

**Bowling Green State University
The Center for Family and Demographic Research**

<http://www.bgsu.edu/organizations/cfdr>

Phone: (419) 372-7279 cfdr@bgsu.edu

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PARENTAL STRAINS AND REWARDS AMONG MOTHERS:

THE ROLE OF EDUCATION

Kei M. Nomaguchi

Department of Sociology, Bowling Green State University, Bowling Green, OH 43403

Phone: 419-372-8147; Fax: 419-372-8306; Email: knomagu@bgsu.edu

and

Susan L. Brown

Department of Sociology, Bowling Green State University, Bowling Green, OH 43403

Phone: 419-372-9521; Fax: 419-372-8306; Email: browns1@bgsu.edu

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ABSTRACT

Using data from the NICHD Study of Early Child Care and Youth Development ($N = 1,198$), this study examines the associations between education and parental strains and rewards among mothers of young children. Findings indicate that a college degree or more is related to less parenting anxiety, but more role captivity, and less new life meaning from parenting than lower levels of education. Differences by education are partly explained by variation in levels of progressive parenting values and work commitment, but remain significant. These patterns indicate that education provides greater resources that ease parental anxiety, but also leads to greater perceived demands of having a successful career, which contribute to more role captivity and less new life meaning from parenting.

Key words: Early childhood, education, motherhood, parenting, well-being

As women's educational attainment continues to rise (U.S. Census Bureau, 2010), its implications for parenting have been of great interest to researchers and the public. Mothers with a higher level of education are more likely to be engaged in a labor-intensive, emotionally absorbing parenting method than mothers with a lower level of education, even though this parenting style often means foregoing personal free time, adult social networks, or success in a career (Hays, 1996; Lareau, 2003; Nelson, 2010; Stone, 2007). How do highly educated mothers feel about the demands of parenting? Do they find parenting rewarding? Although there is extensive research on educational differences in what mothers *do* for their children, less is known about how they *feel* about it. This is a serious omission in the literature, because the extent to which mothers feel that parenting is stressful or rewarding is related to their mental health (Umberson, Pudrovska, & Reczek, 2010) and the quality of their parenting (Abidin, 1992), which in turn influence child well-being (Crnic & Acevedo, 1995).

This paper examines variation in perceived strains and rewards of parenting by levels of education, focusing on mothers whose children were from toddler to preschool years, the group of parents who are most likely to face intense demands and rewards of childrearing (Galinsky, 1987; Goldsteen & Ross, 1989). Stress research has documented an inverse relationship between socioeconomic status (SES) and stress, indicating that education provides individuals with resources that lead to fewer exposures to stress of any kind (McLeod & Nonnemaker, 1999; Mirowsky & Ross, 2003). Recent scholarship, however, has questioned this traditional view of SES as resources, suggesting an alternative perspective of SES as demands (Schieman, Milkie, & Glavin, 2009). Although this new line of research has focused on occupational stress and work-family conflict, parenting may be another life domain where education is related to greater strain, reflecting higher standards of investments in childrearing and higher expectations to have a

successful career. Thus, we examine three perspectives of education—education as resources, education as parental demands, and education as career demands—to interpret mothers' assessments of the strains and rewards of parenting. We use panel data from the NICHD Study of Early Child Care and Youth Development (SECCYD), a unique data source that allows us to distinguish between mothers with college versus advanced degrees. With theoretical refinements and a rich dataset, this study elucidates implications of the trend toward higher education for subjective experiences of parenting.

Parental Strains and Rewards

Prior research has documented that parenthood brings *strains* and *rewards* to adults' lives (Nomaguchi & Milkie, 2003). Yet, few studies have examined both of these domains. We argue that it is important to examine both strains and rewards to decipher subjective experiences of parenting. Below, we briefly review prior research on parental strains and rewards.

Parental strain or parenting stress refers to the degree to which parents perceive the demands associated with the parenting role as difficult (Abidin, 1992; Pearlin, 1989). Models of the determinants of parental strains have suggested that various life contexts, such as child characteristics, parental characteristics, couple relationship quality, characteristics of the environment (e.g., financial conditions, work conditions, and social support), and interactions among these factors may influence parental strains (Abidin, 1992; Belsky, 1984; Crinic & Acevedo, 1995). Empirical evidence has shown support for these models (e.g., Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009; McBride, Schoppe, & Rane, 2002; Mulsow, Caldera, Pursley, Reifman, & Huston, 2002). This study expands prior research by focusing on one parental characteristic that may influence parental strains in complex ways: education level. Despite the increasing importance of education in shaping many aspects of lives such as

childbearing and parenting behavior, marital status, and stress (Bianchi, Cohen, Raley, & Nomaguchi, 2004; Mirowsky & Ross, 2003), little research has focused on the role of education in parental strains. Cooper, McLanahan, Meadows, and Brooks-Gunn (2009) found that education buffered the associations between relationship transitions and parental strain. A few other studies that included education as a control found no associations between education and parental strain (Levy-Shiff & Dimitrovsky, 1998; Ostberg & Hagekull, 2000).

As Pearlin (1989) noted, parental strain can take different forms. Many studies have measured parental strain as an overall score that lumps together varied forms of strains. We argue, however, that different aspects of parental strains should be examined separately because the relationship between education and parental strain is likely to depend on the type of strain. We focus on two types of parental strains that have emerged in recent qualitative research as emblematic of contemporary parenting experiences (e.g., Nelson, 2010). First, *parenting anxiety*, or parents' concerns about their children's well-being, is a common experience of today's parents (Farkas, Johnson, & Dufett, 2002; Nelson, 2010). There is a widespread sense among parents that U.S. society has become a more dangerous environment in which to raise children. Parents may feel they must be constantly on alert to protect their children from harm and are often worried about whether they are adequately protecting their children (Farkas et al., 2002; Warner, 2006). Second, some mothers feel trapped in the parenting role, a type of strain that mental health researchers term *role captivity* (Pearlin, 1989). Caring for young children is a relentlessly demanding, 24/7 responsibility and mothers tend to allocate their time according to their children's needs (Mattingly & Bianchi, 2003). The child-centered daily routines may lead to a sense of isolation from the adult world. At the same time, contemporary U.S. culture expects

women, as well as men, to be economically successful (Jacobs & Gerson, 2004). Some mothers may feel as if caring for young children curtails their full participation in the work world.

Parental rewards signal the value of children. Hoffman, Thornton, and Manis (1978) defined the value of children as the extent to which children were seen as satisfying any particular need. In contemporary U.S. society, the benefits of having children are largely non-economic (Morgan & King, 2001). This paper focuses on two types of parental rewards that were highlighted in recent qualitative studies (e.g., McMahon, 1995; Nelson, 2010). First, children provide parents *joy* through an enduring interpersonal relationship characterized by affection, intimacy, and stimulation. Beck and Beck-Gernsheim (1995) argued that in an advanced economy, where the world of work has emphasized rationality and efficiency and regarded emotions as nuisance, adults have increasingly turned to their personal relationships, especially with their children, for emotional fulfillment. Second, children give life *new meaning* and significance. For instance, mothers in McMahon's (1995) study reported that having someone counting on them made them behave more responsibly, see priorities more clearly, and feel less self-centered.

Parental rewards are in part determined by the availability of alternative sources of satisfaction and attitudes towards family life and the status of women, which are largely influenced by social status and roles (Hoffman et al., 1978; Morgan & King, 2001). Empirical studies have shown support for this argument, indicating that marital status (Groat, Giordano, Cernkovich, Pugh, & Swinford, 1997; Jones & Brayfield, 1997), occupation (Jones & Brayfield, 1997), and religiosity (Jones & Brayfield, 1997) are related to variation in parental rewards. Prior research is unclear about how education is related to parental rewards. Data collected in the 1970s and 1980s indicated that the more educated tended to value children less for any aspect of

parental rewards (Hoffman et al., 1978; Jones & Brayfield, 1997). More recently, however, qualitative studies have emphasized that mothers across the socioeconomic spectrum, including poor (Edin & Kefalas, 2005), middle-class single mothers (Hertz, 2006), and married mothers with advanced degrees (Nelson, 2010; Stone, 2007), express joy about close relationships with their children. This study expands prior research by taking more nuanced approaches to conceptualize the role of education in parenting experiences.

Variation by Education

Drawing on stress research and studies of contemporary parenthood, we examine three possible approaches to understand the associations between education and parental strains and rewards: education as resources, education as parenting demands, and education as career demands. Below, we discuss each perspective in detail.

Education as resources. The literature on stress and mental health emphasizes the unequal distribution of resources by levels of education. Ross and Van Willigen (1997) argued that a wide variety of resources associated with education might contribute to the mental health advantage enjoyed by the highly educated. Higher levels of education allow individuals to acquire human capital that helps them avoid exposure to stressful experiences. Education is also related to social resources through stable social relationships, such as marriage, which can minimize stressful experiences. From the education as resources perspective, mothers with a higher level of education may be less worried about their children's well-being because there are more resources available for them to protect their children. For example, they may be able to live in a safer neighborhood and afford higher quality child care. Mothers with a higher level of education may also experience less role captivity, given their greater coping resources. They are more likely to be employed and to hire outside support for child care or other household chores.

They are also more likely to be married, and research has found less role captivity for married than unmarried parents (Avison, Ali, & Walters, 2007). In terms of rewards, greater resources may ease the task of parenting, freeing mothers to enjoy their children and appreciate the new life meaning that children bring. In sum, the *education as resources* perspective predicts that education will be negatively associated with parental strains and positively associated with parental rewards. Mothers with a higher level of education will report less parenting anxiety and less role captivity, while reporting more joy and more new life meaning. When material and social resources, such as employment status, family income, and marital status, are taken into account, differences by education should shrink and may disappear.

Education as parenting demands. Education is related to greater demands, including the demands of heavier parental investments in childrearing. There are notable SES differences in parenting values and styles (Lareau, 2003; Nelson, 2010). For example, mothers with a higher level of education are more likely to be actively involved in their children's lives to foster their children's talents and skills (Hays, 1996; Lareau, 2003). Mothers with a college degree spend the most time directly interacting with their children (Bianchi, Cohen, Raley, & Nomaguchi, 2004; Sayer, Bianchi, & Robinson, 2004). In addition, highly educated mothers tend to treat their children as equals, including them in adults' conversations and giving them a "vote" in family decisions (Lareau, 2003). The consequences of such educational differences in parenting for mothers' sense of strains and rewards are not well understood. The higher level of investment in children, reflected in a hands-on childrearing approach, may lead to more anxiety for mothers with more education (Nelson, 2010). They may also feel more role captivity than their less-educated counterparts because of the highly child-centered daily routines that isolate them from the adult world. The egalitarian relationship they share with their children, however, may lead to

a greater sense of emotional closeness. Nelson (2010) argued that mothers with a higher level of education emphasized that they enjoy the close relationship with their children, calling them their “best friends.” In sum, the *education as parenting demands* perspective predicts that education will be positively related to both parental strains and rewards. Mothers with a higher level of education will be more likely to report parenting anxiety and role captivity, but also joy and new life meaning from childrearing, as a higher level of education is related to childrearing beliefs that require direct involvement in a child’s daily life and encourage an emotionally close relationship with the child. When parenting values are controlled for, the differences by education may disappear.

Education as career demands. A higher level of education brings another type of demand to women’s lives: perceived career demands. Education increases the potential to have a career that provides better earnings, higher status, and more psychosocial benefits (Ross & Reskin, 1992). With better access to success in the workplace, more educated women are likely to have greater work commitment and career expectations (Blair-Loy, 2003; Stone, 2007). Caring for children, however, may prevent women from devoting time to paid work, which neoclassical economic theory terms the “opportunity cost” of raising children (Becker, 1981; Mincer, 1963). More educated mothers face a greater opportunity cost and thus may perceive themselves as trapped in the parenting role. Blair-Loy (2003) reported that women executives who scaled back their career for the sake of their children expressed a sense of career sacrifice and isolation. With greater access to alternative sources of fulfillment, mothers with a higher level of education may be less likely to see their children as a source of joy and life meaning (Hoffman et al., 1978; Jones & Brayfield, 1997). At the same time, as Hays (1996) noted, mothers with higher levels of education also believe that their devotion to mothering is important for the well-being of their

children. Thus, they may feel guilty about failing to completely devote themselves to their children due to their work commitment, which may lead to more anxiety about parenting. In sum, the *education as career demands* perspective predicts that education will be positively related to parental strains and negatively related to parental rewards. Mothers with a higher level of education will be more likely to report anxiety and role captivity and less likely to report joy and new life meaning from childrearing, arguably because education increases perceived career demands, which may be reflected in a greater work commitment. When work commitment is taken into account, differences by education may disappear.

Other Factors

The present analysis controls for several factors that are related to parental strains and rewards as well as levels of education. Older mothers may report lower levels of strains (Ross & Van Willigen, 1997) and more educated mothers tend to be older (Rindfuss, Morgan, & Offutt, 1996). Black women report more parental rewards than White women, on average (Hoffman et al., 1978) and Black women are less likely to have a college degree (U.S. Census Bureau, 2010). Depressed mothers tend to report more strains (Crnic & Acevedo, 1995) and more educated mothers are typically less depressed (Ross & Van Willigen, 1997). Having more children or children with health or temperament issues is related to more strains and fewer rewards (Groat et al., 1997; McBride et al., 2002) and more educated mothers have fewer children and fewer children with such issues (NICHD Early Child Care Research Network, 2005). We also control for child's gender and age because parents of boys tend to report more stress than parents of girls (Crnic & Acevedo, 1995), and parents of two to three year olds (i.e., the "terrible two's") tend to report more stress than parents of younger children (Fagot & Kavanaugh, 1993; Galinsky, 1987).

METHOD

Data

Data came from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development (SECCYD), an ongoing longitudinal study of 1,364 children and their families (NICHD Early Child Care Research Network, 2005). The study began in 1991 when families of newborns were recruited from 24 hospitals at 10 sites in 9 states. Of women who met the eligibility criteria for the study, 45% were enrolled. The present analysis focused on the first phase of the study, namely the information obtained when the child was 1 month (Baseline), 15 months (T1), 24 months (T2), and 36 months (T3) of age.

The SECCYD has unique advantages that serve the purpose of the present study well. First, mothers were asked about a wide range of strains and rewards of parenting when their children were 15 (T1), 24 (T2), and 36 (T3) months of age. Very few studies have gathered such detailed information using the same measures of strains and rewards of parenting longitudinally during a particular developmental stage of the child. Second, the data include sufficient numbers of mothers with higher levels of education, allowing us to examine the influences of a college degree and an advanced degree separately. Finally, although the SECCYD is not nationally representative, it does provide longitudinal data on a diverse group of mothers.

Measures

Parental strains and rewards. The SECCYD asked mothers a series of questions regarding concerns and rewarding experiences of parenting. Emerging from the conceptual foundation discussed earlier, we identified several measures of parental strains and rewards. All measures were determined to be internally consistent on the basis of factor analyses. Parental strains included parenting anxiety and role captivity. Parenting anxiety was the mean response to three items: “Their safety when they're away from you,” “The trouble they might get into,” and

“Not being sure if you're doing the right thing for them” ($\alpha = .68, .67, .66$ in T1, T2, T3, respectively). Role captivity was the mean response to three items: “Not having any time for yourself because of the children,” “Feeling tied down because of the children,” and “Not being able to spend your time the way you want” ($\alpha = .75, .78, .76$ in T1, T2, T3, respectively). For both measures, response categories ranged from 1 = *not at all a concern* to 4 = *extreme concern*. Parental rewards included joy and new life meaning from parenting. Joy from the parent-child relationship was the mean for the five items: “Seeing your child grow and change,” “The love your child shows,” “Sharing interests or activities with your child,” “Feeling proud of how your child is turning out,” and “Doing things with your child” ($\alpha = .76, .82, .81$ in T1, T2, T3, respectively). New life meaning from parenting was the mean for the five items: “The meaning and purpose your child gives your life,” “Passing on to your child what you know,” “Being needed by your children,” “The companionship your children provide,” and “The way your children change you for the better” ($\alpha = .83, .86, .84$ in T1, T2, and T3, respectively). For both measures, response categories ranged from 1 = *not at all* to 4 = *extremely rewarding*.

Maternal education. Mother’s level of education was measured in the baseline interview as the highest level of schooling. Five dummy variables were created, including less than high school degree, a high school diploma (reference category), some college education (including technical or vocational), a college degree, and an advanced degree.

Resources. Employment status (T1, T2, T3) was measured as three dummy variables, including not employed, part-time (worked < 35 hours per week), and full-time (worked ≥ 35 hours per week, reference category). Income-to-needs ratio (T1, T2, T3) was computed as total family income divided by the number of family members. Relationship status (T1, T2, T3) was

measured by three dummy variables, including married (reference category), cohabiting, and single.

Progressive parenting values was measured in the baseline interview as a constructed variable with eight items (e.g., “Children should be allowed to disagree with their parents if they feel their own ideas are better”; “Parents should go along with the game when their child is pretending something”; “What parents teach their children at home is very important to his/her school success,” 1 = *strongly disagree* to 5 = *strongly agree*) asked at baseline. The scale ($\alpha = .62$) ranged from 18 to 40 with higher values indicating more progressive parenting values.

Work commitment was measured in the baseline interview as a constructed variable that gauges agreement with six items regardless of current employment status (e.g., “I cannot picture having a fully satisfying life without a career/job”; “I don’t think I was really cut out to work all my life”; “I would continue to work/want to return to work even if we don’t need the income,” 1 = *strongly disagree* to 6 = *strongly agree*). The scale ($\alpha = .75$) ranged from 6 to 36 with higher values indicating a stronger commitment to employment activity.

Controls. Age was measured in years in the baseline interview. Race/ethnicity was measured by three dummy variables including White (reference category), Black, and Hispanic or other. Depression (T1, T2, T3) was a constructed variable that was developed from the Center of Epidemiological Studies Depression Scale (CES-D) using 20 items ($\alpha = .90, .91, \text{ and } .90$ in T1, T2, and T3, respectively). Child’s gender was a dichotomous variable (1 = *girl*). The number of children under age 18 in the household (T1, T2, T3) ranged from 1 to 10. Child’s difficult temperament was measured as the mean of 55 items ($\alpha = .81$) asked in the six-month interview (1 = *almost never* to 6 = *almost always*). Child’s health (T1, T2, T3) was measured by mother’s self-report (1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *excellent*).

Analytic Plan

To examine the associations between education and parental rewards and strains, we relied on a pooled-time series technique (Allison, 2005; Johnson, 1995). This approach accommodates the variability and change in parenting strains and rewards that typically occur over time. As noted earlier, previous studies have indicated that parenting strains and rewards vary by the child's developmental stage (Fagot & Kavanaugh, 1993; Galinsky, 1987). Other factors, such as mother's employment status, also change considerably during the first few years of a child's life. Pooled time-series models for longitudinal data permit both time-varying dependent and independent variables (Allison, 2005; Johnson, 1995). We estimated random effects models rather than fixed effects models because key independent variables in this study were time-invariant. Specifically, very few mothers changed their highest level of schooling from T1 to T3, and work commitment and parenting values were measured only at baseline. For the pooled time-series analysis, data were structured so that each wave of observation for each individual in the sample was represented by a separate record. The total sample size was thus the number of individuals multiplied by the number of waves. The pooled time-series data violate the assumption of ordinary least squares (OLS) regressions that the observations are independent of one another. In random effects models, this problem was solved by a generalized least squares solution in which weights were assigned based on a combination of within- and between-individual covariance (Johnson, 1995). The regression equation is expressed as:

$$Y_{it} = \mu_t + \beta X_{it} + \gamma Z_i + \alpha_i + \varepsilon_{it}$$

where Y_{it} refers to the value of the outcome variable for individual i on occasion t ; μ_t is the intercept that varies over time; βX_{it} is a vector of time-varying variables and γZ_i is a vector of

time-invariant variables; and each α_i represents differences between persons that is a random variable with a normal distribution (Allison, 2005).

As a robustness check, we also estimated hybrid fixed effects models, which were recently introduced by Allison (2009). These hybrid models permitted the inclusion of time-invariant variables in a fixed effects framework. We decided to report results only from the random effects models, because the hybrid fixed effects models required that time varying variables be transformed into person-specific means and standard deviations, akin to group mean centering, and the mean and standard deviation transformations of the time-varying variables were not easily interpreted (Allison, 2009). Consequently, it was harder to assess some of the theoretical arguments, specifically the education as resources argument for which the indicators were time-varying (i.e., employment and marital statuses). Comparisons of the effects of education in the random effects versus hybrid models revealed no substantive differences, except for the effect of advanced degree for joy in parenting, and we discuss this finding further in the results section. The hybrid fixed effects models are available in the online version of the article as appendices.

For each indicator of parental strains and rewards, a series of four models were estimated to evaluate the three perspectives on the role of education. The initial model included parental education and the controls to establish the association between education and parenting. The second model tested the education as resources perspective by adding the resource measures. The third model added progressive parenting values to the first model to appraise the education as parenting demands perspective. The fourth model added work commitment to the first model to examine the education as career demands perspective. The final model included all variables to assess the relative importance of the three perspectives. We examined whether the associations

between education and parental strains and rewards varied by time (i.e., interactions between education and time); however, with no significant variation, we do not report the results.

Analytic Sample and Missing Data

Among the 1,364 mothers, 141 mothers (10%) were excluded because they had dropped out of the study by T3. In addition, those who had missing data on time invariant variables (i.e., work commitment, parenting values, and child temperament) ($n = 25$, 1.8%) were excluded. Thus, our sample was $N = 1,198$. The distribution of mothers by levels of education was 8.4% less than a high school diploma, 20.1% a high school diploma, 33.5% some education beyond a high school diploma, 21.8% a four-year college degree, and 15.4% an advanced degree. The average age for the mothers at the birth of the focal child was 28.4 years. Racial/ethnic compositions were 81% White, 12% Black, 4% Hispanic, and 3% other race. For time-varying variables, cases with missing values in one wave were still included in analyses of other waves (Johnson, 1995). For dependent variables, cases with missing values in one dependent variable were included in analyses for other dependent variables. Thus, N 's varied for each dependent variable because the missing cases varied. Percentages of missing cases for each variable, and thus dropped from the analyses, are presented in Table 1. Those who dropped out of the sample were more likely to have less than a high school diploma and to be young, non-White, and single.

[Table 1 about here]

RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics for the dependent, independent, and control variables in the analysis for the total sample and separately by education. The mean values for parental strains

and rewards for the total sample, which could range from 1 to 4, were 1.87 and 2.40 for parenting anxiety and role captivity, respectively. The mean values for joy and new life meaning from parenting were 3.75 and 3.44, respectively. It appears that mothers in general regarded children as more rewarding than demanding. There was some variation by levels of education. Mothers with either a college or advanced degree tended to report less parenting anxiety than mothers with lower levels of education. Mothers with either a college or advanced degree typically reported greater role captivity and less new life meaning from parenting. Mothers with less than a high school diploma reported less joy from parenting than mothers with higher levels of education, on average.

Education tended to be positively related to resources. For instance, mothers with less than a high school degree were disproportionately likely to be unemployed. Mothers with a college or an advanced degree were more likely than mothers with lower levels of education to be employed. The income-to-needs ratio rose with education. Education was positively associated with being married and negatively related to cohabitation and single motherhood. In addition, education was positively associated with progressive parenting beliefs. Work commitment was higher among mothers with either a college or advanced degree, although mothers with some college reported lower average work commitment than mothers with a high school degree.

The Associations between Education and Parental Strain and Rewards

Tables 2 to 5 present the results of random effects models of pooled time series analysis that predicted parental strains and rewards. Table 2 shows results for parenting anxiety. As the resource perspective suggested, mothers with some college education, a college degree, or an advanced degree showed less parenting anxiety than mothers with a high school diploma (Model

1). This pattern persisted with the inclusion of the resource measures in Model 2. Those who were not employed reported more parenting anxiety than those who were employed full-time. This association may reflect selection: mothers who are less confident about their child's safety and well-being may decide to drop out of the labor force to care for their child. Model 3 shows that progressive parenting values were related to less parenting anxiety. The coefficients for education remained essentially unchanged and followed the opposite pattern from the education as parenting demands perspective. In Model 4, work commitment was not significantly associated with parenting anxiety, nor did it alter the effects of education, failing to support the parenting as career demands perspective. The full model (Model 5) reinforces these conclusions, as the education pattern remained, progressive parenting values were negatively associated with parenting anxiety, and work commitment was not significantly related to parenting anxiety. Thus, the education as resources perspective was supported for parenting anxiety. For control variables, mothers with a child with a difficult temperament reported more parenting anxiety. Older age at birth was related to lower parenting anxiety. Depressed mothers reported more anxiety. Parental anxiety appeared to diminish over time.

[Table 2 about here]

Contrary to the education as resources perspective, education was related to perceptions of role captivity, such that mothers with either a college or advanced degree reported higher levels of role captivity, on average, than their counterparts with a high school degree (Model 1 of Table 3). As shown in Model 2, this pattern was unchanged by controls for resource levels. Nonemployment was related to more role captivity in parental role, consistent with findings from previous studies (Goldsteen & Ross, 1989). Model 3 introduces progressive parenting values, which were positively related to role captivity, although including this variable did not change

the association between education and role captivity, providing some evidence for the education as parenting demands perspective. Model 4 shows a higher level of work commitment was related to more role captivity, but the education effects persisted. This model provides some support for the education as career demands perspective. The full model (Model 5) appears to support the education as career demands perspective. An advanced degree was no longer significantly associated with role captivity, whereas this association remained significant for those with a college degree. Work commitment, which was highest among those with the most education (See Table 1), was positively related to role captivity. Together with progressive parenting values and resources, these factors minimized the educational variation in role captivity. Mothers with more children, a child with a difficult temperament, or a child with poorer health reported more role captivity. In addition, mothers reported more role captivity when their children were 15 months old than when their children were 36 months old.

[Table 3 about here]

Turning to parental rewards, Table 4 indicates that maternal education was not related to joy in the parent-child relationship (Model 1) even when controlling for resources (Models 2). Progressive parenting values were positively associated with joy in parenting (Model 3), but education remained unrelated to joy in parenting. Work commitment was not related to joy in parenting (Model 3). The patterns characterizing Models 1 – 4 persisted in the full model (Model 5). Ultimately, the absence of any significant variation in joy in parenting by education is not consistent with any of the three perspectives. The results obtained using hybrid fixed effects models (available in the online version of the manuscript) showed that mothers with an advanced degree reported less joy in parenting than college educated mothers, which supports prior research (Hoffman et al., 1978; Jones & Brayfield, 1997). This finding from the hybrid models

provides tentative support for the education as career demands perspective; however, it is not robust, as it was not found in random effects model specification. For control variables, mothers reported more joy in parenting when children were 15 months old than when children were older. Having more children was marginally related to less joy. Mothers with a healthier child reported more joy, whereas mothers with a child with a bad temperament reported less joy. Older mothers and depressed mothers also reported less joy in parenting.

[Table 4 about here]

Consistent with the education as career demands perspective, mothers with a college or an advanced degree reported less new life meaning from parenting than mothers with a high school diploma, regardless of whether resources were in the model (Models 1 and 2 in Table 5). This pattern persisted in Model 3 with the inclusion of progressive parenting values, which was not related to new life meaning from parenting. It was also evident in Model 4, which introduced work commitment. Work commitment was unrelated to the meaningfulness of life a child brings to a mother. The full model (Model 5) shows the same patterns found in Models 2 to 4. Overall, these findings are in line with the education as career demands hypothesis, which posits a negative association between education and parenting rewards such as meaningfulness. For the control variables, older mothers and depressed mothers reported less life meaning as a reward of parenting.

[Table 5 about here]

DISCUSSION

The growth of higher education, particularly among women, is one of the major social changes to occur over the past few decades (Fischer & Hout, 2006). This study examined how education is related to perceived strains and rewards of parenting among mothers of young children, a topic

that has been little examined but has significant implications for the well-being of children (Crnic & Acevedo, 1995). We assessed three perspectives of education—education as resources, education as parenting demands, and education as career demands—to examine four contemporary domains of subjective experiences of parenting: parenting anxiety, role captivity, joy in parent-child relationship, and new life meaning from parenting. The education as resources perspective predicted that higher levels of education would be related to fewer strains and more rewards of parenting. The education as parenting demands perspective hypothesized higher levels of education would be related to more strains but also more rewards. Finally, the education as career demands perspective predicted that higher levels of education would be related to more strains and fewer rewards. Using longitudinal data from the SECCYD, our findings showed that the influences of education depended on the types of strains and rewards associated with parenting a young child, indicating the importance of examining different aspects of parental strains and rewards separately.

For parenting anxiety, we found that as the resource perspective of education predicted, mothers with a college or advanced degree reported less parenting anxiety than mothers with lower levels of education. This finding is consistent with Nelson's (2010) conclusion that despite the seemingly increased anxiety among affluent parents, it is parents with lower levels of education who experience more immediate, concrete concerns about safety issues of children. Recently, the image of middle-class parents who constantly worry about the safety of their children (e.g., "helicopter parents") has been popular in the media (e.g., Marano, 2004). Our results, along with the findings from Nelson's qualitative study, suggest that this popular image of anxious middle-class parents may mask the real inequality in parenting stress by social class: working-class and poor parents tend to experience more anxiety than middle-class parents.

For role captivity, we found that mothers with a college degree or an advanced degree reported more role captivity than mothers with a lower level of education. This finding supports the education as career demands as well as the education as parenting demands perspective. The full model indicated that work commitment, but not progressive parenting values, was related to greater role captivity. Therefore, we conclude that the education as career demands perspective better explains the greater role captivity experienced by mothers with a higher level of education. Qualitative studies on highly educated mothers who opt out to stay home to raise their children have illustrated that about half of them admitted that they suffer from the sense of being trapped in the role of mother, anguishing about not working and having lost status in the larger society (Blair-Loy, 2003; Stone, 2007). Our findings suggest that highly educated mothers feel this type of stress regardless of their current employment status or work commitment. These findings are in line with the opportunity costs argument of fertility that women with higher levels of education perceive fewer rewards of having children and thus have fewer children (Becker, 1981; Edin & Kefalas, 2005). The present analysis extended prior research by showing that highly educated women who decided to become mothers may experience more parenting stress in the form of role captivity which is consistent with their higher opportunity costs.

For joy in the parent-child relationship, our results suggest that mothers with higher levels of education reported levels of joy comparable to those of mothers with lower levels of education, indicating no support for any of the three perspectives of education. We are cautious about drawing a conclusion from this result, however. As indicated earlier, our hybrid fixed effects models (available in the online version of the article) showed that controlling for resources and progressive parenting values, an advanced degree was related to less joy in parenting, supporting the education as career demands perspective. Although this latter finding is

consistent with previous work that indicated higher levels of education were related to lower parental rewards (Hoffman et al., 1978; Jones & Brayfield, 1997), it is difficult to compare the results of the present analysis with previous findings because of methodological differences. Previous studies asked all adults, regardless of parental status, about general views of the joys of parenting, whereas the present analysis focused on current experiences of mothers with young children. We also found that contemporary parenting values, which emphasize parental involvement and democratic parent-child relationships, are related to a greater sense of joy in the parent-child relationship. This finding is in line with Nelson (2010), who observed joy in parent-child relationships among parents that adopt this style of parenting.

Finally, with respect to another form of parental rewards, new life meaning from parenting, we found that mothers with a college or advanced degree reported less new life meaning brought by parenting than mothers with lower levels of education. These findings suggest support for the education as career demands perspective and are consistent with previous findings (Hoffman, Thornton, & Manis, 1978; Jones & Brayfield, 1997). Higher levels of education provide women with alternative sources of fulfillment. In contrast, as Edin and Kefalas (2005) eloquently argued in their qualitative research on mothers in disadvantaged neighborhoods, with limited economic prospects, less privileged women find that their babies provide them a purpose in life that they had yearned for, and motherhood changed their lives for the better.

Overall, the findings indicate that education is related to greater resources that lead to less parental anxiety about children's current and future well-being. These resources, however, also facilitate alternative sources of fulfillment, especially in the world of work, which leads to a greater sense of role captivity in parenting. Research on the role of education in influencing

individuals' stress and mental health has largely focused on the resource perspective—the greater material, social, and personal resources of people with a higher education protect them from exposure to stressful conditions that can be detrimental to mental health. Challenging this view, Schieman and colleagues (Schieman et al., 2009; Schieman, Whitestone, & Van Gundy, 2006) have developed an alternative perspective, the stress of higher status hypothesis, arguing that people with a higher status (e.g., education) are more likely to be exposed to a particular chronic stressor, work-to-home captivity, because of greater job demands on them that tend to “spillover” into family life. The present analysis expanded the stress of higher status hypothesis to another chronic stressor, role captivity. As maternal education levels continue to rise, policy makers and employers alike will need to be mindful of the unique constraints this group of parents faces as they try to balance work and family roles.

Our results suggest that mothers with a college or an advanced degree share similar experiences of parental strains and rewards. One exception was role captivity; work commitment explained the predicted patterns based on educational differences for an advanced degree but not entirely for a college degree. It could be that the job resources a bachelor's degree would ensure may not be enough to cope with parental demands that those with a bachelor's degree would experience in fulfilling the ideal of involved mothering (Day & Newburger, 2002). Furthermore, a four-year degree may be insufficient to secure a managerial or professional occupation that enhances work commitment for mothers with very young children who often experience a strong “pull” into involved mothering (Stone, 2007). Altogether, unlike some observers who emphasize differences between the two (e.g., Nelson, 2010), our findings suggest that mothers with a college and advanced degree experience similar patterns of parental strains and rewards compared to their counterparts with lower levels of education.

The present analysis has some limitations that future research should address. The SECCYD sample of mothers is not nationally representative. Although a notable advantage of the dataset is that it included adequate numbers of mothers with either a college or an advanced degree, permitting comparisons between parental strains and rewards, further work based on national samples is warranted. For mothers with multiple children, parental anxiety or joy from the parent-child relationship may be influenced by health or behavioral issues of all children. The data, however, included information about the focal child only. Our study documented the importance of examining indicators of parental strains and rewards separately, but did not address whether and how various strains and rewards might be related to one another. This is a task for future research. Furthermore, although our approach relies on time series data, it is possible that some of the observed associations reflect selection, that is, the same unmeasured characteristics that lead a woman to obtain a given level of education are also related to her appraisals of parenting strains (or rewards).

The present analysis focused on mothers whose children were from toddler to preschool years. Future research should examine how fathers' parental strains and rewards vary by socioeconomic status. In addition, as children get older, parenting tasks evolve, and the strains and rewards of parenting also change (Galinsky, 1987). It would be interesting to investigate trajectories in the strains and rewards of parenthood across the child's developmental stages and whether patterns of such change vary by SES or other contextual factors. In their qualitative work, Edin and Kefalas (2005) noted that for mothers in an economically disadvantaged community, children bring a purpose and optimism to mothers' lives when they are younger; once their children begin school, however, the optimism quickly begins to fade as they find their children face more constraints than opportunities to succeed in school. Although this argument is

intuitively reasonable, without systematic research with a large sample, it is unclear to what extent this pattern can be generalized among U.S. parents.

In conclusion, research on parenthood has investigated differences by levels of education in what parents do and what they believe. This study showed how adults *feel* about experiences of parenting also differ by education level. When researchers consider the relationship between education and the strains and rewards of social roles, they typically think about the resources that education provides, such as autonomous and creative jobs, higher income, and better social support. These resources, however, also increase demands for higher investments in a productive career. Parenthood and a career remain at odds in the larger social context, particularly for women. This conflict is reflected in the complexity of the ways through which education is linked to experiences of the parental role and the implications of these experiences for mental health.

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Table 1. Means (*SD*) for Variables for Total Sample and by Education (*N* = 3,594 person data)

	% Miss- ing	Total Sample	< High School (8.4%)	High School Diploma (20.1%)	Some College (33.5%)	College Degree (21.8%)	Advanced Degree (15.4%)
Parental strains and rewards:							
Parenting anxiety (1 – 4)	5.3	1.87 (0.71)	1.98 (0.84)**	1.88 (0.77)	1.81 (0.69)***	1.90 (0.67)***	1.91 (0.65)***
Role captivity (1 – 4)	5.2	2.40 (0.87)	2.61 (0.95)	2.58 (0.86)	2.52 (0.86)	2.24 (0.82)***	2.02 (0.77)*
Joy (1 – 4)	5.4	3.75 (0.37)	3.69 (0.47)*	3.76 (0.39)	3.78 (0.33)	3.77 (0.33)	3.72 (0.39)
New life meaning (1 – 4)	5.5	3.44 (0.55)	3.57 (0.50)	3.55 (0.51)	3.48 (0.54)**	3.32 (0.55)***	3.30 (0.61)***
Resources:							
Nonemployed	2.5	0.34	0.64***	0.36	0.32	0.28***	0.28**
Part-time employed	2.5	0.24	0.13*	0.19	0.23	0.33***	0.29***
Full-time employed	2.5	0.42	0.23 ***	0.45	0.46	0.40*	0.43
Income-to-needs ratio	3.3	3.71 (3.10)	1.25 (1.01)***	2.28 (1.99)	3.24 (2.47)***	4.96 (2.98)***	6.10 (3.95)***
Married	3.2	0.79	0.43***	0.65	0.77 ***	0.94***	0.95***
Cohabiting	3.2	0.08	0.20*	0.14	0.08 ***	0.02***	0.01***
Single	3.2	0.14	0.37***	0.21	0.15 ***	0.04***	0.04***
Progressive parenting values (18 – 40)	0.0	32.78 (3.56)	31.60 (4.05)	32.02 (3.72)	32.43(3.46)*	33.30 (3.25)***	34.46 (2.97)***
Work commitment (6 – 36)	0.0	21.18 (5.85)	22.02 (6.00)**	20.94 (6.01)	20.16 (5.69)**	21.25 (5.54)	23.16 (5.76)***
Child's characteristics:							
Girl	0.0	0.49	0.49	0.44	0.50 *	0.52**	0.49*
Number of children	2.4	2.03 (1.03)	2.37 (1.43)*	2.17 (1.09)	2.04 (1.00)**	1.89 (0.93)***	1.83 (0.83)***
Child's health (1 – 4)	2.4	3.24 (0.73)	3.15 (0.76)	3.17 (0.72)	3.20 (0.73)	3.29 (0.73)***	3.38 (0.68)***
Difficult temperament (1 – 6)	0.0	3.18 (0.40)	3.31 (0.43)***	3.21 (0.40)	3.19 (0.40)	3.10 (0.38)***	3.12 (0.42)***
Mother's characteristics:							
Age at birth	0.0	28.42 (5.57)	21.84 (4.31)***	25.73 (5.62)	28.19 (4.89)	30.77 (3.83)***	32.82 (3.90)***
White	0.0	0.81	0.66 *	0.73	0.79	0.91***	0.91***
Black	0.0	0.12	0.23	0.20	0.15	0.03***	0.02***
Hispanic	0.0	0.04	0.07	0.06	0.04	0.02***	0.02**
Other race	0.0	0.03	0.04*	0.02	0.02	0.04**	0.05**
Depression (0 – 54)	5.1	9.14 (8.33)	15.25 (11.13)***	10.85 (8.94)	9.10 (7.89)***	7.50***	6.39***

Note: Differences compared to a high school diploma are significant at **p* < .05; ** *p* < .01; *** *p* < .001 (two-tailed t-test).

Table 2. Random Effects Models of Pooled Time Series Analysis Predicting Parenting Anxiety (N = 3,345 person) data)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Education ^a :										
< High school	.062	.062	.041	.062	.062	.062	.064	.062	.042	.062
Some college	-.119	.041**	-.119	.042**	-.116	.041**	-.120	.041**	-.116	.042**
College degree	-.243	.048***	-.246	.049***	-.234	.048***	-.239	.048***	-.235	.049***
Advanced degree	-.338	.054***	-.342	.056***	-.318	.055***	-.329	.055***	-.319	.057***
Resources:										
Nonemployed ^a			.089	.027***					.086	.027***
Part-time ^a			.031	.027					.030	.027
Income-to-needs ratio			.001	.005					.002	.005
Cohabiting ^a			-.002	.048					-.002	.049
Single ^a			.021	.040					.023	.040
Progressive parenting values					-.010	.004*			-.010	.004*
Work commitment							-.003	.003	-.001	.003
Child's characteristics:										
Girl	-.043	.029	-.042	.029	-.044	.029	-.043	.029	-.044	.029
Number of children	.031	.013*	.025	.013	.029	.013*	.029	.013*	.023	.013
Child's health	-.002	.013	-.006	.013	-.002	.013	-.002	.013	-.006	.013
Temperament	.145	.037***	.137	.037***	.142	.037**	.145	.037***	.134	.037***
Mother's characteristics:										
Age	-.007	.003*	-.007	.003*	-.007	.003*	-.008	.003*	-.007	.003*
Black ^a	-.005	.049	-.007	.051	-.022	.049	.005	.050	-.019	.052
Hispanic or other ^a	.135	.074	.145	.074*	.125	.074	.139	.074	.137	.074
Depression	.012	.001***	.012	.001***	.012	.001***	.012	.001***	.012	.001***
15 months ^a	-.047	.019**	-.047	.018*	-.047	.019**	-.047	.019*	-.047	.019*
24 months ^a	-.085	.018***	-.083	.018***	-.085	.018***	-.085	.018	-.082	.018***
Intercept	1.965	.162***	1.958	.163***	2.305	.214***	2.025	.172***	2.314	.220***
<i>R</i> ²	.146***		.148***		.149***		.147***		.151***	

^aOmitted reference categories are high school diploma, employed full-time, married, White, and 36 months.

p* < .05; ** *p* < .01; * *p* < .001

Table 3. Random Effects Models of Pooled Time Series Analysis Predicting Role Captivity (N = 3,347 person data)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Education ^a :										
< High school	-.058	.060	-.078	.060	-.057	.060	-.066	.060	-.088	.060
Some college	.043	.040	.041	.040	.041	.040	.046	.040	.041	.040
College degree	.170	.046***	.159	.047***	.162	.047***	.154	.046***	.136	.047**
Advanced degree	.155	.053**	.137	.054*	.138	.053**	.118	.053*	.085	.055
Resources:										
Nonemployed ^a			.082	.026**					.097	.026***
Part-time ^a			.015	.027					.024	.027
Income-to-needs ratio			.007	.004					.005	.005
Cohabiting ^a			-.026	.047					-.048	.047
Single ^a			.040	.039					.022	.039
Progressive parenting values					.009	.004*			.007	.004
Work commitment							.011	.002***	.011	.003***
Child's characteristics:										
Girl	.020	.028	.019	.028	.021	.028	.022	.028	.024	.028
Number of children	.052	.013***	.050	.013***	.054	.013***	.057	.013***	.053	.013***
Child's health	-.024	.013	-.027	.013*	-.024	.013	-.024	.013	-.028	.013*
Temperament	.099	.036**	.093	.036**	.102	.036**	.099	.036**	.095	.036**
Mother's characteristics:										
Age	.006	.003	.006	.003	.006	.003	.007	.003*	.007	.003*
Black ^a	.021	.048	.016	.049	.035	.048	-.020	.048	-.009	.050
Hispanic or other ^a	.062	.072	.072	.072	.071	.071	.045	.071	.060	.071
Depression	.018	.001***	.017	.001***	.018	.001***	.017	.001***	.017	.001***
15 months ^a	.006	.018	.006	.018	.006	.018	.006	.018	.007	.018
24 months ^a	-.048	.018**	-.046	.018*	-.048	.018**	-.049	.018**	-.046	.018*
Intercept	1.116	.158***	1.106	.159***	.829	.209***	.874	.167***	.622	.212**
<i>R</i> ²	.122***		.128***		.124***		.130***		.139***	

^aOmitted reference categories are high school diploma, employed full-time, married, White, and 36 months.

p* < .05; ** *p* < .01; * *p* < .001

Table 4. Random Effects Models of Pooled Time Series Analysis Predicting Joy from the Parent-Child Relationship (N = 3,338 person data)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Education ^a :										
< High school	-.061	.036	-.050	.036	-.061	.035	-.062	.036	-.049	.036
Some college	.023	.024	.020	.024	.020	.024	.023	.024	.017	.024
College degree	-.006	.028	-.014	.028	-.015	.027	-.007	.028	-.020	.028
Advanced degree	-.028	.031	-.038	.032	-.046	.031	-.029	.032	-.052	.033
Resources:										
Nonemployed ^a			-.034	.016*					-.034	.016**
Part-time ^a			-.017	.017					-.018	.017
Income-to-needs ratio			.003	.003					.003	.003
Cohabiting ^a			.000	.030					.004	.029
Single ^a			-.035	.024					-.034	.024
Progressive parenting values					.009	.002***			.009	.002***
Work commitment							.000	.001	-.001	.002
Child's characteristics:										
Girl	-.021	.017	-.021	.017	-.019	.017	-.021	.017	-.020	.017
Number of children	-.020	.008**	-.016	.008*	-.019	.008*	-.020	.008**	-.015	.008
Child's health	.021	.008*	.023	.008**	.021	.008**	.021	.008*	.023	.008**
Temperament	-.053	.021*	-.049	.021*	-.050	.021*	-.053	.021*	-.046	.021*
Mother's characteristics:										
Age	-.008	.002***	-.009	.002***	-.008	.002***	-.008	.002***	-.009	.002***
Black ^a	-.054	.028	-.043	.029	-.040	.028	-.055	.029	-.027	.030
Hispanic or other ^a	.017	.043	.013	.042	.026	.042	.017	.043	.023	.042
Depression	-.004	.001***	-.003	.001***	-.004	.001***	-.004	.001***	-.003	.001***
15 months ^a	-.023	.012	-.023	.012	-.023	.012	-.023	.012	-.023	.012
24 months ^a	-.035	.012**	-.036	.012**	-.035	.012**	-.035	.012**	-.036	.012**
Intercept	4.174	.094***	4.181	.096***	3.879	.124***	4.169	.100***	3.904	.127***
<i>R</i> ²	.046***		.052***		.052***		.046***		.058***	

^aOmitted reference categories are high school diploma, employed full-time, married, White, and 36 months.

p* < .05; ** *p* < .01; * *p* < .001

Table 5. Random Effects Models of Pooled Time Series Analysis Predicting New Life Meaning from Parenting (N = 3,338 person data)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Education ^a :										
< High school	.000	.057	.008	.057	.000	.057	-.003	.057	.006	.057
Some college	-.048	.038	-.051	.038	-.050	.038	-.047	.038	-.051	.038
College degree	-.177	.044***	-.186	.045***	-.182	.044***	-.183	.044***	-.195	.045***
Advanced degree	-.171	.050***	-.185	.051***	-.182	.050***	-.185	.050***	-.204	.052***
Resources:										
Nonemployed ^a			-.028	.023					-.024	.023
Part-time ^a			-.017	.023					-.015	.023
Income-to-needs ratio			.006	.004					.006	.004
Cohabiting ^a			.014	.042					.010	.043
Single ^a			-.009	.035					-.013	.035
Progressive parenting values					.006	.004			.005	.004
Work commitment							.004	.002	.003	.002
Child's characteristics:										
Girl	-.013	.027	-.014	.027	-.012	.027	-.012	.027	-.012	.027
Number of children	-.018	.011	-.012	.012	-.017	.011	-.016	.011	-.011	.012
Child's health	.015	.011	.017	.011	.016	.011	.015	.011	.017	.011
Temperament	-.050	.034	-.047	.034	-.049	.034	-.050	.034	-.046	.034
Mother's characteristics:										
Age	-.015	.003***	-.016	.003***	-.015	.003***	-.014	.003***	-.015	.003***
Black ^a	.031	.045	.035	.047	.040	.045	.016	.046	.033	.048
Hispanic or other ^a	-.001	.068	-.004	.068	.005	.068	-.008	.068	-.004	.068
Depression	-.004	.001***	-.004	.001***	-.004	.001***	-.004	.001***	-.004	.001***
15 months ^a	-.012	.015	-.013	.015	-.012	.015	-.012	.015	-.013	.015
24 months ^a	-.017	.015	-.018	.015	-.017	.015	-.018	.015	-.019	.015
Intercept	4.135	.147***	4.129	.148***	3.951	.196***	4.043	.157***	3.898	.201***
<i>R</i> ²	.060***		.064***		.061***		.062***		.066***	

^aOmitted reference categories are high school diploma, employed full-time, married, White, and 36 months.

p* < .05; ** *p* < .01; * *p* < .001