

Comparison of Emotional competence among Attention deficit Hyperactivity disorder children (ADHD) with non-ADHD children

Ms. Asifa Ashraf

Research Scholar, Bhagwant University, Ajmer, Rajasthan (India)

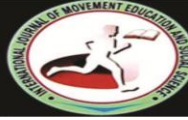
ABSTRACT

The current study aimed to identify Attention deficit hyperactivity disorder children and evaluate their emotional competence. This study was conducted on a sample of N=80 children comprising of 40 ADHD and 40 Non-ADHD. Their age ranged from 13-14 years. Children having clinically diagnosed childhood ADHD were taken from special schools. Non-ADHD children were selected by purposive sampling from formal schools. The sample was taken from Srinagar city of j& k state. Emotional competence was evaluated by using emotional competence scale given by Bharadwaj & Sharma. The results revealed that significance difference were found among ADHD children in comparison to controls.

Keyword: ADHD, DSM-IV, LD.

1. INTRODUCTION

Emotional competence has been defined as including three general facets: (a) understanding or appraisal of emotion—the ability to correctly identify, appraise and understand emotional expressions of others and internal emotional states of oneself and another, (b) regulation of emotions—the ability to manage and alter one's emotional experience, especially its intensity and duration, to manage strategically one's expression of emotion in communicative contexts (Thompson, et.,1994) and (c) expression of emotion—the ability to communicate one's emotions through verbal (language) and non-verbal (facial and vocal expressions, gestures, posture) means. These are intertwined, and cannot develop without each other (Saarni, 1999). A growing body of research has established a strong association between the development of emotional competence and social skills in the general population, and demonstrated that the development of emotional competence is crucial for the child's ability to interact with others, and therefore is considered to be a prerequisite of social competence (Saarni, 1999). Mostow, Izard, Fine, and Trentacosta (2001) have established that the relations between emotional and social competence are unilateral. In their longitudinal study involving elementary school children, emotion knowledge assessed through the ability to recognize and label emotions predicted children's social competence, and not vice versa, showing that there is a positive relationship between these two competencies (Mostow et al., 2002). Other studies have also shown that the ability of children in elementary grades to



recognize and label emotions is strongly linked to their social adjustment (Izard et al., 2001; Walden & Field, 1990) and academic achievement (Izard et al., 2001). One of the more basic and necessary skills of emotional competence is the recognition of emotional expressions. It was Darwin (1872) who first noted that emotional expressions are a basic mechanism of social communication. One cannot appraise the emotion of the individual he/she interacts with, without the ability to recognize his/her emotional expressions. Recognizing emotional expressions is a key component of a broader cognitive skill—nonverbal processing ability—which has been linked to important personal and academic outcomes (Nowicki & Duke, 1992), and contributes to the ability to represent social situations appropriately, leading to more effective social interactions (Feldman, Philippot, & Custrini, 1992). Studies have shown that most people can successfully recognize expressed emotions elicited in everyday social interactions (Izard, Huebner, Risser, McGinness, & Dougherty, 1980), and this ability improves with increasing age and IQ among children (Izard, 1971). Children with psychological disorders are rarely included in systematic study of emotional competence. New conceptualizations of childhood psychopathology however, have begun to include emotion as a central feature. For, example recent definitions of ADHD include problems with self-regulation as one disorder's primary deficit (Barkely, 1991; Westby & Cutler, 1994) because self regulation involves control of emotions especially negative emotions (Thompson, 1991) this recent view of ADHD highlights the potential importance of emotion in the awareness of this disorder.

2. REVIEW LITERATURE:

Several studies have been conducted to assess clinically diagnosed ADHD children's emotion recognition skills using different paradigms. Singh et al. (1998), using an emotion recognition task where children are requested to match photographs of facial affect (Ekman & Friesen, 1975) to story stems presented to them, has shown that children with ADHD make more mistakes in emotion recognition, and fail to recognize anger correctly compared to the reported rates of mistakes produced by children in the general population (Singh et al., 1998). Another study showed that children with ADHD exhibit difficulties in identifying emotions, especially in live situations (Norvilitis, Casey, Brooklier, & Bonello, 2000). Furthermore, ADHD children were shown to be less accurate than controls in identifying their own and their partner's emotional expressions; in addition, when presented with vignettes involving social situations, they performed worse than controls in identifying the emotions felt by the characters and in selecting facial drawings depicting the character's emotion (Casey, 1996). In a different study, where emotion recognition of various non-verbal cues (facial expressions, postures, gestures and tone of voice) of ADHD and ADHD/LD (ADHD with learning disabilities) children's were evaluated, only the ADHD/LD presented deficient abilities in emotion recognition (the sample size of the study was limited, 15 subjects per group, reducing the probability to reach significant effects and appropriate power) (Hall, Peterson, Webster, Bolen, & Brown, 1999). Using a similar technique, Cadesky, Mota, and Schachar (2000) showed that children with ADHD do have impaired ability to identify emotions, but compared to children with conduct problems, the ADHD group made random errors presenting no bias in their misrecognition of emotions. The authors concluded that ADHD children have encoding deficit rather than specific distortions in emotion interpretation (distortions would present themselves as a specific pattern of mistakes, rather than random errors) (Cadesky, Mota, & Schachar, 2000).



3. OBJECTIVES:

With the above back ground this study was taken with following objectives.

- To study the emotional competence of ADHD children with non-ADHD children.
- To compare emotional competence of ADHD children with non-ADHD children.

4. METHODOLOGY

In the present study children having clinically diagnosed childhood ADHD were taken from special schools and non ADHD children were taken by purposive sampling from a school of j & k state which did not have the symptoms this disorder. To asses such children, on present symptoms Vanderbilt ADHD diagnostic rating scales were used having two versions. Parent and teacher rating scales which consists of VDPRS (47) and VDTRS (35) statements based on DSM-IV criteria (1994). The teachers completed the VDTRS and parent's completed the VDPRS children having other comorbid disorder were excluded. The sample consists of 40 ADHD and 40 non-ADHD children taken from Srinagar city of J&K. After identification, Emotional competence of ADHD & non ADHD children were studied by using emotional competence scale given by Bharadwaj & Sharma which consists of 30 items it measures five emotional competences. The data were tabulated and analyzed by using SPSS.

5. RESULTS & ANALYSIS.

Table (5.1) Frequency distribution of emotional competences among ADHD and non-ADHD children.

Emotional competence	Level	ADHD		Non-ADHD	
		Frequency	%age	Frequency	%age
Adequate depth of feeling.	Low	20	50%	5	12.5%
	Average	14	35%	10	25%
	High	6	15%	25	62.5%
Adequate expression Control of emotions.	Low	28	70%	2	5%
	Average	12	30%	8	20%
	High	0	0%	30	75%
Ability to function with emotions.	Low	26	65%	4	10%
	Average	10	25%	8	20%
	High	4	10%	28	70%
Ability to cope with	Low	28	70%	5	12.5%



problem of emotions.	Average	7	17.5%	12	30%
	High	5	12.5%	23	57.5%
Enhancement of positive emotions separately as well as whole.	Low	25	62.5%	6	15%
	Average	9	22.5%	7	17.5%
	High	6	15%	27	67.5%

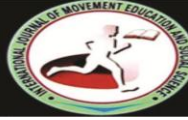
From the above table (5.1) it is clear that (50%) of the ADHD children have low level of adequate depth of feeling as compared to non-ADHD children which have high (62.5%) of adequate depth of feeling. Adequate expression Control of emotion (70%) of ADHD has low level of expressional control as compared to non ADHD which has high level (75%) of expressional control. (65%) of ADHD has low level of ability to function with emotions whereas (70%) of non-ADHD has ability to function with emotions. (70%) of ADHD children has very low ability to cope with emotional problem whereas (57.5%) of non ADHD has the ability to cope with the problem of emotions. ADHD has (62.5%) of low ability to enhance positive emotions separately as well as whole where as non-ADHD has (67.5%) of positive capability to enhance emotions separately as well as whole.

Table (5.2) comparison of mean scores of emotional competences among ADHD and non ADHD children.

Emotional competence	Group	N	Mean	Std. Dev	t-value
Adequate depth of feeling.	ADHD	40	2.00	1.08	13.63**
	Non-ADHD	40	10.20	3.64	
Adequate expression Control of emotions	ADHD	40	8.50	3.03	12.58**
	Non-ADHD	40	15.37	1.64	
Ability to function with emotions.	ADHD	40	2.45	1.83	9.23**
	Non-ADHD	40	9.57	4.52	
Ability to cope with problem of emotions.	ADHD	40	7.32	1.63	20.95**
	Non-ADHD	40	15.37	1.79	
Enhancement of positive emotions separately as well as whole.	ADHD	40	9.55	3.14	14.35**
	Non-ADHD	40	1.82	1.29	

****P≥0.01level of significance**

Table (5.2) clearly depicts that there is a significant difference in adequate depth of feelings, Adequate expression control of emotions, ability to function with emotions, ability to cope with problem of emotions,



enhancement of positive emotions as separately as well as whole among ADHD and Non-ADHD children. The obtained t value ($t=13.63, 12.58, 9.23, 20.95, 14.35$) is significant at 0.01 level.

5.3 Discussion:

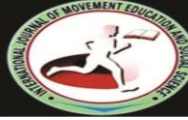
From the above findings it is clear that ADHD children have low emotional competence which is in accordance with the existing literature. Specific deficits in emotional competence have been found in children with ADHD that differentiates them from normal children Casey (1991 & 1996). (50%) of the ADHD children have low level of adequate depth of feeling as compared to non-ADHD children which have high (62.5%) of adequate depth of feeling. Children (Cadesky, Mota, & Schachar, 2000; Casey, 1996; Shapiro, Hughes, August, & Bloomquist, 1993) and adults (Rapport, Friedman, Tzelepis, & VanVoorhis, 2002) with ADHD have problems in facial affect recognition as well as in matching prosodic content and emotional expressions (Corbett & Glidden, 2000; Rapport et al., 2002; Shapiro et al., 1993). Some authors have suggested that these problems arise from the attentional sequelae of the disorder, which cause a failure to attend to affect in the interpersonal environment (Cadesky et al., 2000; Corbett & Glidden, 2000). Adequate expression Control of emotion (70%) of ADHD has low level of expressional control as compared to non ADHD which has high level (75%) of expressional control. children with ADHD are significantly poorer in identifying emotional expressional control, especially negative expressions of fear, anger, and sadness Singh et.al (1998), Cadesky et.al (2000). Since children with ADHD also make more random errors than control subjects, it has been suggested that their deficit reflects a failure to attend to salient emotional signals, originating from a primary deficiency in encoding these signals. This proposal accords with the focus of cognitive-behavioral theories on the inability to selectively attend and inhibit irrelevant information in ADHD Biderman et.al (1999), Rubika et.al (2009), Smith et.al (2006) Dupaul et.al (1998). (65%) of ADHD has low level of ability to function with emotions whereas (70%) of non-ADHD has ability to function with emotions. (70%) of ADHD children has very low ability to cope with emotional problem. It is supported by the Barkley (1997) that ADHD should be associated with secondary impairments in these 4 executive abilities and the motor control they afford and finds it to be strongest for deficits in behavioral inhibition, regulation of motivation, working memory and motor control in those with ADHD which hinders the coping in ADHD children separately as well as whole.

6. CONCLUSION:

From the above study it is concluded that there exists significant difference in emotional competences among ADHD children and non-ADHD children. Further, ADHD children have low level of emotional competence in all dimensions as compared to non-ADHD.

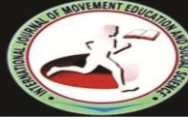
6.1 Recommendations:

- Studies on emotional maturity, emotional stability and emotional resilience should be studied more in children with psychopathologies.
- Emotional awareness and intervention strategies should be studied for future research.



References:

- 1) Thomson JB, Seidenstrang L, Kerns KA, Sohlberg MM, Mateer CA. Pay attention! Puyallup: Association for Neuropsychological Research and Development; 1994.
- 2) Saarni, C. (1999). The Development of Emotional Competence. New York: Guilford Press.
- 3) Mostow, A. J., Izard, C. E., Fine, S., & Trentacosta, C. J. (2002). Modeling emotional, cognitive, and behavioral predictors of peer acceptance. *Child Development*, 73, 1775–1787.
- 4) Izard, C. E., Fine, S., Schultz, D., Mostow, A. J., Ackerman, B., & Youngstrom, E. (2001). Emotion knowledge as a predictor of social behavior and academic competence in children at risk. *Psychological Science*, 12, 18–23.
- 5) Walden, T. A., & Field, T. M. (1990). Preschool children's social competence and production and discrimination of affective expression. *British Journal of Developmental Psychology*, 8, 65–76.
- 6) Darwin, C.R.1872. The expression of emotions in man and animals. London: John Murray. 1st edition.
- 7) Nowicki, S., Jr., & Duke, M. P. (1992). Helping the child who doesn't fit in. Atlanta, GA: Peachtree.
- 8) Feldman, R. S., Philippot, P., & Custrini, R. J. (1992). Social competence and nonverbal behavior. In *Fundamentals of nonverbal behavior* (pp. 329–350). New York: Cambridge University Press.
- 9) Izard, C. E., Huebner, R. R., Risser, D., McGinness, G. C., & Dougherty, L. M. (1980). The young infant's ability to produce discreet emotion expressions. *Developmental Psychology*, 16, 132–140.
- 10) Izard, C. E. (1971). The face of emotion. New York: Appleton-Century Crofts.
- 11) Singh, S. D., Ellis, C. R., Winton, A. S. W., Singh, N. N., Leung, J. P., & Oswald, D. P. (1998). Recognition of facial expression of emotion by children with attention-deficit hyperactivity disorder. *Behavior Modification*, 22, 128–142
- 12) Ekman, P., & Friesen, W. V. (1975). Unmasking the face: A guide to recognizing emotions from facial clues. Englewood Cliffs, NJ: Prentice Hall.
- 13) Norvilitis, J. M., Casey, R. J., Brooklier, K. M., & Bonello, P. J. (2000). Emotion appraisal in children with attention-deficit/hyperactivity disorder and their parents. *Journal of Attention Disorders*, 4, 15–26.
- 14) Hall, C. W., Peterson, A. D., Webster, R. E., Bolen, L. M., & Brown, M. B. (1999). Psychology in the Schools, 36, 505–514.
- 15) Cadesky, E. B., Mota, V. L., & Schachar, R. J. (2000). Beyond words: How do children with ADHD and/or conduct problems process nonverbal information about affect? *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 1160– 1167.
- 16) Casey, R. J.(1991).childhood psychopathology and emotional competence. Paper presented at the biennial meeting of the society for research in child development, Seattle, Washington.



- 17) Casey, R. J. (1996). Emotional competence in children with externalizing and internalizing disorders. In M. Lewis & M. W. Sullivan (Eds.), *Emotional development in atypical children* (pp. 161–183). New Jersey: Lawrence Erlbaum Associates.
- 18) Shapiro, E. G., Hughes, S. J., August, G. J., & Bloomquist, M. L. (1993). Processing of emotional information in children with attention deficit hyperactivity disorder. *Developmental Neuropsychology*, 9, 207–224.
- 19) Rapport, L. J., Friedman, S. L., Tzelepis, A., & Van Voorhis, A. (2002). Experienced emotion and affect recognition in adult attention deficit hyperactivity disorder. *Neuropsychology*, 16, 102–110.
- 20) Corbett, B., & Glidden, H. (2000). Processing affective stimuli in children with attention deficit hyperactivity disorder. *Child Neuropsychology*, 6, 144–155.
- 21) Biederman J, Wilens T, Mick E, Faraone SV, Weber W, Curtis S, et al. Soriano J. Is ADHD a risk factor for psychoactive substance use disorders? Findings from a four-year prospective follow-up study. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1997;36:21–29
- 22) Rubia K, Halari R, Smith AB, Mohammad M, Scott S, Brammer MJ. Shared and disorder-specific prefrontal abnormalities in boys with pure attention-deficit/hyperactivity disorder compared to boys with pure CD during interference inhibition and attention allocation. *J Child Psychiatry*. 2009;50:669–678
- 23) Smith AB, Taylor E, Brammer M, Toone B, Rubia K. Task-specific hypo activation in prefrontal and temporoparietal brain regions during motor inhibition and task switching in medication-naïve children and adolescents with attention deficit hyperactivity disorder. *J Psychiatry*. 2006; 163:1044–1051.
- 24) Barkley, R. A., Anastopolous, A. D., Guevremont, D. C., & Fletcher, K. E. (1991). Adolescents with ADHD: Patterns of behavioural adjustment, academic functioning and treatment utilization. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 752–761.
- 25) Westby, C.E. & Cutler, S.K. (1994). Language and ADHD: understanding the bases and treatment of self-regulatory deficits. *Topics in language disorders*. 14, 58-76.
- 26) Thompson R.A (1991). Emotion regulation and emotional development. *Educational psychology review*, 3, 269-307.
- 27) Barkley, R. A. (1997). Behavioral inhibition, sustained attention, and executive functions: Constructing a unifying theory of ADHD. *Psychological Bulletin*, 121, 65–94.
- 28) American Psychiatric Association. [1994]. Diagnostic and statistical manual of mental disorders. 4th ed. Washington: the Association.
- 29) Vanderbilt, B.T. (1998). Manual for ADHD rating scale for children: Nashville, Tennessee. University of Vanderbilt. Department of child Development.
- 30) Bharadwaj. R & Sharma. H emotional competence scale (2007): National psychological corporation. Agra.