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A Cross Cultural Study on the Children with Disability for Developmental Support through Dousa-hou of Psychological Rehabilitation Method

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Abstract

Children with mental retardation, autism, down syndromes, and behavior problem followed the psychological rehabilitation's Dousa-hou method for the day to day self help skills and personal psychological matters in India and Malaysia. The children, trainers, and the parents responded on the questionnaire for developmental changes. It was concluded that the children gained in communication with other peers, trainers and other parents, expressing their feelings, shift to the next task by themselves, task recognition, expression of body fitness and less on the emotional expression of self and others emotional expression recognition.

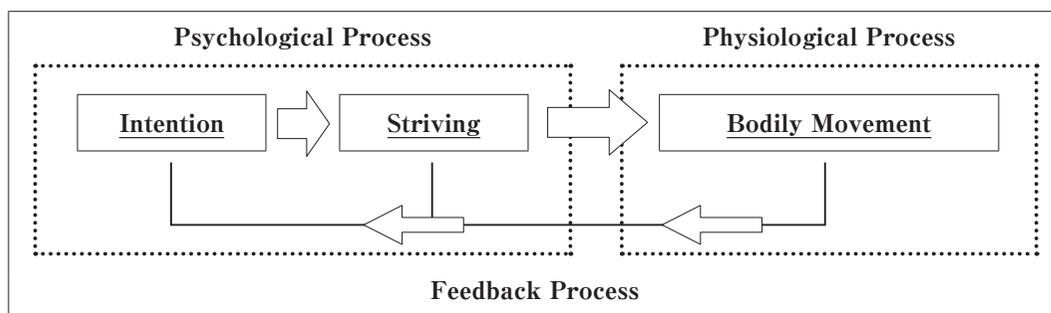
Introduction

Dousa-hou is a psychological rehabilitation process to promote education, health, and psychological care of the children with disabilities (Naruse, 1973, 1985, 1992). Through Dousa-hou, children with cerebral palsy improve control of their bodily movements and postures, reduce anxiety and depression caused by their disabilities, and socially interact more with others (Ogawa, 1987; Harizuka, 1992; Konno, 1993; Kumar & Harizuka, 2001). Mothers and first-degree relatives of the child with disabilities received more social support through Dousa-hou therapy than usual social interactions during Dousa-hou activities during a one-week camp (Kim & Kumar, 2004).

The social mode of interaction comprises physical and verbal strategies usually observed as physical comforting, smiling, nonverbal vocalizing, and face-to-face verbal communication (Snow, 1984). Psychological health improvement factors include feeling better, being more comfortable, taking more interest in life, and the like, and awareness of health-tending

decisions and interpersonal relationships (Barron, 1963). 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 (Tokunaga, 2002; Kumar, Harizuka, Imura, Furukawa, Kim, & Kumar, 2005). In other rehabilitation therapies, such performances are more mechanical, do not include self-intention and self-awareness, and extinguish faster than Dousa-hou training (Naruse, 1997a). The therapeutic interventions involve raising the individuals' consciousness of the affect of their conduct and attitudes on themselves and the social environment, and conversely, the affect of the behaviors and attitudes of others on themselves and the social environment (Leon, 1997). This way, Dousa-hou training sessions in awareness during a bodily movement task create a mutual social interaction between a trainee and a trainer, affecting the patient's psychological health (Naruse, 1997b). This may provide relatively better support for a patient to improve in social interactions with others in the one-week Dousa-hou training sessions. Interactions of the mothers or first-degree relatives of the patient with the child's trainer, supervisor, other trainers, and other mothers in similar situations provide recognition of the patient's improvements related to health, self-care, educational aspects, and daily life matters to those responsible for the child's care and self-dependency. The trainers' perception of the child's social interaction improvements related to health, self-care, educational aspects, and daily life matters may differ from the mothers' perception.

Working Process of Dousa-hou:



General meaning of psychosocial rehabilitation is the approach to work with people who have mental illness. The specific activities come under the program designed to help individuals who suffer a disability in their mental health to attain their better level of independence within their community. Psychosocial rehabilitation is an all-inclusive approach to facilitate the entry or return to participation in every aspect of normal life that is required for basic daily living and to maintain their situations in the society. The achievement of certain goals is the whole purpose of psychosocial rehabilitation. They include working with

the person to take them from being dependent to achieve independence and from exclusion from mainstream society to inclusion in the many areas of daily life. Psychosocial rehabilitation therapists seek to instill a strong sense of self-worth in mentally disabled people so that they can take charge of their lives and responsibility to best of their ability, which is often underestimated (Vaness Harvey, 2014).

Most of the rehabilitation and education program includes the children's interest, abilities and specific needs considering the individual differences. The education at this stage is based on development rather than academics. Early childhood activities should be plan according to the child's age, developmental stage, and personal interest (Bergan, J. R., Sladeczek, I. E., Schwartz, R. D., & Smith, A. N., 1991). Physical activities are also widely included in the school education. These are fine and gross motor skills. The fine motor activities involve the control of the fingers, hands, and feet with proper acquisition of sitting, walking, and jumping etc. The gross motor activities involve control of trunk, arms, and legs, eye hand coordination and balance in different body postures are the activities for physical skills (Allen, K. E., & Hart, B., 1984). They were found to use their left hand more than the right hand and that depended upon the task and situation (Mandal, M. K., Harizuka, S, Zamami Airi, Kumar, S., 2011). Children in their play, experiment and explore their environment, practice their fine, gross, and other skills needed later in their life. The best way of learning for these children is learning through their own senses and the movement of body (Kumar, S. & Harizuka, S., 1998).

The primary focus of the rehabilitation method is to improve bodily movements and posture as well as to introduce social support to patients and their first-degree relatives and to promote social interaction among participants.

The effectiveness of psychological rehabilitation technique, in terms of posture and communication development, for the children with disabilities at cross-cultural level was examined in this study. Improvements of developmental changes occurred in body control, volunteer body movements, health maintenance, initiative and appearance, speech and communication, social interaction, emotion expressional factors, were measured by the Questionnaire for Developmental Changes (QDC).

METHOD

Participants

Twenty children with autism, down syndrome, mental retardation, behavior disorder, cerebral palsy disabilities ($N = 20$, M age = 16.5 yr. M education = 10.4 yr.) studying in

Seri Mengasih Center, Kota Kinabalu and Balvantray Mehta School, New Delhi; 25 special educators as trainers, parents, 2 supervisors and some volunteers as sub-trainers participated in the psychological rehabilitation camp for 3-days at each place. 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- III*) 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 mothers. 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 syndrome, mental retardation, behavior disorder, cerebral palsy disabilities, special educators as trainers from Seri Mengasih Center and Balvantray Mehta School, parents (mostly mothers), supervisors, and sub-trainers participated in a 3-days psychological rehabilitation camp of Dousa-hou organized in Kota Kinabalu and New Delhi. Dousa-hou training activities were organized in small groups of five to six trainer-trainee pairs under a 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, passing a ball to next child, pushing a ball, escaping from a striking ball to self 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 mothers. To measure the posture and communication training effects on trainee and the training effects noticing skills of trainers, the data was collected from the trainers and mothers.

RESULTS AND DISCUSSION

Total scores of QDC on seven factors (*see Table 1*) of trainers were analyzed using one-way analysis of variance using SSPS for windows (Kinnear & Gray, 2000) for the prediction of Dousa-hou effect on posture and communication development of the children with disabilities. It showed that QDC's total scores of seven factors (*between-groups*) as group effect of trainers, differed significantly ($F_{1,6} = 29.6, p < .001$). The trainers found their trainees to maintain normal health in certain body postures during training activities; and on clear understanding of the exhibited emotion expressions of their trainees in the sessions. The group effect of children and parents scores on QDC did not differ significant and it showed that the culture does not effect on Dousa-hou activities and their outcomes.

The *Table 1* also showed that the developmental changes through the Dousa-hou activities in children in respect of communication with their trainers, supervisors, parents, other children, and other parents were found most in body movements (*mean rating 3.9*) followed by behavior control (*mean rating 3.3*), social interaction (*mean rating 3.2*), physical appearance (*mean rating 3.0*), speech and communication (*mean rating 2.9*), and emotion expression (*mean rating 2.8*).

Table 1. MEAN SCORES AND STANDARD DEVIATIONS OF QUESTIONNAIRE FOR DEVELOPMENTAL CHANGES ON SEVEN FACTORS ($N = 20$)

Factors	Behavior Control (I)	Speech and Communication (II)	Emotion Expression (III)	Volunteer Body Movements (IV)	Initiative & Appearance (V)	Social Interaction (VI)	Health Maintenance (VII)	Total	$F (1,6)$ 29.6**
<i>Mean</i>	6.8	6.6	12.7	14.15	16.8	8.3	14.44	12	—
<i>Mean Rating</i>	3.3	2.9	2.8	3.9	3.0	3.2	4.7	3.5	—

Note:- ** = $p < .001$; Total no. of items in QDC were 24.

The above data analyzed results clearly gave a direction to know the communication developmental changes of the children with disabilities that children got benefit by the psychological rehabilitation method Dousa-hou. The trainers who participated in training camps get skilled to notice the small developmental changes and outcomes by the practiced training activities with selection and emphasis on a particular Dousa-hou activity to produce a desired change of posture and communication development.

To consider the training effects on communication development, the trainees could improve very well on volunteer movement of body, and behavior control factors. Such as how to involve in play with others, volunteer movement of hands, legs, fingers, neck and other body parts, could gain on how to initiate a talk with others or to act on his role in recreational activities or when playing with others; and taking care of his own appearance and interaction with other using verbal, non-verbal and emotional expressions. It was noted that they use their preferred had that changes with a task. It means that the trainee could take care of himself with awareness as a social manner not to be looked awkward or dull. The trainee was found to produce body movements better and correct than earlier in different situations while involving in different social activities of daily living. The trainee could communicate his feelings better to their trainer using words in the training context and to respond on the given body movement tasks. It was also emerged that a trainee could control the own behavioral activities with awareness by this method. It can also be concluded that the trainee got more chance to get social interaction (3.5 out of 5.0) with other persons including his trainer and was found involved from sometimes to usual states. In the last, it reflected from the results that trainee was not significantly able to produce facial emotion expressions in training activities. There may be chances that the trainer could not catch the produced emotional expressions at right time due to paying much attention to support the body movement tasks.

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, behavior control, speech and communication skills, initiative & appearance, social interaction, and the emotion expression through Dousa-hou training method of psychological rehabilitation. Culture did not effect the training situations and instructions.

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Appendix-I.

Training Records to be written by Trainers:

<u>Dousa-Hou Learning Practice (Date-):</u>	<u>Supervisor's Comments</u>
<u>Intake tasks:</u>	
<u>First Session:</u>	
<u>Second Session:</u>	
<u>Third Session:</u>	
<u>Outcomes of the day:</u>	

Appendix-II.

Daily Schedule

<u>Time</u>	<u>Activities</u>
08:30~ 9 :30	<u>Dousa-hou Training for trainees (children)</u> in groups
9 :30~10:30	Dousa-hou Learning Practice for Trainers Recreation for Trainees & Mothers' meeting
10:30~11:00	Simple Tea Break
11:00~12:00	<u>Dousa-hou Training for trainees (children)</u> in groups
12:00~12:20	Toilet time break
12:20~13:10	<u>Dousa-hou Training for trainees (children)</u> in groups
13:10~14:00	Lunch (all)
14:10~15:00	Supervisors & Group Meetings
15:00~16:00	All Groups Meeting of trainers and supervisors

Appendix-III.

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

トレーナーの名前： _____ 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様な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. 子どもは嬉しそうでしたか。	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. 子どもは自発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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