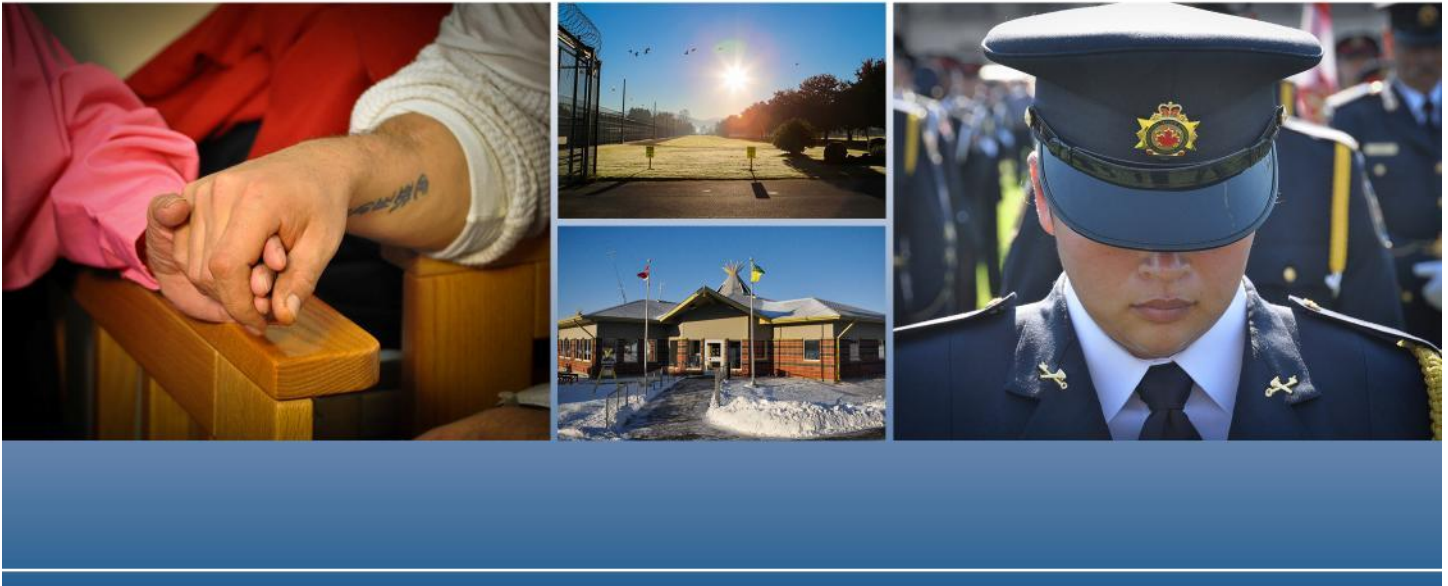


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RESEARCH REPORT

A Review of the Women Offender Risk/Need Research: In Search of Gender-Neutral, Women-Salient, and Women-specific Risk Factors

2017 N° R-386

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**A Review of the Women Offender Risk/Need Research: In Search of Gender-Neutral,
Women-Salient and Women-Specific Risk Factors**

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Executive Summary

Key words: *women offenders, risk factors, gender neutral, gender salient, gender specific.*

This report summarizes studies that have directly examined the hypothesis that women offenders are different. Adult offender studies were included if they have examined whether any of the ‘Central Eight’ risk/need factors or gender responsive factors predict criminal recidivism in samples of women offenders, or in mixed-gender samples of adult offenders. An attempt was made to classify factors as gender-neutral, gender-salient, or gender-specific. Gender-neutral risk factors are factors that predict recidivism to the same extent in men and women offenders. Gender-salient risk factors are factors that predict recidivism in both genders, albeit the strength of the effect is stronger in one gender than the other. Lastly, gender-specific risk factors are factors that are truly unique risk factors for one gender and not the other; thus they would predict recidivism in one gender but not the other. The search focused on studies published predominately after 1990 and ended March 25, 2016. In total, 30 articles were included in the final annotated bibliography. Sixteen of the articles reviewed included direct gender comparisons; 14 articles were women-only studies. Based on the results of this review the following conclusions are offered:

- Although only one study could be located that explicitly explored the need for differential risk factor ‘weighting’ as a function of gender, there is sufficient evidence to warrant more research in this area.
- There is sufficient evidence to conclude that the global constructs of ‘substance abuse’ and ‘personal/emotional’ are women-salient predictors of recidivism. However, Level of Supervision Inventory- based studies are driving this conclusion.
- The extant evidence suggests that the global risk/need domains of ‘criminal history’, ‘criminal peers’, ‘criminal attitudes’, ‘employment’, ‘marital/family’, ‘community functioning’ are gender neutral predictors of recidivism—they predict recidivism to the same degree in both genders.
- Very few studies have explicitly examined whether gender-responsive risk/need domains such as abuse, trauma, anxiety/depression, relational dysfunction, criminal intimate partners, parental stress, unsafe housing are in fact female-salient or even female-specific risk factors.
- Some evidence suggests that antisocial pattern/psychopathy may be a male-salient predictor of recidivism however this question has not been sufficiently examined.
- There is little evidence to conclude that any of the risk/need factors examined to date are truly gender-specific—for males or females.

In summary, the extant research does favour gender-neutrality over gender-salience/specificity. However, this certainly does not negate the possibility that future research studies will find more gender differences or the need to make women offender programming gender responsive.

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Introduction

Historically, scholars and correctional agencies have implicitly or explicitly ignored women offenders. However, this is no longer the case. Correctional agencies worldwide are adopting women-centered philosophies grounded in the assumption that women *are* different than their male counterparts. In addition, the female-focused literature base is burgeoning with theoretical debates, risk assessment studies, and treatment outcome studies germane to women offenders. A relatively recent development in the literature has been to conduct research that directly tests the theoretical position that women offenders are in fact unique from their male counterparts. Empirical tests of the gender-difference hypothesis (Hyde, 2005) are now being conducted in correctional settings vis-à-vis mixed-gender samples that explicitly compare results by gender.

This report summarizes studies that have directly examined the hypothesis that women offenders are different (see Appendix A). Adult offender studies are included if they have examined whether any of the ‘Central Eight’ risk/need factors ¹(Andrews & Bonta, 2010) or gender responsive factors (VanVoorhis, 2012) predict criminal recidivism in samples of women offenders, or in mixed-gender samples of adult offenders. Occasionally, an adolescent offender study is included if it is particularly informative (e.g., Jones, 2011).

An attempt was made to classify factors as gender-neutral, gender-salient, or gender-specific. However, this proved difficult due to a paucity of research studies explicitly comparing women and men in the same study (see Appendix B). Gender-neutral risk factors are factors that predict recidivism to the same extent in men and women offenders. Gender-salient risk factors are factors that predict recidivism in both genders, albeit the strength of the effect is stronger in one gender than the other. Hence a gender-salient risk factor could be classified as female-salient or male-salient. *Importantly, a label of ‘female-salient’ does not mean the factor is not predictive for males. It simply means that the factor is more predictive for females.* Consequently, a finding of saliency implies differential weighting of gender salient factors in risk assessment tools for example. Lastly, gender-specific risk factors are

¹ The ‘Central Eight’ include the ‘Top Four’: 1.History of antisocial behaviour; 2.Antisocial personality pattern; 3.Antisocial cognition; 4.Antisocial associates; and the remaining four: 5.Family/marital circumstances; 6.School and work; 7.Leisure/Recreation, and 8.Substance abuse.

factors that are truly unique risk factors for one gender and not the other; thus they would predict recidivism in one gender but not the other. For example, a male-specific risk factor would be a factor that only predicts recidivism among males but not at all among females.

Given claims that approaches to the assessment of women's risk should differ from those in place for men, an up to date review of the literature is required to determine if risk factors identified in the standard tools that are applied to men and women are relevant to women offenders, and if so, whether there are additional factors specific to women that should be considered.

Method

The following research databases were searched: PsychInfo, PsychArticles, Criminal Justice Abstracts, and Scopus. The search focused on studies published predominately after 1990. The search date ended March 25, 2016.

Studies were included if all of the following criteria were met:

- The study directly examined some variant of a ‘Central Eight’ (Andrews & Bonta, 2010) or gender responsive risk/need factor (VanVoorhis, 2012)
- Results were disaggregated by gender, or the analysis explicitly examined gender differences (e.g., interaction term was used in the analysis: gender*self-efficacy)
- The study sample was comprised entirely of women offenders
- The study employed a longitudinal design (prospective or retrospective); thus treatment outcome studies were not necessarily excluded

Studies were excluded if:

- The study sample was comprised exclusively of male offenders or adolescent offenders [one exception was made—Jones (2011)]
- The research design was cross-sectional
- The primary study was subsumed within a more recent meta-analysis or narrative review. For example, a number of earlier Level of Service/Supervision studies were not individually reviewed given that Olver, Stockdale, and Wormith (2014) have recently conducted a ‘grand-daddy’ Level of Supervision Inventory (LSI) meta-analysis at the subdomain level.
- Risk assessment validation studies that failed to disaggregate results by subdomain/subscale.

Results

In total, 30 articles were included in the final annotated bibliography (see Appendix A). Sixteen of the articles reviewed included direct gender comparisons; 14 articles were women-only studies. Importantly, five of the thirty articles were actually large-scale reviews—either meta-analytic or narrative. Additionally, most studies are relatively new—published within the last five to ten years. This is not surprising given that it is only recently that correctional researchers have begun to explicitly study gender differences. Further, the gender-informed literature tends to focus on global questions such as whether or not risk assessment tool A is better than risk assessment tool B, rather than which components of risk assessment tool A may actually work better for women. Nonetheless, a number of conclusions can be reached based on the existing literature.

Only one study could be located that explicitly explored the need for differential risk factor ‘weighting’ as a function of gender. Nonetheless, there is sufficient evidence to warrant more research in this area.

The review identified one unpublished dissertation (Jones, 2011) that explicitly attempted to differentially weight risk factors by gender in a mixed-gender sample of adolescent offenders. Notably, the study found evidence that an empirically-derived gender-responsive risk assessment tool yielded stronger predictive accuracy estimates of recidivism ($AUC = .67$) than the gender-neutral risk assessment tool ($AUC = .62$). Moreover, the study found that certain factors were more predictive for females (e.g., family issues); while other factors (e.g., education) were more predictive for males. This study is described in more detail in the annotated bibliography.

Additionally, there are studies that have afforded ‘more weight’ to hypothesized female-specific or female-salient risk factors during the development phase of women offender risk assessment tools. The most notable series of studies that have adopted this approach are: (1) those involving the Women’s Risk Need Assessment (WRNA) conducted by VanVoorhis and colleagues (e.g., VanVoorhis, Bauman, & Brushett, 2013a; 2013b) and (2) those involving the Service Planning Instrument-Women (SPIn-W) (Robinson, Van Dieten, & Millson, 2012).

For example, the WRNA is comprised of both gender neutral (e.g., criminal history,

antisocial friends), and gender responsive domains (depression, housing safety, child abuse, adult abuse, parental stress). While the gender responsive items have been shown to predict recidivism among women (see VanVoorhis et al., 2013 in the annotated bibliography) the extent to which these gender responsive items are female-salient or female-specific remains unknown given that the WRNA was developed and validated solely on women offenders. However, gender-responsive scholars would probably ask, “Why does it matter?”

There is sufficient evidence to conclude that the global constructs of ‘substance abuse’ and ‘personal/emotional’ are women-salient predictors of recidivism. However, LSI-based studies are driving this conclusion.

The Olver et al. (2014) comprehensive meta-analytic review clearly illustrates that substance abuse and personal/emotional factors evidence stronger associations with recidivism for female offenders than male offenders, irrespective of age. Prior offence history also evidenced a slightly higher degree of association with recidivism for women than men, albeit the difference was slight and the magnitude of the effect would be considered strong for both genders. Similarly, antisocial pattern evidenced a slightly higher degree of association with recidivism for men than women, albeit once again the difference was slight. Importantly however these findings do not mean that offense history, substance abuse, or personal emotional factors are not relevant for males, or that antisocial pattern is not relevant for females. It simply means that these constructs are more relevant (more salient) for a particular gender, and consequently differential-weighting schemes could be justified.

Importantly, the few studies that have attempted to unpack these global constructs have hinted at additional nuanced gender differences. For example, the Brown and Motiuk (2008) analysis revealed that social drinking and early age of onset of drug/alcohol use were particularly strong predictors of recidivism for men, but not women. Conversely, alcohol/drug use that was stress related or interfered with daily functioning were particularly salient predictors for women. Whether these nuanced gender differences will replicate remains to be seen. Further, whether such nuanced differences need to be addressed at the risk assessment level or the treatment level requires careful thought and exploration.

The extant evidence suggests that the global risk/need domains of ‘criminal peers’, ‘criminal attitudes’, ‘employment’, ‘marital/family’, ‘community functioning’ are gender neutral predictors of recidivism—they predict recidivism to the same degree in both genders. However...

Once again, there is some evidence that certain nuanced gender differences exist within these global ‘gender neutral’ domains. For example, Benda (2005) explicitly reported that a criminal partner predicted recidivism for women but not men. Similarly, Yang et al. (2015) reported that while high self-esteem predicted recidivism among men, it actually reduced the likelihood of recidivism among women. This later finding directly contradicts the long-standing belief that it is bad for business to essentially make offenders more confident about themselves without simultaneously targeting criminal attitudes for example. VanVoorhis and colleagues have also found that higher levels of self-esteem and self-efficacy actually reduce recidivism rates among women offenders, albeit the effects are small. In essence, we need more primary research that specifically asks whether these emerging findings will replicate and under what circumstances and whether or not some of these factors are best conceptualized as strengths.

Very few studies have explicitly examined whether or not gender-responsive risk/need domains such as abuse, trauma, anxiety/depression, relational dysfunction, criminal intimate partners, parental stress, unsafe housing are in fact female-salient or even female-specific risk factors.

There is little debate that women offenders score higher on virtually all gender-responsive factors and that these factors must be integrated into a women-centered corrections philosophy. The debate lies in whether or not these factors should be actively incorporated into risk assessments, or whether they should be addressed as responsivity factors. A few seminal studies have shown that these factors are predictive of recidivism among women offenders (e.g., VanVoorhis and colleagues, 2013a 2013b). Moreover, there is also some limited, albeit excellent, research illustrating that these factors are indeed female-salient or female-specific risk factors (see Benda, 2005 for example). Nonetheless, more research using mixed-gender samples is required.

Some evidence suggests that antisocial pattern/psychopathy may be a male-salient predictor of recidivism however this question has not been sufficiently examined.

More research is needed to ascertain how gender influences (or does not) the role of antisocial patterns/psychopathy in recidivism. Women-focused psychopathy research—studies using the PCL-R- have been limited, and those that do exist have yielded mixed results. However, Olver et al. (2014) revealed that ‘antisocial pattern’ was important for both genders and perhaps even slightly male-salient. Regardless, this is an area of study that merits further consideration.

There is little evidence to conclude that any of the risk/need factors examined to date are truly gender-specific—for males or females.

A number of feminist-inspired scholars refer to unique female risk factors and unique female pathways to the criminal justice system. However, the extant research does not merit these conclusions. In the absence of a male comparison group, female uniqueness cannot be claimed. Further, based on the limited, albeit slowly growing literature it would seem a more plausible conclusion favours female-salience rather than female-specificity or female-uniqueness. However, this does not negate the reality that differences do exist, they matter, and they can be particularly pronounced in certain circumstances.

Discussion

- LSI-based studies dominate the literature. Although this is not necessarily a fatal flaw it does underscore the importance of unpacking higher order constructs—like the Central Eight- to fully investigate whether or not genuine gender differences exist. Otherwise studies that only explore surface level risk factors may unintentionally mask nuanced gender differences.
- The extant research does favour gender-neutrality over gender-salience/specificity. However, this certainly does not negate the possibility that future research studies will find more gender differences, as well as replicate existing ones. As we move beyond an LSI-centric research paradigm this is the most likely outcome.
- There is no agreed upon statistical litmus test for ascertaining whether gender differences exist. The most common approach is to disaggregate the data by gender, and conduct separate analyses for each gender. While some researchers essentially ‘eye-ball’ the results and make statements about gender differences/similarities, others have attempted to make the process more objective. Moreover, some researchers have also adopted a more integrated approach opting to test for gender effects using interaction terms (i.e., moderated analyses). While interaction approaches are statistically rigorous approaches they require exceedingly large sample sizes to generate the requisite power needed to find significant effects—a luxury typically absent in women-centered research. Hence, moderator/interaction analyses are likely to generate a substantial number of “Type II” errors—failure to find an effect when there really is one. Consequently, in the absence of sufficient power, statistical approaches that disaggregate the data by gender and use objective rules of comparison are warranted.
- The main limitation of the review is that it was subjective. The tabular summary was particularly challenging. As studies continue to grow in this area so will the opportunity to conduct a meta-analysis that moves beyond LSI-domains. However, a meta-analysis is

only one tool in the gender-informed researcher's toolkit. Clearly, primary research that uses a multitude of instruments, designs, and populations is a requisite first step.

- Researchers rarely study the intersection of sex and race. This is an area that requires immediate attention. In Canada there is a dire need to conduct research that specifically examines how the intersection of sex and Aboriginal ancestry impacts risk assessment as well as treatment outcomes. The overrepresentation of people of Aboriginal ancestry in the federal correctional system is a longstanding concern. However, the disproportionate number of women in custody who are of Aboriginal ancestry (35.5%) relative to their male counterparts (24.1%) is particularly alarming (Public Safety, 2016).
- Researchers and policy decision makers are human. We have a hard time 'letting go' of what we learned in graduate school 'to be true'. It is easy to dismiss what does not readily fit within our pre-existing schemas. But as this quote demonstrates, some of us are willing to entertain data that competes with our existing hypotheses, albeit reluctantly,
 - “without knowing exactly what to make of the finding of Brown and Motiuk (2008), without denying some gender specificity in risk/need, without denial of discrimination and disadvantage, and without denying myriad differences between female and males, the weight of the evidence in support of the gender neutrality of risk/need is becoming overwhelming “ (p. 121, Andrews et al., 2012).

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- Van Voorhis, P., Bauman, A., & Brushett, R. (2013b). *Revalidation of the Women's Risk Needs Assessment: Probation Results Final Report January 2013*. Retrieved from <https://forums.doc.state.mn.us/site/fo/Lists/Announcements/Attachments/33/WRNA%20Probation%20Final%20Report%202013.pdf>

Appendix A: Annotated Bibliography (organized alphabetically)

Andrews, D. A., Guzzo, L., Raynor, P., Rowe, R. C., Rettinger, L. J., Brews, A., & Wormith, J. S. (2012). Are the major risk/need factors predictors of both female and male reoffending?: A test with the eight domains of the level of service/case management inventory. *International Journal of Offender Therapy and Comparative Criminology*, *56*, 113-133. doi: 10.1177/0306624x10395716

This archival study aggregated the results of five different Level of Service/Supervision (LSI) studies (adult and youth included) conducted in Canada. The focus of the paper was to compare the predictive accuracy of the LSI subdomains by gender. Each study employed a minimal one-year follow-up period. Overall, the paper reported evidence for gender neutrality. All LSI subdomains predicted recidivism to the same degree, irrespective of gender with two notable exceptions. Criminal history was a slightly stronger predictor of recidivism among the male offenders ($N = 2,069$), whereas substance abuse was a considerably stronger predictor of recidivism among the female offenders ($N = 354$). Importantly, Olver, Stockdale, and Wormith (2014) subsequently replicated these findings more recently (see study description below).

Benda, B.B. (2005). Gender differences in life-course theory of recidivism: A survival analysis. *International Journal of Offender Therapy and Comparative Criminology*, *49*(3), 325-342. Doi: 10.1177/0306624X04271194

This study compared the predictors of recidivism in a sample of 300 women and 300 men who graduated from a boot camp in the Midwestern United States. Predictors were assessed using standardized self-report questionnaires (e.g., Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998; Blum, Harris, Resnick, & Rosenwinkel, 1989; Multiple-Problem Screening Inventory (MPSI; Hudson, 1990) administered verbally to participants. Predictors assessed at initial boot camp intake included: childhood sexual and physical abuse, recent sexual and physical abuse, and adverse feelings and thoughts (depression, stress, aggression, fearfulness, suicidal thoughts). Noteworthy, adverse feelings and thoughts were re-assessed

immediately prior to release. Additional predictors assessed in the community two month after boot camp graduation included: criminal partner, criminal peer associations, alcohol and drug use. Survival analyses were conducted separately for men and women and gender comparisons were based on objective statistical comparison of relevant statistical indices. The follow up period was 5 years and recidivism was defined as any return to custody. While the analyses revealed that a number of predictors (e.g., childhood abuse, adverse feelings/thoughts, criminal peers, criminal partners) predicted recidivism in BOTH genders, further statistical comparisons revealed that the magnitude or strength of the predictive relationship varied as a function of gender. Specifically, the following predictors were female-salient—stronger for women than men: (1) childhood physical and sexual abuse, recent physical and sexual abuse, (2) changes in adverse feelings and thoughts: stress, depression, suicidal thoughts, and fearfulness, (3) relational variables: having a criminal partner, number of children, partner relations, friendships, and family relations. Conversely, the following predictors were male-salient—stronger for men than women: (1) adverse aggressive feelings, (2) relational variables—criminal peers, (3) education/employment variables—education level, job satisfaction, and (4) alcohol abuse. Drug use predicted recidivism to the same degree in both genders. Thus, it was considered gender neutral.

Broadhurst, R., & Maller, R. (1990). The recidivism of prisoners released for the first time: reconsidering the effectiveness question. *Australian & New Zealand Journal of Criminology*, 23 (2), 88 – 104.

This recidivism study examined the extent to which certain demographic variables (age, marital status, education level) predicted return to prison in a sample of 16,381 adult offenders (10% of the sample was female) located in Western Australia. The study also compared recidivism rates between Aboriginal males and non-Aboriginal males and Aboriginal females and non-Aboriginal females. The follow-up period was not specified. In sum, the researchers found that age was inversely related to recidivism for all sub-groups. While education level predicted recidivism in the expected direction for non-Aboriginal males, there was no relationship between education level and recidivism for the Aboriginal male subsample. While male offenders (irrespective of race) were more likely to recidivate if they were single/separated,

a less clear pattern emerged for the Aboriginal women. Specifically, 40% of the separated Aboriginal women recidivated. In contrast, 66% of the single and 64% of the married Aboriginal women recidivated. Results were not reported for the non-Aboriginal women due to the apparent low number in the sample.

Brown, S. L., & Motiuk, L. (2008, June). *Using dynamic risk factors to predict criminal recidivism in a sample of male and female offenders*. In K.D. Blanchette (Chair), Classification for the prediction of recidivism in girls and women. Symposium conducted at the 69th Annual Conference of the Canadian Psychological Association (CPA), Halifax, NS.

This study examined the extent to which a number of gender responsive and gender neutral risk factors predicted returned to federal custody during a three year fixed follow-up period in a Canadian prison sample of men ($N = 765$) and women ($N = 765$). All variables were assessed using the interview-based Dynamic Factor Identification and Analysis (DFIA) instrument administered by parole officers to federally sentenced offenders at intake. Odds ratios were calculated for each predictor (199 individual binary items were examined) for each gender. In sum, of those indicators that were predictive, 48% of the indicators could be classified as either female-salient or female-specific (substance abuse related indicators, poor problem solving, financial instability); 29% of the indicators were either male-specific or male-salient; 23% of the indicators were classified as gender neutral. Importantly, while some of the results were consistent with gender-responsive theory (e.g., victim of spousal violence, parenting problems, and certain substance abuse variables were female-specific predictors of recidivism) other patterns were more difficult to link to existing theory (e.g., unrealistic goal setting and impulsivity were male-specific predictors of recidivism). The study underscores the importance of unpacking higher order constructs—like the Central Eight- in order to fully investigate whether or not genuine gender differences exist; otherwise studies that only explore surface level risk factors may unintentionally mask nuanced gender differences. Regardless, this study requires replication.

Chang, Z., Larsson, H., Lichtenstein, P., & Fazel, S. (2015). Psychiatric disorders and violent reoffending: A national cohort study of convicted prisoners in Sweden. *Lancet Psychiatry*, 2 (10), 891 – 900. doi:10.1016/S2215-0366(15)00234-5.

This recidivism study examined the extent to which psychiatric disorders predicted violent reconviction in a sample of 47,326 Swedish prisoners (3,486 female, 43,840 male). Although the sample included youth (as young as 16), the sample was predominately comprised of adults. Analyses were conducted separately by gender. The follow-up was variable with a maximum risk period of 10 years. Based on a series of survival analyses the following three key findings emerged. First, the presence of *any* psychiatric disorder (broadly defined, included substance use disorders, personality disorders, anxiety, depression, bipolar, and schizophrenia spectrum disorders) significantly increased the likelihood of violent reconviction for male and female offenders alike even after controlling for a number of demographic variables. Affective disorders (i.e., bipolar disorder, depression, anxiety) and schizophrenia spectrum disorders predicted violent reconviction in males and females similarly; however, this effect disappeared (for both males and females) once alcohol and drug use disorders were entered into the model with one exception: bi-polar disorder in males remained a significant predictor (albeit small effect) of violent reconviction. The specific psychiatric disorders that were the strongest predictors of violent reconvictions in both genders regardless of what additional variables were entered into the model included: alcohol and drug use disorders, personality disorders, attention-deficit hyperactivity disorder, ‘other’ developmental or childhood disorders. However, the predictive strength of alcohol and drug use disorders was slightly higher for females than males.

Cimino, A.N., Mendoza, N., Thieleman, K., Shively, R., & Kunz, K. (2015). Women re-entering the community: Understanding addiction and trauma-related characteristics of recidivism. *Journal of Human Behavior in the Social Environment*, 25, 468– 476. doi: 10.1080/10911359.2014.983257

This study examined recidivism rates in a sample of 57 women offenders with co-occurring substance abuse and trauma symptoms (scored ‘high’ on any one of the 10 subscales of the Trauma Symptom Inventory). The women were enrolled in a gender-informed substance abuse program that targeted gender responsive targets (e.g., self, support, sexuality and spirituality). Recidivism was defined as re-arrest or re-incarceration during an unspecified, variable follow-up period (up to four years). The results revealed that the following three trauma-

related variables significantly discriminated between recidivists and non-recidivists: alcohol, dysfunctional sexual behaviour, and sexual concerns. Specifically, women with more alcohol problems were more likely to recidivate. However unexpectedly, women evidencing less sexual dysfunction and less sexual concerns were more likely to recidivate. The following trauma-related variables did not differentiate recidivists from non-recidivists: anger/irritability, anxious arousal, depression, intrusive experiences, dissociation, tension reduction behaviour.

Eisenbarth, H., Osterheider, M., Nedopil, N., & Stadtland, C. (2012). Recidivism in female offenders: PCL-R lifestyle factor and VRAG show predictive validity in a German sample. *Behavioral Sciences and the Law*, 30(5), doi: 10.1002/bsl.2013

This study examined the predictive accuracy of the Psychopathy Checklist- Revised (PCL-R), the Historical, Clinical, Risk (HCR-20), and the Violence Risk Appraisal Guide (VRAG) in a sample of 80 German female offenders referred for a forensic psychiatric evaluation prior to sentencing. The mean time at risk was eight years. The PCL-R's total score, the PCL-R interpersonal factor and the antisocial factor demonstrated moderate predictive validity for general recidivism. However, the PCL-R affective factor and antisocial factor did not.

Freeman, N.J., & Sandler, J.C. (2008). Female and male sex offenders: A comparison of recidivism patterns and risk factors. *Journal of Interpersonal Violence*, 23, 1394-1413. doi:10.1177/0886260508314304

This study examined gender similarities and differences in the predictors of sexual recidivism in a matched sample of 390 female and 390 male sex offenders in New York State. Offenders were matched on age, race, supervising agency, geographic region, and nature of index sexual offence. The average follow-up period ranged from 48 months to 61 months. The researchers coded general re-arrests and re-arrests for sexual offences. In sum, survival analyses revealed more similarities than differences in the predictors of general as well as sexual recidivism. No gender differences emerged in the predictors of sexual recidivism. However, victim gender and sexual contact (in sexual offence history) were predictors of general

recidivism among the male sex offender group, but not the female sex offender group. Specifically, males with a history of sexual contact crimes were more likely to be re-arrested for general recidivism than males with no history of sexual contact crimes; male sex offenders with a history of offending against female victims were less likely to be re-arrested for general recidivism than male sex offenders with a history of offending against male victims. Although the results are not presented 100% clearly it appears that having male victims (as opposed to female victims) is predictive of future general re-offending for male sex offenders but the sex of the victims is irrelevant among female sex offenders.

Gardner, B.O., Boccaccini, M.T., & Bitting, B.S., (2015). Personality Assessment Inventory scores as predictors of misconduct, recidivism, and violence: A meta-analytic review. *Psychological Assessment, 27*, 534 – 544.

This meta-analysis examined the ability of the Personality Assessment Inventory (PAI; Morey, 1991, 2007) to predict recidivism, violence, and institutional misconduct. The PAI is a self-report measure that assists in clinical diagnosis, treatment planning and screening for psychopathology. The following three subscales were the focus of the analysis: Antisocial Features (antisocial personality and psychopathy), Aggression (attitudes and behaviour representative of aggression, anger, and hostility), and Violence Potential Index (VPI). In sum, while all three subscales predicted recidivism to the same degree (small to moderate effects) in both genders, gender differences emerged for predictions of violence. Noteworthy, antisocial features predicted violence more strongly among the females than males. In contrast, the aggression subscale predicted violence more strongly among the males than females. However, it is important to note that the female sub-analyses were based on only three samples whereas the male based analyses were based on 14 different samples.

Geraghty, K.A., & Woodhams, J. (2015). The predictive validity of risk assessment tools for female offenders: A systematic review. *Aggression and Violent Behavior, 21*, 25 – 38.

This paper narratively reviewed 15 studies that have examined the predictive validity of risk assessment tools in samples comprised solely of female offenders. While 13 of the studies were based on correctional samples, 2 were based on psychiatric samples. Although the authors do not explicitly indicate whether the samples are comprised of adolescents or adults, it can be inferred by the nature of the assessment tools examined that all 15 studies were comprised of women offenders. In total, nine different tools were examined including the LSI, the PCL-R, and the HCR-20. Overall, the review concluded that the LSI was the most effective tool for predicting violence and recidivism among women. Notably, the evidence for the PCL-R was mixed. While the PCL-R predicted violence in one correctional study, it did not predict violence or general recidivism particularly well in the three remaining studies. Although some scholars disagree (e.g., Andrews & Bonta, 2010), the PCL-R is arguably a strong proxy for the antisocial personality/pattern need domain.

Gobeil, R., Blanchette, K., & Stewart, L. (2016). A meta-analytic review of correctional interventions for women offenders: Gender-gender-neutral versus gender-informed approaches. *Criminal Justice and Behavior, 43*, 301-322.

doi:10.1177/0093854815621100

This meta-analytic review compared the effectiveness of women offender programs classified as either gender-neutral or gender-informed (gender responsive). In total, 37 studies were included involving 22,000 women offenders and 38 individual effect size estimates. Overall, gender-neutral and gender-informed programs reduced recidivism to the same extent. However, when the analyses were restricted to the 18 effect sizes classified as higher in methodological quality, the results illustrated that gender-informed programs outperformed those classified as gender-neutral. Notably, approximately 40% (16 effect sizes) of the treatment studies specifically targeted substance abuse. A restricted analysis based solely on the substance abuse treatment programs revealed that targeting this need factor resulted in reductions in recidivism, once again confirming that substance abuse is an important risk factor for women.

Greiner, L.E., Law, M.A., & Brown, S.L. (2015). Using dynamic factors to predict recidivism among women. *Criminal Justice and Behavior*, 42, 457 – 480. doi: 10.1177/0093854814553222

Using a sample of 497 Canadian women released into the community from federal prisons, this study examined the extent to which seven dynamic risk factors assessed longitudinally at 6-month intervals (four waves) change over time and predict recidivism. Results obtained from a series of within-subject ANOVAs indicate that with the exception of substance abuse, all dynamic risk factors (i.e., employment, marital/family, community functioning, personal/emotional, criminal associates, and criminal attitudes) decreased among those offenders who did not recidivate. In addition, results obtained from a series of Cox regression survival analyses with time-dependent covariates also indicate that proximal assessments of dynamic risk predict recidivism more strongly than more distal assessments of dynamic risk. Employment and associates were the strongest dynamic predictors of recidivism, whereas the remaining factors were weak-to-moderate predictors of recidivism. This study lends support to the utility of repeatedly assessing dynamic risk factors among female offender populations.

Huebner, B.M., & Pleggenkuhle, B. (2015). Residential location, household composition, and recidivism: An analysis by gender. *Justice Quarterly*, 32, 818-844. doi: 10.1080/07418825.2013.827231

This study compared recidivism rates among 466 women and 3,395 men released from prison in Missouri. The follow-up period was four years; survival analysis was the primary analytic technique. Recidivism was defined as any return to custody. Although the study results were varied and complex some notable findings emerged. First, while the number of dependent children increased survival times for women, it decreased survival times for men. Living with family increased the survival time for both genders, however the effect was somewhat stronger for females. Living with an intimate partner increased survival time for both genders to the same degree. Both men and women who lived in neighbourhoods characterized by frequent movements were equally like to return to custody.

Jones, N.J. (2011). *Merging theoretical frameworks to inform risk assessment for the young female offender*. Dissertation, Carleton University, Ottawa, ON.

Archival risk assessment data based on the Youth Assessment and Screening Instrument (YASI; Orbis Partners, 2000) was analyzed for 1,550 male and 819 female youths on probation across New York. The gender-neutral YASI was statistically equivalent in predicting convictions over 2-years across gender ($AUCs = .62$ and $.63$ for females and males, respectively). For girls, however, the strength of predictive validity was enhanced by applying an empirically-derived female-responsive tool ($AUC = .67$). Collectively, female-specific predictors offered incremental validity to a model featuring gender-neutral items. Notably, gender disparities were further observed at the item and domain level. For example, family history was a primary risk area for girls, whereas school-related factors were more salient for males.

Jung, H., & Lalonde, R. (2016). The relationship between re-incarceration and their own childhood foster care experience of women. *Children and Youth Services Review, 62*, 40-48.

This study examined whether incarcerated women placed in foster care during childhood or adolescence were more likely to be re-incarcerated than their female counterparts with no foster care placements. In total, 3, 240 women were included in the study. All women had been incarcerated in the State of Illinois. A three-year fixed follow-up was employed and recidivism was defined as re-incarceration. In sum, early foster care placements during childhood (ages 10 – 14) predicted recidivism, however adolescent foster care placements did not (ages 15 – 18). Importantly, recidivism was highest among those with multiple risk factors: early foster care placements, drug addiction and low educational achievement.

Kopak, A.M., Proctor, S.L., & Hoffmann, N.G. (2015). Pathways to rearrest among court mandated female substance use treatment patients. *The American Journal on Addictions, 24*, 495–498.

This study examined recidivism rates for 381 women who were mandated to participate in a court ordered substance abuse treatment program in the United States due to alcohol related driving infractions. Recidivism was defined as 1) re-arrest within 12 months of program completion, and 2) alcohol relapse within 12 months of program completion. Unemployment,

history of adolescent conduct problems, and alcohol relapse all significantly predicted re-arrests. Further, low educational attainment, single status, and substance abuse severity predicted relapse.

Kubiak, S.P. (2004). The effects of PTSD on treatment adherence, drug relapse, and criminal recidivism in a sample of incarcerated men and women. *Research on Social Work Practice, 14*(6), 424-433. doi. 10.1177/1049731504265837

This study examined various substance abuse treatment outcomes among male ($N = 139$) and female offenders ($N = 60$) with and without PTSD. The treatment programs were offered in prison settings somewhere in the United States. The programs offered to men and women were cognitive behavioural, however the women's program was trauma-informed and cognitive behavioural. The results were varied and complex. First, males with PTSD were no more likely to have a drug relapse than their male non-PTSD counterparts (13.8% vs. 17.6%). In contrast, females with PTSD were substantially more likely to experience a drug relapse (16.7%) versus females with no PTSD (0.0%) thus suggesting that the co-morbid experience of substance abuse and PTSD is associated with negative drug relapse outcomes for females, but not males. Among a smaller subset of offenders who were paroled (76 males, 47 females) the results indicated that female with PTSD were less likely to recidivate (13.8%) vs. those without PTSD (22.2%). In contrast, male with PTSD were more likely to recidivate (17.1%) than males without PTSD (5.7%).

Makarios, M., Steiner, B., & Travis, L.F. (2010). Examining the predictors of recidivism among men and women released from prison in Ohio. *Criminal Justice and Behavior, 37* (12), 1377 – 1391.

This study compared the extent to which education, employment, residential stability, and number of program referrals and number of programs completed while in the community predicted recidivism (re-arrest and re-arrest for felony) in a sample of 558 male and 213 female offenders (adult) released on parole in Ohio. Data was extracted from case files that had assumedly been scored by correctional staff. The follow-up period was approximately one year.

Results revealed no gender differences. Unstable employment and residential instability were significant predictors for both men and women whereas education level and programming variables did not consistently predict re-arrest in either gender. Importantly, unlike most gender comparison studies this study not only disaggregated the data by gender but also conducted objective statistical comparisons of statistical parameters that were generated separately for each gender.

McCoy, L.A., & Miller, H.A. (2013) Comparing gender across risk and recidivism in nonviolent offenders. *Women & Criminal Justice*, 23(2), 143-162, doi: 10.1080/08974454.2012.759054

This recidivism study compared a matched sample of adult male ($N = 164$) and adult female ($N = 164$) offenders on a number of predictors. Recidivism was defined as re-arrest. Offenders had been released from a jail in Texas and were followed up for approximately 2 years. The male and female offenders were matched on age, number of arrests, race, and current offense type. Predictors were assessed using an in-house self-report tool. In sum, the logistic regression analyses revealed that alcohol/drug problems predicted re-arrests for males but not females; education deficits did not predict recidivism for either gender. Lastly, perceived positive support led to less recidivism among the females, but not the males.

Olver, M.E., Stockdale, K.C., & Wormith, J.S. (2014). Thirty years of research on the Level of Services Scales: A meta-analytic examination of predictive accuracy and sources of variation. *Psychological Assessment*, 26, 156-176. doi: 10.1037/a0035080

This comprehensive and methodological rigorous meta-analysis examined the predictive validity of all versions of the Level of Service tools (youth version, adult version, region-specific versions). In total, 128 studies involving 151 samples, and 137, 931 offenders (approximately 20% were female ($n = 26,896$)) were included. The average follow-up time was 2 years. Importantly, the analyses were disaggregated by LS domain, gender, ethnicity, and country of origin. In sum, two important findings emerged. First, in terms of prevalence, female offenders evidence higher scores in the following LSI domain areas: family/marital, personal/emotional,

and financial, whereas male offenders evidenced higher scores in prior offenses and antisocial pattern. No gender differences emerged (in terms of prevalence) in the following domains: leisure activities, attitudes, education/employment, companions, or substance abuse. Second, in terms of prediction a slightly different pattern emerged. The following LSI domains predicted recidivism in both genders and to the same degree: education/employment, family/marital, financial, accommodations, companions, leisure/recreation, attitudes. In contrast, offense history, substance abuse and personal/emotional factors evidenced stronger associations with recidivism for female offenders than male offenders; albeit, the size of the difference for offense history was negligible (offense history was still a strong predictor irrespective of gender, just stronger for females). Lastly, the antisocial pattern LS domain while predictive in both genders the magnitude/strength of the relationship with recidivism was stronger for males than females.. Thus, two important implications: (1) prevalence does not equal prediction and (2) there is sufficient empirical evidence to indicate that the predictive validity of the LSI could be enhanced if domains were weighted differently—e.g., substance abuse and personal emotional weighted more heavily for females; antisocial pattern weighted more heavily for males.

Palmer, E.J., Hatcher, R.M., McGuire, J., & Hollin, C.R. (2015). Cognitive skills programs for female offenders in the community effect on reconviction. *Criminal Justice and Behavior*, 42, 345–360. doi: 10.1177/0093854814552099

The study examined the effectiveness of two cognitive skills programs (*Enhanced Thinking Skills* and *Think First*) with 801 women offenders serving community sentences in the English and Welsh Probation Service. While the *Enhanced Thinking Skills* program targets both thinking skills associated with offending to encourage prosocial attitudes and behaviour, the *Think First* program only targets thinking skills. Each program was administered to women ‘as is’ with no attempt to make the program gender responsive. A quasi-experimental design was used to compare the reconviction rates at 1-year follow-up of offenders who completed the program, offenders who started but did not complete the program, and a comparison group that were not allocated to the program. Overall, the results did not demonstrate that the program was effective in reducing recidivism. The results have two interpretations. Cognitive skills and

criminal thinking are not criminogenic for women; alternatively, the program was simply ineffective in this circumstance possibly due to the absence gender responsive elements.

Pelissier, B.M.M., Camp, S.D., Gaes, G.G., Saylor, W.G., & Rhodes W. (2003). Gender differences in outcomes from prison-based residential treatment. *Journal of Substance Abuse Treatment, 24*, 149– 160.

This study compared 1,842 male and 473 female offenders who were part of a multi-site prison-based substance abuse treatment program offered by the Federal Bureau of Prisons. Although the program adopted a standard cognitive behavior approach, the authors report that anecdotal accounts indicated that the program offered to the women was most likely tailored to meet women-centered needs of co-dependency and sexual abuse. The goal of this study was to examine gender similarities and differences in the predictors of recidivism during a three year follow-up while controlling for whether or not the participants had received the substance abuse treatment or not. Key gender difference finding: (1) while living with a spouse after release was associated with increased survival times among male offenders—less recidivism; living with a spouse after release was associated with decreased survival time among female offenders—more recidivism; (2) history of mental health treatment increased survival rates for women, not for men. Key gender similarities findings: diagnosis of depression did not predict survival for either gender but institutional infractions did.

Putkonen, H., Erkki, M.D., Komulainen, E.J., & Virkkun, M., Eronen, M., & Lönnqvist, J. (2003). Risk of repeat offending among violent female offenders with psychotic and personality disorders. *American Journal of Psychiatry, 160*(5), 947-951.

This study examined factors linked to criminal recidivism in a sample of 132 female homicide offenders in Finland. All of the women underwent a forensic psychiatric evaluation post conviction. The follow-up period was not clearly specified but it was variable and those who reoffended did so on average within four years. Overall, Cox regression analysis revealed that criminal history, personality disorders, and substance abuse were the factors that significantly increased the risk of recidivism, whereas having a psychiatric diagnosis did not increase the risk of recidivism.

Robinson, D., Van Dieten, M. & Millson, W. (2012). The Women Offender Case Management Model in the State of Connecticut. *Journal of Community Corrections*, 7-24.

This paper describes the evaluation results of a gender responsive case management model—the Women Offender Case Management Model (WOCMM)- implemented in the State of Connecticut. Part of the evaluation involved comparing the predictive accuracy of the gender neutral LSI-R, and the gender responsive Service Planning Instrument-Women (SPIN-W) on a subsample of 274 women offenders. A 12-month fixed follow up was used to examine re-arrest rates. Predictive accuracy estimates were particularly strong for the SPIN-W (AUC = .73) versus the LSI-R (AUC = .59). The authors did not break down the analysis by the domain level.

Salekin, R.T., Rogers, R., Ustad, K.L., & Sewell, K.W. (1998). Psychopathy and recidivism among female inmates. *Law and Human Behavior*, 22, 109-128.

This study examined the relationship between various measures of psychopathy and recidivism in a sample of 78 women offenders during a one-year follow-up. The following measures of psychopathy were included: the Psychopathy Checklist-Revised (PCL-R), an Antisocial Personality Disorder Diagnosis from the Personality Disorder Examination (PDE), and selected scales from the Personality Assessment Inventory (PAI; Antisocial and Aggression scales). In sum, the egocentricity subscale of the PAI, Factor I of the PCL-R, and the verbal aggression subscale of the PAI were the best predictors of future recidivism.

Salisbury, E. J., & Van Voorhis, P. (2009). Gendered pathways: A quantitative investigation of women probationers' paths to incarceration. *Criminal Justice and Behaviour*, 36, 541-566. doi: 10.1177/0093854809334076

This study explored the extent to which three hypothesized gendered pathways models: relational, childhood victimization, and social/human capital could predict return to custody among 313 Missouri probationers during a 2-year follow-up period. Noteworthy the sample used in this study was part of a larger, multi-site study that examined the validity of a gender-responsive Women's Risk Needs Assessment tool (WRNA; see VanVoorhis, Bauman, & Brushett, 2013 below). In sum, this was one of the first studies to provide predictive support for a number of hypothesized gender responsive variables (e.g., self-efficacy, depression/anxiety). However, the most important contribution of this paper was the recognition that although certain gender responsive factors may not evidence a direct relationship with recidivism, they may in fact exert an indirect/mediating effect on recidivism. For example, while childhood abuse in and of itself did not predict recidivism directly, it did influence the likelihood of anxiety and depression, which in turn influenced recidivism. Consistent with the gender responsive literature this study illustrated that the following variables were either directly or indirectly related to recidivism: history of mental illness, current anxiety/depression, substance abuse (past & present), child victimization, adult victimization, self-efficacy and family support (negative correlations), relational dysfunction, education/employment challenges, and financial stresses.

Van Voorhis, P., Bauman, A., & Brushett, R. (2013). *Revalidation of the Women's Risk Needs Assessment: Probation results final report January 2013*. Retrieved from <https://forums.doc.state.mn.us/site/fo/Lists/Announcements/Attachments/33/WRNA%20Probation%20Final%20Report%202013.pdf>

This report presents the construction and re-validation results of the Women's Risk Needs Assessment (WRNA) tool and its variants (WRNA-trailer—meant to be appended to a gender-neutral tool; and the Revised WRNA). The WRNA studies were conducted in multiple sites (Missouri, Ohio, Iowa, Minnesota) and utilized samples of women on probation. Although sample size fluctuated depending upon the analysis, upward to 554 women offenders participated

in the construction and re-validation studies. The study employed multiple definitions of recidivism (e.g., arrest, conviction, re-incarceration) and a 6-month and 12-month follow-up period. The study also compared the predictive validity of the WRNA with the Level of Service Inventory-Revised (LSI-R). The WRNA includes a number of gender neutral (e.g., criminal history, attitudes) and gender responsive items (e.g., parental stress, childhood abuse, adult abuse, self-efficacy). In sum, the results illustrated that most gender responsive items were predictive of some type of recidivism, albeit the magnitude of the effects were generally small but significant nonetheless. The authors present numerous AUC's (with no confidence intervals) that vary as a function of sample, outcome and measure (e.g., LSI-R vs. WRNA standalone). This in turn complicates the interpretation of the results. Nonetheless, it would appear that the gender-responsive WRNA adds incrementally to the LSI-R. However, more research is warranted in this area. For an earlier study that also encompasses parts of this study and reached similar conclusions see Van Voorhis, P., Wright, E. M., Salisbury, E., & Bauman, A. (2010). Women's risk factors and their contributions to existing risk/needs assessment. *Criminal Justice and Behavior*, 37, 261-288. doi: 10.1177/009385480935744

Walters, G. D., & Lowenkamp, C. T. (2015). Predicting recidivism with the Psychological Inventory of Criminal Thinking Styles (PICTS) in community-supervised male and female federal offenders. *Psychological Assessment*. Advance online publication. <http://dx.doi.org/10.1037/pas0000210>

This study examined the predictive validity of a self-report measure of criminal thinking—the Psychological Inventory of Criminal Thinking Styles (PICTS) in a large sample of federal probationers in the United States (81,881 males, 14,519 females). The PICTS is an 80 item self-report scale comprised of 8 subscales that fall within three dominant superordinate domains: *General Criminal Thinking*—propensity to engage in criminal thinking, *Proactive Criminal Thinking*—reflects a planned and calculated approach to crime, and *Reactive Criminal Thinking*—reflects a rash and impulsive approach to crime. The results were analyzed separated by gender. In sum, each of these master subscales predicted re-arrested at 24 month in both males (AUCs ranged from .63 to .65) and females (AUCs: .64 to .67) to the same degree.

Yang, Y., Knight, K., Joe, G.W., Rowan, G.A., Lehman, W.E.K., Flynn, P.M. (2015). Gender as a moderator in predicting re-arrest among treated drug-involved offenders. *Journal of Substance Abuse Treatment, 49*, 65-70.

This study examined the extent to which self-esteem, decision-making confidence, peer support and criminal history predicted re-arrest rates in a sample of adult male ($n = 384$) and adult female ($n = 313$) offenders who had completed a prison-based substance abuse treatment program in a southwestern state. The follow-up period was variable ranging from 33 to 972 days, consequently the main statistical tool used was survival analyses. In sum, the analyses revealed an interaction effect between gender and the following variables: self-esteem, decision-making confidence, and peer support. Specifically, while higher levels of self-esteem predicted re-arrests among the male offenders the opposite effect was found among the females. Specifically, for the females, higher levels of self-esteem were associated with less chances of re-arrests, albeit the magnitude of the effect was small. While peer support and decision-making confidence reduced the re-arrest rates in males, there was no effect for females. Lastly, criminal history strongly predicted re-arrests for females, but not for males—small effect albeit not statistically significant.

Yesberg, J.A., Scanlan, J.M., Hanby, L.J., Serin, R.C., & Polaschek, D.L.L. (2015). Predicting women's recidivism: Validating a dynamic community-based 'gender-neutral' tool. *Probation Journal, 62(1)*, 33–48.

This study compared the predictive accuracy of the Dynamic Risk Assessment for Offender Re-entry (DRAOR) and its three-subcales: stable (peers, attitudes, impulsive control, problem solving, attachment), acute (substance abuse, anger/hostility, negative mood, employment, interpersonal relationships, living situations, opportunity/victim access), and protective (responsive to advice, prosocial identity, high expectations, cost/benefits, social supports, social controls) in a matched sample of adult male ($n = 133$) and adult female ($n = 133$) New Zealand offenders released from prison. Males and females were matched on age, ethnicity, static risk and index offence. Although the follow-up time was variable, the mean follow-up time was not explicitly reported. None of the subscales predicted recidivism for the male offenders, and only one subscale—acute— predicted recidivism for the female offenders. Analyses were not run within subscale components.

Appendix B:

Table B1.

Summary of Central Eight and Gender Responsive Factors: Evidence for Risk Factor Neutrality, Saliency, and Specificity

Gender Responsive/RNR Factor	Is there predictive empirical support for:				Corresponding Studies
	Gender neutrality	Gender-saliency	Gender-specificity	Inconclusive/ Grey Areas	
Criminal history	✓			<i>May</i> be slightly more salient for females	Andrew et al. (2012); Olver et al. (2014)
Antisocial pattern/psychopathy	✓			Probably gender-neutral but more research needed, as <i>some</i> research suggests it may be male-salient	Gardner et al. (2015); Olver et al. (2014)
Personal/emotional		Female ✓		More research needed to unpack this domain	Brown & Motiuk, 2008; Gardner et al. (2015); Olver et al. (2014)
Anger/aggression		Male ✓			
Manipulative		Female ✓			
Poor stress management		Female ✓			
Not conscientious			Male ✓		
Marital/Family/Relational	✓			More research needed, particularly to test the belief that intimate criminal	Andrews et al. (2012); Benda (2005); Brown & Motiuk (2008); Huebner & Pleggenkuhle (2015);
Criminal partner		Female ✓			
Children/parental stress		Female ✓			

Gender Responsive/RNR Factor	Is there predictive empirical support for:				Corresponding Studies
	Gender neutrality	Gender-saliency	Gender-specificity	Inconclusive/ Grey Areas	
Family relations Support/Friendships Poor relations with father		Female✓ Female✓ Female✓		relationships or intimate relationships are female-salient	McCoy & Miller (2013); Olver et al. (2014); Pelissier et al. (2003)
Criminal peers/associates Criminogenic neighbourhood	✓	Male✓ Female✓		Most research supports gender neutrality except Benda (2005)	Andrews et al. (2012); Benda (2005); Brown & Motiuk (2008); Olver et al. (2014)
Abuse/Trauma Childhood Abuse Recent Abuse/spousal victim Trauma-related Witness spousal abuse		Female✓ Female✓ Female✓ Female✓		Need more research	Benda (2005); Brown & Motiuk (2008); Kubiak (2004)
Cognitions Criminal attitudes Negative towards law Lacks direction	✓	Female✓ Female✓		More research needed to determine if certain elements of criminal attitudes are gender-salient	Andrews et al. (2012); Brown & Motiuk (2008); Olver et al. (2014); Walters & Lowenkamp (2015)
Self-esteem/self-efficacy High self-esteem		Protective for females✓ Risk factor		More research needed	Yang et al. (2015)

Gender Responsive/RNR Factor	Is there predictive empirical support for:				Corresponding Studies
	Gender neutrality	Gender-saliency	Gender-specificity	Inconclusive/ Grey Areas	
		for males ✓			
Substance abuse		Female ✓*		Inconclusive re:	Andrews et al. (2012);
Combines alcohol/drugs			Female ✓	what aspects of this	Benda (2005); Brown &
Drug use/stress			Female ✓	domain <i>may</i> be	Motiuk (2008); Chang et
Drug use interferes with life			Female ✓	gender-salient,	al. (2015); McCoy &
Early age drinking/drugs			Male ✓	however the global	Miller (2013); Olver et al.
Social drug use			Male ✓	construct is most	(2014)
Associates with substance Users	✓			likely female-salient	
Education/Employment	✓			Inconclusive re:	Andrews et al. (2012);
Dissatisfaction with trade/has none		Female ✓		what aspects of this	Benda (2005); Brown &
				domain <i>may</i> be	Motiuk (2008); Olver et al.
				gender-salient,	(2014); Makarios et al.
				minimally it is a	(2010)
				gender neutral risk	
				factor	
Mental Health				More research	Benda (2005); Chang et al.
Anxiety/fearfulness		Female ✓		needed	(2015)
Stress		Female ✓			
Depression		Female ✓			
Suicidal thoughts/attempts		Female ✓			

Note. This table is based predominately on studies that included male and female offenders.