Time Use in the Transition to Adulthood: Cross-National Comparisons

Eva Österbacka, Ph.D.
Research Department
The Social Insurance Institution of Finland

Cathleen Zick, Ph.D.
Department of Family and Consumer Studies
Institute of Public and International Affairs
University of Utah

Introduction

A recent UNICEF report offers the first multi-dimensional overview of children's and adolescents' well-being for rich OECD countries (UNICEF, 2007). The Netherlands scored the highest overall on UNICEF's multidimensional scale that provides a broad picture of child and adolescent well-being, while the United Kingdom scored the lowest among the 21 countries that were ranked. The report notes differences between countries in both the overall measure of well-being and in the specific sub-scales used. In this paper, we attempt to uncover contextual differences in adolescent time use that may underlie some of these differences in scores. To do this, we focus on time use in two countries – Finland, which had a relatively high ranking (4th overall), and the United States, which had a relatively low ranking (20th overall). Our goal is to provide detailed descriptions of adolescent time use with an eye toward raising questions about how time use and its correlates may link to some of the more global measures of child and adolescent well-being used in the UNICEF study.

The dimensions examined in the UNICEF report are: material well-being, health and safety, educational well-being, family and peer relationships, behaviors and risks, and subjective well-being. Each dimension is composed of different indicators measured at different stages of children's and adolescents' lives and the chosen indicators are mainly data driven. The indicators used come from a range of sources, including the OECD Programme for International Student Assessment (PISA) and WHO Health Behavior of School Children Survey (HBSC), and several indicators allude to time-use (e.g., percentage of children who report that their parents spend time "just talking to them," percentage of children who report eating the main meal of the day with their parents at least once a week). The rankings of Finland and the United States on the different dimensions were: material well-being 3rd and 17th, health and safety 3rd and 21st, educational well-being 4th and 12th, family and peer relationships 17th and 20th, and on behaviors and risks the corresponding rankings were 7th and 20th respectively. On the dimension subjective well-being, the data were missing for the United States, while the ranking for Finland was 11th (UNICEF, 2007).

Comparisons and contrasts in child and adolescent well-being across Finland and the United States are interesting, in part, because of differences in their macro-level societal characteristics. First, while both Finland and the United States are developed countries, they differ in terms of their welfare regimes. Finland belongs to the social democratic welfare regime, and the United States to the liberal welfare regime – which affects the relative roles of the market and the state in the production of welfare. Focusing on child health and well-being, we note that child/adolescent welfare production by the market is marginal in Finland while it is central in the United States. At the same time, child/adolescent welfare production by the state is central in Finland and marginal in the United States (Esping-Andersen G. 1999). This means that the welfare state in Finland generally spends more per capita on programs related to child and adolescent health and well-being than does the welfare state in the United States. Second, while both countries have relatively high per capita GDP (37,300/person in USD in Finland and 41,900/person USD in the United States in 2005), income inequality is larger in the United States than in Finland. But, at the same time, income inequality is also increasing in both countries (Brandolini and Smeeding, forthcoming). Finally, Finland is a rather small, generally homogeneous country that has a cultural background that emphasizes the importance of learning and knowledge (Österbacka, 2007). In contrast, the population in the United States is ethnically, racially and culturally diverse. Some American sub-cultures may rely on family and/or educational institutions to facilitate the socio-emotional development of their children more than others – suggesting that race/ethnicity may partially shape adolescent time use in the United States.

While contrasts in cultural, economics, and welfare environments at the national level may explain some of any differences in adolescent time use that we observe, it is also important to articulate the micro-level role of the family in both countries. There is no denying that the family is an important factor in children's and adolescents' lives. The overall well-being of children is very much dependent on the decisions made by the family (Bojer, 2007). The family distributes economic resources to its members, a child's psychological and physical development is supported by the family, and children learn to navigate through the complexities of society with the guidance of the family. Child outcomes and the successful transition from adolescence to adulthood are very much dependent on family relations, where good communication skills and strong social support are important factors for positive outcomes (Orthner et al., 2004).

The importance of the family's influence is evident in adolescent time use and its associations with other adolescent behaviors. For example, prior research has found that if adolescents regularly eat meals with other family members, they have a higher propensity for improved dietary intake, a lower propensity to use cigarettes, alcohol and marijuana, and a lower propensity to experience depressive symptoms (Neumark-Sztainer, et al., 2003; Eisenberg, et al., 2004; Spear, 2006). Compaň et al. (2002) argue that behavioural patterns are learned through shared meals. They show that a higher frequency of shared meals is associated with a reduction in mental health issues among adolescents. At the same time, as children get older, peers become a more important socializing factor – having both positive and negative effects. And, positive peer relationships are important for children's psychosocial development (Bradshaw et al 2006). Surprisingly, there is little comparative data on the quality/quantity of parent-child and peer relationships, yet family and peers have the potential to affect youth well-being and shape future life course trajectories.

In this paper, we will explore adolescent time use in Finland and the United States with the hope of adding insights about possible reasons for differences in the two countries' performances in the UNICEF report. We begin by providing a complete accounting of adolescent time use in both countries and we test for differences in the amount of time that Finnish and American youth spend in

various activities. Next we undertake a multivariate analysis of the categories where we observe statistically significant cross-national differences. This is followed by bivariate and multivariate comparisons of the total time adolescents in each country spend with family, friends, and alone. Finally, we examine the socio-demographic and economic factors that are associated with adolescents' time spent eating/drinking with family members. Thus, we attempt to provide a more complete picture of what adolescents are doing in each country and with whom they are spending their time.

Data sets

Data description

In the current study, two time diary data sets are used; the *Finnish Time Use Survey* (FTUS) (Niemi and Pääkkönen, 2001; Statistics Finland, 2007) and the *American Time Use Survey* (ATUS) (U.S. Bureau of Labor Statistics, 2007). The FTUS is the third Finnish time-diary survey conducted by the Statistics Finland. This survey was conducted for a year during 1999 and 2000. In this survey, a sample of households was drawn from the Population Register. All individuals in the selected households, 10 years and older, were asked to keep an accurate diary of their time use for two days (weekday and weekend). The diaries are gathered during a whole year, half the sample is conducted on a weekday and the other half is on a weekend. The respondents were also interviewed. The diary and interviews were supplemented with register information on e.g. taxable income.

For the current comparative analyses, we use the first diary day only since the ATUS collect a time diary for one day only. Furthermore, we select only 15-19 year olds (to insure age comparability with the ATUS) who live in two-parent or single-mother households. Characteristics of the Finnish parents stem from both registers and from the interviews with the parents. In households where neither of the parents (or the single mother) participated or the parent did not answer some of the questions, the information is missing. The full sample consists of 479 individuals, 231 adolescent males and 248 adolescent females. The Statistics Finland has coded information on with whom the respondents spent their time for the period March to December only, and thus in the analyses where we use information on who the respondents spent their time with, the FTUS sample is reduced to 181 males and 202 females. Due to non-response, season and weekday differences, the FTUS descriptive statistics are weighted so that they can be generalized to the larger population. The FTUS multivariate analyses are not weighted.

The second time diary data set, the ATUS is the first annual American time-diary survey conducted by the U.S. Bureau of Labor Statistics. Beginning in 2003, each year an ATUS sample is drawn from those households that have completed the final interview for the U.S. Current Population Survey. The ATUS respondent is randomly selected from among each household's members who are age 15 or older. Respondents are asked a series of questions that focus on household composition, employment status, etc. They are also asked to complete one 24-hour time diary using retrospective recording methods. For the current comparative analyses, we use the 2003 ATUS because it is the survey that was done closest in time to the FTUS. Once we restrict the ATUS to those respondents between the ages of 15-19 inclusive who live either in two-parent households or in single-mother households, the sample consists of 1,233 respondents with complete information, 624 adolescent males and 609 adolescent females.

ATUS diaries are gathered across all four seasons of the year but half of the respondents complete a diary for a weekday and half of the respondents complete a diary for a weekend day. The ATUS also over-samples some demographic groups and response rates vary by demographic group and day of the week. Thus, in the following analyses, all ATUS descriptive statistics are weighted so that they can be generalized to the larger population of American adolescents age 15-19 in 2003. The ATUS multivariate analyses are not weighted because the independent variables include those factors that are used to calculate the weights (DuMouchel and Duncan, 1983).

Measurement of the Variables

We have categorized the various time use activities and tried to make the categories as comparable as possible in the two data sets. In both data sets, the time is measured over the course of the day. In ATUS, only primary time is recorded, thus only primary activities are analyzed. The different categories are mutually exclusive and exhaustive with respect to primary activity time. The categories used are[1]:

- *Personal care* - includes time spent sleeping, grooming, health-related self care, personal activities and personal care emergencies.
- *Housework* - includes interior cleaning, laundry, sewing clothes, food preparation and clean-up, interior maintenance, exterior maintenance, lawn and garden care, care of pets, vehicle care, appliance repair, and household management and caring for and helping both household members and non-household members.
- *Paid work.*
- *School work* - includes time spent in school, time spent doing homework and time spent in extracurricular school activities (e.g., clubs).
- *Eating and drinking*.
- *Computer* - for leisure-related activities (e.g., playing computer games, participating in online chat rooms).
- *Exercise* - time spent engaged in sports or other forms of exercise.
- *Tv and movie.*
- *Read, write, listen to music.*
- *Residual leisure* – other leisure time (e.g., time spent socializing with friends, attending sporting events or other cultural events, hobbies, shopping, and resting).
- *Volunteer* - religious activities and volunteer activities.
- *Residual time* - all other time (e.g. errands, filling in the diary, activity unable to code).

We also use information on with whom the individuals spend their time for all primary activities except for personal care. The "with whom" information is coded in five different categories; alone, with family, with family and friends, with friends, and missing. Some respondents did not report this information in the diary and thus it is sometimes missing. In the multivariate analyses, we focus on being alone, being with family (where the category with family and friends is added) or being with friends (where the category with family and friends also is added).

[1] Travel time related to the different categories is included in the respective category.

In the multivariate analyses, structural factors and the family's socio-demographic and economic characteristics are included among the regressors to further our understanding of similarities and differences in adolescent time use across the two countries. Structural factors include season (fall, winter, spring, and summer which is the omitted category), day of the week, (weekend and weekday which is the omitted category), urban or rural location, and region of the country.

In Finland, time use in the Helsinki region and Uusimaa (which is the county surrounding the capital), is compared to time use in other part of the south, east, middle, and northern Finland. The southern parts of Finland (including the capital region and Uusimaa) and Mid-Finland are the more densely populated areas where the economic development is higher than in the east and north. The east and north are sparsely populated, except from some regional centers. In the last decades, people have migrated from east and north to the south of Finland. In the analyses of the U.S. sample, the northeast, midwest, and southern regions are compared to the west. Generally, the northeast is the most densely populated region and the south tends to have the highest poverty concentrations.

We also include socio-demographic and economic factors such as the adolescent's age, his/her mother's years of education, the number of minor children in the home, the mother's marital status (married or cohabiting compared to single mothers), and the household's poverty status. In the FTUS sample, parental information is missing for 19 households. However, information on years of education is missing for 53 mothers; information on number of children is missing for 19 mothers; and marital status is missing for 30 mothers. Since the number of observations is small in the FTUS and register information on income exists, we assume the following for the variables with missing information: the mother has minimum years of education (9 years), that number of children less than 18 years old in the home is zero, and that the mother is not married[2]. The poverty status is measured somewhat differently in the two countries. In the United States, there is an official federal poverty threshold. We define the household as poor, if the household's annual income is less than 2 times the federal poverty threshold. In Finland, there is no official poverty threshold. Instead, we have defined the household as poor, if the sum of annual taxable income in the household is less than the second income decile, where all income measures are equivalized. Furthermore, we control for the adolescent's race/ethnicity in the multivariate analyses of the U.S. data. Specifically, the time use of blacks, Hispanics and Asians are compared to white, non-Hispanics.

Results

Adolescents in the two countries have surprisingly similar socio-economic and demographic profiles. Table 1 reveals that the average 15-19 year old in Finland lives in a household where there are about 1.5 children under age 18 in the home, roughly 80 percent of their mothers are married or cohabiting with a partner, their mothers average about 13 years of schooling, and approximately 20 percent have annualized equivalent household incomes below the second income decile. In the United States, there are slightly more children under age 18 in the home (1.60-1.72), slightly fewer of their mothers are married or cohabitating (somewhere between 75 and 78 percent), their mothers have approximately 13 years of schooling, and 28 percent have household incomes that are less than 200 percent of the federal poverty guidelines. Geographic distributions of both samples mirror the urban/rural and regional splits of both countries. The racial/ethnic composition of the U.S. sample is consistent with the latest Census

[2] The two latter characteristics are included in the intercept in the analyses.

figures (U.S. Census Bureau, 2002).

[Table 1 About Here]

The typical day for a Finnish adolescent male is depicted in the first column of Table 2. He spends roughly 9.5 hours per day in personal care, .75 hours doing housework, one hour doing paid work, 3 hours doing school work, one hour eating, one hour interacting with the computer for fun, one hour exercising, 2.5 hours watching tv or movies, .75 hours reading, writing, and listening to or playing music for pleasure, and just a few minutes attending religious services and/or volunteering. Finnish adolescent girls average more time in housework (over a hour per day), reading, writing, and/or listening to or playing music (over an hour per day), and less time interacting with the computer for pleasure than their male counterparts. The patterns for the American adolescent males and females are generally similar, with two exceptions.

T-tests presented in Table 2 show that Finnish adolescents spend significantly more primary time each day eating and drinking and reading, writing, listening to or playing music for pleasure than do American adolescents. In addition, Finnish adolescent girls spend significantly less time than American girls interacting with the computer as a leisure activity. Reading, writing, listening/playing music for pleasure is thought to be among the more developmentally enriching activities in which adolescents might engage. Likewise, meal time is often thought of as time that enhances family interaction, improves nutritional intake, and builds stronger family bonds. The t-tests reported in Table 2 suggest that Finnish adolescents spend more time in these potentially enriching activities than do American adolescents. The additional time appears to come at the expense of spending relatively less time in a variety of activities including paid employment, housework, personal care, tv/movie viewing, volunteering and participating in church activities – although none of these differences reach the conventional thresholds for statistical significance.

[Table 2 About Here]

To gain a better understanding of what factors are associated with the differences in Finnish and American adolescents' time use, we estimate tobit equations for total time spent in eating/drinking and reading, writing, and/or playing/listening to music for pleasure. Estimation is done separately for boys and girls. The results appear in Table 3. Perhaps the most striking feature of this table is the absence of statistically significant relationships. In particular, few associations are found in the case of the Finnish equations. The one exception is the eating/drinking time equation for Finnish girls.

[Table 3 About Here]

Time spent eating/drinking by Finnish girls is associated with several structural factors. In particular, adolescent girls in Finland appear to spent more time in these activities during the fall and spring relative to the winter. Thy also spend less time eating/drinking on weekends and holidays relative to weekday. Adolescent girls living in rural areas spend less time in these activities compared to otherwise similar adolescent girls in urban areas while those living in the south of Finland spend more time eating/drinking than those living near the capital. The one socioeconomic factor that is associated with significantly more time spent eating/drinking is income. Finnish girls who live in families with equivalized incomes less than the second income decile spend more time eating/drinking than otherwise similar girls who live in higher income households.

Estimates using the U.S. samples reveal several associations with structural factors for girls but not

boys. Specifically, girls spend more time eating/drinking on weekends and holidays relative to weekdays. They also spend less time reading, writing, and listening to or playing music in fall, winter, and spring relative to summer. Boys show regional variations in time spent eating/drinking with boys who live in the west spending significantly more time in these activities than boys in the other regions of the country.

The U.S. estimates also highlight significant associations between selected socio-demographic and economic characteristics in time spent in the two activities. Increases in the mother's education level is associated with increases in the time both boys and girls spend eating/drinking as a primary activity. And, boys who live in households with incomes at or below 200% of the federal poverty threshold spend less time eating/drinking than otherwise similar boys in the U.S. An increase in an adolescent's age is associated with increases in time spent eating/drinking for girls and declines in time spent reading, writing, and listening/playing music for pleasure for both girls and boys. Regardless of gender, black adolescents spend significantly less time eating/drinking than white adolescents while Hispanic girls spend significantly more time eating/drinking than white girls. Finally, boys living in two-parent households spend more time eating/drinking and reading, writing, listening to and/or playing music for leisure than do otherwise comparable boys living in single-mother households.

To gain a better sense of who adolescents spend their time with, we calculate the mean minutes per day adolescents in each country spend alone, with family, with family and friends, and with friends. Descriptive information on who the adolescents are spending their time with appears in Table 4. These calculations exclude time spent in personal care activities as in both surveys the "who with" question was not asked when a respondent reported personal care time.

[Table 4 About Here]

The patterns of togetherness and aloneness that emerge are remarkably similar across the two nations. Girls and boys in both countries spend more than four hours per day alone on average. They spend between two and three hours per day with family members, somewhere between half and three-quarters of an hour with family and friends, and somewhere between four and six-plus hours per day with friends and acquaintances. Although Finnish adolescents appear to spend more time alone and with friends and less time with family than do American adolescents, none of the t-tests of differences in the means come close to conventional levels of statistical significance. Descriptive information on who the adolescents were with for specific sub-categories of time use are included in Appendix Table 1.

Multivariate tobit estimates of time spent with family, friends, and alone appear in Table 5. In estimating these equations time spent with both family and friends was included in both the family and the friends' equations. Not surprisingly, in both countries time spent with family increases on weekend days and holidays while time spent with friends declines on weekend days and holidays. In the U.S., time spent alone also declines significantly on weekend days and holidays. Adolescent males in eastern and northern Finland spend less time with family and more time alone than those living near the capital. Similarly, girls living in eastern and northern Finland spend more time with friends and less time alone than otherwise similar girls living near the capital. Finnish girls also appear to spend more time alone in winter and spring than in the summer. The one demographic characteristic that is associated with who Finnish boys spend time with is the number of minor children in the home. Increases in the number of minor children are associated with increases in adolescent males' time with family in Finland.

[Table 5 About Here]

In the U.S. sample, the number of minor children in the home is also associated with significant increases in time spent with family members and significant decreases in time spent alone – for both males and females. In addition, two other demographic associations emerge in the U.S. data. First, Asians exhibit different patterns of who they spend their time with compared to otherwise similar white adolescents. Asian boys spend less time with family, less time with friends, and more time alone than their white counterparts. In contrast, Asian girls spend more time with family, less time with friends, and more time alone than their white counterparts. Second, boys who live in households with two adults spend significantly more time with family and significantly less time with friends or alone compared to boys living in single mother households. It may be that American adolescent males are interested/willing to spend more time with family members when fathers are present relative to those living situations where they are absent.

To explore the national differences in eating/drinking and reading, writing, and listening to music for leisure more closely, we focus on the time spent in these activities that is shared with others. American youth spend very little time reading, writing, and/or listening to or playing music for pleasure but most of the time spent doing this is time alone – averaging 13 minutes per day for boys and 12 minutes per day for girls. In contrast, Finnish boys average almost 29 minutes per day doing these activities alone and Finnish girls average 43 minutes per day alone in these activities. Finnish youth also average relatively greater amounts of time engaging in these activities with friends – with boys averaging 12 minutes per day and girls averaging 21 minutes per day.

The typical Finnish boy averages a little more than 18 minutes each day eating/drinking alone, 24 minutes eating/drinking with family members, 19 minutes eating/drinking with friends, and 4 minutes with both family and friends. The corresponding means for Finnish girls are 19 minutes alone, 18 minutes with family, 29 minutes with friends, and 6 minutes with both family and friends. In contrast, American adolescents average somewhat less time eating/drinking alone (10 minutes for boys and 7 minutes for girls) and more time with family (24 minutes for boys and 23 minutes for girls). American boys spend similar amounts of time as their Finnish counterparts eating/drinking with friends or with both friends and family (18 minutes and 2 minutes respectively), while American girls average somewhat less time than Finnish girls eating/drinking with friends (19 minutes) but similar amounts of time eating/drinking with both family and friends (5 minutes).

In an attempt to identify socio-demographic and economic factors that are linked to time spent eating/drinking with family members, we estimate tobit equations separately for adolescent boys and girls in each country. The resulting parameter estimates, shown in Table 6, suggest some interesting differences. In particular, American youth spend significantly more time eating/drinking with family members on weekends and holidays than on weekdays while day of the week appears to be unrelated to the time Finnish youth spend eating/drinking with family members. Similarly, as boys get older they spend less time eating with their family in the U.S. and as the education level of the mother rises, girls in the U.S. spend more time eating with their family. In contrast, these relationships are absence in the Finnish estimates. The tobit analyses reveal some seasonal variation for boys in the U.S. and girls in Finland in the time spent eating with family members in both samples. In addition, boys in both countries spend significantly more time eating with family members if the mother is not a single parent. Finally, the U.S. estimates suggest some differences by race/ethnicity with black adolescent boys spending less time eating with family members than their otherwise similar white counterparts and Hispanic and Asian girls both spending significantly more time eating with family members than their otherwise similar white counterparts.

[Table 6 About Here]

Discussion

Adolescence is a period where choices about time use can provide important developmental, health, and educational experiences that in turn affect an adolescent's ease of transition into adult roles. Both Finland and the United States scored low on family peer relationships in the recent UNICEF report of children's and adolescents' well-being in rich OECD countries. In contrast, Finland scored higher on the dimensions of health and safety and educational well-being whereas the United States scored low on both of these scales.[3] Our descriptive time diary analyses provide us with some context for the scores that are observed in both countries and they also serve as a catalyst for insights about future research.

Educational well-being in the UNICEF report is measured by reading, mathematical, and scientific literacy of 15 year olds, the percentage of 15-19 year olds enrolled in school full or part-time, the percentage of 15-19 year olds not in education, training or employment, and the percentage of students' age 15 who expect to work in jobs that require minimal skills. American students scored relatively low on the literacy tests compared to Finnish students. While both the Finnish and American public educational systems are free, the Finnish public school system is one of the most equal in the world. The variation in the PISA test scores and the between school variance in Finland is comparatively low in Finland. Furthermore, the linkage between students' socio-economic status and tertiary education is relatively low in Finland. At the same time, Finland spends less per student in primary through tertiary education than does the United States (7,798 equivalent USD versus 12,092 equivalent USD in 2004) and Finnish children up to 14 years of age, have the least number of instruction hours in school compared to other OECD countries (Education at Glance, 2007). Despite these education-related differences in government inputs and student outcomes, our analyses show that there are virtually no differences in the time that adolescents in these two countries spend in school related activities. This suggests that the observed differences in test scores may be a function of curriculum differences.

UNICEF's measures of health and safety are confined primarily to indicators that address early childhood issues (i.e., infant mortality rates, low birth weight rates, toddler immunization rates). Our time use analyses suggest that another important dimension of child health and safety may be time spent in physical activity. Currently, the U.S. Centers for Disease Control and Prevention (CDC) recommends that children and adolescents engage in at least 60 minutes of moderately intense physical activity on most days of the week (CDC, 2006). While the Finnish and American adolescent boys meet this standard on average, the adolescent girls in both countries typically fall far short – averaging about one-half hour per day in physical activity. Given the rising rates of youth overweight in the United States (CDC, 2007) and Finland (Kautiainen et al, 2002) and the consequences of being overweight for adolescent health (Dietz, 1998), public health officials in both countries may find the relatively low levels of physical activity among adolescent girls to be particularly troubling and worthy of further study. Policymakers should also consider including measures of physical activity in multidimensional

[3] The other three dimensions in the UNICEF report -- that cannot be informed by time use analyses -- are material well-being, behaviours and risks, and subjective well-being.

scales that summarize child health and safety.

Our time diary analyses offer detailed insights about adolescents' family and peer relationships in the two countries. UNICEF's composite score for family and peer relationships includes indicators of family structure (measured by percentage of teenagers living in (a) single-parent families, and (b) stepfamilies), family relationships (measured by percentage of 15 year-olds who report (a) eating the main meal of the day with parents more than once a week, and (b) that parents spend time 'just talking' to them), and peer relationships (measured by percentage of teenagers who report finding their peers 'kind and helpful'). Our analyses show that for adolescent males in the United States, household structure may affect their mix of time use in ways that could influence family/peer relationships (and perhaps even health). Specifically, we find that adolescent males who live in households with married or cohabitating parents average over an hour per day more doing activities with family members than otherwise similar males who live in single-mother households. In addition, they spend less time with friends and less time alone and they spend more time eating meals with other family members. While we do not find such a consistent pattern for adolescent males in Finland, there is evidence that if Finnish boys live in married or cohabitating households, they spend significantly more time eating with family members and they spend less time with friends, relative to Finnish boys who live in single-mother households. Thus, it would appear that one of the ways that household structure affects adolescent family and peer relationships is by altering adolescent males' time use. Why we do not observe the same sort of effects for adolescent females remains an unanswered question.

The number of children under age 18 in the home is another factor that consistently has a positive relationship with family time in both Finland and the United States. In the United States, number of children under age 18 is also inversely related to time spent alone for both adolescent girls and boys. This finding is somewhat unclear as it may be suggesting that adolescents in larger families spend more time with family members and/or that first born adolescents are inclined to spend more time with family than latter born adolescents. Certainly larger families provide more opportunity for family interaction but given the limitations of our data sets, we cannot rule out the possibility that we are also capturing a birth order effect in these findings. Regardless, it suggests that number of minor children in the home is an important marker for adolescent family time in both countries. And, this marker also carries over to time spent eating/drinking with family members in the case of Finnish males and American females.

Another component of the UNICEF score for family and peer relationships was the percentage of youth who report eating the main meal of the day with parents more than once a week. Only 59.8% of Finnish adolescents age 15 or older and 65.7% of American adolescents age 15 or older report eat their main meal with their parent(s) around a table several times a week. These relatively low rates of participating in family meals are also reflected in our time diary analyses where we find that both Finnish and American adolescents report spending less than half an hour per day, on average, eating/drinking with other family members. Finnish adolescents spend an equal amount of time eating/drinking with friends, and almost as much time eating/drinking alone. While American adolescents spend less time eating/drinking alone, they too average almost as much time eating with friends as with family. We know that eating family meals is linked to a number of social, developmental and nutritional benefits for children and adolescents (Eisenberg, et al., 2004; Neumark-Sztainer, et al., 2003; Spear, 2006; Traveras, et al., 2005). When they eat together, family members often relate events of the day, plan and coordinate future activities, discuss their accomplishments and frustrations, etc. while also typically eating a more balanced and nutritious meal. In Finland, some of the variation with adolescent boys' time eating with family members appears to be seasonal but, as we

mentioned earlier, residing in a two-parent household is also associated with more time spent eating with family members for both Finnish and American boys.

In the United States, we observed other socio-economic, demographic, and structural covariates that also affect meal time. In particular, racial and ethnic differences suggest that black males may be disadvantaged with respect to family meal time relative to their white non-Hispanic counterparts. In contrast, Hispanic and Asian females may have enhanced family relationships and a more balanced diet relative to their non-Hispanic white counterparts because they spend more time eating with family members. These racial and ethnic differences are intriguing and merit further analysis. Likewise, it is interesting that American youth spend more time eating/drinking with family members on weekends and holidays compared to weekdays but in the case of the Finnish youth these differences by day of the week do not reach conventional levels of significance. Nevertheless, this suggests that family meal time is more likely to be "crowded out" by other structural factors (e.g., school, work) on weekdays compared to weekends and holidays, particularly in the United States.

One potentially important dimension of adolescent life that is difficult to isolate in the UNICEF report, but which is easy to identify using time diary data is reading/writing/listening to or playing music for pleasure. These are activities that are quite likely to promote challenge, concentration, and motivation and thus they can be developmentally enriching (Larson, 2001). Our time diary data reveal large differences in the time that Finnish and American adolescents spend in such activities. Unfortunately, the multivariate analyses reveal little about the reasons for the observed differences. Possible explanations for the observed cross-national differences must await future analyses.

In sum, our descriptive analyses of adolescent time use in Finland and the United States provide important context for cross-national comparisons of the more typical indicators of child and adolescent well-being. Specifically, we were able to uncover some of the possible contextual underpinnings of the low scores that Finland and the United States both received on family and peer relationships. Youth in these two countries spend relatively little time with family. Both socio-demographic and structural factors appear to be at work in influencing adolescents' time with family in the United States. In Finland, these influences, while still present, are less pronounced.

We find few differences in the education- and health-related time use that can explain why Finnish youth score higher than American youth in these domains. Consequently, it may be that differences in the larger cultural, economic, and/or welfare environments across the two countries are responsible for Finland's relatively strong performance and the United States' relatively weak performance in these areas. Our findings with respect to education, health, and family and peer relationships raise a number of new research questions that await future investigation.

Of course, our analyses are not without limitations. First, while 24-hour time diaries of the type used here provide rich descriptions of average time use, they are less useful in identifying multivariate correlates of an individual's time allocation because of the limited diary period. Second, analyses like these must be expanded to include time diary data from other countries if we are to get a clear picture of how macro-level cultural, economic, and welfare environments interact with micro-level socio-demographic and economic factors to affect time use during the transition from adolescence to adulthood. While it would be difficult to remedy the first limitation given the current emphasis on gathering one 24-hour time diary in most time-use surveys, we hope to remedy the second limitation in the future by comparing and contrasting the findings presented here with analyses based on other national time diary data.

References:

Bojer, H. 2003. *Distributional justice, theory and measurement*. Routledge, London and New York.

Bradshaw, J., Hoelscher, P. and Richardson, D. 2007. *Comparing child wellbeing in OECD countries: Concepts and methods*. Innocenti Working Paper No. 2006-03,UNICEF, Innocenti Research Centre.

Brandolini, Andrea. and Timothy M. Smeeding. forthcoming. Inequality: International Evidence. *The New Palgrave Dictionary of Economics*.

Centers for Disease Control and Prevention. (2006a). Physical Activity for Everyone: Recommendations: Are there special recommendations for young people? Available online at: http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/young.htm.

Center for Disease Control, (2007). Prevalence of Overweight Among Children and Adolescents: United States, 1999-2002. Available online at: http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overwght99.htm

Dietz, W. (1998). Health consequences of obesity in youth: childhood predictors of adult disease Pediatrics: 101(3): 518-526.

Duncan, Greg J. and Jeanne Brooks-Gunn. 2000. Family poverty, welfare reform, and child development. *Child Development*. 71(1): 188-196.

DuMouchel, William H. and Greg J. Duncan. 1983. Using sample survey weights in multiple regression analyses of stratified samples. *Journal of the American Statistical Association*. 78(383): 535-43.

Education at glance 2007, OECD Indicators. 2007. OECD publication.

Eisenberg, Marla E., Rachel E. Olson, Dianne Neumark-Sztainer, Mary Story, and Linda H. Bearinger. 2004. Correlations between family meals and psychosocial well-being among adolescents. *Archives of Pediatrics and Adolescent Medicine*. 158: 792-796.

Esping-Andersen, G. 1999. *Social Foundations of Postindustrial Economies*. Oxford University Press, Oxford.

Kautiainen, S., A. Rimpelä, A. Vikat, and SM Virtanen. 2002. Secular trends in overweight and obesity among Finnish adolescents in 1977-1999. *International Journal of Obesity*. 26(4): 544-552.

Larson, R.W. (2001). "How U.S. children and adolescents spend time: What it does (and doesn't) tell us about their development." *Current Directions in Psychological Science*, 10(5): 160-164.

Neumark-Sztainer, Diane, Peter J. Hannan, Mary Story, Jillian Croll, and Cheryl Perry. 2003. Family meal patterns: Associations with sociodemographic characteristics and improved dietary intake among adolescents. *Journal of the American Dietetic Association*. 103:317-322.

Niemi, Iris. and Hannu Pääkkönen. 2001. *Ajankäytön muutoksen 1990-luvulla*. Tilastokeskus, Helsinki.

OECD in Figures 2006-2007, 2007. OECD Publication. Available online at: http://www.oecd.org/document/43/0,3343,en_2825_293564_37806443_1_1_1_1,00.html

Orthner, Dennis K., Hinckley Jones-Sanipei, and Sabrina Williamson. 2004. The resilience and strengths of low-income families. *Family Relations*. 53(2): 159-167.

Österbacka, Eva. 2007. Är den finländska grundutbildningen bäst i världen? *Søkelys på arbeidslivet*. 24(2): 243-250.

Spear, Bonnie A. 2006. The need for family meals. *Journal of the American Dietetic Association.* 106(2): 218-219.

Statistics Finland. 2007. *Time Use Survey*. Helsinki. Available online at: http://www.stat.fi/til/akay/index_en.html

Traveras, E.M., L.S. Rifas-Shmin, C.S. Berkey, H.R. Rocket, A.E. Field, A. L. Frazier, G.A. Coldits, and M.W. Gillman. 2005. Family dinner and adolescent overweight. *Obesity Research*. 13:900-906.

UNICEF. (2007). *Child poverty in perspective: An overview of child well-being in rich countries*. 2007. Innocenti Research Centre, Report Card 7. Available online at: http://www.unicef-irc.org/publications/pdf/rc7_eng.pdf

U.S. Bureau of Labor Statistics. 2007. *American Time Use Survey*. Washington DC. Available online at: http://www.bls.gov/tus/

U.S. Census Bureau. 2002. *Population Profile of the United States: 2000*. Available online at: http://www.census.gov/population/www/pop-profile/profile2000.html

Table 1. Descriptive statistics

	Finland 2000 [a]		**Finland 2000** [b]		**United States 2003**[c]	
	Boys	Girls	Boys	Girls	Boys	Girls
Adolescent's Age	16.81	16.93	16.85	17.0	16.90	16.72
Mother's Education (yrs) [d]	13.17	12.82	13.26	12.85	13.18	13.25
Number of Children < 18 in the Home[d]	1.50	1.42	1.53	1.42	1.60	1.72
Household's Annual Equivalized Income <= 2nd Income Decile (1=yes)	0.19	0.19	0.18	0.21	n.a.	n.a.
Household's Annual Income < 200% of Poverty Threshold (1=yes)	n.a.	n.a.	n.a.	n.a.	0.28	0.28
Mother Married or Cohabitating (1=yes) [d]	0.84	0.77	0.86	0.80	0.78	0.75
Fall[e]	0.28	0.22	0.33	0.26	0.24	0.25
Winter[e]	0.28	0.23	0.12	0.14	0.27	0.26
Spring[e]	0.27	0.24	0.33	0.25	0.24	0.26
Weekend or Holiday Diary (1=yes)	0.30	0.27	0.34	0.24	0.35	0.29
South-Finland[f]	0.38	0.30	0.38	0.29		
East-Finland[f]	0.17	0.14	0.16	0.12		
Mid-Finland[f]	0.14	0.17	0.13	0.18		
North-Finland[f]	0.10	0.15	0.06	0.16		
Northeast-U.S.[g]					0.18	0.20
Midwest-U.S.[g]					0.22	0.21
South-U.S.[g]					0.33	0.34
Rural (1=yes)	0.16	0.19	0.14	0.19	0.18	0.17
Black[h]					0.15	0.15
Hispanic[h]					0.18	0.15
Asian[h]					0.04	0.04
N	231	248	181	202	624	609

[a] The means have been weighted using the FTUS sample weights so that the descriptive statistics reflect the larger population of individuals age 15-19 in Finland in 2000. Whole sample.
[b] The means have been weighted using the FTUS sample weights so that the descriptive statistics reflect the larger population of individuals age 15-19 in Finland in 2000. March-December sample, with-who data is missing for January-February sample.
[c] The means have been weighted using the ATUS sample weights so that the descriptive statistics reflect the larger population of individuals age 15-19 in the United States in 2003.
[d] For a small proportion of the Finnish data, parental information is missing. If so, mother's years of education = 9 (minimum years of education), number of children < 18 in the home = 0, and mother married = 0.
[e] The omitted category in this sequence of dummy variables are those respondents whose time diary came from a summer day.

[f] The omitted category in this sequence of dummy variables are those respondents who lived in the capital area and Uusimaa (which is the county surrounding the capital) in Finland.
[g] The omitted category in this sequence of dummy variables are those respondents who lived in the western United States.
[h] The omitted category in this sequence of dummy variables are those respondents in the U.S. sample who identified their race/ethnicity as white, non-hispanic.

Table 2. Mean time use for adolescents age 15-19 (standard deviation in parentheses).

Time use category	Finland (2000)		United States (2003)		T-Tests[a]	
	Boys	Girls	Boys	Girls	Boys	Girls
Personal care	573.24	591.28	616.30	605.76	-0.69	-0.26
	(140.24)	(138.55)	(156.79)	(143.25)		
Housework	42.80	65.25	49.07	69.68	-0.33	-0.21
	(78.15)	(79.22)	(82.86)	(103.21)		
Paid work	57.23	46.22	89.42	78.16	-0.35	-0.57
	(171.33)	(131.25)	(183.22)	(160.50)		
School work	186.12	181.78	177.48	227.38	0.07	-0.33
	(204.61)	(204.78)	(226.22)	(259.05)		
Eating and drinking	67.32	71.57	54.32	53.85	2.23**	3.76**
	(41.38)	(35.57)	(51.25)	(51.10)		
Computer	62.36	12.39	55.09	32.67	0.24	-2.79**
	(98.81)	(31.20)	(103.77)	(80.29)		
Exercise	62.37	34.11	61.48	30.65	0.02	0.28
	(111.35)	(60.34)	(112.35)	(78.76)		
Tv and movie	145.91	124.18	144.89	128.76	-0.02	-0.12
	(122.76)	(107.27)	(146.41)	(134.42)		
Read, write, listen to music	46.68	70.74	18.20	15.30	2.14**	3.18**
	(69.16)	(88.16)	(60.39)	(45.67)		
Residual leisure	159.98	187.78	118.10	123.46	0.49	0.97
	(175.13)	(156.77)	(155.01)	(140.62)		
Volunteer	6.74	13.84	19.10	15.90	-1.42	-0.20
	(43.75)	(61.53)	(75.33)	(57.83)		
Residual time	29.24	40.87	12.46	18.70	1.60	1.48
	(64.41)	(77.92)	(43.20)	(57.34)		
N	231	248	624	609		

[a]T-tests calculated under the assumption that the two populations have different standard deviations.

** p<.05

The largest differences between the two countries are in the categories eating and drinking, read, write, and listen to music

Read, write, and listen to music: The most important shares for the Finns; listen to radio and music (non-specifiable time) (mean 21.9 for boys and 22.2 for girls), read magazines and books (14 and 26; girls read books for 16 minutes on average) (I thought Finns read newspapers a lot, the teens only about 3 minutes on average)

EO: could check secondary time for eating and drinking in Finland!

Table 3. Tobit parameter estimates for time spent eating/drinking and time spent engaged in reading, writing, or listening/playing music (chi-square in parentheses).

	Finland 2000				**United States 2003[a]**			
	Eating/Drinking		Reading/Writing/Music		Eating/Drinking		Reading/Writing/Music	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Intercept	4.66 (0.01)	25.98 (0.79)	64.63 (0.27)	-80.21 (0.60)	20.01 (0.28)	-126.48 (9.14)**	182.86 (0.77)	331.18 (4.32)**
Adolescent's Age	3.81 (2.35)	1.54 (1.01)	-1.81 (0.08)	9.12 (2.80)*	0.54 (0.08)	7.17 (11.02)**	-27.39 (6.35)**	-24.34 (8.37)**
Weekend or Holiday Diary	-4.62 (0.61)	-8.90 (5.07)**	4.71 (0.10)	16.69 (1.40)	4.91 (1.16)	16.32 (10.19)**	3.82 (0.02)	-11.73 (0.38)
Mother's Education	0.98 (0.41)	0.75 (0.60)	-3.70 (0.84)	-1.41 (0.16)	1.49 (2.81)*	3.29 (10.25)**	5.31 (1.19)	-3.83 (0.97)
Equivalized Income <= 2nd Income Decile	-0.82 (0.01)	11.28 (3.80)*	1.42 (0.00)	-8.48 (0.17)				
Income < 200% of Poverty Threshold					-12.54 (4.27)**	-6.42 (0.89)	-9.76 (0.09)	4.67 (0.03)
Number of Children < 18 in the Home	-0.91 (0.10)	-0.26 (0.02)	11.84 (2.69)	10.12 (2.23)	2.22 (0.95)	0.42 (0.03)	-4.04 (0.11)	1.64 (0.03)
Fall	-0.52 (0.00)	12.27 (4.52)**	19.79 (0.83)	0.70 (0.00)	1.07 (0.03)	-4.57 (0.40)	-40.34 (1.42)	-55.11 (4.31)**
Winter	-2.95 (0.10)	-1.99 (0.12)	-23.68 (0.94)	-8.53 (0.17)	-6.97 (1.21)	-1.46 (0.04)	-13.89 (0.18)	-46.19 (2.94)*
Spring	-14.05 (2.64)	10.51 (3.76)*	17.86 (0.65)	-27.64 (2.03)	1.26 (0.03)	5.89 (0.66)	-12.86 (0.13)	-54.48 (4.07)**
Rural	-5.19 (0.41)	-10.28 (3.84)*	-31.95 (2.17)	-19.14 (1.05)	-0.27 (0.00)	1.18 (0.03)	-32.54 (1.04)	11.73 (0.22)
South-Fin/South-U.S.	-9.45 (1.33)	10.40 (3.54)*	-8.92 (0.18)	-15.75 (0.64)	-12.01 (3.58)*	4.28 (0.35)	-30.50 (0.82)	-5.05 (0.03)
East-Fin/Northeast-U.S.	-11.68 (1.47)	9.21 (2.06)	-22.49 (0.81)	-2.87 (0.02)	-11.84 (2.65)*	1.57 (0.04)	-30.89 (0.63)	-25.97 (0.73)
Mid-Fin/Midwest-U.S.	-17.29 (3.14)*	2.48 (0.14)	-13.42 (0.29)	10.20 (0.20)	-15.69 (5.26)**	-1.72 (0.05)	-1.67 (0.00)	12.75 (0.20)
North-Fin	-3.52 (0.08)	-0.31 (0.00)	-7.41 (0.05)	-24.13 (1.03)				
Black					-16.60 (4.44)**	-16.68 (3.27)*	-15.30 (0.12)	-22.09 (0.36)
Hispanic					0.42 (0.00)	30.48 (11.38)**	-23.73 (0.33)	-6.85 (0.04)
Asian					-1.05 (0.01)	16.66 (1.44)	-4.43 (0.00)	30.13 (0.37)
Mother Married or Cohabitating	3.58 (0.15)	1.03 (0.03)	18.89 (0.56)	1.13 (0.00)	16.25 (8.07)**	6.31 (0.96)	81.20 (6.00)**	21.01 (0.70)
Scale	43.09	30.13	102.61	103.84	55.17	61.37	206.88	162.84
X^2	13.99	27.88**	16.70*	10.61	49.16**	53.70**	24.82*	21.38

** p<.05,
* p< .10

Table 4. Mean Minutes Spent Alone, with Family, and with Friends

	Finland		United States		T-tests	
With whom	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Alone	264.70 (188.84)	261.18 (174.86)	239.96 (104.96)	249.50 (215.80)	0.23	0.10
Family	153.16 (162.69)	120.10 (133.02)	164.58 (193.87)	185.07 (204.26)	-0.11	-0.83
Family & friends	54.53 (168.82)	36.04 (78.14)	30.59 (104.96)	48.52 (117.74)	0.27	-0.47
Friends	350.75 (261.17)	412.24 (268.47)	309.19 (266.16)	278.48 (264.98)	0.17	0.56
Missing	32.63 (105.26)	27.47 (74.89)	79.38 (170.42)	72.67 (150.88)	-0.86	-1.38
Total	855.77 (143.32)	857.03 (132.46)	823.70 (156.79)	834.24 (143.24)	0.42	0.38
N	181	202	624	609		

Table 5. Unweighted tobit parameter estimates of time spent with family, friends, and alone (chi-square in parentheses).

	Finland 2000						**United States 2003[a]**					
	Family		Friends		Alone		Family		Friends		Alone	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Intercept	481.05 (2.88)*	481.08 (6.63)**	364.38 (0.97)	196.26 (0.47)	231.03 (0.85)	- 3.72 (0.00)	406.18 (5.01)**	243.62 (2.04)	105.14 (0.21)	603.46 (7.70)**	443.08 (9.56)**	377.06 (6.44)**
Adolescent's Age	-12.56 (0.80)	-18.00 (3.41)*	11.61 (0.40)	9.79 (0.43)	-5.12 (0.17)	16.14 (2.89)*	-18.33 (3.87)**	-8.43 (0.91)	11.79 (1.02)	-17.88 (2.52)	-17.25 (5.55)**	-10.82 (1.99)
Weekend or Holiday Diary	52.21 (2.45)	75.16 (8.39)**	- 95.01 (4.76)**	-144.75 (13.46)**	-37.51 (1.61)	-24.54 (0.95)	104.76 (23.10)**	135.73 (42.28)**	-97.65 (12.82)**	-128.03 (23.01)**	-75.25 (19.19)**	-81.01 (19.95)**
Mother's Education	-4.52 (0.27)	-8.45 (1.77)	-0.23 (0.00)	7.76 (0.65)	7.77 (1.03)	2.48 (0.16)	-3.97 (0.86)	0.77 (0.03)	3.14 (0.34)	2.30 (0.18)	11.41 (11.62)**	4.76 (1.68)
Equivalized Income <= 2nd Income Decile	36.77 (0.52)	-42.77 (1.36)	4.93 (0.01)	40.32 (0.53)	-39.04 (0.74)	36.29 (1.04)						
Income < 200% of Poverty Threshold							28.05 (0.96)	10.97 (0.16)	-41.40 (1.32)	-1.87 (0.00)	27.33 (1.45)	14.48 (0.36)
Number of Children < 18 in the Home	30.27 (3.51) *	23.48 (3.79)*	2.99 (0.02)	-14.20 (0.60)	-16.08 (1.27)	-13.65 (1.34)	39.77 (13.82)**	34.90 (12.17)**	16.90 (1.57)	-0.08 (0.00)	-32.35 (14.43)**	-20.17 (5.35)**
Fall	-19.82 (0.20)	-13.21 (0.15)	-11.24 (0.04)	2.70 (0.00)	-13.22 (0.11)	43.64 (1.70)	0.08 (0.00)	-49.59 (2.84)*	30.77 (0.65)	16.62 (0.19)	21.59 (0.82)	26.93 (1.11)
Winter	- 8.70 (0.02)	8.07 (0.03)	2.72 (0.00)	-73.00 (1.19)	-24.79 (0.20)	89.45 (4.38)**	-26.31 (0.76)	-37.99 (1.58)	48.35 (1.64)	23.00 (0.36)	8.09 (0.12)	56.58 (4.63)**
Spring	28.56 (0.40)	40.62 (1.53)	-53.10 (0.81)	-70.87 (2.02)	20.69 (0.27)	76.86 (5.83)**	11.84 (0.13)	-57.41 (3.76)*	71.17 (3.09)*	39.79 (1.11)	15.67 (0.38)	12.75 (0.25)
Rural	8.23 (0.03)	-43.39 (1.57)	64.25 (0.98)	60.86 (1.34)	5.95 (0.02)	-47.10 (1.97)	30.76 (1.20)	39.02 (1.96)	-20.40 (0.33)	-32.68 (0.84)	-2.67 (0.01)	-10.01 (0.17)
South-Fin/South-U.S.	-81.52 (3.33)*	-3.31 (0.01)	37.49 (0.41)	84.21 (2.33)	26.04 (0.43)	-63.16 (3.22)*	-44.87 (2.20)	-18.56 (0.39)	-4.54 (0.01)	-5.20 (0.02)	37.28 (2.41)	12.58 (0.24)
East-Fin/Northeast-U.S.	-120.91 (5.32)**	-42.07 (0.99)	-24.96 (0.13)	174.79 (7.32)**	84.16 (3.30)*	-81.71 (3.93)**	-74.35 (4.56)**	-22.06 (0.46)	-47.08 (1.17)	2.67 (0.00)	51.13 (3.48)	17.91 (0.40)
Mid-Fin/Midwest-U.S.	-2.31 (0.00)	18.59 (0.20)	-18.96 (0.07)	63.30 (1.01)	15.08 (0.10)	-49.88 (1.55)	-61.96 (3.63)*	29.46 (0.84)	3.42 (0.01)	-3.27 (0.01)	26.44 (1.05)	16.79 (0.36)
North-Fin	-148.96 (4.43)**	-69.49 (2.69)	15.50 (0.03)	135.66 (4.48)**	110.83 (3.15)*	-95.79 (5.45)**						
Black							-6.85 (0.03)	56.63 (2.29)	-15.69 (0.11)	-63.18 (1.74)	-47.74 (2.64)	2.95 (0.01)
Hispanic							-21.61 (0.37)	59.59 (2.60)	9.31 (0.04)	-6.58 (0.02)	21.55 (0.58)	8.08 (0.06)
Asian							-161.51 (7.40)**	97.66 (2.95)*	-74.75 (1.02)	-171.22 (5.22**)	140.31 (9.17)**	91.03 (3.33)**

Mother Married or Cohabitating	-50.36 (0.90)	57.47 (2.26)	-141.54 (4.10)**	-42.95 (0.56)	24.93 (0.27)	- 8.99 (0.06)	85.26 (9.76)**	13.50 (0.27)	-63.67 (3.53)*	11.87 (0.13)	-38.21 (3.20)*	-0.30 (0.00)
Scale	212.78	171.88	279.36	264.42	189.98	169.25	259.60	250.87	326.03	316.77	208.82	218.63
X^2	25.86**	32.87**	13.80	29.08**	14.05	23.18**	81.38**	75.45**	24.36*	33.30**	65.58**	39.88**

** p<.05

* p< .10

Table 6. Tobit parameter estimates of time spent eating/drinking with family members (chi-square in parentheses). Non-weighted estimates.

	Finland		**United States**	
	Boys	Girls	Boys	Girls
Intercept	-42.04 (0.79)	41.78 (1.30)	79.46 (2.99)*	-30.55 (0.73)
Adolescent's Age	1.82 (0.61)	-2.74 (1.98)	-6.08 (6.62)**	0.11 (0.00)
Weekend or Holiday Diary	-0.43 (0.01)	2.19 (0.18)	10.55 (3.61)*	15.47 (12.26)**
Mother's Education	-0.31 (0.05)	-0.50 (0.16)	1.39 (1.64)	1.58 (3.22)*
Equivalized Income <= 2nd Income Decile	-11.56 (1.74)	-1.69 (0.06)		
Income < 200% of Poverty Threshold			3.53 (0.23)	-4.97 (0.72)
Number of Children < 18 in the Home	7.83 (8.56)**	3.07 (1.68)	3.09 (1.29)	5.04 (5.70)**
Fall	-2.78 (0.14)	12.71 (3.42)*	-2.96 (0.15)	-7.75 (1.55)
Winter	12.80 (1.57)	1.76 (0.04)	-14.56 (3.57)*	-3.13 (0.24)
Spring	12.09 (2.58)	14.89 (5.19)**	-3.17 (0.15)	-2.78 (0.20)
Rural	-16.12 (3.52)*	-5.36 (0.64)	-0.40 (0.00)	6.65 (1.28)
South-Fin/South-U.S.	-1.22 (0.03)	8.36 (1.36)	-11.13 (2.14)	-0.62 (0.01)
East-Fin/Northeast-U.S.	9.23 (1.11)	-1.65 (0.04)	-14.83 (2.82)*	2.76 (0.16)
Mid-Fin/Midwest-U.S.	5.55 (0.39)	9.12 (1.25)	-12.88 (2.47)	11.74 (3.02)*
North-Fin	-18.00 (2.18)	-0.62 (0.01)		
Black			-20.47 (4.18)**	1.15 (0.02)
Hispanic			3.63 (0.16)	20.68 (7.06)**
Asian			-24.94 (2.66)	25.84 (4.82)**
Mother Married or Cohabitataing	20.90 (5.05)**	7.10 (0.88)	21.57 (9.12)**	4.80 (0.75)
Scale	33 .95	32 .36	62.15	50.47
X^2	28.81**	17.79*	48.38**	37.92**

** p<.05

* p< .10

Appendix

Time use category	With whom	Finland				United States			
		Boys		Girls		Boys		Girls	
		Mean	Non-Zero Mean	Mean	Non-Zero Mean	Mean	Non-Zero Mean	Mean	Non-Zero Mean
Household work	Alone	15.99	28.39	31.26	38.77	17.04	32.55	24.64	36.80
	Family	15.07	26.76	19.19	23.80	18.77	35.86	26.75	39.96
	Family & friends	1.80	3.19	2.43	3.01	2.68	5.12	4.93	7.36
	Friends	7.63	13.54	11.08	13.74	10.46	19.99	13.36	19.96
	Missing	1.49	2.64	1.19	1.48	0.12	0.22	0	0
	Total	41.98	74.53	65.16	80.81	49.07	93.75	69.68	104.08
	Non-zero N		107		169		339		411
Eating and drinking	Alone	18.54	18.73	19.45	19.45	10.28	11.79	7.45	8.47
	Family	24.39	24.64	18.49	18.49	23.63	27.10	22.53	25.62
	Family & friends	3.86	3.90	6.23	6.23	2.04	2.35	4.53	5.15
	Friends	18.84	18.03	28.64	28.64	18.36	21.06	19.30	21.95
	Missing	1.15	1.17	0.77	0.77	0.12	0.14	0	0
	Total	66.77	67.47	73.57	73.57	54.32	62.30	53.85	61.22
	Non-zero N		179		202		545		537
Computer	Alone	40.99	84.34	10.04	41.47	25.68	65.57	17.48	62.49
	Family	3.54	7.29	1.70	7.00	10.86	27.74	8.43	30.14
	Family & friends	1.97	4.05	0.29	1.19	1.58	4.03	2.94	10.51
	Friends	13.49	27.75	0.94	3.89	16.97	43.34	3.81	13.64
	Missing	0.56	1.13	0.08	0.32	0	0	0	0
	Total	60.54	124.55	13.05	53.87	55.09	140.69	32.67	116.78
	Non-zero N		85		43		253		183
Exercise	Alone	16.23	35.89	11.69	29.23	10.97	29.17	4.07	19.06
	Family	9.18	20.30	4.39	10.98	6.43	17.09	4.32	20.21
	Family & friends	5.25	11.60	1.05	2.62	4.22	11.22	4.86	22.69
	Friends	34.74	76.82	16.59	41.49	39.86	105.96	17.14	80.18
	Missing	0.12	0.27	0.04	0.09	0	0	0.27	1.25
	Total	65.53	144.89	33.76	84.43	61.48	163.42	30.65	143.39
	Non-zero N		87		85		231		131
Tv and movie	Alone	59.61	78.31	38.96	46.05	60.22	76.82	45.40	59.46
	Family	52.38	68.81	36.63	43.29	57.25	73.03	52.80	69.17
	Family & friends	7.75	10.18	4.70	5.55	3.63	4.62	5.73	7.05
	Friends	17.86	23.46	38.62	45.65	22.63	28.86	24.83	32.53
	Missing	4.67	6.13	1.38	1.63	0.16	0.20	0	0
	Total	142.26	186.89	120.29	142.18	143.89	183.55	128.76	168.66
	Non-zero N		141		171		491		464
Read, write, listen to music	Alone	28.86	45.67	43.03	54.68	13.13	70.83	12.22	63.30
	Family	7.23	11.45	4.87	6.20	1.73	9.40	2.14	11.01
	Family & friends	0.52	0.82	1.06	1.35	0.13	0.74	0	0

	Friends	11.67	18.47	20.83	26.48	3.20	17.24	0.89	4.62
	Missing	1.39	2.20	2.34	2.98	0	0	0.05	0.27
	Total	49.67	78.61	72.14	91.69	18.20	98.20	15.30	79.26
	Non-zero N		116		157		116		111
Residual leisure	Alone	30.36	34.54	36.24	36.77	26.03	32.52	31.84	37.76
	Family	26.50	30.16	22.88	23.22	29.57	36.94	42.57	50.48
	Family & friends	21.38	24.33	15.98	16.21	10.94	13.67	16.87	20.00
	Friends	76.57	87.13	111.95	113.59	76.64	95.76	71.92	85.30
	Missing	8.81	10.03	5.87	5.96	0	0	0	0
	Total	163.62	186.19	192.93	195.74	118.10	178.89	123.46	193.55
	Non-zero N		158		198		495		518