Behavior Control Support to the Children with Autistic Spectrum Disorders through Psychological Rehabilitation

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Abstract:

The children with autism (ASDs) could improve and respond well on the body movement tasks as a non-verbal communication in the psychological rehabilitation Dousa-hou training activities. They were found low exhibitors and receivers of emotional activities and high on maintenance of physical fitness, like training environment and activity participation, and average on interpersonal communication and temper controls. Dousa-hou activities were found helpful to manage the inner feelings or distresses more responsible for uncontrolled behavior than the receiving and expressive emotional aspects.

Introduction:

Autism is well known as ASDs that stands for Autistic Spectrum Disorders. Kanner, who first defined their characteristics and called them *Autistic* initially in the Journal *Nervous Child* in his article "Autistic Disturbances of Affective Contact" in which the behavioral data of eight boys and three girls were involved (Kanner, 1943). Before the decision of a concrete definition to these children certain terms were also used as, typically developing children (TD), developmental disorders (DDs), broader autistic phenotype (BAP), high-functioning autism (HFA), Pervasive developmental disorders (PDDs), pervasive developmental disorder-not otherwise specified (PDD-NOS), and Asperger's syndrome (AS) in addition of *Rett's disorder* childhood disintegrative disorder (CDD) etc. Autism can be proper diagnosed after age of three to four years. Gross and fine motor abilities such as sitting, crawling, walking, small objects handling and adjustment for play, language acquisition, and intellectual or cognitive abilities are some diagnostic criteria. Impairment in social interaction, impairment in communication, repetitive behavior restricted

interests are the main characteristics. Children with autism were found to have difficult in controlling of their behaviors, distress feeling, emotional reciprocity activities, and intellectual abilities (Wetherby, A. etc., 2004). Language use and interpersonal relationship maintenance are also other certain difficulties. Immediately responds to a task without much thinking and expecting the surrounding persons' perceptions to him, if can express in words. Other way, if cannot express the thought and desired matter to the surroundings, gets upset easily making loud noise and sometimes use hands and legs as an ill manner or aggressive behaviors. These activities create tension and uneasy feelings among the surrounding persons and that arouse as an individual's problematic behavior and causes of a quarrel sometimes. As a result, ignorance and disgust behavior arises in interpersonal related activities (Kumar & Harizuka, 1998, 2001; Benaron, 2009).

Children with ASDs, with limited or no language, often push, hit or slap at others when they are not getting their needs met and cannot communicate exactly what they want. As the autistic child's language or alternative communication strategies improve, aggressive behaviors almost decrease. Children with ASDs do not typically hold a grudge or go after another child because they are jealous or for other complicated emotional reasons. They almost never pull their fist back, make threatening facial expressions, furrow their brow, stomp their foot in defiance, or stare down their opponent, all the kinds of things that typically developing children do; and causes a complexity in caring the child (Tammet, 2006; Snow, 1984). Aggression in children with ASDs does not seem to come from an emotional angry place but instead seems to arise from extreme internal distresses when something is amiss in their autistic world and they cannot set it right. Aggressive behavior in ASDs is almost always an attempt to communicate that the child is bothered by something, is frustrated at not getting a need met, does not want to do what is being asked, or wants something to stop; and such behaviors reduces at child's language or communicative strategies improves (Baron-Cohen, 2003; Herbert, 2005). When children with ASDs are overwhelmed, they often engage in behaviors that hurt themselves, referred to as self-injurious behavior (SIB), such as hitting themselves in the face, banging their heads against the floor or the walls, of biting or scratching themselves (Rogers, S. & Sally, O., 2005). SIB is virtually never an attempt to get attention or to manipulate adults, though improving communication skills almost always decreases such behaviors and is important to identify the stressors that lead to these behaviors in order to decrease their frequency and severity of such behaviors (Benaron, 2009; Mandal, Harizuka, Zamami, Kumar, 2011). The children with ASDs and cerebral palsy were found to use their left-hands and left-legs frequently in daily living functional activities (Kumar, Mandal, Harizuka, 2011).

Psychological rehabilitation's Dousa-hou method was found useful for the decrease of self-

injurious, impulsive, and aggressive behaviors and for controlling their internal distressing and sensory issues regarding sight, sounds, smells, tastes, textures, and movements. In the one-on-one training process of Dousa-hou, a trainee experiences objective judgment of body movements and develops communication skills for responding to a trainer in attempting a desired body movement task with self-awareness (Kumar, Harizuka, Imura, Furukawa, Kim, 2005; Kim & Kumar, 2004). In other rehabilitation therapies, such performances are more mechanical, do not include self-intention and self-awareness, and extinguish faster than Dousa-hou training (Harizuka 1992; Naruse, 1997 a, 1997 b; Vaness, 2014). Therefore, the study was aimed to identify how helpful the psychological rehabilitation's Dousa-hou activities can be for the control of behavioral aspects of the children with autistic spectrum disorders in perception and observation of Dousa-hou trainers and their parents.

Methodology:

***Participants.*—**

Twenty two children with autism, down syndromes, mental retardation, behavior disorder, cerebral palsy disabilities (N = 22, M age = 14.6 yr. M education = 8.2 yr.) studying in Seri Mengasih Center and CBR school, Kota Kinabalu; 24 special educators as trainers, 12 parents, 2 supervisors and some volunteers as sub-trainers participated in the psychological rehabilitation Dousa-hou camp for 6-days. Subjects were specified as to their disabilities only. Disabilities ranged from mild to severe; none were profoundly disabled.

***Materials.*—**

English version of 24-item Questionnaire for Developmental Changes (*see Appendix- I*) to measure the developmental changes of children occurred by Dousa-hou training method was developed by the researchers and was administered among the trainers and parents. The QDC rated data of 11 trainers and 7 parents those who were the parents and trainers in the camp for the children with Autism was included in this study. The average 3-6 days camp participation of the QDC raters was 1.9 times in the range of minimum 1 times to maximum 6 times. The average rating on the QDC item anchors was 3.44. The items selected in the questionnaire were from seven areas of development as: I. Behavior Control (*item* 1, 2), II. Speech & Communication (*item* 3, 4), III. Emotion Expression (*item* 5, 6, 7, 8, 9), IV. Volunteer Body Movements (*item* 10, 11, 12, 13), V. Initiation and Appearance (*item* 14, 15, 16, 17, 18), VI. Social Interaction, (*item* 19, 20, 21), and VII. Health Maintenance (*item* 22, 23, 24).

Procedure.—

Children with autism, down syndromes, mental retardation, behavior disorder, cerebral palsy disabilities, special educators as trainers from Seri Mengasih Center and CBR School, Kota Kinabalu, parents, supervisors, and sub-trainers participated in a 6-days psychological rehabilitation camp of Dousa-hou organized in Kota Kinabalu. Dousa-hou training activities were organized in small groups of five to six trainer-trainee pairs under a supervisor or sub-supervisor three times a day and for one hour each time. Recreational activities were organized involving active interplay of trainers, trainees, mothers, siblings, supervisors, and sub-trainers. Recreational activities as walking with a balloon on a hard paper hand fan, relay race, passing a ball to next child, pushing a ball, escaping from a striking ball to self, small rope pulling etc. English, and Malay languages were the medium of instruction during Dousa-hou training.

Main Dousa-hou tasks for children with disabilities were practiced depending upon the type and level of disability as follows.

① Relaxation tasks in twisting trunk activities and by active horizontal relaxation.

② Sitting crossed legs (*Zai*) tasks for relaxation, bending forward, and return straight at straightening the curvy back portions.

③ Kneeling tasks for balancing and body images.

④ *Shisei* (posture making) for attainment of straight and stable sitting, kneeling, and walking with coinciding images of the patient himself and in others' perception.

⑤ Arm uplifting Dousa-hou exercises in lying down and sitting posture.

Therapist (trainer) kept in mind the patient's needs, with concrete planning to support the patient's needs. The Dousa-hou activities were selected accordingly. All the activities were performed with slow pace because by speedy movements the patient feels difficulty to judge and cope up with the information of body movements, how his body parts are moving, and how he is striving to create a desired movement. Relaxation tasks performance in lying down positions through twisting trunk, active horizontal relaxation, and uplifting the arms upward, downward and in directions.

English version of 24-item Questionnaire for Developmental Changes (QDC) to measure the developmental improvements of children facilitated by Dousa-hou training method were administered on the last camp day of Dousa-hou training among the trainers and parents. To measure the posture correction, behavior and impulsive control, and communication training effects on trainee; and for trainers' skill acquisitions, the data was collected from the trainers and parents.

RESULTS AND DISCUSSION

Total scores of QDC items (*see Table 1*) of trainers and parents were analyzed for mean item rating and total item scores with total QDC scores. The total QDC scores for trainers were *79.82* with concrete homogeneity at the range of 72 to 89; and for parents were *87.14* with a wide range of 70 to 105. These results were because trainers had more camp participation than parents. Dousa-hou effectiveness for behavioral controls of the ASDs were analyzed on behavioral, emotional recognition, response on body movement tasks, and physical appearance items etc. The trainers found their trainees to maintain normal health in certain body postures during training activities; and on understanding of the exhibited and produced emotional and verbal or non-verbal communicational expressions of their trainees in the sessions.

The *Table 1* showed that the developmental changes in children with ASDs to have communication with their trainers, supervisors, parents, and other children most through the activity of maintaining normal breathing and desired body movements (*mean rating 4.44* and *4.2*) and least on active participation and emotion expression (*mean rating 1.61* and *1.72*).

Table 1. TOTAL SCORES AND MEAN RATINGS OF QUESTIONNAIRE FOR DEVELOPMENTAL CHANGES ITEMS (*N=18; QDC mean scores = 82.67*)

Item No.	Total Score	*Mean Rating*	Item No.	Total Score	*Mean Rating*	Item No.	Total Score	*Mean Rating*
1	66	*3. 67*	9	28	*1. 56*	17	73	*4. 1*
2	62	*3. 4*	10	78	*4. 3*	18	29	*1. 61*
3	64	*3. 6*	11	79	*4. 4*	19	62	*3. 44*
4	75	*4. 2*	12	74	*4. 1*	20	59	*3. 28*
5	69	*3. 8*	13	76	*4. 2*	21	60	*3. 3*
6	35	*1. 9*	14	81	*4. 5*	22	70	*3. 9*
7	25	*1. 39*	15	77	*4. 28*	23	77	*4. 3*
8	31	*1. 72*	16	58	*3. 22*	24	80	*4. 44*

*The QDC 24-items were responded on *5-likert* type.

Table *1* results showed that these children performed well on motor skills' desired tasks of hands (*4.3*), legs (*4.4*), fingers (*4.1*), and neck (*4.2*) as rated by trainers and parents. It reflected that they could produce desired body movements better if instructed through words and body movement instructions as verbal and non-verbal expression and respond back through the body movements with less expectations of verbal response in Dousa-hou activities. The emotion expression of sadness (*1.9*), anger (*1.39*), rejection (*1.72*), fear (*1.56*), and looking dull (*1.61*) were quite low. These results are in the direction of earlier studies (Benaron, 2009; Benaron, 2003; Kumar & Harizuka 2001) that they are not good at expression and recognition of facial expressions and were found low on recognition and exhibition of such emotions during Dousa-hou

training activities. Although, they were found enjoying training environment and maintaining interpersonal relationship as the response of looking fresh (*4.1*), normalcy of body temperature (*3.9*), heart rate (*4.3*), and breathing (*4.44*), temperature control (*3.4*), talk with therapist (*3.6*), response to therapist (*4.2*), and initiation of talk (*3.22*) were rated high to averagely. It showed that Dousa-hou activities could set the task and environment in which the child could produce motor and non-verbal actions which were easily detected by the trainers, parents and other participants; and helping them to feel easy, fresh, and happy. The trainers who participated in training camps got training skills to notice the small developmental changes and outcomes in the performed training activities with selection and emphasis on a particular Dousa-hou activity to produce a desired change of posture and communication aspect.

Therefore, it can be concluded that the children with ASDs got benefit by the psychological rehabilitation method Dousa-hou for communication development as an interpersonal relationship, easy to participate and respond on training planning activities, and production of the desired body movements as a part of reception and exhibition of instructional communication. Though, the low response on emotional aspects was found in the direction of previous studies that they neither exhibit nor receive or stop the emotional inputs nicely that causes the uncontrolled behavior problems. Such problems were found uncontrolled not due to emotional recognition but due to some inner feeling aspects or distresses. Though in the study, they were found low on emotional recognition, but did not find them to be upset and behaviorally uncontrolled frequently in the training. These results are also in the direction of earlier researches that their aggressive behaviors decrease when child's language or alternative communication strategies improves (Benaron, 2009; Herbert, 2005, Kim & Kumar, 2004), and these were facilitated by Dousa-hou training activities. Therefore, it concludes that Dousa-hou activities helped them to control their inner feelings or to manage distresses responsible much for the uncontrolled behavior than the emotional inputs. Does emotional inputs really not disturb them is a big and future study task in psychological rehabilitation Dousa-hou activities.

Overall, it can be concluded by the QDC results, that the psychological rehabilitation method Dousa-hou could supports and promotes most the posture and body movements, behaviors control, maintenance of interpersonal relationships, and control of inner feeling aspects related to uncontrolled behaviors.

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Appendix-I.

Questionnaire for Developmental Changes (QDC)　（トレーナー／保護者　用）

トレーニーの名前：＿＿＿＿＿＿＿＿　年齢：＿＿＿　M・F＿＿＿　日付：＿＿＿＿

Japanese Translated Version　　この動作法のキャンプは何回目ですか。

この動作法訓練キャンプで子どもの心身面に以下の用の変化が見られましたか：

1＝全然ない、2＝たまにある、3＝ときどきある、4＝よくある、5＝いつもある

1．出された動作課題に子どもは集中していましたか。	1	2	3	4	5
2．子どもは訓練中に自分の感情をコントロールしていましたか。	1	2	3	4	5
3．子どもは訓練中トレーナーと話していましたか。	1	2	3	4	5
4．子どもはよくトレーナーの質問に答えていましたか。	1	2	3	4	5
5．子どもの顔が嬉しそうに見えましたか。	1	2	3	4	5
6．子どもの顔が悲しそうに見えましたか。	1	2	3	4	5
7．子どもの顔が怒っているように見えましたか。	1	2	3	4	5
8．子どもの顔がやる気がないように見えましたか。	1	2	3	4	5
9．子どもの顔が怖がっているように見えましたか。	1	2	3	4	5
10. 子どもは訓練課題によって手を適切に動かしていましたか。	1	2	3	4	5
11. 子どもは訓練課題によって足を適切に動かしていましたか。	1	2	3	4	5
12. 子どもは訓練課題によって指を適切に動かしていましたか。	1	2	3	4	5
13. 子どもは訓練課題によって首を適切に動かしていましたか。	1	2	3	4	5
14. 子どもは嬉しいでしたか。	1	2	3	4	5
15. 子どもは他の子どもと保護者との遊びに参加していましたか。	1	2	3	4	5
16. 子どもは自始的に他の人と話していましたか。	1	2	3	4	5
17. 子どもはキャンプで元気そうに見えましたか。	1	2	3	4	5
18. 子どもはキャンプで元気がないように見えましたか。	1	2	3	4	5
19. 子どもは集団療法に好きで参加していましたか。	1	2	3	4	5
20. 他の人との遊びの中自分の役割を果たす努力をしていましたか。	1	2	3	4	5
21. 子どもは他の人とボールやおもちゃを使って遊んでいましたか。	1	2	3	4	5
22. 子どもの体温は普通でありましたか。	1	2	3	4	5
23. 子どもの心臓の鼓動（動悸）は普通でありましたか。	1	2	3	4	5
24. 子どもの呼吸は普通でありましたか。	1	2	3	4	5

Is it your first or second or (　　) times to participate in Dousa-hou camp? Mark the suitable one.

Note.- Items were rated on a 5-point scale using anchors of 1 = never and 5 = almost always. Items for Factor Ⅰ = 1, 2: Behavior Control; Factor Ⅱ = 3, 4: Speech and Communication; Factor Ⅲ = 5, 6, 7, 8, 9: Emotion Expression; Factor Ⅳ = 10, 11, 12, 13: Volunteer body movements; Factor Ⅴ = 14, 15, 16, 17, 18: Initiative and Appearance; Factor Ⅵ = 19, 20, 21: Social Interaction; and Factor Ⅶ = 22, 23, 24: Health Maintenance.

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