

This paper presents a theoretical framework for examining how family characteristics in middle childhood and in adolescence affect adolescent outcomes. The theory explicitly considers the effects of employment, income, program participation and the role of the relationship between the adolescent and both parents. The empirical analyses are based on longitudinal surveys from the U.S. Census Bureau Survey of Income and Program Participation and the Surveys of Program Dynamics. The analyses are presented in two parts. The first part uses standard ordinary least squares estimation; the second part estimates a series of structural equation models based on the underlying processes outlined in the theoretical framework. The results suggest that parental employment and income are more strongly associated with intermediary variables, such as adolescent attitudes towards school and perceived burden of home responsibilities, than with direct outcome variables, such as criminal offences and problems with school.

Based on the theoretical framework developed in the paper and on past research, the following hypotheses are tested:

1. Maternal employment, attitudes towards parents, and income will affect a range of intermediary variables that will directly affect adolescent outcomes. Such intermediary variables include parental monitoring variables (knowledge of friends and school, TV rules), relationship building activities, (eating together as a family), and adolescent responsibilities at home (reported level of responsibilities and perceived level of burden from responsibilities). It is hypothesized that the effects for maternal employment will be negative while increases in positive attitudes towards parents and income will exert positive effects on the intermediary variables.
2. Adolescent outcomes will be positively affected by greater involvement and monitoring of parents in the lives of their adolescent
3. Adolescent outcomes will be negatively affected by self-perceptions of excessive responsibilities at home.
4. Adolescent outcomes will be positively affected by more positive relationships with both parents.
5. Level of maternal employment and income will have a greater impact on intermediary variables, such as monitoring, attitudes towards mother, and adolescents' perceptions of responsibilities and burdens than on adolescents' outcomes, that is, maternal employment will have a stronger indirect than direct effect on adolescent outcomes.

Model Estimation and Variable Selection

In order to test these hypotheses, variables were classified as intermediary variables and as outcome variables. In the first stage of the analyses, two sets of equations were estimated. Multiple regression or logit regression techniques were used based on the level of measurement of the dependent variables. The first set of dependent variables measured intermediary variables that were hypothesized to be strongly affected by maternal employment, income, welfare participation, father involvement and parent/adolescent relationship. The explanatory variables were defined to account for differences in level and timing of employment and differences in level and types of income. The second stage estimated a series of structural equation models where the processes specified in the theoretical model were tested.

Measures of Maternal Employment. Five different measures of maternal employment were used in the analyses. Separate variables were entered for employment during the periods covered by the Surveys of Income and Program Participation and the Survey of Program Dynamics. These variables measured the number of periods in which the mother was employed in the pre-PWORA period and the extent to which the mother was employed full-time. Current employment was measured by full-time and part-time employment, with a marker for women

who moved to full-time employment from no employment or part-time employment during the period of the child's transition from middle childhood to adolescence.

Measures of Program Participation. Variables were included that indicated whether the family participated in welfare and/or food stamp programs during prior to and during the period covered by welfare reform legislation. Four designations were included: participation only during the pre-reform period (middle childhood); participation only during the period of welfare reform (adolescence); participation during both periods; and no participation. The analyses also differentiated between families who were cut-off welfare and families who left welfare, but who were not cut-off.

Measures of Income. Three measures of short-term and long-term income were used. Current income was measured by the log of income; average income to poverty level was calculated for all available years in the survey and served to measure permanent income resources available to the child during middle childhood and adolescence. Finally, current severe income deprivation was measured by a variable that indicated that the family had dealt with food insufficiency that the adolescent himself/herself had been affected in terms of availability and/or nutritional content of meals.

Attitudes toward mother and father. Each model included two variables that indicated the quality of the adolescents' relationships with their mothers and their fathers based on adolescent self-reports. In cases where no contact between the adolescent and his/her father existed, the score on this variable for fathers was zero. The equations also included dummy variables that indicated whether the father resided with the child; whether the father had contact with the child, but did not reside in the same household, and the excluded category, which was no contact between father and child.

Other variables. Other variables included in the analyses included educational level of the mother, race of the child, whether the household was a Spanish speaking household, whether the mother had poor language competency in English, gender of the child, and age of the mother and of the child.

Intermediary Variables. Six intermediary variables were included in the adolescent outcome equations: (1) Perceived level of burden of responsibilities at home; (2) Level of Home Responsibilities; (3) Knowledge about friends; (4) Knowledge about school; (5) Parent sets TV rules; (6) Eat together as a family. For each of these intermediary variables, we also estimated a series of regressions to examine the associations between each of these variables and income, employment, and attitudes towards parents.

Results: Intermediary Variables.

Hypothesis 1. Tables 1 and 2 present tests of hypothesis one. These tables show the associations between the intermediary variables and a set of explanatory variables including maternal employment, income and program participation, and attitudes toward parents.

Maternal Employment. As predicted by theory, current full-time employment was associated with lower reported knowledge about school, lower reported knowledge about friends and higher perceived burdens of home responsibilities. Employment of the mother during the period of the adolescent's early childhood was associated with a greater level of home responsibilities. A change to full-time employment during the period of middle childhood to adolescence was associated with increases in the level of home responsibilities and a decreased likelihood that the parent set rules for television viewing. In no case did any of the maternal employment variables exert positive effects on the intermediary variables. Furthermore all negative effects were associated with full-time employment, not part-time employment in either middle childhood or adolescence.

Attitudes towards mothers and fathers. The results indicated that as adolescents reported more positive relationships with their mothers, they also reported that their parents had more knowledge about schools and friends, that they ate together more frequently as a family, that their

perceived level of burden of household responsibilities was lower and that parents were more likely to set rules for television viewing. In all cases, the effects associated with attitudes towards mothers were greater than the effects for attitudes towards fathers. The coefficient on attitude toward fathers must be interpreted in conjunction with the dummy variables for contact with fathers. For residential fathers, adolescents reported a mean attitude score of 16.9; for non-residential fathers who maintain contact with the adolescent, adolescents reported a mean attitude score of 13.7. At the mean level for residential fathers, the net effect on knowledge about school was .105, that is, (.042 the coefficient for attitude toward father * 16.9 mean attitude level for residential fathers) + (-.605 coefficient for dummy variable that the father resided in the same household as the adolescent); at the mean level for non-residential fathers, the net effect was -0.037, that is, (.042 the coefficient for attitude toward father * 13.7 mean attitude level for non-residential fathers) + (-.612 coefficient for dummy variable that the father had contact, but did not reside in the same household as the adolescent). These results suggest that the presence of the father is not as important as the quality of the father-adolescent relationship. When adolescents reported that this relationship was poor, the effects on the examined intermediary variables were more negative than when the adolescent had no contact with the father at all.

Income and program participation. Income and program participation had the greatest effect on adolescents' reported level of home responsibilities, but had no separate effect on the perceived burden of these responsibilities. As the average income to needs increased for a family, adolescents reported lower levels of household responsibilities. Compared with adolescents whose families received *no* welfare benefits during the periods of middle childhood and adolescence covered in the SIPP and SPD, adolescents whose families received *some* welfare benefits during the middle school period or during both middle childhood and adolescence reported higher levels of home responsibilities. Adolescents who lived in families currently receiving some form of welfare reported they ate together more frequently as a family than did adolescents whose families were not currently receiving welfare benefits. Negative effects on knowledge about school were observed for families with serious food insufficiency problems. Overall the effects of income and program participation were less consistent for the intermediary variables than were the effects of maternal employment and attitudes towards parents. Furthermore, these results are not consistent with a hypothesis that positive effects of increased income compensate negative effects associated with maternal employment.

Results: Adolescent Outcome Variables.

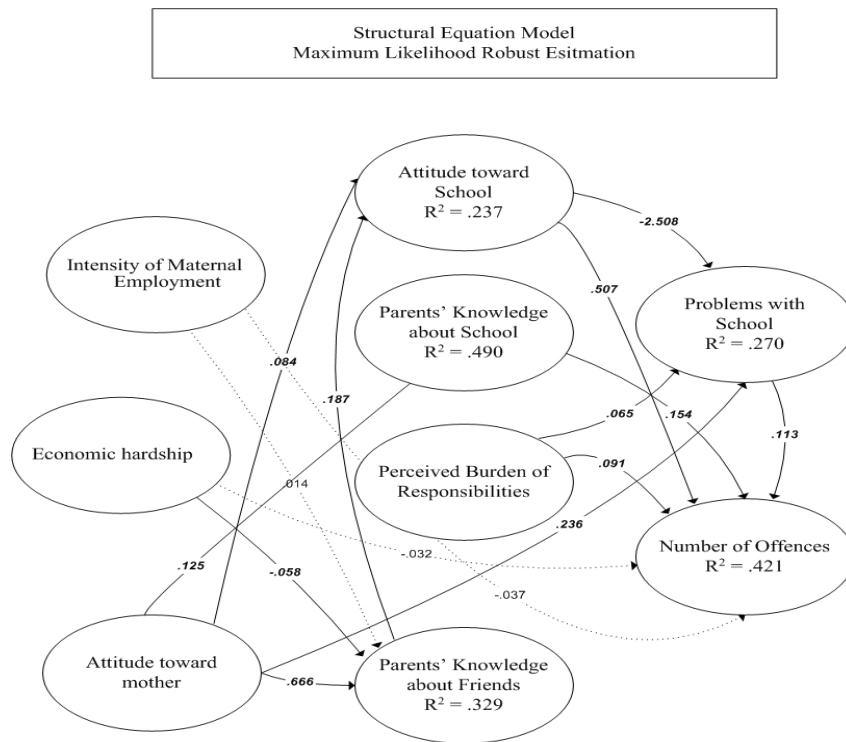
Hypothesis 2: Monitoring and Parental Involvement. This hypothesis was tested by the inclusion of the intermediary variables, knowledge about friends and school, television viewing, and frequency of eating together as a family. As a group, these variables exhibited strong and consistent effects on the outcome variables. Specifically, decreases in the level of parental knowledge and decreases in the frequency of eating together as a family were associated with increases in negative school outcomes, increases in substance use, increases in adolescent sexual activity and increases in self-reported illegal activities. Only in one case was the direction opposite that predicted by hypothesis 2. Parental television rule setting was associated with an increase in the likelihood that adolescents reported they had run away from home.

Hypothesis 3: Perceived burden of home responsibilities. Increases in the perceived burden of home responsibilities were associated with more negative attitudes toward school, more reported problems in school, and increases in reported illegal activities and status offences. The reported level of home responsibilities was, however, associated with more positive attitudes toward school, higher levels of sexual activity as well as increases in reported illegal activities. Neither of these variables affected substance use.

Hypothesis 4: Attitudes toward mothers and fathers. For both the intermediary and the adolescent outcomes variables, no variable exerted as strong and consistent an effect as the adolescents' self-reported attitude toward their mothers. In all cases, more positive attitudes

towards mothers were associated with more positive outcomes. This variable had statistically significant effects on all four categories of outcomes—school outcomes, substance use, sexual activity, and delinquent behavior. The self-reported attitude toward fathers functioned similarly for the intermediary and outcome variables. Only when adolescents indicated that they had strong positive relationships with their father were outcome variables positively affected. When adolescents reported that the relationships were poor, the net effects of contact with residential and non-residential fathers were more negative than no contact with father.

Hypothesis 5: Level of maternal employment and income. The results supported the hypothesis concerning the greater importance of maternal employment for intermediary variables than for outcome variables. In contrast with the consistent negative effects of maternal employment on the intermediary variables, in only one case did maternal employment exhibit an association with the outcome variables. Adolescents whose mothers who were employed part-time in the current year were less likely to have been expelled from school than other adolescents. Income and program participation, however, were significantly associated with adolescent outcomes. Higher average ratios of household income to poverty income were associated with more positive attitudes toward school, fewer problems with school, and a lower likelihood that the adolescent had been expelled. Higher average ratios were also associated with lower reported incidences of delinquency and pregnancy, but higher reported incidences of substance use. In cases where the parent reported food insufficiency problems, adolescents were more likely to report that they had run away from home or had engaged in physical fighting.



CHI-SQUARE = 2142.413, d.f. =454, p=.000
 Fit Indices
 Bentler-Bonett NFI =.901
 Bentler-Bonett NNFI =.907
 CFI=.920
 RMSEA=.040
 90% Confidence Interval of RMSEA (.038,.042)