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GENDER INFORMED ANALYSIS OF RESIDENTIAL TREATMENT OUTCOMES

(Spine title: Gender and Residential Treatment)

by

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Graduate Program in Education

Submitted in partial fulfillment
of the requirements for the degree of
Master of Education

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Abstract

This study investigated the association of gender, externalizing and internalizing behaviours, and treatment of aggressive female adolescents within a residential setting. Two hundred twenty five youth between the ages of six and seventeen years (170 boys, 55 girls) were followed up to two years post-discharge from a residential treatment facility. The Brief Child and Family Phone Interview was used as an outcome measure of treatment efficacy. Upon admission, girls presented with higher levels of externalizing behaviours than boys while no difference was apparent for internalizing disorders. Overall, both males and females showed significant treatment gains with regards to both externalizing and internalizing disorders. Once preadmission scores were accounted for, there was no impact of gender on treatment outcome. The implications of these findings are discussed in terms of clinical significance and relevance to policy.

Keywords: adolescent female aggression, residential treatment, gender.

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List of Abbreviations

PTSD	Posttraumatic Stress Disorder
CPRI	Child and Parent Resource Institute
BCFPI	Brief Child and Family Phone Interview
CBCL	Achenbach Child Behavior Checklist
DSM-IV	Diagnostic and Statistical Manual of the American Psychiatric Association version IV

Introduction

Aggression can be manifested in a variety of ways including physically, verbally, or socially and can either be direct or indirect in nature. For years, the ways in which females aggress have been ignored as a result of a male bias in defining aggression and behavioural deviancy within the literature (Bjorkqvist & Niemela, 1992; Hipwell & Loeber, 2006). Consequently, it is only recently that the variations in female and male aggression have been recognized. Research has shown that the etiology, risk factors, and functionality of female aggression tend to differ from that of male aggression. In addition, aggressive girls tend to display more internalizing symptoms, such as anxiety and depression, than aggressive boys (Silverthorn & Frick, 1999) as well as experience inferior outcomes across multiple psychosocial domains during adulthood (Zoccolillo, 1993). These differences may have an impact on the way in which each sex responds to treatment aimed at reducing aggressive behaviours. Unfortunately, many treatment programs for girls have been informed by male specific research (Hipwell & Loeber, 2006) with a "one-size fits all" approach being applied in the treatment of adolescent females (Graves, 2007). This singular treatment modality also exists within residential treatment programs that were originally established to serve the needs of boys with aggressive and aberrant behaviours (Kirgin, 1996). As of yet, it is undetermined as to whether these models of treatment for aggression and delinquent behavior are an appropriate and effective option for female adolescents with disruptive behaviours (Handwerk, Clopton, Huefner, Smith, Hoff, & Lucas, 2006). The purpose of the present research is to examine the outcome of treatment for aggressive girls within a residential treatment setting who were followed for a period of up to two years post discharge from a

residential treatment center in London, Ontario. Specifically, the association of gender, externalizing and internalizing behaviours, and treatment will be explored.

Literature Review

The last decade has seen a considerable increase in the attention paid to the acts of violence and aggression committed by girls. Media coverage reflects a large number of high-profile cases involving nontraditional violent acts perpetrated by female adolescents (Chesney-Lind, Morash, & Irwin, 2007). While the level of media attention regarding violent females is on the rise, coincidentally, so too are the number of females arrested for violent acts. In Canada between 1996 and 2002, there was a slight decrease in violent crime committed by boys (from 1385 to 1332 per 100,000 youth), while there was a moderate increase in violent crime committed by girls (from 451.9 to 512.1 per 100,000; Statistics Canada, 2004). Similar statistics have been reported in the United States: between the years of 1980 and 2000, the rates for female juvenile arrests increased by 121% for aggravated assault and 257% for simple assault (Snyder, 2002). In comparison, the arrest rates for male juveniles increased by 28% and 109% for aggravated and simple assault respectively (Snyder, 2002).

Although these numbers are staggering at first glance, it is important to consider these statistics within the appropriate context. Boys are continuously reported as more violent than girls (Kashani, Jones, Bumby, & Thomas, 1999) and still commit the vast majority of violent crimes accounting for 76% of aggravated assaults and 90% of murders and negligent manslaughter arrests (Snyder, 2004). Despite the fact that adolescent girls only account for a small proportion of violent crimes, and that policy shifts in law enforcement practices may be increasing the arrest rates for girls (Steffensmeier,

Schwartz, Zhong, & Ackerman, 2005), the reality is, females are increasing in the rate of violence relative to males. This observation has sparked a number of researchers to investigate the area of female violence and aggression in order to answer various aspects of one question: Why are female adolescents becoming more aggressive?

Forms of Aggression

One of the inherent difficulties in studying female violence and aggression is the extent of variability in the definition of these concepts (Parrot & Giancola, 2007). For many years there has been a male bias in defining aggression and behavioural deviancy that has ignored the way in which females aggress and behave (Bjorkqvist & Niemela, 1992; Hipwell & Loeber, 2006). Aggression can take many forms including physical, verbal, and social with aggressive acts being either direct or indirect in nature. Some covert acts that harm others include social exclusion, public humiliation, and personal rejection with these behaviours collectively being referred to as social or relational aggression (Moretti, Catchpole & Odgers, 2005).

Males and females are socialized differently (see Block, 1983, for a review) with gendered patterns of aggression being reflected within these differences. Girls tend to be socialized to be empathic and receive higher levels of training in prosocial behaviour than boys (Denham, McKinley, Couchoud, & Hold, 1990). Relative to male peer groups, female peer groups tend to focus on social encounters and emphasize relationships over structured games and activities (Underwood, 2003). Furthermore, girls' friendships are more central to their identities, more intense, as well as more intimate than boys' friendships (Maccoby, 1998). The majority of violence committed by girls occurs within the context of close relationships; girls learn to use violence within their relationships as a

viable strategy, although maladaptive, for surviving and maintaining interpersonal connections (Moretti et al., 2005). Indeed when physical aggression is the main problem, the aggressive act is usually directed towards someone they have a relationship with, be it a friend or family member (Acoca, 1999; Bloom, Owen, Covington, & Raeder, 2003) as opposed to a complete stranger. Hence, girls are motivated to use aggression for emotional and expressive needs related to interpersonal issues whereas boys use aggression more for instrumental needs (Crick & Grotpeter, 1995; Loper & Cornell, 1996). Studies have shown that while boys are more likely to show overt, physical aggression to establish dominance (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Coie & Dodge, 1998; Crick & Grotpeter, 1995), girls are more likely to engage in indirect or relational forms of aggression consisting of rumor spreading, ostracism, character defamation and social sabotage to disrupt social relationships (Crick & Grotpeter, 1995; Leschied, Cummings, Van Brunschot, Cunningham, & Saunders, 2000; Underwood, 2003). Thus males and females may be equally aggressive depending on the context of the situation and definition of aggression.

Both physical and relational aggression have been shown to be related to externalizing problems including delinquency and substance abuse (Craig & Pepler, 2003; Crick, 1997; Werner & Crick, 1999) and internalizing problems such as anxiety, suicidal behaviour, and depression (Crick, Ostrov & Werner, 2006; Rigby, 2003; Sourander, Helstela, Helenius, & Piha, 2000). As well, aggressive and delinquent girls are more likely than boys to experience pervasive comorbid psychopathology (Bardone, Moffitt, Caspi & Dickson, 1996; Moffitt, Caspi, Rutter, & Silva, 2001) including attention-deficit hyperactivity disorder, anxiety, posttraumatic stress, depression,

somatization disorders, and substance use disorders (McMahon, Wells, & Kotler, 2006). Even suicide rates for highly aggressive adolescent girls are higher than for aggressive adolescent boys (Chamberlain & Reid, 1994).

For girls, social aggression may be a precursor to physical aggression and may even form the interpersonal context in which acts of severe physical aggression are perpetrated (Odgers & Moretti, 2002). In a study of 245 children in grades three to six, Crick (1996) identified a correlation of .77 between relational and overt aggression. This would suggest that both physical and social aggression co-occur. Qualitative research has noted the use of power and dominance within the social relationships of violent girls in order to secure social networks and status (Chesney-Lind & Sheldon, 1998). These girls are typically manipulative and highly controlling in their relationships and can respond with physical aggression and retaliation if provoked (Artz, 1998; Chesney-Lind & Sheldon, 1998).

Developmental Course of Aggression for Girls

While differences exist in the intentions of and ways in which females aggress, differences also exist between the sexes in terms of the developmental pathways of aggression and behavioural deviancy. However, empirical data on the nature, development and course of female delinquency and behaviour problems are limited due to methodological and logistical restrictions (Hipwell & Loeber, 2006). Still, a picture can be drawn from existing research regarding the developmental trajectories of aggression for girls.

Research has shown that aggression may change or evolve over time (Vaillancourt & Hymel, 2004) in accordance with children's maturation and development

of verbal and social cognitive skills (Bjorkqvist et al., 1992). Longitudinal studies have demonstrated that children's use of aggression changes from physical, to verbal, to indirect (Brame, Nagin, & Tremblay, 2001; Broidy et al., 2003). However, a study by Vaillancourt, Brendgen, Boivin, and Temblay (2003) involving over 3000 children aged 4 to 11 found that children were consistent with a particular type of aggression and did not refine their aggression tactics from physical to indirect. Despite the previous study, other research has shown an evolution in the type of aggression used by children and youth. Studies have indicated that physical aggression is standard among preschoolers but then declines while verbal and social forms of aggression emerge later and become more common with age (Vaillancourt & Hymel, 2004).

Gendered patterns of aggression also tend to develop gradually as children age. Among toddlers, there are virtually no gender differences in aggressive behaviour (Hay, Castel, & Davies, 2000; Loeber & Hay, 1997). Even in preschoolers there are few if any gender differences in physical aggression (Keenan & Shaw, 1994; Underwood, 2003). This trend changes, however, once children reach middle school with differences becoming apparent in the way that girls and boys show aggressive behaviour. Throughout adolescence, girls are less likely than boys to show overt, physical aggression (Coie & Dodge, 1998) and more likely to engage in relational forms of aggression including gossiping, rumor spreading, character defamation and social ostracism (Crick & Grotpeter, 1995; Underwood, 2003; Xie, Cairns, & Cairns, 2005). As well, adolescent girls are more likely than adolescent boys to show aggression towards family members and partners (Heide, 2003; Robbins, Monahan, & Silver, 2003) and towards females they know rather than strangers (Acoca; 1999).

The majority of longitudinal studies addressing developmental pathways of female aggression have focused on the adolescent period (Hipwell & Loeber, 2006). These studies suggest some degree of continuity in female behaviour problems from childhood to adolescence (Offord, Boyle, Racine & Fleming, 1992), which may even be as high for females as it is for males (Coie & Dodge, 1998). However, it would seem that girls have a unique delayed onset trajectory for aggressive and violent behaviour; antisocial and aggressive behaviour in girls typically begins in adolescence rather than childhood (Silverthorn & Frick, 1999). Research has shown that the developmental slope for overt physical aggression in particular is different for girls than it is for boys (Moretti & Odgers, 2002). For boys, aggression often starts in childhood but decreases with age even though the severity of aggression does not necessarily decrease as well (Loeber & Hay, 1997; Tremblay et al, 1999). Conversely, girls tend to show lower frequencies of physical aggression at a young age and higher frequencies of aggression in later years (Doob & Sprott, 1998).

Risk Factors

One area in the study of female violence that has experienced extensive research is the identification of risk factors. Graves (2007), defines a risk factor as "characteristics that have been identified as precursors to negative outcomes such as violence" (p. 133). Although risk factors may be similar for males and females, it is essential to note that the importance of any specific factor or the way in which factors predispose individuals towards violence may be different for females (Graves, 2007).

Multiple risk factors for aggressive and violent behaviour have been identified in the research literature including a history of substance abuse (Blum, Ireland, & Blum,

2003; Ellickson, Saner, & McGuigan, 1997, Lipsey & Derzon, 1998), physical abuse (Dodge, Pettit, Bates, & Valente, 1995; Langhinrichsen-Robling & Neidig, 1995), sexual abuse (Simkins & Katz, 2002; Tyler, 2002), and parental displays of violence (Bjorkqvist & Osterman, 1992) to name a few. Most of these studies have been exploratory or descriptive in nature and serve to provide an illustration of what characteristics a violent or aggressive female adolescent may have.

Various researchers have documented the relationship between adolescent violence and substance abuse (Lipsey & Derzon, 1998; Ellickson et al., 1997). A cross-sectional study using a stratified representative sample of all high schools in the United States carried out by Blum et al. (2003) examined various correlates related to juvenile violence. A total of 8,836 females and 8,290 males in grades 7 through 12 completed a computer-assisted survey within their homes answering questions regarding violent behaviours consisting of physical acts, substance abuse and various other demographic factors. Violent behaviours were greatly associated with alcohol consumption and other illicit drug use for both males and females. Thus it would seem that substance abuse overall contributes to violent acts for adolescent girls.

Substance abuse is not the only risk factor to be identified for female adolescent violence. Langhinrichsen-Robling and Neidig (1995) examined the impact of adolescents experiencing and witnessing abuse and committing aggressive acts themselves. A total of 474 adolescents, 137 female, with a mean age of 18 completed a modified version of the Conflict Tactics Scale (Straus, 1979). Participants were asked to comment on various aggressive behaviours (pushing, slapping, kicking, hitting, threatening with knife or gun) they had experienced, witnessed, and committed. For both males and females,

experiencing physical abuse was significantly associated with perpetrating aggression. This relation increased when victimization and witnessing abuse were combined. Thus it would seem that the more physical violence present in a female adolescent's life, the more likely she is to be aggressive in the future. Some researchers have suggested that physical abuse may be a more salient risk factor for girls than for boys. Connor (2002) reported that the prevalence of a history of physical abuse is significantly higher among violent women (42%-62%) than among either violent men (approximately 23%) or nonviolent women (approximately 6%). Being physically abused may disrupt the normal sequence of emotional development, resulting in psychological barriers to learning appropriate coping strategies in response to stressors (Widom, 2000). As a result, physically abused females may try to cope with histories of physical abuse by using illicit drugs and alcohol which, as mentioned, are also associated with aggression in girls (Blum et al., 2003; Ellickson et al., 1997, Lipsey & Derzon, 1998).

In addition to physical abuse being a risk factor for violence, sexual abuse has also been identified as a risk factor for aggressive and delinquent behaviour in females by various researchers (e.g., Simkins & Katz, 2002; Tyler, 2002). To understand the relationship between female victims of sexual abuse and involvement in the juvenile justice system, Goodkind, Ng, and Sarri (2006) conducted a multidimensional study of women involved in various treatment facilities. The investigators administered questionnaires to 169 young women with a mean age of 15.92 years old. The questionnaire focused on the relationship of sexual abuse to seven outcome areas including delinquent behaviour, measured with the Self-report Delinquency Scale (Elliott, Huizinga, & Morse, 1986). Delinquent behaviour included such acts as fighting, assault,

theft and vandalism. Within this investigation, young women who had experienced sexual abuse were more likely to engage in fighting, vandalism, and delinquent behaviour overall than young women who had not been sexually victimized.

It is possible that a history of physical and sexual abuse may be more salient risk factors for violence for adolescent girls than it is for boys. Mason, Zimmerman and Evans (1998) examined the prevalence of sexual and physical abuse among incarcerated youth in Nevada. In the summer of 1994, the researchers administered a self-report survey to 62 females and 334 males between the ages of 12 and 17 who were incarcerated in youth correctional facilities. The occurrence of physical and sexual abuse was significantly higher for females than it was for males. Seventy three percent of females and 46.8% of males reported past physical abuse and 68.3% of females and 9.9% of males reported past sexual abuse respectively. Similar results have been found in other studies as well. A comparative analysis of male (n = 1,030) and female (n = 500) prisoners found that 4.5% of the male and 26.0% of the female inmates disclosed that they were sexually mistreated, abused, or raped as they were growing up (McClellan, Farabee, & Crouch, 1997). In addition, girls tend to experience sexual abuse at younger ages and for longer periods of time (Chesney-Lind, 2001), which can lead to more severe consequences (Tyler, Hoyt, & Whitbeck, 2000). These studies support the notion that histories of physical or sexual abuse are higher risk factors for females than males in relation to aggression.

Besides personally experiencing abuse, witnessing abuse can also influence girls' likelihood to be aggressive. Bjorkqvist and Osterman (1992) explored the influence of parents' aggressive behaviours on children's self estimates of their own aggression. One

hundred and seventy four children (85 girls; mean age 13.6 years old) completed a three-part questionnaire. Children were asked to assess how their parents' reacted when angry; how they reacted when angry; and how close of a relationship they had with their parents. Children were also requested to complete the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957) which was used as a measure of self-estimated aggressiveness. The results indicated that parents who model aggressive behaviours to their children tended to have children who displayed aggressive behaviours. Girls especially were found to copy their parent's hitting and shouting behaviour at home. Bjorkqvist and Osterman (1992) also noted that girls were impacted by both parent's aggressive tendencies while boys tended to be greater influenced by their mother's aggressive actions.

Another study by Moretti, Obsuth, Odgers and Reebye (2006) examined the impact of being exposed to maternal versus paternal violence on aggression in 63 girls and 49 boys between the ages of 13 and 18. Girls who observed their mother's aggressive behaviour towards their partners were significantly more aggressive towards friends and romantic partners. For boys, observing their father's aggressive behaviour was more influential on their own aggressive behaviour towards friends. These results indicate that some vicarious learning is taking place related to aggressiveness among female adolescents.

Besides witnessing parental violence, there are a number of other characteristics in the family environment that are linked to adolescent female aggression. For instance, delinquent adolescent females are more likely to live in conflictual and neurotic families compared with the families of delinquent males, and non-delinquent males and females (Viale-Val & Sylvester, 1993). Female offenders are shown to experience higher rates of

foster care placements and family instability than male offenders, resulting from poor parenting practices (Chamberlain& Reid, 1994), and are more likely to have two antisocial parents (Farrington, Barnes, & Lambert, 1996). As previously mentioned, girls highly value their relationships with others. As such, it seems logical that family relationships would be of the utmost importance. Pakaslahti, Spoof, Asplund-Peltoala and Keltikangas-Javin (1998) emphasize the significance of family relationships and note the increased risk for girl's aggressive behaviour if there is conflict between the mother and daughter. Hence, a negative family environment is considered a risk factor for girls' aggression differential in nature from boys' risk.

Considering a large proportion of violent girls have either experienced or witnessed abuse, some researchers have posited that female violence may function as a way to express emotional distress related to histories of victimization (Graves, Sechrist, White, & Paradise, 2005). It is possible that trauma is more strongly associated with serious offending for girls than for boys (Breslau, Davis, Andreski, & Peterson, 1991) as adolescent females have been shown to be six times more likely than adolescent males to develop trauma related psychopathology or posttraumatic stress disorder (PTSD; Giacona et al., 1995). Caufman, Feldman, Waterman and Steirner (1998) examined the incidence of PTSD in a comparison study using a sample of 96 adolescent female offenders and 93 male adolescent offenders from the California Youth Authority Ventura School. The girls had been sentenced for an array of crimes including violent crimes against people. Self-report questionnaires were administered on a voluntary basis by an onsite psychologist and included measures of socioemotionl adjustment and traumatic experiences. PTSD was established according to the Diagnostic Statistics Manual III-Revised and assessed

using the PTSD module of the Revised Psychiatric Diagnostic Interview which is a semi-structured interview consisting of 25 questions. There was a significant difference between female juvenile delinquents exhibiting current symptoms of PTSD than the equivalent male population with the rates being 48.9% and 32.3% respectively. In addition, those who suffered from PTSD also displayed higher levels of distress and lower levels of self-restraint. This study provides a link between histories of trauma with violence for female adolescent offenders.

Another study completed in Canada (Ulzen & Hamilton, 1998), noted that over 50% of the incarcerated females met criteria for PTSD. Conversely, only 15.8% of incarcerated males met criteria for PTSD while there were no diagnoses of PTSD in the matched community sample. In a sense, females who act out in violent ways may actually be suffering from PTSD as a result of their victimization rather than having a predisposition towards violence per se (Simkins & Katz, 2002).

Furthermore, there has been some support for the notion that overtly aggressive females display more internalizing symptoms than overtly aggressive males (Silverthorn & Frick, 1999). Violent adolescent females are also shown to experience inferior outcomes across multiple psychosocial domains during adulthood in comparison to violent adolescent males (Zoccolillo, 1993). Even relational aggression has been related to internalizing difficulties and externalizing problems (Crick, 1997; Grotpeter & Crick, 1996; Werner & Crick, 1999). Crick, Ostrov and Werner (2006) conducted a one-year longitudinal study involving 113 girls and 111 boys in grade 3 to grade 4 examining the relationship between physical and relational aggression and social-psychological adjustment. Physical and relational aggression was assessed using peer nominations while

social-psychological adjustment, including internal and external behaviours, was assessed using teacher reports on the teacher report form. The researchers found that relational aggression was an important indicator of social-psychological problems with children displaying both forms of aggression at higher risk for maladjustment. In addition, girls were more likely to experience difficulties with externalizing behaviours or behaviours directed outward and intended to harm others. Thus female adolescents who engage in more overtly aggressive behaviours are proposed to be at the highest risk for multiple problems and long-term negative consequences.

As mentioned previously, violence often co-occurs with internalizing symptoms, such as suicide ideation and depression, particularly among girls (Chandy, Blum, & Resnick, 1996; Silverthorn & Frick, 1999). It has been proposed that violence might function as an outlet for internalized feelings that can no longer be withheld (Graves, 2007). As girls enter early adolescence, there is a large increase in negative feelings towards friends with conflict resulting from challenges of sexual reputation, access to partners, and jealousy over partners and resources (Campbell, 2005). However, girls have been socialized away from aggression and are unsure how to handle conflict and intense negative feelings (Underwood, 2003). When girls do try to address intense feelings and act out aggressively, they are often punished for doing so by parents, peers, and others more so than boys (Stueve, O'Donnell, & Link, 2001). As a result, girls may internalize their anger and frustration until it simply breaks out (Simmons, 2002). Furthermore, girls typically begin displaying antisocial behaviour in adolescence after years of aggressive mechanisms lying dormant throughout childhood (Silverthorn & Frick, 1999).

Researchers have documented the strong influence of relationships with deviant peers on boys' and girls' aggressive behaviour (Aseltine, 1995). However, girls may be more vulnerable to peer influences, as friendships are more central to their identities, are more intense, as well as more intimate than boys' friendships (Maccoby, 1998). Aggressive girls may experience more negative consequences from peers as girls who bully are more likely to be rejected by their peer group than boys who bully (Pepler, Craig & Roberts, 1995). For girls, peer rejection is associated with escalating aggression and girls who engage in relational aggression are more likely to interact with deviant peers who are also socially aggressive (Coie, Terry, Zakriski, & Lochman, 1995; Werner & Crick, 2004).

Research suggests that the effects of adolescent peer relationships on female aggression should be considered in conjunction with early sexual maturation (Moretti et al., 2005). Caspi, Lynam, Moffitt, and Silva (1993) examined menarcheal timing and its impact on aggression and delinquency in 297 girls. These researchers found that early onset menstruation (younger than 12 years, 5 months) predicted higher self-reported delinquency at age 13. However, by age 15 those girls with early menstruation and average onset menstruation were not different in delinquent behaviour but were both more delinquent than girls who experienced late onset menarche. Girls who sexually mature early may be more inclined to interact with older boys where engagement in antisocial behaviour may be more prominent (Moretti et al, 2005). As such, early menarche and exposure to opposite gender deviant peers appear to be unique predictors of girls' antisocial behaviour (Garber, Lewinsohn, Seeley, & Brooks, 1997). As well, the age of menarche continues to decline in North America (Steiner, Dunn, & Born, 2003).

As girls sexually develop earlier, they may be at increased risk for engaging in aggressive and antisocial behaviours.

Treatment of Girls Aggression

Residential treatment centers are intensive group care settings that provide constant care in a therapeutic environment. Often treatment and educational services are integrated together as the children live at the centers away from their homes. For many, residential treatment is a last resort after other treatment attempts, such as foster boarding homes or group homes, have "failed" (Baker, Archer, & Curtis, 2005). Hence, residential treatments are the highest, most restrictive level within the child welfare system (Bates, English & Kouidou-Giles, 1997) and are among the largest and most expensive components of the mental health system for children and youth (Leon, Lyons, Uziel-Miller, Rawal, Tracy, & Williams, 2000).

Despite the extensive amount of resources required for residential treatment programs, relatively little is known regarding the expected outcomes of residential treatment (Little, Kohm, & Thompson, 2005) especially for girls (Baker et al., 2005). However, the information that has been gathered regarding the effectiveness of residential treatments is hopeful with some evidence for the benefits of residential treatment (e.g., Frensch & Cameron, 2002; Hair, 2005). These benefits tend to be short lived with the effects of treatment dissipating over time (Frensch & Cameron, 2002). For instance, a meta-analysis review of 27 studies on outcomes of residential child and youth care by Knorth, Harder, Zandberg, and Kendrick (2008) found that on average, children and youth improve in their psychosocial functioning after a period of residential care. Specifically the authors concluded that youth with externalizing behaviour problems

made more progress than youth with internalizing problems, that behaviour modification interventions achieve positive results, and that overall residential care yields better results than treatment at home with the same problematic group. However, mainly short-term outcomes were evaluated so the maintenance of successful treatment gains over time is undetermined. Similarly, a study by Lyons, Terry, Martinovich, Peterson, and Bouska (2001), concluded that residential treatment was effective at reducing high risk behaviours such as suicidality, self-mutilation, aggression towards others, as well as depression. Contrary to the review by Knorth and his colleagues (2008), Lyons et al. (2001) state that residential treatment may be somewhat more effective with PTSD and emotional disorders rather than with behavioural disorders. While the aforementioned studies provide a great deal of insight into the effectiveness of residential treatment for adolescents, no distinction was made between treatment outcome for boys and girls.

Unfortunately, with few exceptions gender analyses are typically given little status (Handwerk et al., 2006) and often, gender analyses are not completed or gender specific outcomes are not discussed in residential outcome literature (e.g., Frensch & Cameron, 2002; Hair, 2005; Knorth et al., 2008; Lyons & Romansky McCullocch, 2006; Lyons et al., 2001). Of the 34 studies on inpatient psychiatric hospitalization and child and adolescent residential treatment outcomes reviewed by Pfeiffer and Strzelecki (1990), only six looked at gender in relation to outcome. More recently, Hipwell and Loeber (2006) found only two articles out of a possible 273 that reported treatment effects for interventions designed to ameliorate disruptive behaviours in adolescent girls. However, neither of these articles examined residential treatment outcomes for adolescent girls. This highlights the difficulty in accessing information regarding the effectiveness of

interventions for disruptive and delinquent girls (Hipwell & Loeber, 2006) especially with regards to residential treatment outcome.

Given the existence of unique phenotype, developmental pathways, risk factors, and functionality of female aggression in comparison to male aggression, it is vital to determine whether these differences have an impact on treatment outcome. Unfortunately, many treatment programs for girls have been informed by male specific research (Goodkind et al., 2006; Hipwell & Loeber, 2006) with a "one-size fits all" approach being applied in the treatment of adolescent females (Graves, 2007). This singular treatment modality also exists within residential treatment programs that were originally established to serve the needs of boys with aggressive and delinquent behaviours (Kirigin, 1996). Whether these models of treatment for aggression and delinquent behaviour also cater to the needs of female adolescents with aggressive behaviours is questionable (Handwerk et al., 2006) since the etiology and functionality of female adolescent aggression tends to differ from that of males' as outlined previously. Since we know that certain treatments are more effective for various internalizing and externalizing behaviours (see Kazdin & Weis, 1998, for a review), it is also necessary to determine whether various treatment modalities are equally successful for both adolescent girls and boys.

Despite the use of male-based treatment practices for adolescent females with aggressive behaviours, there are other factors that may affect treatment outcome for aggressive girls. The fact that delinquent girls are at a heightened risk for co-morbid disorders more than delinquent males impairs treatment outcome for aggressive girls (Hipwell & Loeber, 2006). Moretti and colleagues (2005), report that during their

diagnostic interviews they routinely found that girls with aggressive behaviour problems meet criteria for more than three to four comorbid disorders in both the internalizing and externalizing domains. These multi layers of psychological disorders make treatment for adolescent girls especially difficult.

It is also possible that girls' behaviour does not come to the attention of parents, teachers, and mental health care workers until it is quite severe due to the covert nature of their aggression (Hipwell & Loeber, 2006). For instance, in a naturalistic observation study, Pepler and Craig (1995) observed peer aggression amongst approximately 250 children on the school playground. Girls were found to be just as physically aggressive towards their peers as boys; however, they were significantly more likely to hide these behaviours from watching adults. Thus, girls may be less likely than boys to be referred to mental health services before their behaviour problems have become severe (Hipwell & Loeber, 2006) which may have an impact on the efficacy of treatment for aggressive girls. On the other hand, it is possible that mothers of aggressive girls have a higher threshold for seeking and placing their daughters into intensive treatment than do mothers of aggressive boys resulting in girls not entering treatment unless they have severe behavioural problems (Baker et al., 2005). If girls are presenting with more severe behavioural problems than boys, working with aggressive girls may be more challenging for practitioners than working with aggressive boys.

A number of anecdotal accounts from practitioners in the mental health and juvenile justice system provide some insight into the experience of working with aggressive girls. Many of these studies note the difficulty in working with girls with disruptive and delinquent behaviour (Baines & Alder, 1996; Belknap et al., 1997). Girls

within these settings are often viewed as being more difficult to work with, are more verbally abusive, and have a harder time developing trusting relationships with the staff (Baines & Alder, 1996). In a quantitative study regarding a treatment foster care program for chronic juvenile offenders involving 88 children (51 male and 37 female), Chamberlain and Reid (1994) noted that females seemed to worsen over time while males were improving or at least not worsening. This speaks to the discouragement that is often felt by foster parents and therapists working with adolescent girls. In addition, it suggests that the current treatment is not as effective for girls having been designed around an understanding of male aggression.

In a comprehensive review on the effectiveness of interventions for delinquent girls undertaken by Hipwell and Loeber, (2006), it was shown that mental health and juvenile justice services in general were failing in the treatment of delinquent girls as interventions were predominantly geared towards the specific needs of delinquent males. However, with limited research in this area, the question still remains as to whether girls displaying problematic behaviours are as amenable to change as their male counterparts.

A few articles that have addressed the issue of girls within residential treatment have focused on describing the characteristics of girls involved with treatment, rather than specific treatment outcome. Studies that have examined gender differences have found that boys are described as more delinquent and aggressive (Barton, Rey, Simpson, & Denshire, 2001) while girls are reported to have more frequent histories of physical and sexual abuse (Connor, Doerfler, Toscano, Volungis & Steingard, 2004), and engage in more self-harming behaviour (Barton et al., 2001). Although a number of residential treatment studies have found boys to be more physically aggressive and displaying more

psychopathology than girls, this is not always the case. Connor and his colleagues (2004) systematically described a sample of 397 (317 were male) adolescents in a single residential treatment center over a period of 7 years. Most of the adolescents exhibited high levels of aggression with girls exhibiting higher levels of verbal aggression, physical assault, and self-injurious behaviour than boys. Furthermore, girls showed higher levels of psychopathology and were more likely than boys to self-report use of alcohol and drugs. Hussey and Guo (2002) also suggest that girls within residential treatment are likely to present with higher levels of psychopathology and behavioural problems than boys in the same program. Handwerk and colleagues (2006) further support the claim that girls present with more internalizing and externalizing symptoms and are more troubled at admission to residential treatment than boys. Since girls who become involved with residential treatment services often have extreme histories of abuse, it has been suggested that the disruptive behaviours that bring girls to residential treatment (e.g., running away, substance abuse, aggression towards family members) are a reflection of their previous victimization (Obeidallah & Earls, 1999). Yet the question still remains as to whether residential treatment is effective for adolescent girls.

The limited articles that address residential treatment outcomes for adolescent girls present inconsistent findings. Some treatment outcome studies found that girls respond better than boys (Ansari, Gouthro, Ahmad, & Steele, 1996; Handwerk et al., 2006; Hooper, Murphy, Devaney & Hultman, 2000), others have found that girls respond worse than boys (Chamberlain & Reid, 1994), while still others have found no difference in outcome by gender (Weis, Whitemarsh, & Wilson, 2005).

One study (Chamberlain & Reid, 1994) found that for their sample of 88 adolescents (37 female) in treatment foster care, not only did girls not respond well to treatment but they actually got worse over the course of the treatment program. The adolescent girls were shown to display more signs of problematic behaviours while boys either decreased or remained the same in their level of delinquent behaviour. In addition, the girls were more likely to internalize their problems and have co-morbid emotional disorders as well as engage in more attempted suicides than the boys. Handwerk et al. (2006) compared 1,302 boys and 764 girls that were admitted to a residential facility over three years. At admission, girls were determined to be more troubled than boys as they showed higher levels of internalizing and externalizing symptoms and more co-morbid disorders. Although girls were rated by staff as being more successful and showed a greater reduction in internalizing symptoms than did boys, at 6 months post-discharge there was no difference by gender with regards to behaviour. In addition, girls still displayed higher levels of internalizing symptoms than did boys at the time of the follow-up interview. Furthermore, Weis et al. (2005) evaluated the effectiveness of military-style residential treatment for 171 boys and 81 girls between the ages of 16 and 18. Similar to Handwerk et al. (2006), at admission girls showed equal levels of overt aggression and higher rates of nonviolent antisocial behaviours than boys as well as higher levels of comorbid internalizing symptoms. Treatment outcome was independent of gender with boys and girls demonstrating equivalent treatment benefits. However, girls with a history of abuse were more likely to withdraw from the program. Hence, little consistency exists amongst the residential outcome treatment literature with regards to the efficacy of treatment for adolescent girls.

Since a great deal of controversy still exists, more research needs to be done in order to determine whether residential treatment is a viable and effective treatment option for girls with disruptive behaviours. There are a number of reasons why this type of research is important. For one, residential treatment is extremely costly and the benefits of this type of intervention are still largely unknown. Two, the increasing prevalence of girls with severe behaviour problems means more adolescent females are in need of effective treatment than in previous years. Also, there are long lasting and far reaching consequences for females that are aggressive as well as for their families. Finally, since many residential treatment programs have been informed by male research, it is necessary to determine whether these same treatments are appropriate for girls given their unique pathologies and etiology of aggressive behaviours.

Child and Parent Resource Institute (CPRI) is a large, regional children's mental health center operated directly by the Ministry of Children and Youth Services. CPRI is one of the major residential treatment providers in the province of Ontario serving a total of 17 counties and encompassing rural and urban areas in southern Ontario from Windsor to Niagra to Owen Sound. The primary reason children are referred to CPRI is for treatment of problem behaviours. As a result, the programs at CPRI are behaviour based. As of yet, it is still undetermined as to whether this type of program intervention is effective for girls who are admitted to CPRI. Evaluating this treatment program provides a valuable opportunity to gain insight into the outcomes of residential treatment for youths in Southern Ontario as well as the benefits of a traditional intensive behavioural based treatment program for adolescent females with disruptive behaviour.

by the Minister of Children and Youth Services. All children are referred through one of ten local mental health single point of access agencies in order to ensure that only those youth at high-risk with extreme levels of need are accepted into the program. Typically, children at CPRI display symptoms and deficits that are on average two to three standard deviations beyond the normal population. In general, behavioural aggression is the primary reason for referral and most children have received multiple forms of professional and psychotropic intervention prior to residential assessment and treatment. A total of 225 youth (170 boys and 55 girls) entered residential treatment during the appropriate timeframe and were used in the analysis of this study.

Residential Program at CPRI

CPRI is a mental health residential treatment program licensed by the Ministry of Children and Youth. The program contains five cottage-like residencies with separate cottages for the girls. Treatment is extremely intensive consisting of multimodal clinical assessment, adaptive skill development, family and guardian involvement and coordinated discharge planning. Special education is delivered in classrooms accessible to all inpatients and school suspensions are not used which greatly enhances the client's access to learning. Active involvement of the parent or guardian is considered essential and guardians are kept informed of all interventions. Program plans are developed for each individual in order to ensure optimal treatment and are reviewed on a regular basis by all parties involved in the child's care. On average, children and youth admitted to the program stay 4 months. However, this is flexible and dependent on the specific needs of the client. Upon discharge, out-patient services are provided which can include administration of appropriate medications. The majority of children and youth in the

residence program return home every weekend constituting 28% of their 4 month stay. Child and family goals are in place for these times.

Measures of Functioning

One of the strengths of this study is the utilization of multiple points of measurement during the length of service. This allows for repeated measures to be collected before, during, and six months and two years post-discharge. The data for the proposed investigation will utilize a pre-existing data set from a larger study recently completed (St. Pierre, Leschied, Stewart, & Cullion, 2008). Presently, all data is stored under the protection of the clinical records department at CPRI so it can be accessed for clinical purposes.

Clinical Outcomes. The Brief Child and Family Phone Interview (BCFPI; Cunningham, Pettingill, & Boyle, 2006) is a structured phone interview with the child's caregiver and takes approximately thirty minutes to complete. Thus information on the client is retrieved from a presumably knowledgeable source on the child's presenting behaviour and symptoms. The BCFPI is similar to the most commonly used instrument in children's mental health, the Achenbach Child Behaviour Checklist (CBCL), but is based on Ontario norms. This instrument is particularly useful since the treatment facility is located in Ontario and operates under Ontario law. Standardized scale (T) scores provide normative data on subscale factors including several externalizing and internalizing individual functioning factors. Some examples of questions on the BCFPI include "Does (child's name) physically attack people?" and "Do you notice that (child's name) has no interest in her usual activities?" A copy of the BCFPI is included in Appendix A.

The BCFPI has a number of benefits. For one, since it is a phone interview, it is expected that the response rate will be higher as compared to a mail-out questionnaire. The response rate using the BCFPI for this study was 75%. Secondly, the BCFPI provides a standardized screening for clinical triaging and clinical profiling based on parent report. Furthermore, it is used across Ontario which generates clinical and local norms for comparison. The BCFPI has also evidenced acceptable internal consistency and test-retest reliability (Cunningham et al., 2006). Cronbach's alpha represents the average of all possible split half reliabilities which consists of correlating half of the subscale with the other half of the subscale. For both the internalizing and externalizing scales, the Cronbach's alpha scores are .88 for clinical samples (Cunningham et al., 2006), which is in the accepted range (Streiner & Norman, 1995). Content validity was ensured by selecting items that map onto the descriptions of clinical problems in the Diagnostic and Statistical Manual of the Amercian Psychiatric Association version IV (DSM-IV). Moreover, subscales on the BCFPI have been shown to highly correlate with the scales from the Ontario Child Health Study's survey diagnostic instrument demonstrating a level of concurrent validity (Cunningham et al., 2006). However, the BCFPI has not yet been used as an outcome measure within the published journal literature, although the website (www.bcfpi.com) continuously publishes the status of short-term projects using the BCFPI for outcome measurement.

Results

The primary focus of the current study was to examine the outcome of tertiary treatment for aggressive girls. Specifically, the association of gender and various treatment outcomes were explored. In order to appreciate the treatment gains of females

compared to males, it is necessary to first have an understanding of the characteristics of children accepted into CPRI prior to treatment. Thus the following section will outline the characteristics of the youth who entered into residential treatment.

Descriptive Field Study

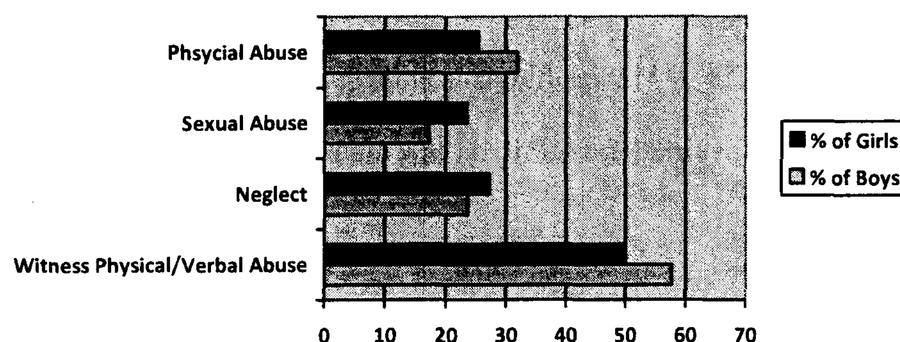
Upon entry into CPRI, participants ranged in age from 6 to 17 years old, with a mean age of 11.72 (SD = 2.55; for girls M = 13.15, SD = 2.26; for boys M = 11.26, SD = 2.46). This difference in age was statistically significant [$t(223) = 5.03$, $p < .001$] with girls entering residential treatment at a later age than boys. Overall, 40.5% of the children and youth admitted to CPRI came from single parent households (38.3% of females and 41.2% of males; x^2 (1, 200) = .124, n.s.). At discharge, 66% of both girls and boys went to live with parents or guardians with the remainder of youth living primarily in group homes (21% of both girls and boys) and foster care (13.2% of girls and 5.9% of boys).

Children admitted to CPRI experienced a great deal of intervention prior to entering residential treatment. Most youths, 80% of girls and 90.5% of boys, had at least one or two formal diagnoses at intake with the primary one being Attention Deficit Disorder. As well, nearly all of the youth in this sample, 93.8%, were on at least one type of medication including anti-psychotics, stimulants, anti-depressants, lithium, or anti-convulsants with Risperidone being the most common medication prescribed prior to admission.

Contrary to expectations, there were no significant gender differences observed with regards to having a history of maltreatment. However, a substantial number of children and youth in the sample had experienced some or multiple forms of trauma. Overall, 25.5% of females and 32% of males reported being physically abused prior to

admission [x^2 (2, 224) = 2.73, n.s.], while 23.6% of females and 17.2% of males reported a history of sexual abuse prior to residential treatment [x^2 (2, 224) = 2.03, n.s.]. Similarly, 27.3% of girls and 23.7% of boys had experienced neglect prior to treatment [x^2 (2, 224) = .371, n.s.]. Half of all girls and boys present for treatment at CPRI had witnessed some form of physical or verbal abuse (50% of girls and 57.7% of boys; x^2 (2, 222) = 1.58, n.s.). Figure 1 displays these results.

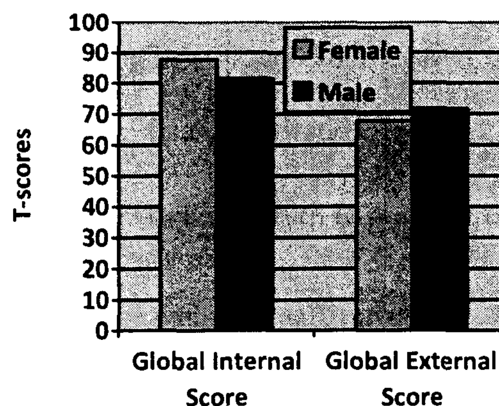
Figure 1
Percentage of girls and boys admitted to CPRI with various histories of maltreatment.



Children admitted to residential treatment display the highest level of risk behaviours in relation to children in other aspects of the children's mental health system and therefore are at the highest level of need for treatment. This can be seen in the extreme levels of symptoms displayed by youths upon intake as measured by the BCFPI. Standard T-scores of 65-70 on the BCFPI measures represent the cut-off range for clinical significance with higher scores indicative of pathology. In addition, typical child mental health clinics take referrals for children displaying T-scores of 70 and above. Comparatively, the youth admitted to CPRI had T-scores in the 80's for Externalizing behaviours demonstrating the extreme levels of crisis these children and their families were experiencing.

Upon intake, girls ($M = 87.62$, $SD = 10.68$) were displaying significantly higher levels of externalizing behaviours than were boys ($M = 81.52$, $SD = 8.68$; $t(223) = 4.27$, $p < .001$) although it is worthy to note that both groups were in the extreme ranges for externalizing symptoms. In particular, girls presented with more difficulties in areas of attention or impulsivity [$t(223) = 4.6$, $p < .001$; for girls $M = 79.2$, $SD = 10.25$; for boys $M = 73.32$, $SD = 7.47$], cooperativeness [$t(223) = 2.76$, $p = .006$; for girls $M = 79.38$, $SD = 7.6$; for boys $M = 75.9$, $SD = 8.28$], and conduct [$t(223) = 2.93$, $p = .004$; for girls $M = 101.87$, $SD = 39.1$; for boys $M = 88.78$, $SD = 24.6$]. Although both girls and boys levels of Internalizing behaviours both reached clinical significance ($M = 67.74$, $SD = 14.78$ and $M = 71.65$, $SD = 13.72$ respectively), there was no difference between gender, $t(222) = 1.79$, n.s. These results are presented in Figure 2.

Figure 2
Scores for both girls and boys on the External and Internal subscales on the BCFPI upon admission. Higher scores represent pathology with 65-70 being the clinical cut off (normal T- score mean is 50 with a standard deviation of 10).



In addition, there was no significant difference presented between girls and boys on a measure of self harming behaviours and general mood, $t(220) = 1.28$, n.s. ($M = 77$, $SD = 19.77$ for girls; $M = 80.86$, $SD = 19.09$ for boys). The high need for intensive

intervention can also be seen in the fact that nearly half of the sample had previous contact with the law. Specifically, 44% percent of the total sample of youth admitted to CPRI in 2002 (47.3% of females and 42.9% of males) had some prior involvement with law enforcement agencies with no observed gender difference, X^2 (1, 225) = .316, n.s.

Gender and Treatment Outcomes

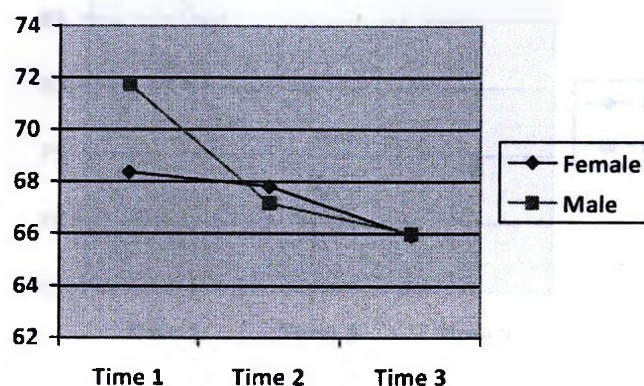
In order to track the progress of the youths admitted to CPRI, various repeated measures ANOVAs were conducted. Overall, youth showed significant gains in treatment with regards to Internalizing behaviours at both six month post discharge as well as at the two-year follow up, $F(1, 213) = 14.09, p < .001, \eta_p^2 = .10$. Externalizing behaviours also notably decreased over time as reported by parental figures on the BCFPI, $F(1, 124) = 49.23, p < .001, \eta_p^2 = .28$. A dramatic decrease of 10 points on the T-score was observed between pre-admission scores and six-months post-discharge. This reduction in disruptive behaviours was anticipated as the program targets externalizing behavioural problems. However, externalizing behaviours did increase from six-months to two years post-discharge as seen in the significant quadratic effect, $F(1, 124) = 31.86, p < .001, \eta_p^2 = .20$, although the behaviours did not return to pre-admission levels. Average T-scores for all three time points for both internalizing and externalizing behaviours are shown in Table 1. As previously mentioned, the children admitted to CPRI displayed levels of internalizing and externalizing behaviours that were in the clinical range for psychopathology. It is worthy to note that follow up scores were at the level commonly seen with referrals to outpatient services. These scores highlight the use of inpatient services to reduce crisis level symptomatology.

Table 1
BCFPI T-scores for Internalizing and Externalizing subscales at Intake, 6-months post-discharge and 2 years post-discharge

	BCFPI – Internalizing	BCFPI – Externalizing
N	124	125
Intake	M = 71.06	M = 82.73
	SD = 14.0	SD = 9.4
6 months post-discharge	M = 67.28	M = 72.97
	SD = 14.8	SD = 12.0
2 years post-discharge	M = 65.98	M = 74.18
	SD = 13.7	SD = 12.3

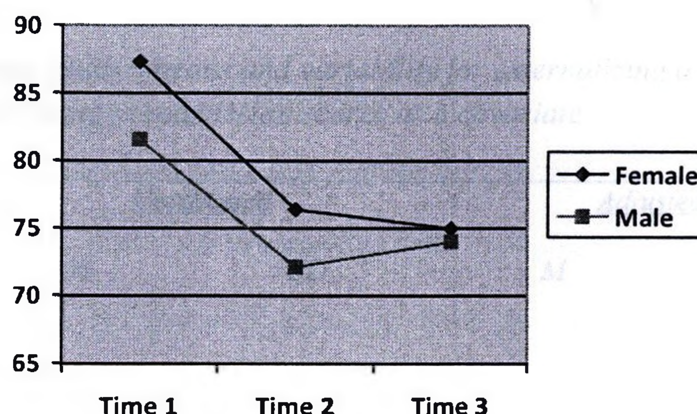
The primary purpose of the proposed study was to investigate the outcome of treatment for aggressive girls within a residential treatment setting in order to determine its effectiveness. Thus, a 2 (gender – female, male) X 3 (time of measurement – intake, six-months post-discharge, two years post-discharge) repeated measures ANOVA examined the potential for an impact of gender upon the dependent variable of the Internalizing subscale of the BCFPI over time. Although both groups experienced a reduction in scores over time, $F(1, 123) = 5.89$, $p < .017$, $\eta_p^2 = .05$, contrary to expectations, there was no main effect for gender, $F(1, 123) = .134$, n.s., indicating that females and males did not differ in their amenability to change with regards to such behaviours as anxiety and mood. These results are presented in Figure 3.

Figure 3
Scores for females and males on Internalizing subscale at Intake, 6 months and 2 years post-discharge.



A second 2 X 3 repeated measures ANOVA conducted using the global externalizing subscale as the dependent variable revealed a significant main effect for gender, $F(1, 124) = 3.88, p = .051, \eta_p^2 = .03$. An examination of the means revealed that females came into the residential program with reportedly more severe levels of externalizing behaviours ($M = 87.32, SD = 11.89$) than did males ($M = 81.58, SD = 8.34$). However, by two years post-discharge, the girls' T-scores had dropped to a similar level to the boys' T-scores ($M = 74.96, SD = 12.34$ and $M = 73.98, SD = 12.38$ respectively). These results can be seen in Figure 4.

Figure 4
Scores for females and males on Externalizing subscale at Intake, 6 months and 2 years post-discharge.



An analysis of covariance was used to assess whether girls have differing scores on the externalizing subscale at Time 2 than boys after controlling for differences between girls and boys in the preadmission scores on the externalizing subscale of the BCFPI. Results indicate that after controlling for the preadmission scores, there is not a significant difference between girls and boys on externalizing scores at Time 2 or 6 months post discharge, $F(1, 159) = .008$, n.s. Similar results were found for externalizing scores at Time 3 or 2 years post discharge in that there was no significant difference by gender after controlling for externalizing sores at Time 1, $F(1, 166) = .717$, n.s.

A similar series of ANCOVAs were run in order to determine the impact of gender on internalizing scores at both Time 2 and Time 3 after controlling for preadmission scores on the internalizing subscale of the BCFPI. No differences were observed between gender on internalizing scores at Time 2 or Time 3 after controlling for internalizing scores preadmission, $F(1, 155) = 1.109$, n.s., and $F(1, 165) = .322$, n.s. respectively. Table 2 presents the means and standard deviations for girls and boys on externalizing and internalizing scores, before and after controlling for preadmission

scores. As is evident from this table, virtually no difference between boys and girls remains after differences in preadmission scores are accounted for.

Table 2
Adjusted and unadjusted gender means and variability for externalizing and internalizing scores at Times 2 and 3 using preadmission scores as a covariate

	Unadjusted			Adjusted	
	N	*M*	*SD*	*M*	*SE*
Externalizing					
Time 2					
Males	124	73.05	11.85	73.6	1.09
Females	38	75.21	14.29	73.4	2.00
Externalizing					
Time 3					
Males	134	73.3	12.47	73.79	1.07
Females	35	73.6	14.24	71.74	2.14
Internalizing					
Time 2					
Males	122	66.89	15.14	66.48	1.29
Females	36	67.97	15.36	69.35	2.39
Internalizing					
Time 3					
Males	133	64.69	14.05	64.42	1.1
Females	35	64.74	12.54	65.79	2.14

In order to account for the extreme scores at intake, a repeated measures ANCOVA was administered using only the females. Scores on the externalizing subscale

at intake comprised the covariate. There was no significant effect for externalizing behaviours at six month and two year post discharge once scores at intake were accounted for, $F(1, 25) = 1.27$, n.s.

Discussion

This study examined the association of gender, externalizing and internalizing behaviours, and treatment outcomes in an intensive residential treatment facility for up to two years post-discharge. A descriptive examination of the participants revealed limited gender differences; there were no differences in histories of maltreatment, the number of pre-existing psychiatric diagnoses, nor differing levels of internalizing symptoms reflected in anxiety and mood. However, adolescent girls showed more aggressive and disruptive behaviours at admission than did adolescent boys. Male and female youths demonstrated equivalent treatment benefits for both internalizing and externalizing symptoms even though females presented with higher levels of disruptive behaviours at admission.

Current Findings in Relation to Previous Literature

The youth that were in tertiary care in the present sample reflected extreme levels of difficulty upon entry to CPRI. Both girls and boys in residential treatment exhibited externalizing behaviours well above the clinical range. For the present study, girls displayed significantly higher levels of externalizing behaviours than did boys at the time of intake. This finding is consistent with previous literature that suggests girls present with more behavioural problems and externalizing symptoms at admission to residential treatment relative to boys (Connor et al., 2004; Handwerk et al., 2006). As well, girls were entering residential treatment at an age two years later than their male counterparts.

This is consistent with the finding that girls' antisocial and aggressive behaviour typically begins in adolescence rather than childhood (Silverthorn & Frick, 1999). Perhaps girls were entering residential treatment later than boys simply due to the fact that they tend to display aggressive behaviors at a later age. It is also possible, as suggested by Baker et al. (2005), that mothers of aggressive females may have a higher threshold for placing their daughters into residential treatment than do mothers of aggressive males, and therefore, girls are only admitted to treatment *if* they display severe behavioural problems. Another explanation is that girls' behaviour goes unnoticed for longer periods of time due to the covert nature of their aggression (Hipwell & Loeber, 2006). Thus, by the time girls are admitted for residential treatment, they are older and their behaviours are even more severe relative to boys.

Contrary to expectations, girls did not exhibit higher levels of internalizing symptoms than boys. This was surprising given that girls tend to display higher levels of internalizing symptoms than boys in intensive treatment environments (Handwerk et al., 2006; Hussey & Guo, 2002). Although the levels of internalizing symptoms presented by both boys and girls were far above the clinical cut off, the scores were not as extreme as the levels of externalizing symptoms. CPRI is a cognitive-behaviourally-based treatment facility with treatment planning driven by client specific needs. As a result, the program primarily serves children with aggressive behavioural problems. It is possible that girls who are experiencing extreme levels of psychopathology are being treated in alternative non-residential treatment services. All children and youth referred for treatment at CPRI have to go though single point access agencies in order to ensure only those youth at extreme levels of need are accepted into the program. This process may in fact prevent

girls that are experiencing more internalizing disorders from entering residential treatment as the program focuses primarily on behavioural issues.

There were no differences between genders with regards to having a history of maltreatment. Overall, it would appear that a number of children admitted to CPRI have experienced difficult circumstances which are not impacted by gender. Maltreatment histories have been identified as risk factors for aggression for both sexes although it has been speculated as to whether it is a stronger risk factor for girls. This was not supported by the current research; females presented with higher levels of externalizing symptoms than did males yet there was no link established between levels of behavioural concerns and maltreatment histories.

Typically, behavioural treatment programs for aggressive girls have been informed by male specific research (Goodkind et al., 2006; Hipwell & Loeber, 2006) without consideration given to the etiology and functionality of female adolescent aggression. The outstanding question, therefore, is whether these models of treatment for disruptive behaviour are adequately gender-sensitive in order to provide appropriate care for aggressive adolescent females (Handwerk et al., 2006). As such, it was predicted that girls would not benefit to the same extent as boys from the cognitive behaviourally-based treatment program at CPRI.

The results of the present research did not support this hypothesis. Overall, both boys and girls responded positively to treatment for both externalizing and internalizing symptoms. Levels of aggressive and disruptive behaviours had decreased and remained lower than the pre-admission symptom level two years after treatment. Although symptoms after treatment remained at a clinical level, they were no longer at the same

level of intensity relative to admission. Thus, treatment at CPRI reduced difficult behaviours to a level at which other less-intensive mental health centers would be able to continue treatment. When the girls and boys were examined separately, the adolescent females displayed similar patterns of improvement with regards to anxiety and mood as did the adolescent boys. Thus, boys and girls demonstrated equivalent treatment benefits in reducing internalizing symptoms and remained stable for up to two years post-discharge. In addition, girls and boys showed no differences in their reduction of aggressive behaviour over time once the extreme scores at intake were taken into account.

The literature regarding the effectiveness of residential treatment for aggressive girls is limited, with inconsistent findings. Some treatment outcome studies have shown that girls actually respond better to treatment than boys (Ansari et al., 1996; Handwerk et al., 2006; Hooper et al., 2000), while others claim that girls fair worse than boys (Chamberlain & Reid, 1994) or that there is no difference in treatment outcome when gender is considered (Weis et al., 2005). The present findings are in line with past literature that has shown girls to be as amenable to change as boys within a cognitive-behavioural-based program. In a study utilizing military-style residential treatment for boys and girls, researchers determined that treatment outcomes were independent of gender (Weis et al., 2005). Together these studies lend credence to the notion that residential treatment is a viable option for girls as well as boys. The focus of the remaining discussion will relate the current findings to implications for clinical practice and policy.

Relevance for Clinical Practice

The findings of the present study suggest that aggressive girls appear to respond to a cognitive-behaviourally-based intervention. Even though female aggression may have a different etiology and function than male aggression, it is encouraging that similar programming is effective for both genders. The program was effective in reducing such behaviours as physical assault, impulsivity, and conduct disorder, as well as symptoms of anxiety, depression, and suicidal ideation.

It is possible that being gender sensitive has become a part of the culture in which treatment personnel respond to youth. This may account for why there were no gender differences observed in treatment outcomes. Service delivery workers may interact differently when dealing with boys and girls despite delivering consistent programming for both genders. Hence, although the program itself is not gender specific, the interaction between workers and residential youth may be gender sensitive. In this way the youth's gender may in fact be influencing treatment in the way that services are delivered individually, but not as a whole.

Another possibility is that the actual aggressive act is the same regardless of gender despite the function it may serve; all aggression has similar levels of impulsivity, anger, and inflicts pain of some sort. Since the actual act may be similar across gender, then the same type of cognitive-behaviourally-based intervention may be useful regardless of functionality and etiology of the aggression.

Relevance to Policy

Residential treatment is often considered a "last resort" for children with disruptive behaviours after numerous other treatments have been unsuccessful (Baker et

al., 2005). Since residential treatment centers are characterized by constant and intensive group care, they are considered the most restrictive level of service within the children's service delivery systems (Bates et al., 1997) as well as being the most expensive form of treatment within the mental health system for children and youth (Leon et al., 2000). The limited research on treatment outcomes for residential services tends to show positive gains with dissipating effects over time (Frensch & Cameron, 2002). Typically, behaviour modification programs aimed at disruptive behaviours proved effective with less progress apparent with youth displaying internalizing problems (Knorth et al., 2008). However, information with regards to maintenance of treatment gains over time is still largely unknown. The present study furthers the progression of knowledge in suggesting that maintenance of treatment gains up to two-years post-discharge is possible. In addition, this study specifically examined the effectiveness of treatment with regards to females with aggressive tendencies, which heretofore, had been largely ignored in the literature.

These findings are encouraging considering that many cognitive- behaviourally - based programs have been informed by male specific research. However, not only was the program in the present study capable of reducing disruptive behaviours with girls, it was also shown to reduce symptoms of anxiety and mood disorders. Although treatment gains remained stable two years after treatment, no further gains were made between six months post-discharge and two years post-charge. It is important to note that symptom levels at follow up were still within the clinical range with T-scores still over the clinical cutoff of 70. However, these levels were consistent to those anticipated within outpatient services for continued treatment. Thus, the present residential treatment program

provided important tertiary care thus enabling clients to access services in the community which were previously inadequate to accommodate their extreme behaviours.

It is unclear as to why further improvements were not observed within the present sample. This leads to the question as to whether enough resources are being put into the re-integration of youths into the community after living in a residential treatment facility. Although treatment gains were maintained up to two years after treatment, there were no further improvements noted. It is possible youths were not able to access appropriate follow-up services in order to continue working on their treatment goals. Perhaps the most critical point of case management then needs to be programming upon discharge. Families may need to be provided with information as to how to continue some of the cognitive behaviourally-based strategies used in residential treatment so as to provide consistent care for their child at home. As well, families may require extended support within the community to assist their child with continued care.

Future Directions and Research

This study made efforts to follow children after discharge from residential treatment in order to clarify the longer term effects related to treatment outcomes. It was determined that residential treatment was effective in reducing conduct disorders, impulsivity, anxiety and emotional disorders for female adolescents. However, the identification of residential treatment as a workable option for adolescent females with aggressive behaviours is only a first step. More detailed research needs to be done focusing on the maintenance of treatment gains. Closer attention needs to be paid to discharge planning as well as to the supports given to families of children in residential programs. It may be that if the trajectory of symptom resurgence were to continue beyond

the two year follow-up period as identified in the current study, a different appreciation regarding the effects of residential treatment would have to be made. Future research should consider the longer-term implications of residential treatment on youth once they re-enter society in order to identify potential strengths and weaknesses within the residential treatment system.

In addition, the youth in this study achieved symptom reduction that placed them at a lower rate of clinical symptom levels within the treatment provided. The question remains: what would it take for youths to reduce their aggression, anxiety and other internalizing and externalizing symptoms to levels more comparable to the general population? Perhaps the present sample of youth was not in the program long enough to fully reduce disruptive behaviours or there may not have been enough treatment options to suit each child's particular needs. Although it was shown that a cognitive behaviourally-based treatment was effective for both boys and girls in reducing aggressive behaviours, there may in fact be other methods of intervention that would be valuable alternatives. The exact combination of medication and therapeutic interventions for each program resident are relatively unknown for this sample. As such, it is difficult to ascertain what particular interventions were responsible for reducing unwanted symptoms. Future research should focus on the clinical level of services received in addition to the types of medication.

Limitations

The findings of this study should be interpreted within the context of specific limitations. This study is quasi-experimental or correlational by nature and thus no causal inferences regarding the relationship between study variables can be drawn. In addition,

there was no comparison group with which to determine treatment efficacy. Thus it is unclear as to whether the cognitive behaviourally-based programming is the most effective modality of treatment for aggressive girls and boys. Although programming within CPRI was individually constructed based upon a cognitive-behavioural intervention model, there was no way to track what particular treatments were used for each child. In other words, every child received similar types of treatment planning yet the duration, mode of delivery, gender of treatment personnel, or exact combination of treatments including various medications remains largely unknown. Future research into the treatment efficacy of residential treatment should take into account the individual programs that residents actually receive.

In addition, the present study was based on a convenience consenting sample of youths within one treatment facility in one specific geographical location. Thus the homogeneous characteristics of the present sample may limit the generalizability of the findings. Further, given that all data in the present study was collected using parent or guardian reports, there may be some reporting bias present in the results. Parents or guardians may be highly motivated to see behavioural improvements within their children after admitting them to an intensive residential treatment facility. It is recommended that future research within this area include more third party reporting that would allow for some degree of convergence of reports.

Summary

Despite the limitations of the present study, we have established that intensive residential treatment is a viable option for adolescent females who present with extreme levels of aggressive behaviours. This is encouraging given that residential treatment

represents the highest, most restrictive and expensive level of care within the child's service delivery system (Bates et al., 1997; Leon et al., 2000). The findings of this study indicate that short and long term treatment gains were possible for youth with disruptive behaviours highlighting the importance of residential treatment within the children's mental health system. Further, cognitive behaviourally-based interventions were successful in reducing behaviours such as conduct disorder, aggression, anxiety, and mood disorders. As well, gender did not moderate the relation of treatment outcome for either internalizing or externalizing symptoms. This suggests that the current program would appear to be sensitive to the specific needs of both male and female residents.

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Appendix A

The Brief Child and Family Phone Interview (BCFPI)

The Brief Child and Family Phone Interview (BCFPI)

Parent Form

Paper Version

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Canadian Centre for the Study of Children at Risk
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Michael Boyle, Ph.D.
Canadian Centre for the Study of Children at Risk
McMaster University

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Hamilton Health Sciences
2003

PARENT PHONE INTERVIEW (Shaded items are required)

CHILD	
Child's name last first	ID NUMBER
Address street	Date of Birth month day year
city province postal code	Sex Male (1) Female (2)
Phone	

AGENCY	
Agency Name	Agency dates (record 1, 2, or 3 of:) 1. referral 2. admission 3. discharge
Stage of Service (Circle 1:) Before During After	Date Form Completed month day year

INFORMANT
Informant Type (Circle 1) Parent Doctor Provider Self Teacher
Name: (Circle 1): Female Parent 1 Female Parent 2 Male Parent 1 Male Parent 2 last first
Address: street city province postal code
Phone: home work
Consent to contact for follow-up: Yes No

Start with basic concerns saying something like . . . .
"Please tell me about your concerns and any help you would like."
Record comments in box.

Move on by saying something like . . .
"Thanks, that's a good start. Now, I'd like to go on to some other questions."
Go to appropriate section, in accordance with your BCFPI protocol.

Externalizing

"I will read you examples of (other types of) problems which children sometimes have. Tell me whether each is NEVER true, SOMETIMES true, or OFTEN true of _______."

REGULATION OF ATTENTION, IMPULSIVITY AND ACTIVITY ***"Do you notice that_______ . . . ?***	never (1)	some-times (2)	often (3)	comments
Is distractible of has trouble sticking to an activity				
Fails to finish things he/she starts				
Has difficulty following directions or instructions				
Is impulsive or acts without stopping to think				
Jumps from one activity to another				
Fidgets				

COOPERATIVENESS ***"Do you notice that_______ . . . ?***	never (1)	some-times (2)	often (3)	comments
Is cranky				
Is defiant or talks back to adults				
Blames others for his/her own mistakes				
Is easily annoyed by others				
Argues a lot with adults				
Is angry and resentful				

CONDUCT ***"Do you notice that_______ . . . ?***	never (1)	some-times (2)	often (3)	comments
Steal things at home				
Destroy things belonging to others				
Engage in vandalism				
Has ____ broken into a house, building or, car				
Does _____ physically attack people				
Does _____ use weapons when fighting				

Internalizing

"I will read you examples of (other types of) problems which children sometimes have. Tell me whether each is NEVER true, SOMETIMES true, or OFTEN true of _______."

SEPARATION FROM PARENTS ***"Do you notice that_______ . . . ?***	never (1)	some-times (2)	often (3)	comments
Worries that bad things will happen to loved ones				
Worries about being separated from loved ones				
Is scared to sleep without parents nearby				
Is overly upset when leaving loved ones				
Is overly upset while away from loved ones				
Complains of feeling sick before separation				

MANAGING ANXIETY *"Do you notice that________ . . . ?*	never (1)	some-times (2)	often (3)	comments
Worries about doing better at things				
Worries about past behaviour				
Worries about doing the wrong thing				
Worries about things in the future				
Is afraid of making mistakes				
Is overly anxious to please people				

MANAGING MOOD *"Do you notice that________ . . . ?*	never (1)	some-times (2)	often (3)	comments
Has no interest in his/her activities				
Gets no pleasure from usual activities				
Has trouble enjoying him/her self				
Is not as happy as other children				
Feels hopeless				
Seems unhappy, sad, or depressed				

ASK THE NEXT 3 QUESTIONS IF THERE IS ANY CONCERN RE: POSSIBLE DEPRESSION OR SELF-HARM. IF ANY OF THE NEXT 3 ITEMS ARE ENDORSED, IMPLEMENT YOUR AGENCY'S RISK MANAGEMENT PROTOCOL.

"Do you notice that________ . . . ?	never (1)	some-times (2)	often (3)	comments
Has lost a lot of weight without trying				
Talks about hilling himself/herself				
Deliberately harms self or attempts suicide				

"Now I'll ask few questions about __________'s day to day functioning and how all of this may have affected your child. Tell me if it is "NONE", "A LITTLE", of "A LOT".

Child Functioning	none (1)	a little (2)	a lot (3)	comments
Social Participation How much has ___ withdrawn or isolated him/herself as a result of these problems?				
How much has ___ been doing things less with other kids as a result of these problems?				
How much has ___'s life become less enjoyable as a result of these problems?				
Quality of Relationships How much trouble has _____ had getting along with his/her teachers as a result of these problems?				
How much trouble has ___ had getting along with you or your partner as a result of these problems?				
How much has ___ been irritable or fighting with friends as a result of these problems?				
School Participation & Achievement How much has ___ missed school as a result of these problems?				
How much have ___'s grades gone down as a result of these problems?				

"Now, I'd like to ask about some family circumstances. Tell me if they apply "NEVER", "SOMETIMES", "OFTEN", of "ALWAYS"."

Impact on Family	never (1)	some-times (2)	often (3)	always (4)	comments
Family Activities How frequently has ______'s behaviour prevented you from taking him/her out shopping or visiting?					
How frequently has _____'s behaviour made you decide not to leave him/her with a babysitter?					
How frequently has _____'s behaviour prevented you from having friends, relatives, or neighbours to your home?					
How frequently has _____'s behaviour prevented his/her brothers or sisters from having friends, relatives, or neighbours to your home?					
Family Comfort How frequently have you quarreled with your spouse regarding ____'s behaviour?					
How frequently has _____'s hehaviour caused you to be anxious or worried about his/her chances for doing well in the future?					
How frequently have neighbours, relatives or friends expressed concerns about _____'s behaviour?					

Other Items Available for Inquiry, if applicable

The interviewer may record degree of concern, if any, regarding any of the following items. Items should be selected which seem to be of concern to the informant, or are of routine concern to the provider.

Concern	none 0	a little 1	a lot 2	comments
Mutism: Consistent failure to speak in some situations (e.g. school) but speaks comfortably in other situations (e.g. home)				

<<<< The following 6 items are 'pilot' screening items re Elective Mutism. They are optional, under review, and may be dropped or changed in future versions.>>>>

	never (1)	some-times (2)	often (3)	
In the past 2 months did _____ speak to his/her parent at home?				
In the past 2 months did _____ speak to his/her brothers or sisters at your home?				
In the past 2 months did _____ speak to other children at your home?				
In the past 2 months did _____ speak to his/her parent at school?				
In the past 2 months did _____ speak to other children at school?				
In the past 2 months did _____ speak to the teacher at school?				

Other Concerns (Continued)	none 0	a little 1	a lot 2	comments
Specific Fear: Unusually strong and persistent fear of something specific (e.g. animals, needles, heights)				
Obsessions: Recurrent thoughts or impulses cause distress or impair functioning.				
Compulsions: Repetitive behavious (e.g. hand washing, ordering, or checking) cause distress or impair functioning.				
Movement problems: recurrent movements (tics) or vocalizations cause stress or impairment				
Thought Problems: Delusions, hallucinations, paranoia, disorganized speaking or behaviour resulting in significant impairment				
Speech Difficulties: Informant felt child had significant difficulty understanding speech or speaking				
Learning Problems: Informant felt academic progress was significantly below ability. If yes, record examples in 'comment' section.				
Sleep Difficulties: Persistent difficulty falling asleep, staying asleep, awakening from anxiety-provoking nightmares, or prolonged sleep during the day which causes stress or impairment.				
Eating Problems: Not maintaining weight, significant loss of weight, fear of being overweight, and disturbed thinking about body shape or weight.				
Urination Problems: Urinates in bed or clothing several times per week				
Bowel Movement Problem: Bowel movements in inappropriate places (e.g., clothes, floor) several times over a three month period.				
Substance Use Problem: Recurrent use of alcohol or drugs leading to impaired functioning (e.g., substance-related absences, suspensions, or expulsions from school)				
Development Problems: Informant felt general development was significantly below age.				
Sexual Problems: problems with sexual behaviour or identity which cause distress or impairment				
Fire: inappropriate involvement with fire, matches, ets.				

Risk Factors

"Some of the following items may help us understand your situation and ________'s overall situation better. Different combinations of these things seem to make life easier or more difficult for many families and children."

"Here I'll ask a couple or health questions."

Health – Mom and Dad	very much 1	some-what 2	not at all 3	n/a 4	comments
Are you limited, in carrying out normal activities, at home, at a job, or in school, because of a medical condition or health problem?	1	2	3	4	
Is your spouse or partner limited, in carrying out normal activities, at home, at a job, or in school, because of a medical condition or health problem?	1	2	3	4	

"We'd like to rate whether or not you feel that drinking is a problem in your home. Please say how much you agree or disagree that . . . . . . "

Alcohol – Mom & Dad	strongly agree	agree	disagree	strongly disagree	n/a	comments
Your drinking is a source of tension or disagreement in your home.	1	2	3	4	5	
Your spouse or partner's drinking is a source of tension or disagreement in your home.	1	2	3	4	5	

"Parent's moods are also important. The following items describe some of the ways people feel at different times. During the past week, how often have you felt or behaved this way during the past week? Would you say is was "less than 1 day", "1-2 days", "3-4 days" or "5 or more days"."

Depression – Informant	less than 1 day	1-2 days	3-4 days	5 or more days	comments
You did not feel like eating; your appetite was poor.	1	2	3	4	
You had trouble keeping your mind on what you were doing.	1	2	3	4	
You felt depressed.	1	2	3	4	
Your sleep was restless.	1	2	3	4	
You felt sad.	1	2	3	4	
You could not 'get going'.	1	2	3	4	

"Now some similar questions regarding your spouse or partner. During the past week, how often has your partner . . . . ?"

Depression – Partner	less than 1 day	1-2 days	3-4 days	5 or more days	comments
seemed unable to 'get going'?	1	2	3	4	
seemed to feel sad?	1	2	3	4	
had crying spells?	1	2	3	4	

"The next statements are about families and family relationships. How much do you agree or disagree with the following statements about your family?"

Family Functioning	strongly agree	agree	disagree	strongly disagree	n/a	comments
In times of crises we can turn to each other for support.	1	2	3	4	5	
Individuals (in the family) are accepted for what they are.	1	2	3	4	5	
We express feelings to each other.	1	2	3	4	5	
We are able to make decisions about how to solve problems.	1	2	3	4	5	
We DON'T get along well together.	1	2	3	4	5	
We confide in each other.	1	2	3	4	5	

Couple Relationship	excellent	good	fair	poor	n/a	comments
Overall, how would you rate the relationship between you and your spouse or partner?	1	2	3	4	5	

"Next, a few questions regarding discipline. When _____ is being bad or doing something wrong, how often do you . . . . . .?"

Discipline Style	never	some-times	often	always	comments
Reason with ___ or explain to ____?	1	2	3	4	
Send ____ to his/her room?	1	2	3	4	
Take away ____'s privileges?	1	2	3	4	
Spank ____ with your hand?	1	2	3	4	
Spank ____ with a belt, brush, or something else?	1	2	3	4	

"We also need to know whether abuse or neglect has been part of _______'s situation."

Abuse	yes	no	don't know	comments
To your knowledge, has _______ ever been physically abused?	1	2	3	
To your knowledge, has _______ ever been sexually abused?	1	2	3	
To your knowledge, has _______ ever been neglected to that extent that seemed to impair his/her emotional or physical well being?	1	2	3	
To your knowledge, has _______ ever witnessed verbal or physical violence amongst the adults who have been involved in parenting him/her?	1	2	3	

Protective Factors

"Next, a few questions regarding some of ___'s activities and talents, and some related family characteristics."

Supervised activities Outside of regular physical education classes, did ___ take part in any sports during the past year which involved adult coaching or instruction? (if 'yes' record number and details in comments for this question). □ yes □ no □ don't know	comments
Outside of regular classes in school, did ___ take any lessons or instruction during the past year in music, dance, or other non-sport activities? (If 'yes', record number and details in comments for this question). □ yes □ no □ don't know	comments
During the past year, did ____ belong to any clubs or groups with adult leadership, such as cubs, scouts, brownies, a church group or community programs? (If 'yes', record number and details in comments for this question). □ yes □ no □ don't know	comments
Family Recreation How often have all or most of the family participated together in any recreational activities, such as walks, games, fishing, etc., in the past 6 months? □ once a week □ 2-3 times per month □ once a month □ less than once per month □ never	comments
Spiritual How often does ____ attend religious services or cultural ceremonies? □ almost every week □ less than weekly, but more often than just on holidays □ only on holidays or special occasions □ never, almost never	comments
Child-Confidant Does ____ have anyone in particular he/she talks to or confides in? (If answer is 'yes', record relationship of confidant to child and impact of sharing on child's coping in comment section for this question). □ yes ➡	**relationship**______________ **impact:**

◻ no ◻ don't know	
Parent - Confidant Do you have anyone in particular that you can talk to or confides in about yourself of issues you are concerned about? (If 'yes', record relationship of confidant to parent and impact of sharing on parent's coping in comment section for this question). ◻ yes ➡ ◻ no ◻ don't know	relationship____________ impact:

Readiness & Barriers

"The next questions ask about other services and information you may be interested in. Tell me if it is "NO", "MAYBE", or "YES".

Readiness	no (1)	maybe (2)	yes (3)	comments
Would you be interested in reading about the issues you described?				
Would you be interested in watching a videotape about the issues you have described?				
If there was a group of parents meeting together to discuss similar issues, would you be interested in attending?				
If workshops were available to learn about things you could do as a parent to help your child, would you be interested in attending?				
Is your child interested in getting help with the difficulties he/she is having?				

"Would you be willing to give us a phone number where we can reach you to get updates on these items, so we can track how ____ is doing while waiting for, during, and after service?" (IF YES, ENTER PHONE NUMBER NOW) ____________________

"Let me ask about some things that may affect your ability to work with us. We are located ________________ (describe location client would attend).

Do you know where that is?" **Yes/No**

Barriers	none (1)	a little (2)	a lot, but can participate (3)	will prevent participation (4)	n/a (5)	comments
How much of a problem would it be for you to get to the Centre? Would that stop you from attending?						
Would parking costs be difficult for you? Would that stop you from attending?						
Would it be problem if services were only during the day? Would that stop you from attending?						
Would it be a problem if services were only during the evening? Would that stop you from attending?						

Barriers	none (1)	a little (2)	a lot, but can participate (3)	will prevent participation (4)	n/a (5)	comments
How much of a problem would babysitting be if you were to come to the Centre? *Would that stop you from attending?*						
Would it be difficult for you to read and fill in a questionnaire? Would that stop you from attending?						

Readiness Wrap Up:

"If you would like, we will send you a list of books, videotapes, talks and workshops which you might be interested in. What is the best way to get it to you?"

____

"Do you have a fax?" ________________________

"Do you have an email address?" ________________

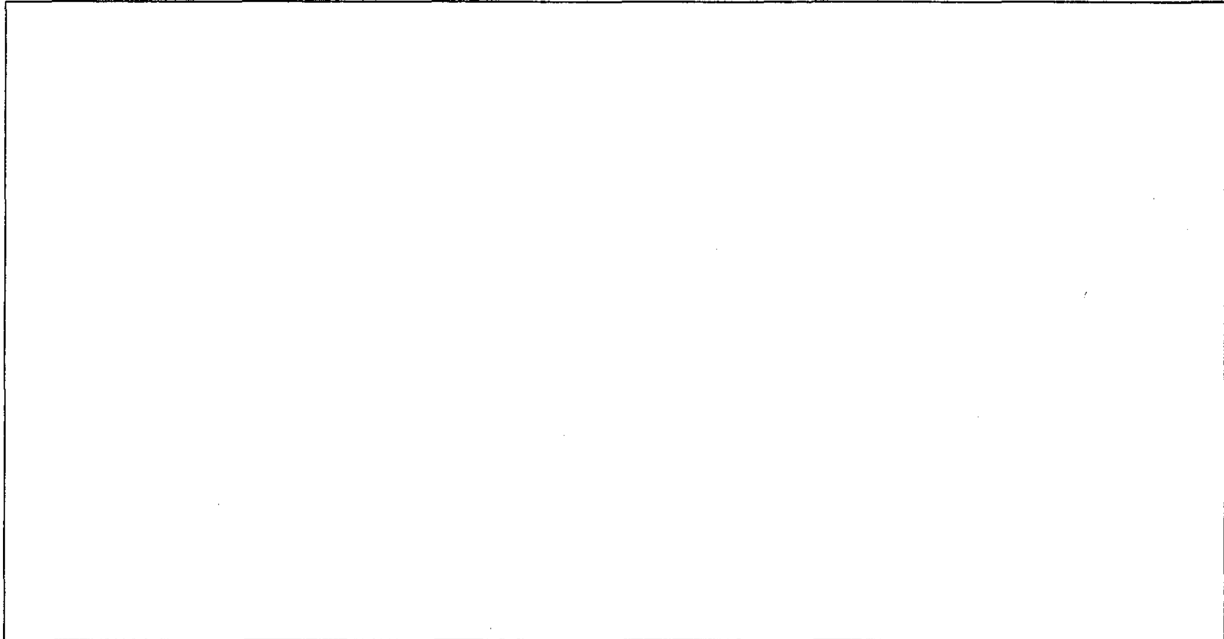
Demographics

"Finally, I'd like to ask a few basic background questions."

Are you a single parent, or do you live with a spouse or partner?		
1. single parent 2. partner or spouse		
What language is most often used in your home?		
1. English 2. French 3. Italian 4. Polish 5. Punjabi 6. Chinese 7. German 8. Portuguese	9. Ukrainian 10. Spanish 11. Dutch 12. Greek 13. Hungarian 14. Croatian 15. Uru 16. Khmer (Cambodian)	17. Serbian 18. Slovenian 19. Serbo-Croatian 20. Other ____________ (please specify) 21. Ojibway 22. Cree 23. Ojicree
What is the highest level of education you've completed?		
1. no schooling 2. some elementary 3. completed elementary 4. some secondary or high school 5. completed secondary or high school	6. some Community College 7. completed Community College 8. some University 9. completed University	
What is the highest level of education your spouse or partner has completed?		
1. no schooling 2. some elementary 3. completed elementary 4. some secondary or high school 5. completed secondary or high school	6. some Community College 7. completed Community College 8. some University 9. completed University	
Could you tell me which of the following describes your total family income over the past year?		
1. $0-$9,999 2. $10,000-$14,999 3. $15,000-$19,999	4. $20,000-$29,999 5. $30,000-$39,999 6. $40,000-$49,000	7. $50,000-59,999 8. Greater than $60,000
(Optional) What is the primary source of your family income?		
1. Employment Insurance 2. Disability	4. Employment 5. Other	

3. Social Assistance

"Have we missed anything important?"



"Thank you."

Inform Client of next steps in your organization's service delivery process.