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The intervention model for affective involvement and its effectiveness

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Chapter 2

Introducing an intervention model for fostering affective involvement with persons who are congenitally deafblind

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Abstract

The article presented here introduces the Intervention Model for Affective Involvement (IMAI), which was designed to train staff members (for example, teachers, caregivers, support workers) to foster affective involvement during interaction and communication with persons who have congenital deafblindness. The model is theoretically underpinned and practical implications and preliminary implementation findings are discussed.

2.1 Introduction

Affective involvement (the mutual sharing of emotions) is a key characteristic of well-attuned social interactions, which are essential for the regulation of emotions and the development of secure attachment relationships (for a review, see Diamond & Aspinwall, 2003). For children and adults with congenital deafblindness, who have limited or no access to visual or auditory environments since birth, it is enormously difficult to develop well-attuned social interactions, because such individuals struggle with orienting, perceiving information, and communicating feelings and intentions (Hart, 2010; Janssen & Rødbroe, 2007). Despite the inherent difficulties that persons with congenital deafblindness experience, two studies have shown that it is possible to increase affective involvement between persons with this condition and their communication partners. Chen, Klein, and Haney (2007) demonstrated that family members could improve their ability to identify their children's needs and emotions, and Janssen, Riksen-Walraven, and Van Dijk (2003a) showed that educators of persons with congenital deafblindness can be trained to promote affective involvement. Although these studies have made important contributions to affective involvement, they focus only on increasing affective involvement during *social interaction*, "the process of mutually influencing each other's behavior" (Janssen, Riksen-Walraven, & Van Dijk, 2003b, p. 198).

Building on these studies, we expand the idea of affective involvement during social interaction by focusing on affective involvement during a more complex form of social interaction, namely, *communication*, which has been defined as "a form of interaction in which meaning is transmitted by use of utterances that are perceived and interpreted by the partner" (Janssen et al., 2003b, p. 198). We assume that fostering affective involvement during communication may be more difficult than during interaction because, when interpreting expressions of communication by persons with congenital deafblindness, communicative partners will mainly focus on the expression's content, which may be to the detriment of the quality of the underlying interactions and emotional exchanges. Without support, communication partners may find it difficult to move from sharing emotions during interaction to sharing emotions during communication.

In the present article, we introduce and describe the Intervention Model for Affective Involvement (IMAI). This model aims to foster affective involvement during both interaction *and* communication with persons who have congenital deafblindness. IMAI is an extended version of the Diagnostic Intervention Model (DIM; Janssen et al., 2003b) that has proven to be effective in fostering harmonious interactions with persons who have congenital deafblindness (Janssen et al., 2003a). In the following section, we begin by highlighting the significance of affective involvement for emotion regulation. Next, affective involvement during interaction and affective involvement during communication are examined, and IMAI is presented. In the concluding section, the model's practical implications are discussed.

2.2 Affective Involvement and its Significance for Emotion Regulation

The mutual sharing of emotions (affective involvement) is assumed to help form a bond between people because it evokes social awareness and promotes interpersonal relationships across the life span (Bowlby, 1982). The emergence of affective involvement in the early parent–child relationship has been extensively described by Stern (1985), who emphasized the key role of affect attunement by the parent in this process. According to Stern (1985, 2000), affective attunement encompasses the parent’s ability to “read” the infant’s feeling-state from its overt behavior. Accordingly, the parent provides a response that corresponds with the infant’s behavior in such a way that the infant experiences the parent’s response as related to its own original feeling. The parental response creates a sense of “feeling understood” in the child. Analogous to the parent–infant interaction, communication partners of older children and adults with congenital deafblindness can also use affect attunement to successfully increase affective involvement during interactions by mimicking the emotions of the person with congenital deafblindness through the use of well-attuned facial, vocal, postural, and tactile feedback. Increasing evidence on affect attunement suggests that it also plays a key role in fostering positive emotions and well-being of interaction partners across different age groups (Diamond & Aspinwall, 2003; for studies on older persons in nursing homes, see, for example, Custers, Kuin, Riksen-Walraven, & Westerhof, 2011, and Magai, Cohen, & Gomberg, 2002).

Affective involvement in well-attuned social interactions not only increases positive affects but also helps to reduce negative emotions (Diamond & Aspinwall, 2003; Janssen, Schuengel, & Stolk, 2002; Schore, 2001). These outcomes are very important for persons with congenital deafblindness because limited access to the physical and human environment makes them vulnerable to experiencing negative emotions and tensions (Rødbroe & Souriau, 1999). Persons with congenital deafblindness are prone to experiencing stress, a state of negative tension resulting from an imbalance between their inner demands and the external demands from their environment and their abilities to cope with those demands (Perry, 2004). Daily stressful frustrations may even lead to prolonged states of negative tension, which will result in recurrent negative emotional outbursts. Extensive research has demonstrated that both acute and chronic negative emotions impede the social functioning, empathy, exploratory behavior, and cognitive functioning in children and adults (Bradley, 2000; Diamond & Aspinwall, 2003; Schuengel & Janssen, 2006). Positive emotions, in contrast, have been shown to foster cognitive, emotional, and social development and functioning (Diamond & Aspinwall, 2003; Schore, 2001; Sroufe, 1995) and to promote communication (Trevathan & Aitken, 2001). Fostering affective involvement is therefore crucial for increasing positive emotions and reducing negative ones. By experiencing affective involvement, persons with congenital deafblindness not only feel understood and encouraged by

the interaction partner but also feel supported in reducing stressful experiences and in coping with stressors.

2.3 Affective Involvement during Interaction

Emotions are shared between the communication partner and the person with congenital deafblindness in interactions or mutual behavioral exchanges when the communication partner cross-modally expands on rhythms, temporalities, and tensions that are expressed by the person with congenital deafblindness. For example, the communication partner may mimic the joyful arm movements of the person with congenital deafblindness by tapping the person's leg in the same rhythm as the movements and by using similar rhythmical vocalizations. Trevarthen and Aitken (2001) called such dynamic exchanges "proto-conversations." Proto-conversations have the same behavioral structure as conversations (that is, mutual attention and turn-giving or turn-taking), but the exchanges are not intended to transmit meaning as they are during communication.

Three categories of interactive behavior of communication partners are assumed to play an essential role in interactions with persons who have congenital deafblindness and therefore deserve special attention in interventions aiming to improve the quality of these interactions. First, attention to the interactive partner and to the actions or objects involved is needed for an interaction to emerge. For example, attention can be established by searching together, hand-under-hand, for a ball on the table. Second, interaction initiatives of the person with congenital deafblindness have to be recognized and responded to in order to strengthen the person's motivation to initiate and continue interactions. This can be achieved, for example, by affirming the other person's touching of the ball and coactively rolling it on the floor for a short time. Third, regulating intensity of the interaction is needed to avoid distress and increase pleasure in the interaction. In this behavior, the interaction can be slowed or it can be done with breaks. For example, when the person with congenital deafblindness withdraws his hands when engaging in an activity together, the communication partner waits until the person with congenital deafblindness makes contact with the communication partner's hands again to continue the coactive behavior. The three core categories of interactive behavior discussed are also included in the DIM (Janssen et al., 2003b) for fostering harmonious interactions, which has been shown to effectively increase affective involvement during interactions with persons who have congenital deafblindness (Janssen et al., 2003a).

2.4 Affective Involvement during Communication

In the present article, we aimed to extend the DIM by focusing on improving affective involvement not only during interaction but also during communication. Affective involvement during communication is difficult for communication partners of persons

with congenital deafblindness to achieve, because they must coordinate the flow of interactions while simultaneously focusing on meanings and intentions and tactilely sharing emotions.

Sharing experiences and sharing meaning are required to establish conversations with persons who have congenital deafblindness (Janssen & Rødbroe, 2007). *Sharing experiences* happens when events are elaborated upon or when new events are introduced between communication partners. In the example of a child with congenital deafblindness feeling distressed while feeding a horse after the horse unexpectedly touches the child's hand to grab a carrot, the caregiver elaborates upon the frightening experience by touching the spot where the child felt the horse's nose and repeatedly mimicking the touching with sudden and quick movements on the child's hand until the child understands that the caregiver is referring to what just happened. Then the child shows affective involvement towards the caregiver by hugging. Sharing experiences is only possible when communicative partners are open to each other and feel secure and emotionally engaged with each other. *Sharing meaning* is characterized by a turn-taking structure in which partners take turns negotiating the meaning of expressions by interpreting and affirming each other's expressions and emotions. For example, when discussing the meaning of negative emotions expressed by the person with congenital deafblindness, the communication partner first imitates the expressed negative emotion, such as mimicking sounds of distress by rhythmically vocalizing "uhuhuh" with similar pitch, and imitating the person's agitated movements of the upper body by repeatedly making similar movements. The communication partner then waits for the response of the person with congenital deafblindness. The person with congenital deafblindness may vary his or her emotional expressions, for example, by making sounds of discomfort and making exaggerated movements with the arms. Subsequently, the communication partner repeats giving and taking turns and imitating emotions until she discovers, for example, that the person with congenital deafblindness is suffering from a stomachache. Then they finally share meaning about the sore spot.

Harmonious interactions are indispensable in establishing and developing communication because it is impossible to exchange wishes and intentions without social awareness, attention, and motivation (Trevarthen & Aitken, 2001). This requirement is accounted for in the two-phase IMAI that we have developed to foster affective involvement during interaction and communication with persons who have congenital deafblindness. In Phase I, the communication partner learns to promote affective involvement during interaction by focusing on the core concepts of attention, initiatives, and regulating intensity, adjusted from Janssen and colleagues (2003a). When the communication partners can recognize and share emotions during interaction, the focus of the intervention shifts to affective involvement during communication. This is Phase II of the IMAI. In Phase II, the communication partners learn to promote affective involvement while focusing on sharing experiences and sharing meaning. The

IMAI outlined in the next section is designed to be suitable for persons with congenital deafblindness of all ages with different communication partners (that is, teachers, caregivers, and support staff members), and in different interaction contexts, settings, and organizations.

2.5 IMAI

Figure 1 provides an overview of the aim and principles of the IMAI. The intervention is focused on improving the competencies of communication partners in (a) recognizing

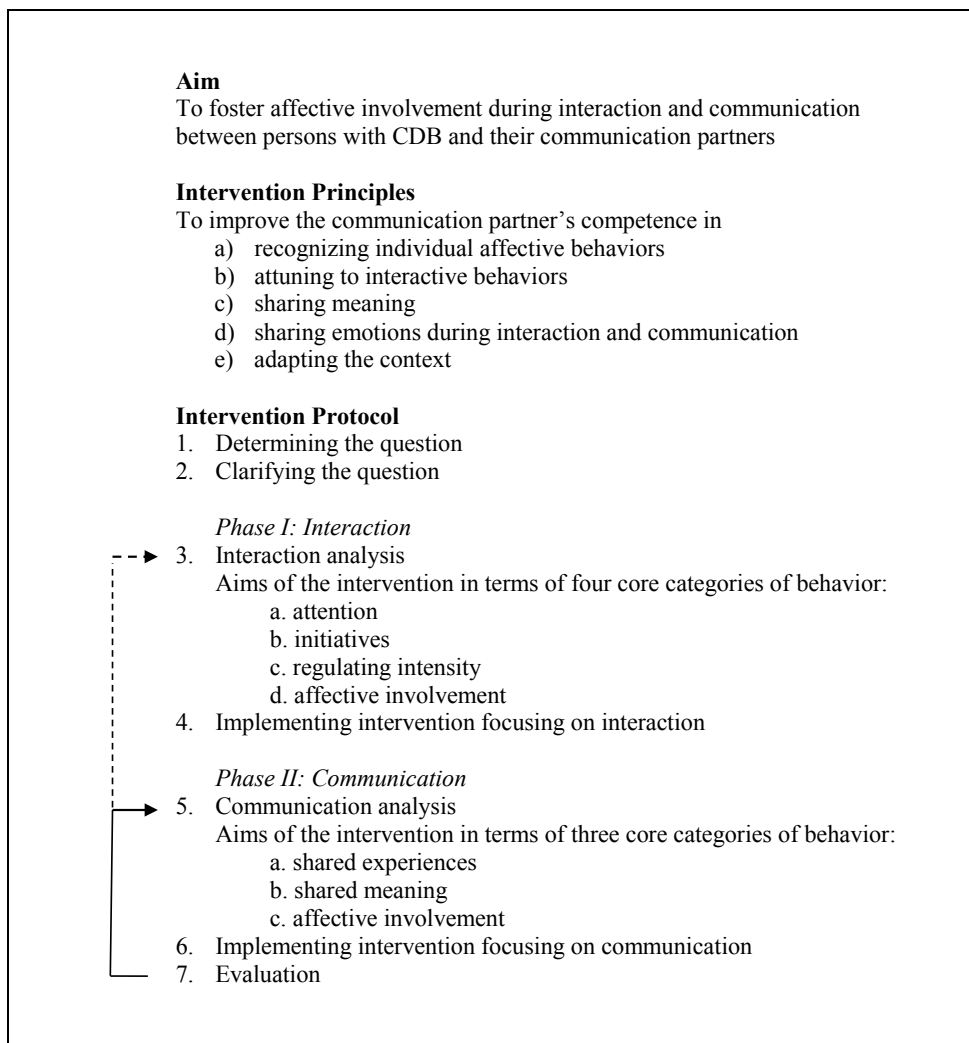


Figure 1. Intervention model for affective involvement during interaction and communication

affective behaviors of the person with congenital deafblindness, (b) attuning to interactive behaviors, (c) sharing meaning for better understanding, (d) sharing emotions and evaluating the adequacy of their own affective behavior during interaction and communication, and (e) adapting the context to promote affective involvement.

The intervention protocol is conducted by a coach for a team of communication partners (for example, the caregivers in a group home) who have requested to be coached in handling difficult emotional behaviors of a given person with congenital deafblindness (henceforth referred to as “the client”). To be successful, the coach, who has to be familiar with the IMAI’s aim, principles, and protocol, has to have extensive work experience, a specialization in interaction and communication with persons with congenital deafblindness, and skills in conducting video analysis and coaching communication partners with video feedback.

During intervention, the coach uses two types of coaching: team and individual. *Team coaching* is used with the whole team of communication partners to ensure agreement within the team about the changes in behaviors and attitudes of the client that are needed. *Individual coaching*, on the other hand, focuses on single team members. These individuals are selected to receive one-to-one coaching to fine-tune the intervention of their interaction and communication with the client, and to encourage them to use and strengthen their competencies in daily practice. For selection of communication partners who have requested individual coaching to improve their behavior, the coach consults the team before the start of the intervention. The communication partners with the highest need for coaching are given priority. Depending on the working schedule of the communication partners and coach, the number of communication partners who are selected for individual coaching may vary from one to five.

Video analysis and video feedback are the most important tools for coaching. In this process, the coach uses recent video recordings of interactions between the client and one of his or her communication partners for analysis. These videos are shot weekly during the intervention period and record interaction episodes of at least 20 minutes. Video analysis involves the communication partner repeatedly watching the video clips with the coach (in slow motion if needed), while the partner receives feedback about the interactive target behaviors in relation to the intervention aims.

Information transfer and role-playing are also used during coaching. Information transfer involves presenting of information about core concepts and defining interaction, communication, and affective involvement targets to emphasize the importance of improving affective involvement skills and to ensure unambiguous use of terminology. Role-playing involves the coach and one of the communication partners reenacting a certain communication situation. First they imitate what they saw on the video recordings and provide variations on those behaviors (for example, demonstrating possible strategies for tactile communicative acting), and then the coach

begins a discussion on the strategies that might be effective for sharing emotions in this particular case.

2.5.1 Applying the intervention protocol

The coach applies the seven-step protocol (Figure 1) to design, implement, and evaluate the intervention.

1. Determining the question.

The coach receives a request for coaching from the communication partners or psychologist concerning difficulties in recognizing, understanding, and regulating emotions of a given client (for example, “It is difficult to calm Leon when he is angry. Why is he angry and what can we do to soothe him?”). The coach examines whether the case meets the model’s intervention criteria, because IMAI is only appropriate when the difficulties about sharing emotions are due to constraints in interaction and communication caused by deafblindness. Communication partners also have to express the need for coaching and to commit themselves to the video feedback intervention.

2. Clarifying the question.

The coach consults the team of communication partners to formulate the definitive questions for coaching, for example, “How can we improve communication so that Leon does not need to hit himself to express his negative emotions?” and relevant intervention situations, for example, shopping or playing with objects.

The coach gathers additional information about the client’s different functioning domains by searching the client’s personal file, conducting live observations, and carrying out a hands-on assessment (Nelson, Van Dijk, & McDonnell, 2002). The coach analyzes the physical and social interaction contexts, and finally, the coach video records interactive situations for interaction analysis (Step 3 of the protocol) and for video analysis during the first team-coaching session of Phase I (Step 4 of the protocol).

3. Interaction analysis.

The coach analyzes the taped interactive situations to relate the communication partners’ question(s) to the intervention aims and to determine target behaviors during interaction, while focusing on the four core categories of interactive behavior included in the model (Figure 1):

1. *Attention*, defined as focusing on the interaction partner, the content of the interaction, and the persons and objects within the interaction context.
2. *Initiatives*, defined as starting an interaction or raising a new idea or an issue as part of a reaction.

- 3. *Regulating intensity*, defined as waiting while the client is adapting the intensity or pace of the interaction and is processing new information.
- 4. *Affective involvement*, defined as recognition of positive and negative emotions and sharing these emotions in a positive way that is perceivable for the client.

An example of a concrete intervention aim for *affective involvement* is “recognizing and tuning into negative emotions” with target behaviors such as “tactilely repeating the pushing away of objects.” Another intervention aim for affective involvement could be “evoking and sharing positive emotions” with target behaviors such as “holding the hands available and affirming laughing by coactively shaking hands.”

4. Implementing intervention Phase I (focusing on interaction).

The overview of coaching sessions depicted in Figure 2 shows that, during Phase I, the coach provides two team-coaching sessions (120 min per session) and three individual-coaching sessions (60 min per session) over a 10-week period.

Team coaching.

During the first team-coaching session (Week 1), the coach explains what affective involvement is and how it relates to the underlying theories of affect attunement (Stern, 1985) and interpersonal communication (Trevarthen & Aitken, 2001). The four core categories of interactive behavior are introduced and elaborated upon with recent video clips (for example, initiatives: peeling an orange together and occasionally pausing to

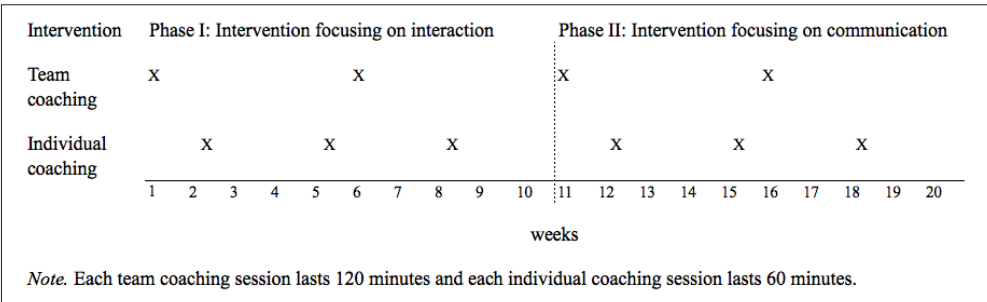


Figure 2. Coaching sessions during the intervention’s two phases

stimulate initiatives). The communication partners practice the target behaviors in the following 5 weeks.

In the second team session (Week 6), the coach evaluates the previous 5 weeks. New videos are interactively analyzed and supported by role-playing to increase the communication partners’ sense of tactile responding during communication (for example, sharing excitement by focusing on an interesting detail on a ball-shaped Christmas ornament by first imitating the touching and then by carefully shaking hands

while clasping the ball in the shaken hands). The communication partners are asked to continue practicing the target behaviors over the following 5 weeks.

Individual coaching.

At the intervention's start, the coach and individual communication partners plan three individual coaching sessions, with enough time between the sessions to allow the target behaviors to be practiced. Depending on the communication partner, different target behaviors in the four core categories of behavior are introduced during each of the individual sessions. The training of communication partners may differ according to how quickly a communication partner can successfully understand and implement target behaviors.

For video analysis and video feedback during the individual coaching sessions, the coach uses examples of the most recent videotape of the communication partner in question. In the first individual-coaching session, the coach and communication partner reflect upon the recent team coaching and specify individual goals (for example, for attention, using voice and touching; or for affective involvement, naming moods and imitating movements). In the second and third individual sessions, new learning points are discussed (for example, for attention, first coactively pushing an object away before introducing a new one; for initiatives, affirming initiatives more often; for regulating intensity, reducing own initiatives; and for affective involvement, rhythmically using the voice more often).

With the communication partner's permission, some of the positive examples of affective involvement are used for video analysis and discussion during team coaching.

5. Communication analysis.

Recent video recordings made during the intervention period are selected for communication analysis. The coach analyzes the tapes to determine intervention aims and target behaviors during communication by focusing on the three core categories of behavior in Phase II of the model (Figure 1):

1. *Shared experiences*, defined as elaborating on events and introducing new events so that the client becomes motivated, feels secure, and knows what is going to happen.
2. *Shared meaning*, defined as interpreting and affirming the client's expressions of communication and using different turns to negotiate about the correct meaning of the expressions.
3. *Affective involvement*, defined as recognition of positive and negative emotions and sharing these emotions in a positive way that is perceivable for the client.

An example of a concrete intervention aim with target behaviors for shared experiences is "talking about unexpected events" by mutually imitating, for example, the movement of the spoon falling from the table and then picking it up from the floor together. An

example for shared meaning is “affirming and repeating initiatives more often”; for example, the communication partner could first tap an apple slice, wait for a response, and then affirm the response by tapping the apple slice again and making a moving action to mimic “cutting.” If needed, initiatives and turns can be repeated before the apple is actually cut. Examples for affective involvement are “sharing (very) positive and (very) negative emotions” by rubbing the client’s arm or by having the communication partners rhythmically shake hands when sharing positive emotions and using a firmer touch when sharing negative emotions.

6. Implementing intervention Phase II (focusing on communication).

Similar to Phase I, the coach trains the communication partners during two 120-min team-coaching sessions and three 60-min individual-coaching sessions (Figure 2, Phase II).

Team coaching.

In the first team-coaching session (Week 11), the coach evaluates the former phase and introduces and elaborates upon the three core categories of behavior supported by new video examples. Training to increase shared experiences is supported by role-playing involving scaffolding the roles of initiator and actor, modeling actions and reactions, repeating and varying actions, and elaborating on topics or introducing new topics. Regarding shared meaning, the coach explains about overinterpreting expressions of communication, naming expressions of communication, dramatizing or repeating expressions of communication, and giving and waiting for affirmation (for an example of sharing meaning, see the Communication Analysis section). The coach ensures that the communication partners can translate aims and target behaviors to their daily practice for the following 5 weeks. In the second team coaching session (Week 16), the coach promotes a lively exchange of experiences and ideas among the communication partners regarding affective involvement during communication, as well as analyzes and discusses new videos. The communication partners are again asked to bring the target behaviors into practice during the final 5 weeks.

Individual coaching.

Individual coaching in Phase II is continued with the same individual communication partners and involves discussing learning opportunities with regard to the three core categories of behavior.

Examples of aims and target behaviors for affective involvement include “sharing very positive emotions” by rubbing the client’s shoulder and acknowledging a joyful response with a higher pitch (“Yeah, that’s nice, huh?”); or “sharing negative emotions” by first imitating the negative tension by making short movements in the

air with a balled fist, then firmly shaking “no,” hand-under-hand, and waiting for a response.

An example for sharing experiences is talking about “doing the same as me” by using hand-under-hand guidance while taking off each other’s shoes.

An example for sharing meaning is “making clear what the client meant” by building in more repetition.

7. Evaluation.

The two-phased intervention is evaluated in a separate team session. The discussion is supported by a compilation of video fragments from the first and last recordings of Phases I and II. The communication partners’ satisfaction with the intervention content and process is discussed with regard to various evaluation aspects, such as the practicality of the model or the effectiveness of the different types of coaching (for example, “It is more difficult to share negative emotions than to share positive emotions” or “Individual coaching is more effective than team coaching”). The coach and communication partners also discuss whether the intervention should be stopped or continued, possibly with adjusted intervention aims for Phases I or II. After the evaluation, a DVD with the video clips, and a written report with findings regarding the intervention for affective involvement during interaction and during communication, are included in the client’s individualized education program or personal care plan.

2.6 Conclusion

The intervention model described in this article was designed to foster affective involvement between persons with congenital deafblindness and their communication partners. The IMAI was developed in response to urgent requests from practitioners for more practical guidelines to foster affective involvement for reducing negative emotions in persons with congenital deafblindness. Individuals with a reduced ability to hear and see from birth have obstructed development in all domains, and they run a high risk of experiencing stress and of failing to develop skills to cope with complex circumstances and negative emotions. Previous studies indicate a high prevalence of self-injurious, aggressive, and withdrawn behavior in persons with congenital deafblindness (for example, Dammeyer, 2011; Durand & Kishi, 1987; Sisson, Van Hasselt, & Hersen, 1993).

A harmonious interchange between the person with congenital deafblindness and his or her communicative partners, in which the communication partners support the developmental processes of the person with congenital deafblindness, does not naturally evolve in many cases because both the person with congenital deafblindness and the communication partners lack skills to establish interpersonal contact and to exchange thoughts and emotions. Given that affective involvement during interaction

and communication is significant to make the person with congenital deafblindness feel secure, self-confident, and capable of expressing wishes and thoughts appropriately (Trevarthen & Aitken, 2001), promoting affective involvement between persons with congenital deafblindness and their communicative partners is indispensable in the training of staff members.

2.6.1 Implications for Practice

The IMAI has recently been applied to nine persons with congenital deafblindness and their 34 communication partners to evaluate the model's effectiveness and to examine whether its different components can be applied in naturalistic settings. Initial results strongly suggest that the model is applicable to both children and adults with congenital deafblindness. Moreover, increases in affective involvement during interaction and communication with persons who have congenital deafblindness were found for different communication partners in different settings and even in different organizations. In short, all communication partners learned to better attune their behaviors to the person with congenital deafblindness after IMAI training. They indicated that mutual exchanges increased not only in number but also in enjoyment. Another interesting preliminary finding is that communication partners indicated that sharing positive emotions was easier than appropriately sharing negative emotions. Findings of the implementation studies will be reported in the near future.

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