



The Effect of Social Information Processing Model Training on Improving Social Behaviour of with Intellectual Disabilities

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Abstract

The purpose of the current study was to explore the effectiveness of a training program based on Dodge's social information processing model on improving social behaviour of children with intellectual disabilities .10 children with intellectual disabilities were chosen .The sample was divided into two groups; experimental (n= 5 boys) and control (n= 5 boys). A Social Skill Rating Scale (SSRS) was developed by the researcher. Results from this study indicated the effectiveness of the program employed in improving social behaviour of children with intellectual disabilities in the experimental group.

Key words: Dodge's social information processing model, social behaviour, children with intellectual disabilities

Introduction

In accordance with the definition of mental retardation, as described by the American Psychological Association (1994) and the American Association on Mental Retardation (AAMR), an individual must have impairment in adaptive functioning in addition to subaverage intellectual functioning to meet diagnostic criteria. Social functioning is considered to be a major component of adaptive behavior (Grossman, 1983), and is consequently a common deficit among individuals with mental retardation (Lovett & Harris, 1987). Social behavior/functioning can be conceptualized in several ways; that is, those behaviors that provide individuals with the means to interact effectively with others, to recognize and respond to social cues, to apply appropriate responses to a specific situation, to avoid interpersonal conflicts, and/or to adjust to both simple and complex social situations (Matson & Swiezy, 1994). Individuals who engage in appropriate social behavior can effectively demonstrate and utilize these skills and are able to maintain positive social relationships (Guralnick, 1986).

The social repertoires of children with mental retardation have been found to be limited compared to those of normal children. One of the early findings by Guralnick & Weinhouse (1984) was that children with mental retardation initiate fewer social interactions and demonstrate fewer responses to peers when compared to normal children. Studies of social cognition have found that socially rejected children offered fewer possible behaviors in response to hypothetical stories than did their peers (Pettit, Dodge, & Brown, 1988). Further, Leffert, Siperstein, and Millikan (2000) found that children with mental retardation had difficulty focusing simultaneously on multiple and incongruous social cues, used fewer social strategies to deal with conflict situations, and employed strategies similar to those selected by younger peers without disabilities.

Crick and Dodge (1994) proposed a detailed model of social information processing consisting of six stages. In stage one, children encode social cues by considering both external environmental cues and internal cues drawn from a database of previous experience. In stage two, children interpret the cues by ascribing social intent to the behavior of others and evaluating the outcome of the social exchange for themselves and others.

The third stage consists of the child selecting a goal or desired outcome for the social outcome, followed by the fourth stage in which the child accesses responses from memory or creates new behaviors in response to the social situation. The fifth stage consists of evaluating the anticipated outcomes for each possible response, determining their ability to perform the response, and deciding whether the response is appropriate. The final stage occurs when the child enacts the selected response.

According to Crick and Dodge's (1994) reformulated Social Information-Processing Model, children come to social situations with a set of biologically determined capabilities and a "database" of memories of past experiences. The child selectively attends to particular situational and internal cues and encodes them. The child then interprets the encoded cues using filters, causal analyses, and inferences about others' intent. After the child interprets the situation, he/she selects a goal or desired outcome (i.e., focused arousal state) for the situation. Goals are revised or changed as a result of immediate social stimuli. The next step involves recalling possible responses to the situation from past experiences; however, if the situation is novel, the child may construct new behaviors as a response to the social cues. The child then evaluates all possible responses based on outcome expectations and chooses a behavioral response. (Khalifa, 2014; Mahfouz, 2014).

In their model, Crick and Dodge (1994) hypothesize that there are six sequential processes which lie behind competent performance in any social situation. These six processing "steps" are hypothesized to occur in "real-time", or in other words, occur simultaneously within the context of different kinds of social situations. The six processes or "steps" are 1) encoding of relevant stimulus cues 2) accurate interpretation of those cues 3) goal selection based on an interpretation of the situation as well as memory of past experiences 4) response generation 5) response evaluation and 6) behavioral enactment of a selected response. Consistent with tenets of schema theory and contextualism (though not necessarily drawing from these theories), children are seen as coming into social situations with different sets of past experiences, as well as different mental representations or memories of these experiences. These past experiences, along with prior knowledge, constitute latent mental structures that interact with and influence on-line or "real-time" processing (Crick & Dodge, 1994). To illustrate Crick and Dodge's Social Information Processing model, consider the following scenario taken from Arsenio and Lemerise (2004):

"...Imagine a child trips on a classmate's foot when getting up to sharpen a pencil. The child must figure out what happened ("I tripped on his feet") and why it might have happened ("he tripped me" or "it was an accident"). In the next step of the model, guided by his or her understanding or misunderstanding of the situation and 'latent mental structures' [sic], the child must clarify and select goals for the situation ("I just want to get my work done" or "I'm going to show that kid he can't do this to me"). Then...the child generates possible responses to the situation and evaluates them in terms of his or her self-efficacy and the likely consequences of performing the response. Finally...the child enacts his or her selected response" (p.989).

Although numerous of studies have examined the effectiveness social information processing in other children, little is known about the effect on social behaviour of children with intellectual disabilities. The purpose of the present study was to examine the extent to which social information processing model can be used to improve the social behaviour of ten children with intellectual disabilities. The primary research question was, what effects will social information processing model have on social behaviour of children with intellectual disabilities?

Method

Participants

Participants were ten children between the ages of five and ten who attended a school for children with developmental disabilities (Tarbya Fekrya). All children attended the same classroom within the school. Parental informed consent forms were sent home by the school director and school psychologist to parents of potential participants telling them about the

study and requesting them to give permission for their children to participate. Through a previous comprehensive psychological evaluation each targeted child had received a primary diagnosis of intellectual disabilities.

Measure

Social Skills Rating Scale (SSRS) was developed by the researcher for evaluating the social behaviour of children with intellectual disabilities. The Social Skills rating scale is a 3 point rating scale – Always (2), Sometimes (1) and Never (0). Cumulative model of scoring was used for the scale. There are four domains in the SSRS – they Interaction (12), Initiation (5), Cooperation (8) and Self-management(5). Reliability and Validity of the SSRS was established and the final checklist consisted of 30 items.

Procedure

Social behaviour of each child was measured on *Social Skills Rating Scale (SSRS)*. The assessment was done in an environment familiar to the children and during their usual intervention time. Treatment consisted of social behaviour training using social information processing model. The pretest scores were analyzed to ensure parity among the children.

Each child in the treatment group received 14 teaching sessions. The duration of each session would be from 15 minutes to 20 minutes, depending on child's capacity. While treatment group children received social behaviour training using social information processing model ,the control group continued with usual special classroom interventions. At the completion of the treatment session, children from both groups were tested again on *Social Skills Rating Scale (SSRS)*.

Results

Social information processing and development of social behaviour

The first objective of the study was to determine if use of social information processing model would be more effective for the treatment group compared to the control group .For this purpose, the post intervention scores of both treatment and control groups were analyzed. Table 1. shows Z Value results for the differences in post- test mean rank scores between experimental and control groups in Social Skills Rating Scale. The table shows that (Z) values were(-2.435)for interaction ,(-2.631)for initiation, (-2.711)for cooperation,(-2.701)for Self-management and (-2.688)for the composite score. These values are significant at the level (0.01) in the favor of experimental group .

Table 1. Z Values results for the differences in post- test mean rank scores between experimental and control groups in Social Skills Rating Scale

Variables	Groups	N	Mean Ranks	Sum Ranks	Mann-whitney	Z Value	Sig.
Interaction	Ex	5	8	40	Zero	-2.435	0.01
	Cont.	5	3	15			
Initiation	Ex	5	8	40	Zero	-2.631	0.01
	Cont.	5	3	15			
cooperation	Ex	5	8	40	Zero	-2.711	0.01
	Cont.	5	3	15			
Self-management	Ex	5	8	40	Zero	-2.701	0.01
	Cont.	5	3	15			
Composite	Ex	5	8	40	Zero	-2.688	0.01
	Cont.	5	3	15			

The second objective of the study was to determine the effect of social information processing model on improving social behaviour in children with intellectual disabilities. The children's performance on social behaviour was measured pre and post intervention. Table 2. shows Z Value results for the differences in post- test mean rank scores between experimental and control groups in *Social Skills Rating Scale*. The table shows that (Z) values were(-2.612)for interaction ,(-2.523)for initiation, (-2.632)for cooperation,(-2.604)for Self-management and (-2.655)for the composite score. These values are significant at the level (0.01) .This indicates that use of social information processing model had a positive effect on improving social behaviour in children with intellectual disabilities.

Table 2. Z Values results for the comparison of mean rank scores of experimental group at pre- and post intervention in Social Skills Rating Scale

Variables	Negative Ranks		Positive Ranks		Z Value	Sig.
	Mean	Sum	Mean	Sum		
Interaction	3	15	Zero	Zero	-2.612	0.01
Initiation	3	15	Zero	Zero	-2.523	0.01
cooperation	3	15	Zero	Zero	-2.632	0.01
Self-management	3	15	Zero	Zero	-2.604	0.01
Composite	3	15	Zero	Zero	-2.655	0.01

Discussion

The present study evaluated the effects of social information processing model on improving social behaviour in children with intellectual disabilities. The study results showed that the social information processing model was effective in improving interaction ,initiation, cooperation and self-management of all children participated in this study.

My findings contribute to social information processing research in two major ways. First, they reinforce the utility of this approach in identifying the SIP patterns of specified groups such as children with intellectual disabilities.

In that respect, the results speak to concerns that the SIP approach can describe the processing patterns of chronically aggressive children(Mahfouz, 2014) but is not as efficient in describing accurately the SIP patterns of other groups of children. Second, they demonstrate the utility of the multi-step approach to SIP, as concrete differences between the groups could be attributed to different SIP steps.

Furthermore, the children in this study did not receive any type of reinforcement or behavior modification strategies while participating in the sessions. Removing strategies such as prompting techniques, token systems, and other reinforcement systems reduced the potential for confounds within the study. Therefore, one can conclude that the social information processing model was primarily responsible for the change in the social behaviour of children participated in the study.

In summary, social information processing model effectively improved the social behaviour of the children who participated in this study. Overall, results from this study contribute to the social information processing model literature for improving the social behaviour of children with intellectual disabilities. The present study lends empirical support to the notion that children with intellectual disabilities, specifically young children with intellectual disabilities, can be taught and can learn appropriate social behavior.

References

- American Psychiatric Association (APA, 1994). *Diagnostic and statistical manual of mental disorders*, Fourth Edition. Washington, D.C.: American Psychiatric Association.
- Arsenio, W. F., & Lemerise, E. A. (2004). Aggression and moral development: Integrating social information processing and moral domain models. *Child Development*, *75*, 987-1002.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*, 74-101.
- Grossman, H. J. (1983). *Manual on Terminology and Classification in Mental Retardation*. Washington, D.C.: American Association on Mental Retardation.
- Guralnick, M. J. (1986). The peer relations of young handicapped and nonhandicapped children. In P. S. Strain, M. J. Guralnick, and H. M. Walker (Eds.), *Children's Social Behavior: Development, Assessment, and Modification*. Orlando, FL:Academic Press Inc.
- Guralnick, J. & Weinhouse, E. (1984). Peer related social interactions of developmentally delayed young children: Development and characteristics. *Developmental Psychology*, *20*, 815 – 827.
- Khalifa, Walid (2014) The effectiveness of a training program based on Dodge's Social Information Processing Model on social competence of children with ADHD. *International Journal of Psycho-Educational Sciences* ,*2*, 141-153 .
- Leffert, J. S., Siperstein, G. N., & Millikan, E. (2000). Understanding social adaptation in children with mental retardation: A social-cognitive perspective. *Exceptional Children*, *66*, 530–545.
- Lovett, D. L., & Harris, M. B. (1987). Identification of important community living skills for adults with mental retardation. *Rehabilitation Counseling Bulletin*, 34-41.
- Mahfouz Abdul Satar (2014). Effectiveness Of Social Information Processing Skills Training Using Making Choices Program On Promoting Social Competence of Primary School Children With Aggressive Behavior. *International Journal of Psycho-Educational Sciences*, *Issue(5)*, *No.(5)* , April,8-15
- Matson, J. L. & Swiezy, N. (1994). Social skills training with autistic children. In J. L. Matson (Ed.), *Autism in Children and Adults*. Pacific Grove, CA: Brooks Cole.
- Pettit, G. S., Dodge, K. A., & Brown, M. M. (1988). Early family experience, social problem solving patterns, and children's social competence. *Child Development*, *59*, 107–120.