# Do Preadolescent after School Activities Predict the Mother-Child Relationship in Taiwan?

Li-Ching Sun<sup>1</sup> & Shu-Yin Tsai<sup>2</sup>

Correspondence: Li-Ching Sun, Department of Early Childhood Education, National Chia-Yi University, 85 Wenlong, Ming-Hsiung, Chiayi 621, Taiwan. Tel: 11-886-920-288-231. E-mail: sunlc@mail.ncyu.edu.tw

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## **Abstract**

This study investigates whether preadolescent after school activities predict the mother-child relationship. A total of 346 5th and 6th grade elementary school students and their mothers participated. The students were asked to write down after school activities they are involved in as well as the time slots for a week. Correlation and multiple regression analyses were used to examine the relationship between after school activities and the mother-child relationship. The results showed that organized activity participation was not significantly associated with the mother-child relationship. Playing computer games, literature, and artistic activities were significant to the prediction of the mother-child relationship even after demographic variables were statistically controlled for. The more time spent on literature and artistic activities increased preadolescent perception of the mother-child relationship. In contrast, the length of time for playing computer games decreased preadolescent and mother perception of the mother-child relationship.

Keywords: after-school activity, mother-child relationship, school-age children, preadolescent

# 1. Introduction

The debate on the risks and benefits of a variety of after-school activities in U.S.A. is common (Mahoney, Harris, & Eccles, 2006). Some scholars advocate the over-scheduling of organized activities undermines family functioning and youth well-being (Elkind, 2001; Rosenfeld & Wise, 2000). Although Mahoney et al. (2006) through empirical research against the over-scheduling hypothesis and supported organized activity as it facilitated youth development, they still found that African-American youth who spent 20 or more hours a week in organized activities was significantly associated with less frequent discussion with parents. Obviously, youth participation in organized activities reduced the amount of time for interaction with their parents. However, does it influence the parent-child relationship? How much time spent in organized activities will affect the parent-child relationship? Does the over-scheduling hypothesis happen in Taiwan? The present study attempts to explore these unanswered questions.

Mahoney et al. (2006) indicated that American youth who participated in organized activities had more achievements and better psychological adjustment than youth who did not participate. Mahoney et al. (2006) viewed many non-organized activities as one group to compare to another group that they called organized activities. Are all kinds of unorganized activities inappropriate for youth well-being and family functions? The current study attempts to expand the over-scheduling hypothesis and with Mahoney et al. (2006) research to investigate whether the types of after-school activities affect the mother-child relationship.

## 2. Literature Review

## 2.1 After School Activities

The after school activities of preadolescents provides a window to understand their daily lives. Because the types of after school activities are various, previous researchers categorize these activities based on their study purpose. For example, Mohoney, Schweder, and Stattin (2002) categorized them into structured activities and unstructured recreational activities to investigate whether participation in structured after-school activities moderates the association between detached parent-adolescent relationships and adolescent depressed moods. Mahoney et al. (2006) categorized them into organized and non-organized activities. The characteristics of

<sup>&</sup>lt;sup>1</sup> Department of Early Childhood Education, National Chia-Yi University, Taiwan

<sup>&</sup>lt;sup>2</sup> An-Nan Elementary School, Taiwan

organized activities are as follows: outside of school, structured, have adult-supervision, and have an emphasis on skill building. They compared children who do and do not participate in organized activities and their developmental outcomes. Taiwanese researchers have categorized organized activities into cram schools, talent classes and leisure activities. They examined the relationship among these activities, academic behavior, and behavior adjustment (Su, H. Lin, M. Liu, R. Liu, & Wang, 2006).

The after-school programs provide organized activities for academic assistance, recreation, or enrichment learning (Mahoney et al., 2006). In Taiwan, there are three types of institutes to provide organized activities. They are as follows: (1) the tutor center (called Bu-shi-ban) that provides training in English and mathematics to improve academic skills; (2) the cram schools (called An-ching-ban) that provides care and helps student with their schoolwork; and (3) the talent classes (called Tsai-i-ban) that provide music, calligraphy, arts, and sports to develop their artistic talents and athletic skills (Shih & Yi, 2014). Su (2005) reported that 43% of school-age children participate in cram schools and 69% of them enroll in tutor centers or talent classes for one or more lessons. Participation in organized activities is a common developmental experience for Taiwanese youth.

In the U.S.A., research on the risks and benefits of a variety of after-school activities has been expanding rapidly (Mahoney, Larson, & Eccles, 2005). Most empirical studies support that organized activity participation contributes to positive youth development. Cooper, Valentine, Nye, and Lindsay (1999) reported that a significant positive relationship between the number of hours spent in organized activities and student standardized achievement test scores in the 424 students from grades 6-12 who participated in their study. Roth, Brooks-Gunn, Murray and Foster (1998) found that youth who participated in structured activities after school showed better adjustment than youth who chose unstructured recreational activities. However, the above examples of structured activities were sports teams, music clubs, community service, and scouts. The organized activities also included being a volunteer in religion-based and child/family organizations (Mahoney et al., 2006). The organized activities in the U. S. A. are different than those in Taiwan. The organized activities in Taiwan are seen as supplemental learning at private cram institutes in a group setting and with adult supervision on weekday evenings or on weekends (Shih & Yi, 2014). Most organized activities are inactive and curriculum-oriented such as doing homework, writing tests, and reviewing lessons. Su (2005) studied 479 students in grades 2, 4, and 6 in Taiwan and reported that children who participated in cram schools (called An-ching-ban) showed poorer school grades and behavioral adjustment. Otherwise, the primary reasons for American youth participation in organized activity were enjoyment and expediency with the least mentioned as external pressure from parents (Luthar, Shoum, & Brown, 2006). From a cross-cultural study (Bidierano & Newman, 2010) that compared Taiwan to the United States for preadolescent autonomy on the choice of after school activities, the results showed that the proportion of time spent by self-choice for organized activities is 58% for American students and 30% for Taiwanese students. The motivation may be intrinsic for American students (Mahoney, et al., 2006). However, we are not sure the motivation and reasons of participation in organized activities for Taiwanese youth, because of the lack of empirical research.

Except for organized activities, American students spent most of the time watching TV, playing games, and educational activities; they spent less time hanging out with friends and household chores (Mahoney, et al., 2006). Similarly, Taiwanese children spent most time watching TV and films, reading, playing games, and listening music, but still spent a lot of time hanging out with family and doing household chores (Su, et al., 2006).

The current research categorized five types of after school activities by synthesizing previous research as follows: organized activities, unorganized educational activities, unstructured recreational activities, social interactional activities, and household chores.

## 2.2 Mother-Child Relationship

Empirical studies have linked the mother-child relationship to preadolescent deviant behavior (Liao, 2004), emotion experience (Chang, 2004), peer relationship (Lo, 2012), parent-child conflict (G. Tsai & M. Tsai, 2014), and early stage violence (Chang, 2006). A better mother-child relationship is associated with less violence and deviant behavior, less parent-child conflict, and more peer cooperation/prosocial behaviors (Lo, 2012). However, the above researches regarding the mother-child relationship were all are from preadolescent perception and lacked the mother perception of the mother-child relationship.

Do mothers really understand their children? Titzmann, Gnlewosz, and Michel (2013) indicated that mothers tend to overestimate the amount of information they received from their children. Mothers and children reflected two sides of the same story. Reidler and Swenson (2012) asked both children and mothers to report their relationship quality. Children reported higher positive relationship quality than mothers did, but mothers reported

a lower negative relationship quality than children did. The disagreement between the perceptions of the mother and the children is obvious. The purpose of this study is to collect dyad information from what was reported the mother-child relationship by mothers and preadolescent.

Research on after school activities and the parent-child relationship is scarce. Although Lareau's (2003) study suggested that organized activity constrains the nature of the parent-child interaction, it did not actually investigate how much time children spent in organized activities and how it affected the parent-child relationship. Wang and Shen (2014) reported that all types of family leisure activities were significantly associated with positive parent-child interrelationship. Parental accompaniment with children for leisure activities can increase the opportunity of communication and improve family cohesion. However, modern parents are too busy to bring children to tutor centers or talent classes and they have less time engage for family leisure activities. The leisure activity at home for many children is spent alone.

Most previous studies of after school activities usually treated family indictors as independent variables and examines whether parent educational level, job, and income as making the difference for after-school activities (Su, 2005; Su et al., 2006). This study views the mother-child relationship as a dependent variable and explores whether after school activities predict this relationship.

## 3. Method

## 3.1 Subjects

The participants in this study were 346 5th and 6th grade elementary school children and their mothers. Eighty-seven (25.1%) participants were 5th grade students and 259 (74.9%) were 6th grade students. The participants were comprised of 183 (52.9%) boys and 163(47.1%) girls from two elementary schools and 14 classes in Tainan County, Taiwan.

The range of the age of the mothers was 30-66 with a mean age of 40.65 (SD = 4.86). The range of educational level was from elementary school only to PhD. Twenty-six percentage had graduated from a vocational school and 25.7% had a college degree or other type of higher education. The monthly family income reported was NT\$20,000–170,000 with an average income between NT\$50,000–70,000 (approximately US\$1,666 to \$2,333).

# 3.2 Instruments

# 3.2.1 After School Activity Diary

The participating children were asked to recall and write down after school activities and time slots. Each time slot also needed to indicate if there were alone or accompanied by others such as mother, sister, or friends. On Monday, children needed to fill out Friday, Saturday, and Sunday diaries. From Tuesday to Friday, children wrote down what happened on the previous day. The researchers collected the diary each day of the week.

The activities were coded into five categories and 10 activities. These categories and activities were as follows: (a) Organized activities; (b) Unorganized educational activities: School works and Literary and Artistic activities; (c) Unstructured recreational activities: Computer games, Media use, Sports, Play; (d) Social interactional activities: Hanging out with family, Hanging out with peers; and (f) Household chores. Table 1 presents the full spectrum of activities in each category.

## 3.2.2 Mother-Child Relationship Scale

This scale was based on previous research (Tsai, 2014) and developed to assess the quality of the mother-child relationship. Children and mothers were asked to complete the questions with this scale. The questionnaire contains 19 items that are rated on a scale ranging from 1 (Never) to 5 (Always). Factor analyses of the ratings of mother-child relationships yield two distinct subscales: Support and Affection. *Support* includes 11 items that describe understanding, instrumental aid, listening, and companionship. *Affection* includes 8 items that reflect dyad affective interaction such as children share feeling, mother comfort children, and feeling relaxed when they get along with each other. Internal reliability was high for the support and affection (mother  $\alpha = .88$  and .89, children  $\alpha = .91$  and .92). The sum of all items was calculated to create a single composite score because two subscales are highly correlated.

#### 4. Results

## 4.1 Descriptive Statistics of after School Activities

Table 1 presents the participant number, mean, standard deviation, and the range of hours for each activity according to reports from preadolescents. The order is based on the participant numbers from most to least, media used, organized activities, computer games, educational activities, hanging out with family, literary and

artistic activities, sports, play, hanging out with peers, and household chores. The participant number for the two categories mentioned most was over 280 and the least two categories was below 35. Most children chose to watch TV, film, and listen to music or were involved in a tutoring center and after-school clubs. However, the least amount of children hung out with peers and did household chores. From the mean, standard deviation, and range of hours, participant children spent most of their time in organized activities (M = 13.35), and then watching TV, film, and listening to music (M = 9.88). The items and time that children spent after school activities varied quite a bit as well.

Table 1. Mean, standard deviation, participant number, proportion and range of hours a week by per activity

Activities	M(SD)	N (%)	Range hours
Organized activities			
1. Organized activities (participate in tutoring center, cram school, and talent class)	13.35(7.75)	289(83.5%)	0.5–37
Unorganized educational activities			
2. School works (e.g., do homework, study for school courses at home)	8.48(5.80)	245(70.8%)	0.5–29.5
3. Literary and Artistic activities (e.g., reading, painting, stamp collecting, origami)	4.78(4.10)	165(47.7%)	0.5–21
Unstructured recreational activities			
4. Computer games(e.g., play computer, I-pad, cell phone, and video games)	7.16(6.22)	264(76.3%)	0.5–34
5. Media use (e.g., watch TV or films, listen to music)	9.88(6.76)	325(93.9%)	0.5-35
6. Sports (e.g., ride a bicycle, play balls, swim, kendo)	3.95(3.89)	141(40.8%)	0.5–26
7. Play (free play alone, with siblings or pets)	4.02(3.70)	124(35.8%)	0.5-20
Social interaction activities			
8. Hang out with family: socialize with adults (playing chess, go shopping, talking, and traveling with adults, and visiting relatives)	5.03(4.82)	189(54.6%)	0.5–36
9. Hang out with peers (e.g., talk on phone, line, FB, and play with friends)	4.04(3.98)	34(9.8%)	0.5–15.5
Household chores			
10. Household chores: chores around the house	2.82(2.38)	11(3.2%)	0.5-8.5

## 4.2 Children and Mothers Perception of Mother-Child Relationship

A pair T-test was conducted to compare children and mothers perceptions of the mother-child relationship. The result (T = 11.10, P = .000) showed that the perceptions of mothers as to the relationship with their children (M = 81.93, SD = 10.41) was significantly higher than the children perceptions (M = 72.78, SD = 17.01). The indication is that mothers perceive a closer relationship with their children than their children do.

A Pearson correlation analyses were conducted to test the relationships between demographic variables and the mother-child relationship. Table 2 shows that education and family income were significantly and positively related to both the perception of children and mothers about the mother-child relationship. Additionally, the age of the mother was significantly associated with perception of the mother about the mother-child relationship but there was no association for the perception of the children.

Table 2. Correlations between demographic variables and mother-child relationship

Variables	Child perception of Mother relationship relationship	
Age	.01	.13*
Educational degree	.16**	.23***
Family income	.13*	.14**

*Note.* \* $\rho$  < .05 \*\* $\rho$  < .01 \*\*\* $\rho$  < .001.

## 4.3 Predictors of the Mother-Child Relationship

The research question addressed was as follows: Do after school activities predict the mother-child relationship? The results from the correlation analyses revealed that computer games, literary and artistic activities, and educational activities were significantly associated with the perception of the children for the mother-child relationship (Table 3). Additionally, the perception of the mother for the mother-child relationship was significantly related to time spent by children on computer games, media used, and literary and artistic activities.

A multiple regression analysis was conducted to test whether after school activities predicted the mother-child relationship. The independent variables in the regression model were selected when they had a significant correlation with the dependent variables (child perception of relationship and mother perception of relationship). The controlled variables were age of the mother, level of education, and family income. Table 4 shows the results of the regression analyses. The more time children spent playing computer games was significantly associated with a decreased children perception of the relationship ( $\beta$  = -.25,  $\rho$  < .001) and decreased the mother's perception of the relationship ( $\beta$  = -.11,  $\rho$  < .05). By contrast, the more time children spent on literary and artistic activities was significantly related to an increased perception for children of the relationship ( $\beta$  = .11,  $\rho$  < .05). The findings indicated that the time children spent playing computer games was a significant predictor for both perceptions of the quality of the mother-child relationship. Additionally, children who spent longer on literary and artistic activities perceived more support and affective interaction with their mothers.

Table 3. Correlations between the mother-child relationship and after school activities

Variables	Child perception of relationship	Mother perception of relationship		
Organized activities	01	02		
School works	.14**	.07		
Literary and Artistic	.16**	.13*		
Computer games	31***	17**		
Media use	10	13*		
Sports	01	07		
Play	.06	.07		
Hanging out with family	.08	.09		
Hanging out with peers	05	02		
Household chores	.05	.02		

<sup>\*</sup> $\rho$  < .05 \*\* $\rho$  < .01 \*\*\* $\rho$  < .001.

Table 4. Summary of multiple regression analyses for after school activities predicting the mother-child relationship when controlling demographic variables

Variable	Child pe	Child perception of relationship			Mother perception of relationship		
	В	SE B	β	В	SE B	β	
Computer games	70	.15	25***	18	.09	11*	
Media use				14	.08	10	
Literary & Artistic	.49	.24	.11*	.15	.15	.05	
School works	.27	.15	.10				

*Note.*  $R^2$ = .12 for child perception of relationship,  $R^2$ = .09 for mother perception of relationship, \* $\rho$  < .05 \*\* $\rho$  < .01 \*\*\* $\rho$  < .001.

## 5. Discussion

From the results, the lengths of time children spent on organized activities did not affect the relationship quality with their mothers. This finding does not support the over-scheduling hypothesis that assumes organized activity participation limits the time for children to interact with their parents and this affects the parent-child relationship. However, the description statistics showed that 83.5% of the 5- and 6- grade students (age 10–12) participated in organized activities and average time as 13.35 hours per week. In comparison with the data from Mahoney et al. (2006), 60% of the young people (age 5–18) spent an average of 5 hours per week doing organized activities in the USA. The Taiwanese participant numbers and average time spent on organized activities was greater than for the participants from the USA.

How much time does over scheduling affect the parent-child relationship? Mahoney et al. (2006) reported that organized activity participation from 5–20 hours per week increased the frequency of the parent-adolescent discussions. However, spending 20 or more hours/week on organized activities was associated with less frequent discussions with parents for African American youth. Mahoney et al. (2006) reported only 3-6% of U.S. youth but our data indicated that 21.5% of Taiwanese youth participated in organized activities with 20 or more hours per week. The current research only made correlation and multiple regression analysis and did not compare those who spent 20 or more hours and those who spent less than 20 hours per week. Thus, we were unable to identify if participation in organized activities for 20 or more hours per week is harmful the mother-child relationship.

The time spent playing computer games is a strong predictor for both preadolescents and mothers perception of the mother-child relationship. Following the popularization of the internet and cell phones, computer games are played on multiple devices such as computers, cell phones, and tablets. There is strong evidence that more youth are spending more time playing computer games than in the past. Elementary school teachers reported that the most frequently discussed topic for children is computer games. There is a lot of evidence from previous research that shows the negative effects of computer games on adolescent hostility, social skills, and academic achievement (Huang & Lee, 2003) and on interpersonal relationships (Chen & Yu, 2009), but the previous empirical research lacked for the effect of computer game on parent-child relationship. Why do preadolescents playing computer games negatively affect mother-child relationship? We assumed that the children and mother expectations for time allowed to play computer games were different. They may disagree, argue, and dispute how much time they can play computer games. Thus, the more time preadolescents spend on computer games decreased the quality of mother-child relationship.

The results of the regression analysis indicated the time children involved in literary and artistic activities was related to a significant increase in preadolescent perception of the mother-child relationship. Involvement with unorganized educational activities such as homework, reading, painting, stamp collecting, and origami was associated with preadolescent perceptions of the mother-child relationship. We suggest that preadolescents should do educational activities at home rather than in a cram school or tutor center.

Involvement in unorganized literary and artistic activities benefit the mother-child relationship but the spent time on computer games is harmful to the mother-child relationship. From the description data, 76.3% of preadolescents spent an average 7.16 hours per week playing computer games, but only 47.7% spent an average 4.78 hours per week on literary and artistic activities. This should be seen as a warning for parents and educators. If Taiwanese parents and educators are unable to find a solution to effectively reduce the amount of time children

spent on computer games, the negative consequences will become worse in the future. Moreover, If Taiwanese parents continue to rely on organized institutes to assist their children with school work and to provide literary and artistic activities, they will have lost wonderful opportunities to build a good relationship with their children.

Preadolescent and mother perceptions of the mother-child relationship are discrepant. Mothers reported a better relationship than was reported by preadolescents. The mother-child discrepancy was not a goal of this study. However, the collection of our data has indicated that the relationship contributes to a dyadic understanding of its members. Future research could investigate the effect of the discrepancy between mothers and children on various indicators.

The current study provides useful information for parents, educators, policymakers, and professionals. Some unorganized activities contribute significantly to the prediction of the mother-child relationship. Even organized activities were not significant predictors, the data showed a large proportion of high level of organized activity participation. Thus, the quality of the organized activity is important for children. The Taiwanese government and policymakers should consider on how to better manage cram institutes and control the quality. The risks and benefits for after school activities for Taiwanese children development and family function are unclear. Future researchers could pay more attention to examine the many indictors of development such as emotional well-being, achievement pressure, psychological adjustment, and family indictors such parental motivation, goals, values, and expectation with after school activity.

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