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# Parenting Behaviors, Adolescent Depressive Symptoms, and Problem Behavior: The Role of Self-Esteem and School Adjustment Difficulties Among Chinese Adolescents

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#### **Abstract**

Cross-sectional data from 589 Chinese adolescents were used to investigate whether parenting behaviors are directly or indirectly (through self-esteem and school adjustment difficulties) associated with adolescent depressive symptoms and problem behavior. Structural equation modeling results showed that school adjustment difficulties fully mediated the relations between two parenting behaviors (parental punitiveness and paternal monitoring) and adolescent problem behavior and partially mediated the relation between maternal monitoring and adolescent problem behavior. Adolescent self-esteem partially mediated the relations between maternal punitiveness and adolescent depres-

sive symptoms and fully mediated the relations between parental support and adolescent depressive symptoms. Parental love withdrawal was not significantly related to any adolescent adjustment when other parenting practices were controlled. The findings highlight the interactions between family and school contexts in adolescent development.

**Keywords:** adolescents, culture, mother–child relationship, education, father–child relationship

Depressive symptoms and problem behavior have detrimental impacts on adolescent academic performance and social/emotional development. Research has shown that parenting behaviors (e.g., support and control) are correlated with adolescent depressive symptoms and problem behavior (e.g., Amato & Fowler, 2002; Bean, Barber, & Crane, 2006; Garber, Robinson, & Valentiner, 1997; Pettit, Laird, Dodge, Bates, & Criss, 2001; Resnick et al., 1997). However, what factors mediate these relations is not fully understood. Furthermore, studies on this topic have been mainly based in Western cultural contexts. Ecological systems theory (Bronfenbrenner & Ceci, 1993) suggests that human development takes place through the complex reciprocal interaction between an active evolving individual and his/her immediate, intermediate (e.g., familial, school), and larger social environments (e.g., culture). Parenting behaviors are likely to have different meanings in different cultures as they are "embedded in culturally based meaning systems" (Crockett, Veed, & Russell, 2010, p. 31). Some researchers suggest that the meaning of control and strictness in Chinese child rearing is different from Western ideas of parental control as the effect of parental control is not always replicable in Chinese samples (Chao, 1994, 2001). The purpose of the current study is twofold: (a) to examine the relations between supportive and controlling dimensions of parenting behaviors and Chinese adolescent depressive symptoms and problem behavior and (b) to examine whether these relations are mediated by self-esteem and school adjustment difficulties. Data generated from this study will provide valuable information about adolescent development in non-Western cultures. It will also provide Chinese practitioners with a theoretical base for developing school-based prevention and intervention programs for adolescent depressive symptoms and problem behavior, and ultimately strengthen Chinese youth and their families facing challenges during adolescence.

#### Parenting and Adolescent adjustment

Parental support and control are two key dimensions of parental behavior that correlate with adolescent psychosocial well-being (e.g., Barber, 2002; Baumrind, 1991b). Parental support is often considered as a unidimensional construct, including parenting behaviors such as warmth, nurturance, acceptance, and responsiveness (e.g., Barber, 2002). Research repeatedly suggests that high level of support was associated with lower level of adolescent delinquent and aggressive behavior (e.g., Amato & Fowler, 2002; Reitz, Deković, & Meijer, 2006), lower levels of depressive symptoms (e.g., Nolan, Flynn, & Garber, 2003; Sheeber & Sorensen, 1998), higher self-esteem (e.g., Baumrind, 1991a), and better grades (e.g., Amato & Fowler, 2002). Compared with Western parents, Chinese parents are less likely to show their support through expressing affection explicitly (Chen et al., 1998; Wu et al., 2002). Instead, they express their love and support through their efforts to control and govern their youngsters (Chao, 1994). Chinese culture also emphasizes modesty, and Chinese mothers are less likely to praise and show approval to the children (Wu et al., 2002). Furthermore, one study has shown that direct expression of love and warmth appears to be less relevant to Chinese American adolescents' perception of parental support as those items did not load on the parental support factor (Crockett et al., 2010). Interestingly, maternal support, which is believed to promote children's well-being in Western culture, has been found related to more problem behavior among Chinese boys (Xia et al., 2014) and more relational aggression among Chinese girls after controlling for other parenting variables (Li, Putallaz, & Su, 2011). In summary, parental support, in terms of showing affection and approval, might have different meanings in Chinese culture, and thus its impact on adolescent adjustment is worth examining.

The construct of parental control, on the other hand, is multidimensional and complex. It is generally believed that parental control consists of behavioral control (i.e., monitoring and reasoning) and psychological control, which are parental attempts to control adolescent's psychological world (e.g., feelings and thoughts) through psychological methods such as withdrawing love and inducting guilt (Barber, 2002). The positive effect of parental monitoring is widely documented and includes low level of adolescent problem behavior (e.g., Jacobson & Crockett, 2000; Pettit et al., 2001; Reitz et al., 2006), lower level of depressive symptoms (e.g., Jacobson & Crockett, 2000), and higher self-esteem (e.g., Baumrind, 1991a; Bean, Bush, McKenry, & Wilson, 2003). On the other hand, lack of rules and boundaries at home (e.g., permissive parenting) has been found to

relate to less achievement orientation (Baumrind, 1991a), more internalizing problems, and drugs use (Baumrind, 1991b). Parents also differ on the discipline (another dimension of behavior control) methods they use. When children misbehave, some parents turn to coercive and punitive types of discipline, characterized by strict, harsh, and arbitrary punishment, whereas other parents use noncoercive methods, such as positive induction/reasoning. Research has found that parents' hostile and harsh discipline was correlated with more adolescents' behavior problems (e.g., Amato & Fowler, 2002; Ge, Best, Conger, & Simons, 1996), lower self-esteem (e.g., Amato & Fowler, 2002), and lower achievement orientation (Ingoldsby, Schvaneveldt, Supple, & Bush, 2003). Positive induction was related to lower level of antisocial behavior (Hart, DeWolf, & Burts, 1992) and greater achievement orientation (Ingoldsby et al., 2003).

Parental psychological control has been found to relate to adolescent psychosocial problems in Western cultures, such as depressive symptoms (e.g., Garber et al., 1997), problem behavior (e.g., Pettit et al., 2001), low self-esteem (e.g., Garber et al., 1997), and low grades (e.g., Amato & Fowler, 2002). However, the meaning and effects of psychological control and strictness in Chinese culture are less clear (Chen & Kaspar, 2004). Researchers have found that certain elements of psychological control (e.g., shaming and threatening withdrawal of love) are positively valued by Chinese parents and correlated with traditional Chinese parental belief of guan (meaning "to govern," "to love," and "to care for") and filial piety (Chan, Bowes, & Wyver, 2009; Fung, 1999; Shek, 2006a, 2007a; Wu et al., 2002). Different from American parents, Chinese parents' involvement is correlated with psychological control (Cheung & Pomerantz, 2011). The goal for shaming is not to hurt the children psychologically but to "motivate the children to take responsibility for their own actions and to improve and strive upward" (Fung, 1999, p. 202). In addition, shaming is often used with reasoning and opportunity education (Fung, 1999). Influenced by cultural norms, Chinese children were found to attribute parental control as an expression of love and caring instead of intrusion (Cheung & McBride-Chang, 2008; Lam, 2003). However, few studies have examined the effect of parental psychological control on adolescent psychological well-being, and the relationships are not simple (Chan et al., 2009; Shek, 2007a, 2007b). For example, Chinese parental control (including both behavior and psychological control) was found to positively relate to adolescent psychological well-being when parental psychological control was low (Shek, 2007b). Furthermore, a bidirectional relationship between parental psychological control and adolescent well-being was also found (Shek, 2007a). This study will further examine the effect of different dimensions of parental control on adolescent adjustment.

#### The Role of School Adjustment and Self-Esteem

Parenting practice, however, may not be directly linked to adolescent depressive symptoms and problem behavior. One way that parenting behavior might contribute to adolescent depressive symptoms and problem behavior is through adolescent self-esteem. Self-esteem, defined as a favorable or unfavorable attitude toward the self (Rosenberg, 1965), has been found to relate to parental behavior (Amato & Fowler, 2002; Garber et al., 1997), adolescent depressive symptoms (e.g., Hammond, & Romney, 1995), and problem behavior (e.g., Robin, 2004). Researchers have suggested that inadequate parenting such as parental rejection and coercion could lead adolescents to negatively evaluate themselves and their future (e.g., low self-esteem), which in turn, might make adolescents vulnerable for depressive symptoms (e.g., Goodman, 2002). On the other hand, positive parenting, such as support and monitoring, might contribute to adolescents' positive views of self, which then protect them from developing internalizing symptoms. Garber et al. (1997) have found that adolescent self-worth partially mediates the relations between maternal acceptance and psychological control and adolescent depressive symptoms. It is also possible that adolescents with low self-esteem might view relationships as untrustworthy, misinterpret others' intention as negative, respond aggressively in social interactions, and engage in other problem behavior (e.g., Greenberg, Speltz, & DeKlyen, 1993). This mechanism is supported by one study that found low self-esteem mediated the relation between parental behavior (support and closeness) and dating violence (Pflieger & Vazsonyi, 2006).

Beside family context, school context is another critical factor that influences adolescent depressive symptoms and problem behavior (e.g., Luthar & D'Avanzo, 1999; Unger et al., 2001). Chassin, Ritter, Trim, and King (2003) have suggested that school adjustment may mediate the relation between parenting and adolescent problem behavior, because adolescents who receive inadequate parenting are more likely to have school adjustment problems, which increase their risk of being alienated from the mainstream and influenced by deviant peers, and hence engage in problem behavior. Furthermore, adolescents with school adjustment problems might also develop feelings of helplessness and depressive symptoms, because school success is highly valued by the Chinese society (e.g., Chao, 1996). However, there is not enough empirical support on these mediation relations.

Currently, no known study has examined the mediation effects of both self-esteem and school adjustment in the context of multiple parenting dimensions and adolescent problem behavior and depressive symptoms simultaneously among Chinese adolescents. Considering the high correlation between adolescent problem behavior (e.g., conduct problem) and depressive symptoms (Angold & Costello, 1993), it is important to examine them together. The present study seeks to examine which dimensions of parenting are related to adolescent problem behavior and depressive symptoms and the mediation effects of self-esteem and school adjustment. The following hypotheses are proposed:

- **Hypothesis 1:** Parental support, positive induction, and monitoring will be negative predictors of adolescent problem behavior and depressive symptoms.
- **Hypothesis 2:** Parental love withdrawal, punitiveness, and permissiveness will be positive predictors of adolescent problem behavior and depressive symptoms.
- **Hypothesis 3:** Adolescent self-esteem and school adjustment difficulties will mediate the relationship between parenting behaviors and adolescent problem behavior and depressive symptoms.

#### Method

#### **Participants**

The data of the current study were collected through a youth self-report survey in a southern city, Hangzhou, China. The adolescent participants of this study were recruited through middle and high schools. Institutional review board approval was obtained for this study. Parents were informed about the research, and adolescents participated in the survey after their parents gave consent. The participation rates across different schools were above 90%. No incentive was given for participation. Although this study did not use probability sampling, the participant sample varied on the sociodemographic characteristics (age, gender, and family demographic variables) and appeared to be a reasonable representation of the adolescents from Hangzhou. Our sample included 589 adolescents from 7th to 12th grades (M = 9.67, SD = 1.02). The mean age of the participants was 15.76 years (SD = 1.33; range = 12-19). Among them, 224 were boys and 336 were girls (29 missing values on gender). About 58% (n = 339) mothers were working full-time at the time of data collection. Fifty-nine (10.2%) mothers and 96 (16.5%) fathers had some college or graduate school education, 157 (37.3%) mothers and 223 (38.3%) fathers had high school education, 225 (38.7%) mothers and 204 (35%) fathers had middle or junior high school education, and 68 (11.7%) mothers and 44 (7.5%) fathers had elementary school education.

#### Measures

The back-translation technique (Rose, 1985) was used to enhance cultural relevancy in the Chinese instrument. The following specific measures were administered during the data collection:

Parent Behavior Measure (PBM). This is a 34-item self-report instrument that measures adolescents' perceptions of several dimensions of behavior by mothers and fathers. The items in PBM were selected from previously existing instruments based on having the highest loadings on identified factors in previous factor analytic studies (for a detailed discussion of the PBM measures, see Bush, Peterson, Cobas, & Supple, 2002; Henry, Wilson, & Peterson, 1989). The participants responded to the items on a 4-point Likert-type scale that ranged from strongly agree (4 points) to strongly disagree (1 point). One previous study found the hypothesized factor structure of PBM based on Western research fit the Chinese sample poorly (Supple, Peterson, & Bush, 2004). We conducted a confirmatory factor analysis (CFA) and found the hypothesized model fit the data poorly. A respecified model was created based on modification indices by dropping 14 items that demonstrated cross-loading or a loading less than .4. The remaining items demonstrated factor loadings ranging from .48 to .84, suggesting adequate loadings on the latent constructs. Cronbach's a for each of the subscales for mother/father was .69/.66 (support), .72/.72 (positive induction), .69/.67 (permissiveness), .78/.80 (punitiveness), .73/.75 (love withdrawal), and .77/.76 (monitoring).

Global Self-Esteem Scale. Adolescents' global self-esteem was assessed by the 10-item Self-Esteem Scale (Rosenberg, 1979). Participants' responses were scored on a 4-point Likert-type scale that ranged from strong agree (4 points) to strongly disagree (1 point). This scale has demonstrated high validity as it negatively correlated with emotional and behavior disorders and peer victimization (Bagley, Bolitho, & Bertrand, 1997). Consistent with previous research (Shahani, Dipboye, & Phillips, 1990), exploratory factor analyses (EFAs) using principle axis factoring with varimax rotation (this method was also used for the following sections) demonstrated a two-factor solution for the scale; one included positively worded items and the other included the negatively worded items. The overall Cronbach's  $\alpha$  for the entire scale was .77, demonstrating good reliability for this scale.

**Perceived Negative Adjustment to School.** This 10-item measure was modified from the Denver Youth Survey Interview Schedule (Elliot, 1990) to assess the extent to which adolescents felt a lack of acceptance and alien-

ation and loneliness in school contexts or were inclined to skip classes and thus get suspended from school. Each item was answered on a 5-point Likert-type scale that ranges from *strongly agree* (5 points) to *strongly disagree* (1 point). EFA showed a three-factor solution for the scale, including sense of belonging, academic performance, and school behavior difficulties (e.g., skipping classes). Cronbach's  $\alpha$  was .64 for the scale. Our results indicated that school adjustment difficulties positively correlated with problem behavior and depressive symptoms, which may suggest good validity of the scale.

Adolescent Problem Behavior Scale. This 33-item scale included items measuring risky behavior ("did something dangerous," "swam in a dangerous area"), alcohol and drug use ("got drunk," "smoked cigarettes," "smoked marijuana," "used other illegal drugs"), aggression to people ("got into a physical fight," "attacked someone with the idea of seriously hurting that person"), destruction of property, and deceitfulness or theft. Each item was answered on a 5-point Likert-type scale that ranges from *never* (1 point) to *more often* [more than four times during the past 6 months] (4 points). EFA showed a three-factor solution, including major conduct problems (e.g., drug use, weapon use, being arrested), minor offense (e.g., lying, graffiti), and aggressive behavior. The overall α for the entire scale was .84, demonstrating good reliability for this scale devised for this project. Our results indicated that problem behavior positively correlated with school adjustment difficulties and depressive symptoms, which may suggest good validity of the scale.

**Depressive Symptom Scale.** This is a 20-item scale measuring negative mood ("felt depressed," "fearful"), somatic symptom ("My appetite was poor," "My sleep was restless"), interpersonal difficulties, and ineffectiveness. Participants reported how many times in the past month they had the feelings listed in the questionnaire. Each item was answered on a 4-point Likert-type scale that ranges from *never* (1 point) to *almost every day* (4 points). EFA yielded a three-factor solution, including emotional problems, somatic and behavioral symptoms (e.g., "I could not get going"), and positive mood. This is consistent with research that suggests depression is a multidimensional construct (Kovacs, 1992). The overall a for the entire scale was .88, demonstrating good reliability for this scale devised for this project. Our results indicated that depressive symptoms positively correlated with school adjustment difficulties and problem behavior, which may suggest good validity of the scale.

#### **Analytic Strategies**

We used structural equation modeling (SEM) with Mplus software (Version 7.11; Muthen & Muthen, 1998-2013) along the following steps sep-

arately for mothers and fathers to conduct the analyses. We used full information maximum likelihood to account for missing vales. First, CFA was used to test whether the factor structures of parenting behaviors were valid in the current Chinese sample. A respecified model of parenting behavior was then created based on modification indices by dropping items that demonstrated cross-loading or a loading less than .4 (Table 1). Second, for the four adolescent adjustment measures (adolescent self-esteem, school adjustment, depressive symptoms, and problem behavior), itemparceling procedure was used to simplify the model and create reliable and representative indicators (Little, Cunningham, Golan, & Widaman, 2002). We first conducted several EFAs to identify the factor structure of the measures. Then we constructed domain-representative parcels by randomly assigning a similar number of items from each dimension into each parcel. This approach, which has been shown to have satisfactory statistical properties, is widely used in SEM studies (Bandalos & Finney, 2001; Kline, 2005). Third, to explore the relation among parenting behavior and adolescent adjustment, we tested three models that would examine whether the self-esteem and school adjustment measures accounted for variance in adolescent depressive symptoms and problem behavior above and beyond the parenting dimensions. To control the possible effects, adolescent age, gender, and mother's (or father's) education were controlled as covariates. In the partially mediated model, each parenting dimension is specified to have direct effects on adolescent depressive symptoms and problem behavior in addition to indirect effects through self-esteem and school adjustment. We allowed the disturbances associated with self-esteem and school adjustment and with problem behavior and depressive symptoms to correlate in all the models. In the fully mediated model, all relations between the parenting dimensions and adolescent depressive symptoms and problem behavior are mediated by self-esteem and school adjustment. In the nonmediated model, each parenting dimension is specified to have a direct effect on adolescent self-esteem, school adjustment, depressive symptoms, and problem behavior, but no mediation is specified. The chi-square difference test was used to determine whether there was a significant difference between the fit of the partially mediated model and fully mediated model and between the partially mediated model and the nonmediated model. The best fitting and most parsimonious model was selected as the final model. For SEMs, a good fit is obtained when Bentler's comparative fit index (CFI) is larger than .95 and root mean square error of approximation (RMSEA) is below .05. We consider the model to be an adequate fit if CFI is larger than .90 and RMSEA is between .06 and .08. Last, we used bootstrapping analysis to examine the indirect effects because this method has an adequate control of Type I errors (Preacher & Hayes, 2008). We consider that a significant indirect effect is observed if the 95% bias-corrected

**Table 1.** Confirmatory Factor Analysis Results for Parenting Behavior and Adolescent Adjustment Constructs.

Items	Standardized factor loadings (mother)	Standardized factor loadings (father)
Support		
This parent has made me feel that he/she would be there for me if I needed	.67	.61
This parent seems to approve of me and the things that I do	.79	.81
This parent tells me how much he/she loves me	Omitted	
This parent says nice things about me Positive induction	Omitted	
This parent explained to me how good I should feel when I did something he/she liked	Omitted	
Over the past several years, this parent explained to me how good I should feel when I shared things with other family members	.76	.75
This parent explains to me how good I should feel when I do what is right	.71	.67
This parent explains to me when I share things with other family members that I am liked by other family members	.59	.63
This parent tells me how good others feel when I do what is right	Omitted	
Permissiveness		
This parent usually lets me do anything I want to do	Omitted	
This parent allows me to be out on my own as often as it pleases me	.62	.59
This parent allows me to have any friends I want without questioning me Punitiveness	.86	.86
This parent hits me when he/she thinks I am doing something wrong	.53	.54
This parent does not give me any peace until I do what he/she says	.71	.73
This parent punishes me by not letting me do things that I really enjoy	.66	.70
This parent yells at me a lot without good reason	.66	.68
This parent punishes me by not letting me do things with other teenagers	.62	.63
This parent is always finding fault with me This parent punishes me by sending me out of	.51	.52
the room		<i>(</i>

(continued)

Table I. (continued)

Items	Standardized factor loadings (mother)	Standardized factor loadings (father)
This parent punishes me by hitting me	Omitted	
This parent tells me that I will be very sorry that I wasn't better behaved	Omitted	
This parent tells me that someday I will be punished for my behavior	Omitted	
Love withdrawal		
This parent tells me about all the things that he/she has done for me	Omitted	
This parent will not talk to me when I displease him/her	.66	.72
This parent tells me that if I love him or her, I would do what he/she wants me to	Omitted	
This parent avoids looking at me when I have disappointed him/her	.89	.83
Involvement	Omitted	
This parent enjoys doing things with me	Omitted	
This parent shares many activities with me	Omitted	
Monitoring		
This parent knows where I am after school	.67	.65
I tell his parent where I am going to be with when I go out	.71	.70
When I go out, this parent knows where I am	.73	.72
This parent knows the parents of my friends	Omitted	
This parent knows who my friends are	.53	.55
This parent knows how I spend my money	.53	.52
School adjustment difficulties		
School adjustment Parcel I	.64	
School adjustment Parcel 2	.66	
School adjustment Parcel 3	.71	
Self-esteem		
Self-esteem Parcel I	.67	
Self-esteem Parcel 2	.76	
Self-esteem Parcel 3	.67	
Depressive symptoms		
Depressive symptoms Parcel I	.91	
Depressive symptoms Parcel 2	.90	
Depressive symptoms Parcel 3	.91	
Problem behavior		
Problem behavior Parcel I	.82	
Problem behavior Parcel 2	.89	
Problem behavior Parcel 3	.91	

bootstrap confidence intervals (BC CIs) for the indirect effect do not contain a zero or end at zero. We consider that the indirect effect is marginally significant if the 90% BC CIs do not contain a zero or end at zero.

#### Results

#### Step 1: Measurement Model

The CFA showed that the hypothetical factor structure for maternal parenting provided a poor fit for the Chinese sample,  $\chi^2(512) = 2058.19$ , p < .001, CFI = .73, RMSEA = .07. A respecified model was created based on modification indices by dropping 14 items that demonstrated cross-loading or a loading less than .4 (see Table 1). A closer look at the dropped item suggests that some items described parenting practice that are not common in Chinese culture, such as "tells me how much she loves me," "says nice things about me," and "explains to me how good I should feel ...," because Chinese parents tend not to express support through verbal affection, and they strongly encourage modesty among adolescents. The only 2 items in parental involvement had double loading onto other factors, so involvement was not included in the following analysis. The modified parenting model demonstrated a good fit for mother,  $\chi^2(155) =$ 288.37, p < .001, CFI = .96, RMSEA= .04, and for father,  $\chi^2(155) = 286.09$ , p < .001, CFI = .96, RMSEA = .04. For each of the four adolescent adjustment variables, through parceling, the original items were combined into three parcels to represent each construct. The final measurement model provided a good fit to the maternal data,  $\chi^2(419) = 713.48$ , p < .001, CFI = .96, RMSEA= .04. The final measurement modal also fit the paternal data well,  $\chi^2(419) = 729.62$ , p < .001, CFI = .96, RMSEA= .04. See Table 2 for the correlations among all latent variables.

#### Step 2: Structural Model

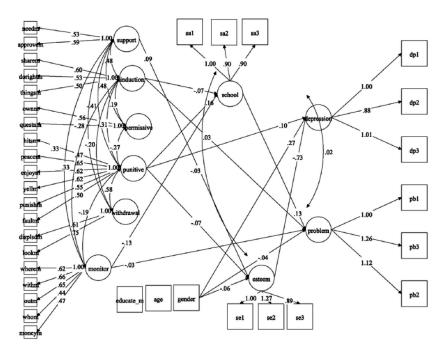
For maternal parenting, the result showed that the partially mediated model fit the data well,  $\chi^2(503, N=537)=861.84$ , p<.001, CFI = .94, RM-SEA = .04, standardized root mean square residual = .04. The fully mediated model without direct paths from parenting to adolescent problem behavior and depressive symptoms also fit the data adequately,  $\chi^2(515, N=537)=888.25$ , p<.001, CFI = .94, RMSEA = .04. However, the overall fit of the fully mediated model was worse than the fit of the partially mediated model,  $X^2_{diff}$  (12, N=537) = 26.37, p=.01. The model without mediation path also fit worse than the partially mediated model,  $X^2_{diff}$  (507, N=537) = 947.94, p<.0001, CFI = .93, RMSEA = .04,  $X^2_{diff}$  (4, N=537) = 86.09, p<.001. As a result, the partial mediation model was retained (Figure 1).

Table 2. Correlation Coefficients Among all Latent Variables.

	_	2	3	4	5	9	7	8	6	01
I. Support	I	***64.	.51***	51***	35***	.31***	17**	.38**	27***	19***
2. Positive induction	.45***	I	.I5**	25***	20***	.35***	28***	.28***	17***	**4.
3. Permissiveness	.48***	91.		34***	17**	02	.07	<u>*</u>	<u>*</u>	90.
4. Punitiveness	42***	29***	30***		**19:	12*	.3 **- !	31***	.25***	.23***
5. Love withdrawal	27***	19***	07	***09	I	03	**/1.	18***	.T3**	90:
6. Monitoring	.36***	.32***	00:	21***	08	I	29***	.21***	17***	21***
7. School adjustment difficulty	12*	25***	01.	.3 ***IE:	**/1:	35***	I	29***	.22***	.42***
8. Self-esteem	.39***	.29***	0.15**	31***	15**	.26***	29***	I	48***	***91
9. Depressive symptoms	20***	<u>-</u> ** <del>4</del>	<u>-</u> ** <del>4</del>	.25***		15***	.22***	48***	I	.28***
10. Problem behavior	15**	90	.02	.23***	.15**	29***	.42***	***90'-	.28***	I
			1	-	1,	-				

Correlations for the maternal data are presented below the diagonal; those for the paternal data are presented above the diagonal.

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



**Figure 1.** Structural model for adolescent depressive symptoms and problem behavior using maternal parenting practices. School and sa = adolescent school adjustment difficulties; esteem and se = adolescent self-esteem; depression and dp = adolescent depressive symptoms; problem and pb = adolescent problem behavior; educate\_m = mother's education. Unstandardized path coefficients are presented. To facilitate reading, nonsignificant paths are omitted. N = 537 (52 cases were excluded from the analysis due to missing values in x variables in the structural model).

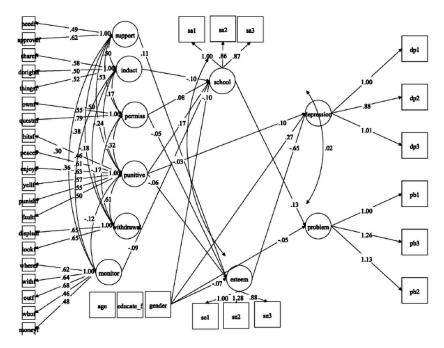
Our hypotheses that maternal parenting would predict adolescent problem behavior and depressive symptoms were partially supported. After controlling for adolescent age, gender, and maternal education, maternal support positively linked to adolescent self-esteem (B = .09, p = .01). Positive induction negatively linked to adolescent school adjustment difficulties (B = -.07, p = .05), but positively linked to problem behavior (B = .03, p = .02). Maternal punitiveness negatively linked to self-esteem (B = -.07, p = .01) and positively linked to adolescent school adjustment difficulties (B = .16, P < .001) and depressive symptoms (B = .10, P = .02). Maternal monitoring negatively linked to school adjustment difficulties (B = -.13, P < .001) and problem behavior (B = -.03, P = .01). Self-esteem was negatively associated with adolescents' depressive symptoms (B = -.73, P < .001). School adjustment difficulties was positively associ

ated with adolescents' problem behavior (B = .13, p < .001). Maternal love withdrawal was not significantly related to any of the adolescent adjustment variables. Gender difference emerged. Boys reported more problem behavior and higher self-esteem than girls, whereas girls reported more depressive symptoms than boys.

Bootstrapping analyses revealed four significant indirect effects. Specifically, maternal support was related to adolescent depressive symptoms, which was fully mediated by adolescent self-esteem (indirect effect = -.06, 95% BC CI: [-.12, -.01]). Maternal punitivess was related to adolescent depressive symptoms, which was partially mediated by adolescent self-esteem (indirect effect = .05, 95% BC CI: [.004, .09]). Similarly, maternal punitivess was related to adolescent problem behavior, which was fully mediated by adolescent school adjustment difficulties (indirect effect = .02, 95% BC CI: [.003, .04]). Maternal monitoring was related to adolescent problem behavior, which was partially mediated by adolescent school adjustment difficulties (indirect effect = -.02, 95% BC CI: [-.03, -.002]). Bootstrapping results suggest that the direct effect and indirect effect (through school adjustment difficulties) from maternal induction to adolescent problem behavior were not significant.

The partial mediation model for paternal parenting also fit the data well  $\chi^2(503, N = 534) = 850.04$ , p < .001, CFI = .95, RMSEA = .04, standardized root mean square residual = .04 (Figure 2). Our hypotheses that paternal parenting would predict adolescent problem behavior and depressive symptoms were partially supported. Paternal support was positively related to adolescent self-esteem (B = .11, p = .01). Positive induction was negatively related to adolescent school adjustment difficulties (B = -.10, p = .04). Paternal permissiveness was negatively related to self-esteem (B = -.05, p = .04), but positively related to school adjustment difficulties (B = .08, p = .03). Paternal punitiveness was positively related to adolescent school adjustment difficulties (B = .17, p < .001) and depressive symptoms (B = .10, p = .02) and negatively related to self-esteem (B = -.06, p = .00) .04). Paternal monitoring negatively linked to school adjustment difficulties (B = -.09, p = .01). Self-esteem was negatively associated with adolescents' depressive symptoms (B = -.65, p < .001). School adjustment difficulties was positively associated with adolescents' problem behavior (*B* = .13, p = .02). Paternal love withdrawal was not significantly related to any of the adolescent adjustment variables.

Bootstrapping analyses revealed three significant and three marginally significant indirect effects for paternal parenting items. Specifically, paternal support was related to adolescent depressive symptoms, which was fully mediated by adolescent self-esteem (indirect effect = -.07, 95% BC CI: -.13, -.01). Paternal punitivess and monitoring were related to adolescent



**Figure 2.** Structural model for adolescent depressive symptoms and problem behavior using paternal parenting practices. School and sa = adolescent school adjustment difficulties; esteem and se = adolescent self-esteem; depression and dp = adolescent depressive symptoms; problem and pb = adolescent problem behavior; educate\_f = father's education. Unstandardized path coefficients are presented. To facilitate reading, nonsignificant paths are omitted. N = 534 (55 cases were excluded from the analysis due to missing values in x variables in the structural model).

problem behavior, which were fully mediated by adolescent school adjustment difficulties (indirect effect = .02, -.01, 95% BC CI: [.002, .04], [-.02, 0], respectively). Paternal permissiveness and punitivess were related to adolescent depressive symptoms, and the indirect effects through self-esteem were marginally significant (indirect effect = .03, .04, 90% BC CI: [.002, .07], [.003, .07], respectively). Paternal permissiveness was related to adolescent problem behavior, and the indirect effect through school adjustment difficulties was marginally significant (indirect effect = .01, 90% BC CI: [0, .02]).

#### **Discussion**

This study is unique in that the researchers examined multiple familial and school variables on Chinese adolescent adjustment using statistic

methods that are beyond conventional multiple regression. A mediation model of Chinese adolescent problem behavior (through adolescent selfesteem) and depressive symptoms (through adolescent school adjustment difficulties) was developed. Most of the findings regarding parenting practice and adolescent adjustment in the current Chinese sample are consistent with previous findings using Western samples (e.g., Amato & Fowler, 2002; Bean et al., 2006; Garber et al., 1997). Specifically, parental support and monitoring were associated with positive adolescent adjustment, but permissiveness and punitiveness linked to negative adolescent adjustment. These findings support previous researchers who argued that parenting behaviors have similar function in Chinese and Western cultures (e.g., Sorkhaibi, 2005; Wang, Pomerantz, & Chen, 2007). Furthermore, although all parenting behaviors (except love withdrawal) were correlated with adolescent adjustment, parent use of appropriate behavioral management strategies appears to be more important for adolescent externalizing problems (Garber et al., 1997), whereas parental support appears to be more relevant for adolescent internalizing symptoms. Furthermore, harsh and punitive discipline appears to be detrimental to both adolescent internalizing and externalizing symptoms.

The lack of negative association between love withdrawal and adolescent adjustment after controlling for other parenting behaviors is not consistent with previous studies (Olsen et al., 2002; Wang et al., 2007). This finding suggests that psychological control or shaming practice, although negatively viewed in Western culture, may have unique meanings in Chinese culture (Fung, 1999; Shek, 2007a). However, since love withdrawal did not relate to any adolescent positive outcomes, we cannot conclude that love withdrawal from parents is beneficial to Chinese adolescents. It is possible that shaming and love withdrawal, when used appropriately, can teach children right from wrong and promote better behavior in the Chinese context. However, when used excessively, it may hurt adolescents' self-esteem and fail to serve its function (Fung, 1999). It is also possible that shaming strategy may work for some adolescents but not for others. As suggested by Fung (1999), children's "style of emotional management" (e.g., whether they take shaming too seriously and become discouraged) plays a role in "maintaining well-balanced shaming" (p. 191). It is also important to mention that two of the original love withdrawal items were not included in the analyses because they loaded onto support, positive induction, and punitiveness factors in CFA. Future studies on the effect of psychological control/shaming on Chinese adolescent adjustment should use more extensive measures of parental shaming practice and examine other variables that may underline the process, such as adolescents' interpretation and emotional management of parents' use of shaming.

Our results suggest that the gender of parents matter when studying parenting (Chang, Schwartz, Dodge, & McBride-Chang, 2003). We found that only paternal (not maternal) permissiveness was associated with adolescent adjustment after controlling for other parenting behaviors and covariates. This different pattern may be explained by the gender role differentiation in Chinese culture. Chinese fathers are expected to be strict and serve as a discipliner whereas mothers are expected to be more loving, as illustrated in the Chinese phrase yan fu ci mu (strict fathers and loving/kindhearted mothers). Although maternal permissiveness appears to be harmless in our sample, when the supposedly "strict" fathers act permissively toward adolescents, there may not be anyone left in the family to reinforce rules and boundaries. As a result, adolescents may be left free to develop school adjustment difficulties and struggle with low self-esteem and then engage in problem behavior and develop depressive symptoms.

The results of the current study shed light on two distinct indirect path ways through which parenting behaviors may affect adolescent adjustment. Specifically, school adjustment was more relevant to adolescent problem behavior whereas self-esteem was more essential for depressive symptoms. Our findings highlight the important role of school in preventing adolescent problem behavior. Due to the great emphasis on academic achievement in Chinese culture, having school adjustment difficulties may lead to extra stress and alienation from the mainstream peers and social norms, which then increases the adolescents' risk for problem behavior (Chassin et al., 2003). Considering that adolescents spend much of their waking hours at school and school success is greatly valued in Chinese culture, interventions on adolescent problem behavior in China should focus on promoting adolescent school adjustment in addition to promoting positive parenting practices (i.e., more parental monitoring and less punitive strategies) at home.

To our knowledge, our study is the first to provide empirical support to the notion that nonsupportive and punitive parenting might lead to the development of low self-esteem in adolescents, which in turn serves as a cognitive vulnerability to depressive symptoms (e.g., Beck, 1987) in a Chinese sample. The finding is consistent with another study using a Western sample (Garber et al., 1997). Considering that adolescence is a period characterized by many physical, social, and psychological changes, adolescents are conscious about others' opinions (e.g., parents'). Positive interaction with parents can serve as a protective factor for adolescent depressive symptoms during this period (Nolan et al., 2003). It will be important for Chinese parents who tend to be less emotionally expressive to convey their love and support toward their adolescents and use less punitive discipline strategies in order to foster adolescents' self-esteem and ultimately prevent depressive symptoms.

There were several limitations in this study. First, given that this is a convenient sample drawn from a restricted geographic area, generalization and interpretation of the results need to be done cautiously. Second, all the data in this study came from adolescent self-report. Future studies should use adolescent, parent, and other informant ratings to measure parenting practice and adolescent adjustment. Third, this is an exploratory study, and most of the measures were developed in the Western cultural context. Those measures need to be further examined and revised to reflect Chinese cultural context. For example, to understand better the nature of psychological control, future qualitative study will be needed to explore the meaning of psychological control perceived by Chinese parents and adolescents. Fourth, caution should be exercised since this research is a cross-sectional study and causal effect should not be assumed.

Despite these limitations, the present study has contributed to our knowledge about Chinese parenting and adolescent health in four areas. First, the present study discriminates the positive effects of parental support, positive induction, and monitoring and the negative effect of parental punitiveness and paternal permissiveness on Chinese adolescent adjustment. Second, it demonstrates the important mediating effect of school adjustment difficulties in the relations between parenting and adolescent problem behavior, suggesting the important role of school in preventing adolescent problem behavior. Third, it demonstrates the mediating effect of adolescent self-esteem in the relations between parenting behaviors and adolescent depressive symptoms.

#### References

- Amato, P. R., & Fowler, F. (2002). Parenting practices, child adjustment, and family diversity. *Journal of Marriage and Family*, 64, 703-716.
- Angold, A., & Costello, E. (1993). Depressive comorbidity in children and adolescents: Empirical, theoretical, and methodological issues. *American Journal of Psychiatry*, 150, 1779-1791.
- Bagley, C., Bolitho, F., & Bertrand, L. (1997). Norms and construct validity of the Rosenberg Self-Esteem Scale in Canadian high school populations: Implications for counselling. *Canadian Journal of Counselling*, 31, 82-92.
- Bandalos, D. L., & Finney, S. J. (2001). Item parceling issues in structural equation modeling. In G. A. Marcoulides & R. E. Schumacker (Eds.), *Advanced structural equation modeling: New developments and techniques* (pp. 269-296). Mahwah, NJ: Lawrence Erlbaum.
- Barber, B. K. (2002). *Intrusive parenting: How psychological control affects children and adolescents*. Washington, DC: American Psychological Association.

- Baumrind, D. (1991a). Effective parenting during the early adolescent transition. In P. A. Cowan & E. M. Hetherington (Eds.), *Family transitions* (pp. 111-164). Hillsdale, NJ: Lawrence Erlbaum.
- Baumrind, D. (1991b). Parenting styles and adolescent development. In R. M. Lerner, A. C. Petersen, & J. Brooks-Guun (Eds.), *Encyclopedia of adolescence* (Vol. 2, pp. 746-758). New York, NY: Garland.
- Bean, R. A., Barber, B. K., & Crane, D. R. (2006). Parental support, behavioral control, and psychological control among African American youth. *Journal of Family Issues*, 27, 1335-1365.
- Bean, R. A., Bush, K. R., McKenry, P. C., & Wilson, S. M. (2003). The impact of parental support, behavioral control, and psychological control on the academic achievement and self-esteem of African American and European American adolescents. *Journal of Adolescent Research*, 18, 523-541.
- Beck, A. T. (1987). Cognitive models of depressive symptoms. *Journal of Cognitive Psychotherapy*, 1, 5-38.
- Bronfenbrenner, U., & Ceci, S. J. (1993). Heredity, environment, and the question "How": A first approximation. In R. Plomin & G. E. McClearn (Eds.), *Nature, nurture, and psychology* (pp. 313-324). Washington, DC: American Psychology Association.
- Bush, K. R., Peterson, G. W., Cobas, J. A., & Supple, A. J. (2002). Adolescents' perceptions of parental behaviors as predictors of adolescent self-esteem in mainland China. *Sociological Inquiry*, 72, 513-526.
- Chan, S. M., Bowes, J., & Wyver, S. (2009). Chinese parenting in Hong Kong: Links among goals, beliefs and styles. *Early Child Development and Care*, 179, 849-862.
- Chang, L., Schwartz, D., Dodge, K. A., & McBride-Chang, C. (2003). Harsh parenting in relation to child emotion regulation and aggression. *Journal of Family Psychology*, 17, 598-606. doi:10.1037/0893-3200.17.4.598
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, 65, 1111-1120.
- Chao, R. K. (1996). Chinese and European American mothers' beliefs about the role of parenting in children's school success. *Journal of Cross-Cultural Psychology*, 27, 403-423.
- Chao, R. K. (2001). Extending research on the consequences of parenting style for Chinese Americans and European Americans. *Child Development*, 72, 1832-1843. doi:10.1111/1467-8624.00381.
- Chassin, L., Ritter, J., Trim, R. S., & King, K. M. (2003). Adolescent substance use disorders. In E. J. Mash & R. A. Barkley, *Child psychopathology* (2nd ed., pp. 199-230). New York, NY: Guilford Press.
- Chen, X., Hastings, P., Rubin, K. H., Chen, H., Cen, G., & Stewart, S. L. (1998). Childrearing attitudes and behavioral inhibition in Chinese and Canadian toddlers: A cross-cultural study. *Developmental Psychology*, 34, 677-686.
- Chen, X., & Kaspar, V. (2004). Cross-cultural research on childhood. In U. P.

- Gielen & J. Roopnarine (Eds.), *Childhood and adolescence: Cross-cultural perspectives and applications* (pp. 46-80). Westport, CT: Praeger.
- Cheung, C., & McBride-Chang, C. (2008). Relations of perceived maternal parenting style, practices, and learning motivation to academic competence in Chinese children. *Merrill-Palmer Quarterly*, 54, 1-22.
- Cheung, C., & Pomerantz, E. (2011). Parents' involvement in children's learning in the United Stated and China: Implications for children's academic and emotional adjustment. *Child Development*, 80, 932-950.
- Crockett, L. J., Veed, G. J., & Russell, S. T. (2010). Do measures of parenting have the same meaning for European, Chinese, and Filipino American adolescents? Test of measurement equivalence. In S. T. Russell, L. J. Crockett, & R. K. Chao (Eds.) *Asian American parenting and parent-adolescent relationships, Advancing responsible adolescent development*. (pp. 17-33). Springer Science Business Media, LLC, Dordrecht
- Elliot, D. S. (1990). *National youth survey*. Boulder: Institute of Behavioral Science, University of Colorado.
- Fung, H. (1999). Becoming a moral child: The socialization of shame among young Chinese children. *Ethos*, 27, 180-209.
- Garber, J., Robinson, N. S., & Valentiner, D. (1997). The relation between parenting and adolescent depressive symptoms: Self-worth as a mediator. *Journal of Adolescent Research*, 12, 12-33.
- Ge, X., Best, K. M., Conger, R. D., & Simons, R. L. (1996). Parenting behaviors and the occurrence and co-occurrence of adolescent depressive symptoms and conduct problems. *Developmental Psychology*, 32, 717-731.
- Goodman, S. H. (2002). Depressive symptoms and early adverse experiences. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depressive symptoms* (pp. 245-267). New York, NY: Guilford Press.
- Greenberg, M. T., Speltz, M. L., & DeKlyen, M. (1993). The role of attachment in the early development of disruptive behavior problems. *Development and Psychopathology*, *5*, 191-213.
- Hammond, W., & Romney, D. (1995). Cognitive factors contributing to adolescent depressive symptoms. *Journal of Youth and Adolescence*, 24, 667-683.
- Hart, C. H., DeWolf, D. M., & Burts, D. C. (1992). Linkages among preschooler's playground behavior, outcome expectations, and parental disciplinary strategies. *Early Education and Development*, *3*, 265-283.
- Henry, C. S., Wilson, S. M., & Peterson, G. W. (1989). Parental power bases and processes as predictors of adolescent conformity. *Journal of Adolescent Research*, 4, 15-32.
- Ingoldsby, B., Schvaneveldt, P., Supple, A., & Bush, K. (2003). The relationship between *parenting* behaviors and *adolescent* achievement and self-efficacy in Chile and Ecuador. *Marriage & Family Review*, 35, 139-159.
- Jacobson, K. C., & Crockett, L. J. (2000). Parental monitoring and adolescent adjustment: An ecological perspective. *Journal of Research on Adolescence*, 10, 65-97.

- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford Press.
- Kovacs, M. (1992). *Children's depression inventory*. Pittsburgh, PA: Western Psychiatric Institute & Clinic.
- Lam, C. (2003). Covert parental control: Parent-adolescent interaction and adolescent development in a Chinese context. *International Journal of Adolescent Medicine & Health*, 15, 63-77.
- Li, Y., Putallaz, M., & Su, Y. (2011). Interparental conflict styles and parenting behaviors: Associations with overt and relational aggression among Chinese children. *Merrill-Palmer Quarterly*, 57, 402-428.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. (2002). To parcel or not to parcel: Exploring the question, weighing the meris. *Structural Equation Modeling*, 9, 151-173
- Luthar, S. S., & D'Avanzo, K. (1999). Contextual factors in substance use: A study of suburban and inner city adolescents. Development and Psychopathology, 11, 845-867.
- Muthen, L. K., & Muthen, B. O. (1998-2013). *Mplus user's guide*. Los Angeles, CA: Muthen & Muthen.
- Nolan, S. A., Flynn, C., & Garber, J. (2003). Prospective relations between rejection and depressive symptoms in young adolescents. *Journal of Personality and Social Psychology*, 85, 745-755.
- Olsen, S. F., Yang, C., Hart, C. H., Robinson, C. C., Wu, P., Nelson, D. A., . . . Brian, K. (2002). Maternal psychological control and preschool children's behavioral outcomes in China, Russia, and the United States. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 235-262). Washington, DC: American Psychological Association.
- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development*, 72, 583-598.
- Pflieger, J. C., & Vazsonyi, A. T. (2006). Parenting processes and dating violence: The mediating role of self-esteem in low- and high-SES adolescents. *Journal of Adolescence*, 29, 495-512.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879-891.
- Reitz, E., Deković, M., & Meijer, A. M. (2006). Relations between parenting and externalizing and internalizing problem behavior in early adolescent: Child behavior as moderator and predictor. *Journal of Adolescence*, 29, 419-436.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., ... Udry, J. R. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278, 823-832.
- Robin, B. R. (2004). Patterns of problem behaviors in adolescents and the effect of risk and protective factors on these patterns of behavior. *Dissertation Abstracts*

- International: Section B: The Sciences and Engineering, 64(11-B), 5445.
- Rose, M. G. (1985). Back-translating to recover form. *International Journal of Translation*, 31, 6-11.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rosenberg, M. (1979). Conceiving the self. New York, NY: Basic Books.
- Shahani, C., Dipboye, R., & Phillips, A. (1990). Global self-esteem as a correlate of work-related attitudes: A question of dimensionality. *Journal of Personality Assessment*, 54, 276-288.
- Sheeber, L., & Sorensen, E. (1998). Family relationships of depressed adolescents: A multimethod assessment. *Journal of Clinical Child Psychology*, 27, 268-278.
- Shek, D. T. L. (2006a). Assessment of perceived parental psychological control in Chinese Adolescents in Hong Kong. *Research on Social Work Practice*, 16, 382-391.
- Shek, D. T. L. (2006b). Chinese family research: Puzzles, progress, paradigms, and policy implications. *Journal of Family Issues*, 27, 275-284.
- Shek, D. T. L. (2007a). A longitudinal study of perceived parental psychological control and psychological well-being in Chinese adolescents in Hong Kong. *Journal of Clinical Psychology*, 63, 1-22.
- Shek, D. T. L. (2007b). Perceived parental control based on indigenous Chinese parental control concepts in adolescents in Hong Kong. *American journal of Family Therapy*, 35, 123-137.
- Sorkhaibi, N. (2005). Applicability of Baumrind's parent typology to collective cultures: Analysis of cultural explanations of parent socialization effects. *International Journal of Behavioral Development*, 29, 552-563.
- Supple, A. J., Peterson, G. W., & Bush, K. R. (2004). Assessing the validity of parenting measures in a sample of Chinese adolescents. *Journal of Family Psychology*, 18, 539-544.
- Unger, J. B., Li, Y., Johnson, C. A., Gong, J., Chen, X., Li, C., & Lo, A. T. (2001). Stressful life events among adolescents in Wuhan, China: Associations with smoking, alcohol use, and depressive symptoms. *International Journal of Behavioral Medicine*, 8, 1-19.
- Wang, Q., Pomerantz, E. M., & Chen, H. (2007). The role of parents' control in early adolescents' psychological functioning: A longitudinal investigation in the United States and China. *Child Development*, 78, 1592-1610.
- Wu, P., Robinson, C. C., Yang, C., Hart, C. H., Olsen, S. F., Porter, C. L., . . . . Wu, X. (2002). Similarities and differences in mothers' parenting of preschoolers in China and the United States. International Journal of Behavioral Development, 26, 481-491.
- Xia, Y., Wang, C., Li, W., Wilson, S., Bush, K., & Peterson, G. (2014). The associations among parental behaviors, adolescent school adjustment, depression and problem behavior in Chinese adolescents. Manuscript in preparation.