whether or not women had trouble reading or writing, had been diagnosed with a learning disability, or had previously

attended educational courses for students with special needs. Most of the sample (n = 120, 75%) reported zero educational needs (M = 0.35; SD = 0.67; range = 0 – 3; a = .50). In contrast, educational strengths is a four-item scale that measured academic achievements among the participants including graduating high school, earning one or more job related licenses, attending college for at least one academic term, and graduating from college (M = 2.02; SD = 1.20; range = 0 – 4; a = .63). One respondent chose not to answer questions related to educational strengths and needs. In additional to the WRNA measures, women's correctional status at the time of the original study (i.e., probation vs. parole) and recent arrests are assessed. Recent arrests were assessed using official Michigan State Police data. The dichotomous variable represents the presence or absence of at least one arrest within the two-year period prior to the interview date. Approximately twenty-percent of the sample had been involved with the law within the specified time period (n = 31, 19.4%).

Dependent Variables. *Social Capital.* Both of the dependent variables for the study were constructed using a *resource generator*. Resource generators are tools used to measure individuals' social capital (Snijders, 1999; Van der Gaag & Snijders, 2005) by providing a list of resources (e.g., a small sum of money) and asking the respondent to identify whether any network member is able to meet that specified need. The present research utilizes the 26-item resource generator presented by Foster and Maas (2016) to assess social capital. Participants were asked to state whether or not they "know" someone who could provide access to each of the 26 items. If yes, participants were presented with relational categorizations of ties (i.e., acquaintance, friend, family member, and/or partner) and asked to identify the person or people who could provide access to each resource. The first dependent variable, *total social capital*, is equal to the sum of the 26 dichotomous items (M = 19.25; SD = 4.37; range = 0 – 26; a = .852).

For the second dependent variable, an exploratory factor analysis was conducted to identify latent factors indicated by the resource generator items within the tool. A scree plot indicated that two factors should be retained, and because factors are rarely uncorrelated within the social sciences, an oblique rotation method was used to identify the dimensions (DeVellis, 2012). Table 12 (see appendix) presents the two factors and factor loadings from the exploratory factor analysis. The two factors represent general access to personal, financial, and problem-solving capital (Personal & Problem-Solving Capital) and access to government institutions and political figures (Political Social Capital). The first dimension, *personal and problem-solving capital* (*M* = 18.34; *SD* = 3.93; range = 0 – 22; *a* = .855), includes 22 of the 26 resource generator items and was almost perfectly correlated with *total social capital* (*a* = .975; See Table 13 (in the appendix) for subscale correlations). For these reasons, personal and problem-solving capital was excluded from the analysis. The second dimension, *political social capital,* includes four items from the resource generator that women were provided limited access to through their networks. On average, women knew someone who could grant them access to one of the items (*M* = 0.913; *SD* = 1.02; range = 0 – 4; *a* = .569). The inter-item correlations for the 26-items resource generator are presented in the appendix (Table 14).

Analytic Strategy. Poisson regression is the appropriate statistical technique because both of the dependent variables (i.e., total social capital & political social capital) are counts. The analysis was conducted with the *stats* package accessible through the Comprehensive Archive Network (CRAN). Independent variables included participants' age, race, correctional status, employment/financial needs, educational needs, and educational strengths.

Study 2: Crime-Involved Women's Access to Dyadic Social Capital

Overview. The second study 1) examines composition and structure of women's social support networks, 2) identifies the resources dyadically accessible to women from network ties, 3) examines the differences in network characteristics and access to social capital for probationers and parolees, and 4) tests the connections between participant, network member, tie, and network characteristics and access to *resourceful ties* and 5) the amount of capital accessible from *resource rich-ties*. For the investigation of resourceful ties, the models that are tested predict access to any social capital from a network member (i.e., resourceful ties). For the investigation of resource rich-ties, the models that are tested predict the total amount of social capital accessible from network members who provide access to at least on type of support (i.e., resource-rich ties). With the assistance of a software engineer, a beta version of *Networkcanvas* was altered to meet the needs of the dissertation research. Networkcanvas (Hogan et al., 2016) is an interactive data collection software for network research that minimizes interviewer and participant fatigue. Collecting network data is a multi-step process that includes identifying network members (name generators), collecting information about each network member (name interpreters), and collecting data on the frequency of contact among all network members within a single network to measure structural characteristics.

Measurement. ***Name Generators.*** In the first step of the process, name generators are used. Name generators prompt study participants to identify semi-regular and core network members (Marin & Hampton, 2007; McCallister & Fischer, 1978). The name generator method is most commonly used for ego-centered social support networks and is considered to be high in validity (Hlebec & Kogovsek, 2013). The use of eleven name generators, instead of a single name generator, has been shown to be a more reliable method for collecting network data

(Marin, 2004; Marin & Hampton, 2007; McCallister & Fischer, 1978). The primary name generator is the question, "From time to time, most people discuss important personal matters with other people. Looking back on the last six months, who are the people with whom you discuss important matters?" This name generator was used in the General Social Survey, which set the stage for studying core discussion networks (Burt,1984; Marsden, 1987; Moore, 1990), critiquing methods for eliciting network members (Straits, 2000), and creating discourse for critically assessing social network data (Fischer, 2009; McPherson, Smith-Lovin, & Brashears, 2006, 2008, 2009; Paik & Sanchagrin, 2013). The domain specific name generators focus on general settings, as well as criminal justice settings. Specifically, participants were asked, "Other than people you have already named, are there any other individuals from [domain description] that you have interacted with in the last 6 months that are significant to your life?" The domains of interest included: 1) family members, 2) friends or people you have fun with, 3) religious setting, 4) academic setting, 5) employment setting, 6) correctional setting, 7) treatment/self-help setting, 8) neighborhood setting, 9) negative network members, and 10) "any other people" participants wanted to add. After network members were identified, a series of semi-structured questions, or name interpreters, were asked pertaining to the characteristics of each network member (i.e., age, race, employment status, type of substance use) and interactions between the network member and the participant (i.e., type of substance use together, frequency of contact).

Level – 1 Predictor Variables. *Network Member Characteristics.* At level one, data were collected on the characteristics of participants' 1313 network members and the nature of their relationship. The gender (1 = female, 0 = male; *n* = 818, 62%), race (1 = white, 0 = minority; *n* = 770, 59%), and offense history (1 = has not committed an offense, 0 = has committed an offense; *n* = 878, 67%) of network members are included as dichotomous variables. Women also

provided the employment status (1 = employed, 0 = unemployed; *n* = 851, 71%) and age (*M* = 44.40, *SD* = 14.84, range = 17 - 93) of each network member. *Relationship (Tie) Characteristics*. Tie variables include emotional closeness (*M* = 4.04, *SD* = 1.20, range = 1 - 5) and two measures of relationship type. The first relationship variable is categorical and includes community members (i.e., neighbors, "others", religious leaders, therapists, community agents, support group members, and educators), parents, siblings, children, other family members (i.e., aunts/uncles, nieces/nephews, and cousins), significant others, best friends, and friends. A second relationship variable, relationship type (1 = kinship tie, 0 = other relationships; *n* = 589, 44%) is included in the final models.

Control Variable. The final question in the name generator asked women to identify individuals with whom they had discontinued contact due to problems or disagreements. Approximately eight percent of the sample of network members was elicited by this name generator (*n* = 109). Most of the negative network members did not provide women with any social capital. A dichotomous measure is included in each model to control for negative network ties.

Missing Data. Network data could not be extracted from the software for one participant. Consequently, the sample size is reduced to 159 women and their 1313 network members. Additionally, employment status was unknown for 9 network members.

Level – 2 Predictor variables. *Participant and Network Characteristics*. Participant characteristics are as described in Study 1. *Aggregate Measure.* The aggregate score of the dichotomous kinship tie measure is included for each woman. On average, women shared kinship ties with approximately half of their network members (*M* = .48, *SD* = 0.23, range = 0 - 1). *Network Measures*. Two network measures are included in the analysis. Network size is the

total number of individuals elicited by the name generators. Network size ranged from two to 25 members with an average of eight network members (M = 8.26, SD = 4.30). The second network variable is a measure of *network density*. Network density is equal to the portion of the potential connections in a network that are actual connections. To assess network density, women were asked to describe how frequently each combination of ties within her network were in communication with one another. Response options included: *Never, Yearly, Monthly, Weekly (or almost weekly), and Daily (or almost daily).* The variable is dichotomized to measure ties who knew one another (1 = *Daily – Yearly* contact*)* and those who did not (0 = Never). The number of actual connections was then divided by the number of potential connections to create the measure. Density scores range from zero to one, with one representing a connection among all possible ties and 0 represented the absence of connections among all possible ties. On average, women in the sample had moderately dense networks (M = .490, SD = .233) that ranged from scores of zero to one.

Dependent Variables. Two tie-level social capital measures are used in Study 2 for the dependent variables. Both derive from the 26-item resource questions described for Study 1. For each of the network members nominated, women were asked whether that person could provide access to seven of the resource generator items. The seven items included the network member's ability to: 1) sometimes employ people, 2) give advice about money problems, 3) lend a large sum of money, 4) lend a small sum of money, 5) provide a place to stay for a week, 6) give sound legal advice, and 7) give a good job reference. In sum, on average, network members were able to provide access to three resources (M = 3.07, SD = 2.25, range = 0 - 7). The seven items were strategically selected from three domains of the of the tool (i.e., access to experts and formal institutions, problem solving acquaintances, and personal support), which were

determined by a factor analysis conducted with a sample of 120 African American church members from an impoverished area (Foster & Maas, 2016). The first part of the analyses used a dichotomized measure of resource access, *resourceful ties*, to identify the connection between the independent variables and access to at least one resource from a network member. The second part of the analyses used the count of resources accessible from *resource-rich ties*, which were network members who provided access to at least one type of social capital (n = 1070).

Analytic Strategy. The analyses involved 1) examining the composition and structure of women's social support networks, 2) identifying the resources dyadically accessible to women from network ties, 3) assessing the differences in network composition and access to resources for women who were on probation and parole, and 4) testing multilevel regression models to identify the participant, network member, tie, and network characteristics that were associated with access to resourceful ties and increased access to capital from resource-rich ties. The results from the descriptive assessment of women's networks include an overview of results from the name generators used to identify network members, the types of relationships women shared with those individuals (i.e., emotionally close, familial), and the aggregate (i.e., proportion kinship ties) and network scores (i.e., network density) for the sample. Additionally, the proportion of network ties that could provide access to the seven resource generator items is presented. Next, using an independent samples *t*-test to identify differences in network characteristics and access to social capital, the scores from the descriptive assessment are compared for probationers and parolees. Finally, multilevel random-intercept models – with network members (Level – 1) nested in participants (Level – 2) – are used to identify predictors of social capital (Raudenbush & Bryk, 2002). Multilevel random-intercept models are the

appropriate analytic technique because they account for the non-independence in the data that stems from network members being nominated by respondents.

Predicting Social Capital Available from Resourceful Ties. The strategy for predicting resource access has two parts. The first involves predicting *resourceful ties*, or individuals who could grant women access to at least one type of social capital. Four multilevel logistic regression models are tested to assess the connection between the predictor variables and resourceful ties. Related groups of variables are added to regression models in a stepwise fashion because participant, network member, tie, and network variables are correlated. Doing so also allows for the effect of different types of variables to be observed in relation to the dependent variable.

In Model 1 to predict resourceful ties, the independent variables include participant and network member demographics, measures of crime involvement, and employment and educational experiences. The independent variables for Model 2 include participant and network member demographics, a measure of participant crime involvement, and a categorical measure of relationship type. The categorical relationship measure of relationship type is then dichotomized in Model 3 to assess the connection between kinship ties and social capital. The third model includes participant and network member demographics, crime involvement, and employment experiences, and two tie characteristics (i.e., emotional closeness & kinship). The final model (Model 4) includes all previously noted participant and network member characteristics, the tie measures (i.e., emotional closeness & kinship), the network measures (network size, density, and proportion kinship ties), and the interaction between proportion kinship ties and network density. Identification of the significant interaction was followed by a simple slopes analysis examining the effects of the moderated variable (proportion kinship ties) for high and low scores on the

network density, defined as ± 1 SD from the mean. For the simple slopes analysis, all continuous variables were grand-mean centered to avoid issues with multicollinearity (Aiken & West, 1991). For a summary of the variables included in each model, see Table 2.

Table 2. Description of Variables Included in Each Multilevel Regression Model

	Model 1	Model 2	Model 3	Model 4
Participant Characteristics	✓	✓	✓	✓
Network Member Characteristics	✓	✓	✓	✓
Categorical Relationship Type Measure		✓		
Dichotomous Kinship Measure			✓	✓
Emotional Closeness			✓	✓
Network Measures (i.e., density, size)				✓
Interaction Effect (i.e., density & percent kin)				✓

Predicting Social Capital Available from Resource-Rich Ties. The second part of the analytic strategy for predicting resources was to use the independent variables presented in Table 2 (Models 1 – 3) as independent variables, but to use the count of resources accessible from a network member as the dependent variable. The multilevel Poisson regression model only includes network members who provided access to at least one type of resource (n = 1070). I refer to these network members as *resource-rich ties*. The reason for this restriction is to address the distribution of the error terms for the 7 items measured. A high proportion of ties did not provide access to any social capital (n = 243, 18.5%), but the remaining counts were represented in relatively similar proportions. The two-part analysis identifies predictors of (1) the absence or presence of access to social capital from the network members and (2) the count of the types of social capital accessible from ties who provided access to at least one resource. Model 4 was excluded from the tests of the prediction of access to social capital from resource-rich ties because the exclusion of network members who lacked access to social capital disrupted

women's network structures. For this reason, network level variables such as network size and density no longer aligned with network member characteristics.

CHAPTER 4: STUDY 1 RESULTS – ACCESS TO COLLECTIVE SOCIAL CAPITAL

As noted in the section on the analytic strategy, the first study examines 1) justice-involved women's access to social capital from their entire networks and 2) the participant characteristics and experiences that are associated with access to social capital. Social capital was measured using a 26-item resource generator that allowed for the examination of both the presence or absence of access to each type of capital and the nature of the relationship (i.e., acquaintance, friends, family member, or partner) shared with the person or people in women's networks who could grant access to each resource. Two Poisson regression models were tested to assess the connection of justice-involved women's characteristics and experiences with two dependent variables, their access to total and domain-specific (i.e., political social capital) social capital.

Descriptive Statistics for Network Access

As shown in Table 3, when asked about access to specific types of resources, 80% of the sample knew someone who could grant them access to 16 of the 26 resources (61.5% of the resource items). Almost all of the women knew someone who owned a car (n = 157, 98.1%), would be there to talk about their day (n = 154, 96.3%), and could lend them a small sum of money (n = 150, 93.8%). However, there were clear deficits in women's access to certain types of resources. For example, only 14 (8.8%) women knew an elected official and even fewer (n = 11, 6.9%) knew someone who worked at City Hall. Across resource types, family members severed as the prominent source of women's access to resources across items (23 of the 26 items). For the remaining items, acquaintances were most commonly identified as elected officials (n = 7) and individuals who worked as City Hall (n = 7). Women's friends had good contacts at the local media outlets (n = 18) and were identified often as individuals who could

provide a place to stay for a week (n = 94), give a good job reference (n = 93), discuss how the day went (n = 90), and who owned a vehicle (n = 120). More than half of the sample (n = 89, 55.6%) identified a romantic partner. Partners could provide women with emotional support (i.e., be there to talk about your day; n = 72), help with jobs around the house (n = 57), assistance with shopping (n = 63), care for women when they were ill (n = 57), provide access to a vehicle (n = 65), and help with car repairs (n = 50). On average, women had access to 19 of the resources specified by the resource generator (M = 19.25, SD = 4.37, range = 0 - 26).

Trends in women's limited access to specific resources corresponded closely with the items that comprised political social capital, the dimension extracted from the exploratory factor analysis. These four items include the types of social capital that the smallest proportion of participants had access to through their personal networks. On average, women had access to one item on the *political social capital* subscale (i.e. is an elected official, works at City Hall, has connections at the radio/newspaper, and knows a lot about government regulations; M = 0.913; SD = 1.02; range = 0 – 4; a = .569), and acquaintances were most helpful in granting access to those resources.

Table 3. Description of Social Capital Accessible from Women's Entire Networks (N = 160)

Variable Description	n	%	If yes, access through			
			Acquaintance	Friend	Family	Partner
1. Knows how to fix a car	129	80.6	16	44	70	50
2. Give advice on using a personal computer	134	83.8	18	62	91	21
3. Has a professional occupation	140	87.5	41	62	96	32
4. Is an elected official	14	08.8	7	5	5	0
5. Works at City Hall	11	06.9	7	3	5	1
6. Can sometimes employ people	115	71.9	27	56	63	17
7. Knows a lot about government regulations	78	48.8	16	29	39	10
8. Has good contacts at Tv/radio/newspaper	43	26.9	13	18	17	6
9. Give advice about money problems	138	86.3	24	69	113	28
10. Give advice on problems at work	118	73.8	25	66	84	27
11. Help dispose of bulky items	128	80.0	13	54	66	58
12. Help with small household jobs	137	85.6	12	56	90	57
13. Do your shopping if you are ill	143	89.4	9	58	97	63
14. Provide care for a serious health condition	132	82.5	12	48	92	57
15. Lend a large sum of money	117	73.1	3	37	89	22
16. Lend a small sum of money	150	93.8	11	87	131	45
17. Give career advice	131	81.9	29	71	100	26
18. Provide a place to stay for a week	150	93.8	16	94	137	43
19. Discuss politics	86	53.8	8	38	63	26
20. Give sound legal advice	115	71.9	22	59	84	24
21. Give a good job reference	147	91.9	33	93	113	35
22. Can babysit others' children	123	76.9	13	72	99	41
23. Help you find someplace to live	146	91.3	29	89	117	46
24. Watch your home or pets while you are away	144	90.0	12	81	112	40
25. Be there to talk about your day	154	96.3	19	90	110	72
26. Owns a car	157	98.1	57	120	140	65

Note. Access measures are not mutually exclusive.

Predicting Access to Political, Personal and Problem-Solving, and Total Social Capital

Table 4 presents the findings from the Poisson regression analyses predicting social capital. For the first test modeling total social capital, two variables were significantly associated with the outcome. When all other variables are held constant, women who scored higher on the educational strengths subscale were more likely to gain access to total social capital. A one-unit increase in educational strengths was associated with a 5% increase in odds of access to an additional type of capital from the entire network. In contrast women's high scores on the employment and financial needs subscale (i.e., unable to pay bills without help from family and friends) were negatively associated with resources access. A one-unit increase in employment and financial needs was associated with 2% decreased odds of access to an additional type of social capital. The participants' age, race, correctional status, educational needs, and recent arrests were not associated with total social capital.

Similar to the previous model, when all other variables are held constant, a significant association was observed between the employment/financial needs of the participants and political social capital. Every additional indicator of employment/financial needs was associated with 8% reduced odds of access to additional types of social capital. The criminal activity of the participant was also significantly associated with the outcome. Women who had been arrested two years prior to the interview had 40% reduced odds of access to additional political social capital items. The participants' age, race, correctional status, education strengths, and educational needs were not significantly associated with access to political social capital.

In the third test, modeling personal and problem-solving social capital, educational strengths was the only variable that was significantly associated with the outcome. A one-unit increase in educational strengths was associated with a 5% increase in odds of access to an

additional type of personal and problem-solving social capital from the entire network. In summary, employment and financial needs, education strengths, and recent arrests are three participant characteristics that are associated with one or more of the three measures of women's access to social capital from their entire networks.

Table 4. Poisson Regression Models of Participant Characteristics and Experiences on Total, Political, and Personal and Problem-Solving Social Capital (N = 159)

	Total Social Capital			Political Social Capital			Personal and Problem-Solving Capital		
Participant Characteristics	Coef.	SE	OR	Coef.	SE	OR	Coef.	SE	OR
Age (ten years)	- 0.021	0.017	0.979	- 0.102	0.081	0.902	- 0.027	0.018	0.983
Race (1 = White)	0.011	0.037	1.011	- 0.289	0.173	0.749	0.026	0.038	1.026
Correctional Status (1 = parolee)	0.003	0.040	1.003	0.317	0.177	1.373	- 0.013	- 0.042	0.987
Employment/Financial Needs	- 0.019	0.009	0.981 *	- 0.080	0.040	0.923 *	- 0.016	0.009	0.984
Educational Strengths	0.052	0.016	1.053 **	0.106	0.075	1.112	0.049	0.017	1.050 **
Educational Needs (1 = none)	0.047	0.044	1.048	0.301	0.200	1.351	0.039	0.045	1.035
Recent Arrest (1 = yes)	- 0.059	0.049	0.943	- 0.505	0.256	0.604 *	- 0.039	0.050	0.962
Residual Deviance[a]	161.84			173.3			143.97		
df	151			151			151		

[a] Chi-square statistics for the residual deviance goodness of fit test
*p < .05, **p < .01

CHAPTER 5: STUDY 2 RESULTS – ACCESS TO DYADIC SOCIAL CAPITAL

As noted above in the section on analytic strategy, the second study is focused on dyadic social capital. The results section includes: 1) descriptive statistics based on the name generators that elicited women's identification of network members, network member characteristics (i.e., demographics, substance abusing behaviors, access to social capital), and network characteristics (i.e., average percentage kinship ties), 2) a description of the resources dyadically accessible to women from network ties, 3) a description of aggregate network measures, 4) findings from the independent samples t-test that examined the differences in network composition and access to social capital for women who were on probation and parole, and 5) findings from the multilevel regression models predicting access to resourceful ties and 6) access to social capital from resource-rich ties.

Descriptive Statistics

Name Generators and Relational Composition. As shown in Table 5, the primary name generator elicited identification of approximately half of the network members (*n* = 631, 48.1%). The remaining network members were identified from the following name generators: family members (*n* = 178, 13.6%), negative network members (*n* = 109, 8.3%), friends or individuals participants had fun with (*n* = 88, 6.7%), employment settings (*n* = 54, 4.1%), religious settings (*n* = 44, 3.4%), neighborhood settings (n = 33, 2.5%), treatment settings (*n* = 37 or 2.8%), academic settings (*n* = 23, 1.8%), correctional settings (*n* = 27, 2.1%), and "other" individuals not elicited by the prior name generators (*n* = 89, 6.8%). In examining the relational composition of women's networks, nearly half of the network members had kinship ties with the participants (*n* = 589, 44.9%). Other prominent relationship types included friends (*n* = 190, 14.5%), best friends (*n* = 99, 7.5%), significant others (n = 89, 6.8%), coworkers (n = 78, 5.9%),

neighbors (n = 43, 3.3%), ex-friends (*n* = 42, 3.2%), support group members (*n* = 37, 2.8%), therapists (*n* = 34, 2.6%), religious leaders (*n* = 31, 2.4%), community agents (*n* = 29, 2.2%), ex-significant others (*n* = 28, 2.1%), and "others" (*n* = 24, 1.8%).

Table 5. Name Generator and Relational Network Composition

Characteristic	*n*	%
Name Generators (NG; *N* = 1313)[a]		
Primary NG		
Discuss Important Matters	631	48.1
Secondary NGs		
Family	178	13.6
Friends	88	6.7
Religious Setting	44	3.4
Academic Setting	23	1.8
Employment Setting	54	4.1
Correctional Setting	27	2.1
Treatment/Self-Help Group Setting	37	2.8
Neighborhood Setting	33	2.5
Negative Network Members	109	8.3
Other Settings	89	6.8
Network Relational Composition (*N* = 1313)		
Kinship Ties	589	44.9
Parents	154	11.7
Siblings	181	13.8
Children	113	8.6
Other Family	81	6.2
Aunts and Uncles	39	3.0
Grandparents	21	1.6
Friends	190	14.5
Best Friends	99	7.5
Significant Others	89	6.8
Coworkers	78	5.9
Neighbors	43	3.3
Exfriends	42	3.2
Support Group Members	37	2.8
Therapists	34	2.6
Religious Leaders	31	2.4
Community Agents	29	2.2
Ex-Significant other	28	2.1
Other	24	1.8

[a] Name generators are listed in the same order as the questionnaire.

Network Member Characteristics. As was shown above in Table 1, network members were predominantly women (*n* = 818, 62%) and ranged from 17 to 93 years of age (*M* = 44.40, *SD* = 14.84). Most of the network members were employed (*n* = 851, 71%) and on average had attended some college courses (*M* = 3.92, *SD* = 1.61, range = 1 -7). Most of the network members participants nominated were White (*n* = 770, 59%), followed by Black (*n* = 449, 34%), and multiracial including Hispanic (*n* = 72, 5%). The remaining 2% of network members' racial/ethnic identities were described as Arab (*n* = 11), American Indian or Alaskan Native (*n* = 7), Asian (*n* = 3), and Native Hawaiian/Pacific Islander (*n* = 1). Substance use was prevalent among network members. More than half drank alcohol (*n* = 717, 54.6%) and a considerable number of network members used marijuana (*n* = 504, 38.4%), heroin or prescription pills (*n* = 151, 11.5%), or Methamphetamine or crack cocaine (*n* = 201, 15.3%). Lower rates were observed when assessing shared substance-abusing experiences between the participant and the network member. Approximately one-third (*n* = 447, 34.0%) of ties had drunk alcohol with the participant and about 20% had used marijuana (*n* = 276, 21.0%). Shared use of heroin or prescription pills (*n* = 65, 5.0%) and Methamphetamine or crack cocaine (*n* = 107, 8.1%) were less common, but 3% (*n* = 42) of the ties had used both types of drugs with the participant. Most of the network members had never been involved in the criminal justice system (*n* = 878, 67%). Women, on average, experienced weekly (*M* = 3.82, *SD* = 1.37, range = 1 - 5), emotionally "close" (*M* = 4.04, *SD* = 1.19, range = 1 - 5) and long relationships (i.e. *several years*; *M* = 4.04, *SD* = 0.96, range = 1 - 5) with network members who lived, on average, within an hour from their homes (*M* = 3.70, *SD* = 1.34, range = 1 - 6).

Negative Network Members. The presence of negative network members was a control variable in each of the statistical models. Approximately half of the study participants (*n* = 85,

53.1%) identified the 109 named negative network members (8.3% of 1313). Most of the negative network members did not provide the participant access to any of the seven types of social capital (n = 83, 76.1%; M = 0.61, SD = 1.30) and most had previously been involved in the criminal justice system (n = 77, 66.1%). These individuals were most commonly friends of the participants (n = 59, 54.1%). The remaining ties were siblings (n = 17, 15.6%), followed by parents (n = 14, 12.8%), children (n = 7, 6.4%), other family members (n = 6, 5.5%), community members (n = 5, 4.6%), and one significant other (n = 1, 1.0%).

Dyadic Social Capital

Table 6 displays the percentage of network members who had the ability to provide the participants with each of the seven types of social capital. More than half of the network members were able to provide a good job reference (n = 769, 58.6%), a place for the participant to stay for a week (n = 749, 57%), and a loan of a small sum of money (n = 716, 54.5%). Participants identified fewer network members who could give advice about money problems (n = 628, 47.8%) or provide sound legal advice (n = 503, 38.3%). Only one-quarter of network members were identified by participants as someone who could sometimes employ them (n = 335, 25.5%) or lend a large sum of money to them (n = 333, 25.4%). On average, network members could grant access to three of the seven types of social capital (M = 3.07, SD = 2.25, range = 0 - 7). Social Capital could not be accessed from 18.5% (n = 243) of the network members.

Table 6. Dyadic Social Capital from Nominated Ties (N = 1313)

Variable Description	*n*	%
Can sometimes employ people	335	25.5
Give advice about money problems	628	47.8
Lend a large sum of money	333	25.4
Lend a small sum of money	716	54.5
Provide a place to stay for a week	749	57.0
Give sound legal advice	503	38.3
Give a good job reference	769	58.6
None of the above	243	18.5

Aggregate Network Measures

Table 7 displays the average aggregate scores for women's networks. The minimum and maximum scores represent the variation in network member characteristics for women's networks across the sample. A range of complete absence to complete representation of network characteristics was observed for the proportion of network members who were employed, female, had an absence of criminal history, and had shared experiences of alcohol use and marijuana use with the participants. The same range of scores was present for the seven types of social capital and absence of access to any type of capital (related to the seven items). Women's networks varied in average total number of resources provided by each network member across networks, and they ranged from zero to over six.

Few women in the sample reported high proportions of network members with whom they had used heroin/prescription pills. A higher upper range was observed for the average proportion of network members (across networks) with whom participants had used meth, crack, or cocaine, which suggests that shared experiences of substance use occurred with 70% of a woman's network members. The average educational achievement across networks ranged from network members who attended high school to complete representation of individuals who

possessed graduate degrees, which was the highest measure of academic achievement. Emotion closeness ranged from “distant” to “very close.” For the participants with the most widely geographically dispersed network, on average, network members lived within an hour of their homes.

Table 7. Egos' Aggregate Network Characteristics

	M	*SD*	Min	Max
Whole Networks (n = 159)				
Proportion Women	0.62	0.20	0.00	1.00
Proportion Employed	0.67	0.22	0.00	1.00
Education	3.80	0.92	1.83	7.00
% Substance Use Together				
Alcohol	0.30	0.30	0.00	1.00
Marijuana	0.20	0.25	0.00	1.00
Heroin or Prescription Pills	0.04	0.10	0.00	0.50
Meth, Crack, Cocaine	0.07	0.14	0.00	0.71
No Criminal History	0.68	0.23	0.00	1.00
Frequency of Contact	3.87	0.61	1.00	5.00
Emotional Closeness	4.05	0.55	1.50	5.00
Geographical Distance	3.79	0.65	2.42	5.50
Relationship Length	4.46	0.48	3.00	5.00
Dyadic Social Capital				
Employ People	0.25	0.24	0.00	1.00
Money Advice	0.47	0.27	0.00	1.00
Lend Large Sum	0.26	0.22	0.00	1.00
Lend Small Sum	0.54	0.23	0.00	1.00
Place to Stay	0.56	0.26	0.00	1.00
Legal Advice	0.39	0.31	0.00	1.00
Job Reference	0.59	0.31	0.00	1.00
None of the Above	0.19	0.20	0.00	1.00
Sum Social Capital	3.06	1.38	0.00	6.40

Substance-Abusing and Crime-Involved Network Members' Contributions to Women's Access to Social Capital

Two common requirements of correctional supervision are to avoid interaction with individuals who have a felony conviction and those who abuse substances. Table 8 displays the changes in the number of network members who could provide women access to seven types of social capital when those who have used substances (other than alcohol), committed a crime, or both are excluded. Findings suggest that the removal of substance-abusing network members would reduce the average network size from eight to five network members. The exclusion of crime-involved network members would reduce the average network size to approximately six members. By removing substance-abusing network members, approximately 35% of network members who could provide access to social capital would be eliminated (ranging from 32% – 40% reduction in the number of ties across categories). Fewer network members had a criminal history, which resulted in the exclusion of on average approximately 28% of ties that could provide access to social capital categories (ranging from 27% – 29% reduction in the number of ties across categories). Substance-abusing network ties accounted for a large percentage of network ties who did not provide access to any resources.

When excluding both substance-abusing and crime-involved network members, the average number of networks members is reduced by approximately one-half in size. Similarly, the number of network members who could provide access to each type of social capital was cut in half relatively uniformly across categories (i.e., 44% - 50% reduction in the number of ties that could provide access). For this reason, the greatest reductions in the overall proportions of network members who could provide access to social capital were observed in the areas where more network members had access (i.e., the ability to lend small sums of money, provide a place to stay for a week, provide sound legal advice, and give a good job reference); in these areas,

several hundred network members were eliminated as potential sources of support. However, the elimination of substance-abusing and crime-involved networks members drastically reduced the number of network ties that reportedly could not provide access to any of the seven types of social capital. A 73 reduction was observed for the percentage of network ties that met this criteria, with only 64 network members remaining.

Table 8. Network Member Descriptive Characteristics (Excluding Substance Users and Crime-Involved Individuals)

	All Network Members (*N* = 159/1313)			No Substance Use[a] (*n* = 155/762)				No Criminal History (*n* = 158/878)				No Criminal History Nor Substance Use (*n* = 152/630)			
Characteristic	*n*	Prop	*M*	*n*	Prop	*M*	CHG[b]	*n*	Prop	*M*	CHG	*n*	Prop	*M*	CHG
Age			44.40			46.73				45.76				47.52	
Proportion Female	818	.62		502	.66			606	.69			438	.70		
Proportion Kinship Ties	589	.45		353	.46			418	.48			302	.48		
Education			3.92			4.26				4.19				4.39	
Employed	851	.71		547	.72			628	.72			459	.73		
Substance use together															
Alcohol	447	.34		172	.23			242	.28			134	.21		
Marijuana	276	.21						112	.13						
Heroin or prescription pills	65	.05						12	.01						
Crack cocaine	107	.08						20	.02						
No Criminal History	878	.67		630	.83										
Frequency of Contact			3.82			3.87				3.95				3.91	
Emotional Closeness			4.04			4.18				4.18				4.23	
Geographical Distance			3.70			3.68				3.69				3.65	
Relationship Length			4.40			4.32				4.36				4.33	
Networks															
Network Size			8.26			4.92				5.56				4.14	
Social Capital from Ties															
Can sometime employ people	335	.26		215	.28		- .10	239	.27		- .08	175	.28		- .13
Advice about money problems	628	.48		424	.56		- .16	456	.52		- .13	356	.57		- .20
Lend a large sum of money	333	.25		219	.29		- .08	236	.27		- .07	184	.29		- .11
Lend a small sum of money	716	.55		440	.58		- .21	504	.57		- .17	373	.59		- .27
Place to stay for a week	749	.57		449	.59		- .23	536	.61		- .16	381	.61		- .28
Give sound legal advice	503	.38		340	.45		- .12	355	.40		- .11	277	.44		- .24
Give a good job reference	769	.59		494	.65		- .21	555	.63		- .17	410	.65		- .28
None of the above	243	.19		91	.12		- .05	121	.14		- .10	64	.10		- .14

[a] Excludes all substances except alcohol. [b] CHG (change) Represents the percentage change in the proportion of networks members (*N* = 1313) who could provide access to each type of social capital.

Probationers' and Parolees' Access to Social Capital and Network Characteristics

Table 9 presents the findings from the independent samples t-test of network and social capital characteristics for women who were categorized as probationers and parolees. Findings from the test suggest the women of differing correctional statuses did not differ significantly on the key network and social capital measures. As an exception, women who had been to prison construct networks that were comprised of slightly older network members and tended to be older in age.

Table 9. Independent Samples *t* -Test of Probationer and Parolee Network and Social Capital Characteristics

Key Matching Variables	*M (SD)* Probation (*n* = 109)	Parole (*n* = 50)	Significance test (*t*-test)	Standard *M* difference
Participant Characteristics				
Recent Arrest (2 years)	16.4	26.0	- 1.43	- 0.10
Age	39.93(10.43)	44.20 (11.06)	- 2.35 *	- 4.27
Educational Strengths[a]	1.94 (1.20)	2.20 (1.19)	- 1.30	- 0.27
Educational Needs	0.35 (0.64)	0.33 (0.72)	0.24	0.03
Employment/Financial Needs	3.12 (2.14)	3.42 (2.57)	- 0.77	- 0.30
Total Collective Social Capital (26 – item)	19.26 (4.30)	19.22 (4.56)	0.06	0.04
Political Social Capital (4 – item)	0.85 (1.01)	1.06 (1.04)	- 1.24	- 0.21
Total Dyadic Social Capital (7 – item)	3.09 (1.41)	2.99 (1.31)	0.42	0.10
Network Member Characteristics[b]				
% Female	62.6	60.6	0.59	0.02
% No Criminal History	68.3	68.2	0.03	0.00
% Employed	71.3	71.6	- 0.08	- 0.00
Age	44.01 (7.09)	46.75 (7.92)	- 2.18 *	- 2.74
Relationship Length	4.46 (0.51)	4.47 (0.43)	- 0.08	- 0.01
Education	3.74 (1.46)	2.97 (1.27)	- 0.80	- 0.13
Tie Characteristics				
Geographical Closeness	3.80 (0.62)	3.78 (0.72)	0.15	0.02
Relationship Closeness	4.05 (0.56)	4.05 (0.52)	- 0.33	- 0.00
Frequency of Contact	3.86 (0.61)	3.87 (0.61)	- 0.07	- 0.01
Network Characteristics				
% Kinship Ties	0.48 (0.23)	0.47 (0.22)	0.60	0.00
Network Density	0.50 (0.23)	0.47 (0.23)	0.04	0.02
Network Size	8.23 (4.24)	8.32 (4.46)	- 0.12	- 0.09

[a] Educational Strengths and needs includes 49 women who were on parole [b] Network measures include 109 probationers

*p < .05

Predicting Access to Social Capital Available from Resourceful Ties

Table 10 presents four models predicting the presence of network members' access to at least one type of social capital. The first model includes participant and network member characteristics. When controlling for negative network members, one participant and two network member characteristics were associated with access to social capital. The exponentiated coefficient for age indicates that each additional ten years of the participant's age was associated with a 24% decrease in odds of possessing a tie with access to social capital (b = - 0.27 , SE = 0.13, OR = 0.76, p = .034). Race, recent arrests, educational strengths, educational needs, and employment/financial needs were not significantly associated with access to resourceful ties. Two network member characteristics were associated with access to social capital. Each additional ten years of the network member's age is associated with a 58% increase in odds of access to social capital (b = 0.46 , SE = 0.74, OR = 1.58, p < .000) and employed network members were almost three times as likely to provide access to social capital, in comparison to unemployed network members (b = 1.06 , SE = 0.21, OR = 2.88, p < .000). This finding remains valid even when considering the missing data. To invalidate the inference, 61% of the estimated effect would have to be due to bias. In other words, 778 of the cases would have to be replaced with cases for which there is an effect of zero to invalidate the inference (Frank, Maroulis, Duong, & Kelcey, 2013).

Model 2 (Table 10) presents the findings from the examination of the connection between relationship type and access to social capital from network members. When controlling for negative network members, the participant's age is no longer a significant predictor of access to social capital. Compared to community members, parents (b = 1.14, SE = 0.38, OR = 3.12, p = .003), significant others (b = 1.26 , SE = 0.50, OR = 3.53, p = .012), and best friends (b = 1.31 ,

SE = 0.49, OR = 3.70, p = .008) were more likely to provide participants with access to social capital. Participants' children were less likely to provide access to social capital, and ties to siblings, other family members, and friends were not significantly associated with access to social capital.

Model 3 (Table 10) presents the findings from the assessment of the connection of participant, network member, and tie characteristics with social capital. When controlling for negative network members, the participant's age (b = - 3.37, SE = 0.14, OR = 0.69, p < .000) is significantly negatively associated with access to social capital. Each additional ten years of the participant's age is associated with a 31% decrease in odds of access to any tie that possess social capital. The age and employment status of the network members remained positively and significantly associated with social capital. In regard to tie characteristics, sharing connections with kinship members demonstrated a marginally significant and negative associated with access to social capital (b = - 0.41 , SE = 0.21, OR = 0.66, p = .053). Social capital was more likely to be accessible from individuals who participants characterized as sharing greater emotional closeness. For each unit increase in emotional closeness to network ties, network members were more than twice as likely to provide access to social capital (b = 1.22 , SE = 0.23, OR = 3.39, p < .000). The negative association between kinship ties and social capital is best explained by revisiting Model 2. When emotional closeness is included in the model that categorically conceptualizes relationship types, parents (b = 0.46 , SE = 0.41, OR = 1.59, p = .254), significant others (b = 0.34 , SE = 0.54, OR = 1.40, p = .530), and best friends (b = 0.43 , SE = 0.53, OR = 1.54, p = .417) are no longer significant predictors of access to social capital. It appears that emotional closeness rather than kinship is the key predictor of access to social capital.

Model 4, presents the findings from the assessment of the connection between network level predictors (i.e., percent kinship ties, network size, and network density) and access to social capital. The size of women's networks was not associated with access to social capital. However, there was a statistically significant interaction effect between the proportion of kinship ties in women's networks and network density (see Figure 1). The simple slopes analysis revealed that when the network density is high (i.e. one standard deviation above the mean), percent kinship in a network is not significantly associated with access to social capital (b = - 0.68, SE = 0. 89, p = .448, OR = 0.51). But, when density is low (i.e. one standard deviation below the mean), the proportion of kinship ties in a network is significantly negatively associated with access to social capital (b = - 3.733, SE = 1.02, p < .000, OR = 0.024). The exponentiated coefficient indicates that a one-unit increase in the proportion of kinship ties is related to a 98% decrease in the odds for access to social capital when network density is low and the remaining model variables are held constant.

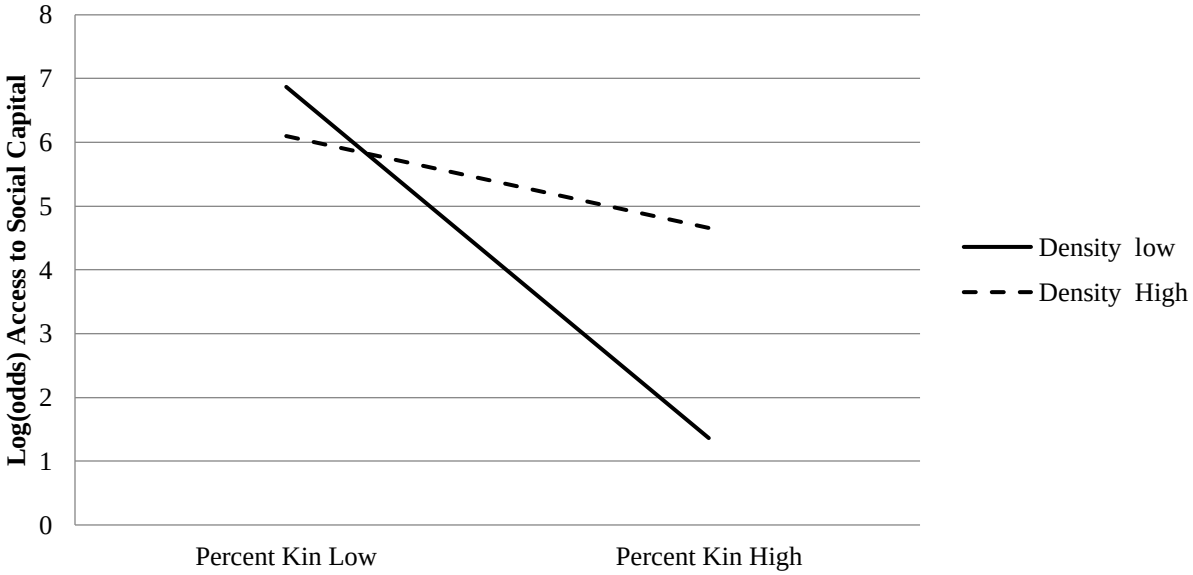
Table 10. Random-Intercept Logistic Regression Predicting Access to Resourceful Network Ties

	Model 1 OR (CI)	Model 2 OR (CI)	Model 3 OR (CI)	Model 4 OR (CI)
Participants				
Age (ten years)	0.76 (0.60 – 0.98) *	1.03 (0.80 – 1.32)	0.69 (0.53 – 0.91) **	0.67 (0.53 - 0.89) **
Race (1 = white)	0.76 (0.45 – 1.30)	0.78 (0.45 – 1.34)	0.72 (0.40 – 1.29)	0.72 (.41 – 1.27)
Recent Arrest (1 = yes)	1.20 (0.59 – 2.44)	1.26 (0.61 – 2.58)	1.33 (0.53 – 2.44)	
Educational Strengths	1.09 (0.87 – 1.37)			
Educational Needs (1 = 1+ needs)	0.56 (0.31 – 1.04)			
Employment/Financial Needs	0.97 (0.86 – 1.10)		0.93 (0.82 – 1.06)	0.98 (0.86 – 1.12)
Network Members				
Age (ten years)	1.58 (1.37 – 1.83) ***		1.69 (1.44 – 1.98) ***	1.73 (1.48 – 2.03) ***
Gender (1 = female)	1.34 (0.91 – 1.97)		1.32 (0.88 – 1.97)	1.42 (0.96 – 2.12)
Committed offense (1 = no)	1.43 (0.96 – 2.13)		1.38 (0.89 – 2.11)	
Employment Status (1 = employed)	2.88 (1.90 – 4.38) ***		3.89 (2.17 – 5.30) ***	3.39 (2.18 – 5.28) ***
Ties				
Relationship (1 = yes)[a]				
Parents		3.12 (1.48 – 6.58) **		
Siblings		1.12 (0.61 – 2.06)		
Children		0.51 (0.26 – 0.99) *		
Other Family		1.63 (0.82 – 3.23)		
Significant Others		3.53 (1.32 – 9.45) *		
Best Friends		3.70 (1.41 – 9.74) **		
Friends		0.88 (0.50 – 1.54)		
Relationship Type (1= Kinship Tie)			0.66 (0.44 – 1.01)	
Emotional Closeness			2.36 (1.88 – 2.95) ***	2.26 (1.83 – 2.80) ***
Negative Network Member (1 = yes)	0.03 (0.02 – 0.07) ***	0.02 (0.01 – 0.05) ***	0.21 (0.09 – 0.49) ***	0.20 (0.09 – 0.45) ***
Networks				
Percent Kinship Ties (tens)				0.58 (0.43 – 0.78) ***
Network Density				0.82 (0.62 – 1.07)
Network Size				1.03 (0.97 – 1.10)
Percent Kinship*Network Density				1.09 (1.02 – 1.15) **
Number of Participants	158	159	159	159
Number of Network Members	1270	1313	1279	1279
Log Likelihood	- 451.7	-488.8	-422.6	-417.4
df	1257	1300	1266	1265

[a] Omitted category is community members

*p < .05, **p < .01, ***p < .001

Figure 1. Plot of the Interaction Between Network Density and Proportion Kinship Ties on Access to Social Capital Where Low and High are Defined as ± 1 SD from the Mean



Predicting Increased Access to Social Capital Available from Resource-Rich Ties

Table 11 presents the results from three multilevel Poisson regression models that predict the count of types of social capital available from resource-rich ties. These models excluded network members who could not provide participants access to at least one type of social capital. Model 1 focuses on participant and network member characteristics. For women, each additional ten years of a participant's age was associated with a 7% decrease in odds for access to an additional type of social capital from a network member (b = - 0.08 , SE = 0.03, OR = 0.93, p = .003). In addition to age, increases in employment and financial needs also put women at a disadvantage. The exponentiated coefficient for employment/financial needs (i.e., needing assistance from family and friends to pay bills), indicates that a one-unit increase in needs is associated with 4% decreased odds of access to an additional type of social capital from a network member (b = - 0.04 , SE = 0.01, OR = 0.96, p = .003). Notably, women's recent involvement in the criminal justice system was not significantly related to access to social capital (b = 0.01 , SE = 0.07, OR = 1.01, p = .901).

Three network member characteristics – age, gender, and employment status – were significantly associated with access to increased types of social capital, when controlling for negative network members. In regard to the participant's age, each ten year increase in the network member's age was associated with a 10% increase in odds of access to an additional type of social capital (b = 0.10 , SE = 0.01, OR = 1.10, p < .000). Female network members were associated with 11% decreased odds of access to additional types of social capital (b = - 0.12 , SE = 0.03, OR = 0.89, p < .000) and employed network members had 20% increased odds of providing access to an additional type of social capital (b = 0.18 , SE = 0.04, OR = 1.20, p < .000).

Model 2 (Table 10) presents the findings for the examination of the effect of relationship type on the count of social capital types accessible from network members. When controlling for negative network ties and participants' ages, race, and recent arrests, four relationship types were significantly associated with increased access to social capital. In comparison to community members, parents (b = 0.21, SE = 0.06, OR = 1.24, $p <$ .000), siblings (b = 0.18 , SE = 0.06, OR = 1.20, p = .001), other family members (b = 0.16 , SE = 0.06, OR = 1.18, p = .007), and significant others (b = 0.23 , SE = 0.06, OR = 1.26, $p <$ .000) were each associated with approximately 20% increased odds of providing participants with access to an additional type of social capital. The final model (Model 3), introduces kinship as a dichotomous variable and presents the findings from the assessment of emotional closeness shared between the participants and network members on access to social capital. The associations reported for Model 1, as well as the effect sizes, remained significant and were relatively similar in Model 3. However, when emotional closeness is included in the model, kinship ties were not significantly associated with access to additional types of social capital. Emotional closeness is associated with 14% increased odds of access to additional types of social capital from network members.

Table 10. Random-Intercept Poisson Regression Predicting Total Social for Resource-Rich Ties

	Model 1			Model 2			Model 3		
	Coef.	SE	OR	Coef.	SE	OR	Coef.	SE	OR
Participants									
Age (ten years)	- 0.075	0.026	0.927 **	- 0.028	0.025	0.972	- 0.081	0.025	0.922 ***
Race (1 = white)	- 0.065	0.055	0.937	- 0.059	0.053	0.943	- 0.078	0.054	0.925
Recent Arrest (1 = yes)	- 0.009	0.069	1.009	0.021	0.068	1.021	0.027	0.067	1.027
Educational Strengths	- 0.041	0.024	0.960						
Educational Needs (1 = 1+ needs)	- 0.082	0.065	0.921						
Employment/Financial Needs	- 0.037	0.013	0.964 **				- 0.033	0.012	0.967 ***
Network Members									
Age (ten years)	0.010	0.013	1.100 ***				0.090	0.013	1.094 ***
Gender (1 = female)	- 0.116	0.035	0.891 ***				- 0.127	0.035	0.881 **
Committed offense (1 = no)	0.031	0.042	1.032				0.041	0.039	1.041
Employment Status (1 = employed)	0.182	0.133	1.200 ***				0.202	0.042	1.224 ***
Ties									
Relationship (1 = yes)[a]									
Parents				0.213	0.058	1.238 ***			
Siblings				0.182	0.057	1.200 **			
Children				- 0.092	0.079	0.912			
Other Family				0.163	0.061	1.179 **			
Significant Others				0.233	0.066	1.262 ***			
Best Friends				0.023	0.070	1.023			
Friends				- 0.022	0.057	0.978			
Relationship Type (1= Kinship Tie)							0.062	0.035	1.064
Emotional Closeness							0.134	0.022	1.143 ***
Negative Network Member (1 = yes)	- 0.452	0.133	0.636 ***	- 0.520		0.595***	- 0.194	0.035	0.824 ***
Number of Participants		156			157			157	
Number of Network Members		1057			1070			1065	
Log Likelihood		- 2057.9			-2106.2			-2053.8	
df		1044			1057			1052	

[a] Omitted category is community members

*p < .05, **p < .01, ***p < .001

CHAPTER 6: DISCUSSION AND CONCLUSION

Summary and Discussion

Study 1: Crime-Involved Women's Access to Collective Social Capital. Despite major resource deficits, women reported access to the majority of the items on the resource generator (Research Question 1; RQ1). Nearly two-thirds of the resources were accessible to 80% of the sample, and only five items were accessible to less than 70% of women interviewed. Family members served as the prominent source of women's access to resources across items. Friends were helpful in granting women access to resources and acquaintances were infrequently identified as a source of social capital. For women who identified a significant other (n = 89, 55.6%), romantic partners served as major sources of emotional support and were problem-solvers (i.e., knows how to fix a car, do your shopping if you are ill). Less favorable trends in women's access to resources were observed for items related to connections to political social capital. Few women knew someone who had ties to formal institutions.

Although the effect sizes were small, findings from the assessment of participant characteristics and experiences that were associated with resource access suggested that women with lower academic achievement (i.e., those who had not graduated high school, attended college for an academic term) and more employment and financial needs had access to fewer types of social capital (RQ2). These outcomes align with Reisig and colleagues (2002) finding that, for justice-involved women, lower levels of social support were available to participants who had limited education and were economically disadvantaged. In regard to political social capital, more employment and financial needs were associated with decreased access to social capital. Additionally, women who had been arrested within the two years prior to the interview were 40% less likely to have access to additional types of political social capital, in comparison

to those who had not reoffended (RQ2). This is particularly problematic because elected officials, City Hall representatives, and the media are crucial contributors to the public's perception of crime-involved individuals and the creation of policies that impact the population. Research has shown local news media consumption to be significantly related to fear of crime, independent of true crime rates and victimization (Chiricos, Padgett, Gertz, 2000; Hale, 1996), and that the perception of higher crime rates is a salient influencer of preferences for stiffer sentencing (i.e., criminal justice policy; Pfeiffer, Windzio, Kleimann, 2005). In other words, public perceptions of crime tend to have greater influence on public policy than trends in crime rates. For women in the criminal justice system, building relationships with elected officials and the media could be crucial to combatting the competing (and inaccurate) narrative of rising crime rates and the need for more punitive sentencing.

Study 2: Crime-Involved Women's Access to Dyadic Social Capital. The second study aimed to contribute to the limited information available about the size, composition, and structure of women's personal support networks. On average, women identified eight network members – which is larger than previously cited (Reisig et al., 2002) – and networks were moderately dense with mostly family, friends, significant others and community members (i.e., neighbors, therapists, coworkers; RQ3). The finding of a larger average network size is likely the result of the strategic use of multiple name generators and interactive network software. Approximately half of the network members were elicited by the primary name generator, but name generators specific to family, friends, employment settings, and negative network ties proved to be important for capturing semiregular interaction partners. The strategy used in the present research was effective in capturing strong and weak ties, as well as those ties that may

not naturally be elicited by a single name generator (i.e., religious, correction, treatment settings).

In additional to the more comprehensive approach to assessing network size, important information was collected about network members' characteristics, access to social capital, and the overall structure of the network. Most of the network members identified were female, employed, and had no history of involvement with the law (RQ3). On average, ties had received some college education, were emotionally close to the participant, shared multi-year relationships, and lived within an hour of their homes. Despite these strengths, networks were comprised of a considerable number of substance users. Most concerning, 12 to 15 percent of network members that women nominated as ties had reportedly engaged in shared episodes of heroin or prescription pills and Methamphetamine or crack cocaine use. Shared experiences of heroin or prescription pills and Methamphetamine or crack cocaine use were less common in the sample. The aggregate network scores suggest wide variation in substance-abusing behaviors across networks. In other words, some women were a part of networks with high proportions of substance users while other networks were substance-free. Considering the well-established connection between substance abusing behaviors and crime (Bennett & Holloway, 2009; Bennett, Holloway & Farrington, 2008; Exum, 2002; Lurigio & Swartz, 1999), it is important to clarify how the substance-abusing behaviors of network members are connected to women's substance use and recidivism rates, and whether or not those individuals also provide resource support. Research suggests that justice-involved women's networks can be helpful in navigating correctional experiences while also engaging in substance-abusing behaviors that contribute to substance use and violations (Goodson, 2018).

In regard to dyadic social capital, on average, women had access to three of the seven types of resources measured (RQ4). Most of the network ties could serve as a job reference, provide a place for women to stay, and lend a small sum of money. Only one-quarter of the network members could sometimes employ people or lend a large sum of money. As one step in the analysis, substance-abusing and crime-involved network members were eliminated from women's networks to observe the effect of including only categorically prosocial network members in the assessment of women's access to social capital. The exclusion of crime-involved network members eliminated more than 400 ties and, on average, removed approximately one-quarter of ties that could provide access to the seven types of social capital (RQ5). The exclusion of substance-abusing network members eliminated 550 ties and, on average, removed approximately one-third of network ties that could provide access to the seven types of social capital. When both substance-abusing and crime-involved network ties were excluded from women's networks, 683 network ties were removed and approximately half of the ties that provided access to the seven types of resources were eliminated.

These findings could benefit from additional information that characterizes women's neighborhoods and experiences of reentry. This type of contextual analysis would likely reveal the lengths to which women go to avoid the people and geographic areas that are affiliated with their past substance use and/or criminal behaviors (Cobbina, Morash, Kashy, Smith, 2014b; Leverentz, 2010). It also would reveal the high concentration of individuals who possess felony convictions in specific neighborhoods. Unfortunately, women in the criminal justice system often return to (or remain in) high-crime, economically disadvantaged areas so interactions within those communities would yield a significant proportion of ties that have had substance or crime involvement. It may be best practice to strategically identify and eliminate substance-

abusing and/or criminally engaged network members who do not provide access to specific types of resource support.

Interestingly, with the exception of the average participant's and network member's age, women who had been under probation and parole supervision did not differ significantly on the variables included in the analyses (RQ6). Women who had been imprisoned for a period of time were able to gain access to similar levels of support and build networks of similar size, density, and composition as those who had not been incarcerated. It is possible that women with a history of incarceration had become reintegrated into their communities – as it relates to social support networks – despite the severity or consequences of prison time. This finding, however, does not identify how experiences of women in the criminal justice system compare to other women in the community. In other words, probationers and parolees do not differ from one another, but are likely under-resourced in comparison to women in general.

Finally, when examining the predictors of access to social capital from network members, a few characteristics were consistently significant across models. Generally, participants who were older in age were less likely to have access to resourceful ties (ties that grant access to at least one type of capital), as well as less likely to have access to higher levels of support from resource-rich ties (ties that grant access to multiple types of social capital; RQ7 & RQ8). Older network members and those who were employed and emotionally close to the participants were more likely to be resourceful ties and grant access to additional types of social capital. Kinship ties are the most frequently identified source of support for women in the criminal justice system (Bui & Morash, 2010; Clone & DeHart, 2014; O'Brien, 2001; Petersilia, 2003; Valera et al., 2015). The current research provides partial support for kinship as a primary source of social capital. In terms of access to resourceful ties and increased access to social capital from resource-

rich ties, parents and other family members were more likely to provide access to resources than community members. Siblings were also more likely to provide access to additional resources. However, when controlling for emotional closeness, kinship ties were unrelated (resource-rich ties; Table 10) or negatively associated (resourceful ties; Table 10) with the amount of resources accessible. In other words, kinship ties are important, but when controlling for emotional closeness, some of those ties (i.e., siblings and children) are associated with reduced odds of access to support. This finding suggests that the closeness of the relationship is more important for providing access to social capital than the relationship type, specifically whether it involves kinship.

Furthermore, assessment of network level measures that were associated with connections to resourceful ties revealed a significant interaction effect between the proportion of kinship ties within a network and network density. Specifically, when density is low (i.e., few connections exist among network members), increases in the proportion of network members who are related to the participant was associated with reduced odds of access to resourceful ties. Although the literature on offenders and social support has emphasized kinship ties, a separate analysis of the characteristics and resourcefulness of significant others would be of interest. In both studies, romantic partners served as important sources of social capital.

Overall, the research presents a strong starting point for rigorously assessing the characteristics of women's networks and how those characteristics are related to social capital. However, it also unveils the seemingly endless opportunities to assess how network characteristics are associated with the women's experience, access to resources, and reoffending patterns. The following section outlines some of the limitations of the dissertation and provides recommendations for future research.

Limitations and Future Research

The present project provides unique contributions to the literature on social capital and the social support networks of women in the criminal justice system. Despite the study's strengths, there are some limitations. Due to the unexpectedly long time needed for data collection, it was not possible to examine the connection of social capital measures to one-year recidivism. Future research should assess whether or not increased access to resources translates to reduced odds of future involvement in the criminal justice system. Additionally, controlling for the amount of time women were in prison and under correctional supervision, as well as the amount of time that had passed since the completion of correction supervision could have strengthened the present research design, and are recommended for studies of recidivism and social networks in the future.

Drawing a subsample of participants from a larger study strengthened the research design but introduced some limitations. For example, the longitudinal design allows for the persistent risks and needs of participants to be assessed in the future in relation to network constructions; however, due to the long period of time (i.e., seven years) between the start of the initial study and the present research, women greatly varied in their current involvement in the criminal justice system. Some women had not been involved with the law since the offense that brought them into the original study. Other women had been released from prison days prior to the interview. Future research should begin network data collection at the time women come into contact with the criminal justice system and execute a longitudinal network design that would allow the assessment of network change over time. In addition to the measures presented in the analysis, inclusion of additional network measures such as isolates (i.e., the number of network members disconnected from all other network members) and clustering (i.e., the number of

close-knit communities within a larger network structure) could further clarify the importance of certain network structures in relation to access to social capital. Doing so would allow researchers to provide targeted advisement and/or design intervention strategies that would assist women in altering existing networks to improve resource access.

The final recommendation for future research is related to the distinction between social capital and social support. The present research is informative in identifying the resources women believed they could gain access to from their networks and the types of resource support accessible from specific networks members; however, these findings do not necessarily represent the number or types of individuals women would activate for needed support. The literature suggests that individuals are selective in this respect. Scholars across various disciplines note the selective nature of help-seeking behaviors (Borgatti & Cross, 2003; Heaney & Israel, 2008; Pescosolido, 1992; Tellez, 1992). Specifically, the body of research identifies factors which influence individuals' decisions to seek help from certain people, such as perceived receptiveness to the request or access to the needed resource. In the context of the present study it is unclear which network ties would actually be activated for resource support. The likelihood of resource provision also is not known. Future research should assess the connection between social capital and social support from network members.

Conclusion and Policy Implications

In closing, the research provides several important contributions to the literature. First, women offenders' social support networks may be larger in size than previously reported. Single name generators could be appropriate to assess core network members but are poorly suited for the examination of semiregular interaction partners. Second, several years after involvement in the criminal justice system, probationers and parolees appear to construct very similar networks

that are rich in personal and problem-solving social capital and lacking in attachments to formal institutions. From a reintegrative standpoint, this finding is encouraging. Despite the stigmatizing effects of a felony conviction and/or imprisonment, women are able to build new and preserve old relationships in their communities in similar ways. However, these connections are limited in their access to capital through people in formal institutions.

Third, women with more employment/financial needs and lower educational achievement are less likely to have access to social capital. This finding provides reason for correctional institutions to continue to encourage women to pursue academic and vocational training opportunities. Lastly, when controlling for emotional closeness, kinship ties were negatively associated with access to social capital and unrelated to the amount of social capital accessible to participants. For those who had constructed networks where few ties were connected to other ties, the proportion of kinship network members decreased access to social capital. These findings highlight the need for additional research on the personal support networks of crime-involved populations. By testing multilevel models and examining interaction effects, the current study demonstrates the utility of egocentric social network techniques for studying community-based correctional populations. Replication of the research would allow for a sophisticated understanding of how women offenders' characteristics and those of their semiregular interaction partners are connected to social capital, social support, and recidivism. Social relationships are complex, and when embedded in differing network structures, it is challenging to broadly advise women who have broken the law.

APPENDIX

Table 12. Factor Analysis for Resource Generator Tool (N = 160)

Variable Description	Item Label	Factor 1 a = 0.86	Factor 2 a = 0.57
1. Knows how to fix a car	FixCar	0.257	-0.033
2. Give advice on using a personal computer	Computer	0.317	-0.103
3. Has a professional occupation	Profession	0.269	-0.112
4. Is an elected official	Official	-0.083	- 0.788
5. Works at City Hall	CityHall	-0.084	- 0.910
6. Can sometimes employ people	Employs	0.320	-0.172
7. Knows a lot about government regulations	Regulation	0.156	-0.284
8. Has good contacts at Tv/radio/newspaper	Media	0.065	-0.304
9. Give advice about money problems	MoneyAd	0.503	-0.019
10. Give advice on problems at work	WorkAd	0.439	-0.104
11. Help dispose of bulky items	Dispose	0.375	0.014
12. Help with small household jobs	HomeJob	0.540	0.081
13. Do your shopping if you are ill	Shopping	0.539	0.031
14. Provide care for a serious health condition	Health	0.427	-0.037
15. Lend a large sum of money	LargeSum	0.444	-0.031
16. Lend a small sum of money	SmallSum	0.610	0.169
17. Give career advice	Career	0.631	-0.017
18. Provide a place to stay for a week	Housing	0.597	0.074
19. Discuss politics	Politics	0.302	-0.503
20. Give sound legal advice	LegalAd	0.480	-0.134
21. Give a good job reference	JobRef	0.685	0.039
22. Can babysit others' children	Babysit	0.448	-0.041
23. Help you find someplace to live	FindHom	0.692	0.052
24. Watch your home or pets while you are away	Pets	0.538	-0.001
25. Be there to talk about your day	Talk	0.571	0.091
26. Owns a car	OwnsCar	0.646	0.128

Note. Shaded cells indicate factors loaded onto the specific factor.

Table 13. Correlations Between Social Capital Measures from Resource Generator Items (N = 160)

	Personal & Problem-Solving Capital	Political Capital
Personal & Problem-Solving Capital	-	
Political Capital	.322	-
Total Social Capital	.975	.523

Note. $p \leq 0.01$ for all Pearson Correlations.

Table 14. Inter-item Correlations for Resource Generator Measures (N = 160)

Item # / Item Label	9	10	15	16	17	18	20	21	26	1	11	12	13	14	19	22	23	24	25	2
9. MoneyAd	1																			
10.WorkAd	**0.46**	1																		
15.LargeSum	**0.25**	**0.28**	1																	
16.SmallSum	**0.27**	**0.32**	**0.43**	1																
17.Career	**0.38**	**0.48**	0.30	**0.28**	1															
18.Housing	**0.35**	***0.20***	***0.19***	**0.36**	**0.35**	1														
20.LegalAd	**0.28**	**0.29**	**0.31**	***0.18***	**0.43**	**0.24**	1													
21.JobRef	**0.28**	**0.29**	**0.39**	**0.40**	**0.45**	**0.40**	**0.43**	1												
26.OwnsCar	**0.35**	**0.23**	**0.23**	**0.54**	**0.29**	**0.54**	**0.22**	**0.47**	1											
1. FixCar	0.08	0.31	0.10	0.14	0.10	0.14	0.15	0.14	***0.17***	1										
11.Dispose	***0.16***	**0.31**	0.09	**0.26**	**0.25**	0.13	0.10	0.14	***0.16***	**0.23**	1									
12.HomeJob	***0.20***	***0.61***	0.23	***0.19***	**0.32**	**0.26**	**0.26**	**0.27**	**0.21**	***0.16***	**0.33**	1								
13.Shopping	0.10	0.12	***0.16***	**0.25**	**0.31**	**0.25**	***0.19***	**0.42**	**0.25**	0.14	**0.28**	**0.44**	1							
14.Health	0.15	-.01	0.09	0.15	**0.31**	**0.22**	**0.22**	**0.28**	***0.18***	***0.19***	**0.30**	**0.33**	**0.48**	1						
19.Politics	0.10	0.10	***0.17***	0.12	**0.25**	0.12	**0.40**	**0.23**	0.06	0.53	***0.16***	**0.23**	**0.21**	**0.27**	1					
22.Babysit	**0.21**	***0.18***	***0.20***	**0.23**	**0.32**	***0.17***	**0.28**	**0.33**	**0.25**	0.14	**0.21**	**0.33**	**0.29**	**0.22**	***0.18***	1				
23.FindHom	**0.33**	**0.32**	**0.21**	**0.38**	**0.49**	**0.38**	**0.35**	**0.48**	**0.45**	0.13	***0.18***	**0.31**	**0.48**	**0.27**	***0.20***	**0.36**	1			
24.Pets	**0.23**	***0.18***	**0.21**	**0.26**	**0.33**	**0.26**	**0.26**	**0.28**	**0.42**	**0.26**	***0.20***	**0.40**	**0.29**	**0.34**	0.15	**0.26**	**0.34**	1		
25.Talk	**0.30**	***0.18***	***0.18***	**0.36**	**0.24**	**0.63**	***0.17***	**0.30**	**0.46**	0.15	**0.23**	**0.39**	**0.25**	**0.26**	0.08	0.13	**0.41**	**0.26**	1	
2.Computer	**0.27**	***0.16***	**0.23**	***0.17***	0.15	0.10	**0.25**	0.12	0.06	***0.17***	**0.20**	**0.35**	**0.23**	***0.20***	0.14	0.12	**0.22**	**0.31**	0.91	1
3.Profession	***0.18***	**0.25**	0.15	0.06	**0.22**	0.06	0.14	**0.30**	0.09	0.15	0.09	0.11	***0.18***	0.08	0.07	0.11	**0.22**	***0.19***	0.03	**0.30**
4.Official	0.06	0.13	0.09	-.01	0.09	0.08	***0.19***	0.09	0.04	0.04	-.01	0.00	0.04	0.08	0.02	0.01	0.10	0.10	0.06	0.14
5.CityHall	0.11	***0.16***	0.11	-.03	0.13	0.07	***0.17***	0.08	0.04	0.07	0.07	0.04	0.09	0.13	0.10	0.15	0.08	0.09	0.05	0.12
6.Employs	**0.32**	**0.29**	**0.31**	***0.18***	**0.21**	0.13	***0.20***	**0.27**	0.12	0.15	0.14	0.14	0.10	0.15	0.03	***0.18***	0.15	**0.30**	**0.17**	**0.21**
7.Regulation	***0.17***	0.13	0.11	0.15	0.12	0.10	**0.36**	***0.20***	0.04	***0.19***	0.08	0.01	0.05	0.05	***0.20***	***0.18***	0.81	0.08	-.01	0.13
8.Media	0.08	***0.20***	0.02	-.02	0.14	-.02	0.10	0.08	-.02	0.12	0.13	-.03	0.12	0.09	0.14	0.13	0.09	0.12	0.05	0.15

Pearson correlations; bold $p \leq 0.01$; bold and italicized $p \leq 0.05$.

Table 14. (cont'd)

Item # Item Label	3	4	5	6	7
9. MoneyAd					
10.WorkAd					
15.LargeSum					
16.SmallSum					
17.Career					
18.Housing					
20.LegalAd					
21.JobRef					
26.OwnsCar					
1. FixCar					
11.Dispose					
12.HomeJob					
13.Shopping					
14.Health					
19.Politics					
22.Babysit					
23.FindHom					
24.Pets					
25.Talk					
2.Computer					
3.Profession	1				
4.Official	0.12	1			
5.CityHall	0.10	**0.70**	1		
6.Employs	**0.31**	0.19	**0.17**	1	
7.Regulation	**0.29**	0.14	**0.28**	**0.30**	
8.Media	***0.19***	***0.16***	**0.28**	***0.16***	**0.28**

Pearson correlations; bold $p \leq 0.01$; bold and italicized $p \leq 0.05$.

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