Published in final edited form as:

J Marriage Fam. 2014 August 1; 76(4): 843–861. doi:10.1111/jomf.12126.

Single Motherhood, Living Arrangements, and Time With Children in Japan

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Abstract

The authors examined relationships between single parenthood and mothers' time with children in Japan. Using data from the 2011 National Survey of Households with Children (N = 1,926), they first demonstrate that time spent with children and the frequency of shared dinners are significantly lower for single mothers than for their married counterparts. For single mothers living alone, less time with children reflects long work hours and work-related stress. Single mothers coresiding with parents spend less time with children and eat dinner together less frequently than either married mothers or their unmarried counterparts not living with parents, net of (grand)parental support, work hours, income, and stress. The findings suggest that rising divorce rates and associated growth in single-mother families may have a detrimental impact on parents' time with children in Japan and that the relatively high prevalence of intergenerational coresidence among single mothers may do little to temper this impact.

Keywords

coresidence; family interaction; living arrangements; nonmarital parenting; single-parent families; Japan

Parents' time with children and the frequency of shared meals have been linked to children's well-being (Musick & Meier, 2012; Zick, Bryant, & Österbacka, 2001). Single parents spend less time with their children and provide less effective monitoring and supervision relative to their married counterparts (Aronson & Huston, 2004; Asmussen & Larson, 1991; Astone & McLanahan, 1991; Sandberg & Hofferth, 2001), and these differences contribute to the less favorable outcomes observed among children living with a single parent (Amato, 2005; McLanahan & Sandefur, 1994). With changes in policy contributing to reductions in public income support and longer work hours for single mothers in the United States (e.g., Schoeni & Blank 2000), relationships among single parenthood, parental time with children,

and children's outcomes may increasingly depend on support from other family members. Private support takes many forms, but coresidential living arrangements may be a particularly important source of support given that many unmarried parents live with other adults, typically a cohabiting partner or parents (Bryson & Casper, 1999; Fields, 2003; Sigle-Rushton & McLanahan, 2002).

Intergenerational solidarity theory provides a framework for understanding how support provided by coresident (grand)parents may influence single mothers' time with their children (e.g., Bengtson & Roberts, 1991; Silverstein & Bengtson, 1997). Hypotheses suggested by this theory are ambiguous, however. On the one hand, the financial, instrumental, and emotional support provided by coresident (grand)parents may affect the personal circumstances of single mothers in ways that allow them to spend more time with their children. For example, intergenerational support could limit the need for mothers' long work hours and supplement their limited economic resources, both of which are factors that contribute to stress that negatively affects single mothers' emotional health and, by extension, their parenting practices (Carlson & Corcoran, 2001). On the other hand, it is also possible that support provided by coresident (grand)parents, including childrearing support, directly substitutes for mothers' time with children, allowing them to invest more time in employment or other nonfamily activities.

Research that focuses explicitly on the relationship between single mothers' living arrangements and the time they spend with their children has yet to be conducted, and findings from analyses of household structure and children's outcomes are mixed. Some studies have found that single mothers and their children fare better in multigenerational families (Aquilino, 1996; Brandon, 2005; DeLeire & Kalil, 2002; Mutchler & Baker, 2009), some have found that they fare worse (Black & Nitz, 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994), and others have found that relationships differ depending on mothers' race and the measure of well-being considered (Dunifon & Kowaleski-Jones, 2007).

This ambiguity in both hypothesized relationships and empirical evidence in research on the United States highlights the importance of examining similar research questions in other settings. Comparative studies have documented cross-national variation in the economic well-being of single mothers (Uunk, 2004) and in the outcomes of children in single-parent families (Hampden-Thompson & Pong, 2005; Park, 2007), but none have examined the ways in which coresidence with other family members may be associated with the time that single mothers spend with their children. We thus have no empirical basis on which to evaluate the generality of patterns observed in the United States or to assess the ways in which context may shape relationships between single-mothers' living arrangements and time with children. This is an important limitation in light of theoretical reasons to believe that intergenerational exchange of resources and services (instrumental solidarity) should be more pronounced in "strong family" countries, where normative obligations to support family members (normative solidarity) are stronger (e.g., Reher, 1998; Rossi & Rossi, 1990; Silverstein & Bengtson, 1997; Takagi, Silverstein, & Crimmins, 2007). To address this gap in the literature, we used data from a recent survey of mothers of minor children in Japan (with an oversample of single mothers) to examine relationships between intergenerational coresidence and mothers' time with children.

Several features of the Japanese context make it a potentially rich source of comparative insight. Intergenerational coresidence has long been a normative arrangement that is widely viewed as a primary source of support for family members in need, the prevalence of single parenthood has increased markedly in recent years, and a sizable proportion of single mothers coreside with their parents. Furthermore, recent reductions in public income support for single mothers have been accompanied by increased policy emphasis on economic independence via employment. Focusing on a country like Japan, where the policy context is similar but the family context differs markedly, may thus help scholars better understand the mixed results U.S. studies have yielded. For example, similarities between single mothers in Japan and African American single mothers in the United States (two populations in which intergenerational coresidence is both prevalent and normative) would suggest that the historical role of intergenerational coresidence as a family safety net may be an important contextual moderator of relationships between single parenthood and mothers' time with children. The Japanese experience may also provide a valuable guide for what we might expect in other countries where the number of single-parent families has increased (or may increase) but public support for single-parent families is limited and traditions of family support are strong (e.g., southern Europe, southeast Asia, Latin America).

Unfortunately, very little attention has been paid to the implications of increasing single parenthood in familistic societies such as Japan, or to the ways in which the high prevalence of intergenerational coresidence and associated exchanges of support in such societies may limit the implications of rapid change in family structure for parenting practices and children's subsequent well-being. To address this limitation, we examined four specific questions derived from the research summarized above: (a) Do single mothers spend less time with their children than married mothers? (b) Does the relationship between single motherhood and time with children differ depending on whether single mothers coreside with their own parents? (c) Does the instrumental and economic support provided by coresident grandparents explain observed differences in time with children for lone mothers and single mothers coresiding with parents? (d) Does intergenerational coresidence facilitate single mothers' time with children via shorter work hours, better economic well-being, and lower levels of stress and depressive symptoms?

Background

Single-Mother Families in Japan

The number of single-mother families in Japan (defined as unmarried women with a coresident child under age 20) increased by 55% between 1993 (789,900) and 2011 (1,223,800) (Ministry of Health, Labour, and Welfare [MHLW], 2012). Census data also show that the proportion of households containing children that are single-mother households increased from 3.9% in 1980 to 9.5% in 2010 (National Institute of Social Security and Population Research [NIPSSR], 2012). The number of single-father families is much lower—estimated at 204,000 in 2010 (Nishi, 2012a).

In contrast to the United States and other countries where nonmarital childbearing is common, the increase in single-parent families in Japan is due almost entirely to increases in divorce. The number of divorces nearly doubled between 1980 (141,689) and 2010

(251,378), and roughly one in three marriages is now projected to end in divorce (NIPSSR, 2012; Raymo, Iwasawa, & Bumpass, 2004). As a result, the proportion of single-mother families formed via divorce increased from 49% in 1985 to 80% in 2006 (Zhou, 2008). The growing prevalence of single-mother families also reflects the fact that about 60% of recent divorces involve minor children, with the mother receiving full custody of all children in the large majority of these cases (83% in 2010; NIPSSR, 2012).

Three distinctive characteristics of single mothers in Japan are their (a) high rates of labor force participation, (b) low incomes, and (c) relatively high prevalence of coresidence with parents. In 2006, 85% of single mothers in Japan were employed, the second highest figure among Organisation for Economic Co-operation and Development (OECD) countries (Zhou, 2008). This high rate of labor force participation reflects public policies characterized by limited income transfers to single parents and a strong emphasis on independence through employment (Abe, 2008; Ezawa & Fujiwara, 2005; Ono, 2010). Overall, Japan has one of the lowest expenditures on public assistance among OECD countries, and recent studies have shown that single mothers' posttransfer income is actually lower, on average, than their pretransfer income (Abe, 2003, 2008).

Despite their high rates of employment, single mothers' earnings are low, reflecting the relatively weak position of women in the Japanese labor market (Brinton, 2001). The earning capacity of single mothers is further limited by the fact that a large majority of women leave the labor force prior to childbirth (NIPSSR, 2011). As a result of their discontinuous work histories, single mothers are typically employed in relatively unstable, low-paying jobs, often on a part-time basis (Abe & Ôishi, 2005; Tamiya & Shikata, 2007). Single mothers' ability to engage in full-time, standard employment is also constrained by the fact that expectations of long work hours are common, commute times are often long, the operating hours of publicly provided child care are limited, and the participation of noncustodial fathers in parenting is minimal (Abe, 2008; Zhou, 2008). Furthermore, because child-support agreements are both uncommon and unenforceable, less than 20% of single mothers receive any financial support from their ex-husbands (MHLW, 2012). For these reasons, single-mother households have much lower incomes than other household types (MHLW, 2004). Per capita income in single-mother households is about half the amount for all households with children, and cross-national comparative data show that Japan has the highest proportion of single-mother households living in poverty (.54) among OECD countries (OECD, 2011, p. 216; Zhou, 2008).

The disadvantages associated with single parenthood may be offset, to some degree, by the high prevalence of intergenerational coresidence and associated access to financial, instrumental, and emotional support from (grand)parents. According to the National Survey of Single-Mother Households, the proportion of single mothers coresiding with parents was 29% in 2011 (MHLW, 2012). Nishi's (2012b) tabulations of data from the 2010 census also indicate that 30% of single mothers were living with other adults, typically their parents. In a recent study, Raymo and Zhou (2012) found that single mothers living with other adults (typically parents) were less likely to report difficult economic circumstances and more likely to report good health than their counterparts living alone. However, no studies have considered mothers' time with children, which is a potentially important dimension of

family well-being in Japan, where belief in the value of maternal care provision for preschool-age children is strong and mothers' involvement in children's education is substantial (Hirao, 2001; Tsuya & Choe, 2004).

Single Parenthood and Time Spent With Children

Evidence that children from single-parent families in the United States exhibit more behavioral problems, perform less well in school, complete less schooling, and are more likely to engage in risky behaviors such as early sexual initiation and substance use reflects not only higher levels of poverty and economic insecurity but also differences in parental involvement and parenting practices (e.g., Amato, 2005; Biblarz & Gottainer, 2000; Dunifon & Kowaleski-Jones, 2002; McLanahan & Sandefur, 1994; Thomson, Hanson, & McLanahan, 1994). Single mothers spend less time with children and provide less effective monitoring than their married counterparts net of other established correlates of time with children such as mother's age, educational attainment, and the number and ages of her children (Sandberg & Hofferth, 2001). Specific examples of differences in parental involvement include evidence that single parents are less likely to eat meals with their children (Musick & Meier, 2012; Thomson, McLanahan, & Curtin, 1992; Stewart & Menning, 2009) and spend less time engaged in interactive activities such as playing, reading, and helping with homework (Astone & McLanahan, 1991; Kendig & Bianchi, 2008; McLanahan & Sandefur, 1994). Although the magnitude of these differences is relatively small (Kendig & Bianchi, 2008), shared activities and shared meals are both associated with better educational and behavioral outcomes for children (Musick & Meier, 2012; Sandberg & Hofferth, 2001; Zick et al., 2001).

Explanations for observed relationships between single parenthood and time with children are varied. First, the absence of a second parent reduces the total time that could be spent with children (Sandberg & Hofferth, 2001). This is particularly true if the absence of a spouse's earnings and the relatively limited earnings potential of many single mothers combine to necessitate relatively long work hours (Milkie, Mattingly, Brooks-Gunn, Bianchi, & Robinson, 2004). Second, economic deprivation, work-family conflict, and the experience of divorce itself may result in stress and lower levels of emotional well-being which, in turn, are associated with lower parental engagement and less effective parenting (Carlson & Corcoran, 2001; Jackson, Brooks Gunn, Huang, & Glassman, 2000; Meadows, McLanahan, & Brooks-Gunn, 2008; McLoyd, Jayaratne, Ceballs, & Borquez, 1994). To the extent that parental engagement and effective parenting are associated with time spent with children and the frequency of shared meals, we would expect that differences in economic well-being, work-family conflict, and emotional well-being will explain observed differences between married and single mothers and between lone mothers and single mothers living with parents.

The Living Arrangements of Single Mothers

As in Japan, a sizable proportion of single mothers in the United States coreside with other adults, and several studies have examined the ways in which coresidence and associated family support may moderate relationships between single parenthood and children's well-being. Recent estimates indicate that 34% of single mothers live with another adult (Kreider

& Elliott, 2009) and that about 40% of such women report living with their parents (Kalil, DeLeire, Jayakody, & Chin, 2001). Coresidence with parents is particularly common among young, never-married mothers and is more prevalent among African Americans (Gordon, 1999; Sigle-Rushton & McLanahan, 2002). Among children living with single mothers, 17% coreside with a grandparent (U.S. Census Bureau, 2011).

Several studies have shown that coresidence with grandparents is positively associated with the well-being of both single mothers and their children (Aquilino, 1996; DeLeire & Kalil, 2002; Dunifon & Kowaleski-Jones, 2007; Gordon, Chase-Lansdale, Matjasko, & Brooks-Gunn, 1997; Mutchler & Baker, 2009), but relationships between intergenerational coresidence and children's well-being appear to depend on several factors, including the duration of coresidence, race, and the measure of well-being considered (Dunifon, 2012; Dunifon & Kowaleski-Jones, 2007). For example, Dunifon and Kowaleski-Jones (2007) found coresidence with grandparents to be positively associated with cognitive stimulation and reading scores for White children of single parents but not for their Black counterparts. Pittman's (2007) comparison of low-income children coresiding and not coresiding with a grandmother found that the former reported significantly fewer depressive symptoms, but the two groups did not differ with respect to externalizing problem behaviors. Posited explanations for more favorable outcomes in three-generation households include shared economic resources, economies of scale, access to child care, and higher levels of social and emotional support (Casper & Bianchi, 2002; Sigle-Rushton & McLanahan, 2002), whereas explanations for less favorable outcomes include confusion about authority, inconsistency in parenting practices and beliefs, and selection of less effective mothers into coresidential living arrangements (Chase-Lansdale et al., 1994; Gordon, Chase-Lansdale, & Brooks-Gunn, 2004).

Although these findings do not directly concern mothers' time with children, they do suggest that family support via coresidence may play an important role in mitigating linkages between temporal, economic, and psychological disadvantage and the parenting practices of single mothers. The prevalence of intergenerational coresidence and its relationships with well-being highlight the risk in treating single-mother families as a homogeneous group and the importance of considering the living arrangements of single mothers when assessing relationships between trends in family structure and inequality or the intergenerational transmission of disadvantage. This may be particularly true in "strong family" countries or family-oriented welfare states (Dalla Zuanna & Micheli, 2004) such as Japan, where intergenerational coresidence and associated family support is common and more normative than in the United States.

Study Objectives

Our goals in this study were to ascertain the extent to which single parenthood in Japan is associated with mothers' time with their children and examine how that relationship depends on the presence of coresident (grand)parents. To this end, we evaluated the following four hypotheses, derived from the literature summarized in the previous sections:

Hypothesis 1: Single mothers spend less time and eat dinner less frequently with children than married mothers.

This relationship has been documented consistently in research on the United States, and we expected the same pattern to hold in Japan, where single mothers are characterized by high rates of labor force participation, high levels of poverty, and relatively poor emotional health.

Hypothesis 2A: Among single mothers, those coresiding with parents spend more time and eat dinner more frequently with children.

Intergenerational solidarity theory suggests that we should see this relationship if the financial, instrumental, and emotional support provided by coresident (grand)parents either allows single mothers to reduce the time they spend in employment and other nonfamily activities or reduces the stress that may negatively affect mothers' time with children.

Hypothesis 2B: Among single mothers, those coresiding with parents spend less time and eat dinner less frequently with children.

Also suggested by intergenerational solidarity theory, this hypothesis would be supported if grandparents' participation in childrearing substitutes for the time of mothers, who in turn choose to invest more of their time in employment or other nonfamily activities.

Hypothesis 3A: Support from (grand)parents is associated with more time spent with children and more frequent shared meals among single mothers coresiding with parents relative to "lone mothers" and explains support for Hypothesis 2A.

If intergenerational support shapes single mothers' lives in ways that facilitate more time with their children, we would expect direct measures of support from coresident (grand)parents to be positively associated with the two outcomes of interest and that controlling for these measures of support will (partially) explain evidence of more time with children for coresiding single mothers (relative to lone mothers) predicted by Hypothesis 2A.

Hypothesis 3B: Support from (grand)parents is associated with less time spent with children and less frequent shared meals among single mothers coresiding with parents relative to "lone mothers" and explains support for Hypothesis 2B.

If intergenerational support substitutes for single mothers' time with children, we would expect direct measures of support from coresident (grand)parents to be negatively associated with the two outcomes of interest and that controlling for these measures of support will (partially) explain evidence of less time with children for coresiding single mothers (relative to lone mothers) predicted by Hypothesis 2B.

Hypothesis 4: Coresidence with parents is associated with single mothers' work hours, economic well-being and stress, and these relationships explain observed difference in time and meals between single mothers coresiding with parents and "lone mothers."

This hypothesis addresses the indirect pathways through which support provided by coresident (grand)parents may facilitate single mothers' time with their children reducing the need to work long hours and providing economic resources and domestic support that reduce stress. Attenuation of support for Hypothesis 2A or magnification of support for Hypothesis 2B would be consistent with this hypothesis.

Method

Sample

To evaluate these hypotheses, we used data from the National Survey of Households with Children [*Kosodate Setai Zenkoku Chôsa*] (NSHC). Conducted in 2011 by the Japan Institute for Labour Policy and Training, this is a national survey of households that include parents and their minor children, with an oversample of single-parent households. Two-stage stratified sampling based on data from the Basic Resident Registry [*Jûmin Kihon Daichô*] produced a target sample of 2,000 two-parent households and 2,000 single-parent households. Interviewers delivered a self-administered questionnaire to respondents' homes and returned to collect the completed questionnaires at a prespecified date and time. Completed questionnaires were collected from 2,218 respondents, a 56% response rate (72% for married parents and 39% for single parents). A preference for information from mothers was emphasized both by the interviewer and in the survey instrument, but a small number of questionnaires were completed by fathers (79 married fathers and 84 single fathers). We excluded these respondents from our analyses, leaving a sample of 2,055.

The response rate of 56% is similar to that of other recent sample surveys in Japan but is low enough (especially among single parents) to raise concerns about the representativeness of the resulting sample. We have therefore compared the characteristics of single mothers in the NSHC with two large, nationally representative surveys conducted by the MHLW in 2011. We compared single mothers in the NSHC to those in the National Survey of Single-Mother Households and compared married mothers to those in the Comprehensive Survey of Living Conditions in Japan. As shown in Appendix Table A1, the samples are quite similar for the most part. One exception is the relatively high prevalence of single mothers coresiding with parents in the NSHC (36% vs. 29%). In the both the descriptive and multivariate analyses presented below we used poststratification weights that reflect both the intentional oversampling of single-mother households and their lower response rate. These weights, provided by the Japan Institute for Labour Policy and Training, allow for generalization to the population of mothers of minor children.

Limiting our focus to mothers with at least one coresident child age 18 or younger resulted in a base sample of 1,931 (649 unmarried mothers and 1,282 married mothers). Of the 124 mothers we excluded from the total sample, 24 reported no coresident children, five reported that their youngest coresident child was at least 19 years old, 78 did not provide information on coresident children's ages, and 17 had missing data on both measures of mothers' time with children. The large majority (77%) of the unmarried mothers were divorced, and more than one third (38%, $n = 244$) were coresiding with parents; the rest were living independently (55%) or with adults other than parents (7%).

Variables

Mothers' time with children—NSHC respondents were asked about time spent with children and frequency of dinners together in questions similar to those used in studies of parent-child interaction in the United States (e.g., Carlson, 2006; Thomson et al., 1994). These two measures are positively, but not strongly, correlated ($\rho = .52$), and the ability to

consider two different measures of time with children that have been empirically linked to children's outcomes is an important strength of this study. The specific questions ascertaining time with children were "How many waking hours do you spend with your children on a typical weekday?" and "How many days during a typical week do you eat dinner together with your children?" The six response options for the first question were "6 or more hours," "4–6 hours," "2–4 hours," "1–2 hours," "less than 1 hour," and "almost none." The five response options for the second question were "every day," "4 or more days," "2 or 3 days," "one day," and "almost never." We coded both of these measures so that higher values correspond to more time with children.

Family structure—To facilitate the interpretation of results, we constructed a four-category composite measure of mothers' marital status and living arrangements: (a) married and not coresiding with parents, (b) married and coresiding with parents, (c) unmarried and not coresiding with parents, and (d) unmarried and coresiding with parents. In the analyses discussed below, we used Wald tests to examine all pairwise comparisons among the four categories, paying particular attention to differences between married and unmarried mothers (Hypothesis 1) and differences between single mothers living alone and single mothers coresiding with parents (Hypotheses 2–4).

Studies that have compared the circumstances of single-parent families formed by divorce, widowhood, and nonmarital childbearing have provided important insights into the relative importance of different mechanisms linking single parenthood and well-being in the United States, so we included three dichotomous indicators identifying mothers who (a) were widowed, (b) never married, and (c) did not provide information on the pathway to single parenthood (Biblarz & Gottainer, 2000; McLanahan & Sandefur, 1994). Coefficients for these variables allowed us to assess the extent to which time with children for these single mothers differs from that of divorced mothers, the reference pathway to single parenthood. As noted above, divorced women comprised 77% of all single mothers in our sample, and we suspect that most of the additional 9% whose pathway to single motherhood could not be determined from the data also were divorced. The small number of widowed and never-married mothers precluded analyses of the extent to which the relationship between living arrangements and time with children may differ by pathway to single parenthood (i.e., estimation of interactions between living arrangements and pathway to single parenthood). We evaluated the sensitivity of our results to the exclusion of widowed single mothers and found no evidence that our conclusions depend on the treatment of widows (tables available on request).

We identified mothers coresiding with parents(-in-law) from a question that asked respondents to identify their relationship to all individuals with whom they were coresiding. The wording of this question is important in light of evidence that household splitting [*setai bunri*] is not uncommon among single mothers coresiding with parents (Raymo & Zhou, 2012). This practice of establishing a separate household within a residential unit that contains another household (typically headed by a parent) is presumably motivated by a desire to retain eligibility for public benefits (which is determined by household income). Rather than asking about household members generally, the NSHC asked specifically about all people with whom the respondent was coresiding, including those with whom she did not

share finances. This allowed for a broader definition of coresidence than is possible in surveys that ascertain only members of the same household. Among married mothers, 26% were living in intergenerational households, with 18% coresiding with their husband's parents and 8% coresiding with their own parents. Not surprisingly, nearly all (97%) of the 38% of single mothers living in intergenerational households were coresiding with their own parents. Of the eight unmarried mothers living with parents-in-law, five were widows, two did not have information on the pathway to single motherhood, and only one was divorced. The NSHC did not collect information on which of the respondents' parents were in the household, so we were not able to distinguish those living with both parents from those living only with their mother or only with their father.

Grandparental support—Support from (grand)parents was measured with five dichotomous indicators of whether the respondent reported receiving regular assistance (at least twice a month) from their parents with (a) child care, (b) housework, (c) living expenses, (d) housing or rent, and (e) children's educational expenses. These measures of support receipt refer to both coresident and non-coresident (grand)parents.

Mothers' work hours, economic well-being, and emotional health—Mothers' work hours were the reported number of hours per week at work (including overtime). This measure was equal to 0 for those who were not employed at the time of the survey. On the basis of preliminary analyses that showed a nonlinear relationship with mothers' time with children, we collapsed non-zero values of work hours into quartiles (mean work hours for the four quartiles were 18, 33, 41, and 51, respectively). Equivalent household income was the reported annual pre-tax household income (from all sources) divided by the square root of household size to account for income sharing and economies of scale (Smeeding, Rainwater, & Burtless, 2001). Because a relatively large number of respondents did not respond to this question ($n = 375$, 19% of our analytic sample), we collapsed nonmissing values into tertiles and added a fourth category for missing values. Work-family conflict was an index of mother's stress calculated by summing responses to three questions asking respondents how often during the past year they had felt (a) so tired from work that they could not do necessary housework and child care, (b) that long work hours made it difficult to do housework and child care, and (c) that the burden of domestic responsibilities made it difficult to concentrate at work. The six response options ranged from *never* to *every day*, resulting in an index that ranged from 0 to 15 ($\alpha = .80$). This measure was equal to 0 for mothers who did not work for pay in the previous year. Mothers' emotional health was measured using a seven-item version of Radloff's (1977) CES-D index that asked respondents how many days during the past week they could not shake off the blues, could not concentrate, felt depressed, felt that everything was an effort, had trouble sleeping, enjoyed life, and felt sad (index values ranged from 0 to 21 and $\alpha = .86$).

Other covariates—Mother's age was a continuous variable that ranged from 21 to 64 in our sample. Educational attainment was a three-category measure of highest level of education completed by the mother: (a) high school or less, (b) junior college/vocational school, and (c) university. On the basis of the results of preliminary analyses, we defined the number of coresident children as a continuous measure ranging from 1 to 4 and measured

age of children with four dichotomous indicators of the presence of children of various ages (age 5 and younger, ages 6–15, ages 16–18, and ages 19 and older). These indicators of children's age are not mutually exclusive. On the basis of existing studies of U.S. data, we expected that time with children will be positively related to the presence of very young children, the total number of children, and mothers' educational attainment but negatively associated with mothers' age and the presence of older children.

Procedure

We estimated four ordered logistic regression models for each of the two measures of mothers' time with children (similar results from linear regression models are available on request). In the first model, we included the four-category measure of marital status and living arrangements, mother's age, mother's educational attainment, ages of children, and number of children. Because our first research question asked only whether single mothers differ from married mothers, we constrained coefficients for the two groups of married mothers to equal each other (0) and coefficients for the two groups of single mothers to equal each other. This is equivalent to estimating a single coefficient for single mothers (relative to married mothers).

These baseline models allowed us to address our Hypothesis 1, that single motherhood is associated with less time spent with children. To address Hypothesis 2, about the moderating role of intergenerational coresidence, we relaxed the equality constraints on the coefficients for the two groups of married and single mothers. In this model, we were primarily interested in comparing single mothers coresiding with parents to single mothers living alone. These comparisons are conducted using postestimation Wald tests of the null hypothesis that the difference between coefficients is 0.

Our third model allowed us to evaluate hypotheses regarding the role of support from (grand)parents. Statistically significant positive coefficients for indicators of (grand)parental support and attenuation of a positive coefficient for coresiding single mothers would be consistent with ideas underpinning Hypotheses 2A and 3A. Statistically significant negative coefficients for indicators of (grand)parental support and attenuation of a negative coefficient for coresiding single mothers would be consistent with ideas about substitution motivating Hypotheses 2B and 3B.

In the fourth model we considered the possibility that intergenerational coresidence, and associated support from (grand)parents, facilitates mothers' time with children indirectly, by influencing mothers' personal circumstances. We did this by extending Model 3 to include measures of mother's work hours, economic well-being, Work–family balance, and emotional health. Evidence that time with children is positively associated with shorter work hours, higher household income, lower Work–family conflict, and better emotional health would be consistent with Hypothesis 4. We would also expect inclusion of these measures to attenuate/magnify a positive/negative difference between coresident single mothers and lone mothers in Models 2 and 3. In Models 3 and 4, we were primarily interested in comparing coefficients for the two groups of single mothers, but these models also allowed us to assess the extent to which support from (grand)parents and mothers' employment, economic well-

being, and emotional health account for observed differences between single mothers and their married counterparts.

Results

In Table 1 we present descriptive characteristics of the sample by the four-category measure of marital status and living arrangements. The first several rows indicate that time with children and the frequency of shared dinners were lower among single mothers, especially those coresiding with parents. Among married mothers, the percentages who reported spending 6 or more hours per day with children were 46% (not coresiding) and 33% (coresiding), but the corresponding figures for single mothers were only 19% and 14%. Similarly, 87% of married mothers not coresiding and 79% of married mothers living with parents(-in-law) reported eating dinner with their children every day, compared with 69% and 53% of single mothers. Single mothers also differed from their married counterparts in several other ways. They had lower educational attainment (59% and 52% of single mothers vs. 41% and 45% of married mothers had a high school education or less), had fewer children (1.76 and 1.59 vs. 1.95 and 2.04), and were less likely to have a young child (16% and 24% vs. 43% and 36% had a child of preschool or kindergarten age).

Consistent with the results of existing research summarized above, single mothers worked more than their married counterparts. The proportions not working were .42 and .28 for married mothers but only .16 and .13 for single mothers, and the proportions in the upper half of the work-hours distribution for employed mothers were .19 and .32 for married mothers versus .50 and .57 for single mothers. Single mothers also had significantly lower size-adjusted household income (60% and 49% vs. 13% and 20% are in the lowest income tertile) and reported higher levels of both Work-family conflict and depressive symptomatology. Among mothers coresiding with parents(-in-law), single mothers were more likely to receive various types of assistance from their parents, but a similar pattern was not observed among mothers who were not coresiding with parents(-in-law). Among single mothers, those living with parents had higher equivalized household income but, in contrast to our expectations, single mothers' work hours, Work-family conflict, and CES-D values were similar across living arrangements.

The results of ordered logistic regression models for the time spent with children and frequency of dinners with children are presented in Tables 2 and 3, respectively. The first column of Table 2 shows that single mothers spent less time than married mothers with their children, net of age, education, number of children, and children's ages. The estimated coefficient for single motherhood (-1.06) means that single mothers were 65% less likely than married mothers to spend 6+ hours rather than 4 to 6 hours with their children (or hours in category n rather than hours in category $n - 1$, more generally). This difference is similar in magnitude to the difference between mothers who did and did not have a preschool-age child. It is interesting, however, that the negative relationship between single parenthood and time spent with children held only for women who were divorced or whose pathway to single motherhood could not be ascertained from the data. Women who became single mothers as the result of either widowhood or a nonmarital birth did not differ from married women. Wald tests indicated that the difference between widowed and married mothers

($-1.06 + 0.62 = -0.44$, $F[1, 1678] = 1.88$) and the difference between never-married and married mothers ($-1.06 + 0.63 = -0.43$, $F[1, 1678] = 0.95$) were not significantly different from 0.

In Model 2 we relaxed the equality constraints imposed in Model 1. The estimated coefficients for the cross-classified categories of marital status and living arrangements indicated that, regardless of living arrangements, unmarried mothers spent less time with children than their married counterparts (postestimation tests of equality indicated that estimated differences between married mothers coresiding with parents and both groups of single mothers were statistically different from 0 at $p < .01$). Furthermore, both married and unmarried mothers spent significantly less time with their children if they were coresiding with parents. However, the negative relationship between intergenerational coresidence and time with children for unmarried mothers ($-1.68 - -0.90 = -0.78$) was not statistically different from that for married mothers (-0.49 ; $F[1, 1678] = 1.80$).

To assess whether the significantly lower levels of time that single mothers coresiding with parents spent with their children reflect direct provision of child care and other forms of support from parents, we included the five dichotomous indicators of regular assistance from parents (Model 3). It is interesting to note that help with child care was not significantly associated with mothers' time with children. However, (grand)parental assistance with housework was negatively associated with mothers' time with children, whereas assistance with children's education costs was positively associated with mothers' time with children. Most important, the coefficients for categories of marital status and living arrangements were largely unchanged from Model 2. Single mothers living with parents were 48% ($1 - \exp[-1.54 + 0.88] = 0.48$) less likely than single mothers living alone to spend 6+ hours rather than 4 to 6 hours with their children.

The results for Model 4 show that controlling for differences in work hours, income, and stress attenuates the coefficient for single mothers living apart from parents (from $-.88$ to $-.10$) and that these women are no longer statistically different from married women (regardless of living arrangements) in terms of time spent with children. However, single mothers coresiding with parents remained significantly different from both married mothers (regardless of living arrangements) and their unmarried counterparts living apart from parents. Compared to single mothers living alone, the odds of spending 6+ hours rather than 4 to 6 hours with children were now 54% lower [$1 - \exp(-0.87 + 0.10) = 0.54$] for single mothers living with their parents. Attenuation of the coefficients for both groups of single mothers reflects their longer work hours and higher levels of reported Work-family conflict (relative to married mothers). Lower levels of mental health and economic well-being were much less important for understanding differences in time spent with children.

The results of models for the frequency of eating dinner together with children presented in Table 3 are similar to those in Table 2. Model 1 shows that single mothers reported a significantly lower frequency of eating dinner together with children, with the odds of eating together every day rather than 4 to 6 times per week (for example) 73% lower for single mothers relative to married mothers, net of age, educational attainment, pathway to single motherhood, and children's ages. In contrast to the results for time with children, the

estimated differences between married mothers and single mothers who were widowed or had a child outside of marriage were statistically significant.

Also similar to the results in Table 2, Model 2 indicated that single mothers ate dinner with their children less frequently than married mothers, regardless of living arrangements. Coresidence with parents was negatively associated with the frequency of shared dinners for both married and unmarried mothers, and this relationship appears to be stronger for unmarried mothers (although this difference in relevant coefficients for married mothers $[-0.42]$ and unmarried mothers $[-1.96 - -1.06 = -0.90]$ is statistically significant only at $p < .10$, $F[1, 1679] = 3.41$).

The results of Model 3 indicated that none of the measures of (grand)parental support were significantly different from 0 and that the lower frequency of dinners with children among single mothers, especially those coresiding with parents, remained both statistically and substantively significant. Although not related to the questions at hand, it is interesting that inclusion of the (grand)parental support measures attenuates the negative coefficient for married mothers coresiding with parents so that the difference between married mothers living with parents and apart from parents is no longer statistically significant.

In Model 4, work hours, work-related stress, and mental health were related to the frequency of shared meals in expected ways, and inclusion of these characteristics attenuates the negative coefficients for both groups of single mothers (relative to married mothers living apart from parents). It is important to note, however, that, net of these characteristics, the frequency of shared dinners with children remained significantly lower for single mothers living with parents relative to both single mothers living alone and married mothers (regardless of living arrangements). The difference between single mothers living with parents and lone mothers was very similar in Model 3 (-0.73) and Model 4 (-0.66).

Discussion

In this article, we have described differences between single and married mothers in Japan with respect to two measures of time with children. We examined the extent to which those differences are moderated by coresidence with (grand)parents and evaluated posited explanations for observed differences between lone mothers and single mothers coresiding with parents. Simple bivariate comparisons indicated that single mothers spend less time with their children and eat dinner together less frequently than their married counterparts. This is an important finding in light of recent increases in divorce in Japan. Recent estimates indicate that roughly one third of marriages are projected to end in divorce and it is clear that, in most cases, noncustodial fathers provide no financial support and have little or no involvement in their children's lives. Our findings are also important in light of evidence that maternal investment in children's education may be particularly important in Japan's extremely competitive educational environment (Hirao, 2007) and evidence that divorce is concentrated at the lower end of the socioeconomic spectrum (Raymo, Fukuda, & Iwasawa, 2013). Because single parenthood is more prevalent among mothers with less education (as shown in Table 1), the lower levels of time with children we observed in single-mother

families may have important implications for the intergenerational transmission of disadvantage in Japan.

Comparisons across combinations of marital status and living arrangements present some of the same ambiguity observed in recent studies of single-parent families in the United States. We found that the amount of time that single mothers living apart from parents spent with their children was no different than for married mothers (regardless of living arrangements) once we accounted for their longer work hours and higher levels of work-related stress. However, single mothers coresiding with parents spent significantly less time with their children than either married mothers or single mothers living alone, net of several individual and family characteristics. Our results are not consistent with a scenario in which intergenerational coresidence facilitates mother–child interaction via economic and instrumental support (Hypothesis 2A). The fact that the magnitude of the negative coefficient for single mothers coresiding with parents was not attenuated when we controlled for measures of (grand)parental assistance with child care and housework (Model 3) is also not consistent with a scenario in which grandparents substitute for mothers' time with children (Hypothesis 2B). When we examined the frequency of shared dinners, we again found that single mothers coresiding with parents spent significantly less time with their children than any of the other three groups of mothers. In contrast to the results for time with children, however, we also found that single mothers living alone ate dinner less frequently with their children than married mothers (regardless of living arrangements), even after accounting for differences in work hours, Work–family conflict, and other relevant characteristics.

One straightforward interpretation of these results is that intergenerational coresidence with (grand)parents does little to offset the implications of divorce for reduced maternal time with children in Japan (and perhaps in other “strong-family” countries). An alternative interpretation consistent with our results is that, as posited by Hypothesis 2B, coresident grandparents (especially grandmothers) may act as maternal substitutes by spending time and sharing meals with their grandchildren. Our failure to support this hypothesis in Model 3 may simply reflect the relatively crude measurement of the (grand)parental support variables. To more effectively evaluate the relevance of this scenario, we would need either richer measures of grandparent–grandchild interaction or perhaps measures of children's outcomes, neither of which is available in the data.

Our findings represent an important step toward understanding the potential implications of increases in single parenthood in Japan, but we must highlight some important limitations. First, the NSHC did not collect any direct measures of children's well-being. Although mothers' time with children is an important correlate of children's outcomes, it does not allow us to make any direct inferences about relationships between single parenthood and the outcomes for children in which we are ultimately interested. A particularly important barrier to such inferences is the lack of information about grandparents' time with children or father's time with children. Focusing on time with children from the mother's perspective rather than from the child's perspective understates children's interaction with adult family members in a way that affects our ability to make direct inferences about linkages between family structure and children's outcomes. If the coresident parents of single mothers provide

another source of quality time with children not observable in our data (while also facilitating mothers' engagement in employment and educational upgrading, e.g., Hao & Brinton, 1997; Sasaki, 2002), the lower levels of time with children we noted among single mothers living with parents may be of little relevance for the well-being of children and the reproduction of disadvantage across generations.

A second, related, limitation is the absence of information about coresident (grand)parents. Without information on their age, marital status, health, or economic circumstances, it was not possible to distinguish coresident households formed primarily to provide support to the single mother from those formed in response to the older generation's needs. The latter scenario would not be consistent with our assumption that transfers of time, financial resources, and emotional support are largely from (grand)parents to their single-mother daughters. In an effort to indirectly assess the sensitivity of results to possible violations of this assumption, we reestimated all models first using only the subsample of mothers under age 40 and again using only the subsample of mothers with preschool-, elementary-, or middle-school-age children on the basis of the assumption that these younger women would be less likely to have older parents in need of care. The results of these auxiliary models (available on request) were similar to those presented for the full analytic sample in Tables 2 and 3. The magnitudes of the negative coefficients for single mothers (regardless of living arrangements) were larger in the sample that is restricted to respondents under age 40, but in no case was the direction or statistical significance of differences inconsistent with the results presented above.

Third, our modeling strategy did not allow for assessment of whether observed differences between single-mother and two-parent families or differences between mothers who were and were not coresiding with parents were causal or correlational. Research on the well-being of single mothers and their children in the United States has invested substantial effort in identifying the causal effects of single parenthood (e.g., Cherlin et al., 1991; Painter & Levine, 2000) and recognizes the potential importance of self-selection into multigenerational coresidence (DeLeire & Kalil, 2002; Sigle-Rushton & McLanahan, 2002, 2004). It is thus important to emphasize that our models did not provide any insights into the extent to which differences in maternal time with children reflect the selection of more (or less) effective and engaged parents into coresidence with their parents. Such selection might reflect a stronger desire to access grandparental support, or better intergenerational relationships, or both. Our results could be consistent with a scenario in which less engaged mothers are more likely to coreside, perhaps in response to pressure from their parents (e.g., Gordon et al., 2004). Given the cross-sectional nature of our data and the absence of plausible instrumental variables, we did not attempt to address these potential endogeneities. If the self-selection of less engaged parents into coresidence is important, our results will understate the benefits of coresidence for mothers' time with children. Similarly, if more effective or more engaged parents are more likely to coreside with parents, our results will overstate the benefits of coresidence. The present results should be interpreted with this caveat in mind.

This study of single motherhood, living arrangements, and time with children in Japan has arguably raised more questions than it has answered but, in the context of rapid family

change, these are important questions that should be pursued in a wide range of contexts. As in Japan, increasing rates of divorce (and, in some cases, more nonmarital childbearing) are contributing to growth in single-mother families in many societies where public support for families is relatively limited and traditions of family support are strong (e.g., southern Europe, east and southeast Asia, Latin America). These changes will presumably have important implications for social and economic inequality within and across generations, as in the United States (McLanahan & Percheski, 2008). In this context, evaluating the role of intergenerational support via coresidential living arrangements in mitigating the disadvantages associated with single parenthood and understanding the conditions under which coresidence is more or less beneficial is an important task both for family scholars and for those interested in understanding reciprocal relationships between changing family behavior and trends in social and economic inequality.

Acknowledgments

The research reported herein was supported by a grant from the National Institute of Child Health and Human Development (R03-HD049567) and by the College of Letters & Science and the Graduate School of the University of Wisconsin—Madison. Additional support was provided by the Institute of Social and Economic Research at Osaka University, Osaka, Japan. Research was conducted at the Center for Demography and Ecology and the Center for Demography of Health and Aging at the University of Wisconsin—Madison, which are supported by Center Grants from the National Institute of Child Health and Human Development (R24 HD047873) and the National Institute on Aging (P30 AG17266). Hyunjoon Park and Miho Iwasawa acknowledge the financial support provided by Abe Fellowships granted by the Japan Center for Global Partnership, Social Science Research Council, and the American Council of Learned Societies.

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Table 1

Descriptive Statistics, by Marital Status and Living Arrangements

Variable	Married mothers		Unmarried mothers	
	Not coresiding ^a (M/proportion)	Coresiding ^b (M/proportion)	Not coresiding ^c (M/proportion)	Coresiding ^d (M/proportion)
Hours spend with children per weekday				
Almost none	0.00	0.00	0.01	0.02
< 1 hour	0.02	0.03	0.03	0.05
1–2 hours	0.04	0.06	0.10	0.14
2–4 hours	0.18	0.26	0.30	0.38
4–6 hours	0.30	0.32	0.37	0.27
6+ hours	0.46	0.33	0.19	0.14
Days having dinner with children per week				
Almost never	0.01	0.01	0.03	0.03
1 day per week	0.01	0.02	0.05	0.08
2–3 days per week	0.04	0.08	0.14	0.23
4–6 days per week	0.07	0.10	0.09	0.12
Every day	0.87	0.79	0.69	0.53
Age	39.28	40.12	40.68	38.10
Educational attainment				
High school or less	0.41	0.45	0.59	0.52
Junior college/vocational school	0.39	0.43	0.31	0.38
University	0.20	0.13	0.10	0.10
Number of coresiding children	1.95	2.04	1.76	1.59
Lives with a child age 5 or younger	0.43	0.36	0.16	0.24
Lives with a child age 6–15	0.69	0.72	0.77	0.72
Lives with a child age 16–18	0.21	0.31	0.32	0.23
Lives with a child age 19 or older	0.13	0.15	0.18	0.10
Widowed			0.11	0.06
Single mother via nonmarital birth			0.05	0.04
Unclear pathway to single motherhood			0.05	0.07
Parents provide help with child care	0.24	0.55	0.23	0.64
Parents provide help with housework	0.10	0.50	0.14	0.63
Parents provide help with finances	0.02	0.17	0.04	0.33
Parents provide help with housing/rent	0.01	0.10	0.01	0.27
Parents provide help with children's education	0.01	0.05	0.01	0.20
Hours per day working				
Zero	0.42	0.28	0.16	0.13
First quartile	0.26	0.24	0.13	0.13
Second quartile	0.12	0.16	0.22	0.17

Variable	Married mothers		Unmarried mothers	
	Not coresiding ^a (M/proportion)	Coresiding ^b (M/proportion)	Not coresiding ^c (M/proportion)	Coresiding ^d (M/proportion)
Third quartile	0.11	0.18	0.28	0.34
Fourth quartile	0.08	0.14	0.22	0.23
Work–family conflict score (range: 0–15)	3.43	4.13	6.00	6.41
CES–D score (range: 0–21)	3.36	3.70	5.80	5.70
Equivalent household income				
First tertile	0.13	0.20	0.60	0.49
Second tertile	0.33	0.35	0.22	0.17
Third tertile	0.40	0.28	0.07	0.07
Missing	0.15	0.18	0.12	0.27

Note: Proportions are weighted, but *n* is not weighted. CES–D = Center for Epidemiological Studies Depression Scale.

^a *n* = 869, proportion of total *N* = .50.

^b *n* = 295, proportion of total *N* = .17.

^c *n* = 348, proportion of total *N* = .20.

^d *n* = 212, proportion of total *N* = .12.

Table 2
Estimated Coefficients (Coeff.) From Ordered Logistic Regression Model for Time Spent With Children

Variable	Model 1 ^a		Model 2 ^b		Model 3 ^c		Model 4 ^d	
	Coeff.	p	Coeff.	p	Coeff.	p	Coeff.	p
Marital status and living arrangements (ref.: married, not coresiding)								
Married mother, coresiding			-.49	.00	-.39	.00	-.21	.15
Single mother, not coresiding	-1.06	.00	-.90	.00	-.88	.00	-.10	.57
Single mother, coresiding	-1.06	.00	-1.68	.00	-1.54	.00	-.87	.00
Age	-.03	.02	-.03	.00	-.03	.01	-.04	.01
Educational attainment (ref.: high school or less)								
Junior college/vocational school	-.10	.41	-.10	.43	-.09	.48	-.04	.76
University	-.19	.27	-.22	.20	-.20	.24	-.01	.95
Number of coresiding children	.08	.35	.09	.29	.10	.23	.05	.56
Lives with a child age 5 or younger	1.10	.00	1.09	.00	1.11	.00	1.12	.00
Lives with a child age 6–15	-.27	.11	-.27	.11	-.27	.11	-.13	.47
Lives with a child age 16–18	-.80	.00	-.76	.00	-.76	.00	-.56	.00
Lives with a child age 19 or older	-.56	.01	-.57	.01	-.58	.00	-.57	.01
Widowed ^c	.62	.06	.51	.11	.49	.13	-.07	.86
Single mother via nonmarital birth (ref.: no)	.63	.15	.57	.20	.59	.19	.38	.49
Unclear pathway to single motherhood (ref.: no)	-.01	.99	.04	.89	.03	.91	-.14	.71
Parents provide help with child care (ref.: no)					.06	.67	.22	.16
Parents provide help with housework (ref.: no)					-.32	.04	-.28	.08
Parents provide help with living expenses (ref.: no)					.07	.67	.18	.24
Parents provide help with housing/rent (ref.: no)					-.15	.38	-.23	.19
Parents provide help with children's education (ref.: no)					.35	.04	.11	.54
Hours per day working (ref.: third quartile)								
Zero							1.68	.00
First quartile							1.07	.00
Second quartile							.05	.80

Variable	Model 1 ^a		Model 2 ^b		Model 3 ^c		Model 4 ^d	
	Coeff.	p	Coeff.	p	Coeff.	p	Coeff.	p
Fourth quartile							0.01	.98
Work-family conflict (score: 0–15)							–0.12	.00
CES-D (score: 0–21)							–0.02	.21
Equivalent household income (ref.: first tertile)								
Second tertile							–0.10	.55
Third tertile							–0.08	.70
Missing							0.09	.65
Cut 1	–7.64	.00	–7.85	.00	–7.92	.00	–8.01	.00
Cut 2	–5.38	.00	–5.58	.00	–5.64	.00	–5.72	.00
Cut 3	–4.18	.00	–4.38	.00	–4.37	.00	–4.46	.00
Cut 4	–2.31	.00	–2.49	.00	–2.54	.00	–2.29	.00
Cut 5	–0.72	.17	–0.88	.09	–0.93	.09	–0.27	.64

Note: $n = 1,709$ for each model. ref. = reference category; CES-D = Center for Epidemiological Studies Depression Scale.

^a $F(12) = 31.25$.

^b $F(14) = 28.58$.

^c $F(19) = 21.56$.

^d $F(28) = 23.61$.

Table 3
Estimated Coefficients (Coeff.) From Ordered Logistic Regression Models for Shared Dinners With Children

Variable	Model 1 ^a		Model 2 ^b		Model 3 ^c		Model 4 ^d	
	Coeff.	p	Coeff.	p	Coeff.	p	Coeff.	p
Marital status and living arrangements (ref.: married, not coresiding)								
Married mother, coresiding			-.42	.02	-.28	.12	-.17	.35
Single mother, not coresiding	-1.31	.00	-1.06	.00	-1.06	.00	-.62	.01
Single mother, coresiding	-1.31	.00	-1.96	.00	-1.79	.00	-1.28	.00
Age	-.03	.12	-.03	.10	-.03	.08	-.03	.13
Educational attainment (ref.: high school or less)								
Junior college/vocational school	-.09	.59	-.09	.60	-.07	.68	0.04	.83
University	0.04	.19	0.02	.92	0.03	.89	0.31	.22
Number of coresiding children	0.02	.85	0.02	.85	0.04	.76	0.00	.99
Lives with a child age 5 or younger	0.09	.70	0.07	.76	0.09	.71	0.02	.94
Lives with a child age 6–15	-.52	.02	-.52	.02	-.53	.02	-.43	.06
Lives with a child age 16–18	-.96	.00	-.93	.00	-.94	.00	-.69	.00
Lives with a child age 19 or older	-.09	.70	-.11	.65	-.10	.67	-.04	.88
Widowed(ref.: no)	0.36	.25	0.21	.49	0.24	.44	-.03	.93
Single mother via nonmarital birth (ref.: no)	0.16	.77	0.09	.87	0.13	.82	0.06	.93
Unclear pathway to single motherhood (ref.: no)	0.17	.67	0.23	.54	0.20	.58	0.33	.32
Parents provide help with child care (ref.: no)					0.02	.14	0.02	.91
Parents provide help with housework (ref.: no)					-.31	.93	-.16	.47
Parents provide help with living expenses (ref.: no)					-.19	.38	-.23	.32
Parents provide help with housing/rent (ref.: no)					0.03	.92	-.06	.81
Parents provide help with children's education (ref.: no)					0.43	.11	0.29	.31
Hours per day working (ref.: third quartile)								
Zero							1.27	.00
First quartile							0.58	.01
Second quartile							0.56	.03

Variable	Model 1 ^a		Model 2 ^b		Model 3 ^c		Model 4 ^d	
	Coeff.	p	Coeff.	p	Coeff.	p	Coeff.	p
Fourth quartile							0.08	.33
Work-family conflict score (range: 0–15)							–0.08	.01
CES-D score (range: 0–21)							–0.05	.02
Equivalent household income (ref.: first tertile)								
Second tertile							0.40	.11
Third tertile							–0.22	.36
Missing							0.04	.89
Cut 1	–6.41	.00	–6.59	.00	–6.71	.00	–6.46	.00
Cut 2	–5.45	.00	–5.63	.00	–5.75	.00	–5.49	.00
Cut 3	–4.29	.00	–4.47	.00	–4.58	.00	–4.28	.00
Cut 4	–3.50	.00	–3.67	.00	–3.78	.00	–3.41	.00

Note: n = 1,710 for each model. ref. = reference category; CES-D = Center for Epidemiological Studies Depression Scale.

^a F(12) = 12.73.
^b F(14) = 12.24.
^c F(23) = 9.13.
^d F(28) = 7.98.

Table A1

Comparison of the 2011 National Survey of Households with Children (NSHC) With Other Nationally Representative Surveys Conducted in 2011

Variable	Single mothers		Married mothers	
	2011 NCHS	2011 National Survey of Single-Mother Households ^a	2011 NCHS	2011 Comprehensive Survey of Living Conditions in Japan ^b
Household size	3.5	3.4	4.4	4.2
Number of children	1.9		2.1	1.7
Age of youngest child	10.1	10.7	7.5	
Percentage coresiding with parents	36.3	28.5	25.3	17.2
Household income (10,000 yen) ^c	293.7	291.0	625.8	658.1
Mother's earnings (10,000 yen)	172.6	181.0	115.8	158.9
Percentage employed	84.0	80.6	61.2	60.6
Age	39.6	39.7	39.5	
Educational attainment				
High school or less	56.9	61.3	42.9	
Vocational school, junior college	34.2	31.8	39.7	
University, graduate school	9.0	6.9	17.4	

^a Nationally representative sample of single-parent households with a child(ren) under the age of 20.

^b Nationally representative sample of households containing a child(ren) under the age of 20.

^c As of this writing, 10,000 yen $\approx$ 96 USD.