Correlation between Emotional Competence and Behavioral Problems in Elementary School Students with ADHD

Chih-lan Chang, National Kaohsiung Normal University, Taiwan
Shi-Sen Shyu, National Kaohsiung Normal University, Taiwan
Yuan-Yu Ting, National Kaohsiung Normal University, Taiwan

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Abstract

This study attempted to explore the connection between emotional competence and adaptation to life in pupils with ADHD from Southern Taiwan. In addition to analyzing how 32 children with ADHD performed on the scales used, this study was also intended to show the current state of their emotional competence and adaptations to life and understand the correlation between the two.

Results of this study reveal the following four key points. (I) The elementary school students with ADHD rated that they have greater emotional competence than their average peers, particularly the competence of 'emotional awareness', a result significantly different from those from previous studies of emotion. (II) The elementary school students with ADHD scored high on the two scales 'Problems with Self-Care' and 'Problems at School' among their self-rated behavioral problems. (III) There is a considerable difference between the self-assessment by the elementary school students with ADHD and the assessment by the outer world. (IV) 'Emotional expression', 'emotional effectiveness' and 'emotional reflection' were able to predict 'problems at school' in the elementary school students with ADHD. Based on these findings, the researcher makes the following suggestions for further exploration and integration regarding this topic.

Keywords: emotional competence, behavioral problems, ADHD

Introduction

On the scene of elementary education, many pupils with emotional disorders are likely to attract attention due to their emotional outbursts and especially those diagnosed with ADHD are even more likely to have problems controlling their impulsivity. The prevalence of ADHD in childhood is 3-8%. When its symptoms are manifested, the afflicted pupils are likely to have physical or verbal confrontations with their peers or teachers and exhibit behaviors such as defiance or aggression, which cause rejections or negative opinions from their teachers and peers and tremendous impact on their school adaptations (Barkly, 2006). The behavioral, emotional and learning problems caused by symptoms of ADHD plus traumatic experiences and conflict-prone family relationships in childhood cause the symptoms of ADHD in 35-60% children to continue into their adulthood (Miranda, Sorian, Femandez, & Melia, 2008). Therefore, the elementary school stage is a phase in which children with ADHD begin to experience more control difficulties and conflicts and educators need to pay close attention and give them support.

Although the core symptoms exhibited by children with ADHD are the three problems: attention deficit, hyperactivity and impulsivity, Brown (2002, 2005) found in his clinical experiences that even DSM-IV does not incorporate problems with emotion regulation into diagnostic criteria for ADHD while many children or adolescents diagnosed with ADHD suffer long-term negative emotions such as frustration, anger, worry and disappointment and have difficulties regulating these emotions and it is hard for them to deal with these negative emotions on their own once they have occurred. Kats-Gold, Besser and Priel (2007) also agreed that emotional problems in children with ADHD is another field of research to be developed particularly because such problems are the main cause for the lack of social skills in these children. Interpersonal interactions that children with ADHD have, including their relationships with their parents, siblings, peers and teachers, are often deemed negative and more prone to conflicts. Nevertheless, good interpersonal interaction requires understanding of others' emotional state so as to react appropriately and effectively. Braaten and Rosen (2000) also noted that children with ADHD not only are less capable of identifying and understanding others' emotions, but are also less perceptive of their own emotional experiences. Therefore, solving interpersonal problems in children with ADHD can be the starting point for understanding the process in which children with ADHD deal with emotions.

Currently identified psychological causes of ADHD in children are mostly focused on cognitive deficits in these children. Recent studies and their findings include the following. Fine, Semrud-Clikeman, Butcher and Walkowiak (2008) suggested that inattention is a key cause for the deficit in children in identifying others' emotions. Aase and Sagvolden (2006) on the other hand suggested that children with ADHD have motivation deficit and their oversensitivity to rewards or extreme dislike of delay means higher rewards are necessary to motivate them or difficulty in keeping them motivated in the event of insufficient rewards or delay. Kats-Gold et al. (2007) agreed with the views set forth by Corbett and Glidden (2000). All of them suggested that executive function deficits in the prefrontal cortex in children with ADHD actually cause difficulties in emotion regulation, but such difficulties mainly occur in more complex simulation scenarios, such as occurrence of strong emotional reactions to trigger stimuli or unpredictability of emotional reactions to future incidents.

Past studies of adaptation to life in pupils with ADHD were based on either the school setting (Shen, 2009) or the family setting. Our literature review revealed that pupils with ADHD have more emotional, interpersonal and rule violation problems than average pupils (Young & Gudjonsson, 2006). Most children with ADHD are less capable of self-monitoring than average children, which is disadvantage to their performance in interpersonal interactions (Kim & Kaiser, 2000). For these reasons, this study attempted to examine the relationship between emotional competence and adaptation to life in pupils with ADHD from Southern Taiwan for these objectives: identifying the current state of emotional competence and adaptation to life in pupils with ADHD, understanding the correlation between the two, and making suggestions for further research and consolidation regarding this issue based on our findings.

Objectives

(I) Understanding the current state of emotional competence and behavioral problems in pupils with ADHD.
(II) Examining the correlation between emotional competence and behavioral problems in pupils with ADHD.

Hypotheses

(I) Emotional competence in pupils with ADHD is significantly different from that in average pupils.

(II) Behavioral problems in pupils with ADHD are significantly different from those in average pupils.
(III) There is a correlation between emotional competence and behavioral problems in pupils with ADHD.

Samples

For this study, purposive sampling was used. The 32 valid samples were chosen from fourth-sixth grade elementary school pupils confirmed to have ADHD, evenly distributed across fourth-sixth grades and in the boy to girl ratio of 28:4, which is in line with the assumption that boys have a higher ADHD incidence than girls.

Tools

(I) Scale for Behavioral Problems

The scale was developed by Li and Ou (2008) by taking into accounts the actual situations and teachers' experiences at junior high and elementary schools and deliberating related behavioral problems or adaptation to life. It consists of five sub-scales and one measure of honesty. The sub-scales cover: (1) 'problems with self-care': including life goals, personal abilities and care for others' ratings; (2) 'problems with physical and mental development': including physiological development, mental strength, emotional stability etc.; (3) 'problems with school life': including homework and routines, learning attitudes and habits, teachers' methods of discipline etc.; (4) 'problems with interpersonal relationships': including interactions with peers, social skills, pupil-teacher interactions etc.; and (5) 'problems with family life': including parent-child communication, family problems and parents' attitudes towards discipline etc.

(II) Scale for Emotional Adjustment in Elementary School Pupils

The scale was developed by Hsiao (2002) and includes five factors: emotional expression, emotion perception, adjustment strategy, emotional effectiveness and emotional reflection.

Data Analysis

Collected sample data, removed of those with incompleteness in large part or less

reliable responses, were treated statistically with SPSS 20.0.

Results and Discussion

I. Current State of Emotional Competence and Behavioral Problems in Pupils with ADHD

(I) Self-ratings by the elementary school pupils differed greatly from external ratings. The elementary school pupils with ADHD gave themselves higher ratings than their average peers in all of these dimensions: 'emotional expression', 'emotion perception', 'adjustment strategy', 'emotional effectiveness' and 'emotional reflection', especially in the subscale of 'emotion perception'. This result significantly differs from the findings by Taiwanese and international researchers. For example, Corbett and Glidden (2000) noted that children with ADHD performed more poorly not only in attention and behavioral inhibition ability, but also in visual and auditory identification of emotions, compared to those in the control group.

Kats-Gold and Priel (2009) also found that children at high risk for ADHD are actually less capable of expressing negative emotions and comprehending emotion regulation. Although few have conducted empirical research directly on children with ADHD to examine their emotional competence, most Taiwanese researchers support the view that children with ADHD are less capable of emotion perception (Hsu, 2011). The difference is presumably linked to 'the typical positive perceptual bias towards over-rating of self-perception by children with ADHD' suggested by Su (2008). The aforementioned result of this study supports this view. The same bias also makes it more difficult for children with ADHD to monitor and adjust their emotions. When this happens on the scene of education or counseling, inconsistency in mutual perceptions and the understanding of inner needs is very likely to occur between educators and children with ADHD and in turn hinders effective counseling.

Some international researchers also pointed out differences between the self-ratings by children with ADHD and the ratings by their parents (Braaten & Rosen, 2000) with the parents rating that their children with ADHD have more apparent emotional problems while the children do not think or perceive that they have such problems (Friedman, et al., 2003); whereas, others presented entirely different results showing that children with ADHD actually realize that they have difficulties controlling their emotions (Scime & Norvilitis, 2006).

Therefore, whether the self-rated emotional competence by children is valid and reliable data or may vary according to the assessment tools used and whether there are currently available tools that can effectively assess the ability of emotion comprehension, emotional expression or emotion regulation in children are the aspects that can be further examined in subsequent research.

(II) The elementary school pupils with ADHD scored higher than average pupils in 'problems with self-care' and 'problems with school life', especially in the latter.
Children with ADHD are more sensitive to learning and pupil-teacher conflicts in school life and more susceptible to self-doubt and low self-esteem than average pupils. There are more international studies that examined learning problems in pupils with ADHD and showed that such pupils often have low academic achievement compared to their peers. Taiwanese researchers such as Lee (2007) found that learning difficulties caused by ADHD can continue into adulthood and Shen (2009) discovered that pupils with ADHD have more learning difficulties in academic subjects and consequently exhibit more interfering behaviors and are likely to give up when they fall too far behind academically even though they care about their grades.

Ii. Correlation between Emotional Competence and Behavioral Problems in The Elementary School Pupils with ADHD

(I) The 'Scale for Emotional Adjustment' and 'Scale for Behavioral Problems' show that most pairs of their respective subscales have reached significance levels of correlation.
(II) Among the pairs of respective subscales in the two scales, one pair, i.e. 'emotional expression - school life', have reached the significance level of .05.
(III) The two pairs, 'emotional reflection - school life' and 'emotional effectiveness - school life', have reached the significance level of .01.
(IV) 'Problems with school life' is the item that troubles the pupils with ADHD most.

Table 1
Correlations and Descriptive Statistics (N = 32)

Variables	1	2	3	4	5	6	7	8	9	10
emotion perception	–									
emotional expression	-.008	–								
adjustment strategy	.059	.426*	–							
emotional reflection	.251	.683**	.291	–						
emotional effectiveness	.317	.487**	.530**	.638**	–					
problems with self-care	-.005	-.277	-.102	-.165	-.202	–				
problems with physical and mental development	-.022	-.093	-.025	-.013	-.062	.740**	–			
problems with school life	-.174	-.352*	-.195	-.501**	-.471**	.562**	.508**	–		
problems with interpersonal relationships	.092	-.117	.048	-.090	-.230	.591**	.550**	.408*	–	
problems with family life	.115	-.049	.072	-.153	-.131	.472**	.559**	.474**	.621**	–

*p < .05. **p < .01.

Iii. Predictability of Behavioral Problems in the Elementary School Pupils with ADHD Based on Their Emotional Competence

Table 2 shows ‘school life’ has stronger correlations to ‘emotional expression’, ‘emotional effectiveness’ and ‘emotional reflection’. Therefore, linear regression was used to analyze how well the pupils’ ratings using the scale for emotional adjustment can predict their problems with school life and the results are shown in Table 2.

Table 2

The model predicting ‘problems with school life’ based on ‘emotional expression’, ‘emotional effectiveness’ and ‘emotional reflection’

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R	R-square	Adjusted R-square	Estimated standard error	R-square change	F change	Significance F change
.538a	.290	.214	5.92446	.290	3.805	.021

a. Predictor variables: (constants), emotional effectiveness, emotional expression, emotional reflection

Results of the analysis show that the three subscales: ‘emotional expression’, ‘emotional effectiveness’ and ‘emotional reflection’, can predict ‘problems with school life’ in the elementary school pupils with ADHD with 29% of variance explained, which is an average proportion, indicating there are other key factors that can be explored and incorporated into further research.

The findings of this study suggest that pupils with ADHD are more troubled by problems with school life when they perceive their emotional expression, emotional reflection and emotional effectiveness to be more inadequate. The implication behind this may be that the frustration which children with ADHD are more likely to feel and which may even interact with their emotional state combined with the feedback on their emotional competence that they receive more easily in the school setting makes them more perceptive in this aspect.

Suggestions

Results of this study reveal the following four key points. (I) The elementary school students with ADHD rated that they have greater emotional competence than their average peers, particularly the competence of ‘emotional awareness’, a result significantly different from those from previous studies of emotion. (II) The elementary school students with ADHD scored high on the two scales ‘Problems with Self-Care’ and ‘Problems at School’ among their self-rated behavioral problems. (III) There is a considerable difference between the self-assessment by the elementary school students with ADHD and the assessment by the outer world. (IV) ‘Emotional expression’, ‘emotional effectiveness’ and ‘emotional reflection’ were able to predict ‘problems at school’ in the elementary school students with ADHD. Based on these findings, the researcher makes the following suggestions for further exploration and integration regarding this topic:

(I) Suggestions for Counseling Practitioners

1. Assist pupils with ADHD in sensing differences between their perceptions and external assessments, thereby promoting their proper awareness of their own emotions.
2. Pay attention to see whether elementary students with ADHD have the tendency towards low self-esteem due to their emotional and behavioral problems.
3. Elementary students with ADHD mainly have problems at school. Improving their emotional competence in 'emotional expression', 'emotional effectiveness' and 'emotional reflection' can help reduce the extent of such problems.

(II) Suggestions for Further Research

1. Further research may expand data collection to include assessments of pupils with ADHD by primary caretakers and educators to see how differently the two groups perceive the troubled state in these pupils.
2. Since pupils with ADHD are susceptible to positive perceptual bias (response bias) while answering self-rating questionnaires, qualitative interviewing is suggested as an alternative to obtain more information on emotional competence and behavioral problems.
3. Further research may consider other variables (or mediator variables) that may influence behavioral problems in these pupils in addition to emotional competence and create models for the connection between emotion and problems in pupils with ADHD by examining the underlying causal pathways between the two using the integration model for potential variable path analysis in SEM.

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Contact email: antipode1224@yahoo.com.tw