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Children's Behavioral Problems, Inter-Parental Conflict, and Maternal Psychological Distress

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Background: Previous studies conducted to demonstrate the association between children's behavioral problems, inter-parental conflict, and maternal psychological distress have reported mixed findings. This paper examines the relationships between these three factors. **Methods:** School children were interviewed to complete a questionnaire regarding inter-parental conflict and their own behavioral problems, and their parents were requested to fill out the Chinese Health Questionnaire at home. A total of 2,218 first graders and 2,075 fourth graders completed the study. **Results:** Higher inter-parental conflict was significantly associated with more externalizing and internalizing behavioral problems for children in both grades. It also showed that fourth-grade girls were more likely than fourth-grade boys to have internalizing problems, but that boys as a whole were more likely than girls to have externalizing behavioral problems. Maternal psychological distress was not significantly predictive of children's behavioral problems. **Conclusions:** Compared to maternal psychological distress, gender and exposure to inter-parental conflict appears to have a greater influence on children's behavioral problems.

Key words: behavioral problems, child, inter-parental conflict, psychological distress

INTRODUCTION

There is growing evidence that children exposed to economic hardship in the family, neighborhood threats, negative life events, and maternal substance abuse are at elevated risk of developing behavioral problems[1-3]. However, a number of studies have reported mixed results with respect to the association between, on the one hand, children's internalizing and externalizing behavioral problems, and on the other hand, parental emotional distress, particularly in depressed mothers[4-7]. One study[8] found that children with higher scores for impulsiveness and aggressiveness are more likely to have parents who suffer from marital distress and family illness. Buckner, Bassuk, Weinreb, and Brooks[9] found that after controlling for demographic variables, maternal distress was strongly associated with externalizing and internalizing problems in children. However, after conducting a meta-analysis, Connell and Goodman[10] concluded that in middle childhood, the average size of the effect of maternal psychopathology on internalizing and externalizing problems was only small to moderate. Another growing body of literature has sought to clarify and discuss the influence of marital conflict on the development of children's internalizing and externalizing problems. A longitudinal study by Katz and Gottman[11] indicated that a hostile inter-parental situation for children between the ages of 4 and 5 is predictive of mild forms of antisocial behavior by those children 3 years later, as rated by their teachers. The same study also indicated that when fathers show anger and exhibit emotional distance in resolving marital conflict, their children were rated by their teachers 3 years later as showing signs of anxiety and social withdrawal. Cowan, Cohn, Cowan, and Pearson[12] demonstrated a direct relationship between the quality of the marital relationship and children's externalizing problems. This study also found that, by contrast, the influence of the quality of the marital relationship on children's internalizing problems is smaller, and that the pathway mediated by positive parenting.

Based on the empirical evidence above, maternal psy-

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chological distress and inter-parental conflict may be associated with children's behavioral problems. However, the question remains unresolved as to whether inter-parental conflict is more or less closely associated with children's behavioral problems than is maternal psychological distress. This article examines the relationships between maternal psychological distress, inter-parental conflict, and children's internalizing and externalizing behavioral problems.

METHODS

Data for this paper were collected as part of a longitudinal study in Taiwan entitled "Child and adolescent behavior in long-term evolution (CABLE)"[13]. In brief, 9 elementary schools were randomly selected from the school districts of Taipei City and Hsin-Chu County. A total of 2,218 first-grade and 2,075 fourth-grade pupils were recruited. Their parents were asked to sign an informed consent form if they agreed to their child's participation in this study. Children were then interviewed at school to complete a structured questionnaire concerning matters such as their externalizing and internalizing problems, and inter-parental conflict in their family as they perceived it. The participating students were requested to give an additional questionnaire to each of their parents and to submit those forms, completed, to their class teachers the following day. The parents' reports of their own psychological distress were used in the analysis. The data were systematically collected by trained interviewers following standardized procedures.

The externalizing and internalizing problems measured in the CABLE project were revised with consideration of translation and social/cultural context on the basis of the Children Behavioral Checklist[14], the Children Depression Inventory[15], and the Child Loneliness Scale[16]. For the purposes of this paper, children's behavioral problems[14] that focus within the self were defined as internalizing, while behavior that conflicts with or affects the environment was labeled as externalizing[14]. Externalizing behavioral problems include hyperactivity, conduct disorder, and aggressive symptomatology, whereas internalizing behavioral problems are marked by anxiety, depression, and somatic complaints[17].

Externalizing behavioral problems (8 items) was measured by a composite score, obtained by summing the responses to the behavioral descriptors of conduct problems and substance use (1 = never, 2 = sometimes, 3 = often). Internalizing behavioral problems (20 items) were measured by the composite score of child emotional problems, obtained by summing the responses to emotional statements of social anxiety, social loneliness, and depression (1 = never, 2 = sometimes, 3 = often). Detailed information on the conceptualization and psychometric properties of the individual scales is available elsewhere[13]. Based on the data collected, internal-consistency reliability coefficients for the composite scales were 0.66 and 0.85 for internalizing and externalizing behavioral problems, respectively.

Table 1 Demographic information and study variables in first and fourth graders

Variables	First		Fourth	
	n	%	n	%
Total	2218	100.00	2075	100.00
Gender				
Girl	1083	48.83	997	48.05
Boy	1135	51.17	1078	51.95
Location				
Taipei City	1297	58.48	1089	52.48
Hsin-Chu County	921	41.52	986	47.52
School size				
Large	528	23.81	528	25.45
Medium	667	30.07	695	33.49
Small	1028	46.12	852	41.06
Variables (Scores)	Mean	SD	Mean	SD
Maternal psychological distress (0-12)	3.16	1.89	3.32	2.10
Inter-parental conflict (3-12)	4.14	1.65	3.81	1.27
Children's internalizing problems (20-60)	28.95	6.51	31.89	6.86
Children's externalizing problems (8-24)	10.23	3.32	10.52	2.37

The independent variables used in the analysis were demographics, inter-parental conflict, and maternal psychological distress. To control for potential confounding factors that may compete to explain variability in behavioral problems, the demographic variables in this paper included the gender of the child, the location, and the size of the school. Gender and location were measured as binary variables coded as 1 = male and Taipei versus 2 = female and Hsin-Chu, respectively. School size was coded as 3 = large, 2 = medium, and 1 = small. Inter-parental conflict was measured through children's responses concerning their perception of 3 items-parental arguing, throwing things, and hitting each other-on a 4-point Likert scale. Maternal psychological distress was assessed using the Chinese Health Questionnaire[18]. This 12-item instrument includes questions concerning various psychosomatic complaints such as headaches, aches and pains in the body and limbs, difficulty in breathing, fatigue, and poor concentration.

RESULTS

Table 1 presents background information and mean scores for the assessed variables. Just over half of the

Table 2 Predictors of children's internalizing and externalizing problems by multiple regression

Variables	Internalizing Problems				Externalizing Problems			
	First Graders		Fourth Graders		First Graders		Fourth Graders	
	β	SE	β	SE	β	SE	β	SE
Area (1=Taipei, 2=Hsin-Chu)	0.25	0.28	0.26	0.29	0.03	0.04	0.04	0.10
School size (3=large, 2=medium, 1=small)	0.19	0.17	0.03	0.18	-0.26**	0.09	0.10	0.06
Gender (1=boy, 2= girl)	0.46	0.27	0.64*	0.29	-0.97***	0.14	-0.82***	0.10
Inter-parental conflict (3-12)	1.12***	0.08	1.67***	0.12	0.51***	0.04	0.46***	0.04
Maternal psychological distress (0-12)	-0.08	0.38	0.34	0.38	0.11	0.19	-0.24	0.13

Note: * p<.05；** p<.01；*** p<.001.

students in both grades were boys and over half of the participants lived in Taipei. Of the fourth graders, 25.45% were from large schools, 33.49% from medium-sized elementary schools, and 41.06% from small schools. Of the first graders, 23.81% were from large schools, 30.07% from medium-sized schools, and 46.12% from small schools. The mean maternal psychological distress scores were 3.16 and 3.32 for the mothers of first- and fourth-grade children, respectively. The inter-parental conflict scores were 4.14 for first graders and 3.81 for the fourth graders. The mean scores of children's internalizing behavioral problems for first-grade pupils and for fourth-grade pupils were 28.95 and 31.89, respectively, where a score of 20 represents an average response of "never", 40 of "sometimes", and 60 of "often". The mean scores of children's externalizing behavioral problems for first-grade pupils and for fourth-grade pupils were 10.23 and 10.52, respectively, where a score of 8 represents an average response of "never", 16 of "sometimes", and 24 of "often".

Multiple regression analyses were performed to test whether inter-parental conflict and maternal psychological distress were predictive of children's internalizing and externalizing problems (Table 2). The results showed that location, the size of the school, the child's gender, and maternal psychological distress were not statistically significant with respect to internalizing behavioral problems. Inter-parental conflict, however, was significantly associated with internalizing problems for first graders, $\beta = 1.12$, $p < .001$. For the fourth-grade pupils, gender and inter-parental conflict were significant in predicting internalizing behavioral problems, $\beta = .64$, $p < .05$ and $\beta = 1.67$, $p < .001$, respectively. Fourth-grade girls had significantly higher levels of internalizing behavioral problems than boys. In addition, higher levels of inter-parental conflict were associated with more internalizing behavioral problems for both first and fourth graders. Maternal psychological distress was not significantly associated with internalizing behavioral problems for either first or fourth graders.

For first graders, the size of the school, the child's gender, and inter-parental conflict were significant predictors of behavioral problems, $\beta = -.26$, $p < .01$; $\beta = -.97$, $p < .001$; and $\beta = .51$, $p < .001$, respectively. Location and maternal psychological distress were not significantly predictors. For fourth graders, gender and inter-parental conflict were significant predictors, β=-.82, p< .001, and β=.46, $p < .001$, respectively. In smaller schools, first graders but not fourth graders had more externalizing behavioral problems than those in larger schools. In smaller schools, moreover, boys demonstrated more externalizing behavioral problems than girls. Higher inter-parental conflict indicated higher externalizing behavioral problems for children in both grades. Maternal psychological distress was not a significant predictor for externalizing behavioral problems.

DISCUSSION

There were three main findings in this paper. First, higher levels of inter-parental conflict were associated with more internalizing behavioral problems for children in both grades, and fourth-grade girls were more likely to have internalizing behavioral problems than fourth-grade boys. Second, higher levels of inter-parental conflict were also associated with externalizing behavioral problems, and boys in both grades were more likely than girls to have externalizing behavioral problems. In addition, children in the first grade of smaller schools were more likely to have externalizing problems than those in the first grade of larger schools. Third, maternal psychological distress was not significantly predictive of internalizing or externalizing behavioral problems.

Regarding the background variables, gender appears to be associated with behavioral problems. Specifically, boys are more likely to have externalizing behavioral problems, whereas girls are more likely to have internalizing behavioral problems. A possible interpretation of this gender difference is that a parent may exert more influence on children of the same gender as himself or herself. Based on the social learning perspective, justification for this possibility is drawn from Bandura's[19] conclusion that children are more influenced by role models of greater similarity to themselves. Consistent with these arguments are several studies that have found that parents exert the greatest influence on same-sex children, regardless of parenting style[20]. Within the social context of Taiwan, males are

encouraged to behave more aggressively and females tend to be restricted to expressing themselves emotionally[21,22].

As for the finding of the association of school size and externalizing behavioral problems amongst first graders, limited information exists in the literature. One major finding from a previous study[23] is that school size is negatively correlated with bullying in school. The current study provides consistent evidence: students in small schools have more externalizing problems than those in large schools. This finding suggests that most first-grade students may well be aware that over expression as externalizing problems is not socially acceptable behavior. Therefore, expressing externalizing problems in public is less likely in a correspondingly larger and more crowded school.

The Relationship between Parental Conflict, Maternal Distress, and Children's Behavioral Problems

With respect to the findings on the relationships between inter-parental conflict and internalizing and externalizing behavioral problems, our results are congruent with those of previous studies[7,24,25]. Our results show that marital conflict was associated with child adjustment. A plausible explanation is that exposure to background anger may have an impact on children's levels of experienced distress, and that problems in the marital relationship may spill over into the relationship that each parent develops with the child[24]. Marital conflict may thus influence children's internalizing behavioral problems through self-blame by the child[7]. There is, however, little evidence of the specific nature of this association. Our results indicate the importance for future research of exploring the causal pathways for the prediction of internalizing and externalizing behavioral problems.

The finding that maternal psychological distress does not appear to predict children's internalizing and externalizing behavioral problems is surprising. This finding is not consistent with the results of previous studies, although there are three plausible possibilities for it. First, most published research has used clinical diagnostic criteria for maternal emotional problems to predict children's behavioral problems[25]. In our study, a relatively brief assessment tool, the Chinese Health Qustionnaire[26,27], was used to test whether mild maternal emotional distress was associated with children's internalizing and externalizing problems. Second, the influence of maternal emotional distress on children may be mediated by parenting practices, parental beliefs, and the self-perception of depression by parents. Consequently, there are many other variables that can interact to influence the effect of maternal emotional distress on a child's behavior. The third explanation of the non-significant effect of maternal psychological distress may be that a child with an emotionally disturbed mother has an emotionally stable father who cushions the influence of harmful maternal influences on the child. To adjust for the influence of harmful factors, Connell and Goodman[10] performed a meta-analysis and concluded that the effect of the size of maternal emotional distress on children's internalizing and externalizing problems is small, although statistically significant. Further studies should examine in greater depth the influence of maternal emotional problems on children.

Limitations of the Study

There are some limitations to the findings of the current paper. Firstly, although the reliability and validity coefficients of our measures are acceptable, future studies should examine the validity of the assessment tool used in this paper. For example, there are mixed findings on the variations in the sensitivity of the classification of subjects for the Chinese Health Questionnaire that we used to determine maternal psychiatric distress[26,27]. In other words, a mother classified with psychological distress in this study may not actually be distressed. In addition, the measure of marital conflict in this study assessed only the child's recollection of the frequency of marital conflict. Perhaps a better way to measure the adverse effects of marital conflict may be to include measures of the severity of conflict in addition to its frequency. Hence, the interpretation of this study's results should take into account the study limitations, and the findings should be generalized with caution.

Suggestions and Future Directions

The need remains for an accurate method to assess the mental health of children in early childhood before behavioral problems become established. When externalizing behavioral problems are used to designate risk status for targeted interventions in this age group, the content of assistance is likely to be ineffective if school personnel and families are not properly educated.

Our data suggest that the positive value of inter-parental conflict in predicting internalizing and externalizing problems in first-grade and fourth-grade children is modest. This means that intervening in families with severe conflict between parents might be necessary to protect children. Schools should and must be willing to intervene in primary and secondary prevention of serious behavioral problems, including those that may lead to suicide. The task of improving the situation involves the complex issue of com-

munication between schools and parents. Future studies might consider developing an effective strategy to develop effective communication with respect to children's behavioral problems.

It is also imperative to recognize that the significant gender effect in relation to the presence of externalizing problems may place girls at a disadvantage with respect to coverage and the negative effects of labeling in the Taiwanese cultural context. Until future data are available, it seems reasonable to assume that girls and boys may have different vulnerabilities to negative psychological stimuli in the home, and to be aware that coverage of girls is lower than that of boys.

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