CHAPTER THREE

The Maltreatment and Adolescent Pathways (MAP) Project Feasibility Study: Are Youth Involved with Child Protection Services a Feasible Sub-population for Study?

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2 See Appendix for names of Children's Aid Society Advisory Board.

INTRODUCTION

> Human destructiveness is a problem so pressing that all others pale beside it. (Twemlow 1995 p. 545)
>
> Children everywhere have basic human rights: the right to survival; to develop to the fullest; to protection from harmful influences, abuse and exploitation; and to participate fully in family, cultural and social life. (UNICEF 2003 p. 10)

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> We need to move from the notion of "child welfare" to the "welfare of children." This is a responsibility we all share as members of a society. (Underwood, Lewis and Thomson 2010 p. 6)

In Canada, child maltreatment is a pervasive, high priority issue. The Canadian Incidence Study of Reported Child Abuse and Neglect (Trocmé et al. 2005) provides an estimate of 22 per 1000 Canadian children at serious risk of physical and emotional harm, where only a small number of these children receive services from the system mandated to support and protect them from further assault. Those who come to be identified by the Canadian child protection services (CPS) or child welfare system are subject to system impacts. This may include multiple changes in caregivers, residences, and CPS caseworkers, the provision of services and exposure to new development opportunities, and a sustained financial commitment to those who are deemed wards of the provincial government or state, variably, but generally, supported to age 18. While CPS system involvement is intended to prioritize child safety, it also seeks to enhance caregiver and residential permanency and youth well-being in relationship situations that are often complex.

The developmental period of adolescence is an important window of risk to health, but also an opportunity for positive change (Wekerle, Waechter, Leung and Leonard 2007). In meeting with normative stress (e.g. entry to the work force, learning to drive, developing relationships, romantic involvement etc.), all adolescents are presented with opportunities for resilience and revision of their understanding of themselves and of others. We develop mainly in a relational context, and CPS youth have experienced a significant relational insult to their development and have often had to contend with loss and multiple opportunities for an attachment relationship, where there is no promise at the outset for sustained, long-term commitment.

The developing brain of the adolescent allows for increased capacity in abstract or conceptual thinking (i.e. what is a healthy relationship?) that can facilitate the imagining of consequences, taking of different perspectives, and developing alternate problem-solving scenarios. In adolescence, there is the youth's natural interest in new learning opportunities and, thus, the potential for a lasting impact of positive, guided personal and social learning. As with the early years, adolescence is an important developmental window with brain growth and refinement reflecting the cognitive and emotional needs to date. However, with exposure to and engagement in new developmental

challenges, opportunities for shifting stylistic response sets and learning more adaptive, healthful behaviours exist.

Considering the brain-specific issues and the issues that pose a challenge to maltreated youth, adolescence can be thought of as a "developmental crossroad" among this population. This crossroad is a period in which a window of opportunity exists for effective intervention timed with a natural interest among adolescents to learn about relationships, emotions, and ways of processing information or understanding their world (Wekerle, Waechter, Leung and Leonard 2007; Wekerle et al. 2009). A general truism is if you use it, you don't lose it, and this may translate into learning a new way of relating (i.e. non-maltreating) becoming a preferred way of relating. Experiences and opportunities seem especially critical for adolescence and one way for us to understand the normative teen behaviours that are risky.

The impact of maltreatment often exceeds the chronological duration of the maltreatment episode. For the adolescent, maltreatment, as an event, may have ceased, but it may live actively in terms of its negative affective burden or "load," which impacts managing emotions and thinking clearly and proactively. Research has established a robust link between childhood maltreatment and impaired functioning in adolescence and adulthood, most notably in the mood/anxiety and aggression domains (e.g. Gilbert et al. 2009; Wekerle, MacMillan, Leung and Jamieson 2008). Mental health seems to be a key issue for maltreated teens. For example, an Ontario case file review study showed that 22% of Crown Wards (i.e. youth for whom the government had assumed parental rights) had psychiatric diagnoses; and one-third of these youth had two or more such diagnoses (Burge 2007). Also, for women, this extends into increased need of care, such as a greater number of emergency room visits, hospitalizations, and use of a variety of specialists. For example, an Ontario survey of community residents 15 years of age and older found that women with physical and sexual abuse histories had at least double the self-reported health care and ambulatory costs of women with no self-reported maltreatment history (Tang et al. 2006). In this study, it is noted that, while 27.5% of participants endorsed a maltreatment background, less than 10% of abused women reported a historical involvement with child protection services. Thus, CPS can be expected to interact with a number of co-interventionists in supporting the best interests of the child in such areas as education, primary care, mental health, substance abuse, and justice, including the management

of maltreatment-related chronic diseases such as obesity, hypertension, and asthma (MacMillan 2010; Torres and Gushurst 2009).

Although child maltreatment may seem to be a child issue and a CPS issue, it really is a family and community issue of foundational importance. How are we setting up maltreated youth for success in living a normal (expectable) life? This is a significant policy issue. The federal government is concerned with maternal and child health (and, therefore, illness prevention), child and youth mental health, special populations who are at high risk for poor outcomes, being relatively under-served within child welfare (i.e. adolescents versus younger children; adolescents without formal status versus Crown Ward youth; youth transitioning from child services [18 years and under] to adult services [older than 18 years]). Further, some youth within child welfare are highly vulnerable by virtue of their contexts (i.e. Aboriginal youth, engaged in violent dating relationships, addicted youth, homeless youth, youth with intellectual disability [especially mild to moderate]).

Importantly, provincial governments are directly responsible for those youth for whom the government has become their legal guardian. As such, they take on the parental role, with the CPS agency representing them. This responsibility is greater when parental rights have been officially terminated (as is the case in Ontario, where the 2010-2011 fiscal year budget for its 53 CPS agencies is $1.4 billion; for a review of Ontario's child welfare system, see Underwood, Lewis and Thomson 2010). This is the knowledge base and needs context into which the MAP Project was located.

For all teens, and child welfare teens in particular, setting adaptive life goals (e.g. graduating school, getting a full-time job, residential safety and stability, healthy lifestyle) remains one important route towards off-setting physical and mental health limitations. For example, an Ontario survey of community residents found that remaining in school was linked with a lower probability of adulthood externalizing disorders (MacMillan et al. 2006). Unfortunately, very little is known about the mental health and long-term outcomes of youth involved in the child welfare system. Prospective, longitudinal studies are one of the gaps in child welfare research that the MAP Project attempts to address.

The importance of daily living routines such as good nutrition, adequate sleep, adaptive coping with stress, and balanced work and leisure activities cannot be over-stated as part of living a normal life. CPS agencies may be burdened with crisis responding and, with adolescents, the focus may become residential stability, as youth exercise

their independent learning motives. Adolescents, normatively, provide many challenges to adults as they move through their developmental task of establishing independent thought and behavior (e.g. Smetana 2005). Such activities during identity formation may challenge established rules and routines and disrupt functioning in the normative youth (e.g. sleep onset, quality of sleep). However, the establishment of these daily living routines may be equally important for mental health promotion (Lund, Reider, Whiting and Prichard 2010). These routines establish a protection focus and structure for moving through the day. For maltreated youth, developmentally, their task is to be self-reliant in daily care, despite a possible lack of adequate models for such self-care, self-structuring, and self-reinforcement.

The MAP Longitudinal Study considers daily living issues by measuring such key areas as sleep, exercise, leisure activities, and engagement with primary healthcare. For example, preliminary data from the 3-year time point in the MAP indicates that 55% of the youth (n=96, mean age=19.4 [SD=.88]) reported having a passport, 94% reported having a social insurance number card, 94% reported having a health card, and 88% reported having a birth certificate. These relatively high percentages were offset by employment data. Only 31% of the youth reported having at least one job (whether part-time or full-time), and the average monthly income from all combined sources was $1,132. More specific to health care, 86% of the youth confirmed having a doctor and 70% confirmed having a dentist that they visited regularly. Almost one-fifth (18%) said they had been diagnosed with a psychological/psychiatric disorder and 16% said they had been prescribed medication to treat that disorder.

Another unfortunate daily living experience may be school bullying. For the CPS youth, bullying engages them in practising the victimizer and victim roles, since youth who bully are very often also bullied (e.g. Mohapatra et al. 2010) and are also at higher risk for teen dating violence (e.g. Wekerle et al. 2009a; for perspectives on the victim-victimizer dynamic, see Twemlow 1995; Wekerle and Wolfe 1999).

Preliminary analysis of data collected at the MAP 3-year testing time point indicates that in order to support their developmental transition to young adulthood and independent living, it is crucial that we have a thorough understanding of the issues that CPS-involved teens are facing, including describing them with respect to the broader population, looking for within sub-population differences, and testing for constructs that help explain the maltreatment-impairment and maltreatment-resilience relationships. It is recognized that, normatively,

modern-day adolescents are developing over a number of years in an adolescent-early adulthood period, called the "emerging adulthood," defined at its broadest range as ages 15 to 30 (Arnett 2000; Goldstein and Wekerle 2008; Wekerle, Waechter, Leung and Leonard 2007). With this in mind, CPS-involved youth appear to be a high priority sub-population to consider, particularly as they move from CPS support to potentially an end of foster home involvement, financial assistance, and caseworker-facilitated negotiation of external resources, such as housing, career/work, education, and health care. The available research shows that youth who remain in care have better outcomes, including greater access to mental health services (Courtney and Dworsky 2005).

The MAP project, which partnered with large Ontario CPS agencies, was designed to fill some of the knowledge gaps that currently exist regarding the transition of child welfare-involved youth through the critical period of adolescence. CPS youth are a substantial sub-population. Ontario's Children's Aid Societies (CAS) – with The Children's Aid Society of Toronto (CAST) being the largest – have about 20,000 children in care. About 40% of these are teens (age 13-17 years), with 1,500 in the process of being transitioned out of CPS care (OACAS 2006).

This chapter is based on our experience in conducting the MAP Feasibility Study from 2002 to 2004. The MAP Project includes studies that developed in a stepwise fashion. The project is guided by a MAP Advisory Board comprised of researchers and nominated representatives from every region governed within participating CPS agencies, including supervisors and front-line workers. A key consideration for CPS agency participation was investment in the research process and a strong valuing of evidence-informed practice (Wekerle, Aekins and Braun 2009; also see the MAP-KT website: http://www2.oacas.org/home.php). Although reseachers collaborating with CPS providers is not a new idea, the MAP started with a Feasibility Study that addressed key research tasks such as questionnaire-building, setting the clinical and ethics protocols, pilot testing the procedures with at-risk youth, vetting the questionnaire with content specialists (e.g. Lesbian Gay Bisexual Transsexual [LGBT] advisors; youth teams; CPS agency legal representatives) and incorporating youth feedback, testing youth recruitment and retention strategies, and assessing target recruitment rates.

The MAP Longitudinal Study addresses the well-being of CAS youth over time on key dimensions of mental health, substance use, risky sexual practices, and dating violence. Several theoretically relevant constructs

are also examined to assess the maltreatment and outcomes relationship. The MAP Knowledge Translation (KT) Study has approached dissemination of MAP findings from an on-going perspective, from study inception to results dissemination (e.g. Leung, Wekerle, Waechter, Egelstaff and Bennett in press). Dissemination proceeds along the MAP key construct areas, which are broadened to include special populations (i.e. socio-economically disadvantaged, homeless/street-involved youth, and Aboriginal populations). (For a trial viewing of the MAP KT vehicle on the Ontario Association of Children's Aid Societies' member website, see www2.oacas.org; enter your full email address as the username; enter "mapguesttest" as the password, giving you 24-hour access to the developing MAP KT website).

The studies in the MAP project have been approved by the participating CAS agencies' internal research review committees, as well as university and hospital ethics boards. All members of the MAP research team sign confidentiality agreements with the participating CPS agencies. The host institution of the principal investigator reviews the progress of the MAP on an annual basis, requesting specific information regarding participant involvement and dropout rates. Any new procedures to the MAP must receive additional university approval. A primary issue for the MAP was the maintenance of anonymity for all participants. This was based on the balance of costs to obtaining accurate youth information, the need to ask sensitive questions, and the potential clinical significance of the MAP.

RESEARCH SUMMARY

Historically, maltreatment research was criticized for its less-than-rigorous methodology, which typifies the early stages of any area of inquiry (Miller-Perrin and Perrin 1999). With the advent of epidemiological work, such as the community-based Ontario Child Health Study (Statistics Canada 2004), the Ontario Health Supplement (MacMillan et al. 1997), and the child protection services system-based Canadian Incidence Study cycles (e.g. Trocmé et al. 2005), the rigour of epidemiological inquiry has been applied to childhood maltreatment and adult mental health (MacMillan et al. 1997), caregiver vulnerability factors and substantiation (Wekerle, Wall, Leung, and Trocmé, 2007), as well as a range of child outcomes. (For a comprehensive listing of CIS-related reports, see http://www.cecw-cepb.ca/pubs/infosheets_cis_e.html).

Participants

An important aspect of epidemiological research is the selection of a sample that accurately represents the population in question. We strived to obtain a representative sample of CPS-involved youth by randomly selecting teens from the active caseload of three large urban Ontario Children's Aid Societies. Youth across all status groups (e.g. community family, voluntary care, society ward, crown ward) except adoption were included in the random selection.

After random selection, each youth's caseworker determined eligibility for involvement in the MAP self-report study based on the youth's level of functioning (i.e. youth with severe developmental delay; psychiatric and residential crisis status; who could not be located; and who were in secure custody were screened out of the study). Approximately 55% of the randomly-selected youth were considered ineligible for involvement in the study for a variety of reasons as listed above, but just over half of these were inelgible because the youth's casefile had been closed from the time lists of all active youth casefiles were generated to each caseworker following up on randomly selected youth names.

This suggests that the data from the MAP study represents only those youth whose casefiles were open six months or longer. The MAP study does not capture the short-term open and closed cases. Furthermore, given the involvement of only urban CAS agencies in the MAP study, the results are not generalizable to rural or semi-rural Ontario youth.

Procedures

Each identified MAP Advisory Board member takes on a leadership role within his/her agency to ensure that caseworkers are trained and know how to approach each randomly selected youth about the opportunity of research involvement. A brief, standard script is provided where the caseworker clearly states that the MAP is separate from CPS services and in no way bolsters or diminishes services.

The MAP is clearly identified as voluntary and, if interested, telephone consent is obtained for a MAP Research Team member to follow up with the youth. The caseworker provides contact information to the MAP Research Team, who phones and, as appropriate, meets with the youth and/or their guardians. If the youth is under age 16, legal guardian consent is obtained. As youth age between testing time points in the study, consent is re-obtained for those who become 16 years of age. Consent establishes agreement to longitudinal assessment,

other researchers to use the MAP database who were not among original grant-named investigators, and consent for linkage to the child welfare administrative database. In this way, the MAP study growth in data richness and utility to the child welfare field is ensured.

Our search of peer-reviewed publications indicates a substantial lack of maltreatment scholarship (see Table 3.1). Although the MAP is not a public database, it is a managed database, allowing other researchers to access the information for specific research questions that may not have been fully anticipated at study outset.

Table 3.1. PsycInfo Peer-Reviewed Youth and Child-Welfare Focussed Articles

	Number of Peer-reviewed Articles	
Child Welfare Researcher-Based Themes of Investigation in the MAP Research Project	***General Youth Population***	***Child Welfare****
Mental Health - Anxiety	2382	9
Mental Health - Depression	3977	19
Mental Health - PTSD	492	4
Self-harm / Suicide	1761	18
Self-esteem / Self-confidence	1634	10
Substance (Drug) Use	3228	25
Alcohol Use	3386	21
Dating Violence	167	2
Legal Issues	2468	43
Socioeconomic Status / Poverty	1269	9
Sexual Health / Sexual Behaviour	820	5
Physical / Medical Health	196	1

* Child Welfare searches included the terms “child*” & “welfare” & “abuse” & “neglect” and “maltreat*”. All PsycInfo searches included “youth” and “adolescen*” in the search term.

In the MAP, youth complete an initial testing to provide a baseline self-report measure of key variables (i.e. child maltreatment history, mental health, substance use, and dating violence) with follow-up assessments every six months over two years. We continue to extend the follow-up assessments as funding allows and, currently, have data on the youth transitioning to early adulthood at a 3-year testing point.

It is important to note that the MAP study collects limited data on youth prior to their involvement with CPS. Any data that is collected (i.e. maltreatment history, demographics, home and school information,

information on biological parents) is self-report and retrospective in nature. Although self-report questionnaires in child maltreatment research have limitations (Brown, Cohen, Johnson and Salzinger 1998), others have outlined the importance of asking youth about self-reported maltreatment history for theory development in psychiatric disorders (Putnam, Liss and Landsverk 1996).

The MAP Feasibility Study recruitment rate was just under 70% (88 of 130 eligible youth sampled from active CPS case files), including an 89% retention rate (48 of 54 youth contacted at time of feasibility study end) of participating youth at the 6-month follow-up. The feasibility sample was evenly split on gender (51% female), and the majority of the participating youth were Crown Wards (62%). Regarding ethnicity, 31% identified themselves as being White, and 26% reported being Black; 28% said they were of two or more ethnicities. The eligible youth who refused participation were more likely to be male and from the community family CPS care category compared to eligible youth who agreed to participate. Thus, the MAP generalizes well to the population of Crown Wards and youth with in-care status. Although about half the MAP sample consisted of males, the results may not generalize as well to the population of CPS males. In general, females are more likely to volunteer for research participation than males (e.g. Lewis, Winstead and Derlega 1989). In a MAP subsample, in terms of participating versus non-participating youth, there were no significant differences on caseworker ratings of maltreatment types and severity or global functioning of the youth; two-week test-retest reliability on all measures included in the MAP was adequate (see Wekerle et al. 2009 for further details).

Youth are given options as to where to complete the MAP testing. Most assessments are conducted in privacy with the youth at their places of residence. Youth are paid $28 per testing session, are given refreshments, and are offered breaks during the average two hours of testing. Any verbal disclosures of maltreatment by the youth are reported to the caseworker and, if unknown to the caseworker, to CPS intake. Reports could also be initiated by MAP testers' observations within youth's residences. To date, no new mandatory reports were made by MAP staff to caseworkers.

To capture risky adolescent behaviours often associated with the transition to adulthood, youth between the ages of 14 and 17 were targeted for initial recruitment in the study. This allowed for a MAP follow-up of two years to late adolescence and early adulthood (i.e. 16 to 19 years).

As the MAP Project exclusively collects data from CAS youth, comparison to normative age-matched groups remains an issue. Norm-referenced tests provide assistance in identifying when MAP youth are scoring outside the expected ranges, and many tests have derived clinical cut-offs. In some cases comparisons are made to published comparison groups, but the limitations of these comparisons should be considered. MAP youth are from a large urban area in Ontario, making urban Ontario youth normal population estimates most relevant. By collaborating with researchers involved in the Ontario Student Drug Use and Health Survey (OSDUHS, http://www.camh.net/Research/osdus.html), it has become possible to compare rates of substance use, mental health, school and family involvement, medication, delinquency, and other issues between MAP CPS youth and youth in the general Ontario population, as we use the OSDUHS questionnaire at the one-year and two-year follow-up testings. Further, in the 2005, 2007, and 2009 cycles of the provincial OSDUHS, a question on lifetime CAS involvement was added, allowing for a specific comparison of the MAP youth to youth from the OSDUHS who have been involved with CAS versus those who have never been involved with CAS (Mohapatra et al. 2010). It is important for on-going population surveys to include maltreatment history and/or child welfare involvement questions to gain much-needed information about youth characteristics in the context of maltreatment.

Measuring Maltreatment Experiences

Measuring and defining maltreatment is an issue with which the research and practice fields continue to struggle. The axioms from the medical field of "do no harm" (Smith 2005) and from the social services "the best interests of the child" (Vandergrift 2009) are general guiding ethical principles for research and clinical practice. The ethics of asking youth to report maltreatment experiences have been discussed in the literature. This includes the ethics of not asking about abuse and neglect when it may be a significant explanatory variable of adjustment (for a discussion, see Becker-Blease and Freyd 2006). The information that forms a basis for screening, assessment, prevention, and treatment needs to include multiple data sources, and the adolescent victim is one important "voice" to take into account.

Researchers must determine whether it is better to avoid asking about child abuse and neglect, thereby averting the duty to follow up on the potential presence of maltreatment, or ask in an effort to gather

data and be better equipped to provide service within the context of informed consent. For example, red-flagged survey items or pre-screener questionnaires could be used in research studies. Yet despite these questions, it is crucial for all studies in this field to have an established protocol, since maltreatment may be disclosed in any context. If a substantial number of youth in the MAP project indicated current and ongoing maltreatment, the viability of an anonymous survey that asks youth about their lifetime maltreatment experiences would need to be questioned.

The MAP uses two maltreatment questionnaires: the *Revised Childhood Trauma Questionnaire* (R-CTQ; Bernstein 2003) and the *Childhood Experiences of Violence Questionnaire* (CEVQ; Walsh et al. 2008). On the CEVQ, the number of MAP youth who identify that a maltreatment experience is currently happening to them is very small (i.e. 4 youth of 388). It is statistically difficult to imagine that a sample of CPS-involved youth would have absolutely no maltreatment activities from time to time given their interactions with other maltreated youth (and those persons connected to them potentially), as well as some potential interaction with formerly established abusive or at-risk persons. Finally, maltreated youth are a vulnerable sample in terms of safety skills and, perhaps, have developed a tolerance toward poor treatment.

These youth responses do raise a currently unexplored issue: how are CPS-involved youth interacting with parents during formal or informal visits? Are there any incidents of abuse and failure to protect? Are there any unwelcome experiences occurring in the context of the group home? It may be important for caseworkers to query youth about maltreatment experiences at the level of behavioural indicators (been hit, been punched, etc.) during mandated visits (in Ontario, every 90 days the caseworker is mandated to do an in-person visit with the youth). It may be a useful approach if youth complete "new" or "current" maltreatment information via checklist, perhaps in the context of a range of questions on personal safety.

It is important to note that the CEVQ does follow up on any endorsement of a maltreatment item by questioning whether any child protection action specifically was taken or whether the youth told anyone, including his/her caseworker. However, the main theme of this aspect of the data is to highlight that, with the vast majority of the MAP sample, youth are reporting that they are being protected from maltreatment, at least at initial testing.

Measuring the Impact of Study Involvement on CPS Youth

To assess the impact of completing sensitive MAP questionnaires on CPS-youth distress, we instituted a pre- and post-feelings questionnaire, which was developed by the MAP Research Team. This "reactivity to research" questionnaire allows for an examination of youth perceptions of their affective state prior to and after completing the MAP questionnaire package.

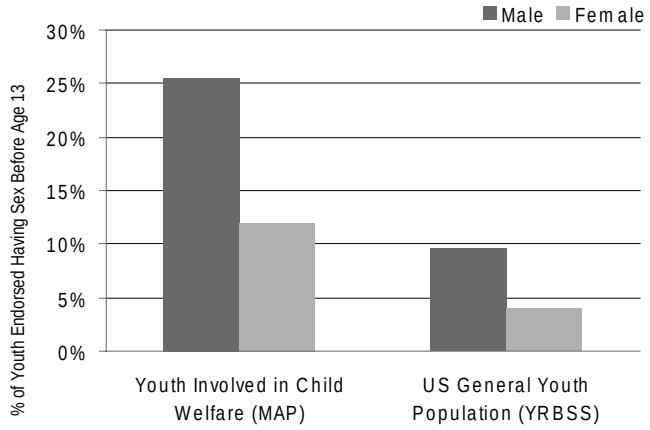
An analysis of responses to these items, reported previously (see Waechter et al. 2009), indicates that the youth do experience some minor stress and discomfort in completing the MAP questionnaire package. For instance, youth reported being significantly less relaxed after, as opposed to prior to, completing the MAP questionnaires. The youth also reported feeling less happy, having a lower energy level, and having a more difficult time breathing after, as opposed to prior to, completing the MAP questionnaires. Numerically, all of the statistically significant changes in youth ratings were small and none of the responses fell below the halfway mark on the 1–6 rating scale, indicating the youth did not drop to a low affective state (Waechter et al. 2009). Finally, CAS youth participants report that the MAP study is a relevant enterprise that is important to them, and they are just as interested in participating in the MAP study after completing the questionnaire package as before completing it. This may help to explain the strong retention rates (82% to 90%) achieved across follow-up testing timepoints in the MAP study.

Lessons Learned from the MAP

The preliminary findings of the MAP study point to a challenging existence for youth in terms of basic residential stability, perceptions of physical wellness, mental health, and close relationships. Youth seem to be willing reporters of their functioning and they identify a number of areas within which child welfare practice may need to strategize more systematically in terms of prevention.

Nearly 50% of MAP youth reported changing schools three or more times in the past five years, which is much higher than the general population of Ontario youth based on the OSDHUS questionnaire (i.e. less than 10%). Between 4-5% of MAP youth rated their physical health as poor, and 20-30% indicated that they did not exercise or participate in sports in the prior week. Thus, the majority of MAP youth feel that their health is adequate and that they are active; however, there is a minority that may need to be more actively engaged in their physical welfare and in developing self-care and a healthy lifestyle, including sexual health.

To assess MAP youth functioning, we first examined how they are negotiating the adolescent task of dating. The Centers for Disease Control and Prevention (CDC) collect data from high school youth across the United States every two years on a range of health issues. For the past few cycles, the *Youth Risk Behavior Surveillance Survey* (YRBSS) has queried intentional physical harm from a partner. This survey has found no significant gender differences, with rates hovering around 10% (Centers for Disease Control and Prevention 2008). MAP youth report an average rate of about about 20% for females. Although caution must be taken in comparing MAP youth dating violence rates to US youth rates, a 20% dating violence rate among MAP youth is concerning regardless of population comparisons. The majority of MAP youth report some item of psychological, physical, and sexual dating violence, with the frequency descending in that order. Using the item closest to the YRBSS, MAP females are 66% more likely and males are 76% more likely than US youth to report physical victimization in a dating relationship. In conjunction with physical aggression, sexual intercourse with a partner is also substantially elevated for MAP youth in comparison to US youth (as measured by the YRBSS), with a nearly three-fold greater likelihood of sex before age 13 (26% of MAP males; 12% of MAP females)(see Figure 3.1).



* Relative Risk = 2.66 (95% CI = 1.87-3.78) **Relative Risk=2.95 (95% CI=1.78-4.90)

Figure 3.1. Percentage of youth who had sexual intercourse for the first time before age 13 years.

It is unknown as to whether sexual behaviours are a function of pseudo-maturity, lowered level of adult monitoring and guidance, or poor sexual negotiation skills. When asked about their first episode of sexual intercourse with a boyfriend/girlfriend, nearly 50% of MAP youth indicated that it was either unwanted or that they were unsure if they indeed wanted to have sex. Thus, the transition to young adulthood may need to be an area of direct inquiry and health education for most child welfare youth, and a substantial minority of youth may require direct skills training in negotiating sexual behaviours and practising safe sex (i.e. more than pregnancy prevention) (Leslie 2007).

In the area of substance use, MAP youth are most distinguishable from their non CPS-involved counterparts in their use of illicit drugs, rather than alcohol. CPS-involved female teens appear to be a high-risk group (Wekerle et al. 2009). When compared to the Ontario non CPS-involved sample, MAP females reported a greater lifetime use of other drugs and are more than three times more likely to have frequently used other drugs (i.e. other than alcohol, cigarettes, cannabis) in the past six months (see Figure 3.2; Wekerle, Leung, Waechter, and Chen 2010).

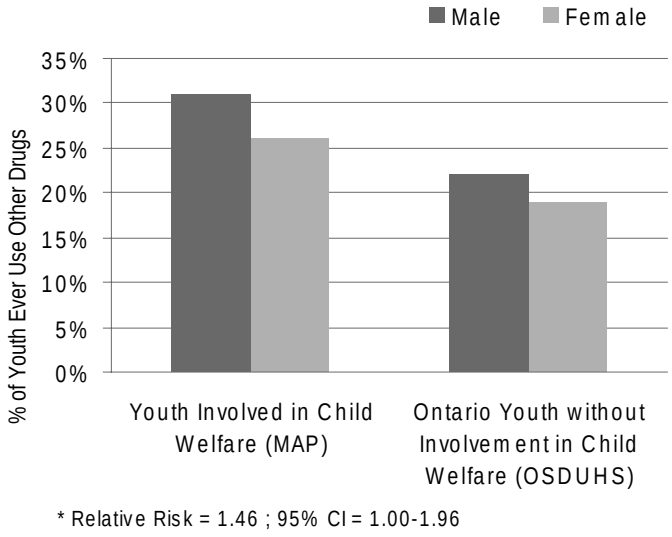


Figure 3.2. MAP and general population youth lifetime use of other drugs.

This suggests that standardized drug screening questions may be an important routine across the adolescent years for CPS youth. This would include inquiring about access to substances and violence prevention in terms of drug-acquiring, drug-selling, or drug-for-sex trade activities. A clinical example, not from the MAP study, was a crown ward meeting with a drug seller in a park to acquire drugs, taking along another foster youth for security (rather than having an exit-from-danger strategy, or making use of practical resources such as a cell phone, going to a crowded area in daylight etc.). The end result in this example was that both CPS-involved youth were sexually assaulted. These youth were using marijuana on a daily basis and these behaviours were successfully hidden from their foster caregivers' awareness.

As with sexual behaviour, the onset of any substance use is typically earlier, and child welfare youth are vulnerable for early entry into risk behaviours generally. As such, preventative actions would need to be in place in the 10 to 12 year old age range. In addition to a no-go message, adaptive coping techniques need to be imparted as part of a healthy lifestyle, including such activities supported by research as yoga, deep breathing exercises, daily walking exercise or jogging, and meditation practices.

Finally, the level of thinking about suicide provides a general indication of distress among CPS youth. MAP data show that a minority of CPS teens have seriously considered suicide in the past year, and this rate is elevated compared to Ontario high school youth (see Figure 3.3; Wekerle, Leung, Waechter and Chen 2010). This points to a clear need for caseworkers to be skilled at suicide risk screening and to be sensitive to the multiple motivations accompanying suicidal ideation, which often does not include a "wish to die." Having the opportunity to understand and elaborate upon the reasons for living is as important as evaluating the reasons facilitating self-harm. Mental health remains a priority for child welfare youth and, in particular, mental health promotion. Structural stability in terms of school adherence, school stability, and physical health care that includes an active lifestyle can be used to promote mental health. A targeted healthful lifestyle can include daily self-interventions for vulnerable youth as they negotiate normative adolescent challenges.

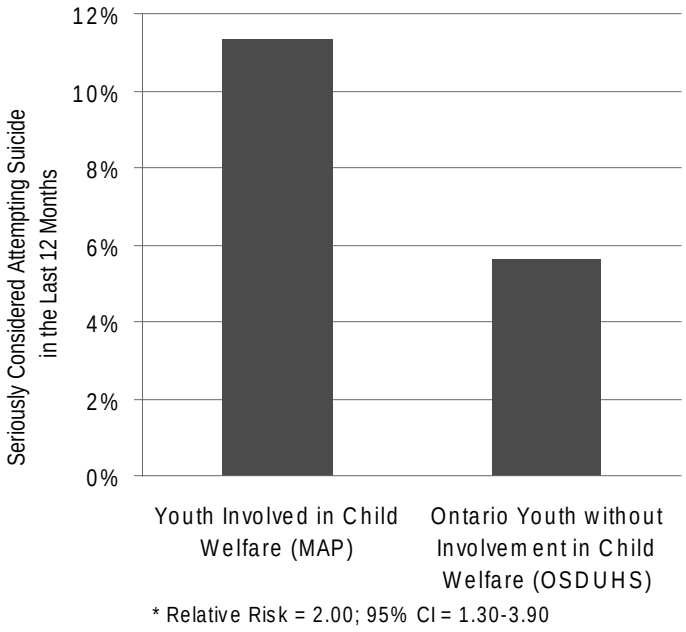


Figure 3.3. Suicide ideation (last 12 months) by MAP and general population youth.

PARTNERSHIP: VIEW OF THE AUTHORS-RESEARCHERS

Nature of the Partnership

In conducting research with a legal sample such as CPS youth, and crown wards in particular, there is a high standard for ethical adherence, a thorough clinical follow-through and documentation procedure, and established routes of reciprocal communication. The foundational ingredient is trust among the partners that, in the case of the MAP study, was built upon the successful completion of other projects between the researchers and Ontario CPS agencies.

The keys to maintaining this collaboration are reciprocal recognition of partner expertise, a willingness to develop research capacity among service providers, and service knowledge among researchers. The collaboration among diverse experts provides a rich context for knowledge sharing, new research directions, and meeting broader professional development

and continuing education needs. The research products have the benefit of years of practice experience and policy knowledge to inform the potential applications. Case examples that illustrate the research findings can be identified and broad-access research uptake messages can be formulated.

By forming the MAP Advisory Board at the earliest stages of the research endeavour, CPS caseworkers provided practical input into the design and methodology of the study. This included topics of inquiry given their first-hand experience working with the youth and the logistics of how to randomly select youth for involvement in the study while maintaining confidentiality. In this way, university-based research staff presented themselves as "expert advisors" whose main purpose was to assist CPS workers and agencies in better understanding the youth in their care. Developing a sense of ownership in the project by CPS workers was critical to maintaining momentum in data collection, a process that was highly dependent on the workers. Finally, presenting preliminary results of the study to the CPS workers as soon as some of the data became available was also crucial to maintaining research investment. By seeing first-hand the information that the MAP was providing, CPS workers appreciated the potential utility of the study, which resulted in increased agency ownership and a sense that the extra work was worthwhile.

The successful recruitment and retention of CPS-involved adolescents in the MAP study is a testament to the quality of the participatory relationship developed and maintained between researchers and CPS staff members. Given the confidential nature of this population, it would be virtually impossible for external researchers to conduct a study of such magnitude without a strong participatory relationship with CPS agency staff, as well as agency dedication to the research enterprise from the executive directors and the Ontario Association of Children's Aid Societies through to front-line caseworkers.

To assess the feasibility of this collaboration, we collected information from CPS staff members who were involved in the MAP Advisory Board. The responses to this survey, reported in full elsewhere (see Waechter et al. 2009) indicated that CPS workers believed that the MAP study is relevant, collaborative, supported by CPS institutions, is not too burdensome, and most importantly, will have a positive impact on CPS youth outcomes. The quality of this relationship, in turn, provided a relaxed, open discussion forum in which front-line staff members could provide feedback on all aspects of the study's design. This feedback was

based on first-hand staff experiences with CPS-involved youth. For example, a section on self-harming behaviour emerged from the MAP Advisory Board commenting on the increased visibility of this problem among teens. Thus, staff members were able to direct the collection of practice-relevant information in the MAP study.

The quality of the relationship between researchers and CPS staff also allowed for flexibility in the recruitment process when resolving inevitable roadblocks. The MAP study did make additional demands on agency Information Technology staff. For example, the high number of ineligible youth obtained from active CPS case files suggested that it was crucial to "refresh" youth eligibility lists every three months, rather than the six month window previously used, to support less disconnect between database case listings as "active" and active status at point of youth contact.

These numbers suggest that such a study requires patience on all parts given the slow rate of gaining eligible youth as research participants (i.e. data collection requires years). These numbers also highlight the fact that commitment to research is needed within a long-term perspective. Strategies for maintaining enthusiasm and concentrated commitment need to be considered, such as time-limited terms for service on the MAP Advisory Board, resource support for agency learning objectives, agency honoraria, and regular study updates in a range of formats, including branch, team, training and management meetings, agency newsletters, and so forth.

Partnership Challenges and How They Were Addressed

A number of challenges were encountered given the unique researcher-community partnership implemented in the MAP study. Three of the most important are described below.

1. It is relatively expensive to conduct research on randomly sampled CPS clients. The costs are driven up by: the logistics of randomly selecting the youth for involvement in the study; confirming that the youth's file is still open and active; having the youth's worker make first contact to explain the study; sending contact information about the youth (if she/he agrees to further contact) to the research staff; having the research staff contact the youth to make an appointment to meet in his/her home; and actually carrying out the youth testing. Given this complex referral process and travel associated with meeting CPS youth, costs for data collection are over $100 per testing time point, excluding staff wages (unpublished MAP data). This cost includes paying the

youth directly for participating in the study, providing them with snacks and refreshments, and travel costs for research staff members. To offset these costs, youth were encouraged to travel to CPS agencies or research offices to complete the MAP questionnaire package, thus saving researcher travel costs, and youth were instead reimbursed for their travel costs. However, for many youth, travelling to the research offices was not feasible by public transit or by automobile. As a result, more than 85% of youth chose to be tested in their residences. Thus, MAP research staff members had to continue travelling to the youth's residences, with some foster homes located several hundred kilometers from the research site.

To complicate matters, it is not uncommon for youth to be asleep or away from home, despite MAP research staff calling them the day before or even on the same day of the appointment to confirm the meeting. It takes an average of seven phone calls to secure an appointment with the youth for testing (unpublished MAP data). Furthermore, when following up to meet with youth at the six-month testing point, the one-year testing point etc., it is very common for the youth to have moved to a new foster home, group home, or other location. This may require MAP research staff to re-connect with the youth's CPS caseworker to obtain updated contact information for the youth. A strong CPS agency collaboration proved vital here, as CPS workers were mostly willing to take time from their busy schedules to help MAP research staff locate youths. In those instances where caseworkers could not be reached, the appropriate MAP Advisory Board member for that CPS agency and branch was able to provide assistance in locating the youth for follow-up involvement in the study. Without this strong CPS agency partnership and persistence on the part of MAP research staff members, the follow-up retention rates in the MAP study would not be as high.

2. A second challenge that needed to be overcome related to the logistics of collecting data and the inconsistent referral rates from CPS Advisory Board members across a given year, considering competing high-priority demands such as Crown Ward audits by the Ontario government. Given stringent ethical and confidentiality guidelines, MAP research staff members were not able to directly contact randomly selected youth about participating in the study. Instead, the youth's caseworker had to make first contact, providing a brief explanation of the study to the youth. If the youth agreed to hear more about the study, the worker would send identifying contact information to the MAP researchers who would then contact the youth to set up an

appointment. This resulted in an eight-step process from the time that master lists of all youth between ages 14-17 in the participating CPS agencies were generated to the point where data was actually collected from the youth. This process involved the coordination of five different individuals/groups. Any system with this number of steps that is reliant on many different individuals is prone to delays, and this must be anticipated when projecting the speed with which data will be collected from a CPS sample. Given the workload of the primary CPS workers, the return rate of the referrals could be irregular and unpredictable and the step that was most likely to experience delays was at the point of each individual CPS caseworker contacting youth on their caseload. The challenge for research staff was to complete the data collection within methodological and grant timelines and to maintain an efficient number of research assistants to collect the data. To overcome this challenge, MAP liaison members were appointed from each geographical locale covered by the larger CPS agencies involved in the study. MAP research staff worked closely with these liaison members to flexibly support individual referral follow-up models. In some instances, this involved conducting presentations on the MAP data for direct care workers and their supervisors to spur referral activity, creating tailored MAP "Frequently Asked Questions" information sheets, and supporting the allocation of administrative assistant resources within the agency branch so that he/she could follow up on outstanding referrals. Furthermore, each geographical branch within the CPS agencies received a $500 honorarium for every 10 eligible youth referrals that were returned to the MAP research office. This money was made available to the workers at each CPS branch to be spent as they deemed appropriate. As such, these funds provided tangible feedback to the CPS workers regarding their research involvement and kept the MAP active in their minds. In some cases, this tangible feedback included the purchase of a new microwave or digital camera for CPS worker use.

3. A third challenge that needed to be overcome related to ethical issues. The MAP study had to be approved by ethics boards at university-based institutions and CPS agencies. Sometimes the methodologies proposed by the researchers and the CPS liaison staff diverged slightly from standard ethical practices. For example, the CPS workers believed that the youth should be paid for involvement in the MAP study and that this should be framed as payment for a "job." That is, the youth would be paid minimum wage to fill out the MAP questionnaire package. Although research participants are routinely paid for study involvement

in Ontario, this remuneration is not usually framed within a "pay for work" explanation, given strict guidelines around coercion.

To address this divergence, the CPS agencies provided a letter stating that this way of framing the remuneration for youth involvement in the study was the most conducive for a population with a history of "unfairness," where a more concrete remuneration for time and the valuing of youth responses was preferred. This letter was forwarded to the University ethics board, which accepted the re-framing of the study remuneration.

Partnership Benefits

A partnership model is the best way of maintaining a research project over time where the participants are recruited from a service sector, whether this involves solely the use of administrative data, secondary analyses of an existing dataset, or on-going data collection (Reason and Bradbury 2001). In the MAP study, CPS agencies have entered into a research relationship with the reasonable expectation of some cost to the conducting of research, including staff consultation, staff liaison, and providing the linkage of the CPS client to the data collection team. As a function of such in-kind support, however, the CPS group is in the position to obtain concrete answers to some of their practice and policy questions.

Another benefit of the research-community partnership includes an information exchange of relative areas of expertise. The clinical researcher nested within a university setting can provide ethical, statistical, library/source material, and research funding consultation to community agencies. In this way, access to research expertise is broadened beyond the MAP project and to the larger practice community. Furthermore, the clinical-researcher can provide in-house presentations and consultation on selected health and outcome topics. In turn, the community-based practitioners can provide consultation on reporting procedures, information on new policy initiatives, and reports emanating from practice sources. Service providers involved in the research project become ambassadors of science and assist in the translation of the science to practice. Opportunities for co-presentations at both scientific and service association meetings are provided. The academic continuing education and specialized research meetings become accessible to interested CPS staffers. By becoming involved in the MAP project, CPS workers have become interested in child welfare research, and have attended research conferences and contributed to scientific journal publications. The

partnership exemplified by the MAP project has led to an awareness of research and research methodologies within the CPS agencies involved.

Although the ownership of the data resides with the principal investigator and the co-investigator team, select CPS agency staff members who have a research background and/or an interest in research are included in the grant application co-investigator team. Furthermore, the partnership mechanism is established for considering any type of proposal to the MAP study, including data sharing for thesis and research paper opportunities for agency staff and student research practice. Thus, this partnership has been a vehicle for a dynamic professional development of both university and community agency members, as well as allowing for a research development model that can enhance research capacity, research relevance, and knowledge translation.

Conclusion

The Maltreatment and Adolescent Pathways (MAP) project demonstrates that, despite unique ethical and logistical challenges, epidemiological research of child welfare youth is feasible. This is not the first time research has been conducted with child welfare youth, but it appears to be the first time the process of this partnership has been assessed. Through this assessment, we conclude that the key to conducting this type of research is the development of a strong partnership between academic researchers and child welfare service providers. The nature of this partnership is also important. Child welfare workers should be involved from the first planning stages of the project, guiding the research design with questions gleaned from front-line work with youth, and ultimately enhancing the applicability of the results for everyday practice. Child welfare workers should remain involved in the study during all stages of data collection, providing feedback via monthly advisory meetings and disseminating practice-relevant results as the data are interpreted.

The MAP project was developed from shared research-community recognition of the need for greater information on adolescents within the child welfare system. Entering into this system can be an opportunity to re-set a developmental trajectory often characterized by the simultaneous impact of multiple forms of maltreatment, caregiver vulnerability, environmental poverty, and community violence.

Before intervening in the most effective way, we must first understand this population of youth. How are they coping with the developmental transition through adolescence? Are they dating? Are they engaging in sexual intercourse, drug use, and alcohol use? At what levels? Are

these levels different from non-maltreated age-matched youth in the same geographical region? The collaborative MAP project is designed to provide answers to some of these questions.

Ultimately, overlapping purpose was the primary factor that supported the researcher-CPS worker partnership in the MAP project. That purpose is to support youth with a history of maltreatment as they make the transition to adulthood. The partnership was entirely aligned in striving for evidence-informed practice to maximally support CPS teens as they make the transition to adulthood. Child welfare-involved teens deserve our research and service best and, with partnering, this translates to evidence-based service, evidence-informed policy, and practice-relevant research. We believe that the 21st century will witness a coming-of-age in terms of a substantial and growing research base forming a child welfare science.

PARTNERSHIP: PRACTITIONER'S POINT OF VIEW

Tara Nassar

Our partnership with the Maltreatment and Adolescent Pathways (MAP) project has strengthened the research capacity of the Children's Aid Society (CAS) and created the potential for improved service. The elements within its design created a synergy of improved connectivity amongst the research community and the CAS workers, gave voice and immediacy to what the recipients of service were experiencing, and established youth as an important community to be served by protection services. Continuation of these elements will mean that workers will participate in future research, as they have experienced respect as professionals and endorse the benefits of evidenced-based practice.

Dr. Wekerle outlines comprehensively the history of the development of MAP within the model of participatory action research. She outlines the elements of trust, recognition of partner expertise, and resource support for agency learning objectives as particularly crucial in strengthening the research capacity within the direct service practitioner's sector. MAP took an inclusive and evolving approach, which supported asking the right questions, in the right way, to obtain insight into the key areas of the youth's lives that needed to be addressed.

The relationship of trust between the CPS worker and the researchers was built slowly. A MAP liaison in each branch or service area regularly

attended the coordinating meetings. This helped the liaisons to identify with the goals and objectives of the project as they worked through the obstacles to its implementation and took on a leadership role in their area of service. The visibility of the researchers who gave presentations resulted in the engagement of the workers and supervisors, both on an intellectual and emotional level. For example, at one branch meeting, when the initial research findings were shared, several workers expressed shock at the level and types of abuse described prior to the youths coming into care. These workers were dismayed that, while conducting their investigations, they might not be eliciting a full picture of maltreatment.

Recruitment of youth into the project was critical, and highly dependent on CAS workers' attitudes toward research and trust of the process used. Workers tend to be protective of their youth, and reluctant to expose them to further distress. On the other hand, if the worker believes that the youth will be treated with respect and sensitivity, the youth will sense this and be more open to participate in the research. As the project continued, more youth were giving feedback to their workers that their interviews had been positive and worthwhile. Workers were particularly impressed by the retention rate of youth who completed the series of interviews. In addition, some youth asked to participate in an advisory capacity to the research, and this was positively received. These factors reinforced an increased sense of joint ownership amongst the workers as the project became more established. For example, when problems in recruiting youth arose, workers readily volunteered solutions.

Individual workers responded differently, but a common thread between them and the researchers was their shared belief in the youths' resilience and the desire to increase effectiveness in assisting youth to reach positive adulthoods. The periodic feedback sessions on the research itself were very important. Although only group data could be given, the workers viewed all of the youth as "belonging" to the Society and as such they felt responsible for them. Workers were given opportunities to attend research symposiums or clinical workshops, attend periodic training sessions, and receive articles on clinical subjects. In addition, information about web sites, which had been professionally reviewed, was disseminated.

MAP has given the youth a voice so that their world can be better understood. In the MAP research recommendations, some areas touched upon are personal safety, especially in dating, drugs and alcohol

use, and coping strategies. The recent implementation of the "Looking After Children" questionnaire in all Ontario CAS agencies utilizes a structured interview format wherein CAS workers query in-care youth about healthy development. The findings and recommendations of the MAP study will be helpful in providing a context to these questions. This is an example of evidence-based practice that has been translated to evidence-informed policy.

Dr. Wekerle speaks to the element of "trust" in developing partnerships in research. This trust has been moved into the realm of "hope." This participatory action research clearly indicates that child welfare teens need to be understood as a high priority service group with developmentally specific issues related to the transition to adulthood. Protection workers have spoken of this for years. Now there is a compelling argument that this age group requires focused services to be effectively protected, and supported to achieve a healthy adulthood, as is their right.

PARTNERSHIP: PRACTITIONERS' POINT OF VIEW

Bruce Leslie, Deborah Goodman and Brenda Moody

Research that is undertaken in partnership, and conducted in collaboration, recognizes partners' contributions, values differences, and is grounded in the experiences of the researchers, the practitioners, the service recipients, and the other key stakeholders. Such research has the potential to create and advance knowledge on many levels. From an agency's perspective, the MAP study is an apt illustration of this preferred collaborative-partnership approach to knowledge creation and development. In times past, when child welfare agencies and universities partnered together to advance research knowledge, the agency typically provided merely the data collection site. The university supplied the research topic, the funding, and the researcher, and defined both the research question and methodology. Some coined it a "forced bonding" process (Edleson and Bible 1999).

As is evident in the description of the MAP research partnership, the MAP's inquiry process into advancing knowledge via the scientist/practitioner model is a much richer, more balanced – but much more complicated approach – to knowledge development. The roles between partners are less defined, and field leadership is required if optimal benefits for all stakeholders involved are to be realized.

The MAP collaboration has been a fruitful and important partnership from the agencies' perspective. The scientist/practitioner model requires the agency partners to shift from being peripheral in the process to being centrally involved, to shift from passive engagement to active participation, and to change from follower to leader in the research and knowledge building process. In order to maximize the success of the partnership, varying levels of agency involvement are required. This includes: 1) the commitment of senior leadership, 2) buy-in and support from supervisory and front-line staff, and 3) a dedicated liaison between the agency and research team. This model also requires complementary change on the part of the scientist. If these shifts do not happen, the research experience can be less than positive and productive for both parties.

Review of the MAP agencies' experience reveals a number of "best practice" affirmations:

- commit to building knowledge through research;
- advance knowledge through collaborative partnerships;
- ground research in field-driven, practice-relevant questions;
- grow the field's capacity and expertise in research;
- expand the researchers' understanding of agency organizational influences;
- increase researchers' awareness of the wealth of rich data at agencies;
- support knowledge translation at all levels; and
- expanding the research evidence base for practice.

As demonstrated through the MAP research process, collaborative research, under the banner of true partnership, really is the better way.

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REFERENCES

Arnett, J. J. 2000. Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist 55* (5): 469-480.

Becker-Blease, K. A., and J. J. Freyd. 2006. Research participants telling the truth about their lives: The ethics of asking and not asking about abuse. *American Psychologist 61* (3): 218-226.

Bernstein, D. P., J. A. Stein, M. D. Newcomb, E. Walker, D. Pogge, T. Ahluvalia, J. Stokes, L. Handelsman, M. Medrano, D. Desmond, and W. Zule. 2003. Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect 27:* 169-190.

Brown, J., P. Cohen, J. G. Johnson, and S. Salzinger. 1998. A longitudinal analysis of risk factors for child maltreatment: findings of a 17-year prospective study of officially recorded and self-reported child abuse and neglect. *Child Abuse & Neglect 22* (11): 1065-1078.

Burge, P. 2007. Prevalence of mental disorders and associated service variables among Ontario children who are permanent wards. *The Canadian Journal of Psychiatry 52* (5): 305-314.

Centers for Disease Control and Prevention. 2010. *The Youth Risk Behavior Surveillance System* (YRBSS). Retrieved from http://www.cdc.gov/HealthyYouth/yrbs/index.htm

Courtney, M. E., and A. Dworsky. 2005. *Midwest evaluation of the adult functioning of former foster youth.* Chicago: Chapin Hall.

Edleson, J. L., and A. L. Bible. 1999. Forced bonding or community collaboration? Partnerships between science and practice in research on woman battering. In *National Institute of Justice, Viewing crime and justice from a collaborative perspective: Plenary papers of the 1998 Conference on Criminal Justice Research and Evaluation* (pp. 25-38). Washington, DC: National Institute of Justice.

Gilbert, R., C. Spatz Widom, K. Browne, D, Ferguson, E. Webb, and S. Janson. 2009. Burden and consequences of child maltreatment in high-income countries. *The Lancet 373* (9657): 68-81.

Goldstein, A., and C. Wekerle. 2008. Keeping the environment stabke: What to do when kids come into care. *Ontario Association of Children's Aid Societies Journal 52*: 2.

James, C. A., T. F. Fulco, T. A. Hart, C. Wekerle, H. MacMillan, M. Boyle, N. Trocme, R. Waechter, and E. Leung. under review. Child sexual abuse and sexual risk behaviors among male and female youth in Child Protective Services (CPS). *Journal of Child Abuse & Neglect*.

Leslie, B. 2007. After care ends: Pregnancy pathways. *OACAS Journal 51*: 17-25.

Leung, E., C. Wekerle, R. Waechter, J. Egelstaff, and M. Bennett. in press. The utilization of the Maltreatment and Adolescent Pathways Knowledge Translation (MAP-KT) Portal: A report on usability statistics of best-practice materials. *First Peoples Child & Family Review*.

Lewis, R. J., B. A. Winstead, and V. J. Derlega. 1989. Gender differences in volunteering for friendship research. *Journal of Social Behavior & Personality 4* (5): 623-632.

Lund, H. D, B. D. Reider, A. B. Whiting, and J. R. Prichard. 2010. Sleep patterns and predictors of disturbed sleep in a large population of college students. *Journal of Adolescent Health 46* (2): 124-132.

MacMillan, H. 2010. Commentary: Child maltreatment and physical health: a call to action. *Journal of Pediatric Psychology. Special Issue: Health consequences of child maltreatment 35* (5): 533-535.

MacMillan, H. L., J. E. Fleming, N. Trocmé, M. H. Boyle, M. Wong, Y. A. Racine, W. R. Beardslee, and D. R. Offord. 1997. Prevalence of child physical and sexual abuse in the community. Results from the ontario health supplement. *Journal of the American Medical Association 278* (2): 131–135.

MacMillan, H. L., C. N. Wathen, E. Jamieson, M. Boyle, L.-A. McNutt, A. Worster, B. Lent, and M. Webb (for the McMaster Violence Against Women Group). 2006. Approaches to screening for intimate partner violence in health care settings: a randomized trial. *Journal of the American Medical Association 296*: 530-536.

Miller-Perrin, C. L., and R. D. Perrin. 1999. *Child maltreatment: An introduction*. Thousand Oaks, CA: Sage Publications.

Mohapatra, S., H. Irving, A. Paglia-Boak, C. Wekerle, E. Adlaf, and J. Rehm. 2010. History of Family Involvement with Child Protective Services as a Risk Factor for Bullying in Ontario SChools. *Journal of Child and Adolescent Mental Health 15* (3): 157-163.

Ontario Association of Children's Aid Societies. n.d.. *Signs of abuse and neglect*. Retrieved from http://www.oacas.org/resources/signsofabuse.htm#Emotional

Putnam, F. W., M. B. Liss, and J. Landsverk, J. 1996. *Ethical issues in maltreatment research with children and adolescents*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Reason, P., and H. Bradbury. (Eds). 2001. *Handbook of action reasearch: Participative inquiry and practice*. Thousand Oaks, CA: Sage Publications.

Smetana, J. G. 2005. Adolescent-parent conflict: Resistance and subversion as developmental process. In L. Nucci (Ed). *Conflict, contradiction, and contrarian elements in moral development and education* (pp. 69-91). Mahwah, NJ: Erlbaum.

Smith, C. M. 2005. Origin and uses of primum non nocere—above all, do no harm! *The Journal of Clinical Pharmacology 45* (4): 371-377.

Statistics Canada. 2004. *Ontario Child Health Study (OCHS)*. Retrieved from http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=3824&lang=en&db=imdb&adm=8&dis=2

Tang, B., E. Jamieson, M. Boyle, A. Libby, A. Gafni, and H. MacMillan. 2006. The influence of child abuse on the pattern of expenditures in women's adult health service utilization in Ontario, Canada. *Social Science and Medicine 63* (7): 1711-1719.

Torres, A. D., and C. A. Gushurst. 2009. Obesity and hypertension in adolescents. *International Journal of Child Health and Human Development 1* (4): 341-348.

Trocmé, N., B. Fallon, B. MacLaurin, J. Daciuk, C. Felstiner, T. Black, L. Tonmyr, K. Barter, D. Turcotte, and R. Cloutier. 2005. *Canadian incidence study of reported child abuse and neglect—2003 major findings*. Ottawa, ON: Minister of Public Works and Government Services Canada.

Twemlow, S. W. 1995. The psychoanalytic foundations of a dialectical approach to the victim/victimizer relationship. *Journal of the American Academy of Psychoanalysis 23* (4): 545-561.

Underwood, E., B. Lewis, and W. Thomson. 2010. *Towards sustainable child welfare in Ontario: First report from the commission*. Retrieved from: http://www.sustainingchildwelfare.ca/assets/CPSCW-Towards-Sustainable-Child-Welfare-in-Ontario-201006.pdf

UNICEF. 2003. *Children have rights.* Retrieved from http://www.unicef.org/why/why_rights.html

Vandergrift, K, C. Milne, C. Rogerson, L. Wolff, N. Pollaert, and E. Chan. 2009. *Best interests of the child: Meaning and application in Canada Report*. Toronto, ON: UNICEF. Retrieved from http://www.unicef.ca/portal/Secure/Community/502/WCM/HELP/take_action/Advocacy/Best%20Interests%20report%20EN.pdf

Waechter, R., C. Wekerle, B. Leslie, D. Goodman, N. Wathen, B. Moody, and The MAP Research Team. 2009. Child protection services and university-based partnerships: A participatory action-based model for creating and sharing knowledge. *First Peoples Child & Family Review 4*: 118-128.

Walsh, C. A., H. L. MacMillan, N. Trocmé, E. Jamieson, and M. H. Boyle. 2008. Measurement of Victimization in Adolescence: Development and Validation of the Childhood Experiences of Violence Questionnaire. *Child Abuse & Neglect 32* (11): 1037-1057.

Wekerle, C., A. Aekins, and C. Braun. 2009. *Visitation practices in child welfare*. PARTicle available at http://www.partontario.org/resources/resources75.php

Wekerle, C., A. L. Miller, D. Wolfe, and C.B. Spindel. 2006. *Childhood Maltreatment*. Ashland, OH: Hogrefe & Huber Publishers.

Wekerle, C., E. Leung, A. Goldstein, T. Thornton, and L. Tonmyr. 2009. *Up against a wall: Coping with becoming a teen when you have been maltreated as a child: Substance use among adolescents in child welfare versus adoplescents in the general population: A comparison of the Maltreatment and Adolescent Pathways (MAP) Longitudinal Study and the Ontario Student Drug Use Survey (OSDUS) datasets*. London, ON. University of Western Ontario. Free report copies available from National Clearinghouse on Family Violence http://www.phac-aspc.gc.ca/ncfv-cnivf/pdfs/nfnts-ado-wallmur-eng.pdf

Wekerle, C., E. Leung, R. Waechter, and M. Chen. 2010. *Looking to the future: Child welfare* (Chapter 6). Ontario: Ministry of Child and Youth Services. Free copies available on request to Kathy Glazier (kathy.glazier@ontario.ca).

Wekerle, C., E. Leung, E., A. M. Wall, H. L. MacMillan, M. Boyle, N. Trocmé, and R. Waechter. 2009. The impact of childhood emotional maltreatment on teen dating violence. *Journal of Child Abuse & Neglect 33*: 45-58.

Wekerle, C., H. L. MacMillan, E. Leung, and E. Jamieson. 2008. Childhood maltreatment. In M. Hersen, and A. M. Gross (Eds.), *Handbook of clinical psychology, Vol. 2: Children and adolescents* (pp. 856-903). Hoboken, NJ: John Wiley & Sons.

Wekerle, C., R. Waechter, E. Leung, and M. Leonard. 2007. Adolescence: A window of opportunity for positive change. *First Peoples Child and Family Review 3*: 8-16.

Wekerle, C., R. Waechter, E. Leung, H. MacMillan, M. Boyle, N. Trocmé, B. Leslie, D. Goodman, and B. Moody, 2009. The importance of cognitive control among child protective services youth: Findings from the Maltreatment and Adolescent Pathways (MAP) Project. *Canada's Children Winter*: 55-58. Ottawa, ON: Child Welfare League of Canada.

Wekerle, C., A.-M. Wall, E. Leung, and N. Trocmé. 2007. Cumulative stress and substantiated maltreatment: The importance of caregiver vulnerability and adult partner violence. *The International Journal of Child Abuse and Neglect 31*: 427-443.

Wekerle, C., and D. A. Wolfe. 1999. Dating violence in mid-adolescence: Theory, significance, and emerging prevention initiatives. *Clinical Psychology Review. Special Issue: Prevention of children's behavioral and mental health problems: New horizons for psychology 19* (4): 435-456.

APPENDIX

Children's Aid Society Advisory Board to the MAP study

Toronto CAS	***Catholic CAS***	***Peel Region CAS***
Angie Corrado	Anne Lumsden	Brenda Moody
Barry McKendry	Bervin Garraway	Jo Rasteniene
Dan Cadman	Bruce Leslie	Sandra Garibotti
Darlaine Mathews	Carla Da Fonte	Linda Arthurs
David Firang	Cherry Chan	Frank Kennedy
Deb Goodman	Christine Austin	Vicky Lowrey
Franz Norritz	Coreen Van Es	
Heidi Kiang	Jacqueline Bittencourt	
Joanne Filippelli	Jim Langstaff	
Kong Chung	Judith Wharton	
Lori Bell	Mario Giancola	
Nancy MacLaren	Sean Wyers	
Natasha Budzarov	Stacey Milley	
Pamela Van	Susan Preston	
Robert Ferguson	Tara Nassar	
Ron Smith	Victor Montaigne	
Rona Delisle		
Susan Gaines		