

The Relations of Maternal Beliefs about Employment and Characteristics of Infant Child Care to Maternal Well-Being

취업에 대한 어머니의 태도와 영아의 보육이 어머니 복지감에 미치는 영향

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국문초록

본 연구는 모성취업에 대한 태도에 따른 영아보육의 특성과 어머니의 심리적 복지감 간의 관계를 밝히고자 했다. 취업 중이거나 학교를 다니는 809명의 미국여성을 대상으로 하였으며, 이들의 자녀가 생후 1개월, 6개월, 그리고 15개월일 때 면접조사를 실시하였다. 모성취업에 대해 긍정적인 태도를 가지고 있는 어머니들은 그렇지 않은 어머니에 비해 더 나은 심리적 복지감을 보였으며, 개별 보육보다 시설 보육을, 그리고 더 많은 시간의 보육을 이용하였다. 이들 어머니들은 자녀들이 친인척에 의해 보육되는 경우(relative care)보다 보육시설(child care center)을 이용할 때 더 낮은 수준의 역할 긴장과 높은 수준의 취업결정 만족감을 나타냈다. 보다 부정적 태도를 가진 어머니들은 가정보육(child care home) 이용시 역할긴장 수준이 낮았다. 영아들이 생후 6개월 무렵 두 집단의 어머니 모두 보육시간이 증가함에 따라 취업 결정에 대한 만족도가 낮았으나 15개월에는 부정적 태도의 어머니에게만 이 관계가 유의했다.

Key Words : 취업에 대한 태도(beliefs about employment), 보육(child care), 심리적 복지감(psychological well-being).

The past few decades witnessed steadily increasing participation in the labor force of mothers with young children. In 1960, only 18.6% of married mothers of preschoolers were employed, but by 1996, the rate had tripled to (Hoffman &

Youngblade, 1999). In 2004, 49% of mothers with children under age 1 were employed and 65.8% of them worked 35 hours or more a week (U.S. Department of Labor, 2005). Maternal employment inevitably requires use of nonmaternal care. As

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more mothers work and use certain form of nonmaternal care while they work, developmental investigations have focused on the relations of child care to infant development and infant-mother relationships (Lamb, 1997; NICHD ECCRN, 1999, 2001). On the other hand, sociologists have sought to identify effects of child care on the amount and stability of women's employment (Bowen & Neenan, 1993; Brooks & Bucker, 1996).

Less attention has been given to possible relations of child care, especially in infancy, to mothers' psychological well-being, despite evidence that employed mothers may feel guilt and conflict about leaving their children in others' care (Greenberger & O'Neil, 1990; Phillips, 1992; Scarr, Phillips, & McCartney, 1989). Individual differences in mothers' beliefs about the importance of full-time maternal care are likely to affect the extent of the dissatisfaction and role strain created by employment. The characteristics of child care may contribute to stress or to well-being depending on how well child care characteristics mesh with maternal beliefs. The purpose of study is to examine how type and amount of infant child care are related to employed mothers' psychological well-being for mothers, and how those relations vary for women with different beliefs about the costs and benefits of employment for children.

Beliefs about the psychological benefits and costs of maternal employment to children are related to mothers' employment and to child care choices (Goldberger et al., 1992; Greenberger, Goldberg, Crawford, & Granger, 1988; Greenberger & O'Neill, 1990; Hyde & McKinley, 1993). Mothers with

positive beliefs about effects of maternal employment are more likely to be employed, to begin nonmaternal care earlier, and to use more hours of nonmaternal care than mothers with negative beliefs about maternal employment (Hyde & McKinley, 1993; Vandell, et al., 1998). In earlier analyses of the data reported in this paper, mothers who believed maternal employment has benefits for children were more likely to use center-based care, while mothers who were most concerned about detrimental effects of maternal employment were more likely to use care by family members, such as fathers or grandparents, (NICHD ECCRN, 1997). In a recent child care selection study of low-income families, mothers who believed that family should have priority over work used less child care than did those whose beliefs about combining family and work were more favorable. When they used child care, it was less likely to be center care (Huston, Chang, & Genetian, 2002). Parents in an ethnographic study of low income families often expressed how their values about family, work, and child rearing played a role in their child care decision (Lowe & Weinsner, 2001).

In a handful of studies, parents' well-being has been examined in relation to child care characteristics (Goldberg, et al., 1992; Marshall & Barnett, 1995; Owen & Cox, 1988; Vandell et al., 1997). High amounts of child care predicted high levels of distress and worry in one study (Owen & Cox, 1988). In a longitudinal analysis (Vandell et al., 1997), more hours in nonparental care during the child's early infancy predicted higher levels of anger, anxiety, depression and marital concerns in mothers, but hours in nonparental care at age 12

months were not associated with mothers' distress (Vandell et al., 1997).

This finding suggests that mothers' feelings about child care vary with the child's age and that negative impacts may be greatest in early infancy. Contrary to Belsky and Steinberg's (1978) suggestion that the type of child care a mother chooses may impact other aspects of her personal and work life, a study of mothers with infants found no significant differences in role conflict, separation anxiety, or perceived support from others among mothers who used different types of child care (Erdwins & Buffardi, 1994).

Multiple roles of employed mothers can create stress, overload, and conflict, with negative consequences for well-being (Baruch, Biener, & Barnett, 1987). On the other hand, some studies suggest that multiple roles bring rewards such as more family income, higher self-esteem, and more social relationships, which, in turn, increase the overall well-being of mothers (Barnett, 1999; Barnett & Hyde, 2001). Employment may have different meanings for women, however, depending on their attitudes and beliefs. Repetti, Matthews, and Waldron (1989) concluded that employment has benefits for women's physical and mental health when women have positive attitudes toward or desire for employment. The more cost mothers thought maternal employment had for their children, the greater role strains they experienced (Goldberg et al., 1992).

Previous studies, however, have not discussed the possible moderating effects of working mothers' beliefs about maternal employment on the relation between their child care selection and their feelings

about being a parent and a employee at the same time. In this study, the relations of the amount and type of child care to psychological well-being of employed mothers with infants are examined for mothers with different attitudes toward employment. We chose aspects of well-being that are likely to be situationally-based : parenting stress, role strain, and satisfaction with the decision about working. Mothers' personality characteristics were controlled because personality is relatively stable and could influence overall beliefs about employment as well as maternal well-being.

Three predictions were tested. First, mothers with positive beliefs about maternal employment will use more center-based care and more hours of care than will mothers with negative beliefs. Second, child care characteristics and maternal beliefs will predict maternal psychological well-being. Less formal type of child care and less time in care will be related to less parenting stress, less role strain and more satisfaction with the decision to work or go to school. Employed mothers who believe that maternal employment has benefits and few costs for children will have higher levels of psychological well-being than will employed mothers who believe that maternal employment has high costs for children. Finally, the relations between child care characteristics and mothers' psychological well-being will vary depending on mothers' beliefs. For those who believe that employment has benefits, formal care and more hours in child care will be associated with higher level of well-being. For those who believe that employment is detrimental, home-based and family care, and fewer hours in care.

METHOD

1. Participants

This study used data of the NICHD Study of Early Child Care, which is a comprehensive longitudinal study initiated by The National Institute of Child Health and Human Development (NICHD)

in 1989 to answer the many questions about the relationship between child care experiences and characteristics and children's developmental outcomes. Researchers are following the children, measuring their development at frequent intervals from birth through adolescence. In 1991, the researchers enrolled 1,364 children in the study. Phase I of the study was conducted from 1991-

Table 1. Characteristics of families and child care use when infants were 6 months and 15 months old

Characteristics	6 months (N=802)		15 months (N=784)	
	M	SD	M	SD
Family Characteristics				
Child gender = Male (%)	52.41		52.26	
Mother's ethnicity (%)				
White, non-Hispanic	81.71		80.90	
Black, non-Hispanic	11.12		11.31	
Hispanic	4.08		4.65	
Other	3.09		3.12	
Mother's Age (years)	28.41	5.40	28.63	5.28
Mother's education (years)	14.58	2.42	14.59	2.39
Number of children in family	1.76	.96	1.81	.99
Husband or partner at home (%)	86.40	34.30	85.80	34.92
Number of other relatives in household	.22	.68	.19	.60
Income-to-need ratio	4.06	3.27	4.10	3.29
Mother's extraversion score	43.09	5.77	42.99	5.64
Mother's neuroticism score	29.42	7.16	29.16	6.73
Beliefs about Maternal Employment	2.66	6.78	2.64	6.76
Child Care Characteristics				
Type of child care (%)				
Mother, father or relative	49.38	50.03	44.90	49.77
Nonrelative	10.35	30.48	10.59	30.79
Child care home	27.31	44.58	28.19	45.02
Child care center	12.97	33.62	16.33	36.98
Hours in child care per week	32.94	16.74	35.83	15.64
Psychological Well-Being				
Parenting stress				
Role strain	49.23	9.74	33.59	5.77
Satisfaction with the decision	-89	.95	-93	.96
	3.80	1.08	3.91	1.03

Note. N is 550 at 6 months and 605 at 15 months for ORCE composite average. For other variables, Ns range from 802 to 809 at 6 months and from 784 to 796 at 15 months depending on missing data.

1994, following the children from birth to age 3 years. Phase II of the study was conducted from 1995 to 2000 to follow the 1226 children continuing to participate from age 3 through their second year in school. Phase III of the study was conducted from 2000 to 2005 to follow over 1100 of the children through their seventh year in school. Phase IV which is currently being conducted will follow over 1000 of the original families through age 15.

The participants were recruited from 31 hospitals located in or near Little Rock, AR; Irvine, CA; Lawrence, KS; Wellesley, MA; Philadelphia, PA; Pittsburgh, PA; Morganton, NC; Charlottesville, VA; Seattle, WA; and Madison, WI. During selected 24-hour sampling periods during the first eleven months of 1991, 8,986 mothers giving birth were visited. Of 8,986 mothers of potential participants, 5,265 mothers were eligible and agreed to receive a phonecall. A random sampling plan was adapted to ensure that the recruited families represented demographic diversity. Of 1,526 families selected through this sampling, 1,364 (89%) completed the one-month interview and became the study participants.

Analyses for this study were restricted to the mothers who were employed or in school for more than 10 hours a week when children were 6 months old (N=802) and 15 months old (N=784). We included mothers in school because we assumed that they would need some kind of regular child care for their children while they were away in the same manner working mothers would. Characteristics of participating mothers at 6 months and 15 months are presented in Table 1.

2. Measures

1) Familial and Maternal Characteristics

Earlier analyses of these data demonstrated that family characteristics, economic factors or/and psychological attributes of mothers were associated with type of care and hours in care (NICHD ECCRN, 1997). To reduce selection bias, some family characteristics, economic factors and maternal personality were controlled. Family characteristics include ethnicity of the child (Non-Hispanic white, Non-Hispanic black, Hispanic, and other); child's gender; mother's age; maternal education in years; the number of children in the family; presence of a partner at home; and the number of adults other than mother and father in household. Average income-to-need ratio is total family income divided by the appropriate poverty threshold. The scores from the extraversion (12 items, $\alpha=.76$) and neuroticism (12 items, $\alpha=.83$) scales of the Neuroticism Extraversion Openness Personality Inventory (NEO; Costa & McCrea, 1985) were used to indicate maternal personality.

2) Maternal beliefs

Beliefs about the consequences of maternal employment for children were measured for all the mothers regardless of their employment/attending school status when infants were one month old with the Attitudes towards Maternal Employment Scale (Greenberger, et al., 1988). A total score was created by summing 12 items endorsing the beliefs about the benefits of maternal employment for children (e.g., Children whose mothers work are more independent and able to do things for

themselves) and reversed scores on 12 items endorsing costs of maternal employment (e.g., Children are less likely to form a warm and secure relationship with a mother who is working full-time). The possible range of the score was between -24 and 24. Higher scores indicate more positive attitudes toward maternal employment ($\alpha=.80$). Higher scores indicate more positive attitudes toward maternal employment ($\alpha=.80$).

3) Mothers' psychological well-being

Mothers' psychological well-being was represented using three measurements : parenting stress, role strain, and satisfaction with decision to work or go to school. Parenting stress was measured at 6 months with 25 items of the Abiden Parenting Stress Index (Abiden, 1983; $\alpha=.84$) and, at 15 months, with 25 items of the Parenting Experience Questionnaire, which is a modified form of the Abiden Parenting Stress ($\alpha=.79$). Role strain was measured at 6 and 15 months with the Combining Work and Family Scale (Barnett & Marshall, 1991). The extent to which the mother perceives rewards and strains from work and family was assessed using 4-point scales. A total score was created by subtracting the sum of the 8 items for total gain from the sum of the 13 items for total strain from combining work and family ($\alpha=.77$). The possible score range was between -52 and 32. Satisfaction with own decision to work or to go to school was assessed by asking one question on the degree to which the mother was satisfied with her decision about working or going to school. Mothers responded on a 5-point Likert scale ranging from 1="Very Dissatisfied" to "5= Very Satisfied". The

question was created by the ECCRN researchers for home visit questionnaire. The possible score range was from 1 to 5.

4) Characteristics of child care

In telephone interviews conducted every 3 months, mothers reported on how many hours per week children had been in child care during the previous 3 months and on the type(s) of care received. Care arrangements were grouped into four types; (1) parent or relative care, (2) non-relative care in child's home, (3) child care home and, (4) child care center. For the children who were in more than one child care arrangement, type of care was coded as the child's primary child care arrangement that is, the child care setting in which the child spent the most time, or if time across settings was equal, the more formal care. Hours of child care was the current hours per week in all nonmaternal care settings at age 6 and 15 months.

3. Procedures

At one month, 6 months and 15 months, home visits were conducted. During one month interview, mothers' completed questionnaires on family characteristics and mothers' beliefs about maternal employment. At 6 months and 15 months questionnaires included mothers' reports on their parenting stress, role strain and satisfaction with decision to work or go to school. At each and every visit, interviews asked about the family's child care use including type of child care and amount of child care. Every 3 months from the

child's birth, telephone interviews were conducted to follow-up any change in family structures and characteristics of child care.

4. Analysis Strategy

Regression was used to evaluate the extent to which the child care characteristics, mothers' beliefs about benefits and costs of maternal employment for children, and their interaction, were associated with each of the three measures of mothers' psychological well-being when children were 6 and 15 months old. Control variables were site, child's gender, mother's ethnicity, mothers' age, mother's education, number of children in household, number of adult relatives in the home, partner at home, income-to-needs ratio, and mothers' personality; these were entered in Model 1. Then main effects of the child care characteristics were entered in Model 2. The four types of care were dummy coded with care by a family member as the omitted variable. In Model 3, mothers' beliefs were added. Finally, in Model 4, the interactions between the child care characteristics and mothers' beliefs were examined. To test the hypothesis that

maternal well-being of mothers using different arrangements of child care will vary depending on their beliefs, univariate analyses of variance and regressions on belief subgroups were conducted as follow-up analyses.

RESULTS

1. Do beliefs about consequences of maternal employment predict child care characteristics?

The distribution of children across child care types and the means for hours in care presented in Table 1. Almost half of the children received their primary care from a parent or relative, and about 1/4 were cared for by a nonrelative in a child care home. Mothers were divided into two groups based on the beliefs score, and using crosstab analysis, χ^2 was calculated to assess whether mothers with positive beliefs and negative beliefs differed in the use of different types of care. Beliefs about the benefits and costs of maternal employment and type of child care were significantly related ($\chi^2 (3) =$

Table 2. Use (%) of Four Types of Child Care Among Two Belief Groups

Child Care Type	6 months			15 months		
	Positive Belief (n=393)	Negative Belief (n=409)	$\chi^2 (1)$	Positive Belief (n=376)	Negative Belief (n=408)	$\chi^2 (1)$
	$\chi^2 (3) = 56.36^{***}$			$\chi^2 (3) = 19.13^{***}$		
Parent or relative	35.9	62.3	56.18 ^{***}	37.5	51.7	15.98 ^{***}
Nonrelative	13.0	7.8	5.74 [*]	10.1	11.0	.18
Child care home	35.1	19.8	23.67 ^{***}	33.0	23.8	8.19 ^{**}
Child care center	16.0	10.0	6.41 [*]	19.4	13.5	5.05 [*]

* $p < .05$ ** $p < .01$ *** $p < .001$

56.36, $p < .001$ at 6 months, $\chi^2(3) = 19.13$, $p < .001$ at 15 months). Mothers with positive beliefs about maternal employment used more child care centers, more child care homes, more nonrelative care (only at 6 months) and less care by a family member than mothers with negative beliefs did (see Table 2).

Regressions were conducted to evaluate the relationship between mothers' beliefs and hours in care. Mothers' beliefs about the benefits and costs of maternal employment accounted for a significant proportion of the variance of hours in child care at both 6 months and 15 months after controlling for the effects of site, demographic variables, and

Table 3. Standardized Regression Coefficients for Predictors of Parenting Stress

	6 months (n=790)				15 months (n=769)			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
(A) Control variables								
Child's gender = Male	.00	.00	.00	-.01	.01	.01	.00	.01
Mother Black ^a	-.04	-.03	-.02	-.02	-.10**	-.10**	-.09*	-.09*
Mother Hispanic ^a	.02	.03	.02	.02	.07†	.06†	.06†	.06†
Mother Other ^a	.03	.03	.03	.03	-.03	-.02	-.02	-.02
Mother's age	.00	.00	.01	.01	.09*	.09*	.10*	.10*
Mother's education	.01	.00	.00	.00	.08†	.07	.07	.07
Number of children	-.03	-.04	-.03	-.03	.13**	.12**	.12**	.12**
Partner live w/ mom	-.03	-.02	-.02	-.03	-.09*	-.08*	-.09*	-.09*
Number of extra adults	.06	.07†	.07†	.07†	.00	.01	.01	.01
Income-to-needs ratio	.03	.02	.03	.04	-.09*	-.11*	-.10*	-.10*
Mother's Extraversion	-.14***	-.15***	-.14***	-.14***	-.08*	-.08*	-.08*	-.08*
Mother's Neuroticism	.46***	.46***	.44**	.44***	.31***	.31***	.31***	.31***
(B) Child care^b								
Nonrelative care		.07†	.08*	.08*		.07†	.07†	.07†
Child care home		.04	.06	.06		.06	.06	.06
Child care center		.05	.06†	.06†		.00	.01	.01
Hours in care a week		-.07*	-.04	-.05		-.02	-.01	-.02
(C) Maternal beliefs								
Beliefs a/ employment			-.10**	.00			-.04	.00
(D) Interactions								
Nonrelative care × belief				-.02				.02
Child care home × belief				-.01				.00
Child care center × belief				-.03				-.03
Hours in care × belief				-.08				-.04
R ² Change		.01	.01**	.00		.01	.00	.00
Adjusted R ²	.26***	.26***	.27***	.27***	.16***	.16***	.16***	.15***

Note. Site was included as a control in all of these models.

^a Comparison group is White, non-Hispanic.

^b Comparison group is mother, father or relative care.

† $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

type of care, (R^2 change=.05, adjusted R^2 =.19, $F(25, 766)=8.23$, $p<.001$ and R^2 change=.05, adjusted R^2 =.11, $F(25, 744)=4.94$, $p<.001$, respectively). The more mothers believed that maternal employment was a benefit for children's development, the more hours of child care they used (β =.24, $p<.001$ at 6 months and β =.25, $p<.001$ at 15 months).

2. Do child care characteristics and mothers' beliefs about the consequences of maternal employment predict mothers' psychological well-being?

The results of the regressions predicting maternal well-being are shown in Table 3 (parenting stress), Table 4 (role strain), and Table 5 (satisfaction with decision to work). In Model 2, the child care block added significantly to the variance accounted for in the analyses of role strain at 15 months and satisfaction with decision at both ages. Even though the child care block did not significantly increase the variance accounted for, using nonrelative care was marginally related to more parenting stress at both ages. At 15 months of age, mothers whose children were in a child care center reported less role strain and more satisfaction with their decision about work than did mothers with children in parent or relative care. Using nonrelative care was also marginally related to less role strain at 15 months.

At age 6 months, when children spent more time in child care, mothers felt more stress, but the relationship between child care time and parenting stress did not last to 15 months (Table 3). At

both ages, mothers whose children spent a lot of time in care experienced more role strain and were less satisfied with their decision to work or attend school than were mothers whose children spent less time in care.

Model 3, tested in each of the regressions shown in Tables 2-4, included mothers' beliefs about the benefits of maternal employment for children. Maternal beliefs were significantly related to all outcomes except parenting stress at 15 months. Mothers who believed that employment had relatively high benefits and low costs reported less parenting stress, less role strain, and more satisfaction with their decision to work or go to school.

3. Do the relations between child care characteristics and maternal well-being differ depending on maternal beliefs?

Interaction terms were entered in the regressions shown in Model 4 in Tables 3-5. For role strain (Table 4) there were interactions between hours of care and belief at 6 months and between type of care and belief at 15 months (nonrelative care \times belief).

In order to explore these interactions and to test the final hypothesis, mothers were divided into two groups on the basis of their beliefs. Regressions of well-being on child care parameters were conducted for each group with controls for site and selection variables (not presented). As predicted, the relationships between type of care and mothers' well-being varied depending on mothers' beliefs. Among

Table 4. Standardized Regression Coefficients for Predictors of Role Strain

	6 months (n=790)				15 months (n=769)			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
(A) Control variables								
Child's gender = Male	.03	.02	.01	.00	-.02	-.01	-.02	-.02
Mother Black ^a	-.10**	-.11**	-.08*	-.08*	-.14**	-.15***	-.11**	-.11**
Mother Hispanic ^a	-.03	-.03	-.05	-.04	.08*	.08*	.07†	.07†
Mother Other ^a	.03	.02	.00	.00	-.02	-.03	-.04	-.04
Mother's age	.02	.01	.04	.04	.07	.07	.11*	.11*
Mother's education	-.02	-.01	-.03	-.02	-.05	-.02	-.02	-.02
Number of children	.03	.04	.06	.06	.01	.03	.04	.05
Partner live w/ mom	.09*	.10*	.08*	.08†	.03	.03	.02	.01
Number of extra adults	-.01	-.01	.00	.00	-.01	-.03	-.02	-.02
Income-to-needs ratio	-.13**	-.14**	-.11**	-.10*	-.13**	-.13**	-.10*	-.11*
Mother's Extraversion	-.12**	-.12**	-.11**	-.10**	-.05	-.05	-.04	-.03
Mother's Neuroticism	.26***	.26***	.22***	.22***	.22***	.21***	.18***	.18***
(B) Child care ^b								
Nonrelative care		.00	.03	.02		-.06†	-.07*	-.07*
Child care home		.00	.05	.05		.02	.05	.05
Child care center		-.02	.02	.03		-.07*	-.04	-.04
Hours in care a week		.09*	.16***	.14***		.13**	.18***	.17***
(C) Maternal beliefs								
Beliefs a/ employment			-.27***	-.09			-.25***	-.19*
(D) Interactions								
Nonrelative care × belief				-.02				.07*
Child care home × belief				.06				-.04
Child care center × belief				.06				.01
Hours in care × belief				-.14*				-.07
R ² Change		.01	.06***	.01*		.02**	.05***	.01
Adjusted R ²	.12***	.13***	.19***	.19***	.09***	.10	.16	.16

Note. Site was included as a control in all of these models.

^a Comparison group is White, non-Hispanic.

^b Comparison group is mother, father or relative care.

† $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

mothers in the positive belief group, those who used a child care center had significantly less role strain than did those using care by family members at 15 months ($\beta = -.15, p < .05$). At 15 months, using center care was related to more satisfaction with their decision to work or go to school ($\beta = .16, p < .05$) in this group. Using a child care home

predicted more role strain for mothers in the negative belief group at 6 months ($\beta = .11, p < .05$). Mothers in this group expressed less satisfaction when their children were in a child care home than when they were in parent or relative care at 15 months ($\beta = -.11, p < .05$). The estimated marginal means of role strain and satisfaction for each type

Table 5. Standardized Regression Coefficients for Predictors of Satisfaction with Decision to Work or Go to School

	6 months (n=790)				15 months (n=769)			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
(A) Control variables								
Child's gender = Male	-.05	-.05	-.04	-.04	.01	.00	.01	.01
Mother Black ^a	.08*	.09*	.08*	.09*	.09*	.09*	.08†	.08†
Mother Hispanic ^a	.01	.01	.02	.02	-.06	-.06	-.05	-.05
Mother Other ^a	-.04	-.03	-.02	-.02	.01	.02	.02	.02
Mother's age	-.01	.01	-.01	.01	-.11*	-.11*	-.12**	-.12***
Mother's education	.01	.01	.01	.12	.09*	.08†	.08†	.07†
Number of children	.03	.02	.00	.00	.10*	.09*	.08*	.08*
Partner live w/ mom	.00	-.03	-.02	-.02	-.06	-.06	-.06	-.06
Number of extra adults	.05	.05	.05	.05	.00	.01	.00	.01
Income-to-needs ratio	.07	.09*	.07	.07	.13**	.14**	.13**	.13**
Mother's Extraversion	.07*	.08*	.08*	.07*	.02	.03	.02	.02
Mother's Neuroticism	-.23***	-.23***	-.21***	-.21***	-.11**	-.10**	-.09†	-.09*
(B) Child care^b								
Nonrelative care		-.04	-.05	-.07†		-.01	.00	.00
Child care home		-.01	-.04	-.04		-.05	-.06	-.06
Child care center		.02	.00	.00		.10*	.09*	.08†
Hours in care a week		-.16***	-.20***	-.20***		-.11**	-.13**	-.12**
(C) Maternal beliefs								
Beliefs a/ employment			.16***	.04			.10*	-.04
(D) Interactions								
Nonrelative care × belief				.06				-.04
Child care home × belief				.02				.01
Child care center × belief				.01				.03
Hours in care × belief				.10				.14
R ² Change		.03***	.02***	.01		.02**	.01*	.01
Adjusted R ²	.08***	.10***	.12***	.12***	.04***	.06***	.07***	.07***

Note. Site was included as a control in all of these models.

^a Comparison group is White, non-Hispanic.

^b Comparison group is mother, father or relative care.

†*p*<.10 **p*<.05 ***p*<.01 ****p*<.001

of care with two belief groups are presented in Figure 1 and Figure 2. Estimated marginal means were used to take account of the differences in the sample size across the type of child care between positive and negative belief groups.

Mothers in both groups reported less satisfac-

tion with their decision when they used more child care at age 6 months (positive belief, $\beta = -.13, p < .05$; negative belief, $\beta = -.21, p < .001$). By age 15 months, however, satisfaction was no longer significantly related to the hours of child care for mothers with positive beliefs ($\beta = -.03, n.s.$).

Mothers with negative beliefs continued to be more dissatisfied when they used more hours of care ($\beta = -.18, p < .001$). These coefficients are illustrated in Figure 3.

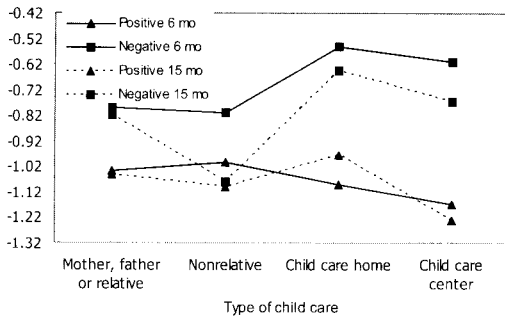


Figure 1. Estimated means of role strain at 6 and 15 months by type of care and belief group.

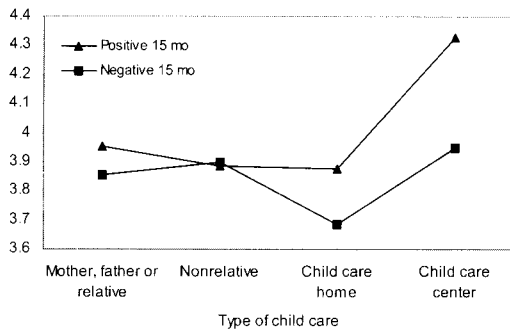


Figure 2. Estimated means of satisfaction with own decision to work at 15 months by type of care and belief group.

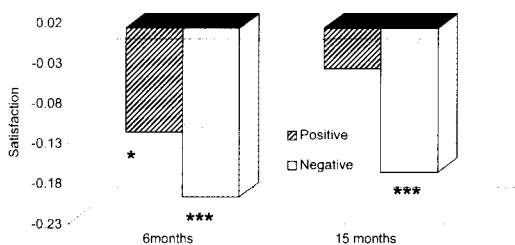


Figure 3. Standardized coefficients of hours in care associated with satisfaction with own decision to work at 6 and 15 months.

4. Relations of control variables to psychological well-being

For all of the dependent variables, the controls accounted for a significant amount of variance. Personality factors consistently predicted maternal psychological well-being. Higher scores on the Neuroticism scale were related to more parenting stress, more role strain and less satisfaction with the decision to work or go to school. Interestingly, presence of a partner at home predicted more role strain among employed mothers when the baby was 6 months old. Black mothers reported less parenting stress, less role strain, and more satisfaction than white mothers did. More income predicted less parenting stress at 15 months, and less role strain and more satisfaction at both ages.

DISCUSSION

In this study, the relationships between child care and employed mothers' well-being were examined during children's first 15 months of life. The first hypothesis was supported. Mothers' beliefs were related to the characteristics of child care they used. Mothers with positive beliefs about the effect of maternal employment on children used more formal care and more hours of care. These results support the previous findings on mothers' attitudes and child care selection (Hyde & McKinley, 1993; Huston, Chang, & Gennetian, 2002; Vandell, et al., 1998).

The hypothesis that child care characteristics will predict employed mothers' psychological well-being

was partly supported. Nonrelative care was related to more parenting stress, perhaps because it is less reliable than other types of care. At 15 months, using a child care center predicted lower role strain and more satisfaction with the decision to work or go to school. By the age of 15 months, mothers appear to benefit from a formal and reliable type of care that can provide stable time schedules and meet children's developmental needs. Mothers whose children spent a lot of time in child care experienced more role strain and less satisfaction with their decision. The results support previous findings (Owen & Cox, 1988; Vandell, et al., 1997) that more hours in child care was related to lower well-being.

Among these employed mothers, those who believed that maternal employment is relatively more beneficial and less costly for children's development reported higher levels of well-being than did those whose employed conflicted with their beliefs about what was best for their children. This finding supports Repetti, et al's (1989) conclusion that positive attitudes toward employment help working women's mental health. In this study, even when mothers' stable personality factors were controlled, maternal beliefs were related to parenting stress, role strain, and satisfaction with the decision to work or to attend school.

The third hypothesis, that the relations between child care characteristics and mothers' psychological well-being would vary depending on maternal beliefs, was also supported. There was some evidence that mothers with positive beliefs had higher well-being when they used more formal care and mothers with negative beliefs experienced

more role strain and less satisfaction when they used more formal care. By the time children were 15 months old, using a child care center for their children was associated with lower mothers' role strain and higher satisfaction among the mothers in the positive belief group. Mothers with positive attitudes toward maternal employment seem as comfortable with formal care as with care by family members, possibly because they believe that child care centers provide opportunities for social interactions and stable time schedules, which get more important as their children move into late infancy. Formality of care, along with mothers' belief system, seems to be an important predictor of maternal psychological well-being.

Mothers who believed that mothers' employment is costly for their children were also most sensitive to the amount of child care their children were in. Mothers with positive beliefs temporarily experienced psychological distress associated with the amount of time in child care only when the children were very young, but the stress of using many hours of child care seemed to last into the second year of the child's life for mothers with a negative view of maternal employment.

Although many studies have examined mothers' satisfaction with child care, the current study assessed the relationships of child care to parenting stress, role strains between work and family, and satisfaction with the decision to work. These variables enabled us to understand some aspects of employed mothers' lives including parenting, job, and the interface between the two. These aspects of mothers' psychological well-being were examined independently of stable personality char-

acteristics. Parenting stress, role strain in combining work and family, and satisfaction with the decision to work or go to school, although related to personality indices, are more situational responses than stable aspects of mental health. They may be more affected by such contextual factors as child care arrangements.

Although the sample represented many regions of the United States, the findings may not be generalized to other countries with varying cultural backgrounds because expectations about the mother's role in the family differ across cultures. A cross-cultural investigation might reveal the function of a broader range of ideologies in psychological well-being of mothers who are not always available for their children. The combination of attitudes, child care preferences, reasons for employment, and availability of care needs to be investigated for a more complete picture of the relationship between child care and mothers' well-being.

The present study underscores the complex pathway through which child care affects mothers' psychological lives by taking into account for the role of mothers' beliefs and attitudes. There appears to be no one answer to the 'best' arrangement because mothers with different beliefs feel comfortable with different amounts and kinds of care. Formality, amount, and quality of infant child care have different meanings to mothers with different belief systems. As we saw in the results, a child care center could be a support for some mothers, but a stress for others.

Public policy regarding child care may affect the psychological well-being of a large part of labor force, working women with children, and

consequently their children's well-being and their families' welfare. By clarifying the way in which objective characteristics of child care combined with personal beliefs about maternal employment are related to mothers' well-being, policy can be designed most effectively to meet the needs of as many mothers as possible.

For example, child care policy designed to provide support and subsidy to relative/nonrelative care, not only to the licensed child care center or child care home, would be helpful for mothers who feel comfortable with care by grandmother or by a babysitter.

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