

# Video Feedback in Parent-Infant Treatments

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## KEYWORDS

- Video feedback interventions • Parent-infant interactions
- Parent-infant treatments • Infant pre-attachment
- Caregiver sensitivity

Studies focusing on parent-infant interactions have developed considerably since the 1970s and have led to an understanding that disturbances in interactive behavior underlie much of infant psychopathology. This understanding has facilitated the development of interventions that focus on the quality of the infant-parent relationship using video feedback analysis of mother-infant interaction. Video feedback has been used in several therapeutic approaches with families that include young children as a way of engaging parents to focus with the clinician on interactive behavior with their child. Several studies have shown that the thoughtful use of this therapeutic tool can improve the quality of interactions in a short period of time.<sup>1-6</sup> Video feedback interventions that focus on attachment quality have also been shown to result in a notable increase in maternal sensitivity.<sup>7-9</sup>

Video feedback has been used in different therapeutic models. Several adaptations to particular settings have been developed using this therapeutic tool, albeit with different goals and targeting a large variety of outcome variables. This article describes how video feedback techniques are used in parent-infant interventions, with attention to their different treatment goals and their different ways of effecting change. Four clinical approaches representing the most important video feedback-based interventions are presented: (a) the attachment-based approach (ie, interventions that seek to enhance parental sensitivity at a behavioral level); (b) the psychoanalytically oriented approach (ie, interventions designed to develop parental reflective functioning and representations using the parents ability to observe and process nonverbal interactions); (c) the systemic approach (ie, interventions that

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target family relationships through behavioral interactions and bodily communication of the different family members); and (d) the transactional model (ie, interventions designed to target the social environment as the primary source of positive and negative development for the child). A clinical case illustrates the transactional model as used in the Interaction Guidance-Geneva Model.

Video feedback interventions may differ in terms of the infants' age at the start of the intervention, the number of sessions, the principal therapeutic target (ie, parent-infant behavior, parental perceptions or the quality of family alliance, quality of parents-infant communication), and their theoretical basis for psychic change (ie, parental sensitivity, maternal reflective functioning, strengthening of positive, corrective experiences, recognizing patterns of negative reciprocity, and so forth). These interventions may also vary in terms of their duration, from a 15-minute videotaped intervention providing behavioral feedback in a single session to an intensive and weekly individual meeting over several years of the child's life.

### ATTACHMENT-BASED INTERVENTIONS

In the last decade, a considerable number of systematic intervention programs driven by attachment theory and research have been developed using video feedback as an important tool to increase parents' sensitivity and responsiveness to their infant's signals.<sup>10,11</sup> The principal goal of these programs is to develop a theory and evidence-based protocol that can be used in a partnership between professionals who are trained in scientifically based attachment procedures, and appropriately trained community-based practitioners.<sup>7</sup> These programs developed rapidly in the field of early intervention because there was an increasing demand by parents and professionals for interventions that are effective in shifting problematic or at-risk attachments toward more adapted developmental pathways.

One of the models developed in this approach is the Video feedback Intervention to promote Positive Parenting (VIPP).<sup>12</sup> This intervention is based on attachment and coercion theories and it focuses on positive parenting defined as the appropriateness of parents' responses to infant's behaviors. To prevent a further increase of externalizing problems in young children screened for externalizing behaviors, the VIPP approach was extended with a focus on parental sensitive discipline (VIPP-SD).<sup>10</sup> The VIPP-SD intervention aims to enhance parental sensitivity and sensitive discipline, that is, the parents' ability to take into account the child's perspective and signals, when discipline is required. This intervention emphasizes the importance of early childhood parenting as an important contributor to socialization processes in the first years of life. In this model, the therapist makes an association between early maladaptive parent-infant interaction patterns, especially inconsistent parental discipline and the failure to provide positive reinforcement for compliant and prosocial behaviors, and the emergence of externalizing problems in infants.

The VIPP-SD is a brief, focused, and standardized program in which parent and child are recorded on videotape during daily situations at home. Video feedback is provided to stimulate the parents' sensitive interactive skills, and targets parenting and information on the development of young children. This model is used by trained interveners during six 1.5-hour sessions with families at home. Each intervention session starts by recording a standardized mother-child interaction (like reading a book together) on videotape. Between home visits, the intervener selects specific video fragments and prepares comments based on the themes of each specific intervention session. The first four sessions have different themes. The first session focuses on teaching parents to recognize the differences between exploratory

behavior and contact seeking (sensitivity), and on the importance of distraction and induction as noncoercive responses to conflict situations. The second session is centered on teaching parents to use positive reinforcement by praising the child for positive behavior and ignoring negative attention seeking (discipline). The third session focuses on the importance of adequate and prompt responses to the child's signals by showing interaction chains with three components: the child's signal, the mother's sensitive response, and the child's positive reaction to that response. The central theme of the fourth session is the sharing of positive and negative emotions and the promotion of empathy for the child, using consistent and adequate discipline strategies and clear limit setting (discipline). The last two sessions consolidate intervention effects by integrating all tips and feedback given in the previous sessions, in video feedback and intervention. The video feedback is adjusted to specific mother-infant dyads, depending on their particular needs and the nature of the videotaped interventions.

In studies using the VIPP approach, positive effects have been documented on parental sensitivity or attachment security in nonclinical groups, for example, in adoptive families,<sup>11</sup> and in at-risk and clinical groups, such as mothers with an insecure representation of attachment,<sup>13</sup> mothers screened for low sensitive responsiveness, and mothers with eating disorders and their infants.<sup>14</sup> Bakermans-Kranenburg and van Ijzendoorn<sup>8</sup> also investigated the differential effectiveness of VIPP-SD in changing basal cortisol secretion in infants, examining the role of the DRD4 gene. The exon III DRD4 7-repeat allele has been associated with several forms of externalizing problems across the lifespan, such as aggression and attention-deficit/hyperactivity disorder. The 7-repeat allele has been linked to lower dopamine reception efficiency; and the dopaminergic system is known to be engaged in attentional, motivational, and reward mechanisms. These investigators found that parental insensitivity was associated with externalizing behaviors in preschoolers, but only in the presence of the DRD4 7-repeat polymorphism. The increase in externalizing behaviors in children with the 7-repeat allele exposed to insensitive care compared with children without these combined risks was sixfold. The dopamine system may affect susceptibility to environmental influences, and may thus play an important role in gene-environment interactions.<sup>9,15</sup>

Marvin and colleagues<sup>7</sup> developed a group-based intervention named the Circle Of Security (COS) designed to shift patterns of attachment-caregiving interactions in high-risk toddlers to more appropriate developmental pathway. This model of intervention is based on attachment theory and on current theory and research on child development, in particular the notions of emotion regulation, interactive synchrony, states of mind regarding attachments and intimate relationships, and reflective functioning.

The core construct of this intervention embraces Ainsworth's ideas of a Secure Base and a Haven of Safety.<sup>16</sup> The COS investigators adapted graphic aides for the intervention, which they share with parents to illustrate both sides of this construct: the child's exploratory system and his tendency to venture away from the attachment figure to explore the world if he feels safe to do so, versus the activated child's attachment system and his need to seek proximity and protection, as well as help in organization of his feelings if feeling threatened by internal or external factors, or if feeling that he has gone beyond the safe limits of exploration. A key component of the COS is to help parents understand that smooth interactions between children and their caregivers are often disrupted and need "repair," and that this ability to repair the disruption is the essence of a secure attachment. This "repair" requires clear cues from each partner and clear understanding and responsiveness to each other's

signals. The intervention uses video feedback of caregiver-children interactions to increase caregiver sensitivity and appropriate responsiveness to the child's signals, to increase their ability to reflect on their own and the child's behaviors, thoughts, and feelings regarding attachment-caregiving interactions, and to reflect on experiences in their own histories that affect their current caregiving patterns.

The COS intervention involves at-risk mothers of toddlers or preschoolers meeting as a small group with a therapist for 20 weeks. In the context of the group, each parent reviews edited video vignettes of interactions with their infant. These video feedback vignettes of interactions recorded during a pre-intervention assessment, and the related psycho-educational and therapeutic discussions, are individualized to each dyad's specific attachment-caregiving pattern and associated internal working models. An identical assessment is conducted immediately after the 20-week intervention to track changes in patterns of child-caregiver interaction. During the first weeks, video vignettes are used to enhance parents' observational skills and understanding of children's needs. As their observational skills increase, parents are asked to evaluate the interactions and to discuss the child's primary need (exploration versus attachment) presented in the video vignettes. Educational videotapes are then used to clarify the role of defensive process within personal interaction, and parents are invited to begin exploring how their defensive process may impact their particular caregiving strategy. Attention is paid to the flexibility/rigidity of the caregiver's defensive process, to her capacity to regulate her own emotions in the group, to her capacity for reflective functioning, and to her willingness to develop a therapeutic relationship with the group leader. Marvin used the COS with 75 dyads and the results showed a significant shift from disordered to ordered child attachment pattern (from 55% to 20%), an increase in the number of children coded as secure (from 32% to 40%), and a decrease in the number of caregivers classified as disordered (from 60% to 15%).

Brisch<sup>17</sup> developed an early attachment-oriented intervention composed of supportive group psychotherapy, attachment-oriented focal individual psychotherapy, a home visit and video-based sensitivity training with families of preterm infants. These infants are known to be at high risk for poor psychomotor, behavioral, and emotional outcomes, and the quality of attachment and parent-infant interaction can be considered as protective factors. In this intervention model, video feedback is used at 3 months of age (corrected for prematurity); mothers and fathers are invited to the laboratory in the hospital for a 1-day, individualized, video feedback sensitivity training session. A 10-minute video of semi-structured play and diaper-changing situations is recorded using a split screen. The aim of this training is to enhance parental capability to recognize their infants' signaling, to reflect on the possible interpretations, and to give positive feedback on interactions in which parents are sensitive to and have a correct interpretation of their infant's needs. This model of intervention is based on the importance of parental sensitivity for the development of the infant's secure attachment.

Egeland<sup>18</sup> implemented a preventive attachment-based intervention called STEEP, which stands for Steps Toward Effective, Enjoyable Parenting. This intervention involves providing ongoing home visits and group education beginning during the second trimester of pregnancy and continuing through the early years of the child's life. Families are referred to the program by obstetric clinics and health care providers and this intervention was originally developed to serve first-time parents whose personal history and life circumstances present challenges to good parent-child relationships. It was later adapted to special populations, such as families with premature babies, teen parents, or mothers with postpartum depression. The principal goal of this program is to enhance the quality of the parent-child relationship in the early years

by bringing support and learning to new mother-infant pairs. During home visits, parent-infant interactions are videotaped regularly in a variety of routine situations. The centerpiece of STEEP is its strategy of videotaping parent-infant interaction (called Seeing is Believing), which is used to engage parents in a process of self-observation as they watch the tape with their home visitor. Video feedback is used to encourage parents to focus on what their baby is telling them and to recognize their own skills in adapting to the baby's needs. Videotaping is considered to help in keeping the parent-child relation at the center of the intervention, to provide a permanent record for monitoring the family's progress, and it is also seen as a valuable aid when seeking supervisors. For the families, the tape is often seen as a treasured keepsake and a powerful incentive for participating in the STEEP program.

### ***Psychoanalytically Oriented Interventions***

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The applied psychoanalytic approach aims to clarify, confront, and interpret defensive maternal representations that mark relational disturbances. This form of treatment is focused on declarative and verbalized modes of exchange,<sup>19,20</sup> whereas the interactional approaches tend to intervene on specific behavioral transactions and focus on the procedural mode of exchange. However, outcome studies using different types of interventions<sup>21</sup> have shown that representational and behavioral approaches are both effective and that the dichotomy between these two approaches overestimated.<sup>22</sup>

Changes in maternal representations can be achieved equally by way of behaviourally focused or representationally focused interventions.

Beebe<sup>2</sup> developed a video-based intervention by adapting microanalytic methods of infant observation used previously in parent-infant research. Affective exchange among other indices of communication became the observational focus by which patterns of interactive regulation could be clarified and verbalized. This brief treatment model includes face-to-face split-screen videotaping and a therapeutic observation of the videotape with the parents. It uses the video feedback within a psychoanalytic framework, often as a consultation to an ongoing psychoanalytically oriented nonvideo treatment of the parent. This consultation model includes positive reinforcement, modeling, information giving, and interpretation while watching the videotape with the parent and her analyst/therapist, focusing especially on the areas of attention, arousal, affect, and timing regulation. This intervention aims to link the history of the presenting "complaints" with the patterns of interactive regulation seen in the videotape and the story of the parent's own upbringing. This model also tries to identify the specific representations of the baby that may interfere with the parents' capacity to observe and process the nonverbal interaction. It argues that the mother's experience of watching herself and her baby interact, and the joint attempts of the therapist and the parent to translate the sequences of behaviors into words, facilitates the mother's ability to "see" and to "remember," stimulating the integration of procedural and declarative modes of processing. The concepts of self-regulation (the capacity of the partners to regulate their respective states) and interactive regulation (the continuous process in which each partner makes moment-to-moment adjustments to the behavior of the other) are important in this model because one of its aims is to identify the relative contributions of self and interactive regulation of the partners in the disordered interactions. Beebe prefers to see infants as young as possible and the typical age is 5 to 9 months. The treatment, which can consist of one or more video feedback consultation visits is generally concluded before the infant's second birthday.

Beebe<sup>2</sup> concluded that observed interactive sequences are the critical ingredients in the process of translating the procedurally encoded action sequences into language and thus into declarative knowledge. For this author, the video feedback method has

the advantage of being simultaneously visually concrete and “distant” because it is not happening right now. It also allows concentration on a particular modality and slowing it down, whereas in the live interaction all modalities and words flood the senses. The visual information of videotaped interactions speaks on its own and helps the clinician to emphasize certain aspects, to underscore the positive elements as well as identify derailments. This video microanalysis method allows the interactive organization of the mother-infant disturbance to be identified but the success of that method depends on the clinician’s capacity to “hold” the mother: staying with the parent as the video is shown, the therapist is alert to any signs of distress and uses these empathically to understand the parent’s experience with the infant and her inner world.

Zelenko and Benham<sup>3</sup> use an infant-parent psychodynamic therapy that involves the videotaping of sessions, with subsequent reviewing and discussion with the mother. In this therapeutic technique, past and current maternal experiences and associated representations are considered central aspects to understand the relational pathology. Videotape replay is seen as a tool accelerating the access to early maternal memories and to promote enlightening awareness of the links between maternal past experience and present behaviors with her child. Video feedback is considered to facilitate therapeutic alliance, especially if maternal ability to develop a trusting relationship with a therapist is of particular concern. Videotaping is seen as a unique vehicle for discussion, providing a distancing effect and permitting observations impossible with the human eye during the session.

Videotape replay can facilitate the therapeutic process in three ways: (a) it provides a unique opportunity to observe the mother’s own nonverbal behaviors during interactions with the child, behaviors considered as enacted mental representations; (b) watching herself in the maternal role may promote identification with the child and access to her own childhood memories; (c) identification with the child may also lead to a better understanding of her child’s immediate experiences with her as a mother.

Schechter and colleagues<sup>23</sup> developed a brief experimental intervention called CAVES (Clinician-Assisted Video feedback Exposure Sessions) that integrates the principles of infant-parent psychotherapy, video feedback, controlled exposure to child distress in the context of parental posttraumatic stress disorders (PTSD), and stimulation of parental reflective functioning. This clinician-assisted video feedback intervention was initially developed to study the process by which change in maternal mental representations can be effected using video feedback in the presence of a mentalizing therapist. The intervention was designed to support emotional self-regulation of mothers with violence-related PTSD. Unlike other video feedback interventions discussed thus far, CAVES, after establishing a positive, supportive frame by showing “the most joyful, contingent, and mutually responsive” moment during mother-child play, focuses the parent and therapist’s attention on a video excerpt of child separation, a situation that exposes traumatized mothers to avoided mental states of helplessness, distress, and perceived loss of protection. Schechter and colleagues<sup>23</sup> posited that negative maternal attributions are an aspect of violent trauma-associated emotion dysregulation and projected self-representations of the maltreated mother.

Schechter and colleagues<sup>23</sup> were especially interested in the question of whether a mothers’ perception of her child could be changed in a single session of video feedback, given that the traditional target of parent-infant video feedback interventions has been mother-infant interactions and not maternal perceptions. In mothers with violence-associated PTSD, Schechter and colleagues<sup>4</sup> found that distorted, negative, and poorly integrated maternal representations of her child were associated with the

severity of PTSD; these mothers had a tendency to view their own children as significant life stressors rather than as sources of joy.

This intervention aims to model and stimulate a mother's reflective functioning (ie, associated with balanced, integrated mental representations). It encourages joint attention with the therapist to the video feedback excerpts. However, because this intervention was developed as an experimental condition designed to test the hypothesis that PTSD interferes with maternal capacity to engage in mentalization and mutual emotion regulation in the "heat" of distressing interactions, Schechter and colleagues<sup>4</sup> state that further research with this manualized approach is needed to replicate the findings and to determine how many sessions helping mothers "to step out of the heat of the moment" would be needed to sustain the observed changes in mental representations.

Cummings and Wittenberg<sup>24</sup> proposed a brief psychodynamic parent-infant psychotherapy called Supportive Expressive Therapy – Parent-Child version (SET-PC) to address the emotional and behavioral problems of toddlers and preschoolers influenced by the parent-infant relationship. SET-PC addresses the parent's internal representations, negative affects, and attributions about the child, and recurrent behavioral responses underlying and maintaining coercive cycles. This intervention applies a social learning approach to the treatment of parent-child coercive transactions. This approach supports the notion that oppositional and aggressive behavior is learned and maintained within the parent-infant relationship, and that children's disruptive behavior is inadvertently reinforced by their parents.

SET-PC is a brief, manualized intervention that includes a structured assessment phase, a socialization interview, and 16 therapy sessions. The parent's Core Conflictual Relationship Theme (CCRT) is formulated in the assessment phase of therapy (two to three sessions), during which the parent is seen without the child. During the socialization interview with the parent, the CCRT is shared and agreement is reached that the CCRT does in fact match the child's presenting problem and that it provides some explanation for it. The therapeutic process is reviewed with the parents and dates are set for 16 subsequent sessions.

Each dyadic therapy session begins with a 20-minute parent-child play session recorded on videotape, followed by a 50-minute therapist-parent session. The first 10 minutes are spent watching a portion of the videotape chosen by the therapist. The therapist uses supportive interventions to help the parent recognize the recurring and maladaptive nature of the CCRT and the therapeutic change through the therapy. After termination, a 3-month follow-up appointment is scheduled. Videotaped interactions are used: (1) to enhance the parent's ability to observe and reflect on their own states of mind, their children's states of mind, and the influence of the interaction on both; (2) to help the parent to recognize recurring attributions, affects, and behavioral responses in themselves (CCRT in action), and to understand how these influence the child's symptomatic behavior; (3) to help the parents recognize developmental capacities in the child. This intervention is considered as a powerful experiential learning, and it allows the development of the parent's observational capacities and reflective functioning. Reflective functioning capacity is associated with better parental functioning because the parent more accurately perceives, accepts, and attunes to the child's mental state.

## SYSTEMIC INTERVENTIONS

Video feedback techniques are also used in interventions focusing on family relationships. Fivaz-Depeursinge and Corboz-Warnery<sup>25</sup> developed a method of "systems

consultations” for therapists caring for high-risk families with infants and young children that involves parental psychopathology, conflict between spouses/parents, or functional problems in the case of the child. In systems consultations, the therapist asks the consultant for assistance to identify or clarify a situation and consider different options for intervention. The goal of consultation for the parents is to receive feedback on their child’s resources or possible deficits, and to help them in parenting their child. This model of intervention was later applied to extended therapeutic work with families to complement the assessment of the triad or of the larger family system, with separate assessments of the family’s dyadic subsystems.<sup>6</sup> The model has been used in training professionals to work with families in infant mental health in several countries, in particular in a nationwide, early childhood psychiatry program in Israel.<sup>26</sup>

This model of intervention is based on the Lausanne Triadic Play (LTP) paradigm, which is a clinical research paradigm developed to systematically observe family interactions in a three-way relationship between the father, the mother, and the infant. As the goal of triadic play is to share playful moments of affective communication, the LTP assessment targets the family’s intersubjective communication. Three-way communication is attained by means of complex coordination between the three partners’ (mostly nonverbal) signals. The infant’s active participation in affect sharing by means of his/her triangular capacity is observable from early on. In good-enough family alliances, the three partners are included in the interaction; no one is excluded; they keep to their roles (active versus third party); the parents support each other in front of the child. In problematic alliances, exclusion, or interferences or withdrawal from roles are the main patterns; the parents undermine or fail to support each other and the infant is not engaged. Thus, each type of family alliance has specific strong and weak points that point to the exact target of intervention. For example, if there is a family pattern of exclusion of one of the members, the intervention will be directed at this exclusion. If a parent self-excludes himself, micro-episodes of triangular family play of the LTP previously selected by the consultant may be reviewed during the video feedback with the therapist and the parents, and the context of exclusion identified. The consultant might then reframe the parent’s disengagement from the child following the techniques elaborated by family therapists, such as the exclusion being the result of his “invisible loyalty” to his family of origin. Assuming the therapist and family return later for a consultation to check on the progress of the therapy, this context of exclusion may be contrasted with micro-episodes in which all family members share triangular positive affect.

There are four parts in the triadic play: (1) one parent plays and the other is a third party; (2) the two parents reverse roles; (3) all three play together, and (4) the two parents interact with one another and the infant is a third party. These four episodes are recorded on videotape and later used by the consultant for video feedback. The paradigm can be adapted for older children, namely toddlerhood, childhood, and adolescence. A prenatal version (with a doll representing the future infant) has also been developed to assess the coparenting alliance in formation.

A systems consultation takes part in two sessions. During the first session, the family interactions are observed and recorded in the LTP and in other family tasks, such as diaper changing, feeding, and separation-reunion. The parents are aware that the consultant receives little information regarding their problems before the observation. In this way, the consultant remains to some extent blind to the issues at hand, to prevent any bias on his side. After a period of rapport building, the parents and infant are seated in chairs in a triangular formation for the LTP portion of the consultation. If the family has experienced problems in performing the task, the consultant may join the family in the LTP setting and make a direct intervention aimed

at triggering changes in the interactive patterns.<sup>6</sup> Then the consultant asks the parents whether they consider that the video is representative of their style of interaction. It is at the end of the observation session that the therapist and the family formulate the motive of the consultation. A second session is scheduled with the therapist and the family for the video feedback. In the meantime, the videos are examined from a clinical perspective as well as micro-analyzed to detect the interactive pattern sequences that best illustrate the family resources and the family problems. Thus, the therapist will use the video feedback to strengthen positive interactive patterns and, if possible, to work on family negative interactive patterns.

The integrative, communication-centered, parent-infant counseling and psychotherapy developed by the Papoušeks, generally called the Munich Model, is also a systemic model based on interdisciplinary research on infant regulation, preverbal learning, and preverbal communication conducted by Hanus and Mechthild Papoušek.<sup>5,27</sup> This approach, developed in the early 1990s, focuses on early communication with regard to joint regulation of adaptative developmental tasks, and particularly on the interplay between the infant's integrative and self-regulatory capacities and the parents' intuitive competencies. Therapeutic elements and techniques from various schools were integrated into this model. It can be conducted with a large diversity of infant behavioral syndromes and psychological problems in parents. The age range includes the first 3 years of life. This model directly addresses patterns of communication at the interface between observable interaction and the parent's conscious and unconscious affects and representations.

This intervention starts with an interdisciplinary diagnostic analysis of the behavioral manifestations, and the immediate and distant conditions of their origin. The assessment includes infant regulatory capacities (eg, developmental level, strengths and difficulties, temperament, quality of solitary play), amount and quality of parental distress (eg, physical and emotional well-being, resources and stress factors, the couple's relationship, family, and social network), and parent-infant communication and relationships (eg, patterns of communication in disorder-related interactional contexts, and attachment behavior). The goal of the treatment is discussed with the parents beforehand and it is always threefold, resolving the behavioral problem, unburdening the parents, and supporting positive relational experiences. Three main interrelated modules are considered to be important: developmental counseling, supportive psychotherapy, and video-supported guidance in communication. These are complemented if needed by psychodynamic communication-centered relational therapy.

Video-supported guidance is used at the level of parent-infant communication. It is mainly directed at observable parent-infant interactions or those described by the parents, and particularly at the patterns of communication in contexts in which the behavioral problems are the most evident (eg, feeding interactions or limit setting). The therapist draws the parents' attention to observable communication patterns during the session and regularly uses videotaped observations. The goal is to replace dysfunctional communication patterns marked by negative contingency between the infant's and the parents' behavior with functional patterns. Specific interactional sequences are selected and analyzed together with the parents. Video feedback, with its technical potential for repetition and pausing, still-framing, slow motion, and time-lapse replay of selected sequences, allows the parents to become aware of particular interactional patterns. However, Mechthild Papoušek considers that this procedure should be used with caution because each video image intrudes into the most intimate sphere of the parent. Therefore, in this model, a secure and protective therapeutic relationship is an indispensable precondition for any video-supported

intervention. Special attention is given to the parents' experience and feelings after an observed situation has been recorded or just before viewing it with the parent to help them to deal with any potential vulnerability. As in most of the treatments discussed in this article, the therapist is expected to have thoroughly reviewed and analyzed the contents of the video. It is also easier for the parents to become involved in the emotional processes elicited by the video feedback if the child is not present at the session.

At the beginning, the parents and therapist look at the positive segments repeatedly, which allows the parents to identify the moments of attunement and to experience them emotionally. The therapist carefully probes for the parents' feelings and associations. Even subtle feelings of relaxation, joy, or pride may be reinforced by the therapist's affective attunement. Later in the session, the parents are encouraged to identify with their infant, and to experience how their own behavior is perceived from the infant's perspective. This initial focus on positive sequences is followed by a joint analysis of difficult interaction sequences that are directly related to the behavioral problems.

Papoušek considers that when viewing a short segment of a dysfunctional interaction pattern, it is advantageous to first address the parents' representational level of associated feelings and to find out which specific behaviors on the part of the infant trigger which affects in the parent. The parents are also encouraged to identify with the baby, and to reflect closely from the baby's perspective at a behavioral and emotional level. The parents and the therapist then look for negatively contingent relations at the behavioral and representational level, and for the psychodynamic mechanisms that may trigger or resolve the dysfunctional communication pattern. The therapist uses microanalysis during video feedback to decode the sequences of parent-infant communications, and to identify the positive and negative interactions. Papoušek observes that it is often difficult to determine whether and to what extent the infant's temperament (eg, irritability or low arousal threshold) or parental factors (eg, depressive inhibition of intuitive competencies or distorted perception) are the cause of the derailment of parent-infant communication. Most often, both sides contribute to maintaining maladaptive interaction patterns by their behavior. Papoušek observes that parents are often able to recognize the mechanisms of negative reciprocity, or the signs of over- or understimulation in their own responses. Attempts are then made to find ways to break this vicious circle of negative reciprocities, and to practice alternative behaviors within the therapeutic context.

## TRANSACTIONAL MODEL INTERVENTIONS

Interaction Guidance treatment is a therapeutic model developed by McDonough<sup>1</sup> and created specifically to meet the needs of infants and their families who previously refused treatment referral or were unsuccessfully engaged in mental health treatment.<sup>28</sup> Many of these families could be described as being overburdened by risk factors such as poverty, poor education, family mental illness, substance abuse, lack of parenting partner, and inadequate social support.<sup>1,29-31</sup>

As a transactional model, Interaction Guidance treatment incorporates principles of the family system theory into a multigenerational transactional intervention and considers the multiple relational contexts of the infant, such as the baby's caregivers, the extended family members, and the broader social and cultural networks in which the family lives. Because many of these overburdened families are preoccupied with everyday life challenges, observable interactions between baby and caregiver serve as the therapeutic intervention focus.

The key process features of interaction guidance are (1) encouraging the family to define the problem or issue of concern as they see it, (2) working hard and quickly to establish a positive working alliance, (3) emphasizing a family's strengths and recognizing their vulnerabilities and limitations, (4) using an egalitarian and cooperative approach in the engagement and treatment of the families. Families are generally seen weekly for 10 to 12 one-hour treatment sessions. The therapist monitors treatment progress weekly with the family and he jointly decides with the parents the definition of treatment success.

Treatment structure includes (1) clinical assessment of family functioning, social support, and interaction style to acquire clear understanding of the family's view of the problem or situation; (2) involving family members in the treatment planning and choosing who comes to the treatment, and (3) delivering the treatment.

The treatment sessions are usually held in a specially designed playroom equipped with developmentally appropriate toys selected by the therapist. Toys and play material are chosen because they invite use by more than one person. Each session involves two main phases: videotaping the family play sequence, and viewing the videotape. The sequence of activities during each session remains fairly consistent throughout treatment. Once the family is welcomed into the playroom, the therapist inquires about what has occurred in the family's life since the last visit. If the therapist considers that family members are satisfied that their concerns have been addressed, he invites the family to play with their infant the way they would do if they were at home. The therapist videotapes approximately 6 minutes of the play sequence, remaining in the treatment room but trying not to interact with family members. He makes particular note of behaviors that need to be modified or altered because of their critical importance. Content and style can provide important clinical information to the therapist. Content refers to *what* the dyad or family is doing. Are they playing, talking, negotiating, or fighting? Style addresses *how* the family goes about interacting. For example, when the parent plays with the infant, does the parent follow the infant's lead or does the parent try to have the baby do what he wants? By observing family members together, the therapist can draw attention to the pleasurable feelings derived from family interactions and nurture and coach these behaviors from reluctant or insensitive interaction partners.

After recording the play interaction sequence, the family and the therapist view the videotape. Initially, the clinician attempts to solicit comments from the parent(s) concerning their perception of the play sequence, and their thoughts and feelings regarding their infant and their role as parents. A series of systematic probes are posed to the family, such as "was this play session typical of what happens at home?" or "were you surprised by anything that happened during the session?" Following the caregiver's comments, the therapist highlights specific examples of positive parenting behavior and parental sensitivity in reading and interpreting their infant's behavior. He uses what is positive in the parent as the foundation for improving and building a more satisfying relationship with the baby before attempting to intervene in areas of family concern. During these repeated occasions, most families begin to realize that the focus of treatment is positive in nature and that the therapist will address family-identified problems through the use of competence and strength. This video feedback intervention can thus be a powerful therapeutic experience for parents overburdened by guilt and disappointment.

The use of videotape in treatment allows for immediate feedback to parent(s) or family regarding their own behavior and its effect on the infant's behavior. However, the viewing and feedback aspect of the sessions seem especially meaningful to the family at the beginning of the treatment. As families become more comfortable

verbalizing their thoughts and concerns spontaneously with the therapist, they seem to view the videotape feedback as an opportunity to reflect on what the televised event represents to them or stirs up in a broader context, such as events of the past week or experiences from years past and the feelings associated with these memories. At the end of the treatment, the clinician edits a videotape documenting the changes that occurred in parent-child interactions and family transactions over the course of the treatment. He gives it to the family as a record and an example of their sensitive and positive parenting.

This treatment has proved to be successful for families caring for infants with growth failure, regulation disorders (sleeping, feeding or excessive crying), biologic vulnerabilities (substance-exposed), and genetic disorders.<sup>1,32</sup> It also proved to be efficient in the treatment of feeding disorders in an adapted version of Interaction Guidance,<sup>33</sup> which included an individually tailored educational component (eg, information about regulatory difficulties or other specific problems exhibited by the infant) and the traditional phases of videotaping the family play sequence and video feedback.

The Interaction Guidance-Geneva Model was developed in Geneva (Switzerland) in the late 1980s by a small group trained by McDonough.<sup>34-36</sup> It was implemented in the context of several outcome and process studies on brief mother-infant psychotherapies with infants presenting functional troubles<sup>21,37</sup> and early behavior problems.<sup>38,39</sup> The disorders targeted in these studies determined an initial restrictive use of this treatment for disorders such as sleep and eating problems, separation difficulties, inconsolable and fussy babies, tantrums and early conflicting relationships. This intervention proved to decrease significantly the rate of behavioral symptoms (such as sleeping or feeding problems) and to improve the quality of mother-child interaction. Mothers came to view their children as well as their own childrearing competencies considerably more positively.<sup>40</sup>

For more than 15 years, this model has been used in a great variety of situations and proved to be particularly useful with depressed or anxious mothers, and with mothers lacking insight or too much intellectualizing. Several adaptations of the initial model were introduced to promote an optimally adjusted therapeutic setting. These adaptations mainly concern the observation context (game or other interactive behavior occurring during the session) and the timing and setting of video feedback (immediate, deferred, with or without the child).

Interaction Guidance was also adapted to the treatment of language delays as well as communication and autistic spectrum disorders by one of the first practitioners of Interaction Guidance in Geneva.<sup>41</sup> In these treatments, the refined observation of the interactions aims to help the parents to better understand their child's special needs and to propose more adjusted and mutually gratifying responses. In the treatments of language delays, the video feedback specifically targets the components of interactions that correspond to the prerequisites of the language emergence (eg, joint attention, pace of exchanges, turn taking, and so forth). The treatment of children with autistic spectrum disorders required a modification of the therapeutic setting to propose a supportive context allowing the parents to experiment with more harmonious interactions with their troubled child. During the parent-child game, the therapist may use two types of interventions: *modeling* (participation in a parent-child game and proposition of an interactive model to the parent) and *prompting* (suggestions or instructions whispered to the parent). Interaction Guidance has been demonstrated to be successful in allowing the parents to rapidly develop a deeper empathy toward their child's difficulties and a better acceptance of the diagnosis and of further therapeutic measures.<sup>42</sup>

Professionals of different disciplines (speech therapists, psychomotor therapists, social workers, educationists, specialized teachers, psychiatrists, and pediatricians), working in different clinical contexts (neonatology unit, kindergarten, residential treatment centers for adolescents, private practice, and so forth), have been successfully trained with the Geneva Model. They applied this model according to their therapeutic aims and in their specific intervention contexts (such as observations of parent-premature baby around the incubator, feeding moments at home, and so forth).

An illustration of the Interaction Guidance-Geneva Model is presented in the following section. The case was referred to our service by the kindergarten and was included in our study on behavior problems. The treatment was conducted by the first author.

### THE CASE OF SAMUEL

Samuel is a 35-month-old boy who was described by his mother as “nervous and agitated since he was a baby.” His mother said that he was strong-willed, stubborn, and never forgets his aim. After the parents’ separation, 6 months earlier, he became defiant and sometimes aggressive with his mother, laughing if she became angry with him. At home, Samuel frequently refused to eat and the mother let him eat whatever he liked whenever he wanted. His mother did not want his father to participate in the sessions due to severe marital conflict. As a child, she remained in her own country and was brought up by her grandparents when her parents came to work in Switzerland. She herself had behavior problems and was thrown out of two schools before her father decided to bring her to Switzerland when she was 13 years old. Her behavior problems stopped when she joined her parents. Despite this, mother did not see any relationship between her own childhood and her son’s actual difficulties.

During the evaluation before treatment, Samuel was extremely agitated and defiant with the examiner, and aggressive with his mother. After he broke several pieces of the assessment materials, his mother smiled at him in a tender way and said to the examiner: “You see, he is not frightened! Even with you!”

During the first session, after a brief exploration of the toys available to him, Samuel interrupted the interview with a remote-control car. Despite this, his mother paid no attention to him. This rapidly worsening disturbance made it impossible to complete the interview and the therapist was obliged to remove the noisy toy. In response, Samuel fell to the floor in tears. Even then, his mother remained distant and showed no emotion. The therapist explained to Samuel why he had not been allowed to play with that toy, and reassured him that he would get it back later. She said that she recognized that this was a difficult moment for him; she then explored with the mother *her* feelings about the therapist’s having forcefully set limits. The therapist encouraged the mother to get closer to her child and try to comfort him.

These interactions addressed three problems that had been identified in the course of the treatment: (1) the child’s need for support; (2) the mother’s difficulties in frustrating her child and setting limits; and (3) the disturbance of mutual emotional regulation that was linked, in part, to the mother’s difficulty in identifying and responding to her child’s distress. The videotaping and the analysis of the mother-child game allowed engagement in the therapeutic process.

During the mother-child game, Samuel snuggled close to his mother, who led the interactions at a quick pace. He carefully observed her and followed her propositions. The emotional climate was tense but warm. Suddenly, during a doll’s tea-party, Samuel put a piece of plastic fruit in his mouth. His mother burst out laughing and

then abruptly ordered him to remove it, simultaneously yanking it out of his mouth. Mother and child were in a control battle until Samuel ran around the play room frantically such that his mother was unable to catch him.

At the video feedback of mother-child play, excerpts from the first part of the play session were selected to illustrate Samuel's motivation, cooperation, and pleasure. His mother was guided to observe how he was seeking physical proximity with her, paying close attention to her, imitating her, and responding positively to her bids. This video feedback aimed, as a first step, to help the mother to identify Samuel's needs for security and support.

To facilitate the mother's ability to see for herself the possible trigger of the vicious circle of disorganizing mother-child interactions that were observed on video, the therapist selected the key moment during which the mother laughed at Samuel as he was putting the piece of plastic fruit in his mouth. At first, the mother believed that her response to Samuel's behavior was a clear and firm "no!" and that Samuel had persisted because he was strong-willed and stubborn. She had to see this video sequence several times with the positive encouragement of the therapist to consider what she had seen on the tape, to recognize her own behavior. She finally did realize that her first response to Samuel had been a mocking roar of laughter and that this affective response had reinforced the difficult behavior of the child.

During the second session, the emotional climate was notably more harmonious. Samuel was less disruptive with and more affectionate toward his mother. His bids for her attention alternated between provocation from a distance and seeking physical proximity and comfort.

The treatment was completed in seven sessions. By the time of termination, Samuel's mother had succeeded in firmly setting limits with Samuel whether or not he mounted a protest. She noticed, with relief, that he always came back to her after his bouts of disorganized aggressive behavior, as if he had "calmed down." Follow-up after the treatment's termination showed that Samuel had become more autonomous and had presented significantly less disruptive behavior at home and in his preschool.

## DISCUSSION

Video feedback techniques are thus potentially important tools that can facilitate and accelerate intrapsychic and behavioral change as either the mainstay of treatment or as a supplement to an ongoing psychotherapy. Video feedback aides the development of the therapeutic alliance, and a feeling of shared intersubjective experience between parent and therapist and parent and child. Video feedback interventions have an increase in positive parenting as a common goal. But they often use different mechanisms and techniques. Whereas some approaches specifically teach and focus on parenting behaviors like, for example, maintaining focused attention on the child or using frequent praise, others, such as nondirective psychodynamic therapies, provide parents with the opportunity to view and reflect on their own psychic functioning and that of their children during their daily interactions. The therapeutic target in this latter example will often be the parent's mental representations of herself, her relationship with her child, and of her child as she imagines his subsequent growth and increasing autonomy. It is ultimately up to the therapist and parents to figure out which type of intervention might be indicated and best suited to a given, particular dyad. Early research on these techniques is promising, although the field will be strengthened by future systematic examination of the outcomes associated with these clinically valuable tools.

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