Gender-Responsive Risk/Needs Assessment

Final Report[1]

Prepared for the Minnesota Department of Corrections

and the

Advisory Task Force on the Woman and Juvenile Female Offender in Corrections

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[1] This research was funded by the National Institute of Corrections under annual cooperative agreements awarded to the Criminal Justice Research Center at the University of Cincinnati. Conclusions stated in this document are those of the authors and do not necessarily represent the official position or policies of the United States Department of Justice.

ACKNOWLEDGEMENTS

We are pleased to submit the final report for the Gender-Responsive Risk/Needs Assessment Project (a.k.a. the "Trailer Project"). In doing so, we hope that the findings presented here help correctional leaders and staff not only understand the importance of gender-responsive needs, but also develop and support gender-responsive services related to abuse, parenting, and self-concept issues throughout Minnesota. Most importantly, we hope that stakeholders agree that the project affords an assessment tool that will continue to generate important information about women offenders into the future.

As will be apparent in the following text, the project in Minnesota was a success. We learned valuable policy-relevant information related to women offenders' needs and risk factors, and constructed a useful assessment tool specifically for women. However, none of this would have been possible without the hard work and support from the individuals mentioned below. They truly made this project a success.

We first recognize the stakeholders who identified a need and sought support to facilitate their goal of improving services to women in Minnesota. Certainly, Commissioner Joan Fabian, Carol Skradski, Dawn Miller, and the members of the Advisory Task Force on Female Offenders were key visionaries in this regard. Early leadership from Anne McDiarmid and financial support from the National Institute of Corrections were key to the collaborative effort that made this project possible.

This project involved numerous hours of recruiting participants, conducting interviews, administering surveys, logging data, troubleshooting problems, and maintaining contact with University of Cincinnati researchers. Many of these activities were conducted by staff on top of their everyday duties and without extra compensation. As such, these individuals certainly deserve thanks for their commitment, dedication, and hard work. First of all, Susan Stacey at the Minnesota Department of Corrections deserves many, many thanks for her hard work on this project. Sue acted as project coordinator in Minnesota, staying abreast of data collection and project progress across five agencies in Minnesota. She held meetings, conference calls, drafted notes and summaries, and fielded numerous emails to keep site coordinators and UC research staff up to date. The success of this project attests to her hard work. The site coordinators and staff at Dakota County Community Corrections, Ramsey County Community Corrections, Washington County Community Corrections, Hennepin County Drug Court, and Minnesota Correctional Facility-Shakopee were invaluable to this project. Many thanks to Kim Evans and Karen Thorsen (MCF-Shakopee), Sandra Hahn (Washington County Probation), Janice Griffin (Dakota County Probation), Jan Scott and Peggy Powers (Ramsey County Probation), and Karin Mann, Julie Rud, Melissa Toavs, and Nancy Skilling (Hennepin County Drug Court) for all of their work on this project. Sandra Hahn, Janice Griffin, Jan Scott, Peggy Powers, Karin Mann, Melissa Toavs, Julie Rud, and Kim Evans were essential in motivating staff, recruiting women, and collecting interview and survey data for the initial segment of the project. Further, Kim, Sandra, Janice, Jan, and Peggy were extremely helpful in answering questions and facilitating data availability at the follow-up stage of data collection. Karin Mann, Julie Rud, and Melissa Toavs at Hennepin County Drug Court collected their own follow-up data and made it available to UC staff with the help of Nancy Skilling, who compiled the Hennepin follow-up data in electronic form for the project. This project would not have been successful without the above individuals. Their hard work, attention, and support for the project are commendable.

We are especially grateful to the women offenders who participated in this study. They did so with little reward other than a suggestion that the research might improve women's programs and services at some future point in time. These women gave up time to participate in the completion of self-report surveys and did so quite willingly. We also note that women offenders in all of the NIC project sites

offered input into research design issues and opinions about the importance of specific risk factors. Their opinions were invaluable.

My staff and co-authors at the University of Cincinnati conducted all of the data preparation, maintained a wonderful working relationship with Minnesota personnel, wrote major sections of the report, and conducted most of the data analysis. Emily Wright was the Project Coordinator and co-researcher for this study. The project benefited tremendously from her talent as well as her meticulous attention to the many details of bringing the research to this stage of completion. Additionally, Ashley Bauman and Emily Salisbury provided assistance in collecting follow-up data and writing sections of the report. I am also grateful to my staff for their skill, commitment, and good cheer.

Financial support, guidance, and oversight were provided by the National Institute of Corrections which funded the present study. Special thanks to Phyllis Modley and Maureen Buell, Correctional Program Specialists at the National Institute of Corrections, for their vision and support.

In closing, this project met all of the characteristics of solid action research. Minnesota staff involved the research group at the University of Cincinnati in a team effort at all junctures of this project. We believe that Minnesota staff members are genuinely interested in helping women offenders. We were pleasantly surprised by the desire of those involved to see the results of this study; it indicates that the results of this study will most likely be used as were intended – to better understand, meet, and serve women's needs. Emily Wright joins me in noting that we personally enjoyed the working relationships that developed over the course of this project. Finally, because the greater Minnesota community likely will never know of the dedication demonstrated by the public servants mentioned in this acknowledgement, I thank you on their behalf.

I wish you all the best in your future endeavors.

Pat Van Voorhis

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This is the final report of a three-year research project conducted with women offenders in Minnesota. The goals of this research were as follows:

- To validate the LSI-R among women offenders assigned to prison, probation, or drug court in Minnesota;

- To develop a gender-responsive trailer to the LSI-R that amends the dynamic risk factors currently assessed by the LSI-R to include scales relevant to parenting, abuse, relationship issues, self-esteem, and self-efficacy;

- To participate in a national study designed to develop new risk/needs assessments for women offenders.

The larger study was a collaborative project between the National Institute of Corrections (NIC), the University of Cincinnati, and four correctional jurisdictions, the Colorado Department of Corrections, Maui County, the Missouri Department of Corrections, the Minnesota Department of Corrections, and three Minnesota county probation departments. Funded by NIC, this research is now concluding the development and construction validation of six new risk/needs assessments specifically for women offenders.[2]

This work builds from two perspectives on offender rehabilitation: a) research by Canadian scholars Donald Andrews, Paul Gendreau, James Bonta, and others, which stresses the importance of assessing and treating dynamic risk factors[3] (see Andrews & Bonta, 2003; Gendreau, Little & Goggin, 1996); and b) work by feminist criminologists (e.g., Joanne Belknap, 2007; Kathleen Daly, 1992; Meda Chesney-Lind,1997, Barbara Bloom, Barbara Owen, and Stephanie Covington, 2003) stressing the importance of women's unique "pathways" to crime. Both perspectives are relevant to the importance of programming targeted to dynamic risk factors. However, the pathways perspective asserts that women's unique needs are not adequately tapped by the current generation of risk/needs assessments, such as the LSI-R.

The present report focuses on findings from Minnesota, and the development of a "trailer" which Minnesota officials may wish to use in conjunction with the LSI-R (Andrews & Bonta, 1995). We have included a literature review that provides additional evidence in support of programming for gender-responsive needs. Finally, the report presents profiles of women

[2] The Project created full risk/needs assessments for three separate applications, prisons, probation, and parole. In addition, separate "trailer" instruments for probation, parole, and institutional settings were designed to be used in conjunction with existing gender-neutral instruments such as the Northpointe Compas (Brennan, Dieterich, & Oliver, 2006) or the Level of Service Inventory-Revised (Andrews & Bonta, 1995).

[3] The term "dynamic risk factor" refers to a dynamic need that can get better or worse over time and that is also a predictor of future offending. Examples include substance abuse, employment, education, etc. Dynamic risk factors, in other words, are important to prediction of crime and direct programming for problems that contribute to future offending.

offenders in Minnesota, across a psychosocial, demographic, offense, and economic characteristics.

It should be noted that the effort to develop an optimal assessment design involved testing several assessment models in the jurisdictions listed above. The final assessment that was submitted to the National Institute of Corrections at the conclusion of these projects is similar but not identical to the design tested in Minnesota. More specifically, the final trailer provides for the assessment of additional risk factors which were not directly tested in Minnesota. It also benefits from the knowledge accumulated across all of the jurisdictions. We discuss the recommended assessment at the end of this report and provide evidence from the Minnesota data to show that the new design is likely to be valid for use in Minnesota.

Minnesota Project History

Funding for this study was secured from NIC in 2004 when Minnesota Department of Corrections and four community correctional agencies agreed to be part of the testing of an addendum to the LSI-R., which would focus upon gender-responsive needs including self-esteem, self-efficacy, relationships, parenting skills, child abuse, and adult victimization. Minnesota officials agreed that participation in the larger NIC Gender-Responsive Assessment Project would benefit women offenders in Minnesota because the information provided by the study could be used to guide services for women and to facilitate agency-wide planning for their needs.

Several site meetings were conducted with correctional staff in Minnesota to ensure their cooperation and understanding of the project. It was determined that one prison site (Minnesota Correctional Facility [MCF]-Shakopee), three probation sites (Dakota, Ramsey, and Washington

Counties), and one drug court site (Hennepin County Drug Court) would be involved in the Minnesota project. Data was collected at three time periods; the first involved collecting initial intake data, where women offenders who agreed to participate were administered the LSI-R interview, completed a self-report survey (see Appendix A), and also answered questions to a short interview termed the "face sheet" interview. The second and third data collection efforts occurred six and twelve months after intake, where follow-up data regarding women's recidivism or institutional misbehavior were collected. More detailed descriptions of the LSI-R interview, the self report survey, and the face sheet interview are given in the Study Methodology section of this report.

Major responsibilities for assessment administration and data collection across sites were assumed by Kim Evans and Karen Thorsen (MCF-Shakopee), Sandra Hahn (Washington County Probation), Janice Griffin (Dakota County Probation), Jan Scott and Peggy Powers (Ramsey County Probation), and Karin Mann, Dawn Miller, Julie Rudd, and Nancy Skilling (Hennepin County Drug Court).

This is not the first report of research findings. Annual reports have been provided to NIC since 2005, as soon as enough data were available to provide stable research findings.

Apart from the Minnesota project, researchers at the University of Cincinnati conducted an extensive review of social science literature regarding the gender-responsive needs that became the focus of this and other studies. In addition, focus groups with correctional staff, administrators, and women offenders which were convened in Colorado, Nebraska, Oahu, and Minnesota greatly informed the present study. We discuss the results of that exploration in the next section.

Women Offenders and Risk Assessment

Although males continue to account for the majority of offenders, the number of incarcerated females has increased at a much faster rate than that of males over the past decade. In fact, since 1995, the number of incarcerated females has increased 53 percent compared to 32 percent among male inmates (Bureau of Justice Statistics, 2005). With the number of convicted female offenders growing, it becomes increasingly important to examine current risk and need assessments.

Many of the risk and need assessments which are currently in use were created for men and later applied to women with little regard for their appropriateness or validity (Bloom et al., 2003; Chesney-Lind, 1997; Morash, Bynum, & Koons, 1998; Van Voorhis & Presser, 2001). Van Voorhis and Presser (2001) reported that 36 states had not validated their institutional classification systems on women offenders. They also found that many of these assessments "over-classified" women by placing them into higher custody levels than was required by their behavior. In addition, many assessments ignored needs specific to women such as relationships, mental health problems, parental and childcare issues, abuse and victimization, self-esteem, and self-efficacy (Van Voorhis & Presser, 2001). These problems are not unique to institutional classification systems; many community correctional assessments also have not been validated on women offenders and most lack attention to gender-responsive factors (Blanchette, 2004; Blanchette & Brown, 2006; Brennan, 1998; Brennan & Austin, 1997; Farr, 2000; Reisig, Holtfreter, & Morash, 2006). Thus, the predictive effects of gender-responsive factors on recidivism have not been thoroughly tested.

Risk and need assessments originated as separate assessments and tasks (Van Voorhis, Braswell, & Lester, 2004). Risk assessments were used to predict an offender's likelihood of

recidivating. The earliest risk assessments consisted of static measures such as current offense and criminal history. At that time, needs assessments were separate instruments. They examined issues such as education, employment, and physical and mental health – areas where practitioners could provide much needed services (or refer offenders to those services). In later years, many of these needs came to be seen as important risk factors, predictive of future offending (Andrews, Bonta, & Hoge, 1990a). Today, risk and need assessments are combined into one single assessment called a dynamic risk/needs assessment; these assessments provide correctional practitioners with a complete picture of an offender's risk for recidivism and the needs that contribute to that risk. Popular dynamic instruments such as the Northpointe COMPAS (Brennan et al., 2006) and the Level of Service Inventory-Revised (Andrews & Bonta, 1995) are used predominately as community risk assessments, but they have also been successfully used to predict institutional misconducts (e.g., see Bonta, 1989; Bonta & Motiuk, 1987, 1990, 1992; Kroner & Mills, 2001; Motiuk, Motiuk, & Bonta, 1992; Shields & Simourd, 1991).

The risk that offenders pose to institutional and community safety is of utmost concern to correctional policy makers (Cullen, Fisher, & Applegate, 2000; Feeley & Simon, 1992), and dynamic risk/needs assessments are particularly relevant to these concerns. A wide body of research, including a group of meta-analyses (Andrews et al., 1990a; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990b; Gendreau et al., 1996; Izzo & Ross, 1990; Lipsey, 1992), supports the use of risk assessments and the use of correctional programming to target risk factors. The summation of these meta-analyses resulted in two principles of effective intervention that are relevant to this study: *the risk principle* and *the needs principle* (Andrews et al., 1990a; Andrews et al., 1990b). The risk principle states that those programs which provide

high levels of services to medium and high risk offenders will be the most successful in reducing recidivism (Andrews et al., 1990b; Bonta, Wallace-Capretta, & Rooney, 2000; Lipsey, 1992; Lipsey & Wilson, 1998; Lovins, Lowenkamp, Latessa, & Smith, 2007; Lowenkamp & Latessa, 2002). Related to the risk principle, the needs principle states that such reductions in recidivism can only occur if the risk factors that are targeted in correctional treatment are dynamic needs which are correlated with recidivism (Andrews et al., 1990a; Andrews et al., 1990b). According to several meta-analyses, the strongest predictors of recidivism (and therefore considered to be the most important in terms of treatment) are the dynamic needs known as the "Big Four" (i.e., antisocial attitudes, peers, personality, and criminal history) (Andrews & Bonta, 2003; Andrews et al., 1990b; Gendreau, 1996). Dynamic risk/needs assessments also include other relevant dynamic risk factors such as substance abuse, family dysfunction, financial well-being, education, emotional health, and employment.

There are two concerns raised when this paradigm is applied to female offenders. First, the majority of studies supporting current risk/needs assessments and the principles of effective intervention were based primarily on male offenders. While some studies have found dynamic risk assessments to be valid for women (see Andrews, Dowden, & Rettinger, 2001; Blanchette & Brown, 2006; Coulson, Ilacqua, Nutbrown, Giulekas, & Cudjoe, 1996; Holsinger, Lowenkamp, & Latessa, 2003), other studies have produced conflicting results (see Blanchette, 2005; Law, Sullivan, & Goggin, in press; Olson, Alderden, & Lurigio, 2003; Reisig et al., 2006). Two meta-analysis found dynamic risk factors (those used by current risk/needs assessments) to be predictive for both men and women (Dowden & Andrews, 1999; Simourd & Andrews, 1994). However, the foundational studies did not test the factors currently put forward in the gender-

responsive literature. More specifically, the early studies do not examine whether gender-responsive factors were in fact risk factors (Blanchette & Brown, 2006).

Regardless of whether current dynamic risk/needs assessments are valid for women or not, they are likely not the assessments we would have today had we started with women offenders. Moreover, because current dynamic risk/need assessments (which do not include gender-responsive factors) guide today's correctional policy and practice, it is probable that gender-responsive factors are being ignored. It is, after all, quite difficult to treat unidentified problems.

The second concern is that correctional officials still lack an accurate understanding of the risk that women pose to institutions and communities. While women can be classified at different levels of risk relative to each other, men still pose a much greater risk to safety than women do (including those women classified as high risk). In prison, men engage in a substantially greater number of aggressive incidents than women (see Hardyman & Van Voorhis, 2004). This holds true in the community as well, with high risk men having somewhat higher rates of recidivism than high risk women (Washington State Institute for Public Policy, 2007). What this means is that high risk should be defined differently for women and men. Moreover, it is important that risk be properly understood by policy makers, officials and practitioners, so that women are not inappropriately over-classified or subjected to overly restrictive policies or practices that are not proportionate to the risk they pose to society.

Gender-Responsive Needs

If research on women had guided the development of dynamic risk/needs assessments, current assessments might look considerably different (see Berman, 2006; Bloom et al., 2003).

The rapidly expanding gender-responsive literature suggests that women have unique pathways to crime (Belknap, 2007; Bloom et al., 2003; Daly, 1992, 1994; Owen, 1998; Reisig et al., 2006; Ritchie, 1996) which are grounded in the following needs: a) self-esteem and self-efficacy, b) parental stress, c) victimization and abuse, d) relationship dysfunction, e) mental health (especially depression); and f) poverty and homelessness.

Self-Esteem and Self-Efficacy

A large body of research has examined the link between recidivism and self-esteem. These studies reported that low self-esteem, often measured as "personal distress," was not related to recidivism (Andrews & Bonta, 2003). In fact, some programs designed to increase self-esteem have actually increased recidivism (Andrews, 1983; Andrews et al., 1990a; Gendreau et al., 1996; Wormith, 1984). However, much of this research was conducted primarily on male offenders, leaving the relationship between recidivism and self-esteem among female offenders yet to be established. In the gender-responsive literature, self-esteem is more closely tied to the idea of "empowerment" than "personal distress." Empowerment refers to not only increased self-esteem, but also to an increased belief in women's power over their own lives (Task Force on Federally Sentenced Women, 1990). The connection between empowerment and reduced recidivism has been noted by correctional treatment staff, researchers, and female offenders (Carp & Schade, 1992; Case & Fasenfest, 2004; Chandler & Kassebaum, 1994; Koons, Burrow, Morash, & Bynum, 1997; Morash et al., 1998; Predergast, Wellisch, & Falkin, 1995; Schram & Morash, 2002; Task Force on Federally Sentenced Women, 1990). Additionally, one meta-analysis has reported a connection between low self-esteem and antisocial behavior in female offenders (Larivière, 1999).

Another facet of self-concept, self-efficacy, refers to a person's belief in his or her ability to accomplish personal goals. Like the research on self-esteem, self-efficacy has been traditionally married to the concept of "personal distress" and shown not to be an important predictor of recidivism among male offenders. In contrast, gender-responsive scholars asserted that self-efficacy was crucial to gender-responsive treatment (Bloom et al., 2003; Bloom, Owen, & Covington, 2005). While there is limited research on the connection between self-efficacy and recidivism among female offenders, some researchers suggest that the link is important (Rumgay, 2004). Our research in other sites also found self-efficacy to be related to the recidivism of female probationers and parolees (Van Voorhis, Salisbury, Wright, & Bauman, 2008); effects on prison misconducts, however, were less apparent (Salisbury, Van Voorhis, & Spiropoulis, in press; Wright, Salisbury & Van Voorhis, 2007).

Parental Stress

Research has demonstrated a link between parental stress and crime (Ferraro & Moe, 2003; Ross, Khashu, & Wamsley, 2004; Salisbury, Van Voorhis, & Wright, 2006; Van Voorhis et al., 2008), particularly among female offenders who are parenting alone (Bonta, Pang, & Wallace-Capretta, 1995). Since over 70 percent of women under correctional supervision are mothers to minor children (Bureau of Justice Statistics, 1999), this issue is particularly salient. Financial strain and substance abuse may add to the stress of child care responsibilities among female offenders, who may eventually become overwhelmed in ways that become relevant to criminal activity (Greene, Haney, & Hurtado, 2000).

Most research examining parental stress among female offenders has focused on the influence of incarceration on both mothers and their children (Baunach, 1985). This research

often examined the influences of custody and visitation issues (Clark, 1995; Enos, 2001; Kampfner, 1995; Kazura, 2001). It would seem that women who are faced with the possibility of losing custody of their children would experience the greatest degree of parental stress. Child custody issues pose considerable stress to incarcerated offenders, although contrary to popular beliefs, loss of custody more frequently occurs prior to incarceration rather than during (Ross et al., 2004). Even so, parental stress was observed to be modestly related to prison misconducts in one of the two other NIC institutional sites (Wright et al., 2007).

Mothers under community correctional supervision have been largely ignored, although the effects of parental stress on the future offending of women serving community correctional terms would seem to be particularly strong as, most of these women are actively parenting their children. Our research in other NIC community sites supported this assumption (Van Voorhis et al., 2008).

Mental Health

Women offenders are more likely than male offenders to exhibit depression, anxiety, and self-injurious behavior (Belknap & Holsinger, 2006; Bloom et al., 2003; McClellan, Farabee, & Crouch, 1997; Peters, Strozier, Murrin, & Kearns, 1997). Mood disorders, panic disorders, post-traumatic stress, and eating disorders are fairly common (Bloom et al., 2003; Blume, 1997). Additionally, co-occurring disorders such as depression and substance abuse afflict these women much more often than men (Bloom et al., 2003; Holtfreter & Morash, 2003; Owen & Bloom, 1995, Blume, 1997).

It has been suggested that mental health issues are not important correlates of recidivism (Andrews et al.,1990a; Blanchette & Brown, 2006); however, this research may be influenced by

two major issues. First, offenders may suffer from mental illnesses that have not been officially diagnosed. In correcting this omission, studies using behavioral measures of mental health (such as suicide attempts), rather than diagnostic history, have observed stronger links between mental health and recidivism among women (Benda, 2005; Blanchette & Motiuk, 1995; Brown & Motiuk, 2005). One study that compared findings for male and female offenders, failed to detect similar correlates for men (Benda, 2005). Second, it may be that some specific mental illnesses are linked to recidivism while others are not. In this regard, studies and risk scales often compile all mental disorders into one category (see Law et al, in press) which may mask the effects of particular illnesses. Disaggregating specific forms of mental illness into current symptoms of depression and psychosis found significant effects on both institutional and community outcomes (Van Voorhis, Salisbury, Bauman, Holsinger, & Wright, forthcoming; Wright et al., 2007). Clearly, much more research is needed to study the link between mental health and recidivism among women offenders.

Victimization and Abuse

Research has shown that female offenders are more likely than male offenders and women in general to suffer physical and sexual abuse both as children and as adults (Bureau of Justice Statistics, 1999; McClellan et al., 1997). While estimates of physical abuse range from 6 to 13 percent for male offenders, as many as 32 to 75 percent of female offenders have experienced physical abuse (Bureau of Justice Statistics, 1999; Browne, Miller, & Maguin, 1999; Greene et al., 2000; Owen & Bloom, 1995).

At this time, research concerning the link between victimization and crime has not produced conclusive results. Although support continues to grow for the link between child

abuse and juvenile delinquency among girls (Hubbard & Pratt, 2002; Siegel & Williams, 2003; Widom, 1989), the connection between both child and adult abuse and criminal activity among adult female offenders has not been as clear. Some studies reported no relationship between victimization and recidivism (Bonta et al., 1995; Loucks, 1995; Rettinger, 1998), while other studies have found conflicting results. Two studies found that abused women were less likely to offend (Blanchette, 1996; Bonta et al., 1995), and one study reported that victimization did not improve prediction beyond the LSI-R (Lowenkamp, Holsinger, & Latessa, 2001). In contrast, other studies, including a recent meta-analysis (Law et al., in press), have produced support for the link between abuse and criminal activity (Widom, 1989; Siegel & Williams, 2003; Makarios, 2007). Daly's (1992) qualitative research reported that some female offenders began involvement with the criminal justice system following domestic violence victimization suggesting a "pathway" between the two. Similarly, Law et al. (in press) found that child abuse was predictive of recidivism among women in community settings but was not predictive of institutional misconduct among women in correctional facilities. Our research in Colorado (Salisbury, et al., in press) and Missouri (Van Voorhis et al., forthcoming; Wright et al., 2007), however, found that child abuse was related to institutional misconducts but not to community recidivism. This suggests that the relationship between victimization and recidivism may be contingent on the type of recidivism analyzed. Mixed results from studies examining the connection between victimization and offender outcomes may also be due to differing measures of victimization, such as a personal interview versus a self-administered survey, or diagnostic history versus behavioral indicators (Browne et al., 1999).

Relationship Dysfunction

Women appear to be more relational than men and tend to place great emphasis on the importance of developing and maintaining healthy and supportive relationships with others in their lives (Bloom et al., 2003; Gilligan, 1982). Female offenders are no different. However, because of the high rates of abuse and trauma experienced by female offenders, their ability to achieve healthy relationships may be severely limited (Covington, 1998). Relationships characterized by high levels of conflict and dysfunction between partners and low levels of support may influence women's criminality prior to, during, or after incarceration. Many women offenders may engage in relationships that facilitate their criminal behavior (Koons et al., 1997; Ritchie, 1996). They also may be involved in abusive relationships, or may turn to substance abuse as a result of problems with their intimate relationships (Langan & Pelissier, 2001).

In stark contrast, Blanchette and Brown (2006) have suggested that females may actually avoid engaging in criminal behavior to avoid harm to their relationships with others. However, this may only apply to women in relationships with pro-social partners, because the same relational attachment process may explain a woman's increased criminal behavior if they are involved in relationships with antisocial individuals. In fact, one study found that relationships with intimate partners influenced female offenders both positively and negatively (Benda, 2005). Research in our other NIC prison sites found relationship issues to be related to serious prison misconducts (Salisbury et al., forthcoming; Wright et al., 2007). Additionally, correctional treatment programs targeted to healthy relationships have appeared promising (Koons et al., 1997). Otherwise, the research on this topic has been very limited. With such limited research, it is especially instructive to note that women offenders in focus groups have expressed concerns

about being involved with antisocial men in their futures (Van Voorhis, Pealer, Spiropoulos, & Sutherland, 2001).

Poverty and Homelessness

Poverty is paramount in the lives of many female offenders (Belknap, 2007; Bureau of Justice Statistics, 1999; Chesney-Lind & Rodriguez, 1983; Daly, 1992; Holtfreter et al. , 2004; Owen, 1998; Richie, 1996). In fact, only 40 percent of women in state prisons report full-time employment, and most report having never earned more than $6.50 an hour (Bureau of Justice Statistics, 1999). Research has shown that women face many barriers to financial success including drug/alcohol dependence, child care responsibilities, and a lack of educational and vocational skills required to obtain higher paying employment opportunities. Some women find that illegal activities offer more financially lucrative opportunities than employment (Owen & Bloom, 1995). As a result of such barriers, Owen and Bloom (1995) found that only 37 percent of women surveyed reported legitimate employment as their primary source of income prior to incarceration, while 22 percent reported public assistance and 16 percent reported selling illegal drugs. When faced with extreme poverty and economic marginalization (combined with addiction, abusive histories, and dysfunctional relationships), many female offenders find themselves dealing with the added crisis of homelessness (Bloom, 1998).

We have found indices of employment and poverty to be among the strongest correlates of recidivism among female probationers in Missouri and Maui (Van Voorhis et al., forthcoming) and parolees inColorado (Salisbury et al., forthcoming). Moreover, Holtfreter et al. (2004) offered especially compelling support for the role of poverty in the criminal futures of women offenders. They reported that poverty increased the probability of rearrest by a factor of

4.6 and the probability of supervision by 12.7 after controlling for LSI-R risk score, age, education, and minority status. In addition, the odds of recidivism declined by 83 percent for women initially living below the poverty line who were given some form of public assistance with their financially-related needs (e.g., education, healthcare, housing, and vocational training).

Substance Abuse

Like male offenders, large numbers of female offenders suffer from drug addiction (Bureau of Justice Statistics, 2005). In fact, some studies have reported that the incidence of illegal drug use was higher among female offenders than male offenders (McClellan et al., 1997). There is a clear connection to offender outcomes (Law et al., in press; Salisbury et al., in press; Van Voorhis et. Al., forthcoming).

Scholars warn that substance abuse also co-occurs with trauma and mental health problems (Bloom et al., 2003; Covington, 1998; Henderson, 1998; Langan & Pelissier, 2001; Messina, Burdon, Prendergast, 2003; Owen & Bloom, 1995; Peters et al., 1997). In support, this trajectory from abuse to mental illness to criminal behavior was recently reported among women but not men (McClellan et al., 1997).

In sum, it is clear that there is both theoretical and empirical support for researching gender-responsive needs, particularly as they relate to risk/needs assessments for women offenders. By doing so, it is hoped that these needs will become a priority of policy makers and practitioners.

Study Methodology

Women participants from the greater Minneapolis area of Minnesota were drawn from prison, probation, and drug court sites. Participants comprising the institutional sample were drawn from MCF-Shakopee, Minnesota's only women's prison. Ramsey, Dakota, and Washington Counties comprised the probation sites from which participants were recruited. Finally, the Hennepin Drug Court, located in Minneapolis, constituted the drug court site. In the prison and probation sites, women offenders admitted for a felony, person misdemeanor, or gross misdemeanor offense and sentenced for a minimum of six months were eligible to participate in the study. In the drug court site, women offenders admitted for a felony controlled substance crime and sentenced to supervision for a minimum of six months were eligible to participate in the study. All offenders who agreed to participate consented to the research under recruitment and consent procedures approved by the University of Cincinnati's Institutional Review Board.

During the intake process at each site, women offenders were asked if they were interested in participating in a study that would assist in better meeting the needs of women offenders on Minnesota, particularly for program development and assessment for classification purposes. Specifically, women were informed that if they agreed to participate, researchers would be allowed access to their LSI-R interview and other background information obtained by administration staff during the intake process. Furthermore, they were asked to complete a confidential self-report survey, referred to as the "Trailer," with items about their relationships, self-esteem, self-efficacy, parenting, and adult and child victimization experiences. Women probationers and drug court participants completed the trailer survey during an initial supervision meeting with their probation officers, while incarcerated women filled out the survey in intake groups during a free period. For purposes of confidentiality, women sealed their surveys in envelopes upon completion, and these were then mailed to University of Cincinnati researchers.

Again, all women who agreed to participate signed consent forms agreeing that they understood the nature of the study, as required by the Institutional Review Board at the University of Cincinnati.

Participation Rates

Prison Sample

The prison sample consisted of 198 newly admitted women offenders to the Minnesota Department of Corrections. All eligible women admitted between November 1, 2004 and June 8, 2005 were asked to participate; of 202 women, 98.0 percent (198 women) consented to the research. Twelve-month follow-up data describing the incidence and prevalence of prison misconducts were obtained between May 2005 and June 2006.

Probation Sample

The probation sample consisted of a total of 233 newly admitted female offenders placed on probation in Dakota, Ramsey, and Washington Counties. Across all three probation sites, 75.4 percent (233 women) of 309 eligible women probationers agreed to participate. Response rates and follow-up time frames for each of the probation sites were as follows:

- Dakota County: All eligible offenders admitted between November 29, 2004 and March 1, 2006 were asked to participate; of 92 women, 86.9 percent (80 women) agreed to participate in the study. Follow-up data describing the incidence and prevalence of community recidivism measures were obtained between May 2005 and March 2007.

- Washington County: All eligible offenders admitted between October 15, 2004 and February 10, 2006 were asked to participate in the project; of 91 women, 72.5 percent (66 women) consented. Follow-up data describing the incidence and prevalence of community recidivism measures were obtained between April 2005 and February 2007.

- Ramsey County: All eligible female probationers admitted between November 16, 2004 and February 23, 2006 were asked to participate in the project; of 207 women, 42.0 percent (87 women) agreed to participate. Follow-up describing the incidence and prevalence of community recidivism were obtained between May 2005 and March 2007.

Although the participation rate of Ramsey County was comparatively lower than the participation rate in other probation counties, the sample drawn for this study was similar to the general population of women offenders served by Ramsey County. Of women offenders sentenced in Ramsey County for a felony, person misdemeanor, or gross misdemeanor offense during the time of the study, most were Caucasian (49.6 percent) followed by African American (40.2 percent) and Latino (5.1 percent). Their average age was 32.6 years. They had committed 0.62 prior felonies, and served 0.62 prior incarcerations. Women offenders from Ramsey County who agreed to participate in this study were slightly older, being around 35 years old (35.7 years old), and reported more prison sentences (1.39 prior prison terms on average). The research sample was similar to the larger population of female offenders in terms of race and average number of prior felonies. Participants from Ramsey County were mostly Caucasian (51.7 percent), followed by African American (40.2 percent), and Latino (4.6 percent), and reported an average of 0.64 prior felonies.

Drug Court Sample

The drug court sample consisted of 150 newly admitted women offenders to the Hennepin County Drug Court. All women admitted between October 28, 2004 and December 6, 2005 were asked to participate; of 163 eligible women, 92.0 percent (150 women) consented to

participate. Follow-up describing the incidence and prevalence of recidivism were obtained between May 2005 and December 2005.

Sample

Prison Participants

Table 1 describes the demographic characteristics of the women in each sample. As can be seen, institutionalized women were on average 33.7 years old, with most offenders falling between 21 and 40 years old. The majority of women were Caucasian, followed by American Indian and African American offenders (70.2 percent, 13.1 percent, and 12.1 percent, respectively). While only 36 women (18.2 percent) reported being married at intake, 126 (63.1 percent) had at least one child under the age of eighteen. Over half (59.1 percent) of the women graduated from high school or received their high school GED. Prior to their incarceration, half of the participants were employed on a full or part-time basis or were unable to be employed due to being disabled or having educational or child care responsibilities. Women in this sample reported more needs than women in drug court or on probation; institutionalized women reported higher percentages of problems with homelessness and all types of victimization than other women in Minnesota. Almost nine percent (8.6 percent) of institutionalized women were homeless upon intake, with 44.2 percent receiving some sort of public assistance at the time. Over 70 percent reported being the victim of emotional or physical assault at some point in their lifetime, with more than 50 percent (54.5 percent) experiencing domestic violence and 31.4 percent experiencing sexual abuse as a child.

Probation Participants

Probationers were slightly older than the institutionalized women. The average age of female probationers in Minnesota was 34.0 years old, with most offenders being 21 to 30 years old. Like the women in prison, most women probationers were Caucasian (72.5 percent), but they differed slightly from the prison sample with regard to the percentage of African American and Latino offenders (18.9 percent, and 3.4 percent, respectively). Somewhat more women reported being married at the time of the study (49 women, or 21.0 percent), and, like the prison sample, 144 (61.8 percent) had at least one child under the age of eighteen. The majority (78.5 percent) of the women graduated from high school or received their high school GED, and over half (58.8 percent) were employed (or in school, disabled, or raising children) prior to their placement on probation. Like the women in prison, many women on probation reported having financial problems and being victimized. Sixty-one percent of probationers were abused or assaulted at some time in their lives, with 47.2 percent experiencing domestic violence and 21.5 percent being sexually victimized as a child.

Drug Court Participants

Table 1 shows that female offenders in the drug court sample were younger than women in prison and on probation. The average age of female offenders in this sample was 31.8 years old, with most offenders being 21 to 30 years old. More African American women (29.3 percent) were placed in the drug court than were placed in prison or probation, although the majority of women in the drug court were still Caucasian (55.3 percent). Only fourteen women (9.3 percent) reported being married at the time of the study, and 77 (51.3 percent) had at least one child under the age of eighteen. The majority (68.0 percent) of the women graduated from high school or received their high school GED, and over half (56.0 percent) were employed,

disabled, raising children, or in school prior to intake into the drug court. Unlike the women on probation, women in the Hennepin drug court reported slightly higher rates of child abuse (23.5 percent and 26.2 percent for sexual and nonsexual abuse, respectively), financial problems (46.3 percent), and homelessness (6.0 percent), but like the other sites, over half (52.7 percent) reported experiencing abuse or assault at some point in their lives.

Table 1: Demographic Characteristics by Sample Type

	Prison		Probation		Drug Court	
Background Characteristic	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
	198	100.0	233	100.0	150	100.0
Age						
18-20 years old	10	5.0	20	8.7	20	13.3
21-30 years old	68	34.3	77	32.6	60	40.0
31-40 years old	68	34.3	69	30.0	35	23.4
41-50 years old	44	22.2	50	21.7	23	15.3
51 years and older	8	4.0	16	7.0	12	8.0
Mean age	33.75		34.01		31.83	
Race						
Caucasian	139	70.2	169	72.5	83	55.3
African American	24	12.1	44	18.9	44	29.3
American Indian	26	13.1	6	2.6	12	8.0
Latino	4	2.0	8	3.4	3	2.0
Currently Married						
Yes	36	18.2	49	21.0	14	9.3
Participant Has Children Under Age 18						
Yes	126	63.1	144	61.8	77	51.3
Employment						
Employed (full or part time, child care, student, or disabled)	99	50.0	137	58.8	84	56.0
Not employed	99	50.0	96	41.2	66	44.0
Graduated From High School or Received HS GED						
Yes	117	59.1	183	78.5	102	68.0

Table Continues

Table 1: Demographic Characteristics by Sample Type, continued

	Prison		Probation		Drug Court	
Background Characteristic	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
	198	100.0	233	100.0	150	100.0
Income						
$0 – 10,000	136	72.0	111	50.0	75	50.0
$10, 00 – 20,000	33	17.5	48	21.6	39	26.0
$20,000 – 30,000	9	4.8	22	9.9	21	14.0
$30,000 – 40,000	1	0.5	19	8.6	8	5.3
$40,000 – 50,000	2	1.1	7	3.2	4	2.7
More than $50,000	3	1.6	12	5.4	3	2.0
Homeless						
Yes	17	8.6	8	3.4	9	6.0
Receiving Public Assistance						
Yes	84	44.2	97	41.6	69	46.3
Victim of Emotional or Physical Assault						
Yes	139	71.3	141	60.5	79	52.7
Victim of Domestic Violence						
Yes	104	54.5	110	47.2	54	36.2
Victim of Adult Sexual Abuse						
Yes	27	14.1	27	11.6	16	10.7
Victim of Child Sexual Abuse						
Yes	60	31.4	50	21.5	35	23.5
Victim of Child Nonsexual Abuse						
Yes	52	27.2	43	18.5	39	26.2

Criminal Histories of Minnesota Women Offenders

Table 2 portrays the criminal histories of the women in each sample. Regarding their current conviction charge, 45.5 percent of incarcerated women were convicted of drug offenses, while 20.3 percent committed a violent offense. Most women had previously committed a felony offense (59.1 percent) and most (76.8 percent) had previously been incarcerated. The majority of prisoners scored in the moderate to moderate- high ranges of the LSI-R.

Fewer probationers than prisoners were convicted of drug offenses (24.5 percent), and more were convicted of DWI or DUI offenses (22.3 percent), with an additional 17.2 percent convicted of forgery and/or fraud offenses. Most women offenders on probation committed non-violent offenses (78.9 percent), and 21.1 percent committed a violent offense. As would be expected, fewer probationers (20.6 percent) than prisoners had previously been convicted of a felony, and fewer had served prior incarceration (38.2 percent). Accordingly, the majority of probationers scored in the low-moderate to moderate ranges of the LSI-R.

In accordance with the selection criteria of this study, most offenders in the drug court sample were convicted of a drug offense (98.7 percent), and most drug offenses were non-violent. More women in the drug court had been convicted of a previous felony (32.0 percent) than probationers, although fewer in the drug court (29.3 percent) had served a prior incarceration. Most women in drug court scored in the low to low-moderate ranges of the LSI-R.

Table 2: Criminal History by Sample Type

	Prison		Probation		Drug Court	
Background Characteristic	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
	198	100.0	233	100.0	150	100.0
Most Serious Present Offense						
Drug Offense	90	45.5	57	24.5	149	98.7
Property Offense	24	12.1	30	12.9	0	0.0
Person Offense	31	15.7	25	10.7	0	0.0
Forgery/Fraud	31	15.7	40	17.2	0	0.0
DWI/DUI	15	7.6	52	22.3	1	0.7
Child-Related Offense	1	0.5	7	3.0	0	0.0
Other	3	1.5	11	4.7	0	0.0
Present Offense Violent						
Yes	40	20.3	49	21.1	2	1.3
Prior Felonies						
None	81	40.9	185	79.4	102	68.0
1-2	60	30.3	36	15.5	34	22.7
3-5	36	18.2	9	3.9	8	5.3
6 or more	21	10.6	3	1.3	6	4.0
Mean number of felonies		2.21		0.40		0.77
Prior Incarcerations						
Yes	152	76.8	89	38.2	44	29.3
Mean number of incarcerations		3.73		1.01		0.67
LSI-R (MHS) Categories						
Low	1	0.5	54	23.2	43	28.7
Low Moderate	33	16.7	86	36.9	59	39.3
Moderate	83	41.9	61	26.2	37	24.7
Moderate High	65	32.8	26	11.2	10	6.7
High	16	8.1	6	2.6	1	0.7

Measures

Outcome Measures

All outcome variables used in this study are described in Table 3. The outcome measures were intended to tap serious and nonserious institutional misconducts and community recidivism committed six and twelve months after intake into participants' respective programs. Serious institutional misconducts refer to serious infraction such as assaults, escapes, threats, smuggling, and sexual behavior. Serious misconducts specifically exclude minor rule infractions such as failure to comply with orders and being in unauthorized areas. Measures of "all" misconducts include both forms of serious and nonserious misconducts, including serious infractions such as assault and threats, as well as nonserious infractions such as failure to comply and being in unauthorized areas.

Community recidivism measures for probationers refer to new arrests, new convictions, new probation violations (PVs), and revocations to prison committed six and twelve months after intake. These measures were collected from probation officers' field notes and confirmed through official records. In addition to these recidivism measures, additional measures relating to court-imposed and drug court-imposed technical violations (TVs) and bench warrants (BWs) were evaluated among drug court participants. Court-imposed technical violations refer to violations in which offenders were placed into court custody for more than three days for a drug court violation; in-house technical violations refer to violations in which the drug court imposed a sanction, such as community service, and bench warrants refer to new bench warrants that were enforced within six and twelve months of intake. All outcome measures across all sites in Minnesota were collected six and twelve months after intake, and are reported as incidence (frequency) and prevalence (presence/absence) measures.

Table 3 indicates that within six months of incarceration, 37.4 percent of women committed at least one prison misconduct, including serious and nonserious infractions, while this number increased to 42.9 percent within twelve months of incarceration. Within six months of incarceration, 32.8 percent of women offenders incurred a serious misconduct, while 39.9 percent incurred a serious misconduct within twelve months. Twelve months after being placed on probation, 15.0 percent of women were convicted of a new offense, almost one-quarter (23.6 percent) of women had been re-arrested, almost 30 percent (29.6 percent) had committed a probation violation, and 4.3 percent were revoked to prison. Slightly more women from the drug court recidivated twelve months after being admitted into the drug court; 20.0 percent of the drug court offenders were re-convicted, 27.3 percent had been re-arrested, 42.0 percent had committed a probation violation, and 11.3 were revoked to prison.

Table 3: Institutional Misconduct and Recidivism Outcome Measures by Sample Type, Minnesota

	Prison		Probation		Drug Court	
Recidivism Measure	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
	198	100.0	233	100.0	150	100.0
6-Month All Misconducts						
Yes	74	37.4	--	--	--	--
Mean number of misconducts	3.73		--		--	
12-Month All Misconducts						
Yes	85	42.9	--	--	--	--
Mean number of misconducts	1.42		--		--	
6-Month Serious Misconducts						
Yes	65	32.8	--	--	--	--
Mean number of misconducts	0.62		--		--	
12-Month Serious Misconducts						
Yes	79	39.9	--	--	--	--
Mean number of misconducts	1.07		--		--	
6-Month Convictions						
Yes	--	--	21	9.0	15	10.0
Mean number of convictions	--		0.11		0.12	
12-Month Convictions						
Yes	--	--	35	15.0	30	20.0
Mean number of convictions	--		0.20		0.27	

Table Continues

Table 3: Institutional Misconduct and Recidivism Outcome Measures by Sample Type, Minnesota, Continued

	Prison		Probation		Drug Court	
Recidivism Measure	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
	198	100.0	233	100.0	150	100.0
6-Month Arrests						
Yes	--	--	38	16.3	26	17.3
Mean number of arrests		--		0.22		0.25
12-Month Arrests						
Yes	--	--	55	23.6	41	27.3
Mean number of arrests		--		0.39		0.50
6-Month Probation Violations						
Yes	--	--	36	15.5	49	32.7
Mean number of violations		--		0.21		0.59
12-Month Probation Violations						
Yes	--	--	69	29.6	63	42.0
Mean number of violations		--		0.40		0.37
6-Month Revocation to Prison						
Yes	--	--	3	1.3	10	6.7
12-Month Revocation to Prison						
Yes	--	--	10	4.3	17	11.3

Table Continues

Table 3: Institutional Misconduct and Recidivism Outcome Measures by Sample Type, Minnesota, Continued

	Prison		Probation		Drug Court	
Recidivism Measure	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
	198	100.0	233	100.0	150	100.0
6-Month Court-Imposed Technical Violations						
Yes	--	--	--	--	41	27.3
Mean number of violations		--		--		0.38
12-Month Court-Imposed Technical Violations						
Yes	--	--	--	--	53	35.2
Mean number of violations		--		--		0.51
6-Month In-House Technical Violations						
Yes	--	--	--	--	61	40.7
Mean number of violations		--		--		0.71
12-Month In-House Technical Violations						
Yes	--	--	--	--	69	46.0
Mean number of violations		--		--		0.91
6-Month Bench Warrants						
Yes	--	--	--	--	54	36.0
Mean number of warrants		--		--		0.65
12-Month Bench Warrants						
Yes	--	--	--	--	60	40.0
Mean number of warrants		--		--		1.03

Scales for Risk Factors

Scales derived from one of two sources were assessed as potential risk factors (predictors) for the criminal outcomes noted in the previous section: 1) the Level of Service Inventory-Revised (Andrews & Bonta, 1995); and 2) the Trailer, a self-report, paper-and-pencil instrument created by the University of Cincinnati staff. Additional dichotomous variables tapping domains relating to economic hardships, welfare, and victimization were assessed at intake with a short interview referred to as the "face sheet" interview. A more detailed description of each assessment and its accompanying risk scales follows.

Level of Service Inventory-Revised

The LSI-R was administered to Minnesota participants at intake via a semi-structured interview, which was corroborated with file information when necessary. The LSI-R (Andrews & Bonta, 1995) is an empirically validated 54-item risk and needs assessment that has been successfully used in Canada, the United States, and the United Kingdom (Girard & Wormith, 2004; Hollin, Palmer, & Clark, 2003), as well as among juvenile, adult, male, and female offenders of various ethnic backgrounds (Coulson et al., 1996; Dowdy, Lacy, & Unnithan, 2002; Girard & Wormith, 2004; Holsinger et al., 2003; Lowenkamp et al., 2001; Simourd, 2004). Ten subscales comprise the LSI-R; these subscales reflect prior Criminal History, Education/Employment, Financial Situation, Family/Marital Relationships, Accommodation, Use of Leisure Time, Companions, Alcohol/Drug Use, Emotional/Mental Health, and Attitudes/Orientation.

Tables 4, 5, and 6 present the mean, standard deviation, and ranges of LSI-R subscale scores, as well as the gender-responsive Trailer scale scores and face sheet variables for women

across the prison, probation, and drug court samples in Minnesota. LSI-R scales are coded so that higher scores reflect the presence of a risk factor. The mean LSI-R score for incarcerated women in Minnesota was 31.15, with total scores ranging from 12 to 47; Minnesota probationers scored an average of 21.72, while drug court participants scored an average of 19.71 on the LSI-R. Eigenvalues and internal consistency (alpha coefficients) will not be reported for the LSI-R scales, since this assessment instrument has been reported on and validated elsewhere (see Andrews & Bonta, 1995); as such, only a brief description of each subscale will be provided.

The *Criminal History* scale was comprised of 10 items assessing the offender's past criminal behavior. Questions relating to prior convictions, incarcerations, juvenile offenses, escape history, past institutional misconduct, community supervision, and past violent behavior were included in this scale.

The *Education/Employment* scale measured an offender's educational and employment difficulties prior to incarceration. Ten items comprised this scale; questions pertaining to whether an offender was unemployed upon intake or had been frequently unemployed, had ever held a job for a full year, or had ever been fired tapped employment difficulties, while questions relating to a participant's educational attainments and problem behavior while in school measured educational problems.

The *Financial* scale assessed financial difficulties with two questions relating to the degree of financial problems that participants faced and their reliance upon social assistance.

The *Family/Marital* scale consisted of four questions. Participants were asked about the quality of relationships and degree of support from parents and other family members, whether they were dissatisfied with their marital or similar situation, and whether significant others or family members had criminal histories or displayed criminal behavior.

The *Accommodation* scale consisted of three questions pertaining to a participant's living situation. Specifically, this scale measured the degree to which an offender was living in unsuitable situations, in a high-crime neighborhood, or had moved frequently during the past year.

Prosocial use of *Leisure/Recreation* time was tapped with two questions. This scale assessed whether participants actively participated in organized activities or whether they could make better use of their free time.

The *Companions* scale included five items to assess the degree to which an offender associated with prosocial and antisocial friends. Questions relating to whether the participant was a social isolate, and whether they had friends or acquaintances who were prosocial as well as antisocial comprised this scale.

Alcohol/Drug Problems were assessed with nine items. This scale measured the degree to which an offender's drinking and/or drug use had ever been or was currently a problem, and whether such drug use interfered with family or marital relationships and school or work duties. Additionally, this scale also assessed whether a participant's alcohol or drug use had resulted in law violations or medical problems.

Emotional/Personal issues were tapped by a five-item scale incorporating questions about whether the offender received mental health treatment in the past or was receiving it currently, as well as whether she was experiencing moderate to severe psychosis.

An offender's *Attitude/Orientation* towards criminal behavior was assessed with four items. Whether the offender was supportive of crime, unfavorable to conventional behavior and values, and whether she held negative attitudes towards her punishment comprised this scale.

Self-Report Supplemental Survey, the Trailer

The Trailer is a self-report paper-and-pencil survey that was created by University of Cincinnati research staff in order to measure gender-responsive needs of women offenders. The survey is comprised of multiple subscales, each which asks several questions in order to tap an underlying domain. These domains pertain to self-esteem, self-efficacy, parenting and relationship problems, and childhood and adult victimization. Each participant in the study completed the instrument individually or in a group setting; the survey took approximately 30 minutes to complete. Completed surveys were kept confidential from Minnesota criminal justice officials and others not directly involved in the project data analysis. Upon their completion, surveys were sealed by the participants and sent directly to researchers at the University of Cincinnati for entry and analysis. The instrument was originally developed by UC researchers and NIC staff. However, several of its scales were already well-established in the literature prior to the study's implementation (e.g., Rosenberg Self-Esteem Scale and the Sherer Self-Efficacy Scale). Other scales were informed by extensive research and literature reviews. A discussion of each scale included in the Trailer is presented below.

The mean, standard deviation, and ranges for all gender-responsive scales examined in this study are provided in Tables 4, 5, and 6. The scales presented below were constructed through factor analyses using principle component extraction with varimax rotation. Once the scales were defined through this data reduction process, a final confirmatory analysis (principle component extraction) was conducted to examine the final factor structures; as a general rule, items which loaded above 0.50 among each domain were retained and subsequently added to create a summed scale. Exceptions to the 0.50 cutoff were made for some items which loaded well in other project samples. The gender-responsive scales presented below are coded so that

higher scores reflect the presence of a risk factor on the parental stress, abuse, and relationship dysfunction scales; higher scores on the self-esteem and self-efficacy scales reflect positive self-concepts. Appendix B presents the internal factor structure of each scale, along with measures of internal consistency (Chronbach's alpha), while Table 7 provides information on each scale's construct validity, or the extent to which each scale is correlated with similar variables. Notably, the factor structures of the risk/need scales were comparable across other project samples, including institutional and probation samples. Scales were collapsed for inclusion in the final instrument.

The *Self-Esteem* scale was based on the Rosenberg Self-Esteem Scale (Rosenberg, 1979). It used a 3-point Likert-type answer format, and consisted of ten items tapping the degree to which participants feel positive feelings about themselves, such as self-respect, self-worth, and self-satisfaction (eigenvalue = 5.38, alpha = 0.90 for the prison sample; eigenvalue = 5.64, alpha = 0.91 for the probation sample; eigenvalue = 5.05, alpha = 0.89 for the drug court sample). The Rosenberg Scale has been tested in a variety of settings and found to have strong psychometric properties (see Dahlberg, Toal, & Behrens, 1998; Rosenberg, 1979). Factor analysis revealed that all 10 items loaded at or above the .50 cutoff and were therefore retained. Construct validity tests (Pearson *r*) (Table 7) ranged from .59 to .71 across the three sites. This was not surprising given that this is a well-established scale. The scale was subsequently collapsed into two categories and incorporated into the final trailer instrument as a strength to be subtracted from the sum of the risk factors.

The purpose of the *Self-Efficacy* scale was to measure the degree to which participants felt that they were capable of achieving their goals and dealing with problems in their lives. This 17-item scale was based on the Sherer Self-Efficacy Scale and used a 3-point Likert-type answer

format (Sherer, Maddus, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982) (eigenvalue = 7.45, alpha = 0.92 for the prison sample; eigenvalue = 6.87, alpha = 0.91 for the probation sample; eigenvalue = 6.34, alpha = 0.89 for the drug court sample) and construct validity results ranged from $r = .59$; $p \leq .01$ to $r = .59$; $p \leq .01$. Similar to the self-esteem scale, the self-efficacy scale retained all 17 items when subjected to factor analysis. This scale was also collapsed into two levels and included into the final trailer instrument as a strength (see Appendix D).

Abuse and victimization were measured with the Childhood Abuse, Adult Emotional Abuse, Adult Physical Abuse, and Adult Harassment scales. These scales were informed by the writings of Belknap, Fisher, and Cullen (1999), Browne et al., 1999, Campbell, Campbell, King, Parker, and Ryan (1994), Coleman (1997), Holsinger, Belknap, and Sutherland (1999), Murphy and Hoover (1999), Rodenberg and Fantuzzo (1993), and Shepard and Campbell (1992). The adult victimization scale contained 54 behavioral indicators of abuse and victimization. Respondents were asked to mark one of three response choices, a) never, b) less than five times, or c) more than five times, for each of the 54 items. Data reduction (factor analysis) revealed three factors: 1) Physical Abuse, containing 15 items; 2) Emotional Abuse, consisting of 16 items; and 3) Harassment, containing 11 items.

The purpose of the *Adult Physical Abuse* scale was to determine the degree of physical abuse experienced by the participant as an adult. Questions relating to physical violence such as being kicked, beaten, dragged, scratched, and choked, as well as being threatened with weapons were used (eigenvalue = 10.04, alpha = 0.96 for the prison sample; eigenvalue = 9.87, alpha = 0.96 for the probation sample; eigenvalue = 10.24, alpha = 0.97 for the drug court sample). Construct validity tests, consisted of correlations with both survey and interview measures and

ranged from $r = .15$; $p \leq .10$ to $r = .71$; $p \leq .01$. The *Adult Emotional Abuse* scale (eigenvalue = 10.49, alpha = 0.96 for the prison sample; eigenvalue = 10.98, alpha = 0.97 for the probation sample; eigenvalue = 10.58, alpha = 0.97 for the drug court sample) measured the degree to which participants had been controlled, insulted, humiliated, disrespected, and harassed by others during adulthood. Highest construct validity correlations were $r = .73$; $p \leq .01$, $r = .71$; $p \leq .01$, and $r = .74$; $p \leq .01$ for the prison, probation and drug court samples, respectively. Finally, the *Adult Harassment* scale tapped participants' experience of harassment, such as being stalked or followed, as well as having a restraining order violated and having their home broken into (eigenvalue = 6.64, alpha = 0.93 for the prison sample; eigenvalue = 5.87, alpha = 0.90 for the probation sample; eigenvalue = 6.25, alpha = 0.92 for the drug court sample). Construct validity tests ranged from $r = .20$; $p \leq .01$ to a high of $r = .74$; $p \leq .01$.

The child abuse scale initially contained 24 behavioral indicators of abuse and used the same response choices as the adult victimization scale. Factor analysis of the scale indicated a single factor of 19 items. The *Childhood Abuse* scale (eigenvalue = 10.17; alpha = 0.95 for the prison sample; eigenvalue = 9.11, alpha = 0.94 for the probation sample; eigenvalue = 10.59, alpha = 0.95 for the drug court sample) was designed to assess the degree to which a participant experienced physical and emotional abuse as a child. Pearson *r* values for the construct validity tests ranged from .17 ($p \leq .10$) to .32 ($p \leq .01$). Questions included whether the participant had been pushed, kicked, beaten, dragged, choked, and burned, as well as forced to do something embarrassing, or insulted or ridiculed, among other things during childhood.

The six-item *Relationship Dysfunction* scale (eigenvalue = 2.94, alpha = 0.77 for the prison sample; eigenvalue = 2.97, alpha = 0.78 for the probation sample; eigenvalue = 2.92, alpha = 0.78 for the drug court sample) identified women who were experiencing relationship

difficulties resulting in a loss of personal power. More specifically, this scale included items which tapped a lack of satisfaction and support from one's partner, neglect of other relationships and responsibilities, and a greater tendency to incur legal problems when in an intimate relationship than when not in one. A number of sources from the substance abuse literature use the term "co-dependency" to describe such difficulties (see Beattie, 1987; Bepko & Krestan, 1985; Woititz, 1983). However, we understand that this construct has not been widely researched. The development of the Relationship Dysfunction scale was informed by Crowley and Dill (1992; Silencing the Self Scale), Fischer, Spann, and Crawford (1991; Spann-Fischer Codependency Scale), and Roehling and Gaumond (1996; Codependent Questionnaire). Construct validity correlations ranged from .11 ($p \leq .10$) to .46 ($p \leq .01$). The scale was collapsed into a three-point scale for the final trailer assessment.

Modifications were made to a 20-item, Likert-type scale developed by Avison and Turner (1986) to create the *Parental Stress* scale. Factor analysis revealed a single factor containing 12 items that reflected a woman who felt overwhelmed by her parental responsibilities and included items pertaining to child management skills and the extent of support offered by family members (eigenvalue = 4.58, alpha = 0.84, prison sample; eigenvalue = 4.26, alpha = 0.82, probation sample; eigenvalue = 3.61, alpha = 0.76, drug court sample). Construct validity results ranged from .31 ($p \leq .01$) to .41 ($p \leq .01$).

Face Sheet Interview

The face sheet refers to a 29-item interview conducted at intake at each site. These interviews were corroborated, where possible, through record checks. The face sheet assessed many traditional custody and criminal history questions, and also provided assessment of some

additional gender-responsive factors. In particular, participants were asked whether or not they were *Homeless* prior to intake into the prison, probation, or drug court in which they were supervised. They were also asked whether they were receiving *Public Assistance* prior to intake. Additional victimization questions were asked. Specifically, participants were asked whether or not they had been victims of emotional or physical assault ever in their lives *(Emotional/Physical Victimization*), and, if so, whether they had experienced *Domestic Violence*, *Adult Sexual Abuse*, *Child Sexual Abuse*, and *Child Nonsexual Abuse*. All of the above items were coded as 0 and 1, with 1 indicating that a participant had said yes to the relevant question. Finally, the participant was asked her income level, which was scored on a six-point ordinal scale, with higher numbers reflecting higher income levels.

Table 4: Descriptive Statistics for Assessment Scales, Minnesota Prison

	Minnesota Prison			
Scale Item	Mean	Median	Standard Deviation	Range
N=198				
LSI-R Assessment Items				
Criminal History (10)[a]	5.52	6.00	2.01	0-10
Education/Employment (10)	5.71	6.00	2.25	0-10
Financial (2)	1.39	1.00	0.66	0-2
Family/Marital (4)	2.58	3.00	1.12	0-4
Accommodations (3)	1.77	2.00	0.90	0-3
Use of Leisure Time (2)	1.53	2.00	0.68	0-2
Alcohol/Drugs (9)	5.36	6.00	2.58	0-9
Companions (5)	3.02	3.00	1.12	0-4
Emotional/Personal (5)	2.72	3.00	1.48	0-5
Attitude (4)	1.69	2.00	1.40	0-4
LSI-R Total	31.15	32.00	7.26	12-47
Trailer Gender-Responsive Scales				
Self-Esteem (10)	23.07	24.00	4.91	11-30
Self-Esteem (Collapsed) (2)	0.59	1.00	0.49	0-1
Self-Efficacy (17)	40.28	40.64	7.04	17-51
Self-Efficacy (Collapsed) (2)	0.52	1.00	0.50	0-1
Relationship Dysfunction (6)	8.04	7.00	2.60	5-15
Relationship Dys. (Collapsed) (3)	1.93	2.00	0.96	0-3
Parental Stress *(N=126)*(12)	15.79	15.79	5.54	1-29
Parental Stress (Collapsed) (2)	0.63	0.50	0.71	0-2
Child Abuse (19)*	26.68	23.00	8.36	19-57
Adult Physical Abuse (15)*	26.58	25.00	8.81	15-45
Adult Emotional Abuse (16)*	35.52	38.00	9.70	16-48
Adult Harassment (11)*	18.16	17.00	6.05	11-33
Facesheet Gender-Responsive Scales				
Income (6)**	1.42	1.00	0.91	1-6
Homeless (2)	0.09	0.00	0.28	0-1
Public Assistance (2)	0.44	0.00	0.50	0-1
Emotional/Phys Victimization (2)	0.71	1.00	0.45	0-1
Domestic Violence (2)	0.76	1.00	0.43	0-1
Adult Sexual Victimization (2)	0.20	0.00	0.40	0-1
Child Sexual Victimization (2)	0.44	0.00	0.50	0-1
Child Abuse, Nonsexual (2)	0.38	0.00	0.49	0-1

[a] Numbers in parentheses denote the number of questions comprising the scale

*Median replacement was used

**Income was measured on a 6 point ordinal scale

Note: Mean replacement was used for all Gender-Responsive scales, but was not used for LSI-R items

Table 5: Descriptive Statistics for Assessment Scales, Minnesota Probation

	Minnesota Probation			
Scale Item	Mean	Median	Standard Deviation	Range
N=233				
LSI-R Assessment Items				
Criminal History (10)[a]	3.21	3.00	2.19	0-8
Education/Employment (10)	4.00	4.00	2.84	0-10
Financial (2)	1.15	1.00	0.73	0-2
Family/Marital (4)	1.99	2.00	1.30	0-4
Accommodations (3)	0.85	1.00	1.00	0-3
Use of Leisure Time (2)	1.24	1.00	0.83	0-2
Alcohol/Drugs (9)	3.90	4.00	2.77	0-9
Companions (5)	2.01	2.00	1.35	0-4
Emotional/Personal (5)	2.48	3.00	1.53	0-5
Attitude (4)	0.85	0.85	1.13	0-4
LSI-R Total	21.72	21.00	9.67	2-44
Trailer Gender-Responsive Scales				
Self-Esteem (10)	23.83	24.00	4.83	10-30
Self-Esteem (Collapsed) (2)	0.64	1.00	0.48	0-1
Self-Efficacy (17)	41.86	42.00	6.46	23-51
Self-Efficacy (Collapsed) (2)	0.65	1.00	0.48	0-1
Relationship Dysfunction (6)	7.66	7.00	2.43	5-15
Relationship Dys. (Collapsed) (3)	1.33	2.00	1.14	0-3
Parental Stress (*N=144*) (12)	14.81	14.81	5.25	1-27
Parental Stress (Collapsed) (2)	0.45	0.00	0.72	0-2
Childhood Abuse (19)*	24.33	22.00	7.02	19-54
Adult Physical Abuse (15)*	23.71	21.00	8.55	15-45
Adult Emotional Abuse (16)*	34.03	35.00	10.27	16-48
Adult Harassment (11)*	17.25	16.00	5.83	11-33
Facesheet Gender-Responsive Scales				
Income (6)**	2.08	1.00	1.46	1-6
Homeless (2)	0.03	0.00	0.18	0-1
Public Assistance (2)	0.42	0.00	0.49	0-1
Emotional/Phys Victimization (2)	0.61	1.00	0.49	0-1
Domestic Violence (2)	0.77	1.00	0.42	0-1
Adult Sexual Victimization (2)	0.19	0.00	0.39	0-1
Child Sexual Victimization (2)	0.35	0.00	0.48	0-1
Child Abuse, Nonsexual (2)	0.30	0.00	0.46	0-1

[a] Numbers in parentheses denote the number of questions comprising the scale

*Median replacement was used

**Income was measured on a 6 point ordinal scale

Note: Mean replacement was used for all Gender-Responsive scales, but was not used for LSI-R items

Table 6: Descriptive Statistics for Assessment Scales, Minnesota Drug Court

	Minnesota Drug Court			
Scale Item	Mean	Median	Standard Deviation	Range
N=150				
LSI-R Assessment Items				
Criminal History (10)[a]	2.43	2.00	2.40	0-9
Education/Employment (10)	4.37	4.00	2.89	0-10
Financial (2)	0.97	1.00	0.77	0-2
Family/Marital (4)	1.39	1.00	1.24	0-4
Accommodations (3)	0.81	0.00	1.00	0-3
Use of Leisure Time (2)	0.99	1.00	0.78	0-2
Alcohol/Drugs (9)	4.37	5.00	2.39	0-9
Companions (5)	2.78	3.00	1.21	0-4
Emotional/Personal (5)	1.23	1.00	1.31	0-5
Attitude (4)	0.39	0.00	0.76	0-3
LSI-R Total	19.71	19.00	8.96	1-42
Trailer Gender-Responsive Scales				
Self-Esteem (10)	24.80	25.00	4.22	12-30
Self-Esteem (Collapsed) (2)	0.37	0.00	0.48	0-1
Self-Efficacy (17)	43.32	44.00	5.60	28-51
Self-Efficacy (Collapsed) (2)	0.45	0.00	0.50	0-1
Relationship Dysfunction (6)	7.60	7.60	2.32	5-14
Relationship Dys. (Collapsed) (3)	0.60	0.00	0.77	0-2
Parental Stress *(N=77)*(12)	13.60	13.60	4.25	4-26
Parental Stress (Collapsed) (2)	0.94	1.00	0.59	0-2
Childhood Abuse (19)*	25.55	22.00	8.60	19-54
Adult Physical Abuse (15)*	21.75	19.00	7.96	15-45
Adult Emotional Abuse (16)*	30.17	30.00	9.37	16-48
Adult Harassment (11)*	15.65	14.00	5.18	11-33
Facesheet Gender-Responsive Scales				
Income (6)**	1.91	1.50	1.19	1-6
Homeless (2)	0.06	0.00	0.24	0-1
Public Assistance (2)	0.46	0.00	0.50	0-1
Emotional/Phys Victimization (2)	0.53	1.00	0.50	0-1
Domestic Violence (2)	0.68	1.00	0.47	0-1
Adult Sexual Victimization (2)	0.20	0.00	0.40	0-1
Child Sexual Victimization (2)	0.44	0.00	0.50	0-1
Child Abuse, Nonsexual (2)	0.49	0.00	0.50	0-1

[a] Numbers in parentheses denote the number of questions comprising the scale

*Median replacement was used

**Income was measured on a 6 point ordinal scale

Note: Mean replacement was used for all Gender-Responsive scales, but was not used for LSI-R items

Table 7: Self-Report Survey: Construct Validity of Gender-Responsive Scales (Pearson *r*, one-tailed)

Gender-Responsive Trailer Scales	Prison *r*	Probation *r*	Drug Court *r*	External Variable
Self-Esteem Scale	.67***	.71***	.59***	Self-Efficacy Scale
Self-Efficacy Scale	.67***	.71***	.59***	Self-Esteem Scale
Child Abuse Scale	.25***	.28***	.32***	Non-Sexual Abuse as a Child
	.27***	.28***	.17*	Sexual Assault as a Child
Adult Emotional Abuse Scale	.18**	.45***	.22***	Victim of emotional/physical assault
	.50***	.57***	.64***	Forced to do something embarrassing
	.73***	.71***	.74***	Adult Harassment Scale
	.63***	.67***	.70***	Adult Physical Abuse Scale
	.31***	.23***	.30***	Victim of domestic violence
Adult Physical Abuse Scale	.32***	.45***	.36***	Victim of emotional/physical assault
	.21**	.21***	.15*	Victim of sexual assault as adult
	.36***	.25***	.40***	Victim of domestic violence
	.70***	.68***	.71***	Adult Harassment Scale
	.63***	.67***	.70***	Adult Emotional Abuse Scale
Adult Harassment Scale	.29***	.41***	.28***	Victim of emotional/physical assault
	.62***	.57***	.54***	Harmed self to get your attention
	.73***	.71***	.74***	Adult Emotional Abuse Scale
	.70***	.68***	.71***	Adult Physical Abuse Scale
	.28***	.20***	.38***	Victim of domestic violence

Table Continues

Table 7: Self-Report Survey: Construct Validity of Gender-Responsive Scales (Pearson *r*, one-tailed), continued

Gender-Responsive Trailer Scales	Prison *r*	Probation *r*	Drug Court *r*	External Variable
Relationship Dysfunction	.12**	.25***	--	Marital dissatisfaction (LSI-R)
	.34***	.44***	.35***	Open with your partner
	.37***	.46***	.41***	Comfortable saying "no" to partner
	.45***	.45***	.37***	Hard to be self when in a relationship
Parental Stress (Parents only)	--	--	.15*	Number of children
	--	--	-.33***	A woman must choose between a well-run home and a good social life
	.33***	.31***	.34***	I believe that I am a good parent
	.40***	.41***	--	Don't always control temper when kids do something wrong (1=yes, 4 = no)

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Results

Results of this study are shown in Tables 8 through 13. Initial tests of predictive validity involved the examination of bivariate correlations (Pearson *r*, one-tailed) between the assessment scales (LSI-R and gender-responsive) and six- and twelve-month institutional and community outcome measures. We then moved to tests of several total assessment models. These tests summed significant scales into total scores for their effects on recidivism. Given that this research area is still emerging within the field of corrections, correlations with alpha levels of .10 and below were flagged as significant. Results are presented below by site.

Prison Results

All Misconducts

Results of six- and twelve-month misconducts committed by institutionalized women are provided in Tables 8 and 9. As demonstrated in Table 8, several patterns were evident across six- and twelve-month misconducts. First, most LSI-R predictors were highly correlated with each outcome (significant correlation coefficients range from $r = .10$, $p \leq .10$, to $r = .36$, $p \leq .01$), suggesting that the LSI-R domains relating to criminal history, education/employment difficulties, financial difficulties, poor family/marital relationships, accommodation problems, poor use of leisure/recreation activities, antisocial companions, alcohol/drug problems, emotional/personal problems, and criminal attitudes/orientations, as well as the LSI-R total score were strong predictors of female institutional misconduct. Second, many gender-responsive items were also correlated with prevalence and incidence measures of six- and twelve-month misconducts. For instance, it appeared that high self-esteem and self-efficacy significantly *decreased* the likelihood that a woman incurred serious misconducts – at both follow-up points,

high levels of self-esteem and self-efficacy were negatively correlated with misconducts (significant correlation coefficients ranging from $r = -.09$, $p \leq .10$ to $r = -.15$, $p \leq .05$).

Third, prior abuse and victimization increased the likelihood that a woman engaged in misconducts. Child abuse was a correlate of the incidence and prevalence of six- and twelve-month misconducts (correlations ranging from $r = .10$, $p \leq .10$ to $r = .17$, $p \leq .01$). Harassment during adulthood was also a risk factor for prison misconducts at both time points, although the relationship was more strongly related to the prevalence of misconducts. The importance of abuse and victimization was confirmed by the consistency of relations between having experienced emotional or physical abuse or assault during childhood or adulthood and all misconducts (correlations ranging from $r = .12$, $p \leq .05$ to $r = .17$, $p \leq .01$). A fourth finding from women in prison was that relationship problems with significant others prior to intake appeared to increase the likelihood that women incurred misconducts after six and twelve months of incarceration. Such problems seem to be particularly relevant when predicting the number of misconducts a woman might incur within six months of incarceration ($r = .19$, $p \leq .01$).

Finally, the importance of LSI-R items and gender-responsive needs did not appear to change substantially when predicting misconducts at six months versus at twelve months.

Serious Misconducts

Table 9 presents the relationships between LSI-R and gender-responsive items with serious institutional misconducts at six- and twelve-month follow-up periods; again, serious misconducts do not include minor infractions such as failure to comply or being in unauthorized areas. In general, the results were somewhat stronger than those reported in Table 8 for all

misconducts, with many needs factors, LSI-R domains as well as the gender-responsive domains, being more powerful predictors of serious misconducts than of all misconducts. Additionally, the patterns of gender-responsive variables from the face sheet interview were very similar in predicting serious and less serious forms of misconduct; although physical abuse during adulthood became a significant predictor of six and twelve month serious misconducts ($r = .11$, $p \leq .10$).

Table 8: Bivariate Correlations, Minnesota Prison Sample, All Misconducts

	Minnesota Prison 6-Month		Minnesota Prison 12-Month	
Assessments and Subscales	# Misconducts	Any Misconducts	# Misconducts	Any Misconducts
N=198				
LSI-R Items				
Criminal History	.16***	.18***	.13**	.20***
Education/Employment	.26***	.13**	.28***	.11*
Financial	--	.16**	.10*	.14**
Family/Marital	.16**	.13**	.14**	.13**
Accommodation	--	.16**	.15**	.18***
Leisure/Recreation	.10*	.15**	.10*	.12**
Companions	.14**	--	.12**	.10*
Alcohol/Drug Problems	.16**	.14**	.20***	.11*
Emotional/Personal	.23***	.15**	.25***	.15**
Attitude/Orientation	.13**	.20***	.18***	.17***
LSI-R Total	.33***	.29***	.36***	.26***
Trailer Gender-Responsive Scales				
Self Esteem	-.15**	-.09*	-.14**	-.10*
Self Esteem (Collapsed)	-.14**	-.10*	-.11*	-.13**
Self Efficacy	-.14**	--	-.10*	-.11*
Self Efficacy (Collapsed)	--	-.12*	--	-.15**
Parental Stress *(N=126)*	--	--	--	--
Parental Stress (Collapsed)	--	--	--	--
Childhood Abuse+	.17***	.10*	.12*	.10*
Adult Emotional Abuse+	--	--	--	--
Adult Physical Abuse+	--	--	--	--
Adult Harassment+	--	.11*	--	.12*
Relationship Dysfunction	.19***	.10*	.11*	.15**
Relationship Dys (Collapsed)	.20***	.14**	.14**	.20***
Facesheet Gender-Responsive Scales				
Income	--	--	--	--
Homeless	--	--	--	--
Public Assistance	--	--	--	--
Emotional/Physical Victimization	.13***	.13**	.12**	.17***
Domestic Violence	--	--	--	--
Adult Sexual Victimization	--	--	--	--
Child Sexual Victimization	--	--	--	--
Child Abuse, Nonsexual	--	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for the Gender-Responsive Scales, but was not used for LSI-R items (2 missing cases)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

Table 9: Bivariate Correlations, Minnesota Prison Sample, Serious Misconducts

	Minnesota Prison 6-Month		Minnesota Prison 12-Month	
Assessments and Subscales	# Misconducts	Any Misconducts	# Misconducts	Any Misconducts
N=198				
LSI-R Items				
Criminal History	.20***	.20***	.15**	.23***
Education/Employment	.23***	.15**	.27***	.16**
Financial	--	.12**	.11*	.13**
Family/Marital	.21***	.20***	.19***	.17***
Accommodation	.15**	.17***	.19***	.19***
Leisure/Recreation	.13**	.15**	.12*	.13**
Companions	.14**	--	.12**	--
Alcohol/Drug Problems	.18***	.15**	.22***	.13**
Emotional/Personal	.20***	.12**	.22***	.13**
Attitude/Orientation	.17***	.22***	.22***	.20***
LSI-R Total	.36***	.30***	.39***	.29***
Trailer Gender-Responsive Scales				
Self Esteem	-.12**	--	-.13**	-.10*
Self Esteem (Collapsed)	-.12**	-.10*	-.10*	-.14**
Self Efficacy	-.14**	--	--	-.11*
Self Efficacy (Collapsed)	--	-.10*	--	-.15**
Parental Stress *(N=126)*	--	--	.12*	--
Parental Stress (Collapsed)	--	--	--	--
Childhood Abuse+	.21**	.15**	.16**	.18**
Adult Emotional Abuse+	--	--	--	--
Adult Physical Abuse+	--	.11*	--	.11*
Adult Harassment+	--	.12**	--	.16**
Relationship Dysfunction	.16**	--	.10*	.13**
Relationship Dys (Collapsed)	.16**	.12**	.13**	.17***
Facesheet Gender-Responsive Scales				
Income	--	--	--	--
Homeless	--	--	--	--
Public Assistance	--	--	--	--
Emotional/Personal Victimization	.14**	.14**	.10*	.16**
Domestic Violence	--	--	--	--
Adult Sexual Victimization	--	--	--	--
Child Sexual Victimization	--	--	--	--
Child Abuse, Nonsexual	--	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for the Gender-Responsive Scales, but was not used for LSI-R items (2 missing cases)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

Probation Results

Results of community recidivism measures among women probationers are presented in Tables 10 and 11. General patterns of results across all outcomes are as follows: 1) LSI-R items and gender-responsive items were more predictive of arrests and convictions, and less highly correlated with probation violations and revocations, although correlations with probation violations and revocations increased at twelve month follow-up periods; 2) gender-responsive items as measured by the trailer generally appeared to be as powerful in predicting arrests and convictions as LSI-R item; and 3) as would be expected with improved variation on the follow-up measures (more arrests, convictions, and revocations), results are stronger for the twelve-month follow-up data than for the six-month follow-up data.

Strong correlations were found for a number of the need domains at the 12-month point. Among gender-neutral needs measured by the LSI-R, accommodations ($r = .25$, $p \leq .01$), companions ($r = .23$, $p \leq .01$), and emotional/personal ($r = .20$, $p \leq .01$) domains were strongly associated with arrests twelve months following probation intake. While financial and family domains were less strongly correlated with arrest data, measures pertaining to relationship dysfunction ($r = .28$, $p \leq .01$), parental stress($r = .25$, $p \leq .01$), adult physical abuse ($r = .24$, $p \leq .01$), and income ($r = -.25$, $p \leq .01$) would certainly temper any assertions that relationships and financial well-being were unimportant.

With respect to other gender-responsive scales, childhood abuse is not as potent a predictor of community recidivism as it was of prison misconducts among inmates. Correlations between survey measures of adult abuse with twelve-month arrest measures, however, ranged from $r = .14$, $p \leq .05$ to $r = .24$, $p \leq .01$, depending upon the type of abuse. Negative correlations between abuse and outcome measures (anomalies) were seen in instances where

variation on the follow-up variable was extremely limited (e.g., revocations to prison) and when the interview/record measure of child sexual victimization was negatively correlated with probation violations.[4]

Self-esteem and self-efficacy again decreased the likelihood that women would be arrested or convicted within six and twelve months of placement on probation.

[4] Recall also that the single item questions about abuse and record information are not believed to be as accurate as behavioral measures similar to those obtained through the Trailer (Browne et al., 1999).

Table 10: Bivariate Correlations, Minnesota Probation Sample, 6-Month Recidivism Measures

	Minnesota Probation 6-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
N=233							
LSI-R Items							
Criminal History	.17***	.19***	.20***	.19***	.12**	.20***	--
Education/Employment	.16***	.18***	.10*	--	.12**	.23***	--
Financial	.11**	.16***	.13**	.14**	.15***	.19***	--
Family/Marital	.15***	.13**	.11**	--	--	.09*	--
Accommodation	.21***	.19***	.10*	--	--	--	-.10*
Leisure/Recreation	--	.11**	--	.09*	--	--	--
Companions	.21***	.18***	.14**	.10*	--	.15**	--
Alcohol/Drug Problems	.14**	.12**	.10*	--	--	.14**	.11**
Emotional/Personal	.16***	.17***	--	--	--	.11**	--
Attitude/Orientation	.13**	.15**	.15**	.13**	.16***	.20***	.12**
LSI-R Total	.25***	.26***	.19***	.14**	.14**	.25***	--
Trailer Gender-Responsive Scales							
Self Esteem	-.12**	-.15***	-.17***	-.17***	--	--	--
Self Esteem (Collapsed)	-.12**	-.13**	-.24***	-.23***	--	--	--
Self Efficacy	-.18***	-.22***	-.13**	-.12**	--	-.13**	--
Self Efficacy (Collapsed)	-.18***	-.19***	-.15***	-.12**	--	-.09*	--
Parental Stress *(N=144)*	.21***	.19***	--	--	--	--	--
Parental Stress (Collapsed)	.18**	.16**	--	--	--	--	-.11*
Childhood Abuse+	--	.10*	.10*	.12**	--	--	--
Adult Emotional Abuse+	.12**	--	--	--	--	--	-.09*
Adult Physical Abuse+	.19***	.16***	--	.09*	--	--	-.09*
Adult Harassment+	.17***	.12**	.12**	.10*	--	.11**	-.09*
Relationship Dysfunction	.30***	.24***	.15**	.10*	--	.13**	--
Relationship Dys (Collapsed)	.24***	.22***	.14**	.11*	--	.16***	--

Table Continues

Table 10: Bivariate Correlations, Minnesota Probation Sample, 6-Month Recidivism Measures, Continued

	Minnesota Probation 6-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
N=233							
Facesheet Gender-Responsive Scales							
Income	-.16***	-.19***	--	--	--	-.13**	-.09*
Homeless	--	--	--	--	.11*	.12**	--
Public Assistance	--	--	--	.10*	--	--	-.10*
Emotional/Physical Victimization	.11**	.10*	.09*	--	--	--	-.14**
Domestic Violence	--	--	--	--	--	--	--
Adult Sexual Victimization	--	--	--	--	--	-.13*	--
Child Sexual Victimization	--	--	--	--	-.13*	-.15**	--
Child Abuse, Nonsexual	--	--	.15**	.17**	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for Gender-Responsive scales, but was not used for LSI-R items (no missing values)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

Table 11: Bivariate Correlations, Minnesota Probation Sample, 12-Month Recidivism Measures

	Minnesota Probation 12-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
N=233							
LSI-R Items							
Criminal History	.16***	.23***	.18***	.17***	.24***	.20***	.17***
Education/Employment	.16***	.18***	.15**	.16***	.30***	.30***	.14**
Financial	.12**	.19***	.14**	.17***	.08*	.12**	--
Family/Marital	.17***	.21***	.18***	.16***	.13**	.10*	.12**
Accommodation	.25***	.22***	.18***	.16***	--	.09*	--
Leisure/Recreation	--	.09*	--	--	.09*	.09*	--
Companions	.16***	.23***	.22***	.17***	.17***	.17***	.12**
Alcohol/Drug Problems	.10*	.16***	.12**	.09*	.09*	.12**	.12**
Emotional/Personal	.14**	.20***	.13**	--	.15***	.15***	--
Attitude/Orientation	.16***	.22***	.09*	--	.17***	.22***	.14**
LSI-R Total	.24***	.31***	.23***	.21***	.27***	.28***	.17***
Trailer Gender-Responsive Scales							
Self Esteem	-.10*	-.14**	-.15**	-.15**	-.08*	--	--
Self Esteem (Collapsed)	-.09*	-.11**	-.19***	-.18***	--	--	--
Self Efficacy	-.14**	-.22***	-.17***	-.16***	-.16***	-.17***	--
Self Efficacy (Collapsed)	-.15***	-.21***	-.19***	-.15**	-.13**	-.16***	--
Parental Stress *(N=144)*	.22***	.24***	.20***	.21***	.17**	.18**	--
Parental Stress (Collapsed)	.23***	.25***	.16**	.18**	.12*	.14**	--
Childhood Abuse+	--	.12**	--	.11**	--	.14**	-.10*
Adult Emotional Abuse+	.14**	.15**	.10*	--	--	--	--
Adult Physical Abuse+	.22***	.24***	.11*	.09*	--	--	--
Adult Harassment+	.20***	.22***	.10*	--	.09*	--	--
Relationship Dysfunction	.28***	.26***	.20***	.13**	.09*	.09*	--
Relationship Dys (Collapsed)	.22***	.23***	.22***	.15**	.13**	.14**	--

Table Continues

Table 11: Bivariate Correlations, Minnesota Probation Sample, 12-Month Recidivism Measures, Continued

	Minnesota Probation 12-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
N=233							
Facesheet Gender-Responsive Scales							
Income	-.18***	-.25***	-.10*	-.10*	-.16***	-.16***	-.15**
Homeless	--	--	.10*	--	.09*	.08*	--
Public Assistance	--	.10*	.08*	.13**	--	.10*	-.09*
Emotional/Physical Victimization	.18***	.12**	.15**	.12**	.13**	.12**	--
Domestic Violence	--	--	--	--	--	--	--
Adult Sexual Victimization	.17***	.18**	.18**	.18**	--	--	--
Child Sexual Victimization	--	--	--	--	-.17**	-.16**	--
Child Abuse, Nonsexual	--	.11*	--	.19**	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for Gender-Responsive scales, but was not used for LSI-R items (no missing values)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

Drug Court Results

Results for women offenders in drug court are presented in Tables 12 and 13. Patterns are not as discernable as they were for the prison and probation samples, especially for the gender-responsive scales. Additionally, many significant findings are not stable across outcome measures and six- and twelve-month time frames. Generally, however, the LSI-R was a valid predictor of outcomes, particularly court- imposed outcomes such as arrests, court-imposed technical violations, and bench warrants. When the results are confined to these outcomes at the twelve month time period, correlations ranged from a low of $r = .21$ to a high of $r = .41$. A number of the domains, however, were not as predictive as one might expect, such as the financial, family marital, accommodations, and emotional/personal domains. At the same time, the LSI-R findings are countered by findings from the Trailer and the face sheet with respect to relationship dysfunction, income, and homelessness. Across the official measures of outcomes, for example, correlations with income at twelve month follow-up ranged from $r = -.14$, $p \leq .05$ to $r = -.29$, $p \leq .01$. In contrast, correlations between the LSI-R financial domain and the same outcomes ranged from null findings to $r = .21$, $p \leq .01$, with most showing only modest relationships with outcomes. While certainly adequate, the findings for the LSI-R in the drug court were not as robust or consistent across domains as they were in the prison and probation samples.

LSI-R items appear to be generally more predictive than gender-responsive items of six- and twelve-month outcomes. Many of the relatively stable findings from other samples in Minnesota (e.g., high self-concepts which decreased the likelihood of recidivism, or parental stress, relationship dysfunction, and abuse which increased the likelihood of recidivism) do not maintain their significance or directional relationships for drug court participants. When the

gender-responsive items were found to be strongly associated with an outcome measure, such as child sexual victimization, they were not consistent across other outcomes, nor supported by similar (Trailer) measures. Simply put, the Trailer and other gender-responsive items contained on the face sheet were not adequate predictors of outcomes for drug court participants. These findings have several possible explanations, including:1) the Trailer (and the gender-responsive variables) were not relevant to women in drug court, 2) the administration and test conditions were not ideal, or 3) the outcome data elements were less comparable to standard offender-recidivism measures. These data do not afford the opportunity to test each possible explanation.

Table 12: Bivariate Correlations, Minnesota Drug Court Sample, 6-Month Recidivism Measures

	Minnesota Drug Court 6-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
N=150							
LSI-R Items							
Criminal History	.28***	.26***	--	--	.28***	.33***	.18**
Education/Employment	.15**	.12*	.11*	--	.27***	.28***	.19**
Financial	--	--	--	--	--	--	.11*
Family/Marital	.14**	.11*	.13*	.11*	--	--	--
Accommodation	--	--	--	--	.17**	--	--
Leisure/Recreation	.20***	.14**	--	--	.20***	.17**	--
Companions	.24***	.22***	--	-.12*	.24***	.28***	.14**
Alcohol/Drug Problems	.14**	.15**	--	--	.24***	.21***	--
Emotional/Personal	--	--	--	.11*	--	--	.12*
Attitude/Orientation	.37***	.23***	-.16**	-.17**	.27***	.18**	.25***
LSI-R Total	.29***	.24***	--	--	.34***	.34***	.21***
Trailer Gender-Responsive Scales							
Self Esteem	--	--	-.15*	-.11*	--	--	--
Self-Esteem (Collapsed)	--	--	-.17**	-.16**	--	--	--
Self Efficacy	--	--	.11*	--	--	--	--
Self-Efficacy (Collapsed)	--	--	.17**	.14**	--	--	--
Parental Stress *(N=77)*	--	--	--	--	--	--	--
Parental Stress (Collapsed)	--	--	--	--	--	--	--
Childhood Abuse+	--	--	--	--	--	--	.13*
Adult Emotional Abuse+	--	.11*	--	--	--	--	--
Adult Physical Abuse+	--	--	--	--	--	--	--
Adult Harassment+	.19**	.19***	--	--	--	--	.25***
Relationship Dysfunction	--	--	--	--	.12*	.12*	--
Relationship Dys (Collapsed)	--	--	.12*	--	.14**	.12*	--

Table Continues

Table 12: Bivariate Correlations, Minnesota Drug Court Sample, 6 Month Recidivism Measures, Continued

	Minnesota Drug Court 6-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
Facesheet Gender-Responsive Scales							
Income	-.14**	-.16**	-.14**	-.12*	-.14**	-.14**	-.14**
Homeless	.18**	.11*	--	--	--	.18**	.16**
Public Assistance	--	--	--	--	--	--	--
Emotional/Physical Victimization	--	--	.19***	.18***	--	--	--
Domestic Violence	--	--	--	--	--	--	--
Adult Sexual Victimization	--	--	-.19**	-.20**	--	.15*	.18*
Child Sexual Victimization	--	--	--	--	--	--	--
Child Abuse, Nonsexual	--	--	--	--	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for all Gender-Responsive Scales, but was not used for LSI-R items (no missing values)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

Table 12: Bivariate Correlations, Minnesota Drug Court Sample, 6-Month Recidivism Measures, Continued

	Minnesota Drug Court 6-Month Recidivism					
Assessments and Subscales	# TVs[a]	Any TVs[a]	# TVs	Any TVs	# BWs	Any BWs
N=150						
LSI-R Items						
Criminal History	--	--	.22***	.31***	.20***	.27***
Education/Employment	--	--	.31***	.35***	.29***	.32***
Financial	--	.12*	.11*	.17**	.16***	.15**
Family/Marital	--	--	--	--	--	--
Accommodation	--	.15**	.18**	.18**	.25***	.19**
Leisure/Recreation	--	--	.18**	.16**	.20***	.15**
Companions	--	--	.22***	.29***	.13*	.16**
Alcohol/Drug Problems	--	--	.21***	.23***	.12*	.14**
Emotional/Personal	--	--	--	--	--	--
Attitude/Orientation	--	--	.29***	.26***	.14**	.14**
LSI-R Total	--	--	.32***	.39***	.28***	.32***
Trailer Gender-Responsive Scales						
Self Esteem	--	--	--	--	--	--
Self-Esteem (Collapsed)	--	--	--	--	--	--
Self Efficacy	--	--	--	--	--	--
Self-Efficacy (Collapsed)	--	--	--	-.11*	--	--
Parental Stress *(N=77)*	--	--	--	--	--	--
Parental Stress (Collapsed)	--	--	--	--	--	--
Childhood Abuse+	--	--	--	--	--	--
Adult Emotional Abuse+	--	--	--	--	--	--
Adult Physical Abuse+	.16**	.17**	--	--	--	.15**
Adult Harassment+	--	--	--	--	--	.19***
Relationship Dysfunction	.16**	--	--	.12*	--	.13*
Relationship Dys (Collapsed)	.14**	--	.14**	.14**	.11*	.14**

Table Continues

Table 12: Bivariate Correlations, Minnesota Drug Court Sample, 6-Month Recidivism Measures, Continued

	Minnesota Drug Court 6-Month Recidivism					
Assessments and Subscales	# TVs[a]	Any TVs[a]	# TVs	Any TVs	# BWs	Any BWs
Facesheet Gender-Responsive Scales						
Income	-.12*	-.13*	-.18**	-.24***	-.26***	-.30***
Homeless	--	--	--	.22***	--	--
Public Assistance	--	--	--	.12*	--	.11*
Emotional/Physical Victimization	--	--	--	--	--	--
Domestic Violence	--	--	--	--	--	.19**
Adult Sexual Victimization	--	--	--	--	--	--
Child Sexual Victimization	--	--	--	--	--	--
Child Abuse, Nonsexual	-.22**	-.19**	--	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for Gender-Responsive scales, but was not used for LSI-R items (no missing values)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

[a]TVs refer to in-house technical violations issued by the drug court

TVs refer to court-imposed technical violations

Table 13: Bivariate Correlations, Minnesota Drug Court Sample, 12-Month Recidivism Measures

	Minnesota Drug Court 12-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
N=150							
LSI-R Items							
Criminal History	.27***	.28***	--	--	.16**	.42***	.19***
Education/Employment	.17**	.16**	.11*	.11*	--	.32***	.19**
Financial	--	--	--	--	.11*	--	--
Family/Marital	--	--	--	--	--	.11*	--
Accommodation	--	--	--	--	--	.12*	--
Leisure/Recreation	.23***	.18**	.14**	.18**	.19***	.22***	.11*
Companions	.22***	.21***	--	--	.12*	.29***	.19**
Alcohol/Drug Problems	.17**	.17**	--	--	.15**	.24***	--
Emotional/Personal	--	--	--	--	.16**	.11*	--
Attitude/Orientation	.28***	.14**	--	--	--	.18**	.18**
LSI-R Total	.28***	.23***	--	--	.21***	.41***	.18**
Trailer Gender-Responsive Scales							
Self Esteem	--	--	--	--	.12*	--	--
Self-Esteem (Collapsed)	--	--	--	--	--	--	--
Self Efficacy	--	--	.12*	--	--	--	--
Self-Efficacy (Collapsed)	--	--	.15**	.11*	--	-.12*	--
Parental Stress *(N=77)*	--	--	--	--	--	--	--
Parental Stress (Collapsed)	-.12*	-.12*	--	--	-.11*	--	--
Childhood Abuse+	--	--	--	--	--	--	--
Adult Emotional Abuse+	--	--	--	-.16**	--	--	--
Adult Physical Abuse+	--	--	--	-.11*	--	--	--
Adult Harassment+	--	--	--	--	--	--	.15**
Relationship Dysfunction	--	--	--	--	.11*	.11*	--
Relationship Dys (Collapsed)	--	--	--	--	--	.11*	--

Table Continues

Table 13: Bivariate Correlations, Minnesota Drug Court Sample, 12-Month Recidivism Measures, Continued

	Minnesota Drug Court 12-Month Recidivism						
Assessments and Subscales	# Arrests	Any Arrests	# Convictions	Any Convictions	# PVs	Any PVs	Any Revocations
Facesheet Gender-Responsive Scales							
Income	-.14**	-.19***	-.18**	-.19**	--	-.17**	-.11*
Homeless	.14**	.16**	--	--	--	.24***	.18**
Public Assistance	--	--	--	--	--	--	--
Emotional/Physical Victimization	--	--	--	--	--	--	--
Domestic Violence	-.21**	-.19**	--	--	--	--	--
Adult Sexual Victimization	--	--	--	--	--	.18*	--
Child Sexual Victimization	--	.27***	--	--	--	.28***	--
Child Abuse, Nonsexual	--	--	--	-.18*	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for Gender-Responsive scales, but was not used for LSI-R items (no missing values)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

Table 13: Bivariate Correlations, Minnesota Drug Court Sample, 12-Month Recidivism Measures, Continued

	Minnesota Drug Court 12-Month Recidivism					
Assessments and Subscales	# TVs[a]	Any TVs[a]	# TVs	Any TVs	# BWs	Any BWs
N=150						
LSI-R Items						
Criminal History	--	--	.30***	.38***	.29***	.29***
Education/Employment	--	--	.22***	.28***	.35***	.34***
Financial	--	.12*	--	.12*	.21***	.17**
Family/Marital	--	--	.17**	.16**	--	--
Accommodation	--	.14**	--	.15**	.22***	.19**
Leisure/Recreation	--	.11*	.20***	.17**	.23***	.18**
Companions	--	--	.28***	.32***	.16**	.22***
Alcohol/Drug Problems	--	--	.19**	.24***	.18**	.16**
Emotional/Personal	--	.16**	.13*	.14**	--	--
Attitude/Orientation	--	--	.13*	.15**	.15**	.13*
LSI-R Total	--	--	.33***	.40***	.36***	.35***
Trailer Gender-Responsive Scales						
Self Esteem	--	--	--	-.12*	--	--
Self-Esteem (Collapsed)	--	--	--	-.11*	--	--
Self Efficacy	--	--	--	--	--	--
Self-Efficacy (Collapsed)	--	--	--	-.14**	--	--
Parental Stress *(N=77)*	--	--	--	--	--	--
Parental Stress (Collapsed)	--	--	-.11*	--	--	--
Childhood Abuse+	--	--	--	--	--	--
Adult Emotional Abuse+	--	--	--	--	--	--
Adult Physical Abuse+	--	--	--	--	--	--
Adult Harassment+	--	--	--	--	.12*	.13*
Relationship Dysfunction	.14**	--	--	.14**	.13*	.14**
Relationship Dys (Collapsed)	.14**	--	.16**	.19**	.16**	.14**

Table Continues

Table 13: Bivariate Correlations, Minnesota Drug Court Sample, 12-Month Recidivism Measures, Continued

	Minnesota Drug Court 12-Month Recidivism					
Assessments and Subscales	# TVs[a]	Any TVs[a]	# TVs	Any TVs	# BWs	Any BWs
Facesheet Gender-Responsive Scales						
Income	--	-.12*	-.18**	-.25***	-.27***	-.29***
Homeless	--	-.12*	.12*	.28***	--	--
Public Assistance	--	--	--	--	.14**	.14**
Emotional/Physical Victimization	--	--	--	--	--	--
Domestic Violence	--	--	--	--	.15*	.15*
Adult Sexual Victimization	--	--	--	.22**	--	--
Child Sexual Victimization	--	--	--	.19**	--	--
Child Abuse, Nonsexual	--	--	--	--	--	--

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

Note: Mean replacement was used for Gender-Responsive scales, but was not used for LSI-R items (no missing values)

+Median Replacement used for Childhood Abuse, Emotional Abuse, Physical Abuse, and Harassment scales

[a]TVs refer to in-house technical violations issued by the drug court

TVs refer to court-imposed technical violations

Construction of the Final Trailer Instrument

In constructing a composite assessment of the factors examined above, three important lessons were learned from findings across Minnesota, Missouri, and Maui sites. These lessons were prompted by a comparison of bivariate findings across samples, shown in Figures 1 and 2, below. First, it was initially assumed that the final trailer would consist of only those items contained in the self-report survey that was tested in the present study (e.g., self-esteem, self-efficacy, relationship dysfunction, parental stress, child abuse, and adult victimization). When the decision was made to test different models, however, research in Missouri identified additional dynamic risk factors beyond those tested in Minnesota. For example, factors relating to current symptoms of depression and psychosis, poverty, housing safety, anger, family conflict, family support, and educational strengths (see Van Voorhis et al., 2008) were obtained through an interview in Missouri and were found to be predictive of offender outcomes. As such, it was determined that the final NIC Trailer would include these factors in addition to those found to be important in the Minnesota study (see Appendix D).

In addition, it became apparent that the importance of risk factors examined across the NIC sites fluctuated in their relevance to particular populations of offenders. For instance, parental stress was only a modest correlate of institutional misconduct across sites, but was particularly relevant to probationers' recidivism. The effects of abuse and economic variables were also different for probation and prison samples. Therefore, it was determined that two different trailers, one for probationers and one for prisoners, were necessary.[5]

Third, it is likely that staff training and the integrity of interview and survey conditions had an impact on both interview and survey results. For example, it is noteworthy that survey results were much more favorable for the Minnesota probation and prison samples than for the

[5] A third instrument for pre-release/parole populations was also developed in Missouri.

Maui or Missouri samples. Strong sample fluctuations were also seen with the LSI-R, when tested in yet a third site and compared to the Minnesota and Maui results (see Salisbury et al., in press; Van Voorhis et al., 2008). In addition, survey results were less favorable for the drug court sample than for other Minnesota sites. In viewing the results shown in Figures 1 and 2, it is important to note that Minnesota and Maui staff were well-trained in the use of the LSI-R, but received only 2 hours of training in the use of the gender-responsive tools. As discussed later, full-scale implementation of the trailer will require extensive staff training.

Gender-responsive factors considered most important to women offenders are shown in the comparison of findings across probation sites (Figure 1) and institutional sites (Figure 2). Because Hennepin Drug Court was the only drug court site among the NIC sites (e.g., Missouri, Minnesota, and Maui), we have no other drug court group to compare findings against. Additionally, findings for the gender-responsive factors among the drug court participants were disappointing. As a result, we limit our discussion to results for the probation and institutional samples.

Many of the statistically significant risk factors shown in Figure 1 are not contained on the current generation of dynamic risk needs instruments. Nevertheless, they clearly appear to be risk factors for female probationers (e.g., depression, psychosis, anger, family conflict, and parental stress). Additionally, strengths, such as self-esteem, self-efficacy, family support, and educational assets, translate into desistance from crime and are also relevant to women's future prospects. These also do not appear on the current generation of dynamic risk/needs assessments. In addition to adding new risk factors, some of the measures on current risk assessment instruments could perhaps be redefined for better relevance to women. For example,

accommodations, financial issues, and mental health might better be approached by assessing housing safety, poverty, and identification of specific and current mental health issues.

Decisions regarding the design of the final trailer are also shown in Figures 1 and 2, below. The trailer consists of a short interview (Appendix C) and a shorter survey than the survey administered during the present study (see Appendix D). Results for both are summed on a scoring sheet (Appendix E). As noted above, there are separate forms for probation and prison settings.

Figure 1: Effects of Research Items on Probationers' Returns to Prison (Missouri) and Rearrests (Maui and Minnesota): A Comparison Across Sites.[a]

Gender-Responsive Need	Missouri	Maui	Minnesota	Decision
Interview Scales				
Employment/Financial	.21***	.25***[b]	.19***[b]	New trailer assesses poverty through interview-administered questions.
Education/Employment	.19***	.26***[b]	.18**[b]	Findings for Missouri speak only to education. LCI-R combines education and employment. Variable is not included on the new trailer.
Educational assets	-.19***	Na	Na	The final trailer will note this as a strength. It refers to post-secondary degrees, certificates and licenses.
History of mental illness	--	--[b] .13**[c]	.20***[b]	Combining all forms of mental illness into a single measure, may be hiding the true impact of certain symptoms on future offending in some samples. In probation samples, current symptoms of anxiety or psychosis (below) appear to be as (sometimes more) important than a composite variable.
Housing safety	.23***	.14**[b] .21***[c]	.25***[b]	New trailer assesses safety of the environment as opposed to antisocial influences (LSI-R). Housing safety is a series of interview items
Depression/anxiety (Symptoms)	.18***	Na	Na	New trailer scale taps current symptoms of anxiety. LSI-R combines all symptoms into one scale. Record data likely underreports.
Psychosis (Symptoms)	.16***	Na	Na	New trailer scale taps current symptoms of psychosis. LSI-R combines all symptoms into one scale, record data likely underreports
Anger/hostility	.15***	Na	Na	New trailer obtains measures of anger through the interview process.

Figure continues

Figure 1: Effects of Research Items on Probationers' Returns to Prison (Missouri) and Rearrests (Maui and Minnesota): A Comparison Across Sites, continued.

Gender-Responsive Need	Missouri	Maui	Minnesota	Decision
Interview Scales (continued)				
Child abuse (interview)	--	--[c]	.11*[c]	Among probationers, results of abuse scales were inconsistent across samples. Results for the adult victimization variable, however, were quite strong for Minnesota, and therefore are computed in the composite risk scale. The survey measure (below) is used.
Adult Victimization (interview)	.09*	.11*[c]	.18***[c]	
Family conflict	.11**	.15**[b]	.21***[b]	These needs were tapped in more specific format in the the Missouri study than in Maui and Minnesota where the LSI-R was used. The LSI-R family/marital variable is a composite variable comprising all aspects of family life into one scale. The new family conflict and family support variables on the trailer refer to family of origin and are interview-based. The trailer also differentiates among different types of relationships, e.g., family of origin, intimate relationships, and children.
Family support	-.08*	-.18**[c]	Na	
Self-Report Survey Scales				
Parental stress	.18***	.20***	.24***	New trailer keeps to the format used in the present study. Scale is obtained through a survey.
Self-esteem	-.08*	-.22***	-.15**	New trailer keeps to the format used in the present study. Scale is obtained through a survey.
Self-efficacy	-.12**	-.16**	-.22***	New trailer keeps to the format used in the present study. Scale is obtained through a survey.

Figure continues

Figure 1: Effects of Research Items on Probationers' Returns to Prison (Missouri) and Rearrests (Maui and Minnesota): A Comparison Across Sites, continued.

Gender-Responsive Need	Missouri	Maui	Minnesota	Decision
Self-Report Survey Scales (continued)				
Adult victimization (survey)	-.09*	--	.24***	Results of abuse scales were inconsistent across probation samples. They were however, predictive in institutional and parole samples. In Minnesota, the adult victimization survey scale is included on the probation trailer.
Child abuse (survey)	--	--	12**	
Relationship Dysfunction	--	--	.26***	New trailer keeps to the format used in the present study. Scale is obtained through a survey.

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

[a] Correlations represent the stronger of two outcomes, incidence or prevalence.

[b] Item was taken from the LSI-R.

[c] Item coded from face sheet (record/interview) data.

Na = Not collected.

-- = Not significant.

Figure 2: Effects of Research Items on Prisoners' Misconducts (Missouri and Minnesota): A Comparison Across Sites.[a]

Gender-Responsive Need	Missouri	Minnesota	Decision
Interview Scales			
Employment/Financial	.09*	.13**[b]	New trailer assesses employment/financial difficulties at arrest, through interview-administered questions. Problems associated with poverty, e.g., homelessness and inability to pay bills are assessed. It is not included in the institutional risk scale, but rather as a need listed in Section II for transition planning.
Education/Employment	--	.27***[b]	Findings for Missouri speak only to education. LCI-R combines education and employment. Variable is not included on the new trailer.
Low Educational assets	--	Na	New trailer accounts for educational assets in the needs section rather than as a strength. It refers to post-secondary degrees, certificates and licenses.
History of mental illness	.19***	.22***[b]	Combining all forms of mental illness into a single measure, may be understating the true impact of certain symptoms on future offending in some samples. In prison samples, current symptoms of anxiety or psychosis (below) appear to be as (and sometimes more) important than a composite variable.
Depression/anxiety (Symptoms)	.23***	Na	New trailer scale taps current symptoms of anxiety. LSI-R combines all symptoms into one scale. Record data likely underreports.
Psychosis Symptoms	.31***	Na	New trailer scale taps current symptoms of psychosis. LSI-R combines all symptoms into one scale, record data likely underreports
Anger/hostility	.13**	Na	New trailer obtains measures of anger through the interview process.
Child abuse	.24***	---[c]	Child abuse was strongly related to prison adjustment among incarcerated women. However, the survey measure (below) was more predictive than the interview method. The new trailer obtains this measure through the survey

Figure Continues

Figure 2: Effects of Research Items on Prisoners' Misconducts (Missouri and Minnesota): A Comparison Across Sites, continued.

Gender-Responsive Need	Missouri	Minnesota	Decision
Interview Scales (continued)			
Adult Victimization	.10**	.16**[c]	The effect of physical abuse on prison adjustment was seen in the MN. Study, but not in other settings. Measure is not included on the risk scale of the trailer, but is noted as a need.
Family conflict	.17***	.19***[b]	These needs were tapped in the Missouri study but not in the others. They are interview-based scales and appear on the institutional risk scale. Family support is listed as a strength.
Low Family support	.20***	Na	
Self-Report Survey Scales			
Parental stress	.13**	.12*	Scores on this scale are not currently listed in the institutional risk scale. It is listed as a need.
Self-esteem	--	-.09*	New trailer keeps to the format used in the present study. Scale is obtained through a survey and noted as a need.
Self-efficacy	--	-.13**	New trailer keeps to the format used in the present study. Scale is obtained through a survey and noted as a need.
Child abuse (survey)	.24***	.18**	Child abuse was strongly related to prison adjustment among incarcerated women. The scale is obtained through the survey.
Adult Victimization (survey)	--	.19**	Physical or sexual abuse as an adult was only significantly associated with prison misconduct in the Minnesota sample. The scale is obtained through the survey and included in the trailer as a need.
Relationship Dysfunction	.09*	.13**	New trailer keeps to the format used in the present study. Scale is obtained through a survey and included as a risk factor.

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

[a] Correlations are the strongest noted against numerous outcomes.

[b] Item was taken from the LSI-R.

[c] Item is from the face sheet (record/interview) data.

Na = not collected-- = Not significant.

When these measures are summed into a final risk/needs scale, does the scale effectively predict recidivism among women offenders in Minnesota? Figure 3 shows the structure of the final risk scales. In general, a final risk score was computed by adding all variables shown to be significantly correlated with offender outcomes and then subtracting all strengths found to be correlated with offender outcomes. Additional needs are noted in Section II of the scoring instrument. While not risk factors, the Section II needs may nevertheless be important to case managers as a means of improving offenders' amenability to treatment and removing barriers. The Canadian "What Works" literature refers to such issues as responsivity factors (Andrews & Bonta, 2003). In the case of incarcerated women, however, many of the needs noted in Section II are risk factors upon release (see Van Voorhis et al., 2008). Their consideration is therefore important to re-entry planning.

Figure 3: Structure of Gender-Responsive Instruments,[a] Minnesota

Probation	Institutional	Parole
Section I: Items for Risk Scale		
LSI Variables **Criminal History** **Education Employment** **Financial** **Family/Marital** **Accommodation** **Antisocial Attitudes** **Leisure/Recreation** **Antisocial Friends** **Substance Abuse** **History of Mental Illness** **Substance Abuse** **Antisocial Thinking** **Trailer Variables** Adult Victimization Relationship Dysfunction Parental Stress **Trailer Variables (Future)** *Depression/anxiety symptoms* *Psychotic symptoms* *Anger* *Housing Safety* *Family Conflict* **Strengths** Self efficacy Self-esteem **Strengths (Future)** *Family Support* *Educational strengths*	**LSI Variables** **Criminal history** **Education Employment** **Financial** **Family/Marital** **Accommodation** **Antisocial attitudes** **Leisure/Recreation** **Antisocial friends** **Substance Abuse** **History of mental illness** **Substance Abuse** **Antisocial Thinking** **Trailer Variables** Child abuse Relationship dysfunction **Trailer Variables (Future)** *Depression/anxiety symptoms* *Psychotic symptoms* *Anger* *Family Conflict* **Strengths** Self esteem Self-efficacy **Strengths (Future)** *Family Support*	**LSI Variables** **Criminal history** **Education Employment** **Financial** **Family/Marital** **Accommodation** **Antisocial attitudes** **Leisure/Recreation** **Antisocial friends** **Substance Abuse** **History of mental illness** **Substance Abuse** **Antisocial Thinking** **Trailer Variables** Depression/anxiety symptoms Psychotic symptoms Dynamic substance abuse Adult victimization Anger **Strengths** Educational strengths Family support
Section II: Needs Not Included in the Risk Scale		
Other *Relationship support* *Relationship conflict* Mental health history Child abuse Adult victimization Relationship dysfunction	Other (Re-entry) *Relationship support* *Relationship conflict* Adult victimization Parental stress Housing safety Educational assets	Other Self efficacy Self-esteem Relationship support Family conflict Child abuse Parental stress Relationship support *Housing safety* *Parental stress*

[a]Items in bold are gender-neutral items; others are gender-responsive(*items needing additional research*).

For purposes of the present study, we could not test all the factors noted in Figure 3, because we did not test them all in Minnesota. However, Table 14 shows the predictive validity that results when the gender-responsive factors found to be significant in Minnesota were summed to form composite scores. Three models are compared in Table 14: 1) the LSI-R scale, alone; 2) the gender-responsive scale alone; and 3) the gender-responsive scale combined with the LSI-R.

Table 14: Bivariate Correlations (one-tailed) and AUC of Total Assessment Scales with Probation and Prison Outcomes, Minnesota.

	Follow-up Data					
	6-month			12-month		
Assessment Scale	**Y/N**	**N**	**AUC**	**Y/N**	**N**	**AUC**
LSI-R Plus Trailer, Minnesota Probation[a]						
1) LSI-R, Only	.26***	.25***	.70	.31***	.24***	.71
2) Trailer Items[c]	.28***	.31***		.34***	.31***	
3) LSI-R Plus Trailer	.29***	.29***	.72	.35***	.28***	.74
LSI-R Plus Trailer, Minnesota Prison[b]						
1) LSI-R, Only	.30***	.36***	.68	.30***	.39***	.68
2) Trailer Items[d]	.21***	.27***		.27***	.20***	
3) LSI-R Plus Trailer	.33***	.40***	.70	.33***	.40***	.70

*$p \leq .10$, **$p \leq .05$, ***$p \leq .01$

[a] Follow up data for Minnesota probation was best captured as rearrests.

[b] Follow up data for Minnesota prison was best captured as serious misconducts.

[c] Trailer items include victimization, self-esteem, self-efficacy, parental stress, and relationship dysfunction

[d] Trailer items include self-esteem, self-efficacy, child abuse, and relationship dysfunction.

The predictive validity of the LSI-R among probationers and prisoners was strong. It achieved correlations with outcomes that are typically associated with well-trailed interviewers and are among the more favorable validity figures seen across numerous studies conducted to date.[6] Findings for the composite trailer items (Row 2), however, were also strong predictors of re-arrests and serious prison misconducts. This is surprising given that the trailer was not designed to be used without gender-neutral predictors pertaining to criminal history, antisocial associates, and similar traditional predictors. Most importantly, combining the gender-responsive items from the trailer with the LSI-R for both probation and prison outcomes (Row 3) added to the predictive validity of the LSI-R for rearrests and misconducts. Additionally, consideration of gender-responsive factors increased the AUCs for each new scale.

Some might observe from these findings that, because the trailer only raised AUC and Pearson *r* values by few points (e.g., .03 to .04 points), that jurisdictions should omit any further consideration of such instruments or of gender-responsive programming. To address this issue, binary logistic regression was conducted where two sets of predictors – LSI-R domains and the gender-responsive factors – were entered to assess the comparative contributions of each block of variables. The results showed that both blocks made significant contributions to the prediction of outcomes ($p \leq .01$), a finding which was also recently noted among incarcerated offenders in Colorado (Salisbury et al., forthcoming) and Missouri (Wright et al., 2007). In sum, while the LSI-R is certainly adequate, it is not optimal for programs seeking gender-responsive approaches to women offenders.

[6] The correlations between gender-responsive and recidivism measures among drug court participants were less robust and do not contribute to the predictive validity of the LSI-R. As a result, we again limit our following discussion to results for the probation and institutional samples.

Risk/Need Levels (High, Medium, and Low Risk)

An additional step in constructing the final instruments involved setting cut-points for the LSI-R, and the LSI-R with the addition of the gender-responsive items. Doing so differentiates each of the samples into subgroups based upon risk of future offense-related outcomes. Supervision and treatment intensity then follows from the risk level designation. It is commonly asserted in this regard that higher risk offenders should receive more intensive supervision and intervention than lower risk offenders (Andrews et al., 1990b; Bonta, Wallace-Capretta, & Rooney, 2000; Lipsey, 1992; Lipsey & Wilson, 1998; Lovins, Lowenkamp, Latessa, & Smith, 2007; Lowenkamp & Latessa, 2002)..

Prior to constructing such risk levels, two constraints where adhered to. First, within the constraints of maintaining the prediction of the original continuous scale, cut-points are somewhat flexible. This is important because an agency may wish to have more offenders in lower-risk services, less in higher, or vice versa. Second, as noted in many instances above, Minnesota did not test all of the variables that will be on the final trailer, so the levels we present for the LSI-R added to the Trailer (Figures 6 and 9, below) likely will change after additional research with larger samples and additional factors. Thus, while we are confident of the levels and cut-points set for the LSI-R alone (Figures 4, 5, 7, and 8), the cut-points set for the combined LSI-R and Trailer are specific to the samples studied in the Minnesota project.

With this in mind, the following alternative options for using the two risk scales (LSI-R and gender-responsive) should be considered by Minnesota officials:

1. Use the trailer only as a needs assessment and do not combine scores with the LSI-R. In doing so, however, users should appropriately differentiate those gender-responsive needs that are risk factors from those that are not (see Figure 3 and Appendix E). As additional research becomes available, it will be possible to communicate new scoring rules for the Trailer and LSI-R combined;

2. Use the Trailer as a needs assessment and submit additional LSI-R, Trailer, and outcome data from a pilot sample to a researcher for purposes of determining appropriate cut-points for the composite LSI-R and Trailer dynamic risk factors. Given limitations with various Minnesota data systems, collecting outcome data would not be a straight forward process, but would require case-by-case record checks similar to the research activities of the present project;

3. Use the stand-alone instruments which have cut-points established for Missouri probation, prison, and pre-release populations. These cut-points should also be re-evaluated on a pilot sample of Minnesota probationers. Given the State's investment in the LSI-R, this is not likely to be a viable option.

4. Add only the gender-responsive needs used in the present study and the LSI-R domains for scoring the risk levels, and consider new Missouri variables as needs. Again, users should be aware of the needs that are risk factors, even if they are not on the risk scale. Current mental health scales pertaining to depression and psychosis are especially important in this regard. As data on all scales are amassed along with outcome data, researchers could then recalibrate the Missouri needs into an overall scale with the LSI-R.

We anticipate that the first or forth option will be of most interest to Minnesota officials and would recommend either one. It should be noted however, that, notwithstanding the need for additional research, the Trailer as well as the stand-alone instrument are ready to be used for supervision and treatment planning purposes. That is, none of the options noted above preclude immediate use of the Trailer interview and survey as needs assessments that also allow for the prioritization of needs. The choice of options, however, may necessitate changes to the scoring instrument (Appendix E). University of Cincinnati researchers will be happy to do this without fee.

We turn now to an examination of risk/need levels for each of the sites.

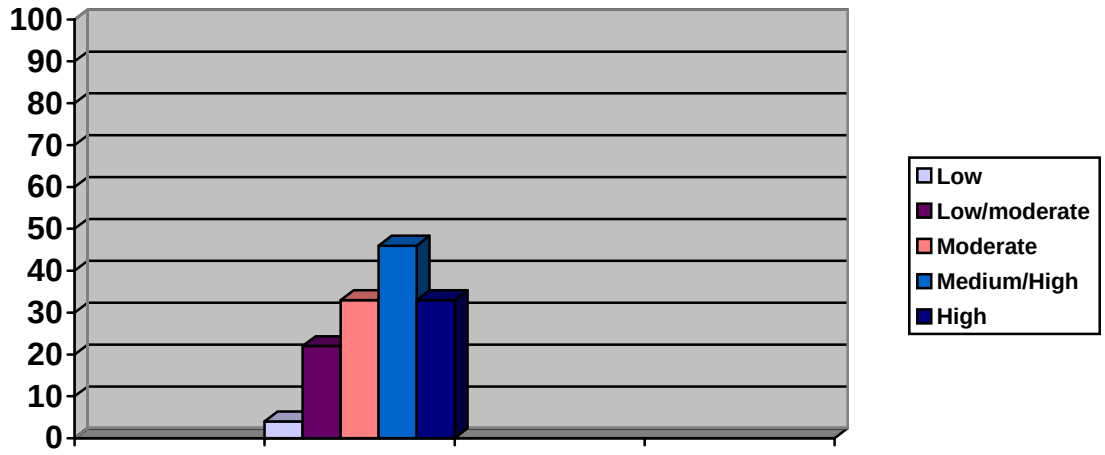
Probation Sample

In collapsing the continuous risk scales into levels appropriate to probation supervision, we compared a number of possibilities, including: 1) using the cut-points set by the LSI-R

publisher, Multi-Health Systems (MHS); 2) setting new cut-points for the LSI-R to explore whether they improve the predictive validity of the levels (corresponds to option 1, above); and 3) using cut-points for the continuous scale formed by the addition of the gender-responsive (Trailer) scale to the LSI-R (corresponds to option 4, above).

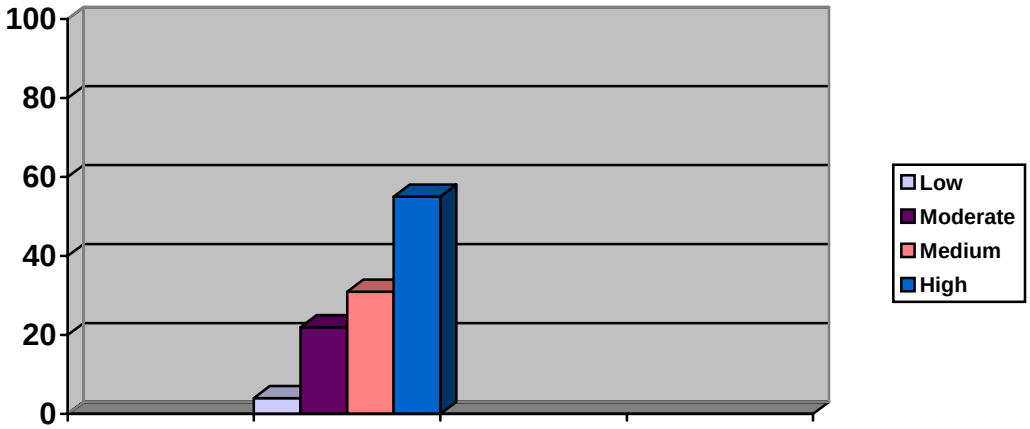
The cut-points currently in use for determining risk levels of probationers, the MHS cut-points, did not differentiate between women's risk levels in an ideal manner. Findings such as those shown in Figure 4, below, underscore the need for local validation of even well-established risk/need assessments. Outcomes (percent with at least one arrest) for each level are shown in Figure 4. The observation that the highest risk group had a 12 month re-arrest rate that was similar to the moderate risk group may have been attributable to the fact that only six women were assessed into the highest risk group. Of more concern, however, is that the differentiation between the groups in terms of their ultimate arrest rate is rather flat. We would have wanted to see more of a "stair-step effect" where recidivism rates increased along with each increase in risk level.

Figure 4: Percent with At Least One New Arrest (12 Months Following Interview) Using MHS Cut-Points, Probation Sample.



Further analysis recommended the following cut-points for use of the LSI-R among probationers in Minnesota: 1) low risk = 0-13; 2) moderate risk = 14-24; 3) medium risk = 25-36; 4) high risk = 37-47. Using these cut-off scores, the differences between groups became much clearer (see Figure 5, below). These are the cut-points that we would recommend if Minnesota officials opt not to combine the gender-responsive (Trailer factors) and the LSI-R into a single scale. Use of the recommended cut-points also improved the predictive validity of the levels (Tau_c = .30; $p \leq .01$; AUC =.71) somewhat over the predictive validity obtained when the MHS levels were used (Tau_c = .28; $p \leq .01$; AUC =.70).

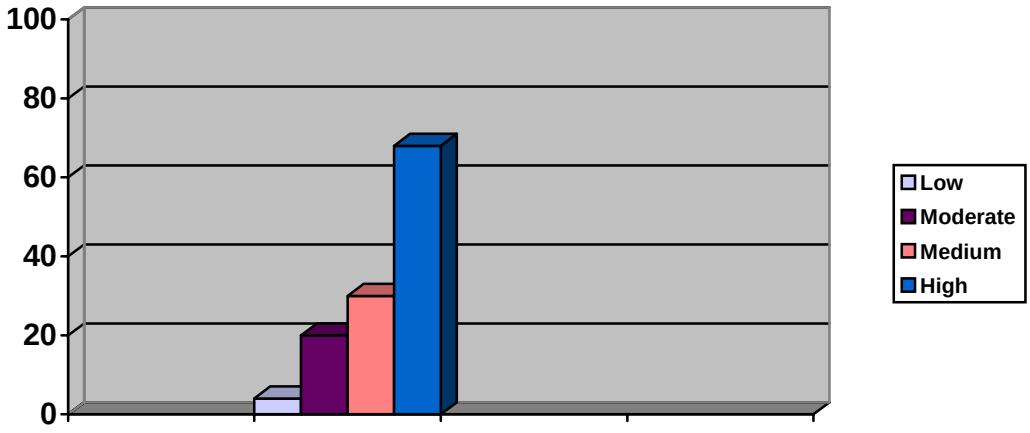
Figure 5: Percent with At Least One New Arrest (12 Months Following Interview), Using Recommended Cut-Points (0-13; 14-24; 25-36; 37-47), Probation Sample.



When the gender-responsive trailer was integrated with the LSI-R score, scores ranged from 0 to 48. The following cut-points resulted in the outcomes shown in Figure 6, below: 1) low risk = 0-14; 2) moderate risk = 15-23; 3) medium risk = 24-39; 4) high risk 40 and above. Results are similar to those shown in Figure 5 above, however, the high risk group has a higher arrest rate, and predictive validity figures are even stronger (Tau_c = .34; $p \leq .01$; AUC =.73

verses Tau_c = .30; $p \leq .01$; AUC =.71), and considerably stronger than results for the MHS cut-points.

Figure 6: Percent with At Least One New Arrest (12 Months Following Interview), LSI-R Plus Trailer (0-14; 15-23; 24-39; 40+), Probation Sample.



The preceding discussion addressed only the outcome behaviors of the women in the various risk categories. The analysis sought to assure that highest risk was reserved for women with a strong likelihood of recidivism. In Figure 6 (LSI plus Trailer), close to 70 percent of the women in the high risk group were rearrested at least once. Another important part of this discussion at least for purposes of planning and resource allocation concerns the proportionate numbers of women in each category. These figures are shown in Table 15, below. An interpretation of the proportionate distribution of women across risk categories in concert with their outcome behaviors suggests that approximately 8 percent of the probationers were high need, high risk, and highly likely to be rearrested. Another 67 percent of the population, however, also scored in the medium range of risk and exhibited needs that warranted services. Their rearrest rates ranged from 20 percent (moderate risk) to 30 percent (medium risk).

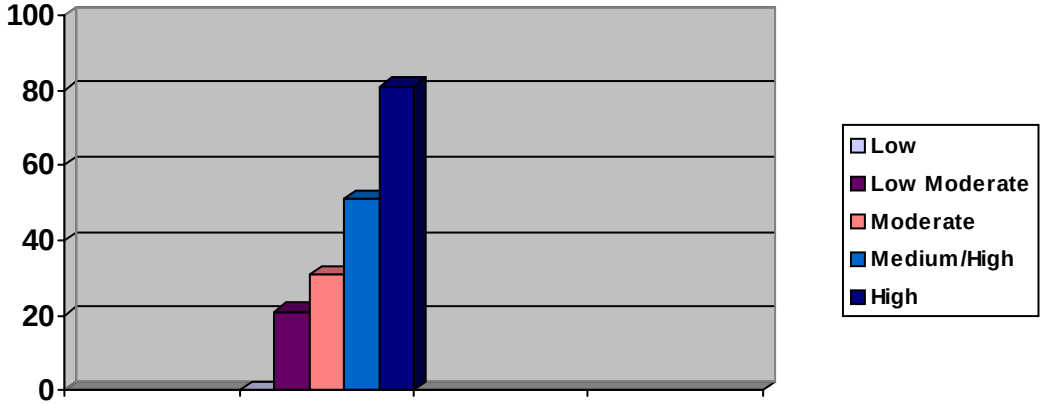
Table 15: Distribution of Offenders Across Risk Levels for Each Model, Probationers

	MHS Levels		Recommended Levels: LSI-R		Recommended Levels: LSI-R & Trailer	
Risk Categories	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
Low	54	23.2	54	23.2	57	24.5
Low/Moderate	86	36.9	Na		Na	
Moderate	61	26.2	88	3728	74	31.8
Medium	26	11.2	69	29.6	83	35.6
High	6	2.6	22	9.4	19	8.2
Total	233	100.0	233	100.0	233	100.0

Prison Sample

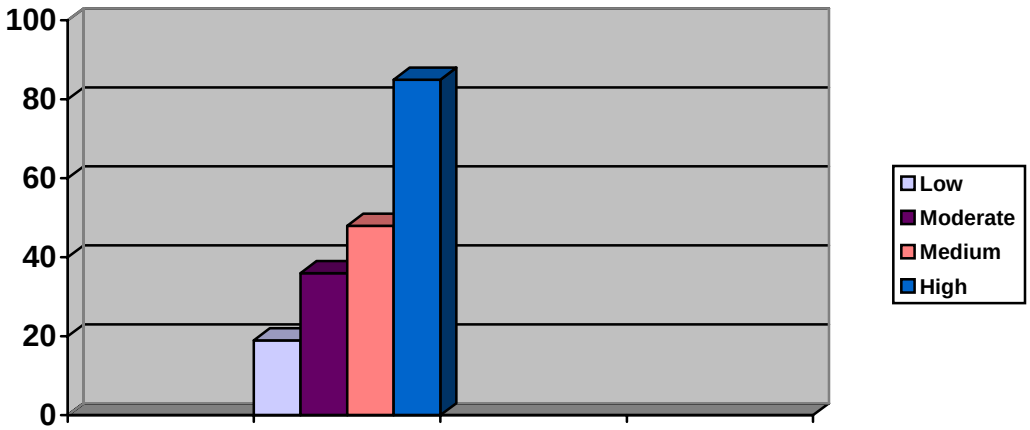
When a similar analysis was conducted for the prison sample, the MHS cut-points showed meaningful differences between risk levels (see Figure 7, below). However, only one inmate was classified into the low risk group. Moreover, five groups are not entirely useful from a prison administrative standpoint.

Figure 7: Percent with At Least One Misconduct (12 Months Following Interview), Using MHS Cut-Points (0-13; 14-23; 24-33; 34-40; 41-47), Prison Sample.



Therefore, alternative cut-points were developed for situations where the LSI-R would be the only risk tool and the Trailer was used as a needs assessment, not calibrated with the LSI-R (option 1): 1) low risk = 0-26; 2) moderate risk = 27-33; 3) medium risk = 34-40; 4) high risk 40-47. Results using these new cut-points are shown in Figure 8, below. The correlation between these levels and prison misconducts is higher for the alternative cut-points (Tau_c = .38; $p \leq .01$; AUC =.70) than for the MHS cut points (Tau_c = .34; $p \leq .01$; AUC =.68).

Figure 8: Percent with at Least One Misconduct (12 Months Following Interview), Using Recommended Cut-Points (0-26; 27-33; 34-39; 40-47), Prison Sample.



A similar demarcation was obtained when the gender-responsive, Trailer was added to the LSI-R, as shown in Figure 9, below. However, the correlation with outcome for these levels was nearly identical to that observed for the alternative cut points shown in Figure 8 above (Tau_c = .37; $p \leq .01$; AUC =.69).

Figure 9: Percent with at Least One Misconduct (12 Months Following Interview), LSI-R Plus Trailer (0-27; 28-35:36-44; 45-53), Prison Sample.

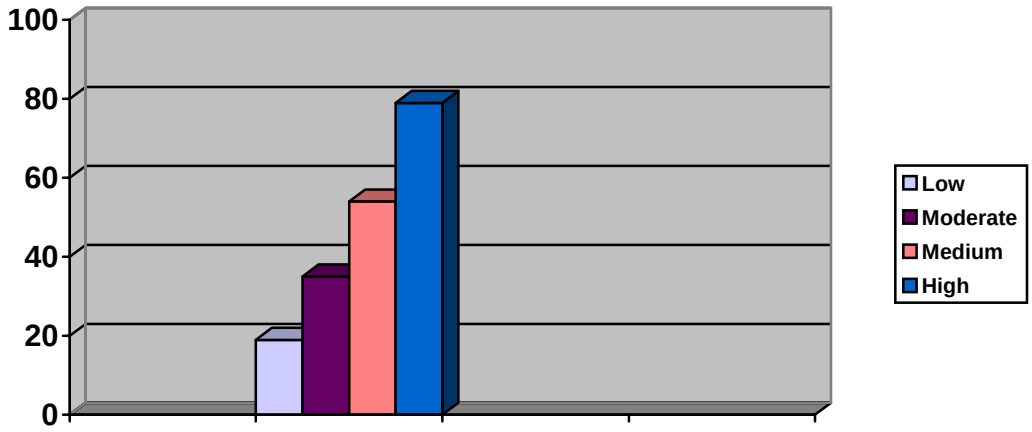


Table 16 below portrays the size of each of the risk groups formed through this analysis. The highest risk group actually comprised only 7 percent of the sample. The remaining women were fairly evenly distributed over the remaining three groups.

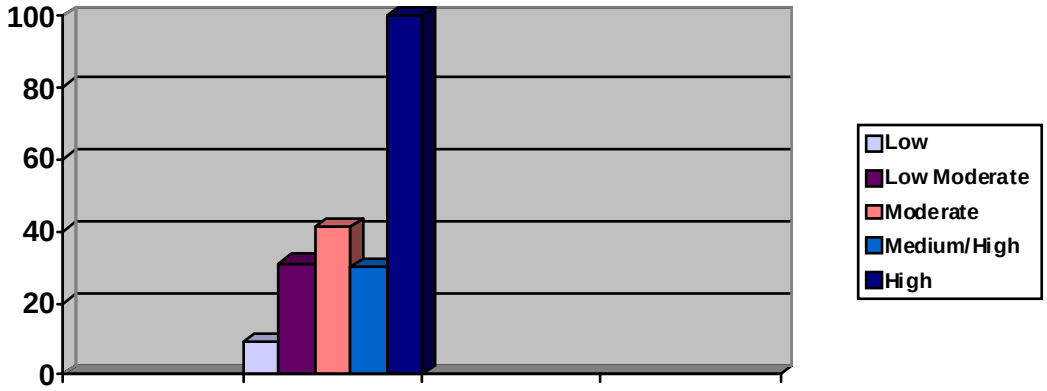
Table 16: Distribution of Offenders Across Risk Levels for Each Model, Prison Sample.

	MHS Levels		Recommended Levels: LSI-R		Recommended Levels: LSI-R & Trailer	
Risk Categories	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
Low	1	0.5	53	26.8	53	26.8
Low/Moderate	33	16.7		Na		Na
Moderate	83	41.9	64	32.3	71	35.9
Medium	65	32.8	61	30.8	59	29.8
High	16	8.1	20	10.1	14	7.1
Total	198	100.0	198	100.0	197	100.0

Drug Court Sample

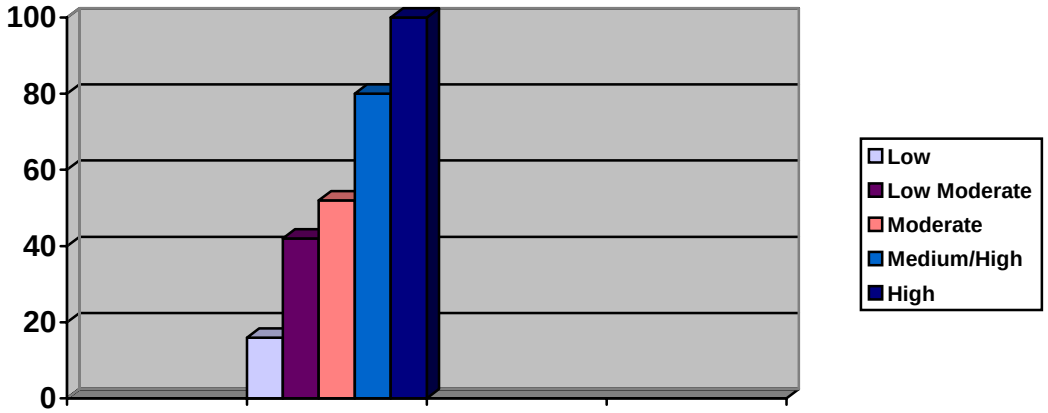
As seen in Figure 10, below, the MHS cut-points also did not produce risk levels which coincided with increases in 12 month arrest rates among women in drug court. The drug court sample, however, was predominantly low risk. Only one offender was assessed as high risk and 10 as medium high risk. The remaining (93.6 percent) were classified at levels ranging from low to moderate risk. The small size of the higher risk groups may have contributed to unstable outcome rates.

Figure 10: Percent with At Least One Arrest (12 Months Following Interview), Using MHS Cut-Points (0-13; 14-23; 24-33; 34-40; 41-47), Drug Court Sample.



When bench warrants at 12 months were examined, the proportion of cited offenders increased steadily with risk level, as shown in Figure 11. Moreover, correlations with outcome were high (Tau_c = .38; $p \leq .01$; AUC =.70). Consideration of this finding as well as the truncated distribution of offenders across LSI-R levels and the more complex measures of drug court success/failure, a change in cut-points did not appear warranted. Using the MHS cut points, the following distribution of offenders was observed across risk levels: 1) low risk = 43 (28.7 percent); 2) low moderate risk = 59 (39.3 percent); 3) moderate risk = 37 (24.7 percent); 4) medium/high risk = 10 (6.7 percent); 5) high risk = 1 (0.7 percent).

Figure 11: Percent with At Least One Bench Warrant (12 Months Following Interview), Using MHS Cut-Points (0-13; 14-23; 24-33; 34-40; 41-47), Drug Court Sample.



Treatment and Policy Implications

In the course of conducting this study and similar ones in other jurisdictions, a good deal of information has been amassed about women's risk and the needs that must be addressed in order to prevent dysfunctional prison adjustment and future offending. The findings broaden the picture of the needs of women offenders over what may currently be seen as treatment priorities. This section reviews the study findings for their implications for program planning and community development in Minnesota.

Women's Risk

The change in cut points along with the addition of several gender-responsive variables identified high risk groups where predictions of unfavorable outcomes were accurate for 68 percent of the probationers and 79 percent of the inmates. While such rates may shrink in later validation studies, they are higher than is typical among high risk women offenders when risk is

assessed through gender-neutral assessments; this suggests that the gender-responsive tools do a better job of identifying high risk women. Such accuracy helps to reduce over-classification by minimizing the number of women who are misclassified as high risk.

Although the arrest/misconduct rates are high for high risk women, rates for the entire samples (undifferentiated by risk) were not. The 12-month, re-arrest rate for probationers as a group was 23.4 percent, while the misconduct rate for prisoners was 39.9 percent, when minor misconducts such as being in an unauthorized area or failure to comply were omitted. On the other hand, the proportion of participants arrested for more serious offenses and misconducts, while low, is nevertheless higher than seen in other jurisdictions. For example, 3.8 percent of the probationers (16.4 percent of those arrested) were arrested for a violent offense (8 assaults and batteries and 1 robbery), the remaining arrests were for DUIs, DWIs, drug possession, forgery, theft, and traffic offenses. Seventeen percent of the inmates were involved in what would be termed very serious infractions. These included 3 assaults (1.5 percent), 2 escapes (1.0 percent), 2 threats (1.0 percent), 2 acts of smuggling (1.0 percent), and 5 citations for sexual behavior (2.5 percent). Additionally, charges for abuse and harassment were issued to 19 women (9.6 percent). However, it is not clear that the abuse and harassment charges were as serious as the charge implied.

Although our results are favorable from a predictive standpoint, we must stress that risk in this case is a function of need, and the higher risk categories in each sample are more likely to be comprised of very troubled individuals than is the case when risk is defined by the LSI-R alone, or by the State's custody classification system. As such, the need for appropriate interventions targeted to these risk factors is urgent and appropriate from both a treatment and a risk management perspective.

Treatment Implications

Clearly, a substantial proportion of the participants warrant careful attention to the issues that are likely to bring them back into the system. If we adhere to the risk principle (Andrews et al., 1990b; Lovins et al., 2007), for example, approximately 74.1 percent of the female inmates, 43.8 percent of female probations, and 32.1 percent of female drug court participants fall into the medium to high risk groups warranting interventions targeted both to gender-neutral and gender-responsive risk factors. If we examine the risk factors of these groups, a picture begins to emerge about the most important directions for future treatment planning.

Table 17 sorts the many needs studied in this research according to prevalence. In constructing this table, we noted a score on each scale, where the factor started to show evidence of the outcome being examined. It is recommended, for example, that offenders scoring at the mid-point or higher on an LSI-R domain scale be referred to appropriate services if they are medium or high risk. The mid-point is widely viewed to be the threshold where scores begin to show evidence of contributing to the outcome being examined. For example, a score of 6 on the education/employment scale begins to find proportionately more women evidencing future arrests than scores between 0 and 5. This study found that some scales (e.g., emotional/personal, and relationships) begin to tip at earlier points, however. The tipping points are indicated for each of the LSI-R and gender-responsive domains shown on Table 17. The prevalence figures shown for each population indicate the proportion of offenders scoring above the tipping point. The table also notes, in bold font, those needs which were associated with either desistence or recidivism.[7]

[7] Items in bold were significantly correlated with twelve-month serious misconducts among prisoners and twelve-month re-arrests among probationers and drug court participants.

The decision to highlight risk and prevalence is not meant to diminish the importance of risk factors that are less prevalent, or less predictive of offense-related outcomes. Rather, it is to highlight those areas that are likely to require substantial resources as states commit to a broader focus on gender-responsive strategies.

It is apparent from these analyses, reported in Table 17, that poverty, noted as incomes less than $20,000 characterized very large proportions of the women offenders regardless of sample (prison, probation, or drug court). Almost 70 percent of women in all samples reported earning less than $20,000 during the previous year, and this variable was predictive of re-arrests among probation and drug court participants. Education was also strongly related to outcomes across all samples. Those with limited educations were more likely to be rearrested or receive a misconduct than those with high school graduation and post high school degrees. At a policy level, these findings advocate strongly for continued education, economic and job development opportunities.

Substance abuse was also observed to be a key issue for these women. Over 40 percent of women in each sample scored high on substance abuse measures from the LSI-R, as well as more specific measures relating to past or current drug or alcohol problems. Although we did not correlate past and present substance abuse and alcohol problems with criminal outcomes in Minnesota, research in other NIC sites suggests that it may be useful to discriminate between past and current problems as well as specific types of substance abuse (e.g., methamphetamines vs. alcohol use) for women offenders because the LSI-R may underestimate the prevalence of substance abuse. This is because the LSI-R scales measures not only use, but also the extent to which substance abuse has interfered with other life issues.

Women with antisocial associates characterized 62.9, 31.3, and 56.0 percent of the prison, probation, and drug court samples, respectively. It was a predictor of recidivism and misconducts in each sample as well, and should be considered in programming, counseling and other interventions for women. Another dynamic risk factor common to the Canadian "what works" model, antisocial attitudes, was correlated with recidivism measures at the twelve-month follow-up point.

Current perspectives on offender recidivism downplay the importance of self-esteem and self-efficacy. Yet, in Minnesota, self-esteem and self-efficacy were strongly associated with recidivism; high levels of self-esteem and self-efficacy reduced the likelihood that women in prison would incur serious misconducts and women on probation would be rearrested. Therefore, these needs appear to function as protective factors which aide women in desistance from crime. Fortunately, gender-responsive programming suggests to look not only at risk factors, but strengths, such as self concept, as well. Providers are also encouraged to take self-esteem and self-confidence into consideration in their interactions and therapeutic relationship styles with women offenders (for some suggestions, see Bogue, Nandi, & Jongsma, 2003)

Proportions of women who had experienced some form of prior abuse were high in Minnesota, ranging from a low of 52.7 percent of the drug court sample to a high of 71.3 percent in the prison sample. With the exception of drug court participants, childhood and adult physical or nonphysical abuse was strongly associated with prison misconducts and recidivism. Abuse appears to be an important factor to consider among women offenders, given its high occurrence as well as research indicating that it is strongly associated to other risk factors (see Salisbury, 2007; McClellan et al., 1997).

We would like to have offered more guidance regarding relationship dysfunction and the role it plays in women's recidivism. However, in this and some of the other NIC sites we did not feel that a good understanding of women's intimate relationships was reached. Two sites (Maui and Missouri) found no relationship between the relationship dysfunction scale and offender outcomes, while Minnesota and Colorado detected strong correlations with outcomes. This may reflect women's reluctance to speak about intimate relationships; there may also be aspects of the survey environment that may need to be and will be changed in future studies. Based on findings from Minnesota, however, it does appear that women whose relationships are characterized by dysfunction, low support, criminal activity, and codependency are more likely to recidivate or have problems adjusting to prison. More research is necessary, however, before policy recommendations can be made.

Over half of the women in all samples in Minnesota were mothers of children below the age of 18. Of those women, very few scored high on the parental stress needs scale, although parental stress was significantly associated with recidivism among all participants. Parental stress, as this assessment scale is defined, should not be considered indicative of bad parenting. Instead, the scale identifies those mothers who receive little support from family members or the father(s) of their children. These women also report stress and difficulties controlling the behavior of their children. The measure was designed to identify mothers who could benefit from parenting classes geared to parenting skills and behavioral management; many of these women are also likely to require child care services. It is important to stress that the scale says nothing about parental affection, overly harsh disciplinary practices, or abuse; as such, it not intended to inform child custody decisions in any way.

Mental health problems appear to be highly prevalent among women offenders in Minnesota, particularly among prisoners and probationers – over 60 percent of women in these samples reported that they had ever received mental health treatment, and over 70 percent scored high on the LSI-R emotional/personal subscale. While the LSI-R measurement of mental health problems was related to criminal behavior among institutional and probation samples, we learned from other NIC sites that measures separately tapping symptoms of anxiety/depression and psychosis appear to be more relevant to women offenders, and are highly correlated with recidivism. Historical scales and those that combined all symptoms into one scale clearly attenuated the true importance of mental health issues for women in those NIC sites. Therefore, even though we did see a correlation with twelve-month outcomes among Minnesota prisoners and probationers, it is likely that the new trailer scales for mental health (Appendix D) will prove to be more informative.

It is important to stress that these women bring many strengths to their correctional experience, and where present, these should be factored into correctional supervision and treatment planning. High proportions of these women approached correctional supervision with post high school educations. Those with sufficient self-esteem and self-efficacy also brought much to the correctional experience. These factors clearly worked to the benefit of correctional clients, their families, and their communities. Fostering their development would likely encourage favorable outcomes.

Therefore, based on our work with NIC, but in contrast to earlier, meta-analytic research (e.g., Andrews et al., 1990a; Andrews et al., 1990b; Gendreau et al., 1996; Izzo & Ross, 1990; Lipsey, 1992) we would cite the importance of family and marital, mental health, substance abuse, antisocial attitudes, and education or employment over strict attention to the "big four"

(e.g., antisocial associates, antisocial thinking, antisocial personality, and criminal history) (see Andrews & Bonta, 2003). If we add to this a picture of the prevalence of these needs (see Table 17), family and marital, substance abuse, and mental health appeared to characterize higher proportions of the female offender populations than other risk factors. Items not collected in this study, but highlighted in the final NIC Trailer may help to provide additional information on these domains. The NIC Trailer adds items pertinent to family support, family conflict, relationship issues, and additional mental health symptoms (e.g., symptoms of depression and psychosis).

Additional gender-responsive items noted to be important from a risk standpoint, include childhood abuse, adult victimizations, and relationship dysfunction. Of these, relationship dysfunction and previous instances of victimization were especially prevalent in Minnesota. We would also note the importance of building strengths (e.g., self-esteem and self-efficacy), although these were more predictive among women in community correctional settings. A variable not tested in Minnesota, support from one's family of origin, was a potent source of resilience for incarcerated women (Van Voorhis et al., 2008). It is included on the final trailer.

Table 17: Frequency and Percent Distribution of Offenders by Programming Needs[a]

	Prison		Probation		Drug Court	
Characteristic	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
LSI-R Subscales						
Education/Employment(6+)[b]	**117**	**58.7**	**81**	**34.8**	**63**	**42.0**
Financial (1+/2+)[c]	**177**	**91.3**	**83**	**35.6**	42	28.0
Family/Marital (2+)	**163**	**82.7**	**138**	**59.2**	59	39.3
Accommodation (2+)	**118**	**59.9**	**64**	**27.5**	38	25.3
Leisure/Recreation (2+)	**126**	**64.0**	**115**	**49.4**	**45**	**30.0**
Antisocial Peers/Companions (3+)	**182**	**62.9**	**73**	**31.3**	**84**	**56.0**
Alcohol/Drugs (5+)	**144**	**73.1**	**150**	**45.1**	**80**	**53.3**
Emotional/Personal (2+)	**145**	**73.6**	**167**	**71.7**	52	36.0
Antisocial Attitudes (2+)	**102**	**51.8**	**64**	**37.5**	**17**	**11.3**
Moderate to High Risk LSI-R						
MHS Cutpoints	164	82.8	93	39.9	Na[d]	Na
New Cutpoints	145	74.2	91	39.1	--	--
Trailer + LSI-R Cutpoints	144	74.1	102	43.8	--	--
Survey Scales						
Relationship Dysfunction (6+/7+)	**165**	**83.4**	**139**	**59.6**	78	52.0
Low Self Esteem (22-)	**81**	**40.9**	**84**	**36.1**	44	29.3
Low Self Efficacy (40-/39-)	**95**	**48.0**	**81**	**34.8**	43	28.7
Parental Stress (14+)	74	37.9	**35**	**32.2**	**48**	**32.5**
Child Abuse (26+)	**58**	**29.3**	**53**	**22.7**	40	26.7
Adult Physical Abuse (25+/26+)	**123**	**62.1**	**72**	**30.9**	34	22.7
Adult Emotional Abuse (26+)	161	81.3	**171**	**73.4**	103	68.7
Adult Harassment (18+)	**76**	**38.4**	**86**	**36.9**	36	24.0
Other Measures						
Income (<$20,000)	170	87.6	**159**	**69.3**	**114**	**76.0**
Homeless Prior to Arrest	17	8.6	8	3.4	**9**	**6.0**
Victim Emotional/Physical Violence/Assault	**139**	**71.3**	**141**	**60.5**	79	52.7
Victim of Domestic Violence	104	54.5	110	47.2	**54**	**36.2**
Victim of Child Sexual Abuse	60	30.3	50	21.5	**35**	**23.7**
Victim of Child Nonsexual Abuse	52	26.3	**43**	**18.5**	39	26.0
Has Children Under 18	126	63.1	144	61.8	77	51.3
Mental Health Treatment (ever)	155	78.7	143	61.6	60	40.0
Mental Health Treatment (present)	102	51.8	115	49.6	31	20.7
Past Alcohol Problems	115	58.4	139	59.9	63	42.0
Past Drug Problems	168	85.3	135	58.2	133	88.7
Current Alcohol Problems	78	39.4	88	37.8	31	20.7
Current Drug Problems	147	74.2	104	44.6	119	79.3

Table Continues

Table17: Frequency and Percent Distribution of Offenders by Programming Needs, continued

	Prison		Probation		Drug Court	
Characteristic	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
Other Measures, Continued						
Medical Insurance	23	14.5	162	69.8	58	38.7
Receiving Assistance						
Housing	10	5.3	23	9.9	7	4.7
Medical	50	26.3	71	30.5	32	21.3
DHS	14	7.4	26	11.2	10	6.7
Disability/SSI/SSDI	19	10.0	22	9.4	11	7.3
Food Stamps	40	21.1	38	16.3	37	24.7
Unemployment	1	0.5	4	1.7	2	1.3
Benefit Disqualification	88	51.5	134	59.3	93	62.8

[a] Only the first 26 scales were subjected to recidivism analyses
[b] Numbers in parentheses indicate the "tipping point" of the scale
[c] The cut-point was 1+ for the prison sample, and 2+ for the probation and parole samples
[d] Na = not calculated due to unstable numbers

Implementation Considerations

If Minnesota officials choose to implement the gender-responsive assessment for probationers and prisoners, it will involve administration of the LSI-R and the Trailer. The Trailer now consists of a short 30-minute interview (Appendix C) followed by a 15-minute survey (Appendix D) which the offender completes on her own, but with support from correctional personnel (e.g., for clarification, definitions, monitoring completion, etc.). Pilot tests of these instruments find that scoring takes approximately 15 minutes (see Appendix E). Overall, the trailer should require approximately one hour to finish and score; actual staff time will involve about 45 minutes.

As with the LSI-R, appropriate use of the trailer requires training related to its administration, scoring, and case planning procedures. We would expect that users understand the Canadian "what works" model, core assumptions of the LSI-R, and the risk and needs principles (Andrews & Bonta, 2003). Gender-responsive approaches are intended to build from this foundation; however, training would require familiarity with the each of the domains on the trailer as well as what high scores mean in terms of appropriate interventions. On a local level, users would need full familiarity with the links between the assessment scales and the services put forward through partnerships across Minnesota. Additionally, users would be expected to demonstrate competence in interviewing, listening skills, motivational interviewing, therapeutic relationships, and case planning.

The Trailer, funded by the National Institute of Corrections, is considered to be a public domain instrument, available to users without charge as long as appropriate precautions are taken to assure the integrity of its use. Permission for its use may be obtained from the University of Cincinnati, but is contingent upon assurances that: 1) appropriate training will be assured and approved by the University of Cincinnati prior to the issuance of permission;[8] 2) changes will not be made to the Trailer scales or the questions that formulate the scales; and 3) users will not extend permission to third parties to use the instrument (agreements are on a case by case basis). Ideally, the University of Cincinnati would also wish to secure data to support further development of the trailer; such data, however, is not required of future users. This would include assessment data as well as follow-up data on offense-related outcomes.

Prospective users should also be aware that the NIC project has developed the following instruments:

[8] A staff-training curriculum is available through the University of Cincinnati Corrections Institute, but users are not required to subscribe to it as long a detailed training plan is submitted and approved.

1. Full institutional risk/needs assessments that do not have to be appended to other instruments;
2. A trailer for use with other institutional risk/needs instruments;
3. Full prerelease/parole risk/needs instruments;
4. A trailer for use with other prerelease/parole risk/needs instruments;
5. Full probation risk/needs instruments;
6. A trailer for use with other probation risk/needs instruments.

The second and sixth instruments, of course, are the tools highlighted in this report.

Conclusion

In closing we hope that this study and report prove useful to correctional policy makers, practitioners and clients in Minnesota. The report finds that the gender-responsive factors studied in this research are extremely import to consider in the course of providing meaningful programs and services to women offenders. Many of them also speak to whether or not women return to the criminal justice system following community or institutional supervision. We have also provided a number of options for using the new assessment tool, scoring guidelines, and new cut points in addition to an overview of implementations procedures.

The study has made a strong contribution to our understanding of women offenders, and we thank the Task Force and all who made it possible.

References

Andrews, D. A. (1983). Assessment of outcome in correctional samples. In M. J. Lambert, E. R. Christensen, & S. S. DeJulio (Eds.), *Assessment of psychotherapy outcome* (pp. 160-201). New York: Wiley.

Andrews, D. A., & Bonta, J. (1995). *Level of Service Inventory-Revised.* North Tonawanda, NY: Multi-Health Systems.

Andrews, D. A., & Bonta, J. (2003). *The psychology of criminal conduct* (3rd ed.). Cincinnati, OH: Anderson.

Andrews, D. A., Bonta, J., & Hoge, R. D. (1990a). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior, 17,* 19-52.

Andrews, D. A., Dowden, C., & Rettinger, L. J. (2001). Special populations within corrections. In J. A. Winterdyck (Ed.), *Corrections in Canada: Social reactions to crime* (pp. 170-212). Toronto: Prentice-Hall.

Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990b). Does correctional treatment work? A clinically-relevant and psychologically-informed meta-analysis. *Criminology 28,* 369-404.

Avison, W. R., & Turner, R.J. (1986). Screening for Problem Parenting: Preliminary Evidence on a Promising Measure. *International Journal of Child Abuse and Neglect* 10(2):157-170.

Baunach, P. J. (1985). *Mothers in prison.* New Brunswick, NJ: Transaction Books.

Beattie, M. (1987). *Codependent no more.* New York: Harper/Hazelden.

Belknap, J. (2007). *The invisible woman: Gender, crime, and justice* (3rd ed.). Belmont, CA: Thompson Wadsworth.

Belknap, J., Fisher, B., & Cullen, F. T. (1999). The development of a comprehensive measure of the sexual victimization of college women. *Violence Against Women, 5,* 185-214.

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

Benda, B. B. (2005). Gender differences in life-course theory of recidivism: a survival analysis. *International Journal of Offender Therapy and Comparative Criminology, 49,* 325-342.

Bepko, C., & Krestan, J. (1985). *The responsibility trap: A blueprint for treating the alcoholic family.* New York: Macmillan.

Berman, J. (2006). *Responding to Women Offenders: The Department of Women's Justice Services in Cook County, Illinois*. Washington, DC: USDOJ, National Institute of Corrections.

Blanchette, K. (1996). *The relationship between criminal history, mental disorder, and recidivism among federally sentenced female offenders.* Unpublished master's thesis, Carleton University, Ottawa, Ontario, Canada.

Blanchette, K. (2004). Revisiting effective classification strategies for women offenders in Canada. *Feminism & Psychology, 14,* 231-236.

Blanchette, K. (2005). *Field-test of a gender-informed security reclassification scale for female offenders.* Unpublished doctoral dissertation, Carleton University, Ottawa, Ontario, Canada.

Blanchette, K., & Brown, S. L. (2006). *The assessment and treatment of women offenders: An integrative perspective.* Chichester: Wiley.

Blanchette, K. & Motiuk, L.L. (1995). Female offender risk assessment: The case management strategies approach. Poster presented at the Annual Convention of the Canadian Psychological Association, Charlottetown, Prince Edward Island.

Bloom, B. (1998). Women with mental health and substance abuse problems on probation and parole. *Offender programs report: Social and behavioral rehabilitation in prisons, jails and the community, 2*(1), 1-13. Kingston, NJ: Civic Research Institute.

Bloom, B., Owen, B., & Covington, S. (2003). *Gender-responsive strategies: Research practice and guiding principles for women offenders*. Washington, DC: USDOJ, National Institute of Corrections.

Bloom, B., Owen, B., & Covington, S. (2005). *Gender-responsive strategies for women offenders: A summary of research, practice, and guiding principles for women offenders.* Washington, DC: USDOJ, National Institute of Corrections.

Blume, S.B. (1990). Chemical dependency in women: Important issues. *American Journal of Drug and Alcohol Abuse, 16,* 297-307.

Bogue, B., Nandi, A. & Jongsma, A. (2003). *The Probation and Parole Treatment Planner.* Hoboken, NJ: John Wiley & Sons.

Bonta, J. (1989). Native inmates: Institutional responses, risks, and needs. *Canadian Journal of Criminology, 31,* 49-62.

Bonta, J., & Motiuk, L. L. (1987). The diversion of incarcerated offenders to correctional halfway houses. *Journal of Research in Crime and Delinquency, 24,* 302-323.

Bonta, J., & Motiuk, L. L. (1990). Classification to correctional halfway houses: A quasi-experimental evaluation. *Criminology, 28,* 497-506.

Bonta, J., & Motiuk, L. L. (1992). Inmate classification. *Journal of Criminal Justice, 20,* 343-353.

Bonta, J., Pang, B., & Wallace-Capretta, S. (1995). Predictors of recidivism among incarcerated female offenders. *The Prison Journal, 75,* 277-294.

Bonta, J., Wallace-Capretta, S., & Rooney, J. (2000). A quasi-experimental evaluation of an intensive rehabilitation supervision program. *Criminal Justice and Behavior, 27,* 312-329.

Brennan, T. (1998). Institutional classification of females: Problems and some proposals for reform. In R. T. Zaplin (Ed.) *Female offenders: Critical perspectives and effective interventions* (pp. 179-204). Gaithersburg, MD: Aspen Publishers.

Brennan, T., & Austin, J. (1997). *Women in jail: Classification issues.* Washington, DC: USDOJ, National Institute of Corrections.

Brennan, T., Dieterich, W., & Oliver, W. (2006). *COMPAS: Technical manual and psychometric report Version 5.0.* Traverse City, MI: Northpointe Institute.

Brown, S.L, & Motiuk, L.L. (2005). *The Dynamic Factor Identification and Analysis (DFIA) component of the Offender Intake Assessment (OIA) process: A meta-analytic, psychometric, and consultative review* (Research Report R-164). Ottawa, Ontario: Correctional Service Canada.

Browne, A., Miller, B., & Maguin, E. (1999). Prevalence and severity of lifetime physical and sexual victimization among incarcerated women. *International Journal of Law and Psychiatry, 22,* 301-322.

Bureau of Justice Statistics. (1999). *Special report: Women offenders.* Washington, DC: USDOJ.

Bureau of Justice Statistics. (2005). *Prisoners in 2004.* Washington, DC: USDOJ.

Campbell, D., Campbell, J., King, C., Parker, B., & Ryan, J. (1994). The reliability and factor structure of the Index of Spouse Abuse with African-American women. *Violence and Victims, 9,* 259-274.

Carp, S. V., & Schade, L. (1992). Tailoring facility programming to suit female offender's needs. *Corrections Today, (August),* 154-158.

Case, P., & Fasenfest, D. (2004). Expectations for opportunities following prison education: A discussion of race and gender. *Journal of Correctional Education, 55,* 24-39.

Chandler, S. M., & Kassebaum, G. (1994). Drug-alcohol dependence of women prisoners in Hawaii. *Affilia, 9,* 157-170.

Chesney-Lind, M. (1997). *The female offender: Girls, women, and crime.* Thousand Oaks, CA: Sage.

Chesney-Lind, M., & Rodriguez, N. (1983). Women under lock and key. *Prison Journal, 63,* 47-65.

Clark, J. (1995). The impact of the prison environment on mothers. *The Prison Journal, 75,* 306-329.

Coleman, F. L. (1997). Stalking behavior and the cycle of domestic violence. *Journal of Interpersonal Violence, 12,* 420-432.

Coulson, G., Ilacqua, G., Nutbrown, V., Giulekas, D., & Cudjoe, F. (1996). Predictive utility of the LSI for incarcerated female offenders. *Criminal Justice and Behavior, 23,* 427-439.

Covington, S. (1998). The relational theory of women's psychological development: Implications for the criminal justice system. In R. T. Zaplin (Ed.), *Female offenders: Critical perspectives and effective interventions* (pp. 113-128). Gaithersburg, MD: Aspen Publishing.

Covington, S. (1999). Helping Women Recover: Correctional Package. San Francisco, CA: Jossey-Bass.

Crowley, J. D., & Dill, D. (1992). Silencing the Self Scale. *Psychology of Women Quarterly, 16,* 97-106.

Cullen, F. T., Fisher, B. S., & Applegate, B. K. (2000). Public opinion about punishment and corrections. In M. Tonry (Ed.), *Crime and justice: A review of research, Vol. 27* (pp. 1-79). Chicago: University of Chicago Press.

Dahlberg, L., Toal, S., Behrens, C. (1998). *Measuring violence-related attitudes, beliefs, and behaviors among youth.* Washington, DC: U.S. Department of Health and Human Services.

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. *Southern California Review of Law and Women's Studies, 2,* 11-52.

Daly, K. (1994). *Gender, crime, and punishment.* New Haven, CT: Yale University Press.

Dowden, C., & Andrews, D. A. (1999). What works for female offenders: A meta-analytic review. *Crime & Delinquency, 45,* 438-452.

Dowdy, E.R., Lacy, M.G., & Unnithan, N.P. (2002). Correctional prediction and the Level of Supervision Inventory. *Journal of Criminal Justice, 30,* 29-39.

Enos, S. (2001). *Mothering from the inside: Parenting in a women's prison.* Albany, NY: SUNY Press.

Farr, K. A., (2000). Classification for female inmates: Moving forward. *Crime & Delinquency, 46,* 3-17.

Feeley, M. M., & Simon, J. (1992). The new penology: Notes on the emerging strategy of corrections and its implications. *Criminology, 30,* 449-474.

Ferraro, K.J., & Moe, A.M. (2003). Mothering, Crime, and Incarceration. *Journal of Contemporary Ethnography, 32,* 9-40.

Fischer, J., Spann, L., & Crawford, D. (1991). Measuring codependency. *Alcoholism Treatment Quarterly, 8,* 87-99.

Gendreau, P. (1996). The principles of effective intervention with offenders. In A. T. Harland (Ed.), *Choosing correctional options that work: Defining the demand and evaluating the supply* (pp. 117-130). Thousand Oaks, CA: Sage.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology, 34,* 575-607.

Gilligan, C. (1982). *In a different voice: Psychological theory and women's development.* Cambridge, MA: Harvard University Press.

Girard, L. & Wormith, J.S. (2004). The predictive validity of the Level of Service Inventory-Ontario Revision on general and violent recidivism among various offender groups. *Criminal Justice and Behavior, 31,* 150-181.

Greene, S., Haney, C., & Hurtado, A. (2000). Cycles of pain: Risk factors in the lives of incarcerated mothers and their children. *The Prison Journal, 80,* 3-23.

Hardyman, P. L., & Van Voorhis, P. (2004). *Developing gender-specific classification systems for women offenders.* Washington, DC: USDOJ, National Institute of Corrections.

Henderson, D.J. (1998). Drug abuse and incarcerated women: A research review. *Journal of Substance Abuse Treatment, 15,* 579-587.

Hollin, C.R., Palmer, E.J., & Clark, D. (2003). The Level of Service Inventory-Revised profile of English prisoners: A needs analysis. *Criminal Justice and Behavior, 30,* 422-440.

Holsinger, K., Belknap, J., & Sutherland, J. (1999). *Assessing the gender specific program and service needs for adolescent females in the juvenile justice system.* Presented to the State of Ohio's Office of Criminal Justice Services, November.

Holsinger, A.M., Lowenkamp, C.T., & Latessa, E.J. (2003). Ethnicity, gender, and the Level of Service Inventory-Revised. *Journal of Criminal Justice, 31*, 309-320.

Holtfreter, K., & Morash, M. (2003). The needs of women offenders: Implications for correctional programming. *Women and Criminal Justice, 14*, 137-160.

Holtfreter, K.,, Reisig, M.D., & Morash, M. (2004). Poverty, state capital, and recidivism among women offenders. *Criminology and Public Policy,* 3 (2), 185-208.

Hubbard, D. J., & Pratt, T. C. (2002). A meta-analysis of the predictors of delinquency among girls. *Journal of Offender Rehabilitation, 34(3),* 1-13.

Izzo, R., & Ross, R. (1990). Meta-analysis of rehabilitation programs for juvenile delinquents: A brief report. *Criminal Justice and Behavior, 17,* 134-142.

Kampfner, C. J. (1995). Post-traumatic stress reactions in children of imprisoned mothers. In K. Gabel & D. Johnson (Eds.), *Children of incarcerated parents* (pp. 21-30). New York: Lexington Books.

Kazura, K. (2001). Family programming for incarcerated parents: A needs assessment among inmates. *Journal of Offender Rehabilitation, 32,* 67-83.

Koons, B. A., Burrow, J. D., Morash, M., & Bynum, T. (1997). Expert and offender perceptions of program elements linked to successful outcomes for incarcerated women. *Crime and Delinquency, 43,* 515-532.

Kroner, D. G., & Mills, J. F. (2001). The accuracy of five risk appraisal instruments in predicting institutional misconduct and new convictions. *Criminal Justice and Behavior, 28,* 471-489.

Langan, N. P., & Pelissier, B. (2001). Gender differences among prisoners in drug treatment. *Journal of Substance Abuse, 13,* 291-301.

Larivière, M. (1999). *The relationship between self-esteem, criminality, aggression, and violence: A meta-analysis.* Unpublished comprehensive examination, Carleton University, Ottawa, Ontario, Canada.

Law, M. A., Sullivan, S. M., & Goggin, C. (in press). *Security classification measures for female offenders and predictors of female criminal conduct: A literature review.* Ottawa, Ontario: Correctional Service Canada.

Lipsey, M. (1992). Juvenile delinquency treatment: A meta-analytic inquiry into the variability of effects. In T. Cook, H. Cooper, D. Cordray, H. Hartmann, L. Hedges, R. Light, T. Louis, & F. Mosteller (Eds.), *Meta-analysis for explanation* (pp. 83-127). New York: Russell Sage Foundation.

Lipsey, M., & Wilson, D. (1998). Effective intervention for serious juvenile offenders: A synthesis of research. In R. Loeber & D. Farrington (Eds.), *Serious and violent juvenile offenders: Risk factors and successful interventions* (pp. 313-345). Thousand Oaks, CA: Sage.

Loucks, A. D. (1995). Criminal behaviour, violent behaviour, and prison maladjustment in federal female offenders. Unpublished Doctoral Thesis. Kingston, ON: Queen's University.

Lowenkamp, C. T., Holsinger, A. M., & Latessa, E. J. (2001). Risk/need assessment, offender classification, and the role of childhood abuse. *Criminal Justice and Behavior, 28,* 543-563.

Lowenkamp, C. T., & Latessa, E. J. (2002). *Evaluation of Ohio's community-based correctional facilities and halfway house programs.* Cincinnati, OH: University of Cincinnati.

Lovins, L., Lowenkamp, C., Latessa, L., & Smith, P. (2007). Application of the Risk Principle to Female Offenders. *Journal of Contemporary Criminal Justice, 23* (4), 383-398.

Makarios, M. (2007). Race, Abuse, and Female Criminal Violence. *Feminist Criminology, 2,*100-116.

Messina, N., Burdon, W., & Prendergast, M. (2003). Assessing the needs of women in institutional therapeutic communities. *Journal of Offender Rehabilitation, 37,* 89-106.

McClellan, D. S., Farabee, D., & Crouch, B. M. (1997). Early victimization, drug use, and criminality: A comparison of male and female prisoners. *Criminal Justice and Behavior, 24,* 455-476.

Morash, M., Bynum, T. S., & Koons, B. A. (1998). *Women offenders: Programming needs and promising approaches.* Washington, DC: USDOJ, National Institute of Justice.

Motiuk, M. S., Motiuk, L. L., & Bonta, J. (1992). A comparison between self-report and interview-based inventories in offender classification. *Criminal Justice and Behavior, 19,* 143-159.

Murphy, C., & Hoover, S. (1999). Measuring emotional abuse in dating relationships as a multifactorial construct. *Violence and Victims, 14,* 39-53.

Najavits L (2007). Seeking Safety: An evidence-based model for substance abuse and trauma/PTSD. In: KA Witkiewitz & GA Marlatt (Eds.), *Therapists' Guide to Evidence-*

Based Relapse Prevention: Practical Resources for the Mental Health Professional, pages 141-167. San Diego: Elsevier Press.

Olson, D.E., Alderden, M., & Lurigio, A.J. (2003). Men are from Mars, Women are from Venus, But What Role Does Gender Play in Probation Recidivism? *Justice Research and Policy, 5*, 33-54.

Owen, B. (1998). *In the mix: Struggle and survival in a woman's prison.* Albany, NY: State University of New York Press.

Owen, B., & Bloom, B. (1995). *Profiling the needs of California's female prisoners: A needs assessment.* Washington, DC: USDOJ, National Institute of Corrections.

Peters, R.H., Strozier, A.L., Murrin, M.R., & Kearns, W.D. (1997). Treatment of substance abusing jail inmates: Examination of gender differences. *Journal of Substance Abuse Treatment, 14*, 339-349.

Prendergast, M., Wellisch, J., & Falkin, G. (1995). Assessment services for substance-abusing women offenders and correctional settings. *The Prison Journal, 75*, 240-256.

Quinsey, v., Harris, G., Rice, M., & Cormier, C. (1998). *Violent Offenders: Appraising and Managing Risk.* Washington, DC: American Psychological Association.

Reisig, M. D., Holtfreter, K., & Morash, M. (2006). Assessing recidivism risk across female pathways to crime. *Justice Quarterly, 23*, 384-405.

Rettinger, L. J. (1998). *A recidivism follow-up study investigating risk and need within a sample of provincially sentenced women.* Unpublished doctoral dissertation. Carleton University, Ottawa, Canada.

Ritchie, B. (1996). *The gendered entrapment of battered, black women.* London: Routledge.

Rodenberg, F., & Fantuzzo, J. (1993). The measure of wife abuse: Steps toward the development of a comprehensive assessment technique. *Journal of Family Violence, 8,* 203-228.

Roehling, P. & Gaumond, E. (1996). Reliability and validity of the Codependent Questionnaire. *Alcoholism Treatment Quarterly, 14*, 85-95.

Rosenberg, M. (1979). *The concept of self.* New York: Basic Books.

Ross, T., Khashu, A., & Wamsley, M. (2004). *Hard data on hard times: An empirical analysis of maternal incarceration, foster care, and visitation.* New York: Vera Institute of Justice.

Rumgay, J. (2004). Scripts for safer survival: Pathways out of female crime. *The Howard Journal of Criminal Justice, 43,* 405-419.

Salisbury, E. J., Van Voorhis, P., & Wright, E. (2006). *Construction and validation of a gender responsive risk/needs instrument for women offenders in Missouri and Maui.* Presented at the Annual Meeting of the American Society of Criminology, Los Angeles, CA.

Salisbury, E.J. (2007). *Gendered Pathways: An Empirical Investigation into Women Offenders' Unique Paths to Crime*. Unpublished Doctoral Dissertation, University of Cincinnati, Cincinnati, Ohio.

Salisbury, E., Van Voorhis, P. & Spiropoulis, G. (accepted for publication). The Predictive Validity of a Gender Responsive Risk/Needs Assessment. *Crime and Delinquency.*

Schram, P. J., & Morash, M. (2002). Evaluation of a life skills program for women inmates in Michigan. *Journal of Offender Rehabilitation, 34*, 47-70.

Sherer, M., Maddux, J.E., Mercadante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R.W. (1982) The self-efficacy scale: Construction and Validation. *Psychological Reports*, 51, 663-671.

Shepard, M., & Campbell, J. (1992). The Abusive Behavior Inventory: A measure of psychological and physical abuse. *Journal of Interpersonal Violence, 7,* 291-305.

Shields, I. W., & Simourd, D. J. (1991). Predicting predatory behavior in a population of incarcerated young offenders. *Criminal Justice and Behavior, 18*, 180-194.

Siegel, J. A., & Williams, L. M. (2003). The relationship between child sexual abuse and female delinquency and crime: A prospective study. *Journal of Research in Crime and Delinquency, 40,* 71-94.

Simourd, D.J. (2004). Use of dynamic risk/need assessment instruments among long-term incarcerated offenders. *Criminal Justice and Behavior, 31*, 306-323.

Simourd, L., & Andrews, D. A. (1994). Correlates of delinquency: A look at gender differences. *Forum on Corrections Research, 6,* 26-31.

Swets, J., Dawes, R., & Monahan, J. (2000).Psychological Science Can Improve Diagnostic Decisions. *Psychological Science in the Public Interest, 1,* 1-26.

Task Force on Federally Sentenced Women. (1990). *Creating choices: The report of the Task Force on Federally Sentenced Women.* Ottawa, ON: Ministry of the Solicitor General Canada.

Van Dieten, M. (1998). Moving On. Toronto, ON: Orbis Partners, Inc.

Van Voorhis, P., Braswell, M., & Lester, D. (2004). *Correctional Counseling and Rehabilitation,* (5th ed.), Cincinnati, OH: Anderson Publishing Co.

Van Voorhis, P., Pealer, J., Spiropoulos, G., & Sutherland, J. (2001). *Validation of offender custody classification and needs assessment systems for incarcerated women offenders in the (Unidentified State) Department of Corrections.* USDOJ, National Institute of Corrections.

Van Voorhis, P., & Presser, L. (2001). *Classification of women offenders: A national assessment of current practices.* Washington, DC: USDOJ, National Institute of Corrections.

Van Voorhis, P., Salisbury, E., Bauman, A., & Wright, E. (2008). Gender Responsive assessment Project in Missouri: Final Report. Cincinnati, OH: University of Cincinnati Criminal Justice Research Center.

Van Voorhis, P., Salisbury, E., Bauman, A., Holsinger, K., & Wright, E. (2008, accepted for publication). Classifying Women Offenders: Achieving Accurate Pictures of Risk and Identifying Gender-Responsive Needs. *International Community Corrections Association—Conference Proceedings*.

Van Voorhis, P., Salisbury, E., Wright, E., & Bauman, A. (2008) Achieving Accurate Pidtures of Risk and Identifying Gender Responsive Needs: Two New Assessments for Women Offenders. Washington, D.C.: U.S. Department of Justice, National Institute of Corrections.

Washington State Institute for Public Policy. (2007). Washington's Offender Accountability Act: An analysis of the Department of Corrections risk assessment. Olympia, WA: WSIPP.

Widom, C. S. (1989). Child abuse, neglect, and violent criminal behavior. *Criminology, 27,* 251-271.

Woititz, J. (1983). *Adult children of alcoholics.* Hollywood, FL: Health Communications, Inc.

Wormith, J. S. (1984). Attitude and behavior change of correctional clientele: A three year follow-up. *Criminology, 23,* 326-348.

Wright, E., Salisbury, E. & Van Voorhis, P. (2007). Predicting the Prison Misconducts of Women Offenders: The Importance of Gender Responsive Needs. *Journal of Contemporary Criminal Justice,* 23 (4), 310-340.