

Patterns of Parental Spending: Do Parents Spend More Money on Sons or Daughters?

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ABSTRACT

This study examines the spending patterns of parents, identifying differences in the amount of money that parents spend on select items for sons compared to daughters. Using secondary data from the “Consumer Expenditure Survey: Diary Survey” dataset from 2008 through 2010, this study tests the hypothesis that parents with adolescent girls spend more money on apparel, beauty and hygiene products, health care, and education compared to parents with adolescent boys. An interaction effect for gender and socioeconomic status by parental expenditures was also included in order to test the long-debated Trivers-Willard hypothesis that high status parents will spend more money on sons while low status parents will spend more on daughters. In determining whether an association exists between parents’ expenditures and the gender of their children, multiple regressions were used to test the hypotheses, allowing the results to be generalizable to single-child and two-child families of adolescents across the United States. The regressions show that within one-child households, parents with daughters do in fact spend more money when making purchases for apparel, education, and medical expenses. However, these findings do not apply to two-child families, as no significant differences were found within these households. Following these results, limitations to the study are discussed, as well as the study’s implications for familial relationships, consumer socialization, and gender inequality among children.

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CHAPTER ONE

STATEMENT OF THE PROBLEM

The American culture of consumerism permeates every aspect of the social institutions found within our society. This emphasis on purchasing and consuming goods, products, and services is continuously asserted into our daily lives. Material consumption and consumerism is especially evident within families, as individuals within family units often spend and consume not only as individuals, but also as family members. Many family expenditure patterns have been studied, especially for families with children. For instance, the spending habits of children of divorced parents change following divorce, indicating trends toward more compulsive consumerism in which the child greatly increases their spending (Payne 2005). Despite the wide interest in family consumerism, one aspect of familial consumption that has not been widely explored is a possible difference in parental spending based on the gender of one's children. Few studies have examined whether parents have a tendency to spend more on sons or daughters. While many parents may think that they provide equally for all of their children, parents can unintentionally invest more resources on one particular child, such as by spending more time with one over the other (Kanazawa 2001). This study examines the pattern of spending among parents, identifying differences in money spent on particular types of purchases between parents with girls and parents with boys.

By analyzing secondary data collected in the Consumer Expenditure Survey: Diary Survey from 2008, 2009, and 2010, a pattern of parental spending for sons or daughters may become evident. Given that the data only indirectly link expenditures to particular individuals, this study tests the hypothesis that parents in households with adolescent daughters, when

compared to parents in households with adolescent sons, spend more money on select items. The findings from this study illustrate family consumption practices and help to illuminate how parental spending differs for girls and boys. Additionally, there are implications for the incorporated theories of differential investment in children and female consumerism.

CHAPTER TWO

THEORY AND LITERATURE REVIEW

This study is important and necessary in determining whether parents invest more financial resources on sons or daughters, as any differences in expenditures might represent a gendered pattern of investment in children. In previous research on the patterns of consumerism within the structure of the family, little attention has been paid to whether children's gender matters in determining patterns of parental spending on them. Children require that funds be allocated for their food, clothing, education, and health care. Additionally, research shows that children ask for (and sometimes demand) popular commodities to serve as markers of cultural belonging or "fitting in" (Pugh 2009). Furthermore, parents often supply children with cash, especially younger children who are unable to seek employment. Despite these many different ways in which parents pay for their children, little academic research has been previously undertaken to determine if gender has an impact on any of these forms of paying for children. Some scholars have attested to the very limited research that has been done on the gendered socialization of children into consumerism through the family (Newcomb and Rabow 1999). Additional research is needed to broaden our perspectives on the intersection between consumerism and gender so that both individual families and the greater society can intercede and interrupt potential negative gender stereotypes.

Differential Treatment by Gender

Differential treatment of children by gender is a characteristic of family life that has evoked much scholarly attention (Trivers and Willard 1973; Freese and Powell 1999; Powell and Steelman 1995; Conley 2004; Hopcroft 2005), despite its relative lack of discussion among

individuals within families (Coldwell, Pike, and Dunn 2008). Differential treatment is important because it is such a taboo concept among most parents that it is commonly invisible. In answering the question of why the differential treatment of children might occur within a household, several theories have been posed in an attempt to identify and explain some of the precursors of differential treatment regarding parental investment. For example, in challenging the traditional view that sons are favored by parents, Freese and Powell (1999) state that families in the U.S. have an uncommonly high investment in daughters relative to other countries, including both developed and developing countries. However, while they suggest that girls' education is more heavily invested in than that of boys, their data show that parents are usually more willing to commit to saving money and paying for their sons' education than for their daughter's education (Freese and Powell 1999). Such theories, along with those based on differential investment due to child spacing, sibling number, and family structure, all point to the same implications for children in multi-sibling households – some children may receive more parental investment, thereby exposing the remaining siblings to negative repercussions of this treatment (Powell and Steelman 1995).

Education can again be seen as an indicator of differential parental treatment when Conley (2004) suggests that parents might also inadvertently advantage one child over another by supporting the private education of one child while the other siblings remain enrolled in public schools. This form of unintentional differential investment in children raises further questions, such as why one child over another would receive a private (and substantially more expensive) education. Additionally, such forms of differential investment in children may determine the level of future success for a particular child over other children, such as the one who receives a private education while the siblings remain in public school.

Perhaps the most notable theory applicable to differential treatment is the Trivers-Willard hypothesis (Trivers and Willard 1973). This sociobiological theory states that parental investment is based on the social status of parents and children's gender. According to this hypothesis, low-status families invest more in daughters, while high-status families invest more in sons. Being a sociobiological theory focusing on reproductive success, Trivers and Willard link low status daughter and higher status sons to producing more children, and thus hypothesize that they will receive differential parental investment. Trivers and Willard (1973) argue that such differential treatment may be gendered, thereby potentially mitigating the financial resources supplied to particular children. This theory has received mixed support in academic research, with various studies supporting the hypothesis (Hopcroft 2005; Hopcroft and Martin 2012) while others refute it (Freese and Powell, 1999; Keller, Nesse and Hofferth 2001). This hypothesis' implications apply to other theories of differential parental investment. Of course, if parents were asked whether they spend more money on a child depending on their gender, they would most likely respond that they provide for and support their children equally, regardless of gender (Hopcroft 2005). While such a statement may be intended to be completely truthful, there is evidence that parents, at times, spend more on one child than another. Hopcroft (2005) did find that high-status parents invest more in sons, while low-status parents invest more in daughters. This notion of investment did not include monetary contributions, but rather focused on time and interest dedicated towards the education and the work-placement of a child, all geared toward their future financial success. However, this finding demonstrates that even unintentionally, parents can still unevenly distribute their various resources among children depending on gender.

In testing the Trivers-Willard hypothesis, this study attempted to select measures of parental expenditures that are relevant to the hypothesis' connection to status and mating or

reproduction. Each of the dependent variables used in this study can be categorized as either supporting the connection to mating and partnering or social status, as suggested by Trivers and Willard. For instance, the measures of expenditures for apparel and beauty or hygiene products might serve as indicators of an individual's attempts to procure a partner and thereby reproduce, fulfilling their reproductive "survival" functions. Likewise, the measures used in this study for education, medical expenses, and extracurricular activities could indicate an individual's status, as healthy, well-educated individuals who can afford costly extracurricular activities are likely to have high social status.

In exploring whether parents spend more financial resources on sons or daughters, families with only one child should be considered as well. Though investigating the spending patterns of parents of multiple children could unveil a socialized gender bias in parental spending habits, examining the spending habits of single-child families could also help elucidate whether sons or daughters actually require more financial support on average for particular items. Despite the lack of scholarly research on this topic, it remains at the center of popular debate. For instance, popular periodicals in the United Kingdom debate whether sons or daughters are generally more expensive to raise. One report from a UK periodical *The Telegraph* states that parents spend about an additional one hundred euros on daughters each year for clothes, shoes, presents, and leisure activities ("Daughters are more expensive than sons, study shows" 2010). In contrast, a short excerpt from the periodical *Data Strategy* suggests the opposite: sons are more costly to raise than daughters. This pattern was predominately identified through the frequent purchases of expensive gifts (especially around the holiday season), as sons are more likely to demand more expensive products, particularly costly electronics such as computers and video games ("Who says girls have more fun?" 2008). However, these arguments are weak. For

example, the claim that daughters are more expensive was based solely on less essential items, such as gifts and activities. This claim does not account for many other important costs of children, such as food, health care, and other essential items such as supplies for school and other educational purposes. Similarly, the claim that young sons are more expensive focused on gifts around the holiday season, which comprises a very narrow view of parental spending on sons. A more inclusive, detailed report of parental spending on both sons and daughters, on a wide variety of services and products, would be useful in determining if more money is spent on a particular gender of children.

Girls as Consumers

If adolescent daughters have more financial resources allocated for their use, implications exist regarding how adolescent girls are potentially being socialized into female consumer roles. Within a family, parents monitor the family's finances and generally retain an important influence on the purchasing habits of their children. Children are influenced by their parents as they themselves become consumers. Parents therefore aid in the socialization of their children into consumer culture, influencing their purchases and at times instructing them on what should or should not be purchased. However, parents can also socialize their children into consumer habits not just through their instructions, but also through their own behaviors. Similarly to how gender roles are perceived and passed on from parents to children, parents teach their children consumer roles through their actions. Parents often pass their attitudes about gender roles to their children, usually resulting in increased congruence between the gender role attitudes of the children and their parents (Marks, Bun Lam, and McHale 2009). If women, as the ultimate consumers, are attempting to pass along this notion of consumerism as a gendered characteristic, it is possible that adolescent girls will have more money spent on them by their parents. In this

way, the increased expenditures on daughters (especially by mothers) would reiterate the notion that it is socially acceptable for women to be seen as a dominant consumer.

As Scott (1976) has pointed out, female consumption is extensive and frequent. The role of women as an important consumer has taken a focus in Western society, and a gendered, feminine role has become associated with consumerism. Even in the early nineteenth century, accounts of “rampant” female consumerism have been reported in Western society. Interestingly, the anxiety connected towards female consumerism throughout history has been associated with men’s fear of increased consumer opportunity for women, as it threatened their economic control over the household (Sievens 2006). Scott also connects consumerism with female empowerment and indicates that women have a powerful purchasing role (Scott 1976). For example, Dholakia (1999) states how many women are the primary shoppers for their household, a practice that has continued from past decades where traditionally, the domestic sphere of the home fell under the domain of the female. However, in addition to this role as the family shopper, women began to accrue more purchasing power over the decades, and now the consumer role has largely been assigned to females (Dholakia and Chiang 2003). As this notion of women as serious consumers continues to expand, women (and men) might further socialize daughters into this role as well. If this is the case, it is possible that parents unconsciously spend more money on daughters because they perceive it as normative for women to spend more financial resources and have more spent on them. If households with daughters spend more money, this may be in part due to families encouraging and enabling daughters to spend more money on particular items such as clothing, health care products, and health-related services in route to becoming specialized consumers. This in turn may help further legitimize and perpetuate the growing emphasis on consumerism as being engendered by women.

This research question seems even more important and necessary when the growing power of children as consumers is taken into consideration. In 2000, the median age of first-time purchases was eight years old (Meyer and Anderson 2000). Additionally, in 1998 over 31 billion dollars were spent by children aged between eight and eighteen years of age on food and beverages, toys, clothes, entertainment, and personal items. However, it is likely that the majority of money spent by children on such goods is provided by the children's parents, especially for younger children. Children are therefore acquiring money from their parents for their own spending purposes. Not only do parents spend money on products and services for their children, but they also distribute money among their children to buy things for themselves. However, it remains unknown as to whether this form of parental expenditure differs between girls and boys. Brusdal and Berg's (2010) study in Norway focused on this issue by examining the types of purchases for which children solicited parentally-supplied funds. However, Brusdal and Berg did not use direct measures of parental spending. Instead, they asked children to report what kinds of products they believed they would have more success in persuading their parents to buy for them. In this case, the only significant finding was that girls were more likely than boys to believe that their parents would buy books for them (Brusdal and Berg 2010).

The main hypothesis tested in the current study (that adolescent daughters end up having more money spent on them by their parents) is based upon different characteristics being attributed to girls than boys in past research. One such characteristic associated with daughters is that they spend more time participating in expensive extracurricular activities, such as music and art-related activities (Dumais 2006). Lareau (2003) found that elementary school-aged children from middle-class backgrounds were more likely to be enrolled in scheduled, structured activities than their peers from working-class families. Not only does this identify a potential

way in which there is differential parental investment, it also shows the need to control for social class, as structured activities, such as team sports or music lessons, are inevitably more costly than unstructured activities such as “hanging out” or watching television. If daughters are in fact participating more in more costly extracurricular activities, this may contribute to more money being spent by parents on daughters than sons.

Parents might also spend more money on health care for daughters compared to sons. Cameron and Bernardes (1998) have shown that health care is thought to be a female “domain.” They explain how this is the popular, socialized belief that women should care about health and be active in supporting healthful behaviors, while men are often allowed to be more passive in their health as a characteristic of masculinity. However, this common pattern places more of the responsibilities of health care on women. Therefore, if women continue this socialization with their daughters and spend more on health care visits and health care products for their daughters, this may contribute to an increased amount of finances spent on girls compared to boys.

If significant gender differences exist in spending on children (especially on important expenses such as medical costs), there are many implications for how children are socialized as consumers within the family and for personal well-being and familial relationships. Even though such a correlation could arise in the process of purchasing only necessities for a child (as it could potentially turn out that either sons or daughters require additional financial support), this unintentional differential treatment could nonetheless be interpreted by another sibling to be intentional preferential treatment on the part of the parents. As previous research has shown, parental differential treatment can undermine the well-being of children and the relationship between siblings. Parental preferential treatment has been shown to induce lower self-esteem and more depressive symptoms among children, diminishing their well-being (Daniels et al. 1985).

Furthermore, sibling negativity can develop as a result of one sibling's feeling like the recipient of negative differential treatment (Brody, Stoneman, and McCoy 1992). The gender of the parents and of the children receiving either differential positive or negative treatment has no moderating effect. In other words, gender is irrelevant in that the differential treatment of both parents can enhance depressive symptoms and feelings of sibling negativity for children of either gender (Shanahan et al. 2008).

The current study begins this careful examination that we must make of our consumer culture from within the family. Past research has shown how gendering within the family affects the individual, the family, and the greater society. If we are to breakdown the stereotype and its ripple effect on the female consumer, then we must research its beginnings, by examining whether this is further perpetuated by spending more money on adolescent daughters compared to adolescent sons.

CHAPTER THREE

RESEARCH PROBLEM AND HYPOTHESES

This study tests the hypothesis that parents spend more money on adolescent girls compared to adolescent boys on three types of expenditures. As described in more detail below, the dataset places some limitations on the direct connection of family spending to the individual receiving the goods purchased. Therefore, it is hypothesized that households with daughters will have higher expenditures than households with sons, particularly pertaining to child-oriented purchases, such as children's clothing, education, and health-related needs. The rationale for this hypothesis is that this pattern of higher expenditures on several different items might be contributing to the phenomenon in which young girls are socialized to become active consumers. Structural functionalist scholars might argue that the socialization of consumerism remains one of the key functions of the modern family. As women have steadily increased their economic and political authority, women have begun to claim the dominant role as modern consumers. While the debate continues as to whether the role of consumer empowers women as capable buyers or denigrates women as careless spendthrifts, it remains clear that women might be socialized into this role within their families at an early age (Newcomb and Rabow 1999). Additionally this hypothesis might be supported by the notion of differential support for daughters over sons, even if this support is unintentional.

This study addresses three main hypotheses and four sub-hypotheses. First, it is hypothesized that households with daughters will allocate more funds for four particular items, each forming its own sub-hypothesis. In other words, the first hypothesis is that households with daughter will spend more on apparel, beauty and hygiene, medical costs, and education. These

three sub-hypotheses arise from theories on daughters' socialization as consumers of products that are associated with the "female domain." As daughters are encouraged or persuaded to purchase more of such products, it could reasonably be expected that parents will spend more money in these areas for daughters than for sons. Second, it is hypothesized that households with daughters spend the same amount on extracurricular activities as households with sons. This hypothesis anticipates a similarity between what parents spend on sons and daughters due to the nature of the available data (as individual extracurricular expenses are not separately listed, but are instead aggregated). For instance, while Dumais (2006) found that girls participated in more expensive extracurricular activities, the dataset for the present study lacks the breadth of activities portrayed through her study. Therefore, even if households with daughters do spend more on extracurricular activities, this dataset may show only a weak connection.

Additionally, the Trivers-Willard hypothesis will be tested as the third hypothesis of this study. Household expenditures of low-income families will be compared with those of high-income families in testing whether there is an interaction effect between gender and socioeconomic status on parental expenditures. If the results show that lower-income families spend more on daughters while higher-income families spend more on sons, then the Trivers-Willard hypothesis will be supported, further emphasizing the potential implications of differential parental spending on children.

CHAPTER FOUR

METHODS

Data

The current study analyzes secondary data collected from the 2008, 2009, and 2010 Consumer Expenditure Survey compiled by the United States Department of Labor, Bureau of Labor Statistics. The data used for this study comes from the Diary Survey data subset, in which parents detailed their various expenditures over the course of two consecutive weeks. Being a trend study, a new sample of individuals was surveyed for each new period of two weeks for data collection. Data was collected through a combination of computer assisted personal interviews (CAPI) and face-to-face interviews. Adult household members reported both large and small expenditures that accrued over the two-week study period. Additionally, respondents also reported on their average annual, monthly, and weekly expenses. Data was compiled from all three consecutive studies in order ensure a sample size large enough for the statistical analysis to be reliable. In analyzing such a detailed dataset as a secondary source, this analysis was able to take advantage of the many different direct measures of parental spending habits in order to determine how much money was spent on sons compared to daughters. Such measures include variables that detail the amount of U.S. dollars spent on apparel, beauty and hygiene products, medical expenditures, and other commodities of daily living. While this dataset contains information pertaining to the overall expenses of the household, some variables (such as for clothing) are included that specifically measure the monetary resources spent on items used explicitly by the children in the household.

Sample

The sample used for the proposed study was taken from the Consumer Expenditure Survey: Diary Survey for 2008, 2009, and 2010. This study only examines parental expenditures in families of adolescent children. A child is classified as an adolescent if they are between the ages of 12 and 17 years old. The resulting sample consisted of 784 households with one adolescent child, and 389 households with two adolescent children, providing a total sample of 1,173 households. This subset of the sample was selected because it represents a specialized group of children. This is the age where we not only expect the most variability in expenditures for children, but it is also the age where parents are most heavily invested in their children (Freese and Powell 1999). Additionally, it can be expected that it is in adolescence that differences in gendered socialization into consumerism become most evident. By examining only families with adolescent children, this research analyzed parental expenditures at a point where any difference in parental spending is presumed to be most pronounced for these families.

Measures

Expenses. Five dependent variables were used to measure the expenses accrued by parents when paying for apparel, beauty or hygiene products, medical services, education supplies, and extracurricular activities for their children. The unstandardized coefficients were used for analyzing these variables, indicating differences in amounts of (U.S.) dollars that occurred over two weeks. When creating the indexed variables to measure the amount of money spent on apparel and beauty or hygiene products, some of these individual items were conveniently classified in the dataset as boys' items or as girls' items, which clearly establishes the gender of the child for whom the product was purchased. For all of these outcome variables, different measures were combined into an index of the sum of the expenditures for children's

educational needs, health needs, extracurricular activities, and appearance needs, respectively. For example, expenditures for children's private school tuition were added to expenditures for children's daily school supplies to create a measure of *educational expenses*. Meanwhile, there were two indexes of appearance expenses. One measure included *apparel expenses* for items such as boys' clothing or girls' clothing, whereas the other measure included *beauty and hygiene products* such as haircuts, makeup, and shaving expenses. A measure of *extracurricular activities expenditures* was also created by adding the costs of general recreational activities, sports equipment, and musical instruments. Finally, a measure of *medical expenses* was created by summing expenditures on health-related services and products such as prescription drugs, physician visits, and dental costs. (For a full list of individual expenditures that comprise each outcome measure, please see Appendix A.) These outcome measures all served as dependent variables.

Some of these expenditures were extremely skewed including education in both the one-child and two-child families, extracurricular in the one-child families, and medical expenditures in two-child families. To reduce this skewness, these expenditures were truncated. Education is truncated at a value of \$300. For one-child families, this truncation reduces skewness from 16.303 to 5.473. For two-child families, this truncation reduces skewness from 19.879 to 5.388. Extracurricular activities was truncated at \$300, which reduces skewness from 18.168 to 6.058 in one-child families and from 4.767 to 4.175 in two-child families. Medical expenses are truncated at \$1500. All values for one-child families were less than \$1500 so that skewness value remained at 4.591. For two-child families, this truncation reduced skewness from 6.875 to 4.876.

Gender. Gender of the child was used as the independent variable in testing whether parents spend more money on sons or daughters. A dummy variable was created for gender,

using male children as the reference category coded as 0. For single-child households, female children were compared to this reference category, coded as 1. Meanwhile, in households with two children, households with two male siblings acted as the reference category (0) and were compared to households with two female siblings and households with mixed-sex siblings.

Socioeconomic Status. For education, those with just a high school diploma will be compared to those with some college, those with a college degree, and those with less than a high school diploma. Income was measured as an income ranking, since earnings were truncated on the upper end of the range at \$70,000. Therefore, the income ranking variable provided a more detailed comparison of income for families at the upper end of the distribution. The income ranking used percentages to indicate how household income compares to the total population. As previous tests of the Trivers-Willard hypothesis have not used income independently to measure socioeconomic status, there are no guidelines for categorizing levels of income. Therefore, this study compared parents with average income to those who are one standard deviation above (high income) and below the average (low income). These measures for socioeconomic status were then used to test the Trivers-Willard hypothesis to determine if low-status families spend more for daughters while high-status families spend more for their sons.

Sociodemographic Control Variables. As family structure and race-ethnicity might have an impact on the relationship between parental spending and the gender of their child, it was important to control for each of these characteristics. *Race/ethnicity* was classified as Non-Hispanic White, Non-Hispanic Black, Asian, Hispanic, and Other. Due to the small sample size, American Indian or Alaskan Native, multi-race respondents, and other race respondents were all combined and coded as “Other.” Non-Hispanic Whites served as the reference category, and were thus compared with the remaining four racial and ethnic categories. Additionally, any

Hispanic respondent was coded as such regardless of race. *Parental marital status* was comprised of three categories, indicating parents who were married, who were previously married, or who have never married. Those who are widowed, divorced, or separated were all coded as previously married. (Appendix B describes the control variables.) Finally, since data was collected from three consecutive years of the Consumer Expenditure Survey, a control for the *year* of the data was used to ensure that the data is not influenced extraneously by a particular year.

Data Analysis

Multiple regressions were used in order to determine if there are any patterns in spending for one gender over the other. The aforementioned control variables were included to ensure that the analysis of parental spending between genders is not impeded upon by outside variables. In one-child families, simple gender differences were computed for adolescent boys and adolescent girls. In two-child households, families with one child of each sex served as the reference category. They were compared to households with two daughters and households with two sons. Households with one-child families and two-child families were analyzed separately. This method was used to decrease potential biases that could possibly arise when simply analyzing one-child homes, since these households might have very similar compositions regarding wealth and financial resources. Model 1 of each regression tested the dependent variable of parental expenditures with the independent variable of gender for the child(ren). Model 2 added the control variables, ensuring that any extraneous effects would be accounted for in this model. Finally, an interaction between social class (indicated by income and education) and the children's gender by parental expenses was run in order to test the Trivers-Willard hypothesis.

CHAPTER FIVE

RESULTS

Table 1 shows the descriptive statistics. Two-child families spend more on all expenses except for educational expenses. Forty-eight percent of one-child families have an adolescent girl, whereas fifty-two percent of one-child families have an adolescent boy. Fifty-one percent of two-child families have mixed-sex children, whereas twenty-two percent have two girls and twenty-eight percent have two boys. One-child families have a higher percentage of low income households compared to two-child families (22% for one-child families and 14% for two-child families). A higher percentage of two-child families are high income compared to one-child families with 25% and 18%, respectively. Compared to one-child families, a smaller percentage of two-child families are African American (14% for one-child families and 7% for two-child families) and a larger percentage are non-Hispanic white (68% for one-child families and 75% for two-child families). A larger percentage of parents in one-child families are high school graduates (29% for one-child families and 23% for two-child families), whereas a larger percentage of parents in two-child families are college graduates (29% for one-child families and 38% for two-child families). In one-child families, 14% of parents are never married, 24% have previously been married, and 62% are currently married. In two-child families, 5% of parents are never married, 18% are previously married, and 77% are currently married. For two-child families, roughly a third are from each year. For one-child families, a slightly larger percentage is from 2008 than 2010 with 37% for 2008, 34% for 2009, and 29% for 2010.

Single-Child Households

Apparel

Table 2 presents the results for expenditures in one-child households. As shown in Model 1, parents with daughters spend more money on apparel than parents with sons ($b = 10.97$; $p < .01$). This association remains largely unchanged in Model 2 ($b = 10.78$; $p < .01$). This result provides support for this study's hypothesis that, on average, single-child households with daughters spend more money on apparel than do single-child households with sons. Some of the control variables are also significant. For instance, high-income parents spend more on apparel ($b = 20.61$; $p < .001$) than middle-income parents. Never-married parents tend to spend more on children's apparel ($b = 13.47$; $p < .05$) than married parents. Interestingly, the control for the year 2008 was marginally significant, indicating that parents spent more money on children's apparel in 2008 than in 2010 ($b = 9.61$; $p < .10$), whereas the year 2009 does not significantly differ from 2010. This finding could be indicative of a progressive curtailing in spending on children as the effects of the economic recession became more severe between 2008 and 2010.

Beauty/Hygiene

Parents in single-child households do not seem to spend a significant amount more on beauty and hygiene for girls than for boys. However, the regression for beauty and hygiene products does show that one particular control has a highly significant correlation with spending on beauty and hygiene: high-income. Parents in one-child families with high income are much more likely to spend more money on beauty and hygiene products ($b = 42.34$; $p < .001$) than parents with middle income. While this was the only significant difference in spending for beauty and hygiene products, it is not particularly surprising. As parents' income grows, it becomes more acceptable and affordable to purchase beauty and hygiene products for their

children, items that may seem trivial or unnecessary to low-income families.

Medical

Some gender-based differential spending exists for children's medical expenses. Households with a daughter are spending more on medical expenses than are households with a son ($b = 17.36$; $p < .10$ in Model 1 and $b = 18.19$; $p < .10$ in Model 2). Similar to the results for apparel, the results for medical expenses in one-child households show that two control variables – race and education – are statistically significant. For example, Asians, African Americans, and those who classified as “Other” for their race spend a significantly different amount on medical expenses for their children. Asians ($b = -55.72$; $p < .05$) and African Americans ($b = -28.07$; $p < .10$) tend to spend less than whites on medical expenses, while those classified as “other” race spend more than whites ($b = 86.29$; $p < .05$). Additionally, college-educated parents spend more money on medical expenses than parents with only a high school diploma ($b = 31.41$; $p < .05$).

Education

Expenses for education appeared to be another category in which one-child households with daughters spend more money when compared to one-child households with sons ($b = 4.38$; $p < .05$ in Model 1 and $b = 4.38$; $p < .05$ in Model 2). Similarly to medical expenses, parents in one-child households who are college educated tend to spend more money on education costs ($b = 9.55$; $p < .001$) than those with only a high school diploma. However, parents with some college or less than a high school diploma do not statistically differ from those with a high school diploma.

Extracurricular activities

As expected, parents in one-child families with daughters did not spend a significantly different amount on extracurricular activities than parents in one-child families with sons. Again,

parents who are college graduates spend more money on their children ($b = 5.84; p < .05$) than parents who are only high school graduates, but this time it is for expenditures on extracurricular activities. Interestingly, the year 2008 once again emerged as a control variable that was statistically significant ($b = 7.12; p < .01$) from the year 2010. Additionally, the coefficient for 2009 was significant ($b = 7.61; p < .01$) from 2010 as well this time. This shows that, once again, parents in one-child families spent more money in 2008 (and 2009) than in 2010, but in this case, money spent was towards extracurricular activity expenditures.

Two-Child Households

Apparel

The significant gender differences in parental spending that occur in one-parent families are not present in two-child families. By examining the results in Table 3, it can be seen that none of the coefficients for the variables measuring gender are statistically significant. The only significant differences were found for some of the control variables. First, when examining expenses for apparel, it can be seen that on average, parents who have never married spend a significant amount more on apparel than do married parents ($b = 42.15; p < .05$).

Beauty/Hygiene

Even more controls are shown to influence differential parental spending on beauty and hygiene products in two-child households. High-income parents spend more on beauty and hygiene than middle-income parents ($b = 22.77; p < .01$). Additionally, education seems to influence spending on beauty and hygiene products in two-child households. Parents with some college education ($b = 24.38; p < .01$) and college-graduated parents ($b = 18.88; p < .05$) in two-child homes spend more money on beauty and hygiene products than parents with only a high school diploma.

Medical, Education, and Extracurricular

Regarding both medical and extracurricular expenses, the control for high-income parents was again the only control that was found to be statistically significant. Therefore, high-income parents in two-child households are shown to spend a higher amount of money on medical expenses ($b = 71.91$; $p < .01$), educational expenses ($b = 6.04$; $p < .05$), and extracurricular activities ($b = 11.69$; $p < .05$) compared to middle-income parents. This is also fairly unsurprising, as those who cannot afford these types of expenses likely go without these resources.

Trivers-Willard Hypothesis

When testing the Trivers-Willard hypothesis, multiple regressions using the three income levels of high, average/middle, and low income to represent class differences, which were used to construct the gender-by-class interaction effects. Like the first set of multiple regressions, these interaction effects were run for both single-child and two-child households in order to determine whether high-status families spend more money on sons while low-status families spend more money on daughters. Table 4 shows these results. For the one-child families, no significant interactions were found. For the two-child families, only one marginally significant interaction was found. The interaction of high income by both female was marginally significant ($b = -14.43$; $p < .10$). Since the main effect of high income was also significant ($b = 10.29$; $p < .10$) and the interaction for mixed-sex siblings was insignificant, this interaction indicates that high-income families with both boys and/or mixed-sex siblings spent more on educational expenses than middle-income families, but those with both girls spent slightly less on educational expenses. This finding supports the Trivers-Willard hypothesis.

Additionally, high income was significant in four of the other models. High-income

households spent more on beauty and hygiene products in both one and two-child households and spent more on medical expenses and extracurricular activities in two-child households.

Table 5 shows additional tests for interactions of educational attainment of parents by child's gender. Some marginally significant interaction effects were found. In one-child families, parents with some high school spent more on apparel for girls than on boys ($b = 26.05$; $p < .10$), which supports the Trivers-Willard hypothesis. The other two marginally-significant interactions contradict the Trivers-Willard hypothesis. In one-child families, college-graduated parents spent more on educational expenses for girls than boys ($b = 9.65$; $p < .10$). In two-child families, parents with some college who have two girls spent more money on medical expenses ($b = 125.87$; $p < .10$) than those with two boys.

Overall, the interactions are contradictory regarding the Trivers-Willard hypothesis (two interactions support and two contradict). Additionally, the interactions were only marginally significant. Thus, the interactions indicate that, for the most part, SES had a weak and contradictory role in modifying gender differences in parental spending. Nonetheless, the results from this study were scrutinized further, whereby the VIF statistics were examined in order to test for collinearity. Every VIF value was at 1.955 or below. Since even 2.0 is a very weak statistic for multicollinearity, these statistics indicate that multicollinearity is not problematic in the results of this study.

CHAPTER SIX

DISCUSSION AND CONCLUSION

The purpose of this study was to determine if parents spend more money on items for adolescent sons or for adolescent daughters, in order to more clearly identify patterns of differential spending based on gender. While this study did not find significant differences in spending based on gender with two-child households, there were considerable gender-based differences that were present between girls and boys in single-child households. Parents in single-child households with girls were shown to spend a significant amount more on apparel, education, and medical expenses.

Additionally, the control variables demonstrated how people from particular demographics may spend more (or less) on particular items as well. For instance, for one-child households, high-income households spend more on both apparel and beauty/hygiene products when compared to low- and medium-income households. Similarly, two-child households with high income spend more across all expense categories with the exception of apparel.

These results have important implications regarding inequalities shown through differential spending. Primarily, these findings show that some gender-based spending patterns for parents do exist. For instance, parents in single-child households with daughters spend more money on apparel, medical goods and services, and education than they would if they had sons. While differential spending may not be detrimental in regards to apparel, reduced spending for sons on medical expenses and education could potentially be problematic. Adolescent sons in one-child households may be at a disadvantage when it comes to having their medical expenses or education financed by their parents. This could result in more sons in single-child homes

receiving public education, while private education could be more likely to be provided by parents for daughters single-child households.

Inequality by parents' socioeconomic status is also evident by significance of income and education as predictors of goods and services provided to their children. High-income parents spend more on almost every category with the exception of education. Additionally, in comparison to parents with less education, college-educated parents spent more money on education and medical expenses in one-child families and beauty and hygiene products in two-child families. These results show that parents with a lower socioeconomic status are not spending as much on these items. This is most likely because they cannot afford to spend as much as families with higher SES. This could again prove problematic when considering medical and education expenses. If households with lower SES are spending less on these goods and services because they cannot afford even the necessary amounts, this could greatly impair their children's access to medical care or to quality education.

The results also have implications for socialization into consumer culture within single-child households. As apparel and health care expenses may be considered part of women's domain, it is possible that adolescent girls in single-child households are receiving more money in these categories due to this socialization process. As such parents generally spend more money on apparel for daughters than for sons, this may be an unintentional reinforcement of what girls should be interested in and that hyper-consumption of these related products is acceptable and accepted. The tendency of single-child parents with a daughter (compared to those with a son) to spend more on apparel, education, and medical expenses may further encourage young daughters to develop their roles as prominent consumers. What this study does not test, however, is whether this image of women as frequent and active consumers is a positive connotation offering

empowerment and economic control, or a negative stereotype indicating frivolous consumption and a lack of economic control or knowledge.

Again, it is important to note that the gendered differences in parental spending mentioned above were found only in single-child households. No significant differences were found for two-child households. While this may seem surprising, various factors could help explain why these gender differences were not found in two-child families. For instance, the small sample size used in this study could limit the statistical significance of any difference that potentially exists. Another potential factor could be the additional strain on limited resources that two-child households might experience. Finally, it is possible that these results are due to measurement error, as it is very difficult to differentiate the person each purchase was intended for, due to the indirect measure of expenditures that was used. Future research using more direct measures of parental expenditures that are linked to a particular child could prove crucial in future research for determining if these differences do exist in two-child families.

This study does not support the Trivers-Willard hypothesis, which predicted that low-status families would provide more resources for daughter while high-status families would provide more for sons. Instead, it joins the ranks of studies that do not support this hypothesis (Freese and Powell, 1999) by showing weak and contradictory findings. Mixed results of the Trivers-Willard hypothesis continue to leave ambiguity regarding the interaction of gender and socioeconomic status on parental spending. The findings of this study also offer only minimal support to the Trivers-Willard hypothesis of differential investment. Additionally, as will be discussed below, two study limitations that potentially affected these results are the limited measure of socioeconomic status as well as the limited range of children's ages examined in this analysis. As future studies continue to test this hypothesis, it may become clearer as to whether

or not there are in fact status-based discrepancies in spending on sons versus daughters.

This study had several limitations. First, the data does not designate which items or services parents purchased for one child rather than for multiple children, for themselves, or for the entire family. For example, some purchases for specific children, such as school-related expenditures and medical expenditures, are not identified in this dataset. In this way, expenditures are not directly linked to each adolescent. Second, only two weeks of data are collected for this sample, which limits the scope of purchases made and expenditures accrued over the short course of the study. Additionally, it is impossible to identify families that include cohabitating adults, which might also impact the findings as cohabitating couples can differ demographically from married couples. Two additional limitations apply directly to testing the Trivers-Willard hypothesis. Despite the usefulness of occupational prestige as an indicator of socioeconomic status, it is not included in this study, leaving income and education as the variables indicating the family's SES when testing the Trivers-Willard hypothesis. Finally, this study does not study families with children of all ages, just those with adolescents aged from twelve to seventeen years old. By not looking younger children, this analysis may overlook differential investments in children that vary by age of the child.

Future research is needed on parental patterns of spending on sons and daughters. First, a quantitative study that connects household expenses to specific recipients should be explored in future studies. In that case, differences in expenditures could be directly tied to particular children, which could result in significant findings particularly for households with two children, which is one of the restrictions on the data for this study. Second, further examination of differences between one and two-child households is necessary in order to determine whether there are other extraneous factors that play some part in the gender-based differences between

one- and two-child households. This will contribute to the existing literature on familial relationships (especially between siblings) if any differential spending patterns exist. Finally, additional research on female consumer habits and patterns would further elucidate the extent to which more money spent by parents in households with girls is contributing to a gendered socialization of daughters into consumer culture.

Conclusion

In summary, this study has found that parents in one-child households spend more money on apparel, education, and medical expenses for daughters than for sons. While these results were not found in two-child households, they do hold implications for socialization into consumer roles and inequalities that exist for families regarding spending, specifically for low SES families. Additionally, this study did not find support for the Trivers-Willard hypothesis. Further research on this topic is still necessary as recent study results (including the current study) have been fairly mixed. Despite the limitations of this research, the findings for one-child households identify important patterns in the spending habits of parents on their children, adding to knowledge about parental spending on their children.

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APPENDIX A: Detailed Measures – Independent Variables

Apparel Expenditures

Variable:	Item:
370110	Boys' coats, jackets, and furs
370130	Boys' shirts
370211	Boys' underwear
370312	Boys' pants
390110	Girls' coats, jackets, and furs
390120	Girls' dresses and suits
390210	Girls' sport coats, jackets, shirts, sweaters, and vests
390221	Girls' skirts, culottes, and pants
390230	Girls' active sportswear
390310	Girls' undergarments and sleepwear/loungewear
390322	Girls' accessories
400210	Boys' footwear
400220	Girls' footwear

Beauty and Hygiene Expenditures

Variable:	Item:
640110	Hair care products
640210	Oral hygiene products, articles
640220	Shaving needs
640310	Cosmetics, perfume, cologne, bath preparations, hand soap, face and body powder, skin care products, nail preparations, manicure and eye make-up implements and accessories
640410	Deodorant, female hygiene products, miscellaneous personal care products and supplies
640420	Electrical personal care appliances
650110	Personal care services for females, including haircuts
650210	Personal care services for males, including haircuts

Health Expenditures

Variable:	Item:
540000	Prescription drugs and medicines
550110	Purchase of eye glasses or contact lenses, excluding exam fee
550210	Over-the-counter drugs
560110	Physicians' services
560210	Dental services
560310	Eye exams, treatment or surgery, glass/lens service, glasses repaired
560330	Lab tests and x-rays
560400	Services by medical professionals other than physicians

Education Expenditures

Variable:	Item:
660000	School supplies., etc., including reference books not in a set
660210	School books, supplies, and equipment for elementary and high school
670902	Rentals of books and equipment, and other school-related expenses
670210	Tuition for elementary and high school
670901	Tuition for other schools

Extracurricular Expenditures

Variable:	Item:
620310	Fees for recreational lessons or other instructions
600430	Winter sports equipment
600900	Water sports and miscellaneous sports equipment
610130	Musical instruments and accessories
620121	Fees for participant sports, such as golf, tennis, and bowling

APPENDIX B: Detailed Measures – Control Variables

Socioeconomic Status

Variable:	Description:
INCLASS	Income class of CU based on income before taxes (Codes 01 through 09 are for CUs considered complete reporters of income) 01 Less than \$5,000 02 \$5,000 to \$9,999 03 \$10,000 to \$14,999 04 \$15,000 to \$19,999 05 \$20,000 to \$29,999 06 \$30,000 to \$39,999 07 \$40,000 to \$49,999 08 \$50,000 to \$69,999 09 \$70,000 and over

Race or Ethnicity

Variable:	Description:
MEMBRACE	Race of Member 1 White 2 African American, or Black 3 American Indian, or Alaskan Native 4 Asian 5 Native Hawaiian or Other Pacific Islander 6 Multi-race 7 Other

Family Structure

Variable:	Description:
MARITAL	Is the member now . . . ? (Marital status) 1 Married 2 Widowed 3 Divorced 4 Separated 5 Never married

APPENDIX C: Tables

Table 1. Descriptive Statistics for Study Variables

	One-Child	Two-Child
	Mean (SD)	Mean (SD)
Apparel	17.47 (56.91)	31.64 (67.45)
Beauty/Hygiene	33.39 (64.90)	42.09 (62.96)
Medical	54.66 (132.46)	73.75 (177.92)
Education	6.64 (28.82)	5.78 (23.46)
Extracurricular	7.04 (29.36)	14.80 (43.74)
Adolescent Girl (in One-Child Families)	.48 (.50)	
Adolescent Boy (in One-Child Families)	.52 (.50)	
Mixed Sex (in Two-Child Families)		.51 (.50)
Both Females (in Two-Child Families)		.22 (.41)
Both Males (in Two-Child Families)		.28 (.45)
Low Income	.22 (.42)	.14 (.35)
High Income	.18 (.38)	.25 (.44)
Middle Income	.60 (.49)	.60 (.49)
African American	.14 (.35)	.07 (.26)
Hispanic	.13 (.33)	.13 (.33)

Asian	.03 (.18)	.04 (.20)
Other	.02 (.13)	.01 (.11)
Non-Hispanic White	.68 (.47)	.75 (.44)
College Graduate	.29 (.46)	.38 (.49)
Some College	.32 (.47)	.31 (.46)
Some High School	.10 (.30)	.08 (.27)
High School Graduate	.29 (.46)	.23 (.42)
Never Married	.14 (.35)	.05 (.22)
Previously Married	.24 (.43)	.18 (.39)
Currently Married	.62 (.49)	.77 (.42)
2008	.37 (.48)	.33 (.47)
2009	.34 (.47)	.32 (.47)
2010	.29 (.45)	.35 (.48)
N	784	389

Table 2. Expenditures for One-Child Households

	Apparel	Beauty/Hygiene	Medical	Education	Extracurricular
Model 1					
Adolescent Girl ^a	10.97** (4.05)	4.25 (4.64)	17.36+ (9.46)	4.27* (2.06)	2.08 (2.10)
Intercept	12.21	31.35	46.34	4.59	6.04
R-Squared	.009	.001	.004	.005	.001
Model 2					
Adolescent Girl ^a	10.78** (4.03)	4.72 (4.45)	18.19+ (9.38)	4.38* (2.05)	1.93 (2.09)
Low Income ^b	-5.28 (5.45)	-4.73 (6.02)	-7.41 (12.68)	-1.55 (2.77)	-3.55 (2.82)
High Income ^b	20.61*** (5.89)	42.34*** (6.51)	1.13 (13.71)	2.92 (3.0)	.56 (3.05)
African American ^c	-7.23 (6.23)	-6.25 (6.89)	-28.07+ (14.51)	-1.27 (3.17)	-6.07 (3.23)
Hispanic ^c	-5.60 (6.39)	.96 (7.06)	-.48 (14.87)	-2.92 (3.25)	-5.42 (3.31)
Asian ^c	-10.42 (11.16)	.36 (12.34)	-55.72* (25.98)	-5.90 (5.68)	-7.89 (5.78)
Other ^c	-2.57 (15.89)	-14.04 (17.57)	86.29* (36.99)	4.56 (8.08)	-6.88 (8.23)
College Graduate ^d	.97 (5.67)	9.49 (6.27)	31.41* (13.20)	9.55*** (2.88)	5.84* (2.94)
Some College ^d	-2.07 (5.19)	4.24 (5.74)	13.80 (12.09)	3.72 (2.64)	3.17 (2.70)
Some High School ^d	11.80 (7.53)	-7.98 (8.32)	.05 (17.52)	4.56 (3.83)	5.16 (3.90)

Never Married ^e	13.47* (6.54)	-1.83 (7.23)	-22.95 (15.22)	1.65 (3.33)	-.72 (3.39)
Previously Married ^e	2.26 (5.13)	-5.77 (5.68)	-15.45 (11.95)	-3.94 (2.61)	-1.04 (2.66)
2008 ^f	9.61+ (5.01)	7.50 (5.54)	17.67 (11.66)	1.02 (2.55)	7.12** (2.59)
2009 ^f	.19 (5.10)	.24 (5.64)	8.42 (11.88)	-.40 (2.60)	7.61** (2.64)
Intercept	5.09	21.12	35.84	1.11	.628
R-Squared	.05	.10	.05	.04	.04
N	784	784	784	784	784

* $p < .05$ level; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Numbers in parentheses are standard errors.

^a Compared to an adolescent boy.

^b Compared to average-income families.

^c Compared to non-Hispanic white.

^d Compared to high school graduate.

^e Compared to married.

^f Compared to 2010.

Table 3. Expenditures for Two-Child Households

	Apparel	Beauty/Hygiene	Medical	Education	Extracurricular
Model 1					
Mixed Sex ^a	7.33 (8.08)	3.58 (7.56)	-15.12 (21.33)	-.22 (2.82)	3.84 (5.24)
Both Female ^a	13.87 (8.08)	6.23 (9.19)	-26.65 (25.94)	-.74 (3.43)	-3.43 (6.37)
Intercept	24.83	38.81	87.02	6.03	13.54
R-Squared	.005	.001	.003	.000	.005
Model 2					
Mixed Sex ^a	3.46 (8.27)	2.84 (7.57)	-20.96 (21.51)	-.90 (2.89)	2.80 (5.29)
Both Female ^a	10.92 (10.03)	4.07 (9.18)	-35.17 (26.09)	-1.31 (3.51)	-6.41 (6.42)
Low Income ^b	2.82 (11.54)	-8.90 (10.57)	-3.68 (30.03)	-.39 (4.03)	-.47 (7.38)
High Income ^b	10.88 (8.77)	22.77** (8.03)	71.91** (22.82)	6.04* (3.07)	11.69* (5.61)
African American ^c	-3.18 (14.13)	-6.81 (12.94)	-39.08 (36.78)	-3.66 (4.94)	-8.91 (9.04)
Hispanic ^c	.63 (11.39)	-7.08 (10.43)	-46.05 (29.64)	-1.15 (3.98)	-10.19 (7.29)
Asian ^c	-27.20 (17.65)	-11.93 (16.16)	-55.16 (45.92)	-4.68 (6.17)	-13.51 (11.29)
Other ^c	5.08 (31.51)	-13.01 (28.85)	2.98 (81.99)	-2.19 (11.01)	-10.51 (20.16)
College Graduate ^e	12.62 (9.83)	18.88* (9.00)	.56 (25.59)	4.98 (3.44)	6.31 (6.29)

Some College ^e	.90 (9.81)	24.38** (8.98)	11.87 (25.52)	5.35 (3.43)	-2.21 (6.27)
Some High School ^e	4.77 (15.19)	8.38 (13.91)	-14.23 (39.53)	.98 (5.31)	-2.71 (9.72)
Never Married ^e	42.15* (16.99)	1.58 (15.56)	-26.84 (44.22)	-.35 (5.94)	-7.77 (10.87)
Previously Married ^e	-1.02 (9.94)	10.54 (9.10)	-17.82 (25.87)	1.31 (3.48)	-6.55 (6.36)
2008 ^f	7.02 (8.45)	-10.12 (7.74)	-3.77 (22.00)	1.17 (2.95)	-6.47 (5.41)
2009 ^f	10.14 (8.62)	-9.50 (7.89)	1.58 (22.43)	.28 (3.01)	1.33 (5.51)
Intercept	12.55	26.25	87.85	1.34	16.29
R-Squared	.043	.079	.068	.034	.068
N	389	389	389	389	389

* $p < .05$ level; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Numbers in parentheses are standard errors.

^a Compared to mixed-sex siblings.

^b Compared to average-income families.

^c Compared to non-Hispanic white.

^d Compared to high school graduate.

^e Compared to married.

^f Compared to 2010.

Table 4. Expenditures for One-Child and Two-Child Households with Interactions of Gender by Income

	Apparel	Beauty/Hygiene	Medical	Education	Extracurricular
One-Child Households					
Adolescent Girl ^a	6.81 (5.20)	1.17 (5.76)	22.73 (12.14)	4.81 (2.65)	-.45 (2.70)
Low Income ^b	-5.60 (7.11)	-8.61 (7.88)	-2.83 (16.60)	.23 (3.63)	-4.98 (3.69)
High Income ^b	10.21 (7.76)	37.83*** (8.59)	7.43 (18.11)	1.74 (3.95)	-4.04 (4.02)
Low Income x Adolescent Girl	-.06 (9.99)	8.22 (11.07)	-9.63 (23.32)	-3.99 (5.09)	2.80 (5.18)
High Income x Adolescent Girl	22.44 (10.88)	9.62 (12.06)	-13.47 (25.40)	2.60 (5.55)	9.90 (5.64)
Intercept	6.93	22.98	33.47	.80	1.81
R-Squared	.051	.104	.046	.039	.043
N	784	784	784	784	784
Two-Child Households					
Mixed Sex ^a	-.70 (10.41)	5.31 (9.53)	-6.14 (27.01)	-.99 (3.63)	4.16 (6.66)
Both Female ^a	2.27 (12.95)	12.14 (11.85)	-25.71 (33.59)	2.96 (4.51)	-1.44 (8.28)
Low Income ^b	-13.19 (21.55)	-11.21 (19.72)	-35.83 (55.90)	-1.69 (7.50)	-.47 (13.77)
High Income ^b	2.50 (16.36)	36.56* (14.97)	130.01** (42.44)	10.29+ (5.70)	19.12+ (10.56)
Low Income x Both Female	20.02 (33.93)	1.59 (31.05)	66.87 (88.04)	.23 (11.82)	5.12 (21.69)
Low Income x Mixed Sex	21.16 (25.40)	4.52 (23.25)	37.14 (65.91)	3.01 (8.85)	-.23 (16.24)

High Income x Both Female	21.83 (22.90)	-29.43 (20.95)	-70.03 (59.39)	-14.43+ (7.97)	-19.17 (14.63)
High Income x Mixed Sex	6.22 (19.81)	-13.36 (18.13)	-82.58 (51.40)	-1.52 (6.90)	-5.61 (12.67)
Intercept	16.39	23.89	81.37	.836	15.35
R-Squared	.047	.084	.078	.045	.074
N	389	389	389	389	389

+ < .10 level; * $p < .05$ level; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Numbers in parentheses are standard errors. Race-ethnicity, parents' education, parents' marital status, and year are all controlled in these models.

^a Compared to both boys.

^b Compared to average-income families.

Table 5. Expenditures for One-Child and Two-Child Households with Interactions of Gender by Education.

	Apparel	Beauty/Hygiene	Medical	Education	Extracurricular
One-Child Households					
Adolescent Girl ^a	4.35 (7.43)	5.00 (8.24)	21.89 (17.32)	1.30 (3.78)	2.59 (3.85)
College Graduate ^b	-6.76 (7.63)	10.37 (8.46)	38.37* (17.78)	4.99 (3.88)	3.94 (3.96)
Some College ^b	-1.10 (7.22)	2.72 (8.02)	6.68 (16.85)	1.90 (3.67)	5.47 (3.75)
Some High School ^b	-1.31 10.61	-4.09 (11.78)	22.13 (24.75)	9.29+ (5.396)	7.29 (5.51)
College Graduate x Adolescent Girl	16.07 (10.49)	-1.89 (11.65)	-14.74 (24.48)	9.65+ (5.34)	4.35 (5.45)
Some College x Adolescent Girl	-2.70 (10.34)	3.30 (11.47)	15.73 (24.11)	3.68 (5.26)	-4.88 (5.36)
Some High School x Adolescent Girl	26.05+ (14.77)	-7.71 (16.39)	-43.77 (34.44)	-9.15 (7.51)	-4.07 (7.66)
Intercept	8.53	20.94	33.76	2.53	.12
R-Squared	.054	.104	.050	.047	.043
N	784	784	784	784	784
Two-Child Households					
Both Girls ^a	6.50 (19.74)	13.25 (18.07)	-85.90+ 51.16)	.41 (6.91)	-12.82 (12.63)
Mixed Sex ^a	-14.09 (17.11)	3.70 (15.67)	-69.08 (44.35)	1.68 (5.99)	-8.53 (10.95)
College Graduate ^b	-4.74 (17.68)	28.18+ (16.18)	-41.92 (45.82)	5.11 (6.19)	-6.32 (11.31)

Some College ^b	-6.22 (17.57)	23.14 (16.09)	-32.88 (45.54)	9.69 (6.15)	-7.07 (11.24)
Some High School ^b	-2.29 (31.41)	7.72 (28.76)	-83.27 (81.40)	.75 (10.99)	-14.69 (20.09)
College Graduate x Both Girls	15.62 (25.38)	-24.85 (23.23)	35.13 (65.77)	1.42 (8.88)	10.86 (16.24)
College Graduate x Mixed Sex	29.63 (22.11)	-6.36 (20.24)	72.67 (57.30)	-1.28 (7.74)	21.20 (14.14)
Some College x Both Girls	.31 (28.39)	9.64 (25.99)	125.87+ (73.58)	-9.52 (9.93)	5.37 (18.16)
Some College x Mixed Sex	15.84 (22.11)	1.45 (20.24)	48.83 (57.30)	-5.59 (7.74)	8.54 (14.14)
Some High School x Both Girls	-13.95 (40.90)	-11.70 (37.45)	107.40 (106.01)	1.81 (14.31)	16.18 (26.17)
Some High School x Mixed Sex	21.60 (37.00)	7.19 (33.87)	80.33 (95.90)	-1.24 (12.95)	14.48 (23.67)
Intercept	20.92	23.27	121.00	-.23	22.84
R-Squared	.050	.086	.083	.038	.075
N	389	389	389	389	389

+ < .10 level; * $p < .05$ level; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Numbers in parentheses are standard errors. Race-ethnicity, parents' education, parents' marital status, and year are all controlled in these models.

^a Compared to both boys.

^b Compared to high school graduate.