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**PEACE, NOT WAR– ADOLESCENTS' MANAGEMENT OF  
INTERGENERATIONAL CONFLICTS IN TAIWAN\***

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This paper examines factors affecting conflict management behaviors of adolescents in Taiwan. The theoretical approach combines sociological approach with perspectives from developmental psychology. The sociological approach classifies conflict management strategies into three forms--unilateral, bilateral, and trilateral, and argues that social relationship variables, such as relational distance and social status difference from the disputant, affect adolescents’ choices of conflict management strategy. The developmental approach, on the other hand, focuses on the impact of biological and psychological factors on conflict management behaviors.

A research model organizing insights from these two theoretical perspectives is proposed to explain the adoption of non-confrontational means of conflict management, in bilateral and trilateral forms, in situations of intergenerational conflict. The model is tested by survey data from 1,808 middle and high school students in Taiwan. Major findings are: (1) Adolescents most frequently employ a unilateral form and non-confrontational means, such as inaction or avoidance, in handling disputes. Relational distance and status difference are found to affect the choice of conflict management strategy. (2) Adolescent’s own social status at school is more important than family socioeconomic status in explaining conflict management behaviors. (3) Having close relationships with parents or teachers promotes the adoption of negotiation and mediation. (4) In conflicts with a parent, adolescent males tend to use direct negotiation as the conflict management strategy. (5) While father’s strict monitoring practices promote prosocial strategies of conflict management, parents’ and teachers’ harsh practices inhibit the adoption of prosocial strategies.

**Keywords** : Adolescent, Interpersonal Conflicts, Conflict Management

Une étude des facteurs qui affectent les conduites par lesquelles les adolescents à Taiwan gèrent les conflits. Le traitement théorique combine l'approche purement sociologique avec des points de vue venant de la psychologie du développement. L'approche purement sociologique classe les stratégies de gestion de conflits en trois formes – unilatérale, bilatérale et trilatérale – et soutient que les variables dans les relations sociales, telles que la distance relationnelle et la différence de statut social avec le rival, affectent les adolescents dans leur choix de stratégies pour gérer les conflits. La psychologie du développement, elle, se concentre sur l'impact que les facteurs biologiques et psychologiques ont sur les conduites de gestion de conflits.

Cette étude propose un modèle de recherche qui met en œuvre les points de vue des deux approches théoriques pour expliquer l'adoption de moyens non-antagonistiques – de formes bilatérale et trilatérale –, dans des situations de conflit inter-générationnel. Le modèle a été vérifié à partir d'une enquête auprès de 1 808 élèves de collège et de lycée à Taiwan. Les principaux résultats sont: (1) le plus souvent, les adolescents emploient une forme unilatérale et des moyens non-antagonistiques (ne pas agir, s'éviter) pour gérer les disputes, et le choix de stratégie est influencé par la distance relationnelle et la différence de statut avec le rival. (2) dans les conflits avec un parent, les adolescents (garçons) ont tendance à adopter la négociation directe comme stratégie. (3) Des relations étroites avec les parents et les enseignants facilitent l'adoption de stratégies pro-sociales, telles que la négociation et la médiation. (4) Le propre statut social à l'école d'un adolescent est plus important que le statut socioéconomique de sa famille pour expliquer les conduites de gestion de conflits. (5) Alors qu'une stricte supervision paternelle promeut l'adoption de stratégies prosociales pour la gestion des conflits, une supervision excessive de la part des parents et des enseignants empêche l'adoption de telles stratégies.

**Mots-clés:** Adolescent, conflits interpersonnels, gestion de conflits

Éste es un estudio de los factores que afectan a la gestión del conflicto de los comportamientos de los adolescentes de Taiwan. El acercamiento teórico combina el enfoque sociológico puro con perspectivas de la psicología del desarrollo. El enfoque sociológico puro clasifica las estrategias de la gestión del conflicto en tres formas, unilateral, bilateral y trilateral, y mantiene que las variables de la relación social, tales como el parentesco y las diferencias sociales del sujeto, influyen en las selecciones de estrategias en la gestión del conflicto entre los adolescentes. El enfoque desarrollista, por su parte, se centra en el impacto de los factores biológicos y psicológicos sobre la gestión del conflicto de los comportamientos.

Se propone un modelo de investigación que organiza la percepción de los dos enfoques teóricos para explicar la adopción de los medios no confrontacionales de la gestión del conflicto, en formas bilaterales y trilaterales, en situaciones de conflicto entre generaciones. Se pone a prueba el modelo utilizando los datos de una encuesta realizada entre 1.808 estudiantes de bachillerato y bachillerato superior de Taiwan. Los resultados principales son: (1) los adolescentes emplean con mayor frecuencia una forma unilateral y medios no confrontacionales, tales como la pasividad o la evasión, al tratar disputas, y la opción de la estrategia en la gestión del conflicto es determinada por el parentesco y la diferencia social del sujeto; (2) en conflictos con los padres, los adolescentes varones tienden a adoptar una negociación directa como estrategia en la gestión del conflicto; (3) la relación estrecha con los padres o profesores fomenta la adopción de estrategias prosociales tales como la negociación y la mediación; (4) el propio estatus social del adolescente dentro de la escuela es más importante que el estatus socioeconómico de la familia al explicar la gestión del conflicto de los comportamientos; y (5) mientras que las prácticas de supervisión estrictas del padre promueven la adopción de estrategias prosociales en la gestión del conflicto, las prácticas severas de los padres y profesores inhiben la adopción de estrategias prosociales.

**Palabras clave:** adolescente, conflictos interpersonales, gestión del conflicto

Adolescence has been characterized by G. Stanley Hall, the first psychologist to advance a scientific theory of adolescence, as a period of “storm and stress” (Muuss, 1996: 16-17). Studies in the west indicate that adolescence is a time when conflict with parents increases sharply (Paikoff and Brooks-Gunn, 1991; Arnett, 1999). Several studies of adolescents’ violent reactions towards their peers and elders in Taiwan also support this observation. A survey of junior high school students showed that 44% of adolescents regularly argued with their siblings (Kao, 1990). A study of adolescents’ violent behaviors at junior high schools in Taipei reported that about 64% of male students had fights with their schoolmates and a study done in Kaoshiung indicated that 22% of students had verbally abused their teachers, while 5% had actually attacked or physically assaulted their teachers (reviewed in Wu and Hung, 1996). A Taiwan central government investigation of 44 cases of serious violence arising in students’ interpersonal conflicts found that rather trivial matters such as pranks or quarrels in competitive games precipitated most of the violent acts among adolescents (Disciplinary Committee, 1994, 1995).

Obviously, employing violence in handling interpersonal conflicts is not the only way to maintain social order in the world of adolescents. It may not even be the “normal” or most prevalent means adopted by adolescents. What are the conditions that influence adolescents to adopt one strategy of conflict management rather than another? The present study addresses this question, with focus on Taiwan adolescents’ conflicts with their elders.

In order to answer this question, the present study draws from the theoretical insights and empirical findings of two disciplines: sociology and developmental psychology. Developmental psychologists interested in adolescents’ interpersonal conflicts have researched a wide range of topics, including conflict issues, initiation, rate, intensity, resolution, and outcomes (reviewed in Collins and Laursen, 1992; Laursen and Collins, 1994). Most of the theoretical attention in developmental studies has been given to the impact of biological factors such as pubertal status or timing (Steinberg, 1987; Paikoff and Brooks-Gunn, 1991), or cognitive factors (Selman, 1980; Smetana, 1988, 1989), without much attention to the impact of sociological variables. This can be attributed in part to the small sample sizes and fairly homogenous backgrounds of subjects in most psychological studies (Laursen et al., 1998). And psychologists tend to study adolescents’ dyadic conflicts in experimental settings or in micro-level social settings. Hence, the research focus and methodology of developmental psychology often preclude examining factors of sociological

concern.

Even though sociologists are very much interested in issues of social conflict and conflict management, they have generally left research on adolescents' interpersonal conflicts to the psychologists. The present study applies a particular sociological approach, developed by Donald Black (1976, 1993) and Allan Horwitz (1990), to study social conditions that affect adolescents' conflict management. Those studies, however, included no psychological factors and provided no psychological explanation. The present study enlarges the approach of Black and Horwitz to include developmental factors of interest to psychologists, to discover whether the developmental factors are mediated by, or rather complement, sociological factors in their impact on adolescents' conflict management. Specifically, a research model organizing insights from both sociological and psychological perspectives is used in this study to examine factors that lead adolescents in Taiwan to manage their intergenerational conflicts by non-confrontational means.

### **SOCIAL RELATIONAL APPROACHES TO CONFLICT MANAGEMENT**

While both sociological and psychological studies on forms and means employed in conflict management have developed approaches emphasizing the impact of social relationships between disputants, these two approaches have been formulated independently and are here reviewed separately, beginning with the sociological approach.

#### **A "Pure" Sociological Approach: Conflict Management as A Form of Social Control**

The approach sometimes called the "pure" sociological approach regards conflict management as a form of social control (Black, 1976, 2000). Interpersonal conflicts often originate from an offended actor's response to another's undesirable behavior, or behavior that should not have occurred from the actor's normative standpoint (Horwitz, 1990; see also Shantz, 1987). While formal means of social control, such as legal proceedings or other manner of government intervention may be available to the actor, informal social control such as self-help, tolerance, negotiation and mediation are the most prevalent means used in everyday life to handle interpersonal conflicts (Black 1989: 74).

From the standpoint of the offended actor, and depending upon whether the offender is

involved and whether third-party aid is involved in the conflict management process, forms of social control or conflict management can be classified into three types: unilateral, bilateral and trilateral (cf. Horwitz, 1990). The unilateral form involves only the offended party who acts alone in handling the conflict. The bilateral form involves both the offended and the offender. The trilateral form additionally involves third-party aid. Each of these three forms may or may not involve confrontational or coercive means. Cast in these terms, conflict management appears as a logical matrix of six cells. Non-confrontational unilateral management includes such strategies as avoidance, tolerance, or withdrawal. Confrontational unilateral management would include covert sabotage or revenge (classified as unilateral because covertness expresses the intention to act unilaterally). Non-confrontational bilateral management comprises negotiation or compromise. Confrontational bilateral management would involve verbal or physical fighting. Non-confrontational trilateral management engages a previously uninvolved third party to mediate or arbitrate. Asking a third party to physically discipline the offender would be an example of confrontational trilateral management.

In explaining the invocation of various kinds of social control, Black (1976, 1993, 2000) develops a “pure” sociological approach that does not consider any kind of psychological process (see also Black, 2000). This approach focuses only on the impact of social relationship among parties in conflict, and Black (1993) proposes that variations in social relationship parameters explain which form of conflict management will be pursued. These parameters include: whether the relationship is equal or unequal, distant or intimate, immobile or fluid, functionally independent or interdependent, homogeneous or heterogeneous, and organized or atomized. Following Black, Horwitz (1990) explains the adoption of various forms of social control in similar terms characterizing the social space: relational distance or degree of intimacy, hierarchy, types of social exchange relationships, the presence or absence of many social ties (social integration), organization, and gender (Horwitz 1990: 12-14). Briefly, this pure sociological approach concerns the impact of the vertical (such as inequality and stratification), horizontal (such as division of labor, intimacy, networks and integration), cultural (such as normative standards and conventionality), organizational, and social control properties of social life (Black, 1976).

How do the social relationship parameters affect conflict management? Both Black and Horwitz argue that inaction options, such as avoidance or toleration are adopted in two

opposite situations. On the one hand, if social relations between the disputants are distant and fluid, and hierarchies of authority are lacking, as in the case of disputants who are strangers, then avoidance or toleration is most likely to be adopted (Horwitz, 1990: 101, 122-123; Black, 1993: 90). On the other hand, avoidance or toleration is likely when the offended and the offender have a close relationship and the offended is dependent on or is lower in status than the offender (Horwitz, 1990: 110-111; Black, 1993: 90). The latter situation can aptly describe the relationship between adolescents and their parents or other closely related elders. Here it would appear that the offended adopts inaction in order to avoid escalation of the dispute.

Sometimes, the offended adopts covertly aggressive actions against the offender whose status is higher. This kind of unilateral means is most likely to be adopted when the offended subordinate has intimate and multiple relationships with the offender, and where exit is not an option and no other social control is effective (Horwitz, 1990: 130). Hence, if a juvenile is disputing with a higher status offender, such as parent or teacher, and no authoritative third party is available to assist in managing the conflict, then unilateral actions that might even be criminal, such as vandalism or property destruction, are likely means (Horwitz 1990: 133; see also Baumgartner 1984; Black 1984).

The aggrieved party may rather adopt a bilateral form of conflict management, involving the offending party in a process of resolution. A major non-confrontational bilateral form of conflict management is negotiation. Disputants who adopt this means generally anticipate continuation of their relationship. Hence, negotiation is expected when “people are equal, cross-linked, organized, homogenous, and mutually accessible” (Black 1993: 90). On the other hand, a confrontational bilateral form of conflict management such as overt rebellion may be adopted where the offended is in a subordinate position, relationally distant from the offender, and bound together with the offender for a long term (Black, 1993: 90). Closeness in status, relationship, and viewpoint between the disputing parties all are conducive to the option of negotiation. Otherwise, rebellion or vengeance is the more likely option of the offended.

Finally, the offended may enlist a third party to aid in resolving the conflict through mediation, arbitration or adjunction in a non-confrontational trilateral form. This kind of conflict management often moves a private grievance to a public platform (Horwitz, 1990:

97-98). Intimates tend to avoid public scrutiny, and thus not use this form. However, Horwitz maintained that, since people of lower status have less reputation to lose, they would be more likely to use trilateral social control such as law (Horwitz, 1993: 161). Black also concluded that, in social fields “where people are unequal, socially distant, organizationally asymmetrical, and where their relational and cultural structure resembles an isosceles triangle,” the trilateral form of conflict management would likely be adopted (Black, 1993: 90). Hence, adolescents would probably enlist the help of parents to resolve a conflict with an adult who has a higher status and is more socially distant, such as a teacher.

The theoretical approach developed by Black and Horwitz is intended to be a general theory and expects adolescents as well as children (Baumgartner, 1992) to be subject to the same influence as adults as long as the relational pattern is the same. That is, adolescents are expected to handle their grievances in ways determined by their relational distance to offenders, the extent of integration with the groups in which they are involved, the degree of social control to which they are subject, and the status difference from the offenders, etc., without particularly taking account that they are adolescents.

While the pure sociological approach helps by developing the social contextual and relational factors involved in explaining adolescents’ choice of conflict management strategies, it does not say anything about the impact of biological and psychological development, and their interactions with social factors. The effect of these social relational patterns may change due to the adolescent’s gradual maturation and social transition. Biological changes such as pubertal status and timing (e.g. Paikoff and Brooks-Gunn), together with individual and familial characteristics, may affect relationships between adolescents and their parents, which in turn may affect choices as to conflict management. Hence, the approach developed by Black and Horwitz can be integrated with, or complemented by, insights gained from theories and research of developmental psychology. Independent of the work of either Black or Horwitz, the social relational model proposed by developmental psychologists (Laursen et al., 1996) can be viewed as such an attempt. These psychologists have come to believe that, while biological or cognitive factors may have their roles, patterns of adolescents’ interpersonal relationships mediate their impact and have more explanatory power as to adolescents’ choices in dealing with interpersonal conflicts.

## **The Social Relational Model**

Instead of relying on intra-individual factors such as biological or cognitive changes, the social relational model maintains that various phenomena of interpersonal conflicts across adolescence can be effectively explained by patterns of social relationships and conflict settings. Laursen and Collins (1994), in a narrative meta-analysis of various empirical studies of interpersonal conflict during adolescence, emphasized the importance of maintaining a close relationship to adolescents and concluded that their concern for equity in social exchange would urge them to adopt certain conflict management strategies, such as negotiation or disengagement.

The social relational model explains differences in social interaction in terms of emotional investment and exchange equity, and distinguishes social relationships along three dimensions: close vs. non-close, voluntary vs. involuntary, and vertical vs. horizontal (Laursen et al., 1996; see also Laursen and Collins, 1994). Based on these dimensions of social relationships, parent-child relationships can be characterized as close, involuntary, and vertically structured. This kind of relationship offers much opportunity for conflict, without concern about discontinuity of the relationship. Moreover, since inequitable exchange does not readily disrupt this type of relationship, submission to parents together with disengagement, such as avoidance or aloofness, are also expected as major means of conflict management. On the other hand, relationships between adolescents and their close peers are voluntary and horizontal. In order to maintain relationships with good friends, adolescents would rely on negotiation and compromise rather than coercive means.

Obviously, the social relational model is very much in line with the previously discussed pure sociological approach of Black and Horwitz. The dimensions of social relationships in the social relational model would correspond to relational distance, status hierarchy, and interdependence discussed in the sociological perspective. Although these two approaches differ in their theoretical scopes, assumptions, and explanatory strategy, the two can be viewed together as supplementary, rather than incompatible or competing approaches (see also Ekland-Olson, 1984). Moreover, the social relational model suggests the possibility that the impact of biological or psychological factors may be mediated by the changing relational patterns between adolescents and others. For instance, if puberty starts earlier or later than parents expect, then this biological change may affect the relational intimacy or equity concern between the adolescent and parents (Laursen and Collins, 1994: 204).

In short, the social relational approach discussed so far presents the interesting and testable proposition that either biological or psychological factors do not matter, or that their impact is indirect and mediated by the parameters of social relationship.

## **DEVELOPMENTAL APPROACHES TO ADOLESCENTS' CONFLICT MANAGEMENT**

Developmental psychologists have viewed adolescence as a period of fundamental transition that involves biological and cognitive changes. The effect of these changes manifest in various contexts, such as families, schools, and peer groups (Steinberg, 2002). The transition in many ways puts adolescents in an awkward and potentially conflict-ridden position with their parents and peers.

The present review focuses on two areas of study in developmental psychology. First are studies on the effects of major biological and psychological characteristics of adolescents on their handling of interpersonal conflicts with their elders. These characteristics include gender, and personality, together with age-related factors such as pubertal status or timing and cognitive development. Second are studies on the effects of multiple contexts of adolescent development.

### **Effects of individual characteristics**

Reviews of previous empirical studies have confirmed that age matters. That is, as adolescents become older, they tend to have a lower rate of interpersonal conflicts and more often adopt negotiation to manage their conflicts (for review see Laursen et al., 1998; Laursen, 2001). Age, however, should be viewed as a crude proxy for a very complex process of biological and psychological development. Extensive studies have uncovered the effects of two important age-related factors – pubertal processes and cognitive changes – on adolescents' interpersonal relationships and conflicts. The concept of pubertal processes involves pubertal status and pubertal timing (Graber et al., 1996). In general, research evidence suggests that both developmental processes contribute to increased conflict and less warmth between the adolescent and parents, at least for a short term (see Paikoff and Brooks-Gunn, 1991 for review). It is not clear if the pubertal process, whether pubertal

status or timing, has a direct impact on adolescents' strategies of conflict management. It may be, however, that the effect of puberty is mediated by increased negative interactions, which, in turn, decreases the possibility of resolving intergenerational conflicts peacefully.

Cognitive and social-cognitive changes are other extensively studied age-related factors (Selman 1980, 1981; Youniss and Smollar, 1985; Smetana 1988, 1989; also Smetana and Bitz, 1996). Smetana (1988) discovered that some issues, such as tidiness of bedrooms, or eating habits, previously considered to be within the domain of legitimate parental authority are now perceived by adolescents to be within the domain of individual choice as to personal style. These studies all suggest that age-related advances in cognitive and social cognitive abilities prompt adolescents to prefer negotiation and to reject outside coercion.

The effects of biological and cognitive development on adolescents' interpersonal relationships often interact with, or are moderated by, other individual attributes. Only two frequently studied individual attributes – gender and personality – are discussed here.

Boys' and girls' interpersonal conflicts differ in many ways, with resulting differences in conflict management. In the realm of parent-child conflicts, Steinberg (1987), for instance, found that the impact of puberty on parent-child relationships differs between adolescent sons and daughters. Early pubertal maturation among sons is related to increased mother-son conflicts. Among daughters, conflicts with the mother increase with physical maturation but are independent of the timing of puberty. Physically mature daughters also report increased agitation in communication with their mothers. The relation between puberty and conflicts with fathers, however, does not differ significantly or consistently between sons and daughters. Some studies have shown that father-son relationships changed with pubertal development (see Paikoff and Brooks-Gunn, 1991). The change involves an increased level of assertiveness on the part of fathers and a decrease in assertiveness of sons. Father-daughter relationships are also related to pubertal status. Father-daughter interaction was more frequent after menarche and the daughter-father communication pattern was characterized by a decrease in daughters yielding to fathers' interruptions. These changes in communication patterns imply the adoption of different forms of conflict management. Reduced assertiveness among sons may indicate increased likelihood of avoidance or submission, and decreased yielding by daughters may imply increased likelihood of negotiation or quarrel.

As to the effects of personality, certain traits are found to be related to adolescents' conflict management strategies. In their review of parent-child relationships at puberty, Paikoff and Brooks-Gunn (1991: 59) suggest that low impulse control on the part of parents, adolescents, or both, may result in more frequent and rapidly escalating conflicts between parent and child. In their meta-analysis of the relationship between personality and antisocial behavior, Miller and Lynam (2001) indicate that children who are low in conscientiousness, a personality trait related to impulse control, tend to evoke peer rejection as well as harsh and erratic parental discipline. All of these reactions from parents and peers predict later antisocial behavior such as vandalism and violence (see also Sampson and Laub, 1994), suggesting a tendency to adopt confrontational strategies of conflict management. Whether impulsivity has a direct causal effect on conflict management strategies, or is mediated by other mechanisms such as relational patterns mentioned earlier, is an empirical question that remains to be explored.

### **Effects of multiple contexts on adolescent development**

Developmental psychologists are interested not only in adolescents' biological, psychological, and social factors on the individual level, but also in multiple contexts in which the developmental processes are nested (Lerner, 2001). According to Bronfenbrenner (1979, 1993), adolescents are placed at the center of concentric zones of developmental context. The microsystem refers to the most immediate interpersonal context experienced by adolescents. This context zone mainly includes family, school, and peer groups. The linkages and processes taking place between two or more microsystems constitute the mesosystem. The exosystem and the macrosystem are more distal contexts of the larger community structure, general cultural values, political and economic structures and resources. Since these four systems are hierarchically nested, a comprehensive analysis of an adolescent's developmental process should explore not only the forces within each context, but also the interrelationships between contexts of different levels.

Researchers interested in issues related to adolescents' interpersonal conflicts have also paid attention to interrelationships between multiple developmental contexts. Paikoff and Brooks-Gunn (1991), for instance, indicate that the pubertal maturation of the child may sensitize parents to issues of their own identities and transition to midlife, which in turn may result in more confrontation between parents and their adolescent children (see also

Silverberg and Steinberg, 1987). They also hypothesize a relationship between mismatch of intra-individual or psychological characteristics as between parent and child, and conflicts in the parent-child relationship (Paikoff and Brooks-Gunn 1991: 59). Studies have shown that marital conflicts or divorce will reduce the effectiveness of parenting, which in turn will lead to the child's anti-social behaviors such as fighting or bullying (Hetherington 1989; Sim and Vuchinich 1996).

Holmbeck's (1996) review of the literature of family relations during adolescence leads him to propose a model that incorporates explicitly demographic, environmental and dispositional variables that moderate the relationship between adolescent's developmental changes and the parent-adolescent conflicts. These moderating variables include family socioeconomic status, gender, family structure, parenting styles, experiences and skills, and parents' beliefs and attributions about why a conflict occurred.

In short, theoretical discussion of the interrelationship between contexts of different levels should lead us to expect that adolescents' conflict management behaviors would not only be influenced by the pattern of social relationships within the particular context where an interpersonal conflict arises, but would also be affected by the pattern of social relationships in other surrounding contexts.

## **RESEARCH DESIGN**

The foregoing review of sociological and psychological approaches to adolescents' conflict management points to the need for a research model that includes variables measuring characteristics of multiple levels and of multiple contexts. The model should include respondents' biological and psychological characteristics, as well as their social relationship patterns with disputants. The model should also include contextual variables pertaining to family, school and peer groups. A 1999 national survey conducted in Taiwan collected such a set of variables, which data can be used to derive answers for the questions addressed in the present study. The "Sample" and "Questionnaire" sections below relate to the 1999 survey, and particularly describe the variables included in the present analysis.

## **Research questions and measures**

The present study addresses this principal question: what factors influence adolescents toward adoption of non-confrontational means and bilateral or trilateral forms in handling conflicts with their fathers, mothers, and teachers? The analysis also treats the question whether social relational factors mediate the impact of biological and psychological factors.

Descriptive statistics on the use of various means inform the selection of a representative set of different means used in conflict management. Logistic regressions are then used to answer the principal question. Dependent variables in the logistic regressions are the non-confrontational means employed in bilateral and trilateral forms of conflict handling. The preliminary analysis found significant correlations between non-confrontational means employed in the bilateral and trilateral forms. That correlation suggests an underlying prosocial inclination to adopt non-confrontational bilateral or trilateral strategies. Thus the analysis of non-confrontational means employed in bilateral and trilateral forms is theoretically valuable as a basis for understanding what factors contribute to or inhibit adolescents' development of prosocial behaviors, especially in situations of intergenerational conflict.

Explanatory variables included in the model for logistic regression are related to respondents' biological and psychological characteristics including sex, age, pubertal timing and status, and impulsive personality. Derived from a factor analysis, impulsive personality is a factor related mainly with indicators such as "easy to lose patience," "often could not control anger," "would do things without thinking," and "have been tempted to do things that would be regretted later." Since pubertal timing and status may have different effects for males and females, the model uses variables related to pubertal timing and status constructed separately for each gender, based on the mean age and standard deviation of semenarche or menarche.

Variables pertaining to respondents' immediate interpersonal context are relational closeness with parents, teachers, and peers; the degree of integration with school, defined as liking to go to school and the extent of having friendly ties with teachers and classmates; respondent's own status at school, which comprises his or her academic marks and demerit records. Parents' and teachers' practices of social control include the degree of monitoring of various kinds of activities, and harsh disciplinary practices. Variables related to

respondent's mesosystem include parents' mental stability, marital status and relationship, socioeconomic status, presence at home, and general condition of social control at school.

### **Sample**

Data for the present analysis were obtained from a 1999 national survey in Taiwan that was designed mainly to study deviant behaviors of adolescents. With a multistage cluster sampling procedure, the survey sampled a total of 86 junior high and senior high schools. The final sample size was 1,808 cases. The mean age was 15.0, and after proper weighting, the percentage of males was estimated to be 50.5%. The sample included in the logistic regressions of the present study comprises the 1,468 cases where the respondent and both parents reside together, and where there is no missing data in any variable to be included in any logistic regression.

### **Questionnaire**

In addition to questions pertaining to respondent's family structure, self-concept, involvement with peers, behavior at school, and deviant behavior, the 1999 survey questionnaire contained nine questions directly related to conflict handling. Each of these nine questions asked respondent to indicate means most frequently used in handling disputes with a specific category of disputants: their fathers, mothers, elder siblings, younger siblings, teachers, classmates, friends, adult acquaintances or strangers, and adolescent acquaintances or strangers. Typically, respondents were asked what they would do when they perceived that the other party had done something wrong to them. The possible response options can be classified by form as unilateral, bilateral, or trilateral, and classified by means as confrontational or non-confrontational. Respondents were allowed to select multiple options.

Wordings and the number of response options were adjusted somewhat according to the disputant involved. For instance, if the disputant was respondent's father, one of the response options was "asking mother to help." When the disputant was respondent's mother, the corresponding response option was changed to "asking father to help."

## RESULTS

### Descriptive statistics as to means and forms

Table 1 presents frequency percentages of means most often adopted by adolescents in managing conflicts with various kinds of disputants. The distribution of percentages reveals several patterns:

“Table 1 about here”

1. Non-confrontational means were most frequently adopted. Within non-confrontational means, the unilateral form was most frequently adopted, with the bilateral form taking the second place. This finding is similar to findings in the U.S., where disengagement is the most often adopted means of conflict management (e.g. Collins and Laursen 1992; Laursen 1993).
2. Within the unilateral form of conflict management, sulking or doing nothing tended to be the most frequent means, while avoidance was the second most often used means. The choice between these two strategies depends on status difference and relational distance. If the respondent adolescent is in a dispute with a higher status person, such as parent, teacher, or elder sibling, sulking is most frequent. On the other hand, if the other party has a lower status, such as younger sibling, sulking or doing nothing is much less frequent, while avoidance is more frequent.

Relational distance matters also, especially when the disputant has equal status with the respondent adolescent and the relationship is voluntary. Sulking or doing nothing is the preferred way to settle disputes with either friends or classmates. However, with those who are distant to the respondent, such as strangers, either adult or adolescent, avoidance will be the more likely means. If the disputant is a friend or classmate, avoidance is also fairly frequent. Relatively speaking, if the disputant has a lower status than the respondent adolescent, e.g., a younger sibling, then a non-confrontational unilateral form tends to be least frequent, with confrontational unilateral means, such as secret revenge, being most likely. Elder siblings, classmates or adolescent strangers are also possible targets of secret revenge. But, this confrontational unilateral form of conflict management has the lowest frequency in general.

3. Within the bilateral form of conflict management, reasoning with the other party, i.e., negotiation, is the most often used means. Again, status difference and relational distance matter. The frequency distribution shows that negotiation is most likely to be adopted if the disputant has an equal status with the adolescent and the relationship is a voluntary one, such as friend or classmate. Negotiation is not likely to be adopted when the relational distance is large, as with an adult or adolescent stranger. Adolescents in Taiwan also indicate that they are more willing to negotiate with their mothers than with any other adults. In conflict situations with siblings, non-confrontational and confrontational bilateral forms of conflict management have almost equal percentages, especially in the case of disputing with younger siblings. These results show the influence of the voluntary or involuntary nature of the relationship. In the case of disputes with adults, adolescents are also more likely to quarrel with their mothers and fathers, but not with teachers or strangers.

While beating or threatening the other party is the least likely bilateral form of conflict management, the likelihood of adopting these violent means also reveals a pattern that is consistent with the effect of relational distance and status difference. Table 1 shows that adolescents are more likely to bully their younger siblings or classmates, or even young strangers or acquaintances.

4. Within the trilateral form of conflict management, the distribution of percentages indicates that, depending on the status difference and the nature of relationship with the disputant, adolescents would ask different categories of third party to assist. In cases where the disputant is a sibling, or is not a family member at all, adolescents are most likely to ask their parents to intervene. But in cases where the disputant is a friend, a classmate, or an adolescent stranger, adolescents are equally likely to seek a friend to assist.

The results also show that dyadic relationships between adolescents and their parents are somewhat different. In general, adolescents are more likely to ask their mothers to assist in disputes with the father than vice versa. Finally, the unusual event that a trilateral form is or becomes confrontational is most likely where the disputant is an adolescent acquaintance or stranger.

The findings from Table 1 generally confirm the importance of relational distance and status difference in the adoption of forms and means of conflict management by adolescents. The next section further explores what other factors influence the adoption of

non-confrontational bilateral and trilateral forms of conflict management in situations involving conflicts with father, mother or a teacher.

### **Results of logistic regressions**

Table 2 presents the results of logistic regression for adoption of a non-confrontational bilateral form of management in conflicts with father, mother or teacher. Table 3 presents corresponding results for adoption of a trilateral form of management. For each conflict situation, computations were performed for each of three hierarchically nested regression models: Model 1 only includes adolescents' biological and psychological variables; Model 2 adds variables related to the immediate relational pattern and personal status; Model 3, the full model, adds family and school context variables at the mesosystem level. This modeling strategy can indicate whether the impact of biological and psychological variables is direct or mediated by other variables. For ease of understanding, only estimated odds ratios are presented in Table 2 and Table 3.

Roughly one-half of all respondents included in the logistic regressions reported adoption of non-confrontational means in bilateral form to manage conflicts with either parent or with a teacher. But for non-confrontational means in trilateral form, percentages varied from 24% to 42% depending whether the disputant is mother, father, or teacher. Adoption of non-confrontational means in trilateral form is almost twice as likely when the disputant is a teacher as compared with the situation when the disputant is the mother.

In general, as indicated by the size of pseudo  $R^2$ , the proposed full model is much more effective in explaining whether adolescents adopt non-confrontational means in bilateral or trilateral form in conflicts with the parents. Pseudo  $R^2$  of these situations vary from 0.15 to 0.21. The explanatory power is much weaker as to cases where the disputant is a teacher, with pseudo  $R^2$  slightly less than 0.10.

Overall, some of the biological and psychological variables have small but significant contributions in explaining adoption of non-confrontational management strategies. Since the effects of these variables do not change much when variables of social relational patterns are included in the analyses, their impact is independent and not mediated by the social relational variables. Contextual variables in the mesosystem also have little impact. The major explanatory power is derived from the independent effects of social relational

variables. In general, the results show that when adolescents have a close relationship with the disputant, the odds of adopting prosocial types of conflict management increases. On the other hand, when adolescents have negative status, as measured by their demerit marks at school, the odds of adopting prosocial types of conflict management are diminished. The results also show that a father's strict monitoring of the adolescent's activities promotes the adoption of prosocial types of conflict management, but harsh parenting and harsh teaching practices both have the opposite effect. The following discussion examines the effects of each variable in more detail.

“Table 2 and Table 3 about here”

*Effects of gender:* Table 2 and Table 3 show that adolescent males and females differ in the odds of adopting the non-confrontational bilateral strategy, while they do not significantly differ in the odds of adopting the non-confrontational trilateral strategy. Males are more likely than females to reason directly (bilaterally) with their parents, but not with their teachers. In general, these findings are not consistent with findings of some previous studies showing males less likely to use a non-confrontational bilateral form, such as negotiation. Those previous studies, however, tend not to be multivariate analyses, and thus the comparison is difficult to make. This gender difference is understandable, however, given that adolescent males, in general, are becoming more assertive in the process of growing up while females become less confident and lose their “voice.” (Gilligan 1993) However, this gender difference in the “level” of voice occurs only at home and not at school. Apparently, both male and female adolescents choose other strategies of conflict management, e.g., trilateral, when in conflict with teachers.

*Effects of age* Results presented in Table 2 and Table 3 show that age has a negative impact on the odds of adopting non-confrontational trilateral form when dealing with conflict with the mother or a teacher. Younger adolescents are more likely to seek others to aid in dealing with interpersonal conflicts. Since age has no significant independent effect on the use of non-confrontational bilateral strategies when the other variables are included in the analyses, its effects on the trilateral form of management cannot be explained by cognitive development alone. According to Table 1, when adolescents have conflict with their mothers, the likely third-party helper would be the father; when the disputant is a teacher, then a parent is the most likely third party helper. Hence, the more plausible

explanation of the effect of age is that parents, especially mothers, are an important social resource from which younger adolescents can draw to mediate their conflicts with other adults.

*Effects of pubertal processes* In general, puberty timing or puberty status does not have much explanatory power, nor is the effect consistent across disputants or conflict management strategies. Late-maturing adolescent males are less likely to reason directly with their fathers (Table 2), while late-maturing females are less likely to seek others' assistance in mediating conflicts with their mothers (Table 3). Further exploration of the data (Kuan, 2002) shows that late-maturing boys and girls are more likely to adopt confrontational or non-confrontational unilateral strategies. Since late maturing boys and girls in the sample are also older adolescents, these findings may partly be explained as an additional effect of age. It is consistent with other findings of this study, stated above, that older adolescents are less likely to adopt prosocial types of conflict management.

While the meaning of the effects of pubertal processes cannot easily be explained, inclusion of social relational variables in the analysis shows the effects of pubertal process variables to be independent and direct. Hence, it is necessary to attribute these effects to other mechanisms.

*Effects of impulsive personality* Table 2 and Table 3 indicate that having an impulsive personality in general decreases the odds of using either type of prosocial strategy when adolescents are in conflict with either father or mother, but not when the disputant is a teacher. These results suggest an interaction between personality and context. Since the relationship between adolescents and their parents is long-term and involuntary, it may be that impulsive adolescents do not care to restrain themselves with their parents, whereas they do need to control temper to a greater or lesser degree when dealing with teachers because the relationship with the latter is more distant and bureaucratic.

*Effects of close dyadic relationships* Effect of relational distance is directly examined by reported emotionally close dyadic relationships between the adolescent and disputant. The overall pattern of results shows that having a close relationship with the disputant increases the odds of adopting either of the prosocial strategies of conflict management. Table 2 and Table 3 show that being close to either parent increases the chance that reasoning will be

adopted to manage conflicts with that parent, and also increases the odds of enlisting that parent as a third party to aid in managing conflicts with the other parent. Furthermore, Table 3 shows that the odds of asking the mother to mediate in conflicts with the father is significantly greater than the odds of asking the father to mediate between an adolescent and the mother. The results also show an interrelationship between family and school. Table 3 indicates that if adolescents have close relationships with their teachers, they may ask a teacher to aid in managing conflicts with either of the parents. However, contrary to what would be expected, parents are not enlisted to aid in conflicts with teachers. In that situation, a friendly peer or teacher would most likely be asked to mediate.

*Effects of integration with school* The concept of integration is defined here as the extent of friendly ties with groups or organizations (Horwitz, 1990:12; see also Lin 1999). Indicators of adolescents' integration with school include whether adolescents like to attend school, and the number of teachers and classmates with whom adolescents get along well. In general, the explanatory power of these variables is not as strong as the dyadic relationship variables discussed above. Table 2 shows significant effects for just two variables, but those variables show no effect on the adoption of trilateral strategies (see Table 3). The pattern of findings does, however, confirm once again the interrelationship between contexts. Table 2 shows that the more interest adolescents express in attending school, the more likely that they would negotiate or reason directly in managing conflicts with their mothers. Those who get along well with many teachers also tend to use direct negotiation in managing conflicts with their teachers. This pattern is consistent with the effects of being close to teachers, as discussed above.

*Effects of Adolescents' Status at School* Results presented in Table 2 and Table 3 indicate that a bad behavior record at school matters, but academic performance does not. The results show that the more serious the adolescent's conduct problem, the less likely it is that the adolescent would adopt either prosocial type of conflict management in conflicts with teachers. Adolescents with more serious demerit marks at school also tend not to ask a third party to assist in managing conflict with their fathers. Once again, this latter finding shows the interrelationship between family and school. Beyond being an indicator of an adolescent's status at school, of course, demerit marks may also be a sign of trouble in the adolescent's relationships with the authority figures of family as well as school.

Effects of social control at home and school This research model includes two types of social control: strictness of monitoring and harsh practices. The overall results presented in Table 2 and Table 3 show that the father's strict monitoring has prevalent positive influence on the adolescent's adoption of prosocial means of conflict management. The results show that fathers' strictness not only encourages adolescents to reason directly with their fathers, but also increases the odds of seeking a third party to mediate conflict with adults generally. Mothers' strictness has a different and much more restricted impact, as compared with strictness of fathers. If mothers exercise strict monitoring, it results that adolescents are less likely to seek a third party to mediate in their conflicts with the mother.

Parents' harsh practices tend to impede adolescents' adoption of prosocial types of conflict management. If the mother or both parents often use coercive control, adolescents tend not to reason with their mothers. Not only does social control exercised by parents affect an adolescent's conflict management behaviors at school, but the influence of coercive control by teachers also extends back to the family. Table 2 and Table 3 show that teachers' harsh practices not only decrease an adolescent's odds of reasoning directly with teachers, but also decrease the odds that the adolescent will enlist a third party to mediate conflicts with either parent.

Considering the combined effects of parents' and teachers' coercive control, the data suggest the possibility that adolescents who are subject to harsh discipline either at home or at school tend to adopt a confrontational approach in conflicts with others generally.

Effects of contextual variables Several contextual variables, including parents' psychological states, relationship between parents, and socioeconomic status as well as opportunity of social control at home and school, are included in the final logistic regression model. As mentioned earlier, these variables add little to the explanation of adolescents' conflict management behaviors. In general, if the parents have a good relationship as perceived by the adolescent, then the odds of using either of the prosocial strategies in managing conflicts with the parents increases. As far as socioeconomic status is concerned, high economic status of the family influences adolescents to seek third party assistance in managing conflicts with fathers and teachers. None of the social control variables treated here has any significant effect.

## CONCLUSION

Adolescents in Taiwan, while experiencing fundamental changes in their lives, cannot be described as being prone to confrontational or aggressive moods and behaviors. In fact, they tend to avoid escalating conflicts with others. They adopt various kinds of inaction strategies, and they are also willing to reason with disputants or seek the help of a third party to mediate.

The overall results of logistic regressions demonstrate the validity of the proposed research model, especially in cases of conflict between adolescents and their family members. Almost all factors emphasized by the social relational approach, such as relational distance, social integration and social control, impact the strategies adopted by adolescents in handling their interpersonal conflicts. However, these relational variables do not completely mediate the effects of other individual attributes such as gender and personality. The findings also confirm the importance of including in the research model factors related to various developmental contexts. These findings have several implications for future research:

1. In general, the findings show that factors related to social relationships and emphasized by the social relational approach have the strongest impact on adolescents' conflict management behaviors. In future research designs, mesosystem factors and individual biological and psychological attributes should be included in a more elaborated causal model. Ultimately, the effects of the mesosystem may be mediated by factors of the microsystem. For instance, parental socioeconomic status might affect adolescents' academic performance and relationships with others, which in turn might impact their conflict management behaviors. It is also possible that, with increasing age, an adolescent might have greater relational distance from parents, which in turn may also affect the choice of conflict management strategies.
2. A more elaborate model could also clarify relationships among variables related to social relational patterns. For instance, the finding that, while close relationships with parents promote adoption of prosocial strategies of conflict management, coercive control practiced by parents inhibits that prosocial tendency. Whether or not it is possible for adolescents to develop intimate relationships with coercive parents is one of the questions remaining to be considered in future elaboration of the model. Of course,

3. Even though factors related to the social relational approach are found to have good explanatory power, the discovery of direct effects of pubertal processes suggests the need to further explore the effect of these factors in future research on adolescents' conflict management behaviors. And the measurement of pubertal processes needs to be refined.
4. The present study only explores non-confrontational forms of conflict management, and focuses only on intergenerational conflicts. Further exploration of confrontational forms of conflict management and other types of interpersonal conflicts would provide a more complete picture of the ways Taiwan's adolescents handle their interpersonal conflicts. The research framework proposed here should also be tested in other societies, to reveal the impact of factors related to the macrosystem.

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**Table 1: Forms and means of conflict management (%)**

<b>Forms / Means</b>	<i>Disputant</i>								
	<b>Father</b>	<b>Mother</b>	<b>Teacher</b>	<b>Adult Stranger</b>	<b>Elder Sibling</b>	<b>Younger Sibling</b>	<b>Friend</b>	<b>Classmate</b>	<b>Adolescent Stranger</b>
<b>Unilateral</b>									
Sulking	48.8	46.4	42.5	26.9	42.2	26.4	46.9	44.1	31.5
Crying	15.6	14.1	6.7	3.2	7.2	3.9	11.1	8.6	3.7
Avoidance	28.7	23.8	19.6	31.7	19.7	11.3	36.9	36.8	41
Covert revenge	0.8	0.6	2.6	3.5	5.6	7.7	3.8	5.6	5.2
<b>Bilateral</b>									
Negotiation	52.2	61.6	59	22.7	45.3	51.8	71.5	69.6	27.9
Quarrel	12.6	17.3	4.7	4.8	39.8	51.1	10.1	13.2	8.6
Beat/Threaten	0.1	0.1	0.2	.9	0.3	3.6	1.7	3.4	2.2
<b>Trilateral</b>									
Seeking help from parents	...	....	22.7	34.8	28.9	35.4	8.3	6.3	21.3
Seeking help from father	....	22.4	...	...	...	...	...	...	...
Seeking help from mother	35.2	...	...	...	...	...	...	...	...
Seeking help from relatives	4.2	4.7	...	...	1.9	2.4	...	...	...
Seeking help from teachers	4	3.9	19.7	22.4	2.0	0.4	13.7	19.7	24.2
Asking friends to negotiate	4	4.7	4.7	13.6	5.2	3.2	34.0	35.5	24.3
Asking friends to beat/threaten	...	...	0.4	2.8	...	...	2.7	3.2	6.8
Total	206.2	199.6	182.8	167.4	198	197	240.6	246	196.7
N	1764	1787	1808	1808	1066	1076	1808	1808	1808

**Table 2: Logistic regressions for non-confrontational conflict management in bilateral form (N = 1,468)<sup>#</sup>**

<i><u>Independent variable</u></i>	<i><u>Disputant</u></i>								
	<i><u>Father</u></i>			<i><u>Mother</u></i>			<i><u>Teacher</u></i>		
	<i><u>Model 1</u></i>	<i><u>Model 2</u></i>	<i><u>Model 3</u></i>	<i><u>Model 1</u></i>	<i><u>Model 2</u></i>	<i><u>Model 3</u></i>	<i><u>Model 1</u></i>	<i><u>Model 2</u></i>	<i><u>Model 3</u></i>
<b><i><u>Biological/psychological variable</u></i></b>									
Male	1.418*	1.921**	2.010**	1.231	1.609*	1.616*	1.000	1.288	1.310
Age	0.963	1.064	1.065	0.916	1.016	1.016	0.876**	0.932	0.933
Male puberty early	1.541	1.528	1.564	1.203	1.069	1.136	1.065	1.996	1.018
Female puberty early	0.668	0.880	0.860	0.613	0.762	0.758	0.678	0.726	0.714
Male puberty late	0.464	0.363*	0.353*	1.488	1.072	1.031	1.336	1.316	1.323
Female puberty late	0.493	0.503	0.587	1.265	1.386	1.456	0.770	0.888	0.785
Male puberty onset	1.014	1.055	1.118	0.980	1.104	1.150	1.261	1.351	1.371
Female puberty onset	0.808	1.112	1.099	0.822	1.152	1.109	0.819	1.006	0.992
Impulsiveness	0.788**	0.845	0.838*	0.740**	0.799*	0.794**	0.884	0.905	0.890
<b><i><u>Social relational pattern</u></i></b>									
Close to father		2.129**	1.925**		1.269	1.130		1.005	0.924
Close to mother		1.537*	1.590*		2.421**	2.380**		1.111	1.098
Close to teachers		1.707	1.849		1.677	1.609		2.050*	2.096*
Close to friends		0.921	0.920		0.771	0.763		1.194	1.201
Like to go to school		1.235	1.244		1.347*	1.326*		1.229	1.193
On good terms with teachers		1.0107	1.099		1.011	0.996		1.213**	1.205**
On good terms with classmates		0.998	0.974		1.087	1.061		0.901	0.884
Academic marks		0.940	0.937		0.987	0.990		0.952	0.957
Demerit marks		0.880	0.897		0.914	0.923		0.803**	0.806**
Father's strictness		1.127**	1.110**		1.052	1.033		1.033	1.019
Mother's strictness		0.961	0.965		1.025	1.034		1.020	1.034
Father harshness		0.630	0.647		0.664	0.700		1.324	1.369
Mother harshness		0.868	0.885		0.401**	0.396**		1.289	1.310
Both parents harshness		0.668	0.691		0.600*	0.620*		1.033	1.073
Teachers harsh		0.888	0.878		0.805	0.788		0.809	0.798*
<b><i><u>Contextual variable</u></i></b>									
Parents' emotional instability			0.246**			0.348			0.564
Parents' marital status			0.594			0.678			0.509*
Parents' relationship			1.425**			1.507**			1.293
Father's education			1.169			0.952			0.917
Mother's education			0.920			1.087			1.085
Family economic status			0.910			0.915			1.076
Father at home			1.108			1.057			1.103
Mother at home			0.881			0.927			0.901
School's strictness			1.057			1.084			0.965
Wald Chi Square	34.67	173.69	205.80	26.22	154.55	182.83	22.47	95.90	120.86
Log Likelihood	-984.611	-877.596	-859.040	-991.497	-871.674	-857.284	-995.317	-945.32	-930.926
Pseudo R <sup>2</sup>	0.028	0.133	0.152	0.024	0.142	0.156	0.015	0.064	0.079

<sup>#</sup> The results of logistic regressions are presented in odds ratios. Upon request, the author will be glad to provide corresponding coefficients and standard errors.

\* p <= 0.05    \*\* p <= 0.01

**Table 3: Logistic regressions for non-confrontational conflict management in trilateral form (N=1,468)<sup>#</sup>**

<i><u>Independent variable</u></i>	<i><u>Disputant</u></i>								
	<i><u>Father</u></i>			<i><u>Mother</u></i>			<i><u>Teacher</u></i>		
	<i><u>Model 1</u></i>	<i><u>Model 2</u></i>	<i><u>Model 3</u></i>	<i><u>Model 1</u></i>	<i><u>Model 2</u></i>	<i><u>Model 3</u></i>	<i><u>Model 1</u></i>	<i><u>Model 2</u></i>	<i><u>Model 3</u></i>
<b><i><u>Biological/psychological variable</u></i></b>									
Male	0.808	1.110	1.105	0.842	1.113	1.107	1.091	1.346	1.369
Age	0.873**	0.987	0.984	0.723**	0.801**	0.790**	0.804**	0.850**	0.847**
Male puberty early	1.441	1.454	1.422	1.202	1.294	1.328	1.150	1.054	1.005
Female puberty early	1.020	1.297	1.251	0.961	1.435	1.353	1.473	1.789	1.796
Male puberty late	0.927	0.732	0.731	1.323	1.172	1.210	0.681	0.640	0.634
Female puberty late	0.593	0.600	0.596	0.126**	0.125**	0.124**	2.130	2.281	2.159
Male puberty onset	1.194	1.314	1.343	0.839	0.843	0.846	1.102	1.148	1.134
Female puberty onset	1.222	1.958*	1.996*	0.551	0.793	0.721	0.489*	0.563	0.552
Impulsiveness	0.845*	0.898	0.885	0.791**	0.822*	0.807*	0.905	0.934	0.909
<b><i><u>Social relational pattern</u></i></b>									
Close to father		0.898	0.811		1.873*	1.618		1.117	1.022
Close to mother		3.014**	2.958**		1.645	1.544		1.292	1.234
Close to teachers		2.723**	2.809*		2.803**	2.692**		2.023*	2.256**
Close to friends		1.005	0.981		0.951	0.967		1.490*	1.513*
Like to go to school		1.226	1.234		1.374	1.336		1.000	0.959
On good terms with teachers		1.069	1.080		1.073	1.083		1.000	1.028
On good terms with classmates		0.885	0.861		0.924	0.887		0.886	0.864
Academic marks		0.923	0.929		0.902	0.916		0.927	0.940
Demerit marks		0.783*	0.792*		0.850	0.855		0.799*	0.796*
Father's strictness		1.152**	1.137**		1.223**	1.198**		1.088**	1.076*
Mother's strictness		0.961	0.968		0.905**	0.913**		0.975	0.987
Father harsh		0.638	0.652		0.632	0.674		0.853	0.886
Mother harsh		0.738	0.759		0.801	0.826		1.212	1.300
Both parents harsh		0.750	0.754		0.872	0.918		0.675	0.697
Teachers harsh		0.795*	0.800*		0.745*	0.749*		0.943	0.961
<b><i><u>Contextual variable</u></i></b>									
Parents' emotional instability			0.770			0.443			1.563
Parents' marital status			0.924			0.650			0.694
Parents' relationship			1.235			1.659**			1.263*
Father's education			0.936			0.884			0.884
Mother's education			1.004			1.040			0.935
Family economic status			1.289*			1.129			1.352*
Father at home			1.132			1.103			1.127
Mother at home			0.856			0.913			0.911
School's strictness			1.024			1.110			0.903
Wald Chi Square	41.38	180.32	202.85	67.82	181.43	183.43	27.13	87.93	99.10
Log Likelihood	-925.525	-812.496	-799.778	-756.593	-649.923	-635.543	-967.806	-925.227	-905.419
Pseudo R <sup>2</sup>	0.020	0.140	0.153	0.058	0.191	0.209	0.031	0.073	0.093

<sup>#</sup> The results of logistic regressions are presented in odds ratios. Upon request, the author will be glad to provide corresponding coefficients and standard errors.

\* p <= 0.05    \*\* p <= 0.01