

# Associations between Parents' Workplace Interpersonal Relationships and Adolescent Interpersonal Sensitivity: The Mediating Role of Parenting Style

Muyun Li

*Ontario Institute of Studies in Education, University of Toronto, Toronto, ON, M5S 1V6, Canada*  
*Corresponding Author's Email: muyun.li@mail.utoronto.ca*

## ABSTRACT

The current study collected data from 289 Chinese families and investigated the associations between parents' interpersonal relationships at work, parenting style, and interpersonal sensitivity (IS). Students were involved in assessing their self-reported IS and perceived parenting style, where parents' reported workplace interpersonal relationships were assessed. The findings indicated a negative relationship between parents' workplace interpersonal relationships and parental control, a positive relationship between parental control and adolescent IS, and parental control serves as a mediator between parents' workplace interpersonal relationships and adolescent IS. Parental care does not appear to be associated with any other parameters. According to this study, the climate in which parents work has a direct effect on their amount of control over their children, which in turn influences adolescents' personality traits.

**Keywords:** *Ecology Theory; work environment; interpersonal relationship; parenting style; interpersonal sensitivity.*

## 1. INTRODUCTION

Over the past two decades, the term interpersonal sensitivity (IS) has gained prominence in a variety of domains, most notably on adolescents and its impact on the mental health and social interactions within the school context. It is a personality trait that defines an extreme sensitivity to interpersonal interactions, the constant perception of self-deficiencies in relation to others, the need to behave in a way that minimizes the risk of negative evaluation and the sense of having an obtrusive core-self that must be hidden from others. High IS has been linked to depression-prone characteristics such as low self-confidence, insecurity, and low self-esteem, and it may further contribute to a high rate of psychotic-like experiences among adolescents [1][2][3].

Work stress associates with interpersonal relationships within the workplace, which entails distressing social environments (e.g., settings that are hostile, unsupportive, or lacking in cohesion) [4][5][6]. According to Bronfenbrenner's Ecology Theory, adolescents' psychological development is influenced

not only by what occurs in the other environments in which they spend their time, such as their family environment and interactions with parents, but also by what happens in the other settings in which their parents live their lives, most notably in a setting that adolescents rarely enter – their parents' world of work [7]. Daniels and Moos' Path Model [8] highlighted how extrafamilial elements such as parental interpersonal work stress in relation with its spillover effects where the internal states have carried over from work to family outcomes such as marital interaction, levels of conflicts, marital satisfaction, and parent-child interactions, and how it could later affect adolescents' functioning such as IS. According to one study, a negative interpersonal atmosphere at work, characterized by lower moral and less cohesion among coworkers, predicted less child-centered and more negatively valenced parenting [9]. Stressful work conditions can also manifest as parental neglect of their children, which is referred to as a dysfunctional parenting style [10][11].

Recent research has examined the association between parenting style and IS. For instance, one study conducted in Japan indicated that adolescents and young

adults with dysfunctional parenting style such as affectionless control, affectional constraint, neglectful parenting, and affectionless control demonstrated a greater IS [12][13]. Among the same year, another study assessed the relationship between insecure maternal and paternal attachment and interpersonal difficulties such as attachment anxiety and avoidance in college students [14]. Finally, a recent study found that increased levels of overparenting, particularly high level of anticipatory problem-solving were strongly associated with increased levels of young adult IS [15]. Evidence have demonstrated a strong association that inadequate parenting style – high control and neglect / lack of caring would result in high level of IS among adolescents, which can further cause mental health problems such as depression, anxiety, and more.

Although there is substantial research on the relationship between parental interpersonal work stress in relate to various family outcomes, as well as diverse parenting styles that result in varying levels of IS. There is limited research on the association between parents' workplace interpersonal relationships, or level of stressful work climate, parenting style, and adolescent IS. We hypothesize, using Bronfenbrenner's Ecology Theory, that parental workplace interpersonal relationships (exosystem) will influence parenting style (microsystem), and thus adolescent IS (the individual), and that parenting style acts as a mediator between parental workplace interpersonal relationships and adolescent IS.

## 2. METHODS

### 2.1. Participants

Participants were recruited in China using convenient sample collection in China via two routes including students' referrals within the schools in Beijing, Nanjing, and Wuxi cities, and school announcements distributed by the Education Bureau of Binhu District in Wuxi. Data were collected from 289 families participated voluntarily in student-parent pairings with high school students and their parents. The questionnaire was designed to be completed in a 1:1 student-parent ratio. Each participant was requested to complete an independently developed online questionnaire for students or parents. Data were obtained solely from valid questionnaires submitted, excluding unmatched participants, those who have their paired student form or parent form incomplete, and those who submitted duplicated questionnaires. With a total of 932 questionnaires submitted, only 578 were deemed valid with the total family size of 289 (n=289, with student and parent matched 1:1 by their names).

The student sample ranged in age from 11 to 18, with a mean age of 15.44; there were 145 boys (50.2%) and 144 girls (49.8%), while 269 of them were taken care by both parents (93.1%), 7 students had father as the

primary caregiver (2.4%) and 12 had mother as the primary caregiver (4.2%), only 1 participant had other relatives as the primary caregiver (0.3%).

The parent sample ranged in age from 31 to 59 with a mean of 42.5 years; 86 fathers (29.8%) and 203 mothers (70.2%) completed the questionnaire; 257 parents were employed as full-time (88.9%), 21 were employed part-time (7.3%), and 11 parents were unemployed (3.8%) but were able to complete the questionnaire based on previous work experiences.

### 2.2. Measures

**Interpersonal Sensitivity:** Interpersonal sensitivity (IS) was measured using a short version of Chinese Interpersonal Sensitivity Measure (IPSM-CS) [16], the measure was originally published in English, we independently translated it into Chinese by two professional raters with bilingual language proficiency and conducted a pilot-test cross-check between raters. The IPSM-CS were consisted of 36-item that students rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Five subscales addressed domains include Interpersonal Awareness ( $\alpha=0.892$ ), Fragile Inner Self ( $\alpha=0.866$ ), Separation Anxiety ( $\alpha=0.841$ ), Need for Approval ( $\alpha=0.766$ ), and Timidity ( $\alpha=0.789$ ). The value of each subscale was added to the score of each question, and the sum of all five subscales equaled the overall IS score. The measurement model was evaluated in this study and found to have a satisfactory fit to the data:  $\chi^2=0.676$ ;  $df=0.573$ ;  $p=0.702$ ; RMSEA=0.129; and CFI=0.700. The higher total IS score indicates higher level of IS among adolescents that may be prone to mental health problems.

**Parenting Style:** Adolescents' perceptions of their parents' parenting style were assessed using the Parental Bonding Instrument, which had its psychometric properties revised specifically for Eastern Cultures (PBI) [17] [18]. The PBI comprised of 25-item with students rating on a 4-point Likert scale, 13 questions were ranging from 0 (very unlikely) to 3 (very likely), whereas 12 rated in the opposite direction from 0 (very likely) to 3 (very unlikely). Two factors were assessed "Parental Care" (Care;  $\alpha=0.889$ ) and "Parental Control", or "over protection" (Control;  $\alpha=0.818$ ). Each factor's sum was calculated by the score of each related question. In this study, we evaluated the measurement model and found to have a good data-model fit:  $\chi^2=0.826$ ;  $df=0.774$ ;  $p=0.702$ ; RMSEA=0.008; and CFI=0.844.

**Parental Workplace Interpersonal Relationships:** Parent's interpersonal atmosphere at work (WIR) were assessed by the Relationships Index of the Work Environment Scale (WES: Relationship Index) [19]. A cross-check between two raters and pilot testing were conducted following the independent English to Chinese translation by the same two professional raters. Parents

rated the 27-item WES in Relationships Index dichotomously (yes/no). Three subscales addressed domains: Involvement ( $\alpha=0.710$ ), which measured how concerned and committed employees were about their jobs; Peer Cohesion ( $\alpha=0.625$ ), which measured how friendly and supportive employees were toward one another; and Supervisor Support ( $\alpha=0.659$ ), which measured how supportive management is of employees and encourages them to be supportive of one another. 14 questions had a yes (+1) or no (0) value, whereas 13 questions had a yes (-1) or no (0) value calculated in the opposite manner. Each subscale's total was added to the score for each item, and the final WIR score was

calculated using all five subscales. The higher the score, the more positive the parents' workplace interpersonal relationships were during their career. The measurement model was evaluated in this study and found to have a satisfactory fit to the data:  $\chi^2=0.685$ ;  $df= 0.767$ ;  $p=0.0.717$ ;  $RMSEA=0.077$ ; and  $CFI=0.712$ .

**3. RESULTS**

The means and standard deviations of the total IS score, PBI in Parental Care (Care), PBI in Parental Control (Control), and WIR are summarized in Table 1.

**Table 1.** Descriptive Results

	Mean	SD
IS	107.792	20.467
Care	16.817	2.894
Control	12.938	5.788
WIR	19.872	4.885

The correlation analysis of each scale tested are shown as in Table 2. At the 0.01 level, IS is significantly and positively correlated with Parental Control, that is, the greater the parental control, the higher the adolescent IS. IS and Parental Control were significantly and negatively correlated with WIR at the 0.05 level. That means a higher level of WIR, the lesser amount of

Parental Control and adolescent IS, this is to keep in mind that higher IS results in higher prevalence to mental health problems and interpersonal difficulties for adolescents. There is no significant correlation between Parental Care with any of other measures at neither 0.01 nor 0.05 level.

**Table 2.** Pearson Correlation Analysis between IS, Parental Care, Parental Control, and WIR

	IS	Care	Control	WIR
IS	1			
Care	-0.050	1		
Control	.260**	-0.018	1	
WIR	-.134*	0.090	-.201**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

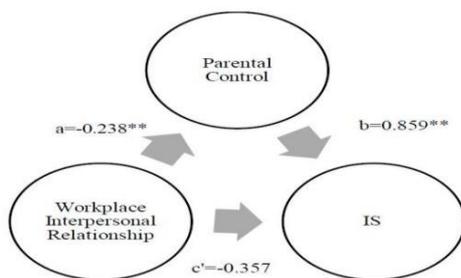
Due to the lack of a significant association between Parental Care and any of the other scales, we conducted a mediational analysis concentrating just on Parental Control. The regression equations in Table 3 revealed a complete mediation effect. Tests of direct effects indicated that parents' WIR exerted its effect on Parental Control ( $SE = 0.069$ ,  $\beta=-0.201$ ,  $p=0.001$ ,  $t=-3.478$ ,  $Adjusted R^2=0.037$ ) illustrated a negative relationship between two variables. Direct effect tests revealed that Parental Control exerts an effect on adolescent IS ( $SE=0.205$ ,  $\beta=0.243$ ,  $p=0.000$ ,  $t = 4.185$ ) indicated a

positive association between two variables. Direct effects tests revealed that parents' WIR exerted an effect on adolescent IS ( $SE=0.245$ ,  $\beta=-0.134$ ,  $p=0.023$ ,  $t=-2.291$ ,  $Adjusted R^2=0.015$ ) demonstrated a negative relationship between two variables. Finally, tests of indirect effects indicated that parents WIR exerted its effect through Parental Control on adolescent IS ( $SE=0.243$ ,  $\beta=-0.085$ ,  $p=0.144$ ,  $t=-1.466$ ,  $Adjusted R^2=0.068$ ) further demonstrated a negative association within the pathway of all three variables.

**Table 3.** Regression Equations

Equation	F value
IS = $-0.561 \times \text{WIR} + 118.950$	$F(1,287) = 5.249, p = 0.023$
Control = $-0.238 \times \text{WIR} + 17.672$	$F(1,287) = 12.094, p = 0.001$
IS = $-0.357 \times \text{WIR} + 0.859 \times \text{Control} + 103.762$	$F(2,286) = 11.534, p = 0.000$

After the mediation analysis, we are convinced that Parental Control functioned as a complete mediator between parents' WIR and adolescent IS showed in Figure 1 ( $c' = -0.357, 95\% \text{CI} = [-0.834, 0.120]$ ;  $c = -0.561^*, 95\% \text{CI} = [-1.042, -0.081]$ ).



**Figure 1.** Mediation Analysis Result

\*\*  $p < 0.01$

**4. DISCUSSION**

According to Bronfenbrenner's theory (1986), this study examined the relationships between the exosystem - parents' workplace interpersonal relationships, the microsystem - parenting style, and the individual - adolescent interpersonal sensitivity (IS). As expected, we discovered that positive interpersonal relationships tie at the parents' place of employment resulted in less control in parenting style. In consistent with previous research conducted by Costigan and colleagues on the relationship between workplace social climate and parenting behavior (2003), parents' roles outside of the family have an effect on how they perform their roles within the family, where a stressful and tense workplace climate does predict more negative and intrusive parent-children's interactions with decreased sensitivity, stimulation, and mutual enjoyment.

Additionally, as expected, we discovered a positive association between parental control and IS among adolescents, with adolescents showcasing a higher level of IS when given more control by their parents. This finding is consistent with previous research findings that IS is associated with highly intensive and intrusive parenting behavior that prioritizes parental needs over offspring's needs and wishes, where high parental overprotection results in increased IS associated with high harm avoidance and low self-directedness [13][15].

Parental care, on the other hand, demonstrated no significant associations with either parents' workplace

interpersonal relationships, or adolescent IS, which was contradictory to the expectation given that both factors of parenting style asserted a link to adolescent IS in Otani and colleagues' research findings (2009), both males and females presented lower IS with optimal parenting with high care and low protection among the four categories of parenting style they classified with Parenting Bonding Instruments: affectionate constraint (high care, high control), affectionless control (low care, high control), neglectful parenting (low care, low control), and optimal parenting (high care, low control).

After identifying relationships between the variables, the hypothesis was confirmed that parenting style, namely parental control in this case, served as a mediator in the relationship between parents' interpersonal relationships at work and adolescent IS. It demonstrated a stronger significant association with parental control acting as a mediator than a direct correlation in between parents' workplace interpersonal relationships and adolescent IS.

There are a few limitations and restrictions in this study that need to be addressed in future research. First, it is suggested to examine gender variations in parenting style that are influenced by exosystem elements such as work environment, social supports and financial circumstances; Second, considering families from diverse cultural backgrounds may aid in establishing a link between parenting style and adolescents' mental outcomes; Last but not least, it may be necessary to expand the study to a longitudinal design in order to better observe the developmental trajectory among adolescents' responses to parenting style.

**5. CONCLUSION**

The current study delves deeper into the fundamental reasons for adolescents' mental health and interpersonal difficulties by applying and expanding on prior empirical evidence inspired by Bronfenbrenner's ecology theory. The gap was identified through an examination of the underlying mechanisms that contribute to interpersonal sensitivity (IS) in adolescents. Thus, this study examined parents' interpersonal relationships at work and adolescents' subjective interpretations of their household parenting style, with the goal of determining the influence of both factors. According to previous research, a negative work climate and job stress can predict increased parental control, and that increased

parental control has an effect on adolescent and young adult IS. However, there was insufficient empirical evidence to support the existence of a solid relationship pyramid between all three variables. Given that individual adolescents are surrounded by a variety of contexts, it is hypothesized that parenting style influences how extrafamilial events and characters affect adolescents' personality traits and mental well-being. This study focused on one of the specific routes that adds to the body of research evidence, while arousing parents' attention to the interrelation among their interpersonal relationships at work, parenting style and their children's personality traits, specifically IS.

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