Relationship Among Children's Social-emotional Competence, Social Support, Academic Achievement and Aggressive Behavior in the Primary School in China

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Abstract

With the development of humanistic education, scholars believe that children's social-emotional competence mostly will take charge of their future family, school and life success in the future. Because of too much time focusing on social-skills training and few about children' s social-emotional competence and relationship between social-emotional competence and aggressive behavior in China, and this article firstly shows concepts of social-emotional competence, social support, academic achievement and aggressive behavior. Secondly, social-emotional competence and social support were hypothesized to have strong influences on academic achievement and aggressive behavior in the study. Participants were 301 pupils (151 boys and 150 girls) from 2 elementary schools in Nanjing, China. The findings suggest that the students with stronger social-emotional competence performed fewer aggressive behaviors than the other peers.

Keywords: children; social-emotions competence; social support; aggression

1. Introduction

With the development of humanistic education, more and more researchers pay more to the socialization of children, and scholars believe that children's social-emotional competence directly will take charge of their future family, school and life success in the future, the development of social–emotional competence is a key challenge for young children as they enter the social field of elementary school and encounter the complex demands of teachers and peers. Socially competent children possess the ability to develop peer and adult relationships that are necessary to succeed in academic and nonacademic settings (Mendez,McDermott, & Fantuzzo, 2002).Therefore, the development of social–emotional competence is of key importance during early childhood, particularly during the preschool years. In China, most of early childhood education is still focusing on the academic achievements to increase intelligence and neglect the importance of social-emotional competence training in China. Besides, schools are the only play-Zone for most pupils most of time, and schools maybe play an important role in the promotion of social–emotional development in children.

1.1 Social–Emotional Competence in Schools

Academic achievement without social and emotional competence on the part of students is undesirable and rarely feasible (Zins, Elias, Greenberg, & Weissberg, 2000). Academic achievement is best fostered in an environment that supports the child across multiple contexts. Zins believes we should expand beyond an academic focus to acknowledge the importance of educating knowledgeable, responsible and caring citizens, which requires systematic attention to children's social and emotional learning/competence. Social–emotional competence influences academic growth and progress as children who feel competent, autonomous, and happy generally make good students (Harniss, Epstein, Ruser, & Pearson, 1999). Dr James Heckman (Nobel Laureate in Economics, 2000) believes that the preoccupation with cognition and academic 'smarts' as measured by test scores excludes the critical importance of social–emotional skills, self-discipline, and a variety of other non-cognitive skills that are known to determine success in later life (Heckman, 2000). These social–emotional skills affect performance in school and in the workplace and are more easily altered than IQ. From an economical standpoint, Heckman (Heckman, 2000) explains that the return on human capital investments is higher when each dollar is spent on the 'young' than when it is spent on the 'old'. Therefore, Heckman prescribes that we must, 'invest in the very young and improve basic learning and socialization skills' (p. 4, 2000). He continues, 'as a society, we cannot afford to postpone investing in children until they become adults, nor can we wait until they reach school age — a time when it may be too late to intervene' (p. 4, 2000). He believes that 'investing in the young' can begin by providing children with interventions that increase social–emotional competence in early life, particularly during the preschool years, which are vitally important for skill formation (Heckman,

2000). Since learning is a dynamic process, it is most effective when it begins at a young age and continues through adulthood (Heckman, 2000). Social-emotional wellbeing/competence can be defined as cooperative and pro-social behavior, initiation and maintenance of peer friendships and adult relationships, management of aggression and conflict, development of a sense of mastery and self-worth and emotional regulation and reactivity (Squires, 2002). Children who are socially and emotionally well adjusted do better at school, have increased confidence, have good relationships, take on and persist at challenging tasks and communicate well (National Research Council and Institutes of Medicine, 2000).

Recently, attention has been paid to the contribution of social and emotional readiness to children's school success. Research documents the negative influence of social, regulatory, and emotional problems on children's early school experiences (Knitzer, 2003; Raver, 2002). Preschool children who exhibit challenges in these areas are more likely to experience difficulties within the classroom that affect their ability to develop normal peer relationships and to behave in ways conductive to learning. As a consequence, these children are less likely to be socially and academically prepared for school (Huffman, Mehlinger, & Kerivan, 2000). Young children require healthy social–emotional development in order to be prepared and ready to learn once they enter school (Klein, 2002). Children who have limitations in their social–emotional development often demonstrate poor social, emotional and academic success (Aviles, Anderson, & Davila, 2005).

1.2 Children and Social Support

Research has shown that, certainly by school age, children seek to be members of social groups and that they reveal a tendency to like and to see themselves as similar to ingroup compared with outgroup members (Nesdale et al., 2005a,b,c), and that their acceptance by a social group contributes to their sense of self-worth (Verkuyten, 2007). In addition, children have a strong bias toward their ingroup when they are required to make choices, indicate preferences, or allocate rewards between the ingroup and an outgroup, and they display ingroup positivity vs. Outgroup negativity in their trait attributions (Nesdale,2001). Whereas the preceding findings indicate that peer group membership is exceedingly important to children, they also suggest that the peer group has the potential to exert considerable influence on group members. A primary mechanism through which this is likely to be achieved is to be found in the norms of the group—the expectations shared by group members concerning the appropriate attitudes, beliefs, and behaviors to be displayed by group members. Consistent with this, Nesdale et al. (2005a,b,c) reported that children were more positive toward outgroup members, when the group's norms endorsed inclusion vs. rejection, whereas Nesdale et al. (2005a,b,c) found that a group norm of exclusion negated individual children's tendencies toward empathy for the members of ethnic minority outgroups. In addition, research has shown that, from 5 years onward, children show less liking for ingroup members who do not conform to group norms (Abrams et al., 2003, 2004).

1.3 Aggression

Problems of aggression, conduct problems, and antisocial behaviors are continuing concerns for society. Levels of youth violence, in the form of physical fighting, bullying, using weapons, making verbal threats, and engaging in impulsive forms of aggression, affect the safety and well-being of all youth (Rappaport & Thomas, 2004). Further, externalizing and conduct problems are associated with peer rejection (Coie & Dodge, 1998), poor academic performance and decreased motivation (Bergman & Magnusson, 1997), as well as increased risk for school dropout (Kokko, Tremblay, Lacourse, Nagin, & Vitaro, 2006). As such, aggression and conduct problems constitute a significant concern; factors that contribute to or mediate aggression= conduct problems need to be better understood to inform prevention and intervention (Brody et al., 2004).

2. The Present Research

Based on the literature reviewed, it was hypothesized that direct relationships exist between Social-emotional Competence, Social Support, Academic Achievement and Aggressive Behavior in the fourth, fifth and sixth Grade in China. Further, as pupils become more social-emotional competent, their ability to seek supportive relationships also should increase and they will perform fewer aggressive behaviors.

2.1 Method

2.1.1 Participants and Setting

Data for this study were collected as part of Social Support Rating Scale(SSRS,1986) constructed by (Shuiyuan) Xiao and The Perceived Competence Scale for Children (PCSC,1982) constructed by Harter and Aggressive Behavior Questionnaire（ABQ，2005）constructed by Qimin Pan. The result was tailored toward preventing violence and promoting social-emotional competence among urban elementary school children.

Data collected from 301 pupils (151 boys and 150 girls) from two elementary schools in Nanjing, China were analyzed in this study. Of these, 96 pupils were from Grade 4 and 113 pupils were from Grade 5 and 92 pupils from Grade 6. Among these students, 217 pupils were from city and 84 pupils were from countryside. As

the two schools are the ordinary elementary schools in Nanjing, China, the study sample is representative of the full ordinary school population. Among these subjects, 58.86% fathers were graduated from high school, 31.10% from college, 4.34% from postgraduate, and 5.70% from primary school. Meanwhile, 59.53% mothers from high school, 26.09% from college, and 2.34% from postgraduate, and 12.04% from primary school. And 65.89% pupils lived with their parents, 27.42% lived with their fathers, 5.35% lived with the mothers, and 1.34% lived with their grandparents.

2.2 Measures

2.2.1 Social Support

Social Support Rating Scale (SSRS), developed by Shuiyuan Xiao(1986), is one of the few multidimensional measures of perceived social support that has been used with urban elementary school children from fourth grade to sixth grade. The original version contains 10 items corresponding to perceived family, peer and teacher supported Cronbach's alpha for subscales ranging from .68-.81and test-retest reliability was .69. SSRS includes 3 parts, 1st subjective support, refers to the individual in society respected and supported by understanding, resulting in emotional experience and satisfaction, 2nd objective support, including material assistance and social networks, groups, and 3rd the utilization of social support degree, refers to the individual in trouble, which is a measure of individual differences in social support.

2.2.2 Social–emotional Competence

Perceived Competence Scale for Children (PCSC) constructed by Harter. The questionnaire includes four dimensions, self-perceived social competence, cognitive self-perception, motor skills self-perception and general self- perception, respectively. This study used only the dimension of self-perceived social competence, which the Cronbach's alpha score was .76.

2.2.3 Aggressive Behavior

Aggressive Behavior Questionnaire（ABQ）constructed by Qimin Pan (2005). And the questionnaire includes oral aggression, physical aggression and self-venting. The Cronbach's alpha was .82.

2.2.4 Academic Achievement

 Academic Achievements were measured using report card grades for Chinese and Mathematics and English at the end of the first and the second school terms. Mean scores for Chinese and Mathematics and English were averaged to obtain an overall indicator of academic performance. The scale used was the equivalent of 4.0=A, 3.0=B, 2.0=C, 1.0=D, and 0=F. Students with any academic scores missing were excluded from the analyses.

2.2.5 Demographic Information

Demographic Information was collected about pupils' gender, parents, grade level, age and birthplace.

2.3 Procedure

As stated above, the data for this study were collected as part of a longitudinal project aimed at improving pupils' social–emotional competence and preventing their youth violence. Grade 4-6 pupils (301students) from two elementary schools were given instruments to measure their level of perceived support. Research assistants read each item aloud to the students as they completed the survey, and paused to allow time for appropriate response.

2.4 Results

2.4.1 Summary Statistics and Data Reduction

The means and standard deviations for the study variables are presented in Table 1. From table 1, we can easily learn that mean of SSRS (utilization of social support degree) was very low which accurately accounts for that most of students hardly utilize social support, however, Std. Deviation of Aggression (total) was quite high that can represent that different students had different attitudes towards aggression and different students owned different competences to prevent aggressive behavior. From the table 2, we can see that GRADE * SEX * BIRTHPLACE was significant. However, there was no significance among others.

Table 1 Descriptive Statistics for Main Study Variables and Tests of Between-Subjects Effects

Descriptive Statistics			
	Mean	**Std. Deviation**	**N**
SSRS (subjective support)	22.4452	3.74448	301
SSRS (objective support)	9.3887	3.32141	301
SSRS (utilization of social support degree)	7.8339	2.08302	301
PCSC	14.1800	3.56604	301
Oral aggression	14.2724	4.16800	301
Physical aggression	15.5200	4.16020	301
Self-venting	20.0967	5.30608	301
Aggression (total)	49.9365	11.36606	301
SSRS(total)	39.6678	7.09666	301

Tests of Between-Subjects Effects
Dependent Variable: Aggression (total)

Source	Type III Sum of Squares	Mean Square	F	Sig.
GRADE	329.521	164.760	1.326	.267
SEX	518.560	259.280	2.087	.126
BIRTHPLACE	32.711	32.711	.263	.608
GRADE * SEX	447.185	223.592	1.800	.167
GRADE * BIRTHPLACE	18.037	9.019	.073	.930
SEX * BIRTHPLACE	305.895	305.895	2.462	.118
GRADE * SEX * BIRTHPLACE	776.481	388.241	3.125	.045

Tests of Between-Subjects Effects
Dependent Variable: Aggression (total)

Source	Type III Sum of Squares	Mean Square	F	Sig.
Academic Achievement	1643.264	547.755	4.384	.005

" poor academic performance and decreased motivation" (Bergman & Magnusson, 1997), "as well as increased risk for school dropout" (Kokko, Tremblay, Lacourse, Nagin, & Vitaro, 2006). According to table 1, 2, we also can see **p<.01, better academic performance and lower aggression. Moreover, and higher marks and larger mean difference and more significance.

Table 2 Multiple Comparisons and Descriptives

Multiple Comparisons
Dependent Variable: Aggression (total)

(I) Academic Achievement	(J) Academic Achievement	Mean Difference (I-J)	Std. Error	Sig.
2.00	3.00	.6362	2.18371	.771
	4.00	5.2067(*)	1.96988	.009
3.00	2.00	-.6362	2.18371	.771
	4.00	4.5705(*)	1.50464	.003
4.00	2.00	-5.2067(*)	1.96988	.009
	3.00	-4.5705(*)	1.50464	.003

* The mean difference is significant at the .05 level.

Multivariate Tests(c)

Effect	Value	F	Hypothesis df	Sig.
Academic Achievement	.084	4.299	6.000	.000
	.917	4.349(a)	6.000	.000
	.090	4.399	6.000	.000
	.082	8.088(b)	3.000	.000

Descriptives

	Academic Achievement		Statistic	Std. Error
Oral aggression	2.00	Mean	14.7692	.78744
		Std. Deviation	4.91754	
		Minimum	9.00	
		Maximum	30.00	
		Mean	14.6709	.46623
	3.00	Std. Deviation	4.14395	
		Minimum	9.00	
		Maximum	27.00	
		Mean	14.0276	.29788
	4.00	Std. Deviation	4.00754	
		Minimum	9.00	
		Maximum	34.00	
		Mean	15.9487	.69697
Physical aggression	2.00	Std. Deviation	4.35255	
		Minimum	8.00	

		Maximum	27.00	
	3.00	**Mean**	16.4810	.40158
		Std. Deviation	3.56932	
		Minimum	10.00	
		Maximum	26.00	
	4.00	**Mean**	15.0442	
		Std. Deviation	4.28022	
		Minimum	8.00	
		Maximum	29.00	
Self-venting	**2.00**	**Mean**	22.5385	.87076
		Std. Deviation	5.43791	
		Minimum	14.00	
		Maximum	44.00	
	3.00	**Mean**	21.4684	.60207
		Median	21.2686	
		Std. Deviation	5.35134	
		Minimum	12.00	
		Maximum	36.00	
	4.00	**Mean**	18.9779	.36966
		Std. Deviation	4.97321	
		Minimum	12.00	
		Maximum	34.00	

From the table above, the mean in academic achievement "4" is lower than academic achievement "2" and "3", (mean 14.7692 in "2.00", mean 14.6709 in "3.00", and mean 14.0276 in "4.00") since the pupils are top students and clever at oral expression, they have less oral aggression. In addition, mean 15.9487 in "2.00", mean 15.0442 in "4.00", the top students have less physical aggression. Finally, mean 22.5385 in "2.00" and mean 21.4684 in "3.00" and mean 18.9779 in "4.00", the top students have less self-venting.

2.4.2 General Linear Model

From table 3, academic achievement was extremely closed to self-venting as well as physical aggression. Besides, mean of self-venting was extremely higher than that of oral aggression and physical aggression.

Table 3 Tests of Between-Subjects Effects

		Tests of Between-Subjects Effects			
Source	**Dependent Variable**	**Type III Sum of Squares**	**Mean Square**	**F**	**Sig.**
Academic Achievement	**Oral aggression**	32.872	16.436	.945	.390
	Physical aggression	120.962	60.481	3.572	.029
	Self-venting	607.715	303.858	11.517	.000

a R Squared = .006 (Adjusted R Squared = .000)

b R Squared = .024 (Adjusted R Squared = .017)

c R Squared = .072 (Adjusted R Squared = .066)

Dependent Variable	**(I) Academic Achievement**	**(J) Academic Achievement**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Oral aggression	**2.00**	**3.00**	.0983	.81624	.904
		4.00	.7416	.73632	.315
	3.00	**2.00**	-.0983	.81624	.904
		4.00	.6433	.56242	.254
	4.00	**2.00**	-.7416	.73632	.315
		3.00	-.6433	.56242	.254
Physical aggression	**2.00**	**3.00**	-.5323	.80524	.509
		4.00	.9045	.72639	.214
	3.00	**2.00**	.5323	.80524	.509
		4.00	1.4368(*)	.55483	.010
	4.00	**2.00**	-.9045	.72639	.214
		3.00	-1.4368(*)	.55483	.010
Self-venting	**2.00**	**3.00**	1.0701	1.00521	.288
		4.00	3.5606(*)	.90677	.000
	3.00	**2.00**	-1.0701	1.00521	.288
		4.00	2.4905(*)	.69262	.000
	4.00	**2.00**	-3.5606(*)	.90677	.000
		3.00	-2.4905(*)	.69262	.000

2.4.3 Correlations

From table 4, the program-generated correlation matrix was analyzed. Pearson's correlation coefficients are presented. Hypothesized relationships were generally supported by the inter-correlation results. SSRS (subjective support) was significantly related to SSRS (objective support) ($r=.390$, $p<.01$) and SSRS (utilization of social support degree) was significantly related to SSRS (objective support) ($r=.439$, $p<.01$). PCSC was significantly related to SSRS (objective support) ($r= -.221$, $p<.01$), and Oral aggression was significantly related to SSRS (objective support) ($r= -.144$, $p<.01$) and Physical aggression was significantly related to SSRS (objective support) ($r= -.163$, $p<.01$) and Self-venting was significantly related to SSRS (objective support) ($r= -.231$, $p<.01$) and Aggression (total) was significantly related to SSRS (objective support) ($r= -.217$, $p<.01$). The results also indicated significant associations between Aggression (total) and SSRS

(totally) (r = - .311, p< .01).

Table 4

	1. SSRS (subjective support)	2. SSRS (objective support)	3. SSRS (utilization of social support degree)	4. PCSC	5. Oral aggression	6. Physical aggression	7. Self-venting	8. Aggression (total)	9. SSRS (total)
1	1								
2	.390(**)	1							
3	.439(**)	.320(**)	1						
4	-.221(**)	-.123(*)	-.347(**)	1					
5	-.144(*)	-.154(**)	-.223(**)	.169(**)	1				
6	-.163(**)	-.160(**)	-.216(**)	.091	.559(**)	1			
7	-.231(**)	-.257(**)	-.293(**)	.148(*)	.493(**)	.572(**)	1		
8	-.217(**)	-.237(**)	-.292(**)	.164(**)	.800(**)	.837(**)	.857(**)	1	
9	.839(**)	.768(**)	.675(**)	-.276(**)	-.214(**)	-.225(**)	-.328(**)	-.311(**)	1

2.4.4 Regression

From table 5, we can easily see that Aggression (total) was Dependent Variable, predictors consists of PCSC and SSRS (total). SSRS (total) was significantly related to Aggression (total) (p<.01).

Table 5

Variables Entered/Removed(b)			
Model	Variables Entered	Variables Removed	Method
1	PCSC, Aggression (total) (a)	.	Enter

a All requested variables entered.

b Dependent Variable: Aggression (total)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.323(a)	.104	.098	10.81206

a Predictors: (Constant), PCSC, SSRS(total)

ANOVA(b)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4007.805	2	2003.903	17.142	.000(a)
	Residual	34485.715	295	116.901		
	Total	38493.520	297			

a Predictors: (Constant), PCSC, SSRS(total)

b Dependent Variable: Aggression (total)

Coefficients(a)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	64.447	5.052		12.756	.000
	SSRS(total)	-.464	.092	-.289	-5.042	.000
	PCSC	.271	.183	.085	1.483	.139

a Dependent Variable: Aggression (total)

3. Discussion

The primary goal of this study was to examine the relationships that exist among social-emotional competence, social support, academic achievement and aggressive behavior in the fourth, fifth Grade and sixth Grade in China. The discussion reviews the relationships among the study variables, examines their stability throughout the school year.

3.1 Relationship between Social-emotional Competence and Academic Achievement

The hypothesized relationship between previous social-emotional competence and academic achievement was mostly supported. In agreement with the current literature, previous social-emotional competence affects academic performance of children in at-risk, high neighborhood disadvantage communities (Baker, 1999; Caprara et al., 2000; Zins et al., 2004).

Younger pupils may think that their peers are not capable of providing assistance in school outcome. It also may be the case that they have no reason to believe that their peers can affect their learning status.

3.2 Relationship between Social-emotional Competence and Aggressive Behavior

Results showed that prior social-emotional competence and change in competence were found to significantly affect later academic performance, which supports Reyes et al.'s (2000) position that transitional support is influential in determining later school performance for at-risk students. And we can also understand that those students who have stronger social-emotional competence mostly performed fewer aggressive behaviors. They own more social-emotional skills which can regulate emotions and solve mental problems. Skills in regulating emotions can be seen as an integral aspect of cognitive problem solving because emotions arouse, motivate, and organize decisional processes (Lemerise & Arsenio, 2000). Poor skills in regulating arousal, encoding social cues, and interpreting the intentions of others increase the risk for peer victimization and reactive aggression, that is, retaliation in the context of anger (Dodge, 2003; Gifford-Smith & Rabiner, 2004; Hanish et al., 2004; Lengua, 2003).

3.3 .Relationship between Social-emotional Competence and Social Support

From the above study, social-emotional competence was found to significantly affect later academic performance. It supports Reyes et al.'s (Reyes，2000) position that transitional support is influential in determining later school performance for at-risk students. The results were in agreement with Baker (Baker, 1999), less competent students perceive more support from their teachers when compared to their more competent counterparts.

4. Limitations

As is suggested above, the present study has several limitations. Firstly, questionnaires were surveyed only in 2 elementary schools, the students did not have plenty of time to finish the tasks carefully and accurately. Secondly, R of regression was only .323(a) which is not high and means not very close to the real society. Thirdly, Perceived Competence Scale for Children (PCSC) written by Harter(1982), which includes four dimensions respectively, self-perceived social competence, cognitive self-perception, motor skills self-perception and general self- perception, this study only used this dimension of self-perceived social competence.

5. Conclusion

The results of this study show that higher in academic achievement, stronger in social-emotional competence, fewer in aggressive behaviors in the fourth, fifth Grade and sixth Grade in China. Among all sorts of aggressive behaviors, academic achievement was very closed to self-venting as well as physical aggression. Besides, mean of self-venting was extremely higher than that of oral aggression and physical aggression. At last, students has less competent perceive more support from their teachers when compared to their more competent counterparts. This article does not contain any studies with human participants performed by any of the authors.

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