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Xu, Anqi; Zhang, Jiehai; and Xia, Yan, "Impacts of Parents' Divorce on Chinese Children: A Model with Academic Performance as a Mediator" (2007). *Faculty Publications, Department of Child, Youth, and Family Studies*. 54.
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Impacts of Parents' Divorce on Chinese Children: A Model with Academic Performance as a Mediator

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ABSTRACT. The study examined the impact of parents' divorce on Chinese children's well-being. A Chinese theoretical model was tested using Structural Equation Modeling. The sample consisted of 940 Chinese children aged 6-16. The well-being of children from divorced families was compared with that of two-parent and widowed families. The results showed that children's academic performance mediated the negative impact of divorce on children's well-being. The societal discriminating attitude towards divorce and single-parent families had a strong negative effect on the children's well-being. Parenting skills of the custodial parent had more influence on the children's well-being than the marital conflicts

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The authors would like to thank Liang Zhang for her valuable assistance in data collection and validation.

This research was partially funded by the Ford Foundation. It is a contribution of University of Nebraska Agricultural Research Division, *Journal Series No.* 14839. The research was also funded by a Shanghai Philosophical and Social Sciences Strategic Grant and a 2001 Shanghai Academy of Social Sciences Research Counsel Grant.

Marriage & Family Review, Vol. 42(3) 2007
Available online at <http://mfr.haworthpress.com>
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doi:10.1300/J002v42n03_05

prior to the divorce. Supports from the extended families counterbalanced some negative effects associated with divorce. doi:10.1300/J002v42n03_05 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2007 by The Haworth Press. All rights reserved.]

KEYWORDS. Academic performance, Chinese children, divorce, well-being

INTRODUCTION

Divorce had been a taboo in China. For five thousand years, couples, especially women, were taught to save their marriages at all cost. "Marry a chicken, you live with a chicken; marry a dog, you live with a dog." The old Chinese saying describes how people perceive their marriages under the influence of Confucianism. Once wedlock was set, the bond was supposed to last forever. However, the traditional view that divorce would bring embarrassment and loss of face not only to the couple but also to their whole kinship is challenged today. Since the start of the economic reform in the late 1970s, the divorce rate has increased rapidly in China. Chinese Ministry of Civil Affairs reported in 2003 a divorce rate of 0.0021, or 1.33 million Chinese couples divorced, equal to 16.42% of the number of couples who married that year (Chinese Ministry of Civil Affairs, 2004). In 2005, 1.78 million couples divorced, equal to 1.37%₀ of the total Chinese population of that year. The gross divorce rate almost quadrupled over 20 years (Chinese Statistics Bureau, 2006). Among the divorced couples, two-thirds had children under the age of eighteen. The number of underage children who are affected by divorce, no doubt, will rise due to the rapid increase in the divorce rate.

Many factors have contributed to the rise in divorce rate. The causes are too complex to discuss within the scope of this paper. The authors only highlight a few social, economic changes during the transition that may lead to a new understanding of marriage and divorce. First, seeking individual interest and happiness becomes possible in a more liberal social and political environment after Mao's era. Getting divorced is less viewed as selfish and immoral. A stronger emphasis is placed on relational quality and satisfaction. Second, the economic reform and growth gives unprecedented mobility of traveling, living, and working outside of people's birthplace. An increased number of married couples live separately

as one partner seeks opportunities in economically booming areas. Third, no-fault divorce was introduced in the Chinese Marriage Act in 1980 and reinstated recently. The new law makes divorce less difficult and, moreover, contends that marriage cannot be sanctioned at the cost of individual's well-being, especially that of a woman (Center for Family Studies, 2001).

Many Chinese studies on divorce linked parents' low education attainment, lack of parenting skills, and child neglect to anxiety, depression, aggression, poor school performance in children (Fu & Shi, 1993; Liu, 2001; Wu, Chen, Ye, & Wang, 1990; Zhang, Li, & Tan, 1990). However, these studies only examined children of divorced parents. Similar association was found in both American and Chinese intact families. Research comparing the functioning of Chinese children from divorced and intact families is rare. One comparison study showed that children from divorced families scored significantly lower on cognitive functioning and parent-child relationship, and higher on problem behaviors than children from intact families (Dong & Xia, 1993). Xia (1991) reported that differences were observed for both male and female students between these two family types regardless of the child's age at the divorce and time of living with the custodial parent. Children of divorced parents reported higher level of internalized symptoms such as anxiety and depression in another study, compared to those in the intact families (Dong, Wang, & Ollendick, 2002). The differences in the factors associated with these negative outcomes were not examined in these studies.

Early Chinese studies were limited by the lack of an explicit theoretical framework, experimental random sampling, or robust statistical analysis. Amato and Keith (1991) pointed out in their meta-analysis that the effects of divorce on children depended, in some degree, on whether confounding variables were controlled and how large the sample size was. The significant result might be due to the large sample size or covariation resulting from spurious relationship. Current Chinese divorce research on the impact on children and adolescents has primarily focused on emotional disturbance and delinquency. Little has been done to examine the well-being (overall psychosocial, economic, and academic functioning) and to delineate the unique factor associated with children and youth experiencing parental divorce. The purpose of the present research was to examine a model that attempted to describe the effects of individual, familial, school, and societal factors on the overall well-being of Chinese children with parents divorced and to identify unique factors that might affect Chinese divorced children.

The impact of the parents' divorce on their children's well-being has been well documented in the Western literature. Amato and Keith (1991) summarized it into three major perspectives: parental absence, economic disadvantage, and family conflict. In the light of parental absence, divorce has a negative effect on the child's social development due to the lack of healthy interactions with both parents, assuming both parents play an important role in the child's social development (Amato, 1987; White, Brinkerhoff, & Booth, 1985). According to economic disadvantage perspective, women often experience dramatic loss in financial resources after divorce, and single-mother families tend to suffer financial instability and poverty (Duncan & Hoffman, 1985; Weitzman, 1985). As a result, children from these families may have less access to good schools and adequate services (McLanahan, 1988), but more exposure to unsafe neighborhoods and to the risks for problem behaviors (Voydanoff & Majka, 1988). The family conflict perspective holds that problems of children from divorced families do not result from the change in family structure, but from the unfavorable home environment before and after parents' divorce (Amato & Keith, 1991). Conflicts between parents can prevent the mother or father from being an effective parent (Hetherington, Cox, & Cox, 1982; Wallerstein & Kelly, 1980) and can cause stress, insecurity, and anxiety in children that contribute to negative developmental outcomes (Maccoby & Martin, 1983).

These perspectives have enhanced our understanding of the well-being of children from divorced families although each shows certain limitations. The parental absence perspective assumes that a family is composed of two parents, emphasizing on the impact of family structure while overlooking family process (Scanzoni, Polonko, Teachman, & Thompson, 1989). Research under this perspective will find it hard to explain why children from divorced families appear to fare worse than those from widowed families given that the latter are also from single-parent families. Comparative research indicates that the negative outcomes on the part of the children still exist even after the custodial parent is remarried or the quality and quantity of interaction with the nonresident parent increase (Amato & Keith, 1991). Contrary to the economic disadvantage theory suggested by researchers, some studies show that when family income is controlled, the well-being of children from divorced families still seems to be lower compared to children from intact families (Guidubaldi, Cleminshaw, Perry, & McLaughlin, 1983). It seems that family income cannot account for the total decline in the well-being of divorced children. Moreover, children's well-being is not significantly improved as this theory predicts despite improved family economic

conditions after remarriage (Amato & Keith, 1991). The conflict research is not conclusive as the negative outcomes are likely related to only open hostility and physical aggression (Hetherington, Cox, & Cox, 1982), but not to the unhappy marriage with parents being apathetic and indifferent (Grych & Fincham, 1990; Rutter, Yule, Quinton, Rowlands, Yule, & Berger, 1974).

The three perspectives reviewed above can help Chinese researchers, practitioners, and policy-makers understand the difficulties that current Chinese divorced families face. Due to the differences in familial, cultural, and social contexts between Chinese and Western societies, we integrated constructs from these theories and added new ones that might affect Chinese families. Chinese society differs from Western societies mainly in China's long history of emphasis on academic success for children and youth; adult children provide care for the elderly; family support comes from a network of extended family, relatives, and friends; few single-parent families are headed by females; and the strong stigma associated with divorce.

CHINESE CULTURAL CONTEXTS

Great Emphasis on Academic Performance

The emphasis on achievements in education dates back to a traditional examination system (*ke-ju*) used by the emperors to select government officials hundreds of years ago. The emperors wanted to have the most intelligent people to serve in the central and local governments. To achieve this goal, national tests were given on subjects such as Chinese language and literature. People from all walks of life were permitted to take the exams and those who achieved exceptionally high scores or passed a set of pre-determined high marks would be appointed as government officials. The higher scores they achieved the higher position they will be awarded. As a result, Chinese people have believed that good education leads to power, social status, and money, thus a bright future (*xue-er-you-ze-shi; shu-zhong-zi-you-huang-jin-wu*).

Since the economic reform that began in 1978, science and technology have brought about dramatic improvements in Chinese people's living and social conditions. The discrepancy in pay and benefits is getting larger and larger between jobs requiring a high school diploma and an advanced degree. Attaining advanced degrees aids in securing professional or managerial jobs with good salaries. Today, college or postgraduate education

is a must for Chinese young people to get a decent job and climb up the social ladder.

China has many colleges and universities, but a large population and high educational expectation make it very competitive to be admitted to a top university that has tough admission criteria. Parents and schools begin to prepare children for the challenge from early childhood. A child is a “good kid” if the child comes home with a perfect examination score. If a child’s academic performance at school is not desirable, the child is often rejected by fellow students and punished by parents. Consequently, he/she may suffer low-self-esteem and strained relationship with parents and peers. Chinese children of divorced parents are especially vulnerable to the rejection because their grades often drop when they have a difficult adjustment. The stigma of divorce can alienate the child and youth of divorced parents from their peers (Xia, 1991). Poor performance can further isolate them. On the other hand, good performance makes children feel good and can buffer them from further isolation and loneliness. The strong emphasis of school achievement in Chinese culture (Chao, 2001) highlights the role of school adjustment in child development.

Investment in Children for the Old Age

In Chinese tradition, parents are responsible to raise children to their fullest potential while adult children have an obligation to take care of their elderly parents (filial piety, *xiao*). In the past, many parents raised their children as insurance for retirement (*yang-er-fan-lao*). China has not yet developed a sophisticated social security system. If parents do not have enough savings or pension provided by the employer, they will have to count on their children for financial help. Urban parents with a pension do not depend on their children as much as rural parents, but they still rely on adult children for physical care and emotional companionship (Shek, 1996; Zhan & Montgomery, 2003). A higher education and better-paid job for adult children increase the potential of a more secured retirement for the parents. Parents may push their child even harder after divorce because the child becomes their only hope due to the loss of ex-spouse’s income and support.

Kinship and Family Support

Family is a key orientation in Chinese culture. Emphasis on collective interests and mutual support of the family is viewed as a virtue. Three

distinctive features mark Chinese family support. First, grandparents are involved in grandchildren's care and formal and informal education. It is a common practice that grandparents consider it their responsibility to help raise their grandchildren (Chen, Short, & Entwisle, 2000).

Second, family relatives make up a strong extended support network for family members. Chinese extended families are estimated to be between 20 and 30% of the entire families in both urban and rural areas (Five-City Household Survey, 1985; Shen, 1999). Although today fewer grandparents, aunts, uncles, or cousins live under the same roof with the nuclear family, they continue to provide physical, financial, and emotional support, especially in crisis, through constant visits and monetary and non-monetary assistance. Third, a family support network may include parents and siblings as well as aunts, uncles, and cousins on both sides of the family. One study of divorced children showed that family members provided childcare, tutoring, and/or financial support so that single parents could go to work and "make ends meet" (Xu, 2001). Family support helps protect the divorced families from suffering dramatic deterioration in their economic conditions, thus making parents' divorce less disruptive to the children's life and ensuring a smoother transition.

Single-Parent Families

Research reveals that in developed countries a large proportion of the single-parent families are headed by mothers, for example, nearly 75% in 2000 (Simmons & O'Neill, 2001) and 80% in 2006 in the U.S. (U.S. Census Bureau, 2006), and 90% in the Great Britain (Office for National Statistics, 2005). In contrast, the female-headed families are less than 50% of the total number of single-parent families in China (Liu, 1998; Wang, 2002). More Chinese single-parent households are headed by fathers than mothers possibly because of cultural belief and custom. Traditionally, a bride joins the groom's family at the marriage. The couple's child is an addition and is to bring prosperity to the father's family. If the couple divorce, the wife returns to her parents' house and the child remains with the father's family. Today the judge first considers granting custody to the mother if she seeks custody of her child. However, it is very difficult for a woman with a child to remarry. The divorced woman may not want the custody. Another possible explanation for more male-headed single households is that divorced women remarry sooner. Chinese census data (Chinese Statistics Bureau, 2003) showed that divorced men who remained single were two (in urban areas) or three times (in rural areas) more prevalent than divorced women who

remained single, because women remarried sooner. Chinese women in the urban areas tend to remain employed after divorce and divorced women usually have a better education and professional job than divorced men (Li, 1993; Xu, 1994; Wu, 1999; Zeng & Wang, 1995). Therefore, many Chinese single-mothers and their children may not suffer as much from income loss and its ripple effects after divorce as their American counterparts.

The Classroom Teacher and Students

In Chinese elementary and high schools, there are usually several class units of students who enter the school in the same year. The students of each class unit from K-12 grades have a designated teacher (called Classroom Teacher) who provides academic advising, supervising after-school activities, carrying out disciplinary actions, and keeping in touch with parents. Among all the teachers, students have the most contact/time with their Classroom Teacher who can be a role model and an important figure in the children's life only next to their parents. If the classroom teacher is competent (unbiased towards children with parents divorced), he/she will treat a student from the divorced parents without prejudice. The teacher's unbiased attitude can strongly influence the class attitude towards the student and, therefore, foster a non-discriminating class environment. The Classroom Teacher's competence in terms of an unbiased attitude was assumed to influence a child or youth's adjustment to parents' divorce.

Social Stigma of Divorce

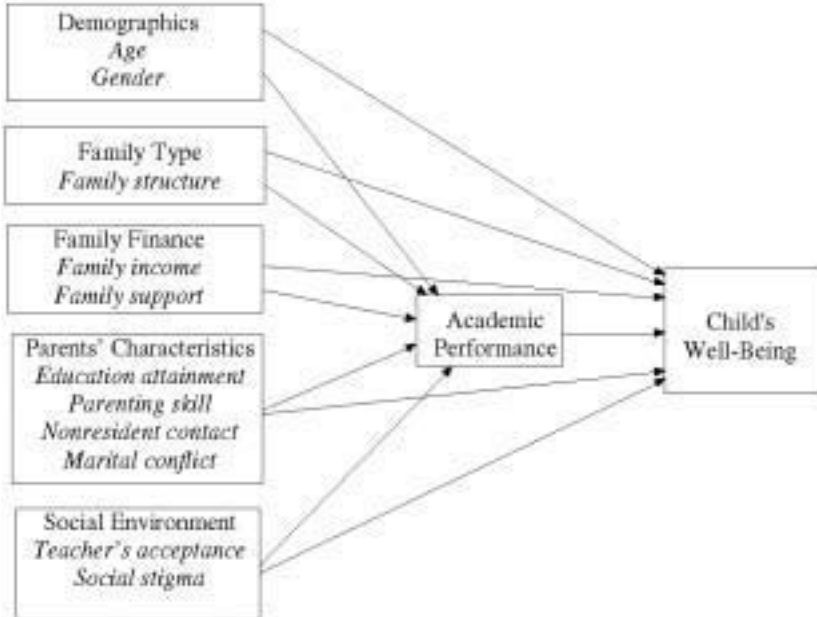
Chinese tradition highly values individual sacrifice for maintaining a marriage. A popular saying goes "You can pull down a temple, but you cannot pull apart a couple" (*ning-chai-yi-zuo-miao-bu-chai-yi-dui-hun*). Seeking divorce is viewed as putting individual happiness over family happiness, and is condemned as selfish and shameful. The high divorce rate is interpreted as a sign of decreased morality, social instability, and increased corruption of the society. The single-parent family becomes an easy target and single parents are blamed for problem behavior in children. Stigma associated with divorce is strong, and can sometimes ruin a person's reputation and career. Although Chinese society has become more accepting towards the single-parent family, the overall negative attitude toward divorce can lead to a high level of stress to divorcees and their children.

***THEORETICAL CONCEPTUALIZATION:
A CHINESE MODEL***

Human ecology theory is a meta-theory that conceptualizes this research. Human ecology theory (Bubolz & Sontag, 1993; Bronfenbrenner & Morris, 1998) describes the interactions between an individual and her/his environment, defined as ecosystem. The three levels of ecosystems are nested. Family and peers are the immediate social context and are embedded in school and/or community, the intermediate environment. The family and community are all influenced by cultural, political, and economic contexts of the larger society. This theoretical model allows us to examine the experiences of children and youth of divorced families in their multi-layered contexts (i.e., family, school, and the society).

The model we proposed consisted of individual, family, school, and social factors that were expected to influence a child’s developmental outcome (see Figure 1). The dependent variable was a child’s well-being. It generally refers to a content state of quality of life that encompasses

FIGURE 1. The Theoretical Model



goods and opportunities, happiness, or satisfaction (Fallen, 2003). It “incorporates . . . everything that an individual values” (Kaplow & Shavell, p. 18). There exists a broad consensus that well-being does not only include economic well-being. A new definition also considers education and the quality of human ecosystem as indicators of well-being (Trevin, 2007). The well-being of Chinese children in this paper was conceptualized as having physical, mental, and relational dimensions (i.e., living conditions, physical, and psychological health, relationship with parents, teachers, and peers, and feeling happy about the family). Chinese research indicated that all these elements were related to an individual’s self-perceived well-being (Zhang, 1999).

The model included five sets of independent variables: (1) demographic information of child’s age and gender, (2) family structure, (3) family income and family support to reflect family economic conditions after divorce, (4) parents’ characteristics, such as education attainment, parenting skill, marital conflict prior to divorce, and contact with nonresident parents after the divorce, and (5) social environment indexed by the Classroom Teacher’s competence and social stigma.

A child’s academic performance was used as a mediating variable. We assumed that all individual, family, school, and societal variables would affect a child’s well-being, and the child’s academic performance would mediate these effects. According to Kenny (2003),

often if the mediator and the outcome variable were interchanged, the outcome would seem to “cause” the mediator . . . Reverse causal effects can be ruled out theoretically. . . . Ideally the mediator should be measured before the outcome variable.

Given that the data structure of this study was cross-sectional, the relationship between academic performance and child’s well-being was correlational and thus reversible. However, theoretically we hypothesized that higher academic performance would lead to better well-being than vice versa for Chinese children. There are several social, economic, and cultural reasons for this proposition. First, severe competition for admission to elite schools, a ticket for a decent job after graduation tends to cause stress and anxiety in both parents and children. Second, reputation and rewards for schools and teachers on the basis of students’ academic performance inevitably make them push hard on students. Third, parents may fear losing face if their child does not score as high as the children of their peers. The demand from the teacher and parents intensifies the stress caused by the competition. Consequently children

with lower school performance are likely to have lower self-esteem and a higher level of anxiety and depression.

We specified that family income would be positively correlated with parents' education attainment, but negatively correlated with family support as relatives and friends tended to help more when the family experienced harsher financial conditions. Among other independent variables parenting skill and marital conflict were negatively correlated because marital conflict can compromise couple's ability to be a good parent.

We expanded family support to include monetary and non-monetary support from extended families and relatives. Besides, the current Chinese model used family support, family income, marital conflict, nonresident contact, and parenting skill as indicators for a child's immediate living environment (*microsystem*). It also used classroom teacher's competence (*exosystem*) and social stigma/societal attitude towards divorce (*macro-system*) as indicators for a child's larger ecological system. The inclusion of a child's academic performance as a direct contributor to and as a mediator for all the effects on the child's well-being made this model reflect the unique Chinese social and cultural contexts (see Figure 1).

METHOD

Sample

The data for the current study were collected in Shanghai, China in 2002. Shanghai is the largest city and the most developed area in China. It has a population of 13.34 million (Office of Statistics, 2003). The annual average urban resident income in 2002 was 13,250 *yuan* (approximately \$1,650), far above the national average of 7,703 *yuan* or about \$963 (Chinese Statistics Bureau, 2003). The current sample included 940 families with at least a child aged 6-16 and a parent. Among them, 500 were two-parent families and 440 were single-parent families. The two-parent family only included the family of the couple from the first marriage with their biological children. Among the 440 single-parent families, 332 were divorced and 108 were widowed families. Of all the divorced families 54.5% were headed by fathers and 44.5% by mothers. Children's age ranged from 6 to 16 years with a mean of 12.17 ($SD = 2.15$). The sample consisted of 48.5% boys and 51.5% girls. The average family per capita income was 8,382 *yuan*, approximately \$1,050, the median was 6,360 *yuan*, and the mode was 6,000 *yuan*. Twenty-five

percent of the families earned below 4,260 *yuan* and 25% above 9,750 *yuan* in that year. In the divorced families, the average years of divorce was 6.33 (Std. = 3.31). One-third (33.4%) of the children in these families reported no contact with their nonresident parents, 40% reported some contact, and 26.5% reported often seeing their nonresident parents.

Sampling and Procedures

Stratified random sampling was used for data collection to ensure the total sample would include comparable sub-samples (two-parent, divorced, and widowed). First, computer software was used to systematically select 25 major streets in 11 metropolitan districts, and then 2 neighborhoods in each street. For the sample of two-parent families, the simple random sampling procedure was used; that is, one of every ten families was selected based on the address in each neighborhood. For the sample of single-parent families, all the single-parent families with a child aged 6-16 were included in order to obtain enough participants. Considering that some families may have moved, no longer lived at the listed address, or refused to participate in the study, we targeted 1,361 families in recruitment, twice as many as the expected number of participants. During the recruitment, interviewers found that 162 families no longer lived at the listed address. They had moved, relocated, or rented out their housing units. Twelve families had a mentally or physically challenged child or parent and were unable to participate. Eighteen families on the recruiting list were out of town and unable to participate. Fifty others could not be located due to the error in the address or to the fact that no one ever answered the door during repeated visits in a-month-and-half period. Forty-five families did not meet the criteria for inclusion because of one of the following situations—the parent had remarried, the child was older than 16 years old or the child did not live with the parent. One hundred and forty-five families refused to participate. The response rate was 86.5%.

Contacts were made through telephone or drop-in visit to all randomly selected families based on the address. If the family agreed to participate, an interview was scheduled. The survey was conducted during an interview with parent and child separately by trained interviewers at the participants' home. The survey interview was chosen over the pencil and paper survey sent by mail to enhance the response rate and the quality of the response. The personal contact with interviewers reduced Chinese participants' discomfort when they revealed private information.

Variables and Measures

Dependent Variable was a child or youth's *well-being* reported by the child or youth. It was measured by 14 indicators on the child's living conditions, psychological well-being, stress of study, family happiness, and other psychosocial characteristics. A 5-point scale was used with 1 indicating "the worst" and 5 "the best." Five factors resulted from the factor analysis using the "principal component" method. They were psychological well-being, peer adjustment, relationship with school teachers, stress of study, and family happiness. Factor loading of the 14 items ranged from .66 to .91. The eigenvalue of each factor was higher than 1.9 and 64.83% of the total variances were accounted for. The alpha was .72 for all the 14 items, indicating fairly good reliability. In the data analysis, well-being was indexed by the average of the total scores of the 14 indicators (sum of the 14 scores divided by 14) instead by 5 latent factors. However, the factor analysis was conducted and reported here as a check for the construct validity of the well-being developed for this study.

Independent variables consisted of 11 variables that measured individual characteristics, family structure, family environment (economic conditions and parents' characteristics), and school and social contexts. Individual characteristics included child's gender, age, and parents' education attainment. Parents' education attainment was an ordinal variable with 1 for "elementary school," 2 for "middle school or junior high school," 3 for "high school," and 4 for "junior college or beyond." Parent's education referred to the highest degree of father or mother, whichever was higher.

Family structure was dummy-coded with the two-parent family in contrast to the single-parent family (divorced or widowed). The two-parent family did not include the remarried family.

Family support encompassed support from grandparents, uncles and aunts on both maternal and paternal sides. Family support included financial assistance, tutoring, and childcare. It was the sum of all the types of assistance received, ranging from 0 (none) to 24 (maximum).

Family per capita income in Chinese *yuan* was the ratio of the total family income (including public assistance and child support if any) to the number of people in the family.

Marital conflict was measured by the presence of physical fights between parents reported by the child (whether parent's verbal fight escalated to physical violence). It ranged from 0 (none) to 2 (always). It was the child or youth's recollection of the conflict presence prior to divorce

for the divorced family and prior to the decease of the other parent for the widowed family.

Parenting skill was the child's perception of parents' competence in parenting. In the single-parent families it was the perceived competence of the custodial parent. It ranged from 1 (the worst) to 5 (the best).

Length of divorce and *nonresident parent contact* were obtained for the divorced sample. The former was measured in the number of years. The latter ranged from 0 (none) to 2 (always).

School and social contexts consisted of two measures: Child's perception of the *Classroom Teacher's competence* and *social stigma* associated with the single-parent family. The former ranged from 1 the lowest to 5 the highest. *Social stigma* was measured by 4 indicators on a 4-point scale ranging from "never" to "always." The child was asked to respond to the statements, for example, "You are prejudiced against at school or in the society because your parents divorced (or diseased)," "You feel inferior due to your parents' divorce (or parent's death)," and "Your parents ask you not to tell other people they are divorced (one of your parent died)." The *alpha* was .58 for the four indicators. It was not clear why the internal consistency for this measure was low and needed to be further studied. The scores on all the 4 indicators were summed up to generate one score ranging from 1 for "lowest" to 9 for "highest."

Among all the independent variables, father or mother responded to the measures of child's gender and age, family structure, family income, family support, and parent's education attainment. In a separate interview, their child or youth reported his/her perception of the parent's parenting skill, marital conflict, nonresident parent contact, Classroom Teacher's competence, and social stigma (single-parent family only).

Mediating variable was *academic performance* reported by both parent and child. It was measured on a 5-point Likert scale with 1 standing for "very poor" and 5 for "excellent." The modified percent-agreement (Stelmer, 2004), a consensus estimate, was computed to assess interrater reliability. The broadened definition of agreement includes exactly the same rating as well as the adjunct higher scoring category. Among all the parent-child pairs, 41% of their ratings were an exact match. In addition, 54% of parents rated 1 category higher than their children. The modified percent-agreement was 95%, demonstrating substantial interrater reliability. The measure used in the analysis was the average of mother's and child's ratings.

Variance Inflation Factor (VIF) was calculated for the three different samples (two-parent, divorced, and widowed). VIF ranged from 1.03 to 1.20, indicating multi-collinearity did not pose a concern (Kline, 1998).

Data Analysis

Prior to the path analysis, we conducted an ANOVA followed by *post hoc* tests to examine the differences in the interested variables between the different types of families. To accomplish this we used General Linear Model Type III method on SPSS, as it is appropriate for the data with unequal group sizes. For *post hoc* test, we used Scheffe test recommended for unequal sample sizes.

We conducted a series of *path analyses* to test the direct, indirect, and mediating effects specified by the proposed model using Structural Equation Modeling in AMOS 4.0 statistical software (SmallWaters, 1999). Maximum Likelihood (ML) was the estimation method. To determine the significant mediating effect of academic performance, we used Baron and Kenny's (1986; Kenny, 2003) 4-step procedure. According to Baron and Kenny, in order for the mediating effect to exist, the path from an independent variable to both the dependent variable (Step 1) and the mediating variable (Step 2), as well as the path from the mediating variable to the dependent variable (Step 3) must be statistically significant. For complete mediation, the path from an independent variable to dependant variable should be zero when the mediating variable is controlled (Step 4). The last two steps can be completed in one regression analysis.

We also employed *Multigroup Analysis* to assess if the direct effects differed across the group. This analysis was accomplished by testing two nested models: the baseline model with paths unconstrained and the constrained model with all path coefficients held invariant. This path model excluded the variables such as nonresident contact, length of divorce, and social stigma which were only relevant to the divorced family so that three groups were comparable. For the pair of divorced versus widowed groups, social stigma was included.

RESULTS

Analysis of Variances

Results from ANOVA indicated that there were significant differences in the characteristics among the two-parent, divorced, and widowed families, $F(2, 924) = 20.50$ for family per capita income, 681.39 for family support, 8.95 for parenting skill, 111.01 for marital conflict, 8.09 for

school performance, and 19.83 for child's well-being ($p < .001$). *Post hoc* tests revealed that compared to the widowed family, the divorced family had more family per capita income and more family support, but the child reported lower school performance and lower well-being (see Table 1). Compared to the intact families, the divorced family appeared to be significantly lower in three measures—family income, and school performance and well-being of the child, but not in parenting skills and family support. However, marital conflict prior to divorce was reported significantly higher than that reported in the intact family or the widowed family prior to one parent's death. Forty-seven percent of the children from the divorced family reported seeing parents' physical fights whereas only 10% of children from the intact family and 5% from the widowed family. We found in a separate t-test, compared to the intact family, the single-parent family had less family income, and lower child's school performance and lower well-being. In general, the single-parent family ($M = 9.87$) reported less family support than the intact family ($M = 14.69$). However, this result was confusing as the divorced families received more family support ($M = 16.49$) whereas the widowed families ($M = 3.46$) received significantly less. No significant differences were observed in parenting skills between two-parent and single-parent families.

Path Analysis

Path analysis was applied to test the proposed model with the samples of the two-parent, divorced, or widowed family, respectively. The model for the divorced and widowed family included social stigma, an additional predictor. The model for the divorced family included length since divorce and nonresident contact as well. Each model fit the sample data of the two-parent, divorced, and widowed family (see Table 2) as all the fit indices were within the range of good fit or very good fit (NFI, TLI or CFI $> .95$; RMSEA $< .08$ for a moderate fit, and $< .05$ for a good fit). The total variance (R^2) of child's well-being accounted for by all the predictors in three separate analyses was .39 (the intact family), .43 (the widowed family), and .47 (the divorced family), respectively. Regarding our hypotheses, we found mixed results by examining path coefficients (see Table 3).

As predicted, school performance had a statistically significant effect on a child's well-being across all the samples. Further, it contributed significantly to the child's well-being with all other independent variables being controlled: child's age, gender, family support, family income,

TABLE 1. Statistics of *Post Hoc* Test for the Different Samples

	Family per Capita Income (yuan)	Family Support	Parenting Skills	Marital Conflict	Social Stigma	Academic Performance	Child's Well-Being
<i>Mean</i>							
Two-parent	10218.58	14.69	4.47	.11	–	3.48	5.67
Single parent	6313.66	9.87	4.49	.47	2.94	3.33	–6.49
Widowed	5483.60	3.46	4.71	.06	2.90	3.54	3.70
Divorced	6583.68	16.49	4.42	.61	2.98	3.26	–9.75
<i>Scheffe (Mean Difference)</i>							
Two/Widowed	4734.98***	11.26***	–.24*	.05	–	–.05	2.49
Two/Divorced	3664.87***	–1.80***	.06	–.50***	–	.22***	16.06***
Widowed/Divorced	–1070.11	–13.06***	.30***	–.55***	.08	.27*	13.58**
Two/Single	–6.30***	7.18***	0.41	10.51***	–	–2.83**	–5.27***

Notes. (1) For Scheffe test, the critical α level is derived from .05/3 for *post hoc* tests. Thus, * $p \leq .016$, ** $p \leq .01$, *** $p \leq .001$. (2) Negative mean difference indicates the first group has a lower mean value than the second group. For example, two-parent families reported an average lower family support than the divorced families did.

TABLE 2. Fit Indices for the Path Model

Fit Indices	Model		
	Two-Parent N = 500	Divorced N = 332	Widowed N = 108
Chi-square	$\chi^2 = 87.97, p = .00$ DF = 25, $\chi^2/DF = 3.51$	$\chi^2 = 180.54, p = .00$ DF = 52, $\chi^2/DF = 2.71$	$\chi^2 = 54.76, p = .07$ DF = 33, $\chi^2/DF = 1.36$
NFI	.991	.983	.993
TLI/NNFI	.986	.981	.990
CFI	.992	.988	.995
RMSEA	.071	.072	.059

Note. NFI = Normed Fit Index, TLI = Tucker-Lewis Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error Approximation.

parent's education, parenting skills, marital conflict, teacher's competence, and social stigma. As expected, parents' education was highly related to children's academic performance across the groups. However, it was not related to their overall well-being. The higher education attainment parents achieved, the better their children performed at school (Table 3).

One of our major hypotheses was that academic performance would mediate the relationship between individual, familial, school, and social factors and the well-being of Chinese children. For the divorced sample, results showed empirical support for this proposition (Table 3). The effect of social stigma on a child's well-being was reduced, though still significant, with the mediation of academic performance. Another mediation effect was observed for the age of children with parents divorced. Children of older age at parents' divorce tended to suffer more than those of younger age. Children with good grades seemed to be less affected. The present study also examined this mediation effect with the data of two-parent and widowed families. For the two-parent sample, the effects of gender, family education, and parents' education attainment were reduced to non-significant (complete mediation), and the effect of parenting skill was reduced, but remained significant (partial mediation). No mediation effect of academic performance was observed for the widowed sample.

Family economic condition following divorce was associated with Chinese children's well-being. Family income was positively associated with children's academic performance, but not their overall well-being in the intact sample. Family income was not significantly related to either

TABLE 3. Parameter Estimates for the Path Model (Direct, Indirect Effects, and Mediation for Child's Well-Being)

<i>Paths</i>	Two-Parent N = 500		Divorced N = 332		Widowed N = 108	
	Academic Performance (β)	Child's Well- Being (β)	Academic Perfor- mance (β)	Child's Well- Being (β)	Academic Perfor- mance (β)	Child's Well- Being (β)
Step 1						
Gender		.08*		.04		.12
Age		-.10*		-.14**		-.22**
Family support		.05		.15**		.02
Family income		.12**		.05		.03
Parent's education		.09*		.00		.25**
Parenting skill		.16***		.18***		.13
Marital conflict		-.06		-.04		.03
Competency		.28***		.13**		.24**
Social stigma		-		-.27***		-.18*
Length of divorce		-		.00		-
Nonresident contact		-		.00		-
<i>Multiple R²</i>		.16		.16		.24
Step 2						
Gender	.010*		.18**		.26**	
Age	-.07		-.14**		-.11	
Family support	-.01		.02		.01	
Family income	.10*		-.11*		-.02	
Parent's education	.10*		.12**		.25**	
Parenting skill	.10*		.09		.17*	
Marital conflict	-.06		.02		-.02	
Competency	.09		.02		.14	
Social stigma	-		-.22**		-.06	
Length of divorce	-		-.01		-	
Nonresident contact	-		-.03		-	
<i>Multiple R²</i>	.07		.13		.20	
Step 3-4						
Gender	.010*	-.03	.18**	-.05	.26**	-.02
Age	-.07	-.06	-.14**	-.06	-.11	-.15*
Family support	-.01	.05	.02	.13***	.01	.04
Family income	.10*	.07	-.11*	.11**	-.02	.05
Parent's education	.10*	.04	.12**	-.07	.25**	.11
Parental skill	.10*	.11**	.09	.13**	.17*	.03
Marital conflict	-.06	-.03	.02	-.06	-.02	.03
Competency	.09	.24***	.02	.11***	.14	.16*
Social stigma	-	-	-.22**	-.15***	-.06	-.15*

TABLE 3 (continued)

Paths	Two-Parent N = 500		Divorced N = 332		Widowed N = 108	
	Academic Performance (β)	Child's Well- Being (β)	Academic Perfor- mance (β)	Child's Well- Being (β)	Academic Perfor- mance (β)	Child's Well- Being (β)
Length of divorce	–	–	–.01	.01	–	–
Nonresident contact	–	–	–.03	.02	–	–
Performance		.49***		.55***		.55***
Multiple R^2	.07	.39	.13	.43	.20	.47
<i>Correlation</i>						
Family support < >		–.08*		–.20***		.19*
Family income						
Family income <>		.37***		.25***		.18*
Parent education						
Parenting skills < >		–.17***		–.12*		–.08
Marital conflict						

Note. Y1 = Academic performance, Y2 = Child's well-being. * $p < .05$, ** $p < .01$, *** $p < .001$.

school performance or well-being in the widowed sample. In contrast, family income was observed positively related to a child's well-being, but negatively related to academic performance in the divorced sample. Family support was also found contributing to children's well-being, but not to their academic performance. Parenting skill was found to have a direct positive effect on the well-being of children in the two-parent and divorced families. Parenting skill was observed to have a positive effect on academic performance among children in two-parent and widowed families. Results from the path analysis did not reveal a significant relationship between marital conflict and a child's well-being reported by children in all three groups despite that marital conflict had a significant negative correlation with parenting skill (Table 3).

Among the social contextual variables, social stigma had both direct and indirect negative effects on the children in the divorced families. A significant negative path was observed from social stigma to academic performance and to the well-being of the children of this group, indicating that the higher the social stigma, the lower the child's school grades and the lower the child's well-being. Bias towards divorce led to poor grades which, in turn, contributed to the child's low well-being. Teacher's

competence was found directly related to well-being, but not significantly related to academic performance for all three groups (Table 3).

We hypothesized that academic performance would mediate the effects on a child's well-being. The findings were summarized in Table 3. One significant mediating effect observed was the association between social stigma and child's well-being for the divorced families. The higher social stigma was associated with poorer academic performance which, in turn, lowered child's well-being. For the two-parent group, academic performance appeared to intervene in the relationship between well-being and immediate living environment variables (i.e., family income and parenting skill). These two variables showed a significant relationship with both mediating and outcome variables at each step of analysis, hence forming a partial mediation. A complete mediation for parent education was observed for both two-parent and widowed samples as the path from parent education to child's well-being was reduced to nonsignificant while parent education showed both significant direct and indirect effect through academic performance (Table 3).

Multigroup Analysis

Multigroup analysis was conducted to determine if direct effects differ across the groups. The divorced family and widowed family were compared separately with the two-parent family and then compared with each other (see Table 4). Results from χ^2 difference test showed no significantly poorer fit [$\Delta\chi^2(16) = 16.42$ for Divorced vs. Two-Parent; $\Delta\chi^2(16) = 14.32$ for Widowed vs. Two-parent; $\Delta\chi^2(18) = 15.78$, all $p > .05$]. Thus, the model with constrained paths did not fit the data significantly worse than the unconstrained model, indicating that the direct effects did not differ across the three groups. In other words, the associations among the variables did not depend on family structure.

DISCUSSION

Based on ecological perspective, we proposed that individual characteristics and living environments, that is, family, school, and society would all influence the well-being of Chinese children and youth in divorced families. Given the cultural emphasis on excellence in academic performance, we further hypothesized that academic performance both

TABLE 4. Fit Indices for Nested Models in Multi-Group Analysis

Model	χ^2	NFI	NNFI	CFI	$\Delta\chi^2$	Δdf	ΔNFI
Two-Parent vs. Divorced							
1. Unconstrained	153.93	.991	.986	.994			
2. Invariant paths	180.35	.989	.988	.993			
Model 2 and Model 1					16.42	16	.002
Two-Parent vs. Widowed							
1. Unconstrained	118.52	.990	.999	.994			
2. Invariant paths	132.84	.989	.991	.994			
Model 2 and Model 1					14.32	16	.001
Divorced vs. Widowed							
1. Unconstrained	96.37	.989	.991	.995			
2. Invariant paths	111.50	.988	.989	.995			
Model 2 and Model 1					15.78	16	.001

Note. NFI = Normed Fit Index, TLI/NNFI = Tucker-Lewis Index/Non-Normed Fit Index, and CFI = Comparative Fit Index. Δ = change, e.g. $\Delta\chi^2 = \chi^2$ change

predict children's and youth's well-being and mediate the effects of individual and environmental factors. The results of the study supported some of our hypotheses while it failed others.

First, the findings from the current study show that self-perceived well-being of Chinese children and youth was strongly related to their academic performance. Above the influences of individual, family, school, and societal factors, academic performance was still a strong predictor for the well-being of children and youth from the two-parent, widowed, and divorced families. The social stigma associated with divorce led to the decreased level of school performance which, in turn, lowered a child or youth's sense of well-being. One of the key questions, based on our conceptual model was whether academic performance mediates the effects of individual, familial, school, and social factors. One major mediating effect was found for social stigma associated with divorce. This is echoed by what we heard repeatedly during the interview. Many single parents noted that because their children had excellent grades at school, teachers and classmates liked them; they kept a good relationship with peers; and people seldom rejected them due to parents' divorce. This may indicate that children from divorced families cope with the

stress from parents' divorce and social prejudice by working hard to improve their academic performance and to be admitted to elite universities. High scholar achievement helps boost their self-esteem and protects them from being isolated by peers.

Second, the data from the Chinese sample do not seem to support "parental absence" literature (White, Brinkerhoff, & Booth, 1985). Despite that the well-being of children from divorced families was lower in general than that from both two-parent and widowed families, the difference did not depend on family structure. Moreover, the well-being of children from the widowed families appeared to be higher than that from the divorced families, even if both types of families had one parent at home. The children's well-being in the widowed families was not significantly different from children's well-being in intact families. One possible explanation may be that Chinese society tends to show sympathy for children who have lost a parent but are prejudiced against divorced parents and their children. A less biased environment makes it easier for children to adjust after losing a parent while social stigma makes it harder for those whose parents have divorced. In addition, the custodial parents in this Chinese sample do not fit the "ill-educated" and "irresponsible" single mothers or fathers stereotyped by the Chinese society and media. Most divorced parents are trying their best to raise their children and work even harder to ensure their children's well-being. This is evidenced by the high average rating (4.4) on parenting that children gave to their custodial parents in this study.

Third, one divorce theory attributes the negative impact of divorce on children to the decrease in family income following divorce (Duncan & Hoffman, 1985; Voydanoff & Majka, 1988; Weitzman, 1985). The results from the current Chinese sample are not fully consistent with the findings in Western literature. Family income was significantly related to child's academic performance and well-being in the divorced sample. The divorced families had significantly less income than the two-parent families and their children reported lower level of well-being than those in two-parent families. However, the widowed families showed significant less income than the divorced families, but children in the widowed families reported significantly higher level of well-being than those in the divorced families and reported no significant difference from those in the two-parent families. Both divorced and widowed families lost family income, whether it was from divorce or death of one parent. If the decreased well-being was a function of loss in income, our question is why it did not affect children from the widowed families? This was more in question given that Chinese divorced family in the current study received

more support, monetary and non-monetary, from extended families and relatives than widowed families, hence facing lower financial risk. In our view, other contextual factors such as social stigma and lack of extended family support, teachers' competence and parenting skill mainly accounted for the lowered well-being.

Another interesting finding of this study was that family income was positively correlated with academic performance for children in the two-parent families whereas negatively for children in the divorced families. Besides, it was not significantly associated with children's overall well-being for the two-parent families whereas it was significantly associated for the divorced families. The intact families with more resources might be able to hire a tutor or provide other learning opportunities to enhance the child's school performance. However, it is puzzling that more family income was not linked to the child's higher performance for the divorced families although it was associated to the child's overall well-being. There may be other variables (i.e., family dynamics and relationship between parents after divorce) that explain the children's lower performance in divorced families with higher income. Chinese divorced parents may feel guilty and indebted to their children. They may try to compensate by lowering their expectations for children's performance and becoming more lenient. On the other hand, the combined effects of divorce can cause depression in children. As a result, they can lose their interest and motivation in pursuing academic success.

It is worth noting that most Chinese women continue working after they get married and financial independence gives them something to fall back on at times of a life change. After divorce, they may not suffer as severely as stay-at-home mothers do in Western societies. Overall Chinese men have higher education attainment and higher income than Chinese women (Jiang, 2003; Xu, 1997). The current study reveals that divorced mothers showed higher education attainment than divorced fathers. Fewer divorced women reported deterioration in living conditions than divorced men reported. The discrepancies in career achievement and income between divorced couples were smaller than the married couples and the couples with one partner deceased. The metropolitan sampling site may contribute to this phenomenon. Shanghai where the data were collected has a high women employment rate and high tolerance of divorce. If the data had been collected in rural areas, the results could have been different. Because few farmers' wives work outside home and have the economic independence enjoyed by urban women, and there exists strong social stigma, divorced women remarry sooner under financial stress and social pressure. Although the economic disadvantage

theory is only partially supported by the results from this Chinese urban sample, it may well explain the adjustment of children in divorced families in rural areas.

Fourth, it is well documented that marital conflict leads to stress, insecurity, and anxiety in children (Maccoby & Martin, 1983) and prevents parents from performing an effective role (Amato & Keith, 1991; Hetherington, Cox, & Cox, 1982; Wallerstein & Kelly, 1980). The current study links children's well-being significantly to parenting skills, but not to marital conflict, even with the sample of divorced families. The non-significance may have resulted from the lack of sensitivity in the measure of marital conflict. Western literature points out that the physical aggression and intensity of the marital conflict account for the most negative outcomes in children. Based on this finding, the marital conflict in this study is measured by the child's witnessing of the physical fights between their fathers and mothers. In Chinese culture, conflicts are more often covert than overt. The unspoken hostility can take a toll on children. However, the measure of physical fights could not capture the degree of covert marital hostility. Besides, children's age, cognitive ability, and coping skills could affect how they perceived and understood parental conflict, thus affecting how they react cognitively or emotionally to divorce. For instance, one-third of the children in the study were younger than four when their parents divorced. Many of them found it hard to recall the dispute and divorce. Furthermore, divorced parents' coping and adjustment, and co-parenting skills could influence on children's adjustment which interfered with their view of parental relationship prior to divorce. The weak association of marital conflict with child's well-being may also be due to the inter-correlation between marital conflict and other variables in the model (e.g., parenting skills).

Neither contact with nonresident parent nor the number of years of divorce yielded a significant association with children's well-being in our study. Literature about short-term impact suggested emotional distress or developmental disruption for younger children and risk behaviors for adolescents (Guttman, 1993). The adverse effects tended to diminish in two years (Holyrod & Sheppard, 1997). The limited research on later adjustment showed girls of school age at parental divorce might experience anxiety when they started dating during adolescence (Wallerstein & Corbin, 1989). The delayed impacts also included feelings of anger and sadness in adolescence and young adulthood (Palosarri & Aro, 1994). It remains unclear why the length of divorce and nonresident contact were not related to child's well-being in the current study. Children were not differentiated according to developmental phase, which was a limitation

of this research. Overall, children who viewed their parents as competent in the study reported being physically and mentally happier and healthier, feeling less stressful, and having a better relationship with peers.

The current research is an effort to understand impacts of divorce on Chinese children. Considering the data structure is cross-sectional, the relationships illustrated by the path model are correlational rather than causal. Although the data is randomly collected, the sampling site is restricted to metropolitan areas. Therefore, generalizability of the findings is compromised. In addition, the wide age range of the participants ignores different characteristics of cognitive and psychological development from early childhood to adolescence. Research taking these differences into consideration can provide a more accurate account of Chinese children's experiences after parents' divorce.

As is shown in the research, Chinese children and youth with academic success tend to fare well mentally and socially. Professionals can develop support programs that help children from divorced families with a smoother transition by helping them improve and/or maintain good academic performance. Since divorce and single-parent families are viewed as "deviant" in Chinese society, it is essential to educate the public to understand divorcees and children from divorced families. Public media, educators, and researchers can help build a less biased social environment for the single-parent families, for instance, neither by labeling divorced families as "abnormal families," "dysfunctional families," and "disabled families," nor by labeling the children as "problem kids," "abnormal children," and "disabled children." Instead, Chinese policy-makers need to allocate funding for research and services targeted at divorced families; practitioners need to develop and provide community and school-based services that include support, training, and counseling so that they can have a smooth transition during their parents' divorce and make proper adjustment afterwards.

In sum, the theoretical model proposed in this study has received empirical support given the limitations. It has advanced our understanding of how the familial, cultural, societal factors are related to the psychosocial outcomes in Chinese children and youth from the divorced families, as compared to those from the intact and widowed families. It shows that those with high academic performance tend to be resilient to the negative impacts of their parents' divorce. Future research that includes rural population and differentiates children by developmental stages can further this investigation.

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doi:10.1300/J002v42n03_05