

MAPPING PARENT-INFANT INTERACTIONS: A brief cognitive approach to the prevention of relationship ruptures and infant maltreatment (the MAP method).

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Overview

The Mapping Attributions of Parents (MAP) is an empirically based intervention currently used in Canada, the United States, and Italy. It is designed for caregivers¹ of children 0 to 3 years of age² who have expressed concern about their child's behavioural difficulties, may feel disempowered in their dyadic relationship

1. Please note that "parent" and "caregiver" are used interchangeably in this article to acknowledge the fact that infants may be cared for by many different individuals (e.g. grandparents, foster parents, etc.).

2. A version for children four to ten is also available (see PCIA II MAP; Bohr, Hudson Crain & Holigrocki 2005, 2006). The pre-school and school age versions of this protocol rely on a different set of video-taped dyadic interactions, namely a structured story-stem play activity focused on a staged visit to the zoo. The PCIA II- MAP is based on the PCIA II Assessment tool developed by Holigrocki, Kaminski and Frieswyk (2002).

with their child, or are seeking services to assist in strengthening their care-giving skills.

While this approach was conceived for dyads at risk for parent-child relational disorders, particularly maltreatment, it has been shown to be useful in addressing a variety of caregiving challenges. Given its definition as an early intervention treatment program for high-risk, sometimes transient families (Bohr 2005, Bohr & Holigrocki 2005, 2007), the MAP was designed as a combination of assessment and brief treatment. Clinical work with the target population required a short, flexible intervention that might initiate a shift in maladaptive caregiver behaviours, but also support parenting competencies and improve dyadic functioning in few meetings. In vulnerable dyads, parenting risks may involve a history of maltreatment in the caregiver's own childhood, substance abuse, psychiatric disorder, partner violence, or the use of inappropriate parenting strategies. In that context, this

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intervention addresses risk with a focus on care-giving sensitivity, interpretation of child behaviour, developmental knowledge, and self-perceived efficacy. More specifically, parental attributions (i.e. explanations for the child's conduct), especially as they pertain to attachment behaviours, are explored with the goal of introducing cognitive and behavioural flexibility to the caregiver's repertoire when the attributions are inappropriately negative and potentially risky. This emphasis on attributions is based on current research findings about the predictive value of this facet of care-giving in vulnerable parents, particularly as it pertains to risk for maltreatment (e.g. Bugental 1998). The MAP intervention is guided by a constructivist methodology that stresses client collaboration, reflection, and active participation. Most importantly, it emphasizes and supports strengths in the caregiver-child dyadic relationship, an approach that has been shown to be very effective (e.g. McDonough 1993). MAP combines assessment and a brief cognitive intervention through an integration of direct observation and video-recall methods. It was developed in Toronto, in a community mental health setting (Aisling Discoveries Child and Family Centre), through an active collaboration between a group of infant mental health clinicians and a research group (York University), making it an interesting example of knowledge exchange and practice-driven clinical tool development. From the outset, an integrated research feature was added to track the efficacy of the intervention: observational measures and standardized outcome instruments are used, as are empirically validated coding schemes.

The MAP intervention should be implemented by trained infant mental health professionals who have a good knowledge base in child development, and who have had experience with providing family and/or child therapy services. Skills developed through the supervised practicum and internship components of programs related to child and youth care, clinical social work, clinical or counselling psychology, or child psychiatry are essential for the successful implementation of the intervention.

Background

Physical and emotional abuse of children is a pervasive problem and risk of child maltreatment ranks among the most concerning family problems seen in children's mental health centers worldwide, yet relatively few *short and focused* early interventions are available for clinicians who wish to prevent it (Garbarino & Kostelny 1994). While theories of child abuse abound, preventive intervention studies are rare as they can pose great challenges to scientist-practitioners (Skowron & Reinemann 2005). For example, clients at risk may often not be retained in counseling long enough to obtain treatment results (Turner & Sanders 2006). In addition, when parents are required to engage in treatment by court order, they may not be able to participate constructively in any intervention (Azar & Twentyman 1986). However, the potential benefits of preventive intervention measures far outweigh any setbacks in client retention and extend across systemic levels (Asawa et al. 2008). These benefits include improved psychological and physical health, decreased family stress, and a reduction in the burden on society through a decrease in health-care, child welfare, and legal system costs (Belsky 1993, Karoly et al. 2001). Moreover, recent advances in infant mental health

have provided us with a greater understanding of the pathways to risk for maltreatment, in particular some of the early parental attitudes and behaviours which may lead to worrisome parent-child interactions (e.g. Cicchetti & Carlson 1989, Cicchetti & Lynch 1993). This growing knowledge base should inform prevention and intervention, especially as we also understand that some problematic caregiving behaviours stand out in their predictive value (re. risk for abuse), as well as in their potential modifiability in a treatment situation (Mullick et al. 2001).

For one, information processing models have been useful in understanding problematic parental behaviours, particularly those leading to maltreatment (Crittenden 1993). The social information processing model proposed by Milner (1993, 2003) identifies numerous parental cognitive processes, including perceptions, interpretations, and attributions for child behaviour, that are thought to mediate the occurrence of abuse and neglect. Parental attributions are cognitions that serve to make sense of a child's behaviour. Distorted attributions that arise from unrealistic expectations about the child's developmental needs and abilities have a significant impact on the parent's immediate affective and behavioural responses to their child (Azar et al. 1984, Bernier & Dozier 2003, Bugental & Goodnow 1998, Miller 1995).

The misinterpretation of child behaviour as a result of misguided, unduly negative, or biased attributions can subsequently have damaging effects on the parent-child attachment relationship, as well as the long term quality of the parent-child relationship (Bugental & Happaney 2000, Dozier 2003). In particular, negative or hostile parental attributions that lead to a distorted perception of power balance in the parent-child relationship have been identified as potentially destructive and critical in the prediction of abuse (Bugental & Lewis 1999, Bugental & Happaney 2000). Early studies examining social power provide support for this finding. Raven and Kruglanski (1970) for example found that individuals who lack power have a tendency to use intimidating tactics and coercion in an effort to regain control. Powerlessness as a parental attribution can be defined as a perception of the self as a relatively defenseless victim in the dyadic relationship with the child (Bradley & Peters 1991). Caregivers with low perceived power are thus at an elevated risk for child maltreatment and generally interpret negative child behaviour as being more blameworthy than parents with high perceived power (Bugental & Happaney 2000). In addition, parents who perceive themselves as lacking power and control over their children have increased cognitive activation for items of threat and defence and are particularly likely to engage in severe forms of power assertion as an attempt to regain control (Kipnis 1976).

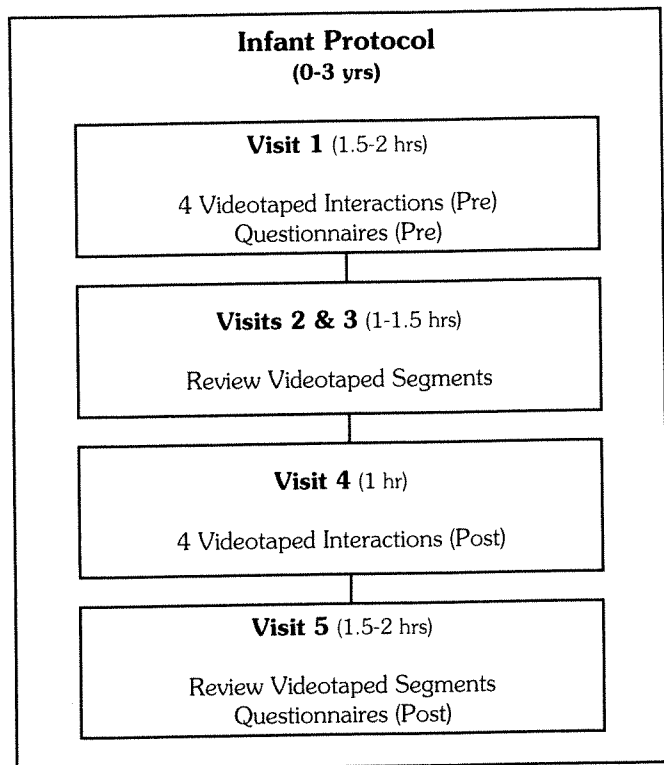
Blame-oriented or hostile parental attributions have been implicated in fostering ineffective, over-reactive, and harsh disciplinary practices towards children, as well as resultant child conduct problems (Bugental & Johnston 2000, Nix et al. 1999, Smith & O'Leary 1998, Snyder et al. 2005). Similarly, abusive or physically coercive parents are more likely to attribute defiant intentions to their children and be highly controlling (Daro & Donnelly 2002, Urquiza & McNeil 1996). Bradley and Peters (1991) found that abusive mothers were more likely to be dissatisfied with their children and attribute children's successful behaviour to external, unstable factors such as luck, than non-abusive mothers. Also

relevant to our work is the empirical research by McGuigan, Vuchinich, and Pratt (2000) who demonstrated that the relationship between domestic violence and a family's risk of child abuse is mediated by a parent's negative views of the child.

Efforts directed at modifying parental attributions in the context of attachment behaviours and signals are expected to improve parental functioning and thereby decrease the risk for maltreatment in disrupted dyads (Cicchetti & Carlson 1989). Clearly many problematic attachment relationships involve parents who feel disempowered, have a history of trauma, and exhibit atypical parenting behaviours (Lyons-Ruth 2000, Bronfman et al. 2004), with less than sensitive response to an infant's attachment needs. These caregivers also often misinterpret attachment cues. Increasing reflectivity as well as sensitivity can be very useful in this context (Slade 2004), as can increasing the caregiver's confidence in her parenting skills. This, in conjunction with maternal knowledge of child development, is correlated with the quality of a parent's interaction with her child (Gross & Keller 1992). One way of promoting reflectivity and improving sensitivity is through the use of video feedback: this method has been shown to effectively increase both these qualities in multi-risk parents (Bernstein 1997, McDonough 1993, 2004, Schechter 2006).

Going beyond reflectivity, to also build a disempowered parent's sense of confidence and efficacy, a collaborative approach was selected for the current model. As recently discussed by Holigrocki, Hudson Crain, Bohr, Young & Bensmen (in press), actively involving clients in assessment has many benefits, in particular for clients who have little sense of power and efficacy in their lives (Fischer 2000, Finn & Tonsager 1997). As has been described by Fischer (1994, 2000), this kind of collaborative assessment encourages the client and therapist to co-construct an understanding of the client's world and can lead to joint problem-solving and the exploration of alternative solutions to the client's dilemmas and patterns in responding to those dilemmas (Finn & Tonsager 1997, Finn 2007). In that context, an evaluation is considered successful when the client feels understood, has developed new strategies to address her problems, and perceives at least some of these changes to be self-generated. This should then lead to greater self-efficacy and, hopefully, empowerment. Such approaches to actively eliciting the expertise of clients are not new: they have long been part of humanistic and cognitive constructivist traditions, as well as some psychodynamic methods. For example, as noted by Holigrocki et al. (in press), many examples can be found in the work of psychologists trained in the Menninger School of assessment (Allen 1981, Berg 1985, Schlesinger 1973, Sugarman 1981). It is easy to see how, in this type of assessment, the work of the therapist to enhance and support her client's skills and sense of efficacy would seamlessly merge into treatment (Holigrocki et al. in press).

MAP is thus a model of parent-child intervention that is based on a co-constructed, collaborative and therapeutic assessment. We invite feedback from caregivers on video-recorded interactions with their infants. Through an emphasis on parenting strengths, we then focus these feedback sessions on increasing sensitive responding and exploring parental attributions. The ultimate goal is to increase cognitive and behavioural flexibility in particular in attachment-based interactions.



Treatment protocol

The MAP treatment module consists of five sessions: one pre-treatment assessment, two feedback intervention sessions, and two post-treatment assessment and feedback sessions.

A comprehensive treatment manual³ describes in detail all steps in the protocol, and informs the structure and content of the sessions with parent and child.

Session 1:

During the first session, the caregiver and child meet with the clinician for a brief introduction to the program and participate in a series of structured, video-taped interactions. Parent and infant dyads participate in four interactions that are designed to reflect activities in which they would normally partake during their day-to-day routine and to provide a situation that may produce an activation of the dyadic attachment system. The scripted interactions include 1) a *free play* episode, 2) a *teaching task*,⁴ 3) a "novel toy" activity,⁵ and 4) a *snack-time*.⁶ Caregivers are then asked to complete brief assessment measures of caregiver stress, depression, confidence, and attributional style (see below for a list of these measures). The two remaining structured questionnaires (examining child abuse potential and perception of child problems)

3. The MAP manual is available with training to clinical and research teams for the purpose of program evaluation.

4. From the NCAST program (Barnard 1994).

5. A similar activity was pioneered by Forbes, Evans, Moran & Pederson & Moran (2007).

6. Based on the NCAST program (Barnard 1994).

are filled out at the conclusion of the session, or, if time does not permit it, prior to session two.

Session 2:

Prior to the second session, the clinician reviews all four videotaped interactions in preparation for feedback intervention sessions two and three. During this time, he/she first identifies strengths (i.e. those interactions that enhance the dyadic relationship). Then, the clinician flags caregiver/child challenging moments (i.e. those that lead to disruptions in the relationship), particularly interactions that reflect the caregiver's presenting concerns.

At the beginning of session two, the clinician makes use of a *strength feedback loop* to highlight strengths and review challenging moments from the free play videotaped interaction with the caregiver. A strength feedback loop simply means that the clinician now links an observed caregiver strength to the "kinds of positive interactions" that will enhance the dyadic relationship and eventually "address and alleviate the presenting concerns." A series of questions designed to assess and identify caregiver attributions, promote caregiver sensitivity and self reflectivity, and modify any potentially negative attributions (e.g., "What is happening here?" "What were you feeling?" "What might your child have needed from you here?") are then asked about both parent-identified moments on the videotape and clips selected by the clinician. The session ends with another strength feedback loop. Identified strengths (IS) may include face-to-face positioning, eye contact, or sensitive responding to cues. Child challenging moments (CCM) may include oppositional behaviour, physical aggression, over-compliance, or refusal to comply with caregiver directives, while parent challenging moments (PCM) may include a lack of physical nurturance or sensitivity, negative caregiver attributions, or negative personal comments about the child.

Session 3:

During the third session, the clinician once again uses the strength feedback loop to highlight identified positive interactions and reviews caregiver and child challenging moments from the teaching task, novel toy, and snack-time videotaped interactions with the caregiver.

Session 4:

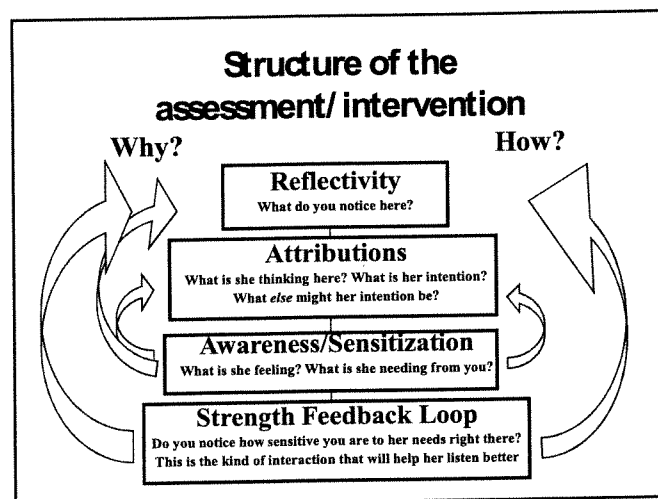
During this session, the caregiver and child are asked to participate in a second videotaping of the four interactions: 1) a free play episode, 2) a teaching task, 3) a novel toy activity, and 4) a snack-time. After the videotaping is complete, the caregiver is given the opportunity to discuss the segment of her choice with the clinician following the same protocol as above with respect to identifying caregiver and child challenging moments and highlighting strengths with the strength feedback loop.

Session 5:

Prior to the last session, the clinician selects a segment to review that highlights either a positive shift in the caregiver's attributions (shared with the caregiver as a new strength) or the lack of a shift (shared with the caregiver as a problem scenario or caregiver

challenging moment). As was done previously, during the final session the caregiver and clinician watch the entire segment together. Following the viewing, the caregiver is asked a series of questions designed to assess and identify attributions. The clinician makes use of the strength feedback loop once more to highlight caregiver strengths, sensitivity, and positive behaviour, with particular attention paid to the child's response. At the conclusion of the fifth session, caregivers are asked to complete the same psychometric assessments administered during the first and second sessions.

The protocol, as delivered over five sessions, allows the clinician to both assess and strengthen the dyadic relationship, as well as to empower the caregiver. The MAP provides the therapist with information about the quality of the dyadic relationship and an understanding of the parent's cognitive style. As for the caregiver, this tool provides a strategy to respond to behavioral concerns and to more constructively interpret her infant's behaviour, intent, and needs.



Evaluation

MAP relies on quantitative and qualitative methods to assess parental change and reduction in risk. As noted above, this approach focuses on the caregiver's sensitivity to, interpretations of, and attributions for her child's behaviours. Over the course of the assessment and treatment, the clinician and caregiver collaborate to build on the parent's strengths, but also to recognize and modify possible negative attributions for the infant's behaviour. Moments of insensitivity and negative attributions are queried and the caregiver is encouraged to generate alternative, more benign and nurturing explanations for attachment behaviours in particular (caregiver behaviours are coded and records are kept of all generated attributions). In the process, the caregiver's distorted perceptions of the power balance in her relationship with her child are addressed. This is done, at times, simply by conveying appropriate developmental information. Upon conclusion of the intervention, the structured interactions are repeated. It is expected that changes in reflectivity, sensitivity and caregiver attributions will be associated with an improvement in several areas of caregiver functioning and a shift in parental behaviour toward the child. The intervention further aims to decrease per-

ceived infant behaviour problems, resulting from this change in the caregiver's behaviour toward the child.

The following features of the caregiver–infant relationship are evaluated with observational and questionnaire tools, during pre-intervention and post-intervention assessments:

- Reflectivity, sensitivity, contingency (AMBIANCE, Lyons-Ruth 2000 and NCAST, Barnard 1994)
- Attributional style (MARS, Schechter 2005)
- Potential for maltreatment (CAP, Milner 1986)
- Caregiver stress (PSI-Short form, Abidin 1995)
- Caregiving confidence (TCQ, Gross & Rocissano 1988)
- Parental depression (BDI, Beck et al. 1996)
- Caregiver perception of child problems (CBCL, Achenbach & Rescorla 2001)

Three studies evaluating the MAP approach are currently underway in Toronto (with 0- to 6-year-old children), Indianapolis (with 5- to 10-year-old children), and Rome (with 0- to 6-year-old children), with caregiver-child dyads who are referred to community-based and university treatment centers for child behaviour problems or parent-child relational difficulties and deemed at potential risk for maltreatment. Clinical assessments and preliminary outcome findings show positive changes in most domains of caregiver functioning and the parent-child relationship. The noted changes in caregiver depressive feelings, distress, cognitive flexibility, and overall potential for child abuse are most encouraging. Interestingly, however, while parental reports of child externalizing behaviour also changed in the expected direction (caregivers perceived their children to be acting out less), many parents appear to report more internalizing behaviours after the intervention. These and other findings will be more thoroughly discussed in a forthcoming publication.

Limitations

The MAP was designed as an assessment tool. This tool doubles as a short intervention whose objective it is to elicit reflectivity, to shift caregiver behaviour toward greater sensitivity, and to promote more cognitive and behavioural flexibility. While convinced that, in a vulnerable dyadic system even small positive shifts can result in significant, growing improvement over time, the authors are aware that not all aspects of the parent-child relationship, nor many features of the caregiver's own functioning, can be addressed in five sessions. It is understood that with many high risk dyads the MAP will serve as a comprehensive assessment and the first phase of a longer, multi-faceted intervention process when it is possible to retain the family in treatment.

The MAP is currently a research tool with proven clinical utility: continuing data collection will be required to establish statistically significant long-term effects as well as to provide more specificity when it comes to diverse client populations.

For more detailed information about the MAP, and the research associated with this tool, please contact Yvonne Bohr at bohry@yorku.ca or Leigh Armour at larmour@aislingdiscoveries.on.ca.

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