

**Adolescents Assuming Adult Roles:
Factors Associated with Teens Providing Child Care for Younger Siblings**

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ABSTRACT

Recent experimental evidence has documented the negative effects of work-promoting welfare policies on adolescents. One potential explanation for these effects is that when parents must work, adolescents may be required to provide child care for younger siblings, occupying time that could be spent on homework or enrichment activities. This research has engendered questions about the extent to which adolescents are used as regular child care providers for their younger siblings. Using a theoretical framework derived from the child care choice literature and data from the child care topical module of the 1996 Survey of Income and Program Participation (fielded in 1999), this paper estimates logistic and OLS regression models to discern the family-level factors associated with the likelihood that a family will use adolescent child care and the amount of time this form of care is used. Models are run for single-parent and two-parent families separately. The findings indicate that among all families at risk of using adolescent care nationally (families with at least one adolescent and at least one child younger than 12), 20 percent regularly use this form of care for an average of 9.9 hours per week. Single-parent and two-parent families are equally likely to use adolescent care, but single-parent families use this form of care for longer amounts of time.

The results of the multivariate models indicate that the use of adolescent care and the amount of time it is used are related to different factors in single- and two-parent families. Among two-parent families, parental employment and work schedules are related to the use of adolescent care and the amount of time it is used. Interestingly, family income is also related to the use and amount of time adolescent care is used, but not in the way one might expect: low-income, two-parent families are less likely to use adolescent care, and use it for shorter amounts of time, compared to their higher-income counterparts. The age of the adolescent child is also related to the use of adolescent care, but neither the presence of a female adolescent in the family nor the age of the child in need of care appear to be related to the likelihood that adolescent care will be used.

Different relationships are observed among single-parent families. Employment status and work schedule, as well as income, are not closely related to the use of adolescent care or the amount of time it is used. Child characteristics, however, do appear to be related to the use of adolescent care. The age of the adolescent child is related to the use and amount of time that adolescent care is used, while the age of the child in need of care is related to the use of adolescent care. Interestingly, welfare receipt is also related to both the use and amount of time adolescent care is used: welfare families are less likely to use adolescent care, and use it for a shorter amount of time, than families not receiving welfare.

The results suggest a complex set of relationships between the use of adolescent care, the amount of time it is used, and different child and family characteristics, which play out differently in single- and two-parent families.

INTRODUCTION

Some of the most striking and unexpected findings to come out of recent welfare evaluations suggest that welfare and work policies can negatively affect the adolescent children of welfare recipients (Gennetian et. al 2002). This research has found that when welfare recipients are subject to mandatory employment activities, time limits, and other welfare policies, they are more likely to report a range of negative schooling outcomes for their adolescent children. These outcomes include below average school performance, grade repetition, and the increased use of special educational services.² Perhaps even more striking is the fact that these negative outcomes appear to be most pronounced among adolescents with younger siblings, who in addition to exhibiting larger negative schooling outcomes, are also more likely than their counterparts to be suspended or expelled from school and to drop out of school (Gennetian et. al 2002).

Researchers have hypothesized a number of ways by which work and welfare policies may be linked to negative adolescent outcomes (see, e.g., Brooks et al. 2001). One hypothesis, motivated by the particularly negative findings among adolescents with younger siblings, suggests that these policies may cause adolescents to take on a greater share of certain household responsibilities while their parents work, most notably the care of younger siblings (Brooks et al. 2001).³ These new responsibilities may lead to negative outcomes by causing adolescents

² It is important to note that other large non-experimental studies have not found similar effects of employment and welfare transitions on adolescent children. Chase-Lansdale et al. (2003) found no negative or positive effects of mother's employment and welfare transition on adolescents across most developmental domains. The authors attribute the difference between their findings and those of Gennetian et al. to the fact that the employment transitions in their study were voluntary as opposed to the mandatory requirements of the welfare programs and that they included many low-income women not on welfare in the study.

³Two other hypotheses—an erosion in the quality of adolescent-parent relationships and a decline in parental monitoring—are also offered to explain the negative impact of mandatory employment activities on adolescents. While there is some weak evidence to support these hypotheses as well, the strongest case to date has been made for the adult role-taking hypothesis (Gennetian unpublished).

increased stress and anxiety and by occupying time that could be spent working on homework, engaging in sports, or participating in other enrichment activities.

Recent research has offered some empirical support for this hypothesis. For example, when examining 16 welfare and employment programs, Gennetian et al. (2002) find that adolescents in the treatment groups who had younger siblings were less likely than their treatment group counterparts without siblings to participate in out-of-school activities. Additionally, in the two specific programs that increased maternal employment and negatively affected adolescent outcomes, the researchers found that the child care responsibilities of the adolescent children in the treatment groups also increased. Indeed, programs that both increased maternal employment and negatively affected adolescents' outcomes were those that significantly increased the likelihood that an adolescent would care for a younger sibling.

The negative outcomes experienced by adolescents with younger siblings have drawn increased attention to the use of these children as child care providers. Despite the potential negative effects of adolescent care, little is known about the extent to which families use adolescents to care for younger siblings, the amount of time this form of care is used, or the factors that may increase the likelihood that a family uses an adolescent to care for a younger sibling.

In this paper, we investigate the use of adolescent care among a nationally representative sample of families who have at least one adolescent child and at least one child in need of child care. We begin by estimating the prevalence and intensity of adolescent care nationally (i.e., how many families use it and for how long). Using descriptive statistics, we examine the use of adolescent care across a number of different types of families. To better understand the characteristics associated with the use of adolescent care and the number of hours it is used, we

then propose a number of hypotheses using a theoretical framework derived from the child care choice literature. We proceed to empirically test these hypotheses with data from the Survey of Income and Program Participation (SIPP) using logistic and OLS regression models.

BACKGROUND

While a growing body of child care literature is dedicated to understanding the child care choices made by working families, little work has focused specifically on the choice to use an adolescent to care for a younger sibling. Research conducted by the Census Bureau finds that 3.4 percent of children younger than six and 10.4 percent of children ages six- to 14-years-old were cared for by an older sibling in 1999 (Smith 2002). However, this descriptive research approaches the question of adolescent care from the perspective of the child in care rather than the adolescent. As such, these findings do not give an indication of the extent to which families “at-risk” of using adolescent care actually use it, and they do not move us closer to understanding the dynamics of a family’s choice to use this form of care.

Using data gathered from welfare experiments, a small number of other studies base their findings on a universe of families at risk of using adolescent care (see Gennetian et al. 2002). These studies find that between 14 and 28 percent of the sampled families use adolescent care for an average of 10 hours per week. In addition, these studies find that among those families using adolescent care, 50 to 80 percent of the adolescents caring for younger siblings are female. This work provides important information concerning the use of adolescent care among participants taking part in welfare experiments and the extent to which welfare and work policies may cause an increase in the use of adolescent care. However, the data used in these studies focus on welfare recipients and are not intended to be nationally representative. Therefore, we do not

know how well these findings reflect the overall use of adolescent care among low-income families nationally.

This current study will add to the small body of literature on adolescent care by providing a nationally representative look at the use of this child care arrangement. It provides new information on the extent to which adolescent care is used and factors associated with its use, and may be considered a first, modest step on the road to a better understanding of the relationship between adolescent care and child outcomes nationally.

THEORETICAL FRAMEWORK

Researchers attempting to understand the child care choices of parents often rely on economic models of the family. Such models assume that potential consumers of child care simultaneously consider employment and leisure time, family income, and the quality of care the child would receive (Blau 2001). Within this framework, the choice of a child care arrangement is dependent upon such factors as a family's need for child care, the extent to which a particular child care option will decrease income, the quality of the child care options available, and parental preferences for certain forms of care. The choice of a specific form of care results from weighing the costs and benefits of different child care options in light of child care needs, income, quality, and preference, and then finding the arrangement that provides the greatest level of satisfaction.

This framework can be used to model the factors associated with the use of adolescent care. Below we discuss how this theory of child care choice can be applied to the study of a family's choice to have an adolescent care for a younger sibling.

Need for Non-Parental Care

Variables associated with the need for non-parental care—those that measure the availability of parents to care for their children—are strong predictors of child care use (Hofferth et al. 1996). The two characteristics of the family most often used to measure the need for non-parental care are family structure and the labor force participation of each parent present in the household.

Family structure may be an important predictor of adolescent care because of the different ways in which single- and two-parent families allocate household responsibilities. Unlike single-parent families, two-parent families can more readily share household responsibilities like child care. Therefore, we expect that single-parent families would be more likely to allocate some of the responsibilities for child care to their adolescent children, increasing the use of adolescent care among these families.

The need for non-parental child care is also measured by the labor force participation of the parents who are present in the household. Parents who work longer hours have less time available to care for their children and may be more dependent on non-parental child care arrangements. Indeed, past research has found that the longer hours that parents work, the more likely they are to use a number of different non-parental arrangements (Hofferth et al. 1991). For this reason, we would expect that longer work hours would be associated with a greater probability of using adolescent care.

Another factor that may affect the need for non-parental care is welfare receipt. Given the work requirements imposed on families receiving welfare, we would expect that welfare receipt would increase the likelihood of using adolescent care.

Available Child Care Options

The presence of readily available child care options is a strong predictor of child care choice (Burstein and Hiller 1999). Researchers have used certain variables related to the availability of formal child care options—like working regular- versus odd-hours—as a proxy for child care availability. This research has found that parents who work odd hours, a time when formal child care options are less readily available, are less likely to use center-based care and family child care and are more likely to use relative and parent care (Capizzano et al. 2000). Therefore, we expect parents who work odd hours to be more likely to use adolescent care.

Ability to Pay for Care

Child care choices vary depending upon a family's financial resources. For example, children from higher-income families are more likely to be placed in center-based arrangements and less likely to be in relative care compared to their low-income counterparts (see e.g., Capizzano et al. 2000). Such findings reflect the fact that center-based care is more expensive, on average, than other child care options, making it more difficult for low-income families to afford. Therefore, we would expect low-income families, who are more likely to be burdened by the cost of other child care arrangements, to be more likely to use adolescent care compared to higher-income families.

Parental Preferences

Parental preferences for certain child care arrangements are a major determinant of child care choice (Beccerra and Chi 1992; Fuller et al. 1996)). Parents can derive these preferences from the characteristics of the child in need of care, a desire for specific child care characteristics, as well as considerations concerning convenience, social norms, and cultural appropriateness. Preferences associated with the characteristics of the child often include

smaller, more intimate settings for younger children and more social, academically enriching environments for older children (Hofferth et al. 1991). In addition, the age of the child in need of care is frequently used by researchers as a proxy for a parent's assessment of the child's maturity, which helps predict whether a child will be left unsupervised. Parents tend to be more willing to leave older children alone, perhaps because they are better able to care for themselves (Casper and Smith 2004). Therefore, we expect that parents may be less willing to leave very young children in the care of adolescents because of the more intensive care they would require. In fact, research has found that despite the presence of older siblings in the household, parents prefer to wait until the child in need of care is at least six-years-old before entrusting their care to an adolescent (Hofferth et al. 1991).

Preferences can also derive from the desire for certain arrangement characteristics. When applied to adolescent care, this may mean that parents are more likely to use an adolescent as a child care provider if he or she is older, more mature, and less aggressive. Therefore, we expect families with older adolescent children and families with adolescent girls would be more likely to use adolescent care.

HYPOTHESES

To summarize, we hypothesize that those families with the greatest need for non-parental care (single-parent families, families with parents who work long hours, and families receiving welfare) will be the most likely to use adolescents as caregivers for younger siblings. In addition, those families working odd hours, when formal child care options are less readily available, will also be more likely to use adolescent care. Those families least able to pay for alternative forms of care should also be more likely to use adolescent care. However, the likelihood of using adolescent care will be tempered by concerns for the child's well-being given

the child's age and care environment. Therefore, we expect the likelihood of adolescent care will be lower among families with younger children in need of care, families with younger adolescent children, and families where there is no female adolescent present.

DATA AND METHODS

Data

The data used for this analysis are from wave 10 of the 1996 Survey of Income and Program Participation (SIPP), a nationally representative household survey fielded between April and July of 1999 by the U.S. Census Bureau. In addition to the SIPP core file, which includes demographic, income, labor force participation, and welfare data, wave 10 of the SIPP also contains the most recent, publicly available child care topical module. In this topical module, a respondent who is identified as the “designated parent” (most often the mother), was asked about the regular child care arrangements she used for each of her children in the household younger than 15 and the hours that the children spent in these arrangements.⁴ Regular arrangements were defined as those used on a regular basis during a typical week in the month prior to the survey. The child care topical module contained 9,526 designated parents.

Universe

Our analysis of adolescent care is at the family level. We restrict the universe to those families who are “at-risk” of using an adolescent to care for a younger sibling, which we define as those families who have at least one child under the age of 12 (a child in need of care) and at

⁴ In married-couple families, the mother is most often the designated parent. In rare cases, a proxy interview will be done with the father if the mother is not available. In single-parent families, the resident parent is the designated parent, and if neither parent is living in the household, the designated parent is the guardian. The mother is the designated parent in 96.95 percent of the families in our universe. It is also important to note that the designated parent is only asked to report the child care arrangements for up to their youngest 5 children between the ages of 0 and 5 and up to the youngest 5 children between the ages of 6 and 14. No families in our sample had more than five children in either of these age groups.

least one child between the ages of 12 and 18 (a potential adolescent caregiver).⁵ Our sample contains 2,131 families.⁶ Descriptive statistics of our universe are presented in Appendix Table A.

Statistical Models

We use logistic and OLS regression models to test our hypotheses concerning a family's choice to use adolescent care and the amount of time it is used. We model the use of adolescent care as a simple dichotomous choice among families at risk of using such care.⁷

This model will take on a logit specification:

$$P(Y) = 1/(1 + e^{-Z})$$

where $Y = 1$ if the family uses adolescent care and 0 if it does not.

$$(1) \quad Z = \beta_1 + \beta_1^N \text{Need} + \beta_1^A \text{Avail} + \beta_1^F \text{Afford} + \beta_1^P \text{Preference} + \beta_1^C \text{Control} + \beta_1$$

In this model, $\beta_1, \beta_1^N, \beta_1^A, \beta_1^F, \beta_1^P$ and β_1^C are parameters to be estimated and β_1 represents unobserved factors affecting child care choice. The vector *Need* represents variables measuring a family's need for non-parental child care; *Avail* represents the variable associated with child care availability; *Preference* represents variables measuring the age of both the child in need of

⁵ While it may be the case that children younger than 12 also provide care for younger siblings, the choice to use 12 as the cut off between children requiring care and children capable of providing care was made to keep the universe consistent with that of Gennetian et al.

⁶ Certain families were dropped from the universe either because of their unique child care situation or because the use of adolescent care could not be determined. Complex families are excluded from the universe because in cases where adolescent care occurs, a teenage mom is most often caring for her child and for a younger sibling. We consider this a fundamentally different social issue and these cases (431) were dropped. We also omitted households where two parents are cohabitating and each is the designated parent of a child in the household and families with foster children. The cohabitating families and families with foster children are excluded because it is extremely difficult to link siblings in these families. Finally, families who reported using sibling care where there was not an adolescent present in the home were dropped. These families could be using adolescent siblings living outside of the household (perhaps with another parent) or could be using adult siblings to care for the child.

⁷ Different studies of child care choice have modeled the decision to choose a certain form of care in different ways. For this version of the paper, we are modeling the choice of adolescent care as a simple dichotomous choice given the ease with which the coefficients can be interpreted. Future iterations of this paper will use a categorical dependent variable and multinomial logistic regression to better capture the fact that adolescent care is one choice among many child care alternatives.

care and the adolescent child, as well as the sex of the adolescent child. We also add variables to control for other contextual factors that may affect child care decisions.⁸

OLS Regression

In addition to estimating the decision to use adolescent care or not, it is important to understand those factors that are associated with the number of hours per week that adolescents care for their younger siblings (conditional on providing adolescent care). To examine this issue, we also estimate the following equation:

$$(2) \text{ AdCarHr} = \beta_2 + \beta_2^N \text{ Need} + \beta_2^A \text{ Avail} + \beta_2^F \text{ Afford} + \beta_2^P \text{ Preference} + \beta_2^C \text{ Control} + \beta_2$$

where *AdCarHr* is the number of hours that adolescents care for younger siblings among those providing care, and like the previous model, $\beta_2, \beta_2^N, \beta_2^A, \beta_2^F, \beta_2^P$ and β_2^C are parameters to be estimated. β_2 represents unobserved variables affecting the number of hours children are in care; and *Need*, *Avail*, *Preference*, and *Control* are the same vectors of variables described above.

We estimate this model for all families who use adolescent care. Future iterations of the model will include those families with zero hours of adolescent care and will employ a tobit model to account for the censoring at zero (Hotz and Kilburn 1992).

A fundamental concern with both of these models is the inherent endogeneity of the variables capturing employment, income, and welfare receipt. While the choice to use adolescent care may be the result of the need for non-parental care due to employment, it may also be that the family's employment decisions are influenced by the presence of a mature adolescent in the household who can care for younger children. Given the likely endogeneity of these variables, findings from this model will not be interpreted as causal, but instead viewed as providing descriptive associations between these variables and the use of adolescent caregiving.

⁸ Of course, we would also like to include variables that measure the average price of different child care options in

Future work will use more sophisticated methods to estimate the potential causal impacts of these variables.

We run the models for single- and two-parent families separately.⁹

Measurement of the Dependent Variables

Use of Adolescent Care

The SIPP does not specifically ask a designated parent whether her adolescent child cares for a younger sibling. In order to measure the use of adolescent care, we use the designated parent's responses about the child care arrangements of her younger children. The SIPP asks whether each child under 15 in the household is cared for by either a "brother or sister age 15 or older" or a "brother or sister under age 15." If a designated parent in our universe replies yes to one of these "sibling care" questions, the family is coded as using adolescent care.¹⁰

Hours of Adolescent Care

We use the responses to the "hours in sibling care" questions to measure the hours a family uses adolescent care. If a designated parent answers that her child is in sibling care, she is also asked about the number of hours the child is in this arrangement. To measure the number of hours a family uses adolescent care, we sum each child's total number of hours per week in sibling care across the two sibling care questions discussed above. If there is more than one child in the family under the age of 12 who is in sibling care, our hours variable assumes the value for the child in the family who is in sibling care for the most number of hours per week.

the family's surrounding area and the supply of different forms of care, but data are limited. Nonetheless, we will explore the possibility of capturing such measures in future iterations of this paper.

⁹ The choice to use sibling care is likely very different for single- and two-parent families. For example, two-parent working families have the option of arranging their shifts to avoid the use of non-parental care. Accordingly, it is important to separate out the two groups when looking at how different family characteristics, particularly employment characteristics, may affect the use of adolescent care.

¹⁰ In cases where there is more than one older sibling in the household, it is unclear which of these siblings is caring for the younger child. This becomes an issue in families where there is at least one adolescent sibling and at least

Measurement of the Independent Variables

Need for Non-Parental Care

We use three variables to measure the need for non-parental care: marital status; labor force participation; and welfare participation. To measure marital status, we recode the six category marital status variable into simply married or single. The married category contains only those families where the designated parent is married and the spouse is present. All other categories are coded as single (married—spouse absent, separated, widowed, divorced, and never married). The labor force participation variable is based on the number of hours the designated parent works. We code this variable into three categories: not employed, employed part-time, and employed full-time. To measure welfare receipt, we use the SIPP welfare allocation flag. If the designated parent is flagged as using welfare at least two out of the four months in the reference period, we code the family as receiving welfare.

Availability of Care Arrangements

We use the designated parent's work schedule as a rough measure of the availability of child care arrangements. This variable is coded into two categories—regular work schedule and odd hour work schedule. A regular work schedule is defined as working a regular daytime schedule Monday through Friday. Respondents reporting other types of schedules including night-time schedules or work on Saturdays or Sundays are coded as working odd-hours.

In the multivariate model, we combine this work schedule variable with the hours that the designated parent works, producing five categories: not employed, employed part-time with a regular work schedule, employed part-time with an odd hour work schedule, employed full-time with a regular work schedule, and employed full-time with an odd-hour schedule.

one adult sibling. For these cases we assume that that the adolescent child is caring for the sibling, even though this may introduce some measurement error.

Ability to pay for child care

To measure a family's ability to pay for alternative child care arrangements we create a measure of family income relative to the federal poverty level. This variable is created by annualizing the family's income over the year and then dividing by the federal poverty threshold in the fourth month of wave 10. We then place families into one of four income categories—below 100 percent of poverty; between 100 and 199 percent of poverty; between 200 percent and 299 percent of poverty, and 300 percent of poverty and above.

Parental Preferences

We use three variables to test our hypotheses concerning the relationship between parental preferences and the use of adolescent care: whether a child younger than six is present in the family, the age of the oldest adolescent child in the family, and whether there is a female adolescent in the family. The variables measuring the presence of a child younger than six and a female adolescent are dummy variables. The age of the oldest adolescent in the family is a series of seven dummy variables capturing whether the oldest adolescent child is 12-years-old or not, 13-years-old or not, up to 18-years-old.

Controls

In our models, we control for several demographic factors that have been shown to influence a family's child care decisions. These variables include the race/ethnicity of the designated parent, the designated parent's education level, and region of residence. We code respondents into one of four race categories: white non-Hispanic, black non-Hispanic, other non-Hispanic, and Hispanic (all races).

The education variable measures the highest grade in school completed by the designated parent. The variable is broken down into four groups: no high school diploma or

equivalent, a high school diploma or equivalent, some college, and those who have completed at least 4 years of college.

To control for region of residence, we group families into 4 categories—Northeast, South, Midwest, and West. To prevent identification of respondents, the SIPP collapses two groups of states. This forced us to include Wyoming in our Midwest category because Wyoming, North Dakota, and South Dakota are all grouped together. Alaska and Hawaii were included in the West category.

Other researchers have shown that significant differences do exist between mothers living in rural versus urban locations, but due to data constraints, we were unable to control for these differences. The SIPP gathers information on the size of area in which the respondent lives, but to avoid the possibility of identifying the respondent based on his or her responses, the SIPP chooses a sub-sample of respondents from metropolitan areas to represent all metropolitan areas. The rest of the respondents living in metropolitan areas are coded as living in non-metropolitan areas.

FINDINGS

Descriptive Statistics

Use of Adolescent Care and Hours Used

Table 1 presents weighted descriptive statistics of the percentage of families using adolescent care and the mean hours that adolescent care is used (among those using) by key family characteristics. We present estimates for families overall and for single- and two-parent families separately. Nationally, 20 percent of families in our universe regularly use adolescent care for an average of 9.9 hours each week. Similar percentages of single- and two-parent families use adolescent care (21.4 percent and 19.5 percent, respectively), but single-parent

families use this form of care for longer amounts of time than two-parent families (12.5 hours on average compared to 9.0 hours, respectively).

The table provides preliminary evidence of the relationships between the use of adolescent care and a family's employment status, work schedule, and income, as well as how these relationships may play out differently in single- and two-parent families. Not surprisingly, adolescent care is most likely to be used in families where the designated parent is employed. Among all families, whether the designated parent works part- or full-time does not appear to change the likelihood that they will use adolescent care; however, families where the designated parent works full-time use adolescent care for longer hours than families where the designated parent works part-time.

The relationship between employment status and adolescent care appears to be different among single- and two-parent families. An increase in the designated parent's work hours does not necessarily mean an increase in the percentage of families using adolescent care among both groups. Among single-parent families, the largest percentage of families using adolescent care are those where the designated parent works part-time. Among two-parent families we see the expected pattern: families where the designated parent works full-time are the most likely to use adolescent care. In terms of the hours that this care is used, an increase in the designated parent's work hours corresponds with an increase in the number of hours adolescent care is used. This is true among both the single- and two-parent groups.

The work schedule of the designated parent does not appear to be related to the percentage of families using adolescent care. However, it does appear to be related to the number of hours that adolescent care is used, at least among single-parent families. Single-

parents working odd hours use adolescent care for an average of 5.2 more hours per week than their counterparts working regular schedules.

In contrast to what we expected, families with a greater ability to pay for alternative forms of child care are *more* likely to use adolescent care compared to their low-income counterparts. Among families overall, and single- and two-parent families separately, families in the two higher income groups are more likely to use adolescent care than families in the two lowest income groups. At least some of this apparent relationship will be explained by the differing employment patterns among the income groups, so it is important to examine this relationship more closely within a multivariate context in the next section.

Interestingly, the relationship between income and the hours of adolescent care appears curvilinear, with families at the low and high ends of the income distribution using this care for the least amount of time. This relationship is most pronounced among single-parent families who seem to be driving the curvilinear pattern among families overall. Taking the estimates of the percent using adolescent care and hours it is used together, it appears that the most intensive use of adolescent care occurs among single-parent families between 200 and 299 percent of poverty. This group has the highest percentage of families using adolescent care and the highest average hours of use.

The Use of Adolescent Care in Conjunction with Other Child Care Arrangements

It is also important to understand whether a family uses adolescent care as its only means of child care or if the care is used to fill gaps that occur among other arrangements (Table 2). Among those families using adolescent care, over two-thirds of families (68.1 percent) who use adolescent care use it as their only child care arrangement. Moreover, similar percentages of both single- and two parent-families use it as their only arrangement.

Employment status appears to be related to whether adolescent care is used as the family's only child care arrangement. Among all families, families where the designated parent is employed full-time are less likely to use adolescent care alone compared to families where the designated parent is not employed. Among two-parent families, families where the designated parent works full-time are less likely than families where the designated parent does not work but more likely than families where the designated parent works part-time to use adolescent care as the sole form of care.

There does not appear to be a clear relationship between the work schedule and family income variables and the use of adolescent care as the family's only child care arrangement. Among these variables, however, we once again find that single-parent families with incomes between 200 and 299 percent of poverty stand out; this group has the highest percentage of families using sibling care as the sole form of child care.

Results from the Logit Models

Table 3 presents the odds ratios derived from logistic regression models predicting the use of adolescent care for both single- and two-parent families. In these models, the odds ratios are interpreted as the odds of observing our outcome (the use of adolescent care) given a certain family characteristic, relative to the odds of observing the outcome for a family in the reference group. For example, an odds ratio of 1.05 for single-parent families with a designated parent who is employed full-time with a regular work schedule means that the odds of this type of family using adolescent care is 1.05 times the odds of families in the reference group using adolescent care. If this coefficient were statistically significant it would mean that families where the designated parent works a full-time regular schedule would be slightly more likely than families with a designated parent who is not employed to use sibling care.

Controlling for the other family characteristics in the model, it appears that the relationship between the employment status of the designated parent and the use of adolescent care is quite different for single- and two-parent families. Contrary to the hypothesized relationship, it does not appear that either increasing amounts of employment or an odd-hour work schedule increase the likelihood that a single-parent family will use adolescent care. Among these families, the odds ratios for the two full-time groups are not significant and the odds ratio for families with a designated parent working a full-time odd hour schedule is in the wrong direction. However, having a designated parent who works a regular, part-time schedule does increase the likelihood of using adolescent care among single-parent families.

Among two-parent families, the effects of the employment and work schedule variables are much more in line with our parental availability and child care availability hypotheses. Each employment group is significantly more likely to use adolescent care compared to families where the designated parent is not employed. Moreover, the odd ratios are much larger among two-parent families where the mother works full-time compared to families where the mother works part-time. In line with our child care availability hypothesis, the odds ratios of families in the odd-hour employment categories (both full- and part-time) are larger than their counterparts in the regular hours categories.

Welfare receipt also appears to be strongly related to the use of adolescent care among single-parent families, but in a way that runs counter to our hypothesis. Indeed, the odds of a single-parent family on welfare using sibling care is less than one-third the odds of a non-welfare family using adolescent care. There are a number of potential explanations for this relationship including greater access to child care subsidies among welfare recipients or the fact that the characteristics of adolescent children of welfare recipients may be different from other

adolescents in ways not controlled for in the model. We discuss these potential explanations in more detail in the next section.

The results of the model indicate that the inability to pay for alternative child care arrangements does not increase the likelihood that either a single- or two-parent family will use adolescent care. Nonetheless, it does appear that the relationship between income and the use of adolescent care is different among single- and two-parent families. Among single-parent families, families below 100 percent of poverty, and families between 100 and 199 percent of poverty appear to be equally as likely as families with incomes above 300 percent of poverty to use adolescent care. The odds ratio for families between 200 and 300 percent of poverty is larger and in the right direction, but is not statistically significant.

In contrast, among two-parent families, those families least able to afford alternative child care arrangements are actually less likely to use adolescent care. The likelihood that families in the two lowest-income groups will use adolescent care is significantly lower than that of families in the highest-income group.

Certain parental preferences deriving from the characteristics of both the adolescent caregiver and the child in need of care play a large role in the choice to use adolescent care. For example, there is some evidence to support the hypothesis that parents may be less willing to use adolescent care for a younger child. Among single-parent families, the odds of a family with a child younger than six-years-old using adolescent care is less than half that of a family where the youngest child is over the age of six. Among two-parent families, the coefficient is in the expected direction but is not statistically significant.

Among both single- and two-parent families, the use of adolescent care is related to the age of the adolescent child. In both groups, the odds of using adolescent care increase as the

adolescent child gets older, peaking at 16, and then decreasing among 17- and 18-year-olds.

While this is true in both types of families, the odds ratios are much larger among single-parent families.

The model does not provide evidence that families with female adolescents are more likely to use adolescent care than families where a female adolescent is not present. For both single- and two-parent families the coefficients are in the right direction, but are small and not statistically significant.

Results from the OLS Regression Models

Table 4 presents the OLS regression coefficients for models estimating the amount of time adolescent care is used. The models are run only on families who we code as using adolescent care and we again look at single- and two-parent families separately. In terms of the hours that families use adolescent care, our hypotheses concerning employment status and work schedule receive some support. Among single-parent families, full-time odd hour employment appears to be related to longer hours of adolescent care use. The coefficient for the part-time regular hours group is the smallest among the employment categories and indicates that this group uses adolescent care for similar amounts of time as families where the designated parent does not work. This point is interesting because this group had the highest likelihood of using adolescent care among single-parent families. This may mean that the choice of adolescent care is in part dependent on parental considerations about the length of time and time of day in which adolescent care will be used.

Among two-parent families both employment status and work schedule are associated with the amount of time that families use adolescent care. Families where the designated parent

is employed (either part-time or full-time) use adolescent care for more hours than families where the designated parent is not employed.

The coefficient for welfare receipt continues to support the potential finding that welfare recipients may use adolescent care less than non-welfare families. While not significant, the coefficient is negative, indicating that not only do welfare recipients appear less likely to use adolescent care, they may also use it for less hours when they do use it.

The coefficients for the poverty variables indicate that the relationship between income and the amount of time that adolescent care is used is very different for the single- and two-parent family groups. Among single-parent families, the coefficients for the groups are large and positive indicating that these lower-income groups use adolescent care for more hours than families with incomes above 300 percent FPL. Only the coefficient for families below 100 percent FPL is not statistically significant. Moreover, the hours in adolescent care consistently increase as one looks across the income categories of families with incomes between 200 and 299 percent FPL using adolescent care for the longest number of hours.

Among two-parent families, we observe a much different relationship. Here, the coefficients for the income groups are negative indicating that lower-income two-parent families use adolescent care for fewer hours than two-parent families with incomes above 300 percent FPL. The group of two-parent families with incomes below 100 percent FPL use adolescent care for the least amount of time and is the only group that is statistically different from families above 300 percent FPL.

The results provide some weak evidence for a relationship between certain parental preferences and the amount of time adolescent care is used. For example, the age of the adolescent child is related to the amount of time that adolescent care is used, at least among

single-parent families. For both single- and two-parent families we observe the largest coefficients among families where the oldest adolescent child is either 15- or 16-years old. However, only the coefficient for single-parent families where the oldest adolescent is 16-year old is significant.

Neither the age of the child in need of care nor the presence of a female adolescent appear to be related to the hours that adolescent care is used. Among both single- and two-parent families, the sign of the coefficient for families with a child younger than six is in the opposite direction of what was expected (more hours of care rather than less). Among single-parent families, the coefficient is relatively large in the opposite direction, but not statistically significant.

Few of the control variables appear to be related to the hours that adolescent care is used. Low-maternal education appears to be associated with fewer hours of adolescent care among single-parent families and more hours among two-parent families. In addition, two parent families living in the South appear to use adolescent care for more hours than families from other regions of the country.

DISCUSSION AND NEXT STEPS

Discussion

This paper has explored the use of adolescent care among families with at least one adolescent child and at least one child in need of care. The results of the logistic and OLS regressions have revealed a complex set of relationships between the use of adolescent care and different family characteristics, which play out differently in single- and two-parent families.

Among two-parent families, the data supported our hypotheses concerning the relationship between the use of adolescent care and both parental availability and the availability

of alternative child care options (as measured by the designated parent's employment status and work schedule). Working longer hours and at times when formal child care options are less available are each related to the increased likelihood that adolescent care would be used and the use of adolescent care for longer hours.

Hypotheses about certain parental preferences also received support. The use of adolescent care appears to be related to the age of the adolescent child in two-parent families, but not the age of the child in need of care. Interestingly, we found no evidence to support the hypothesis that families with a female adolescent would be more likely to use adolescent care compared to families without a female adolescent. The data also did not reveal evidence of a relationship between these variables and the hours that adolescent care is used.

The relationship between income and the use of adolescent care among two-parent families runs counter to what was hypothesized. Low-income families, who we hypothesized as being more likely to use adolescent care due to their potential inability to pay for alternative forms of care, are actually less likely to use adolescent care compared to higher-income, two-parent families. This may be the case because of the influence of certain contextual forces that are associated with income that are not included in the model. It is highly possible, for example, that low-income, two-parent families live in neighborhoods where they feel less comfortable leaving adolescents to care for younger siblings. This consideration, not accounted for in the model, may move low-income two-parents families to find ways to avoid the use of adolescent care despite their lack of resources. Perception of neighborhood safety has been shown to be related to a parent's choice to leave a child alone (Casper and Smith 2004) and may be playing a role here as well.¹¹

¹¹ We attempted to incorporate a measure of the designated parent's perception of neighborhood safety into the model but questions related to this measure are placed in a different topical module and were asked a year before the

The most interesting stories to emerge from the data, however, are those related to the use of adolescent care among single-parent families. First, neither employment status nor work schedule are related to the use of adolescent care in the ways we expected. Only families with employed designated parents who work a part-time, regular schedule are significantly more likely to use adolescent care compared to families where the designated parent is not employed. As discussed above, given the relatively short amount of time that single-parent families use adolescent care it appears that additional considerations concerning the use of adolescent care may include both the time of day it used and the length of time the care is necessary.

The relationship between welfare receipt and the use of adolescent care among single-parent families was also unexpected. The finding that welfare recipients appear to be less likely to use adolescent care and use it for less hours may be the result of a number of factors not controlled for in the model. These include the receipt of a child care subsidy to reduce the cost of care or other non-cash benefits.

There is also an interesting relationship between family income and the use of adolescent care among single-parent families. The descriptive statistics show the greatest use of adolescent care both in terms of the percentage of families using it and the amount of time it is used to be among single-parent families with incomes between 200 and 299 percent of FPL. The results from the model provide some support for the fact that these families continue to be the most likely to use it even after controlling for other family characteristics. Moreover, this group is the most likely to use adolescent care as their sole child care arrangement. These findings may be the result of the fact that this income group is not eligible for child care subsidies, but may not be

child care topical module. Given that families could have moved in the time between the fielding of the two modules, the variable was not included. Because the SIPP follows movers to their new residence we are currently investigating whether we can include this variable.

able to afford alternative child care options. As such, the findings related to this specific group of families should be looked into in more detail.

Next Steps

This paper has provided only an introductory investigation of the use of the adolescent care, and we plan on a number of next steps. Currently, the model treats employment, income, and welfare receipt as exogenous variables with respect to the choice to use adolescent care. We plan on investigating this assumption by estimating the effect that having an adolescent has on employment, income and welfare receipt to better understand how these variables are related to each other.¹²

We also plan to add measures of child care subsidy receipt, the costs of child care arrangements, child care availability, and, if possible, parental perceptions of neighborhood safety. Finally, to better capture the fact that adolescent care is only one choice among many child care alternatives, we plan on running our models using a categorical dependent variable to contrast the likelihood of using adolescent care against other child care alternatives.

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¹² In these models, we will attempt to control for parent age, number of children in the household, and age of youngest child.

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Table 1. Percentage of Families Using Adolescent Care and the Amount of Time Adolescent Care is Used (Among Those Using) by Family Structure and Selected Family Characteristics

	All Families		Single-Parent Families		Two-Parent Families	
	% Using Adoles. Care	Mean Hours	% Using Adoles. Care	Mean Hours	% Using Adoles. Care	Mean Hours
Overall	20.0	9.9	21.4	12.5	19.5	9.0
Desingated Parent's Work Hours						
Not employed	13.2	5.3	16.9	7.5	12.1	4.4
Employed Part-time	20.7 ^{A***}	7.9 ^{A***}	30.2 ^{B***}	11.5 ^{A*}	19.0 ^{A***}	6.8 ^{A***}
Employed Full-time	23.9 ^{B***}	12.3 ^{B***C***}	21.3	14.6 ^{B***}	25.0 ^{B***C**}	11.5 ^{B***C***}
Designated Parent's Work Schedule						
Works a regular schedule	22.3	10.3	23.6	12.0	21.8	9.7
Works odd hours	24.1	12.3	22.1	17.2 [*]	24.9	10.7
Family Income						
Below 100 Percent FPL	15.9	8.9	18.3	10.4	13.1	6.5
Between 100 and 199 FPL	17.6	11.4	21.5	13.9	15.7	9.6 ^{D*}
Between 200 and 299 FPL	22.0 ^{E***F***}	10.1	29.2 ^{D***}	16.8 ^{D**}	20.8 ^{E***F***}	8.5
300 Percent of FPL and Above	22.7 ^{G***H***}	9.3	23.4	8.3 ^{H***I***}	22.6 ^{G***H***}	9.4 ^{G*}

Source: Survey of Income and Program Participation, 1996 Panel, Wave 10 (fielded in 1999).

Notes: Total sample size is 2,131 families. (A) indicates a significant difference between employed part-time and unemployed; (B) indicates a significant difference between employed full-time and unemployed; (C) indicates a significant difference between employed part-time and employed full-time; (D) indicates a significant difference between "between 100 and 199 FPL" and below 100 percent FPL; (E) indicates a significant difference between "between 200 and 299 FPL" and below 100 percent FPL; (F) indicates a significant difference between "between 200 and 299" and between 100 and 199 FPL; (G) indicates a significant difference between 300 percent of FPL and above and below 100 percent FPL; (H) indicates a significant difference between 300 percent of FPL and above and between 100 and 199 FPL; (I) indicates a significant difference between 300 percent of FPL and above and between 200 and 299 FPL.

Crosstabs are run in STATA.

Single includes widowed, divorced, separated, married--spouse absent and never married.

* $p < .10$; ** $p < .05$; *** $p < .01$

Table 2. Percentage of Families Using Adolescent Care Alone or in Conjunction with Another Child Care Arrangement by Family Structure and Selected Family Characteristics

	All Families	Single-Parent	Two-Parent
	% Using Adolescent Care Only	% Using Adolescent Care Only	% Using Adolescent Care Only
Overall	68.1	66.1	68.8
Designated Parent's Work Hours			
Not employed	76.3	72.2	78.0
Employed Part-time	64.5	67.4	63.6
Employed Full-time	66.7 ^{A***}	63.5	67.9 ^{A***B**}
Schedule			
Not employed	76.3	72.2	78.0
Works a regular schedule	66.6 ^{C***}	68.1	66.0 ^{C***}
Works odd hours	65.2 ^{D***}	57.8	67.7 ^{D***}
Family Income			
Below 100 Percent FPL	72.9	74.9	69.5
Between 100 and 199 FPL	64.3	54.9	70.9
Between 200 and 299 FPL	70.8 ^{F*}	78.2 ^{F*}	69.1 ^{E†}
300 Percent of FPL and Above	66.9 ^{H**}	58.7	67.7 ^{G***H†}

Source: Survey of Income and Program Participation, 1996 Panel, Wave 10 (fielded in 1999).

Notes: (A) indicates a significant difference between employed full-time and unemployed; (B) indicates a significant difference between employed full-time and employed part-time; (C) indicates a significant difference between works a regular schedule and unemployed; (D) indicates a significant difference between works odd hours and unemployed; (E) indicates a significant difference between "between 200 and 299 FPL" and below 100 percent FPL; (F) indicates a significant difference between "between 200 and 299 FPL" and between 100 and 199 FPL; (G) indicates a significant difference between 300 percent of FPL and above and below 100 percent FPL; (H) indicates a significant difference between 300 percent of FPL and above and between 100 and 199 FPL.

Table 3. Logistic Regression Predicting the Use of Adolescent Care, 1999 (Odd Ratios)

	Single-Parent Families		Two-Parent Families	
	Odds Ratio	SE	Odds Ratio	SE
Parental Availability				
<i>Designated Parent's Work Hours/Schedule</i>				
Not employed (Reference)	NA	NA	NA	NA
Employed Full-time, Regular Hours	1.05	0.36	2.22***	0.43
Employed Full-time, Odd Hours	0.87	0.35	2.67***	0.62
Employed Part-time, Regular Hours	2.85**	1.40	1.58*	0.38
Employed Part-time, Odd Hours	1.52	0.80	1.86**	0.50
<i>Welfare Receipt</i>				
On Welfare	0.32**	0.17	-	-
Not on Welfare (Reference)	NA	NA	-	-
Ability to Pay for Child Care				
<i>Family Income</i>				
Below 100%FPL	1.04	0.47	0.59*	0.16
Between 100% and 199% FPL	1.14	0.45	0.68*	0.14
Between 200% and 299% FPL	1.47	0.69	0.99	0.17
300% FPL and Above (Reference)	NA	NA	NA	NA
Parental Preferences				
<i>Age of Youngest Child</i>				
At least one child under 6	.43***	0.12	0.88	0.14
No children under 6 (Reference)	NA	NA	NA	NA
<i>Age of Oldest Adolescent</i>				
12 (Reference)	NA	NA	NA	NA
13	2.04	1.12	1.27	0.35
14	4.27***	2.32	1.49	0.43
15	6.14***	3.12	3.22***	0.85
16	10.16***	5.25	3.86***	0.99
17	9.85***	5.08	2.85***	0.78
18	9.75***	5.22	2.76***	0.79
<i>Sex of Adolescent Children</i>				
At least one female adolescent	1.08	0.27	1.14	0.16
No female adolescent (Reference)	NA	NA	NA	NA
Controls				
<i>Race/Ethnicity of Mother</i>				
White, Non-Hispanic (Reference)	NA	NA	NA	NA
Black, Non-Hispanic	0.89	0.28	0.76	0.23
Other, Non-Hispanic	2.22	1.71	1.55	0.43
Hispanic, All Races	1.48	0.52	0.71	0.17
<i>Maternal Education</i>				
Less than High School	0.73	0.23	1.52*	0.36
High School (Reference)	NA	NA	NA	NA
Some College or Two-Year Degree	1.44	0.42	0.77	0.14
Four Years of College or More	0.82	0.37	1.14	0.22
<i>Region</i>				
Northeast	0.65	0.24	1.42*	0.28
South	1.29	0.41	1.36	0.26
Midwest	NA	NA	NA	NA
West	0.83	0.29	1.02	0.21

Source: Survey of Income and Program Participation, 1996 Panel, Wave 10 (fielded in 1999).

Notes: Models run on a universe of families who have at least one child under the age of 12 and at least one child between the ages of 12 and 18.

Total sample size is 2,131: 557 single-parent families and 1,574 two-parent families.

Models are run in STATA.

Single includes widowed, divorced, separated, married--spouse absent and never married.

*p <.10; **p <.05; ***p <.01

Table 4. OLS Models of Hours Families Use Adolescent Care (Among Those Using Adolescent Care Only), 1999

	Single-Parent Families		Two-Parent Families	
	Coeff.	SE	Coeff.	SE
Parental Availability/Availability of Care				
<i>Mother's Work Hours</i>				
Not employed (Reference)	NA	NA	NA	NA
Employed Full-time, Regular Hours	3.88	3.44	6.02***	1.17
Employed Full-time, Odd Hours	8.19**	3.69	8.76***	1.58
Employed Part-time, Regular Hours	0.11	2.93	3.57***	1.28
Employed Part-time, Odd Hours	3.73	3.57	3.29***	1.25
<i>Welfare Receipt</i>				
On Welfare	-3.26	3.13	-	-
Not on Welfare (Reference)	NA	NA	-	-
Ability to Pay for Child Care				
<i>Family Income</i>				
Below 100%FPL	4.77	3.34	-3.81*	2.32
Between 100% and 199% FPL	5.96**	2.83	-1.28	1.80
Between 200% and 299% FPL	8.52*	3.38	-1.21	1.38
300% FPL and Above (Reference)	NA	NA	NA	NA
Parental Preferences				
<i>Age of Youngest Child</i>				
At least one child under 6	3.29	2.52	0.52	1.20
No children under 6 (Reference)	NA	NA	NA	NA
<i>Age of Oldest Adolescent</i>				
12 (Reference)	NA	NA	NA	NA
13	4.58	5.14	-1.80	1.84
14	-0.52	4.50	0.48	1.90
15	5.62	4.68	2.67	2.21
16	10.29**	4.45	2.51	1.82
17	4.20	3.90	1.57	2.11
18	6.68	4.75	1.17	2.11
<i>Sex of Adolescent Children</i>				
At least one female adolescent	1.57	1.68	0.16	1.01
No female adolescent (Reference)	NA	NA	NA	NA
Controls				
<i>Race/Ethnicity of Mother</i>				
White, Non-Hispanic (Reference)	NA	NA	NA	NA
Black, Non-Hispanic	2.53	2.42	-0.66	2.00
Other, Non-Hispanic	-3.17	3.35	1.73**	2.01
Hispanic, All Races	4.53	3.27	-0.80	1.23
<i>Maternal Education</i>				
Less than High School	-7.86***	3.00	4.24**	2.02
High School (Reference)	NA	NA	NA	NA
Some College	-0.98	2.70	-0.88	1.42
College or Advanced Degree	-4.37	2.88	-1.17	1.62
<i>Region</i>				
Northeast	-1.63	2.35	3.19**	1.55
South	2.16	2.97	-2.75*	1.46
Midwest	NA	NA	NA	NA
West	1.59	2.68	-4.3***	1.43

Source: Survey of Income and Program Participation, 1996 Panel, Wave 10 (fielded in 1999).

Notes: Models run on a universe of families who have at least one child under the age of 12 and at least one child between the ages of 12 and 18 and who are using adolescent care.

Sample size: 119 single-parent families and 306 two-parent families.

Models are run in STATA.

Single includes widowed, divorced, separated, married--spouse absent and never married.

*p < .10; **p < .05; ***p < .01

Appendix Table A. Descriptive Statistics of the Universe of Families At-Risk of Adolescent Care

	Mean	Std Dev
Designated Parent's characteristics		
<i>Race / Ethnicity</i>		
White, Non-Hispanic	63.5	0.0110
Black, Non-Hispanic	14.4	0.0083
Other, Non-Hispanic	5.0	0.0087
Hispanic, all Races	17.2	0.0049
<i>Education</i>		
Less than high school degree	16.6	0.0084
High school diploma or equivalent	33.0	0.0106
Some college	32.6	0.0106
4 years or more college	17.8	0.0086
<i>Designated Parent's employment status</i>		
Unemployed	29.6	0.0103
Works part-time regular hours	13.1	0.0107
Works part-time odd hours	9.3	0.0080
Works full-time regular hours	33.2	0.0076
Works full-time odd hours	14.8	0.0065
<i>Family Structure</i>		
Single-parent	24.8	0.0097
Two-parent	75.2	0.0097
<i>Welfare receipt</i>		
Receiving Welfare	3.2	0.0040
Family Characteristics		
<i>Income as a percent of the FPL</i>		
< 100% poverty	18.3	0.0087
100% - 199%	26.2	0.0099
200% - 299%	21.0	0.0093
Income >= 300%	34.4	0.0107
<i>Characteristics of the children</i>		
Child under the age of 6	29.3	0.0103
Adolescent female sibling	57.1	0.0112
Oldest adolescent is age 12	17.5	0.0087
Oldest adolescent is age 13	18.1	0.0088
Oldest adolescent is age 14	14.3	0.0079
Oldest adolescent is age 15	13.3	0.0076
Oldest adolescent is age 16	13.6	0.0077
Oldest adolescent is age 17	12.9	0.0074
Oldest adolescent is age 18	10.3	0.0068
<i>Region of residence</i>		
Northeast	23.2	0.0096
South	23.3	0.0094
Midwest	36.0	0.0109
West	18.6	0.0089

Source: Wave 10 of the 1996 Survey of Income and Program Participation (fielded in 1999).

Notes: Percentages may not sum to 100 percent due to rounding. Total sample size is 2,131 families.