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SERIOUS CONDUCT PROBLEMS AMONG GIRLS AT RISK: TRANSLATING RESEARCH INTO INTERVENTION

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Abstract: Until recently, research on serious conduct problems focused primarily on boys and men. In the past decade, however, we have gained a better understanding of the unique and shared risk and protective factors for girls and boys, and the role of gender in relation to developmental pathways associated with such problems. In this paper we discuss findings from the Gender and Aggression Project on risk and protective factors for girls who are perpetrators but also victims of violence. We discuss our findings from a developmental perspective, with the goal of understanding how exposure to adversity and violence early in life places girls at risk for aggression and violence, among other problems, and how continued exposure to trauma and the disruption of interpersonal and self-regulatory developmental processes cascades into ever deeper and broader problems. This research points more clearly to the need for accessible, evidence-based, and developmentally sensitive intervention.

Key Words: gender, aggression, victimization, mental health, intervention

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Although rates of youth violence have levelled off in recent years, sizeable increases have been noted from the mid-1980s, particularly in rates of aggressive and violent acts perpetrated by adolescent girls (East & Campbell, 1999; Juristat, 2004; Puzzanchera, Stahl, Finnegan, Tierney, & Snyder, 2003; Savoie, 2000). As these trends have become apparent, so has our lack of understanding of the role of gender in aggression and violence. Our limited understanding of the developmental precursors of aggression and antisocial behaviour in girls is due to the fact that past research focused primarily on identifying risk and protective factors, and developmental trajectories for boys (Barker et al., 2010; Vitaro, Brendgen, & Tremblay, 2001; Wilson & Lipsey, 2007). Over the past decade, however, a number of researchers have turned their attention to the causes, correlates, and consequences of aggression and antisocial behaviour among girls (e.g., Acoca, 1998; Altschuler & Armstrong, 1994; Healey, 2001; Moretti & Obsuth, 2011; Moretti, Odgers, & Jackson, 2004; Moretti, Penney, Obsuth, & Odgers, 2006). Studies are underway examining the developmental pathways from adolescence to adulthood among high-risk girls, a particularly risky period with respect to social and mental health, especially for girls growing up in adverse conditions. Such research is a priority in order to develop prevention and risk reduction programs.

Despite progress in the field, few studies have undertaken a comprehensive investigation of mental health, social-cognitive outcomes, and physical health in girls at high risk for violent and aggressive behaviours. To this end, our research team has worked together over the past decade to better understand the lives of high-risk adolescents in Canada and the United States. The findings reviewed in this paper are derived from our longitudinal research, the Gender and Aggression Project, in which we examined the profiles, risk factors, and outcomes of at-risk adolescent girls and boys in Canada and justice-involved adolescent girls in the U.S. (see Odgers, Moretti, & Reppucci, 2010). We briefly summarize research on maltreatment experiences, vulnerable interpersonal beliefs, attributions, and cognitive patterns; risky romantic relationships; mental health problems, including substance use and suicidality; and physical health challenges. We argue that exposure to adversity, early in development and repeatedly over time, contributes to the development of problematic social-cognitive and emotional processing and, in turn, to mental health problems, substance use, and physical health problems. Our findings are discussed in relation to policy issues and the development of effective prevention and treatment.

Child Maltreatment, Interpersonal Beliefs and Risky Relationships

A large body of empirical evidence exists linking child maltreatment to aggression and violence (e.g., Fergusson & Lynskey, 1997; Widom & White, 1997) in close relationships (Wekerle & Wolfe, 2003; Wolfe, Wekerle, Reitzel-Jaffe, & Lefebvre, 1998). Consistent with this work, our research confirmed that experiences of maltreatment are associated with engagement in aggressive behaviour and a multitude of poor mental, interpersonal, and physical health outcomes for girls. More specifically, girls who were exposed to family violence, physical, emotional, and sexual maltreatment,

and neglect reported higher levels of both overt and relational forms of aggression, and violent offending both concurrently and prospectively (Moretti, Obsuth, & Odgers, 2006; Moretti, Penney et al., 2006; Odgers, Reppucci, & Moretti, 2005). Maltreatment experiences are not only associated with future aggression and violence in girls, but they have also been linked to the development of recurrent patterns of interpersonal problems (Burnette, & Reppucci, 2009; Burnette, South, & Reppucci, 2007; Moretti, Obsuth, Odgers, & Reebye, 2006). Indeed, a large body of literature links maltreatment experiences with the development of Borderline Personality Disorder (BPD) features in girls (Rogosch & Cicchetti, 2005; Wonderlich et al., 2001). Many experts in the field view childhood maltreatment as playing a causal role in the development of BPD by interfering with the development of effective emotion regulation (Linehan, 1993), in conjunction with other factors such as temperament (Harman, 2004). Research carried out by our team (Burnette & Reppucci, 2009; Burnette et al., 2007) and others (Beauchaine, Klein, Crowell, Derbidge, & Gatzke-Kopp, 2009) confirmed that childhood physical abuse was associated with BPD features, and further, that these personality features mediated or accounted for the relationship between maltreatment and aggressive and violent behaviour.

One mechanism through which maltreatment increases the likelihood of perpetration of aggression is via the development of interpersonal expectations and attributions. In our research we investigated two social-cognitive processes that have been linked to aggressive and violent behaviour: sensitivity to interpersonal rejection and the tendency to ruminate on anger. Rejection sensitivity (RS) is the tendency to defensively expect, readily perceive, and overreact to perceived rejection by others (Downey, Feldman, & Ayduk, 2000). The RS model proposes that severe and prolonged rejection, and maltreatment in particular, in early childhood leads to the development of expectations of rejection from others. RS gives rise to a range of interpersonal problem behaviours in response to perceived rejection, including hostility, aggression, and violence, which in turn can precipitate precisely what is most feared – rejection and abandonment. Our research confirmed the relation between maltreatment and angry expectations of rejection (RS), and between RS and overt and relational aggression (Bartolo, Peled, & Moretti, 2010; Marston, Chauhan, Grover, & Reppucci, 2006).

Not only are girls who are exposed to maltreatment at greater risk for developing angry expectations of rejection, but they are also vulnerable to ruminating on anger (i.e., thinking repeatedly about their feelings of anger and resentment), which in turn increases their feelings of anger and their tendency to be aggressive in relationships (Sukhodolsky, Golub, & Cromwell, 2001). Individuals who engage in anger rumination are more likely than others to retaliate aggressively after being provoked (Caprara, 1986; Collins & Bell, 1997), and may even direct their aggression toward innocent targets (Bushman, Bonacci, Pedersen, Vasquez, & Miller, 2005). Our research confirmed that anger rumination was associated with increased overt and relational aggression in girls at risk (Bartolo et al., 2010; Peled & Moretti, 2007). Notably, this association between anger rumination and aggressive behaviour was independent of feelings of anger, suggesting that the cognitive process of anger rumination in itself has a direct relation with aggression.

How do experiences of maltreatment and other adversities, in conjunction with the development of interpersonal, cognitive, and affective vulnerabilities, influence the type of romantic relationships that at-risk girls develop? There is convincing evidence that risky romantic relationships are the nexus of continued aggressive behaviour and poor mental health among at-risk adolescent girls: Results show that these girls are victimized in their close relationships and, in turn, they perpetuate aggression within their romantic relationships (e.g., Gilligan & Wiggins, 1988; Odgers et al., 2005). Numerous studies show that female aggression is more likely to ensue in the context of romantic or family relationships (Straus & Ramirez, 2007; Shaw & Dubois, 1995) and that, compared to boys, the victims of girls' violence are more likely to be an acquaintance, friend, or partner (Archer, 2000).

What experiences have led girls to navigate their close relationships through aggressive strategies? In one of our early studies (Moretti, Obsuth, Odgers, & Reebye, 2006) we found that girls who were exposed to their mother's perpetration of aggression toward their father (or their mother's partner) were more likely to be aggressive themselves in their peer and romantic relationships. In contrast, boys exposed to their father's perpetration of physical aggression toward their mothers (or father's partner) were more likely to be physically aggressive in their peer relationships, but their aggression in their romantic relationships was primarily related to their mothers perpetration of partner violence. These findings suggest that both girls and boys learn important lessons about navigating close relationships through their exposure to interparental violence. In particular, mothers' perpetration of physical aggression toward romantic partners (i.e., slapping, hitting, using a weapon) appears to be a highly influential model that guides girls' aggression in their own peer and romantic relationships. Our research on attachment patterns in adolescent girls at risk provides further confirmation of the importance of internal models of relationships that influence violence perpetration. Like other researchers (Allen et al., 2002; Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Brown & Wright, 2003), we found that the tendency to be anxiously attached was common among at-risk girls and was associated with the perpetration of interpersonal aggression (Obsuth, 2009; Moretti & Obsuth, 2011).

We concur with Artz (1998) that the significance of relationships for girls can introduce risks for their health and well-being, and more specifically contribute to their vulnerability for victimization and perpetration of violence. This is especially true for girls who are growing up in risky contexts. This model of female aggression emphasizes the need to understand the experiences of girls in prior relationships – particularly experiences of trauma and maltreatment – in terms of how girls may draw upon their experience of interparental aggression when forming their own intimate, yet violent relationships. Although research on the romantic relationships of at-risk girls is just beginning to burgeon, the emerging findings consistently suggest these girls are vulnerable to forming romantic relationships with antisocial partners and such liaisons can often lead to even further victimization and engagement in risk behaviour (Haynie, Giordano, Manning, & Longmore, 2005). In our recent study of the quality of at-risk

girls' romantic relationships, we found that even though many girls reported satisfaction with their partners, the majority of these relationships were characterized by high rates of victimization and violence (see Oudekerk & Reppucci, 2010). In turn, girls who were involved in relationships with antisocial partners were more likely to continue offending, whereas girls who formed relationships with prosocial partners were more likely to desist from crime. Furthermore, violent victimization within girls' romantic relationships was a powerful predictor of risk of violent recidivism: Girls who experienced violence in mid-adolescence were approximately 11 times more likely than girls who were not victimized to commit a violent offence in late adolescence (see Oudekerk & Reppucci, 2010). Surprisingly, even though many girls reported dating antisocial boyfriends and experiencing violence and victimization within their relationships, 75% of girls felt strongly that their partners cared for and supported them.

These seemingly contradictory findings – that girls feel cared about and satisfied in relationships in which they are victimized – speak to the powerful influence of lessons about violence and intimacy that girls learn through exposure to interparental violence. Given these past experiences, girls may come to expect that violence and intimacy go hand in hand. They may even view relationship violence as an expression of attachment. If this is the case, these girls might not be inclined to discuss their partners' abusive and antisocial behaviours with authorities, nor will they be inclined to seek out social services until violence escalates to extraordinary levels. More research is needed to better understand the developmental pathways and experiences of closeness combined with violence that these girls experience. Juvenile justice interventions that promote the formation of healthy romantic relationships may contribute to the reduction of recidivism and encourage positive outcomes in adulthood.

As we will discuss in detail later, these findings point to the primary importance of preventing child abuse as a key to reducing the problem of youth violence, for both girls and boys. Not only do such experiences result in profound damage to young children, but their effects on developmental processes are also carried forward into adolescence and adulthood. Maltreatment experiences have a powerful direct relationship with aggressive behaviour, and they have an equally if not more deleterious effect through a multitude of cognitive, affective, and interpersonal developmental pathways as we have illustrated here.

Mental Health Problems

Girls involved in aggressive and violent behaviour and those involved in the juvenile justice system bear a heavy burden of mental health problems. Teplin and colleagues (2002) reported that approximately 75% suffer from one or more psychiatric disorders. Similarly, in their longitudinal research, Moffitt, Caspi, Rutter, and Silva (2001) found that 88% of the boys and 93% of the girls met criteria for one or more disorders.

Not only are prevalence rates of externalizing and internalizing disorders among incarcerated females substantially higher than in normative community samples of

adolescent females (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Dixon, Howie, & Starling, 2004; Domalanta, W. Risser, Roberts, & J. Risser, 2003; Fazel, Doll, & Langstrom, 2008; Loeber, Farrington, Stouthamer-Loeber, & White, 2008; Teplin et al., 2002), but psychiatric disorders appear even more common among at-risk girls than boys (Cauffman, 2004; Espelage et al., 2003; Grisso, 2004). These findings suggest that incarcerated adolescent females may be the most psychiatrically impaired population in today's juvenile justice system. Our research was consistent with this conclusion: 88% of girls in our Canadian sample and 94% of girls in our U.S. sample met diagnostic criteria for at least one psychological disorder (see Russell & Marston, 2010). More specifically, using a standardized diagnostic interview, Obsuth, Watson, and Moretti (2010) found a lifetime prevalence among Canadian girls at risk of 71% for conduct disorder (CD), 68% for attention deficit hyperactivity disorder (ADHD), 49% for major depressive disorder (MDD), and 52% for post-traumatic stress disorder (PTSD). These rates were even higher for girls with onset of CD before age 10 (i.e., early onset CD): 85% met criteria of ADHD at some point in their life, 74% MDD, and 57% PTSD. Similar results emerged in our sample of at-risk girls from the U.S.

Comorbidity is also the rule rather than the exception among girls at risk (Abram, Teplin, McClelland, & Dulcan, 2003; Dixon et al., 2004; Dolamanta et al., 2003; Ulzen & Hamilton, 1998). Our research also bore consistent findings: In the Canadian sample, 59% of girls met criteria for at least three disorders in addition to CD. Similar rates were observed in our U.S. sample (Russell & Marston, 2010). Not only is the burden of mental health suffering immense among girls at risk for aggressive and violent behaviour, but it is a burden that extends into their future: For example, Russell and Marston (2010) found that ADHD in girls in our American sample increased the odds of self-reported offending, mental health impairment, and continued psychopathology approximately two years after release from detention. ADHD also uniquely, and apart from other comorbid disorders, predicted enduring externalizing problems such as aggression and rule-breaking behaviour in the transition to adulthood. These results highlight the unique risks that ADHD adds to the mix of comorbid mental health problems experienced by at-risk girls, problems that must be better understood and addressed in treatment planning.

We also examined comorbidity among girls who met criteria for early onset CD (i.e., up to age 10) versus adolescent onset CD (Obsuth et al., 2010). Girls with early versus late onset CD were just as likely to suffer from up to three comorbid psychiatric disorders (i.e., CD plus two additional disorders), suggesting that even those girls with late onset were at high risk for mental health problems as they moved toward adulthood. Nonetheless, early onset girls were more likely than late starters to have four or more disorders showing an even greater burden of risk, confirming prior research on the seriousness of early onset trajectories. However, the important take-home message is not that late onset CD is clinically insignificant; rather, both early onset and late onset CD in girls carries a disconcerting risk for mental health problems which are very likely to cause ripple effects in their social, emotional, and vocational adjustment as they transition to adulthood. Thus, researchers and practitioners are advised to reconsider the assumption that these girls will "grow out of it".

Substance Use and Dependence

Our results from the Gender and Aggression Project were consistent with previous reports showing that the rates of substance abuse and dependence are high in this high-risk population: 70% met criteria for at least one substance dependence disorder (alcohol, marijuana, and/or street drugs) at the time of the assessment and 74% of youth met criteria for at least one dependence disorder over their lifespan (see Obsuth et al., 2010). Similar rates were observed for girls and boys. With respect to specific substances, alcohol was the most common form of substance problem with almost 60% of youth meeting criteria for a current Alcohol Dependence (AD) and 61% meeting criteria for a lifetime diagnosis of AD. Both girls and boys reported early onset of alcohol use (10.6 years of age). Girls reported their first symptom of AD at approximately 13.3 years of age and boys at 13.8 years of age. Marijuana dependence was also common: 48% met criteria for current Marijuana Dependence (MD) and 57% met criteria for lifetime MD. Girls and boys reported first use around age 11 and first symptoms of dependence at 12.6 years for girls and 13.0 years for boys. Current street drug dependence (SDD, e.g., heroin, downers, cocaine, speed, crack) was diagnosed in 40% of youth and 45% met criteria for a lifetime diagnosis of SDD. First use started around age 13 for girls and boys and the mean onset of dependence occurred shortly afterwards.

In sum, girls who are victimized and victimize others are highly similar to their male counterparts in very early onset of multiple forms of substance use and high risk for substance dependence. Further, our findings revealed high levels of comorbidity between substance dependence and other psychiatric disorders, particularly for girls (Obsuth et al., 2010). Our findings highlight the urgent need to develop effective early intervention within high-risk populations to reduce early substance use and offset the development of dependence. Such programs must also address the other mental health problems that challenge these youth, particularly girls.

Physical and Sexual Health

The problems experienced by at-risk girls extend beyond their social and emotional well-being. Recently researchers have turned their attention to the medical and physical health challenges that these young women face (e.g., Timmons-Mitchell et al., 1997; Dixon et al., 2004). Our research team addressed this issue by assessing the physical health of a population of girls sentenced to custody in a U.S. state using a multi-method approach that integrated self-report, physician gathered, and biomarker data (see Robins, Odgers, & Russell, 2010). We found that at-risk girls experience high rates of physical health problems (e.g., asthma, obesity), sexual health problems (sexually transmitted diseases, unplanned pregnancy), and are at elevated risk for physical injury (fracture, head injury, gunshot) and self-inflicted harm. Moreover, these problems persisted into young adulthood with 40% continuing to engage in health risk behaviours and close to 30% reporting that they engage in self-harm behaviour. Thus, not only must programs address the wide range of social, emotional, and mental health problems that at-

risk girls experience, and their substance use issues, but programs must also attend to their physical and sexual health problems. Given the long list of acute needs of at-risk girls, it is not surprising that mental health providers and other professionals feel overwhelmed and ill-equipped to provide interventions that are tailored, yet sufficiently broad to be effective.

Implications for Intervention and Social Policy

What are the implications of our findings for treatment and social policy? Importantly, our work highlights the need for gender-sensitive risk assessment tools (see Penney & Lee, 2010). Girls perhaps more than boys require full spectrum screening programs that assess both externalizing (e.g., conduct disorder, ADHD) and internalizing (e.g., depression, anxiety, PTSD) disorders, as well as substance use disorders. Developmental sequencing of disorders can be informative in shaping intervention for girls. For example, girls who develop substance use problems secondary to trauma and PTSD may require a different approach to treatment than girls who develop substance use problems in conjunction with conduct disorder and ADHD.

In terms of treatment, the findings presented here and elsewhere (Glantz et al., 2009; Moretti, Obsuth, & Odgers, 2006; Moretti, Obsuth, Odgers, & Reebye, 2006; Moretti, Penney et al., 2006; Odgers et al., 2005) underscore the importance of prevention and early intervention. Specifically, these results and innumerable others highlight the harmful and long-lasting effects of child maltreatment. *Preventing child abuse and neglect must be a priority if we are serious about reducing violent, aggressive, and antisocial behaviour in all children and youth*. The early, chronic, and serious nature of maltreatment in the lives of high-risk girls warrants special attention. In interviews and from social service records we often learned that girls' experiences of victimization were not identified until much later than the occurrence, and even when identified, intervention was often limited. If interventions occurred (such as placement outside of the family home or changes between foster homes), they were often time-limited, fragmented, and lacked integration into a systemic model of care. Consequently, they did not necessarily lead to better care or better health outcomes; social service files grew thicker but with no identifiable benefit. Importantly, this often appeared as frustrating to social service workers as it was to families and youth themselves. Social workers frequently ran into barriers in accessing appropriate evidence-based services, integrating services and care across systems, and ensuring continuity of services.

High quality, evidence-based, and accessible early interventions must be more readily available across communities. While many effective programs exist, few are implemented within communities. Indeed, the gap between science and practice in this regard is so significant that it raises questions about our ethical obligations at both research and government levels. For example, excellent programs have been developed for parents, particularly those at high risk, even prior to the birth of their child or early in childhood. Evaluation of services has produced impressive long-term positive effects. Perhaps the best known of such programs is the Nurse Home Visitation program, which provides home visits to young unmarried teens during their first pregnancy and up to the

first two years of the child's life (Olds, 2006). A 15-year follow-up evaluation revealed that the children of mothers who participated in this program had accrued significantly fewer arrests, convictions, and parole violations compared to the children of mothers who did not take part in this program (Olds et al., 1998).

Even if programs are not initiated prior to birth or during a child's infancy, there is still good evidence for intervening in the early school years. For example, the Fast Track program identified high-risk children and randomly assigned them to comparison condition (services as usual) versus an integrated program of family- and child-based intervention beginning in Grade 1 and continuing to Grade 10 (Conduct Problems Prevention Research Group [CPPRG], 2007). Children in the integrated Fast Track program were significantly less likely to be diagnosed with CD than children who were in the comparison condition. Based on the number of averted conduct disorder cases achieved through the program, it was estimated to save $3,481,433 for the entire sample included in the study, or $752,103 for each youth at the highest level of risk (CPPRG, 2007).

Although early childhood prevention and interventions are clearly very important (e.g., Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003; Klein-Velderman, Bakermans-Kranenburg, Juffer, & van IJzendoorn, 2006; Maughan, Christiansen, Jenson, Olympia, & Clark, 2005; Reynolds, Mathieson, & Topitzes, 2009), estimates reveal that between 70% and 90% of young children who are in need of intervention for serious behaviour problems do not receive it (Brestan & Eyberg, 1998). Furthermore, almost half of children who develop serious behaviour problems do not do so until adolescence (Broidy et al., 2003). Even though early onset conduct problems are more likely to have a persistent life course trajectory than are adolescent onset problems (Moffitt, 1993, 2006), as previously noted, our research shows that adolescent onset conduct problems also have serious and lasting consequences for girls. There is good evidence for the effectiveness of integrated wrap-around programs that tailor treatment plans to the needs of each family and include parent, teen, and family interventions. Several trials have supported the efficacy of Mulitsystemic Therapy or MST (Sheidow & Woodford, 2003) compared to individual outpatient counselling or standard community treatment in reducing recidivism and improving the quality of family relationships (Carr, 2005). However, research suggests that comparable effects can be achieved through good quality community wrap-around support (Sundell et al., 2008). This seems to suggest that systemic integration is very important and should be sustained and strengthened within communities, whether this is achieved through adoption of a strict MST model or through other means.

Promoting healthy parent-teen relationships is an essential component of all intervention programs in the pre-teen and teen years. During this developmental transition, parents and teens undergo rapid changes and teens are often exposed to very risky situations. Our research highlighted the importance of parent-daughter relationships: Girls at high risk for conduct problems commonly reported a history of child maltreatment, experiences which set a precarious foundation for their expectations about other social relationships (Moretti, Obsuth, & Odgers, 2006; Russell & Marston, 2010). They lacked attachment security in their relationships with their caregivers and

they were sensitive and vigilant to rejection (Bartolo et al., 2006). Seeking to have their interpersonal and attachment needs met in other relationships, they often became involved in romantic relationships that placed them at even greater risk for victimization (Oudekerk & Reppucci, 2010).

Interventions for adolescents focused on attachment are beginning to emerge and they show promising results (e.g., G. S. Diamond, Reis, G. M. Diamond, Siqueland, & Isaacs, 2002; Keiley, 2002). In our work with high-risk teens, we have developed a brief manualized intervention (The Connect Program) designed to promote attachment security in the relationships of caregivers and high-risk teens (Moretti & Obsuth, 2009). This program bears many similarities to other parenting programs, but places parent-teen attachment at the forefront in the theoretical rationale, structure, and content of the program. Our research shows that this short-term, cost efficient program has considerable promise in producing significant reductions in conduct problems and increasing parenting efficacy and satisfaction (Moretti & Obsuth, 2009). These effects were sustained and additional reductions in conduct problems, depression, and anxiety were noted at the 12-month follow-up. Additionally, the program has been highly portable across communities and cultures (Moretti & Obsuth, 2009).

To summarize, there are a number of effective prevention, early intervention, and risk reduction programs to integrate into clinical service delivery models within our communities. What we do not know is whether these programs produce similar results for girls and boys. Some researchers and clinicians argue that differences in risk factors, mental health, and social consequences for girls and boys warrant gender-specific programs (Acoca, 1998; Altschuler & Armstrong, 1994; Healey, 2001; Moretti & Obsuth, 2011; Moretti et al., 2004; Moretti, Penney et al., 2006; Nicholls, Greaves, & Moretti, 2009), pointing out that existing research has failed to detect these differences because we have not looked for them in meaningful ways. Others point to the similarities between girls and boys in risk factors and processes related to problem behaviour, and counter that gender-tailored or gender-specific interventions are unnecessary and a waste of limited resources (Scott, Spender, Doolan, Jacobs, & Aspland, 2001). Past studies offer little guidance on this issue because there has been greater focus on the development and evaluation of interventions for adolescent boys than girls (Barker et al., 2010; Vitaro et al., 2001; Wilson & Lipsey, 2007) and gender differences have rarely been addressed even when the same program is delivered to both girls and boys (Maughan et al., 2005). When gender has been addressed, it was typically examined in a cursory manner by simply comparing outcomes across gender.

What is needed is a gender- and sex-based analysis that goes beyond the previous research and addresses how gender matters in terms of the spectrum of risk and protective factors, the nature and trajectory of comorbid mental health, social, and health problems, and the factors that account for treatment effects. It is entirely possible that similar treatment outcomes occur for girls and boys, but these effects may arise for different reasons or as a function of different therapeutic change processes. For example, in our evaluation of the Connect Program, we have preliminary research that suggests parent-daughter dyads change differently than parent-son dyads, yet both achieve similar

outcomes in terms of reduced conduct problems. If gender matters in determining these processes, it is possible that fine-tuning our interventions to maximize gendered change processes can further increase our treatment effectiveness (Moretti & Obsuth, 2009).

Finally, researchers have been too silent on the issue of cultural and other forms of diversity, but social context matters on several fronts. Programs may not be available or easily accessible and those that are may not be tailored to the unique racial and social context needs and challenges (e.g., Chauhan, Reppucci, & Turkheimer, 2009). Through engagement with communities and youth, tailored programs can be developed that contain standard components with proven efficacy within a culturally sensitive treatment structure.

Summary

In sum, like other researchers, we found that girls at risk for engaging in aggressive and antisocial behaviour were themselves victims of maltreatment and violence (Moretti, Obsuth, & Odgers, 2006; Moretti, Obsuth, Odgers, & Reebye, 2006; Moretti, Penney et al., 2006; Odgers et al., 2005; Penney & Lee, 2010). We also found that these girls developed high levels of vigilance and rejection sensitivity within their close relationships and furthermore, they became involved in romantic relationships in which they were victimized by their partners (Bartolo et al., 2010; Oudekerk & Reppucci, 2010). Mental health problems emerged early in their development, and they typically experienced multiple mental health conditions as they moved toward early adulthood including PTSD, depression, and substance dependence (Obsuth et al., 2010; Russell & Marston, 2010). Not surprisingly, the majority of these girls suffered poor health outcomes in early adulthood, including mental and physical problems (Robins et al., 2010).

There is no lack of evidence for the clinical and economic value of intervention. Effective programs have been developed to assist at-risk parents prior to the birth of their children; effective programs also exist for early childhood prevention and intervention; new, exciting, and effective programs are emerging for teens. These programs offer considerable benefit at low cost. The critical question is this: If effective and economically advantageous programs exist, why have we lagged so far behind in implementation? This is a serious question for researchers, policy-makers, and clinicians alike. At the heart of the issue is our ethical and moral obligation to do the right thing. Unless researchers, politicians, and clinicians become aligned and work collaboratively, we are unlikely to improve the lives of children and young adults. If we are unlikely to translate our research into measurable benefits, we should begin to the question the value of continuing to invest in research. Harsh statements to be sure, but such issues need to be raised.

As we have noted, we know little about the relative effectiveness of programs for girls versus boys. Few studies have asked this question, and we have yet to examine this issue in a sophisticated way that can shed light on whether we need gender-specific or gender-tailored programs. For the time being, given the lack of services in general,

policy-makers and clinicians are well advised to advocate for the effective programs we now have and to use these wherever possible. This does not preclude further examination of the question of whether and how gender matters in terms of treatment processes and effectiveness. Indeed, this is an exciting area of further research and practice.

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