**Brief Note**

**Establishing Joint Attention and Communication in a Child with Autism Through Therapeutic Touch, Including a “Sense of Melting” Experience: Dohsa Method**

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Recently, it has been argued that communication deficits in children with autism are caused by joint attention deficits. The present study examined the process of establishing joint attention and communication in a 3-year-5-month-old girl with autism, through the Dohsa method called *toke’au taiken*. A total of 6 sessions was held over 18 weeks. Each session, which took about 50 minutes, consisted of a *toke’au taiken* period and a counseling period for her parents. As the girl’s emotional stability improved and her mother’s depressed mood became alleviated, joint attentional exchange between the child and her parents increased. Her active relationship to child-care staff and her peers, including joint attentional behaviors and imitating behaviors, increased as well.

Key Words: *toke’au taiken*, joint attention, communication, Dohsa method, child with autism

Joint attention, defined as three-way exchanges that involve self, other, and object, may be expressed in the form of a referential look between people and object, proto-declarative pointing and showing gestures, and affective expressions. The goal of joint attention appears to be sharing experiences about an object or an event with other people (Bruner, 1983). As Tomasello and Farrar (1986) indicated, periods of joint attentional focus somehow build the foundation for early mother-child linguistic interaction.

Some investigators believe that a deficit in joint attention is the central disturbance of childhood autism. Kasari, Sigman, Mundy, and Yirmiya (1990) examined the association of shared positive affect during joint attention. Compared to typically developing children, children with autism failed to display high levels of positive affect during joint attention. This result supports the hypothesis that the joint attention deficits in children with autism are also associated with a disturbance in shared affect.

Beppu (1991) and Ito (1992) reported that the effects of emotion-eliciting activities such as tickling and swaying might have some beneficial effect for establishing an exchange of affect between children with autism and their caregivers, and

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suggested that pleasant and comfortable emotional experiences might help to establish a basis for communication in children with autism (Beppu, 1997). However, as Beppu (1997) indicated, such an approach is not enough to produce the positive body experience necessary for promoting the establishment of joint attention.

Therapeutic-touch with a “sense of melting” experience (toke’au taiken), one of the Dohsa-method techniques, emphasizes the role of body experiences such as the sense of warmth, the sense of softness, and the sense of harmonious movements, reciprocally exchanged between the therapist and the client (Konno, 1997). The first purpose of toke’au taiken is enhancing body image, which is the basis of harmonious states in mind-body and of the reorganization of self-activities. The second purpose is to facilitate the therapeutic relationship, which is the basic process of communication between the therapist and the client, through shared pleasant mind-body experiences. This reciprocity, in turn, may also serve to establish joint attention, that is, “body-experience-based joint attention” (Konno, 1999a).

Another important factor for establishing a child’s joint attention is the role of the parent’s attitude toward the child, such as following the child’s gaze and maintaining the child’s attention to toys. Warm childrearing attitudes are particularly important (Landry & Chapieski, 1989). In other words, the parents’ positive emotional attitudes toward the child are considered to promote the development of the child’s joint attentional behavior, including pointing gestures, showing, referential looks, and imitative behavior.

In the present study, the author provided a positive body experience induced by toke’au taiken to both a girl with autism and her parents, and examined whether joint attention and communication was established.

Method

Participants

Participants were a girl (3 years 5 months old) with autism and mental retardation, and her parents. Her mother was 43 years old, and her father, a computer engineer, 44 years old. Other family members were an elder brother, 5 years 7 months old, and a younger brother, 1 year 3 months old.

The girl was born at full term without any particular perinatal complications. Her birth weight was 2,580 g. She was very calm during infancy, neither smiling nor making eye contact with her parents, and showing poor responsiveness when she was held. Her parents reported that they had felt as though they were holding an inanimate doll instead of a human baby.

At 2 years 6 months, she abruptly uttered several vowels; “A,” “I,” “U,” “E,” and “O,” as if talking in a delirium, when her mother presented her elder brother a video materials for teaching speech. At around three years of age, she started to say “mama” when requesting food, and “iya” (“no!”) when rejecting something. However, her request behavior was accompanied by neither a pointing gesture nor an affective expression. When she was called by her parents, she sometimes made eye-contact
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with them, but ignored them while she was engrossed in playing on a swing or
drawing. Because of her short attention span and high distractibility, she could not
concentrate on ongoing activities.

In terms of her self-help skills, she could put her underclothes on and take them
off by herself, and could eat using chopsticks held in her right hand while sitting on
a chair. She defecated into her training pants without showing any behavioral signs
that she was doing so. However, she sat on a pot when she wanted to urinate.

At the age of three years, the girl was diagnosed as having an autistic feature
with mild mental retardation. This diagnosis greatly shocked her parents. Her father
attributed the girl’s disturbance to the mother’s poor child-rearing skills and accused
her. His accusations deteriorated his wife’s self-confidence or self-esteem as a mother,
and she suffered from child-rearing anxiety. The mother had poor play skills, making
few facial expressions and seldom smiling while playing with her daughter.

Procedures

Procedure of the sessions. Each session took about 50 minutes, including a *toke’au*
taiken period and a counseling period for the parents. At first, to make the parent feel
relaxed, they were administered *toke’au taiken* on their shoulders, head, back, and foot.
Then the parents held their daughter on their lap, and the therapist gave *toke’au taiken*
on the girl’s shoulders, head, and foot. Sessions were held every three weeks because
of the girl’s schedule of visiting an institution for additional support. A total of six
sessions was held during 18 weeks. After that, three follow-up sessions were provided
at two- or three-month intervals, each comprising *toke’au taiken* for the girl and her
parents, and child-rearing consultation for parents.

Procedures of *toke’au taiken*. The procedure of *toke’au taiken* is as follows: the
therapist places his hands softly on the client’s body, e.g., the shoulders, the back, the
waist, or the foot, pressing them gently for three to four seconds while saying “Pitaa.”
The pressure is then slowly (four to five seconds) released, while the therapist says
“Fuwaa,” and keeps the palm in contact with the client’s body. While releasing
pressure to the shoulders, for example, both the therapist and the client have positive
bodily sensations such as their shoulders becoming warmer, stretched, and mobilized.

Measurements

Measures used in this study were (a) the girl’s responses to *toke’au taiken* includ-
ing crying, rejecting, smiling, eye-contact, pointing, and joint attentional focus, (b) the
girl’s verbal behavior observed during the session, at home, and at nursery school
throughout the weeks when sessions were being conducted, (c) her parents’ child
rearing behavior, and (d) the girl’s relationship with others.

The definitions of responses to *toke’au taiken* were as follows: (a) crying: rejecting
sounds accompanied by tears, (b) rejecting: refusal body movements, such as
wiggling the trunk, standing up, and waving aside, (c) smiling: facial expression with
the mouth turned up at the ends and with bright eyes expressing amusement and
happiness, (d) looking at others: directing her gaze toward others, especially toward
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their face or eyes, including eye contact with others, (e) pointing: a distal gesture with one finger extended toward the object indicated, (f) joint attentional focus: a sequence of behaviors comprising the girl’s initiation of pointing an object (in this study, her own hand or foot) and looking at others (mother, father, or therapist), while smiling.

Based on videotaped recordings, occurrences of crying, rejecting, smiling, looking, and pointing behavior were collected using a time-sampling method in which the sampling time-unit was set at five seconds. Sampling was carried out during the first 10 minutes from the start of toke’au taiken, since she usually fell asleep during the latter part of the toke’au taiken session.

Interobserver agreement was calculated for each response for 50% of the sampling period in sessions 2 and 4, using observations made simultaneously by the author and two graduate students majoring in clinical psychology. The mean percentages of agreement were as follows: for crying, 100% in session 2 and session 4; for rejecting, 97% in session 2 and 100% in session 4; for smiling, 93% in session 2 and 97% in session 4; for looking, 86% in session 2 and 92% in session 4; and for pointing, 89% in session 2 and 91% in session 4. Interobserver agreement for joint attentional episodes was 82% in session 2, and 87% in session 4.

Samples of her verbal behavior, both spontaneous and imitative, including exclamations, interrogatives, and requests, were cumulatively collected across the sessions, and also at her home and nursery school. Anecdotal data regarding her parents’ child-rearing behavior and the girl’s behavior at home and at nursery school were collected from her parents’ reports at each session.

Results

Changes in Response to Toke’au Taiken across Sessions

In session 1, the girl was held on her father’s lap and received toke’au taiken on her back from the therapist. At the beginning of the session, she rejected toke’au taiken, crying and wiggling her trunk. Then she gradually calmed down, and looked at the therapist when he called her by name. When the therapist told her “look at your mom,” she made eye contact with her mother while smiling. Her hands and feet became warm, and she fell asleep while receiving toke’au taiken on her shoulders.

At the beginning of session 2, the girl hesitated to receive toke’au taiken. However, she gradually accepted toke’au taiken on her hand and foot while smiling, and made eye contact with the therapist, and her mother and father during toke’au taiken. Her hands and feet became warm.

In session 3, the girl, held on her father’s lap, stretched out her feet to the therapist and requested him to give her toke’au taiken, saying “yatte!” (Do it!). After that, she was held on her mother’s lap, and the therapist gave her toke’au taiken on her shoulders and back. She frequently smiled and made eye contact with the therapist and with her mother, and father during toke’au taiken.

In session 4, the girl was held on her father’s lap and received toke’au taiken on her shoulders. When her hand became warm, she began to point to her hand with
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the opposite forefinger, then smiled and made eye contact with the therapist and with her mother, and father in turn. Then, during toke’au taiken, she repeatedly moved her body as though she were rehearsing a dance she had learned at nursery school.

In session 5, when the therapist offered to give her toke’au taiken on her hand, the girl extended her hand while smiling at him. During the toke’au taiken on her hand, she pointed to her hand with the opposite forefinger, and then looked at the therapist. She also directed her parents’ attention to her hand by pointing to the hand and saying “koko” (here) and “mi’té” (look).

In session 6, when called by her name, she raised her hand and answered “hai” (yes), and looked at her father and mother, and at the therapist in turn, while smiling. Then she was held on her mother’s lap, and received toke’au taiken on her shoulders, head, hands, and feet. While receiving toke’au taiken on her foot, she smiled at and made eye contact with her mother and father in turn, and pointed to her foot to direct their attention while saying “koko” (here) or “mi’té” (look). Then, she touched her mother’s shoulders with her hands and tried to give her toke’au taiken, and questioned her mother about the feeling, saying “itt?” (Does it feel good?).

Figs. 1, 2, and 3 indicate the changes in her responses to toke’au taiken, showing, in Fig. 1, smiling, crying and rejecting; in Fig. 2, looking at others, and, in Fig. 3, pointing behavior. Fig. 4 presents the frequency of joint attentional focus on her hand and foot with her mother and father and the therapist. The percentage for each response category was calculated by dividing the number of occurrences (number of time units) by the total number of time units in ten minutes (total of 120 units).

As shown in Fig. 1, the percentage of crying and rejecting decreased from session 1 to session 4, while the percentage of smiling increased from session 1 to session 6.
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Similarly, as depicted in Fig. 2, the percentage of looking at the therapist, and at her mother and father, increased from session 1 to session 6. The percentage of pointing at her hand and foot increased from session 2 to session 6, although the percentage of pointing to her mother, her father, or the therapist remained low across sessions (Fig. 3). Similar trends were also found in the change in number of time units of joint attentional focus. The frequency of joint attentional focus with her mother especially increased from session 4 to session 6 (Fig. 4).

![Graph showing percentage of occurrence of response of looking at others across sessions](image1)

**Fig. 2** Percentage of Occurrence of Response of Looking at Others (mother, father, and therapist) across Sessions

![Graph showing percentage of occurrence of pointing gestures across sessions](image2)

**Fig. 3** Percentage of Occurrence of Pointing Gestures across Sessions

The key indicates whom or what the girl was pointing at.
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Changes in Relations with Parents and Others

At the beginning of the sessions, her father did not understand that her wife was exhausted from child rearing and also as a result of his accusations regarding her poor child-rearing skills. However, during sessions 1 and 2, when toke’au taiken alleviated his own fatigue and he experienced relaxation, he noticed his wife’s fatigue and sympathized with her suffering. He decided to give her support, and came home quickly after work in order to give his children and his wife toke’au taiken. The girl received toke’au taiken on her father’s lap while smiling. The father’s attitudes toward his wife became cooperative and gentle. For example, he helped her to do housework, and stopped accusing her of having poor child-rearing skills. During sessions 2 and 3, the girl’s hyperactive behavior and distractibility decreased. After that, she smiled at nursery school, and began to imitate other children’s play activities, such as running a race and dancing.

During session 2 to 3, experiencing toke’au taiken alleviated the mother’s physical and mental fatigue, and relieved her depressive mood state and anxiety about child rearing. Then, the maternal attitudes of relief and warmth regarding child-rearing made the girl accept toke’au taiken done by her mother, and she began to nestle up to her mother, requesting her to carry her on her back, saying “on(bu)” (carry me on your back). The girl began to greet staff at the nursery school and other children, and spoke several words such as “itadaki(masu)” (please give me [a snack]), “moshimo(shi)” (hello), and “on(bu)” at nursery school.

During sessions 3 and 4, her parents read to her. Her repertoire of speech imitation expanded rapidly. She pointed to several objects in a picture book, saying “koko” (here) or “ko’re” (this), and, requesting her parents to say the name of the objects, then imitated the words spoken by her parents. When the girl uttered a word successfully, her parents clapped their hands, and the girl seemed very pleased. She

![Graph](image-url)  
**FIG. 4** Number of Occurrences of Joint Attentional Focus with Others across Sessions

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engaged in physical activities with her elder brother, such as hopping out of bed and running a race. At nursery school, she attentively looked at other children’s behavior, in order to imitate them. She played with a puppy and with her younger brother.

During sessions 4 and 5, the girl was held in her mother’s arms, and her mother said “good girl” or “lovely girl.” Pointing gestures to direct her mother’s attention to objects increased, then her repertoire of imitating her mother’s behavior expanded. The girl spoke words that she wanted to have her mother hear. She began to draw lines and circles, saying, in a cheerful voice, “huuuu!” or “hyaa!” while drawing these figures, and showed her elder brother her drawings.

During sessions 5 and 6, the girl engaged in activities such as counting from 1 to 10 (from “ichi” to “juu”), saying color names such as “aka” (red), “ao” (blue), and “kuro” (black), and drawing a figure with her parents. She pointed to her drawing in order to show it to her parents, while saying “miite” (look), and was pleased when they responded by saying “sogoi!” (splendid!). Observing her elder brother drawing a picture, she pointed to it and asked him, “nani?” (what is it?). As shown in Fig. 5, her vocabulary increased from session 3 to session 6, especially during session 5 and session 6.

Summary and Discussion

In this study, a girl with autism and her parents received toke’au taiken in order to establish the girl’s joint attention and basic communication skills. According to Ornitz and Ritvo (1968), from very early in their life, children with autism suffer from negative mind-body experiences because of hypersensitivity or arousal regulation difficulty. These negative experiences cause a failure of the development of joint attention, which is a basis for the development of communication. Loveland and Landry (1986) examined the relation between joint attention skills and language development in children with autism, and found that impairment of joint attention skills would certainly affect the acquisition of language.

Stern (1985) indicated that the earliest form of communication in human babies may be accomplished by pleasant bodily activities (“vitality affect”) exchanged with caregivers. Ito (1992) and Beppu (1997) have suggested that pleasant and comfortable emotional experiences elicited through bodily activities may help children with autism to establish joint attention. In the Dohta-method approach, a therapeutic relation depends greatly on good bodily reciprocal experiences exchanged between the therapist and the client (Konno, 1993, 1997, 1998, 1999a; Tokunaga, 1996). This reciprocity may serve to establish “bodily-experience-based joint attention” in children with autism, that is, the joint attention based on shared positive bodily experience with the therapist.

In session 3 of the present study, the girl’s hands and feet became warm, and when she was held on her father’s lap, she stretched her feet out to the therapist, requesting that he do toke’au taiken to her feet by saying “yatte!” (Do it!). In session 5, as she felt her hand becoming warm, she directed her parents’ attention to her
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FIG. 5 Changes in Vocabulary across Sessions

hand while pointing to it and saying "koko" (here) and "mi'te" (look). In session 6, she touched her mother's shoulders with her hands and tried to give her toke'au taiken, and then questioned her mother about the feeling, saying "ii?" (Does it feel good?). These anecdotes, as well as data from a study using a thermograph (Konno, 1998), suggest that the sense of warmth might be an important experience for establishing joint attention.

During sessions 2 and 3, the girl came to be able to control her hypersensitivity, distractibility, and excitability, and in session 4, she pointed at her hand with an
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expression of positive affect. Shortly after this episode, she became able to relate actively to others at her nursery school, and also engaged in toy play with her brother at home. During sessions 4 to 6, her joint attentional behaviors increased, and her repertoires of vocabulary imitation and of play activities with her parents expanded. Her relations with other children also improved. During session 4, she imitated some play activities of other children at the nursery school.

During sessions 5 and 6, her repertoires of joint attentional focus and verbal behavior enlarged. Findings in normal language development suggest that joint attention is an important premise for learning conversation skills. Tomasello and Farrar (1986), who explored the role of joint attentional processes in the acquisition of language during childhood, found that both mothers and children talked more and engaged in longer conversations during periods of joint attention. This finding suggests that the periods of joint attentional focus establish the foundation for early mother-child linguistic interactions and the child's imitation of the mother's verbal behavior. Furthermore, this joint attentional focus between mother and child may expand to the child's peer relations and facilitate imitation of other children's behavior.

According to Landry and Chapieski (1989) and Tomasello and Farrar (1986), maternal interactive behavior with infants, including responsivity to infant cues, warmth, and attentiveness, relates to the establishment of joint attention, and subsequently to infants' language development. In contrast, depressed mothers have difficulty sharing positive affect with their children, and have poor joint attentional behavior. Therefore, Field, Grizzle, Scafidi, and Schanberg (1996) recommended massage therapy or touch therapy, because their beneficial effects might reduce mothers' depressive states and establish better mother-child relations, including joint attention.

In the present study, toke'au taiken brought about the alleviation of the parents' mind-body fatigue. In particular, the father came to realize his wife's distress when he was relieved from his own mind-body fatigue. He changed his attitude toward her into a cooperative and sympathetic one, and gave her toke'au taiken to relieve her distress. His support reduced her anxiety about child rearing, alleviated her depressed state, enhanced her self-confidence, and promoted her communication skills. The attitude change found in this father corresponds to the finding that Dohsa-method workshops for personnel working with people with mental retardation alleviate the staff's stress and enhance their supportive attitudes toward people with mental retardation (Konno, 1999b). These results suggest that awareness of one's own mind-body fatigue and the experience of psychological relief from use of a Dohsa-method such as toke'au taiken could enhance people's sympathy for others.

References


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