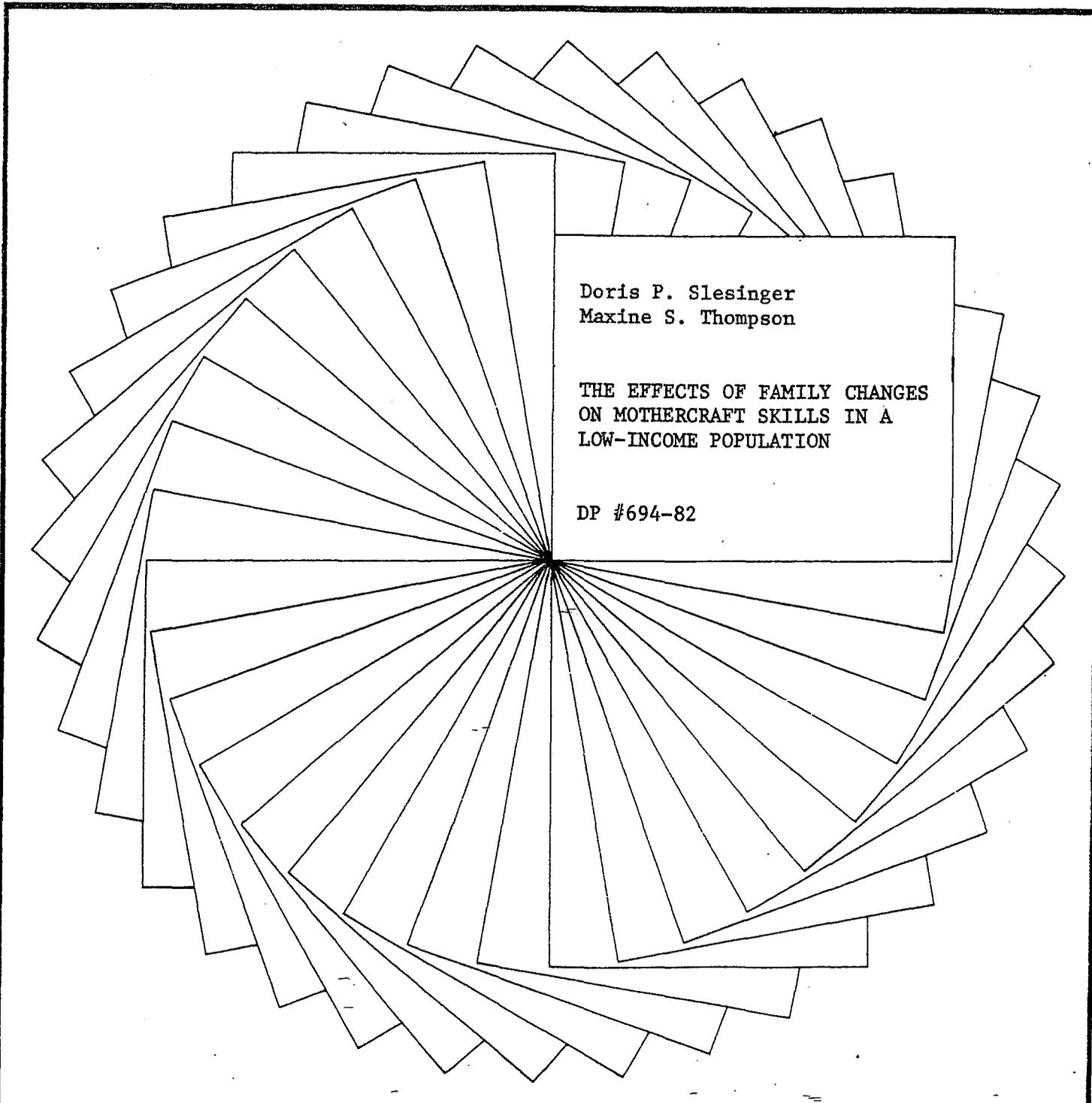




# Institute for Research on Poverty

## Discussion Papers



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THE EFFECTS OF FAMILY CHANGES  
ON MOTHERCRAFT SKILLS IN A  
LOW-INCOME POPULATION

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The Effects of Family Changes on Mothercraft Skills  
in a Low-Income Population

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## ABSTRACT

This paper examines the effects of two stressful family events--changes in the composition of the household and changes in residence--on the health and preventive care of infants. Two hypotheses are tested: that stressful family events affect mothering skills, baby illnesses, and preventive medical care; and that this effect is mediated by the mother's level of social integration in the family and the community. A multivariate analysis indicates that these stressful family events are related to mothercraft skills and baby illnesses but do not affect preventive medical care. However, more variance in mothercraft skills is explained by structural conditions such as poverty and education of mother, not by stressful family changes or degree of social integration. In back, the authors suggest that the usual social integration measures (visiting patterns, membership in organizations, etc.) may have both positive and negative effects and therefore should not always be considered beneficial. Data are from a longitudinal study of 123 mother-infant pairs from poverty areas in urban and rural Wisconsin.

## The Effects of Family Changes on Mothercraft Skills in a Low-Income Population

The family is recognized as the basic unit in which the child grows and develops. Many aspects of child care depend on the child's primary caretaker, usually, but not always, the mother.<sup>1</sup> Mothercraft, the skills of child care, involves the management of the child's growth and development and includes numerous components, such as physical care, emotional support, socialization, and intellectual stimulation of the child.

The entry of an infant into a household requires adjustments in roles, relationships, and routines on the part of the mother and other members of the household. These adjustments demand some rescheduling of family living patterns and are potential sources of stress for the mother and other family members (Hill and Hansen, 1964). For example, a child may become a mother and no longer want to share a bedroom; a wife may become a mother and desire a household separate from her parents; an additional family member may create the need for more living space.

This paper examines the effects of these potential stressors in a group of mothers over the first 20 months of the infants' lives. Three measures of mothercraft skills are examined: a general overall evaluation of mothering ability; the number of preventive health checkups the baby has received; and the number of illness episodes the infant has experienced since birth. Two types of changes in the family setting are examined: a change in the composition of the household, and a change in place of residence. The two types together are referred to as family mobility. Each of these changes may be considered stressful to a mother,

and we suggest that mothers who experience both types of change are doubly stressed by the alterations or disruptions in social integration. Restructuring household composition through either the gain or loss of family members implies altering of patterns of interaction within the family group. Similarly, families, when they move, disrupt contacts with friends and neighbors as well as contacts with community groups. We suggest that disruption in the level of social integration caused by changes in the family setting influences mothering skills, or mothercraft.

Some evidence exists which suggests that certain kinds of family events operate as stressors which render family members vulnerable to illness. In a series of studies, Haggerty and Alpert (1963) investigated the susceptibility of family members to streptococcal infections over time. They found that in addition to physical exposure to family members already ill with proven streptococcal disease, acute stress or chronic family disorganization was associated with acquisition of illness by other family members (Meyer and Haggerty, 1962: 547). Family events such as death of grandparents, change in residence, loss of the father's job, and the child being subjected to "unusual pressure" occurred four times more frequently in the two-week period prior to the appearance of streptococcal infection than in the two weeks afterward (Haggerty and Alpert, 1963: 229). The authors offer these findings as evidence that family crises may lower a child's resistance to infectious disease. However, whether or not the presence of stress has a direct influence on susceptibility to illness (i.e., makes the individual vulnerable to infection) or an indirect influence through other factors (general neglect of health) is unanswered by the data (Mechanic, 1978: 209).

In addition, another study (Mechanic, 1964) showed that mothers experiencing both family and personal stress reported not only more illness symptomatology for themselves but also more for their children, and were more likely to phone a physician concerning their children's health.

In this research we suggest a slightly more complex interpretation of this research finding. We suggest that the direct influence of family stressors (i.e., residential mobility and change in household composition) on susceptibility to illness is mediated by the social support available to family members (i.e., social integration). In this study, social integration operates as a proxy for social support in that it measures the amount of interaction with various networks, both formal and informal. Thus, we suggest that the level of social integration mediates the stressful influence of changes in household composition and residence on mothercraft skills and the health status of the child.

A mother's level of social integration has also been related to utilization of health services. Studies that examine the effects of social integration on the mother's behavior as it relates to her health and that of her children generally find that mothers who express feelings of social isolation and powerlessness receive less preventive care for themselves and their children (e.g., infant immunizations, postpartum checkups, family planning) than those who do not (Bullough, 1972: 355). Other studies associate the use of preventive health services with the degree of interaction with informal groups (e.g., friends and family) and formal groups (e.g., clubs and organizations) (Johnson et al., 1962; Cornely and Bigman, 1963; Moody and Gray, 1972; Coburn and Pope, 1974; Pratt, 1976; Slesinger, 1976). In general, investigators argue that the

greater the degree of social participation, the more likely the individual will be exposed to norms supporting various preventive health behaviors and come into contact with people who have taken preventive measures, both of which increase the probability that the individual will engage in preventive activity. The findings from these studies indicate that individuals who interact outside the family unit tend to utilize preventive health services more than those who have little contact outside the household.

Finally, many studies have related socioeconomic characteristics to the utilization of health services. In general, families in economically disadvantaged positions are underutilizers of health care, especially of preventive care (Green, 1970; Bice et al., 1972; Aday and Andersen, 1975). A mother's level of education is the most consistent variable which explains use of health care for herself and her family (Morris et al., 1966; Green, 1970; Bullough, 1972; Coburn and Pope, 1974). Mothers who are better educated tend to develop attitudes and values which facilitate obtaining health care both for themselves and their children.

In summary, this paper attempts to answer the question, What are the effects of family mobility on mothercraft? We will examine the relationship between antecedent socio-demographic conditions that may influence family mobility; the relationship between mobility and stress; and finally, the relationship of mobility to measures of mothercraft, controlling for socio-demographic characteristics which are significantly related to family mobility. We will also attempt to see whether the degree of social integration mediates the effect of these events in the model.

## STUDY DESIGN AND METHODS

Data Source

The data presented here were gathered as part of a longitudinal research project conducted in rural and urban Wisconsin from June 1974 to June 1976.

A purposive sampling design was employed with the objective of investigating a fairly uncommon event: inadequate mothering. Public health nurses in one metropolitan area and four rural counties were instructed to screen mothers with newborns, looking for structural conditions that, it has been suggested, affect quality of mothering. Such conditions include poverty, low educational level of mother, large number of children close in age, and teenage mothers (Polansky et al., 1975). Mothers with severe psychological problems or mental retardation, or infants with severe birth defects were excluded from the sample.

The sample consisted of 148 mothers with infants born between April 1974 and February 1975. Each mother in the sample was interviewed three times in her home by a public health nurse when her child was approximately 3, 12, and 20 months old. For various reasons--moving out of state, refusal to participate, infant death, and five cases of infants removed from the mother's care--the sample was reduced to 123 mother-infant pairs by the end of the 20-month period. The distribution of the study sample showed that 69 percent of the mothers were black, 59 percent had incomes below the government's definition of poverty (U.S. Department of Health, Education, and Welfare, 1975), 53 percent were married and living with husbands, 81 percent were 20 years or older, and 62 percent

had not graduated from high school. These characteristics of mothers living in poverty in Wisconsin are quite similar to those found by the U.S. Bureau of the Census (Palay, 1977). (Further details of the sampling can be found in Slesinger, 1981.)

Each home interview consisted of a structured interview by the nurse and a physical examination of the baby, including the weight and height measurements. After each interview, the nurse, upon leaving the mother's home, filled out an appraisal form based on her observations of the mother's skills and interactions with the infant.

### Measures

Dependent measures. Mothercraft skills as defined in this study refer to the mother's competence in meeting the needs of her child. Three distinct dimensions of mothercraft are assessed. One pertains to the mother and two to her child. The first is a summary measure of her level of functioning. The second concerns the child's record of preventive medical care (i.e., the reports of when and if the child was taken to a doctor or clinic for well-baby checkups). The third is an attempt to measure the number of illnesses the child experienced since birth. Appendix A provides details on the operationalization of the variables.

Polansky's (1972b) method of evaluating a mother's level of functioning is adapted for this research and defined as the Mothercraft Appraisal Score (MAS).<sup>2</sup> MAS measures several components: (1) Home Environment--the management of the child's physical environment, including safety, cleanliness, and material stimuli; (2) Treatment of Child--the physical and emotional treatment of the child by the mother;

and (3) Personality of Mother--components of mother's personality which were found in Polansky's work to be related to child neglect. Polansky's index has been shown to be related to child neglect in a poor rural area (Polansky, et al., 1972a) and to malnutrition in a poor urban area (Hepner and Maiden, 1971).

The MAS consists of 60 items, with each item constructed to tap the negative aspects of mothers' functioning. The scores for the MAS at the final interview ranged from -31 to 0.<sup>3</sup> The MAS is significantly related to measures of socioeconomic status--mother's educational level and poverty status. Both these socioeconomic variables are most highly related to the Home Environment component.

The child's checkup history was evaluated when the child was 3, 12, and 20 months old. History of the infant's illnesses is a cumulative variable constructed from the mother's reports. The construction of both of these variables is explained in Appendix A.<sup>4</sup>

Independent measures. Socioeconomic status was measured by two variables, mother's education and poverty status. Demographic variables investigated were the mother's age, the mother's race, and the presence of school-age children.

Family mobility was operationally defined as any change in place of residence and/or household composition during the 17-month period under study, when the baby was 3 to 20 months old. Families were classified into four mutually exclusive groups: (1) no change in either residential location or household composition; (2) change in household composition only; (3) change in residential location only; and (4) change in both residential location and household composition.

Mediating variables. Measures of social integration and level of stress are considered variables which may mediate the effect of socio-demographic characteristics on mothercraft skills. Two types of social integration are identified: those involving primary groups, and those involving secondary groups. We hypothesize that mothers who feel themselves part of a family, and who derive social support from its members, are likely to have higher mothercraft scores. These social ties are primary ties, that is, relationships with close relatives and friends. Three items, shown in Appendix A, tap this dimension.

A secondary set of social relationships also exists--one which binds the individual to the larger community and its institutions. Here we refer to links to formal organizations, such as educational institutions, employers, clubs, churches, and other groups.

Stress was measured by the score on the 22-item Langner Scale of Psychosocial Distress (1962), administered to the mothers when the infants were about 12 months old. This scale has been used extensively among community populations to detect a level of psychosocial distress that is not necessarily serious enough to warrant treatment.<sup>5</sup> The score permits respondents to be ordered on a continuum of reported distress. In the original work, a score of 4 among a community population with no impairments indicated moderate stress. In this sample, Langner scores ranged from 0 to 18 with a mean score of 4.3.

#### Method of Analysis

Multiple Classification Analysis (MCA) is the method of analysis selected because it enabled us to obtain values of a dependent variable

for nominal, ordinal, or interval categorical variables, and to express multiple correlations for specific models. This model also allows computation of category values (melecharized beta coefficients), which show deviations from the grand mean. One can also determine net effects by controlling for selected independent variables in the model (Andrews et al., 1967).

In order to address whether the family mobility items have an effect on the MAS, preventive care of the infant, or the record of illnesses, we use the following procedure:

1. We examine whether there is a relationship between household changes, residential moves, and distress (as measured by the Langner scale).
2. If this is the case, we examine how family mobility relates to the three measures of mothercraft skills.
3. Finding a relationship here, we then control for the effects of the socio-demographic and social integration variables that are related to mothercraft skills.
4. Our final step, then, is to examine the relationship between family mobility and the measures of mothercraft skills, controlling for all of the statistically significant independent and mediating variables. We then decide whether the mothercraft skills are affected by unstable household composition and frequent residential moves.

## FINDINGS

Table 1 presents the relationship between family mobility, stress, and the three measures of mothercraft skills: Mothercraft Appraisal Score, adequacy of baby checkups, and number of baby illnesses reported over a 20-month period.

First, it is evident that women in stable households, who have experienced neither a change in household composition nor in residence, have lower mean Langner scores than women who experience either--or both--type of change. These changes are clearly related to stress.

Next, examining the three mothercraft variables--MAS, baby checkups, and baby illnesses--we note that for each measure, the family mobility variable operates in the predicted direction. That is, mothers and babies in stable homes clearly do better on all three measures than those in homes with changes. Experiencing both kinds of change is reflected in poorer MAS values, less adequate record of checkups, and greater history of illnesses. Only in the first and last dependent variables, however, are the differences statistically significant.

Table 1 indicates that the Langner score is also related to two measures of quality of mothering (lower panel). That is, mothers with low Langner scores have better MAS and report fewer illnesses for their children.

The column labelled "net" shows the relationship between family mobility and mothercraft variables, controlling for the effect of stress. Here we note that the relationships remain in the predicted direction for both the MAS and the illness record, but only the illness differences are statistically significant.

Table 1

Multiple Classification Analysis of Family Mobility and Psychosocial Distress for the Three Measures of Mothercraft Skills

		Deviations from Grand Mean										
		Langner Scale		Mothercraft		Baby Checkups		Baby Illnesses				
		Grand $\bar{X}$ = 4.27		Grand $\bar{X}$ = -6.20		Grand $\bar{X}$ = 2.18		Grand $\bar{X}$ = 8.93				
N		Gross		Gross	Net <sup>a</sup>	Gross	Net <sup>a</sup>	Gross	Net <sup>a</sup>			
Family mobility												
Stable household	46	-1.01	* ***	1.43	*	1.08	.13	.13	-.89	* **	-.66	* *
Household composition change	14	.73		-.38		-.10	-.11	-.07	.07		-.26	
Residential change	36	.06		-.33		-.04	-.05		.43		.46	
Combined changes	27	1.25		-1.80		-.10	-.12		.92		.66	
eta and beta		.245**		.175		.271	.094	.118	.234*		.405****	
Langner Scale												
0-3	61			1.39	*		.05		-1.07	*		
4-6	34			-.13			-.12		.51			
7-8	28			-2.88			.04		1.71			
eta and beta				.239**			.070		.364***			

<sup>a</sup>Controlling for Langner Scale.

\*\*\*\*p < .001

\*\*\*p < .01

\*\*p < .05

\*p < .10

We also should note the fairly high correlation between stress and baby illnesses (.364,  $p \leq .01$ ). This relationship substantially increases the multiple correlation of mobility and stress with baby illnesses (.405,  $p \leq .001$ ). However, we cannot address causality with these data. We do not know whether mothers under stress are likely to report that their infants experience more illnesses, or whether the illnesses of the babies are likely to cause stressful feelings in their mothers. Probably the truth lies in an interactive relationship.

In order to see whether the socio-demographic and social integration variables are also related to the dependent variables, MCA results are presented in Table 2.

#### Mothercraft Appraisal Score (MAS)

Of the five socio-demographic variables, only education and poverty status are clearly related to the MAS. Mothers who are not high school graduates or live in poverty have lower scores than mothers in the other categories.

From examining the social integration variables, it is evident that a majority of the mothers have positive primary ties; that is, more than 3 out of 4 mothers live with other adults, visit friends and relatives often, and have someone they can call on to help with the baby. However, no primary integration measures and only two secondary integration measures are significantly related to MAS. In the secondary integration group, mothers who say they attend church often have scores considerably above those who rarely attend church, and mothers who have never worked have significantly lower scores than mothers who have worked.

Table 2

Multiple Classification Analysis of Socio-Demographic Characteristics  
and Social Integration for Three Measures of Mothercraft Skills

Socio-Demographic Characteristics	N	Deviations from Grand Mean		
		Mothercraft Appraisal Score Grand $\bar{X}$ = -6.20	Baby Checkups Grand $\bar{X}$ = 2.18	Baby Illnesses Grand $\bar{X}$ = 8.93
Education				
< High School grad.	76	-2.02****	-.15**	.46**
> High School grad.	47	3.26	.25	-.74
eta		.363****	.182**	.187**
Poverty status				
Income 124% or below	86	-.56**	-.10	.43**
Income 125% or above	34	2.55	.23	-1.05
No information	3	—	—	—
eta		.347****	.140	.210*
Age				
14-19	23	-1.63	.17	.24
20-24	55	-.02	.26**	.37
25-29	23	1.46	-.18	-.20
30-34	13	.66	-.56	-1.09
35-50	9	-.36	-.73	-.82
eta		.138	.316**	.161
Race				
Nonwhite	59	-.52	.04	-.34
White	64	.48	-.04	.32
eta		.070	.037	.105
Presence of children under 18				
Study infant only	43	.45	.29***	.13
Two or more, all under 6	44	.31	.09	.27
Two or more, at least one 6 or older	36	-.92	-.46	-.49
eta		.084	.286***	.102

(table continues)

Multiple Classification Analysis of Socio-Demographic Characteristics  
and Social Integration for Three Measures of Mothercraft Skills

<u>Social Integration</u>	<u>N</u>	<u>Deviations from Grand Mean</u>		
		<u>Mothercraft Appraisal Score Grand <math>\bar{X}</math> = -6.20</u>	<u>Baby Checkups Grand <math>\bar{X}</math> = 2.18</u>	<u>Baby Illnesses Grand <math>\bar{X}</math> = 8.93</u>
<u>Primary Social Integration</u>				
Household composition				
Mother, child(ren)				
only	32	-1.74	.16	.35
Other adult	91	.61	-.06	-.12
eta		.146	.092	.066
Visit friends/relatives				
Rarely	17	-1.22	-.41*	-.17
Often	106	.20	.07	.03
eta		.069	.155*	.022
Help with baby				
No	11	2.74	.09	1.16
Yes	112	-.27	-.01	-.11
eta		.122	.028	.116
<u>Secondary Social Integration</u>				
Church attendance				
Rarely	79	-1.60****	.02	.51**
Often	44	2.88	-.04	-.91
eta		.304****	.030	.217**
Club membership				
No	98	-.40	-.09 *	-.21
Yes	25	1.56	.34	.83
eta		.111	.162*	.133
Entertainment				
Rarely	52	.41	-.16	-.36
Often	71	-.30	.12	.26
eta		.049	.128	.098
Work experience				
Never worked	20	-5.85****	.02	-.38
Worked before birth	68	.68	-.03	.67
Worked both before & after or only after birth	35	2.02	.05	-1.08
eta		.374****	.034	.248**

\*\*\*\*p &lt; .001

\*\*\*p &lt; .01

\*\*p &lt; .05

\*p &lt; .10

### Adequacy of Baby Checkup Record

The mother's educational level was significantly related to the adequacy of checkup score. Mothers who graduated from high school had better scores than mothers who had not completed high school.

The mother's age and the presence of school-age children also are statistically related to having well checkups. Older mothers did not fare as well as younger mothers; and mothers who had only one child (the study infant) had better records than mothers with school-age children.

One primary integration variable, frequency of visiting friends and relatives, and one secondary integration variable, club membership, also were related in the predicted direction, although both relationships were weak.

### Number of Baby Illnesses

Educational level and poverty status were highly related in the expected direction to number of illnesses reported. No other socio-demographic variable demonstrated a statistically significant relationship with number of illnesses.

Church attendance appears to be the only integration variable related to baby illnesses. Mothers who attend church frequently report fewer baby illnesses than mothers who rarely attend church.

### Summary of Findings

To summarize, there is a modest significant relationship between the family mobility measure and the Mothercraft Appraisal Score, with the mothers

in "stable" households having scores above the mean, and mothers who experience both types of change, below the mean. No significant relationship was found for the mobility variable and the measure of preventive health behavior--adequacy of baby checkups. However, the number of reported baby illnesses has a strong relationship to household instability, in the predicted direction. On the average, babies in stable households have fewer illnesses than babies in households which experience both types of change.

Also as predicted, mothers in households undergoing change report more psychosocial distress than mothers in stable households. Psychosocial distress accounts for some but not all of the relationships between MAS and family mobility; it is not related to checkups; and although strongly related to the illness score, it does not appear to affect the relationship between illness and the family mobility variable.

We have also seen that the two socioeconomic variables--mother's education and poverty status--and one secondary social integration variable, church attendance, are statistically related in the predicted direction to the three dependent variables. However, the measure of preventive care (i.e., adequacy of checkups) appears to be affected by an additional set of variables: mother's age and presence of school-age children. The older the mother, the less likely the baby is to receive the proper number of checkups. Also, when the baby under study was the only child, the checkup record was better than when the infant had school-age siblings.

### Net Effects

Having described the interrelationships among the variables, the next step is to control for the variables which may be affecting the relationship between family mobility and the dependent variables.

Table 3 contrasts the gross results of the MCA presented in Table 1 with the net effects, controlling on all other variables that were significantly related to each dependent variable at or below .05 level of significance in Table 1 or 2.

First, examining the MAS, we see that controlling for the effect of the two socioeconomic variables (Net<sup>a</sup>) both increases the explanatory power of the equation (.223) and reduces the difference among the mobility categories. Adding the secondary integration variables, church attendance and work experience, continues this trend (Net<sup>b</sup>).

With adequacy of baby checkups, once again we see little relationship with any of the variables in our model. Adding education to the model makes little change among the mean category values in the categories (Net<sup>c</sup>). However, when adding the mother's education and the demographic characteristics of the family (Net<sup>d</sup>), the explanatory power increases substantially (.162). The social integration variables and the Langner score were not added to the model because they were not statistically related to the baby checkup score.

The large differences shown in the gross model for baby illnesses are clearly reduced by adding the socioeconomic variables (Net<sup>e</sup>). This trend is continued by adding church attendance and the Langner scale to the model (Net<sup>g</sup>). The explanatory power of the latter model is .185.

Table 3

Multiple Classification Analysis of Family Mobility for the Three Measures  
of Mothercraft Skills, Controlling for Effects of Socio-Demographic  
Characteristics, Social Integration, and Psychosocial Distress

Family Mobility	N	Deviations from Grand Mean									
		Mothercraft Appraisal Score Grand $\bar{X}$ = 6.20			Baby Checkups Grand $\bar{X}$ = 2.18			Baby Illnesses Grand $\bar{X}$ = 8.93			
		Gross	Net <sup>a</sup>	Net <sup>b</sup>	Gross	Net <sup>c</sup>	Net <sup>d</sup>	Gross	Net <sup>e</sup>	Net <sup>f</sup>	Net <sup>g</sup>
Stable household	46	1.43*	-.45	.21	.13	.06	.08	-.89* **	-.64	-.63	-.55
Household composition	14	-.38	.50	-.18	-.11	-.10	.02	.07	-.19	-.23	-.39
Residential mobility	36	-.33	-.37	.51	-.04	-.02	.06	.43	.42	.45	.48
Combined changes	27	-1.80	1.00	-.96	-.10	-.03	-.22	.92	.63	.59	.51
eta and beta explained variance		.175	.472****	.529****	.094	.189	.403**	.234*	.321	.351*	.430**
		.031	.223	.280	.009	.036	.162	.054	.103	.123	.185

Net<sup>a</sup> Education + poverty status  
 Net<sup>b</sup> Education + poverty status + church attendance + work  
 Net<sup>c</sup> Education  
 Net<sup>d</sup> Education + age + school-age children  
 Net<sup>e</sup> Education + poverty status  
 Net<sup>f</sup> Education + poverty status + church attendance  
 Net<sup>g</sup> Education + poverty status + church attendance + Langner Scale

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

Another way of expressing these results is that in the gross model, mothers who changed residence reported 1.3 more illnesses for their infants than mothers in stable households; and mothers in households which changed both in location and composition reported about 1.8 more baby illnesses than mothers in stable households. This was reduced by controlling for mother's socioeconomic status, church attendance, and level of psychological stress. However, the residential moves still appear to take their toll after all controls were placed in the model, with mothers reporting about 1.0 more baby illness than mothers from stable households.

#### DISCUSSION

This work has attempted to assess the effects of two types of stressful family change on measures of competence of mothers of small infants. It was hypothesized that changes in household composition and residential moves would adversely affect the mother's ability to care for her child, as measured by scores on mothercraft, history of receiving well checkups for baby, and number of reported illnesses, from birth to 20 months.

A relationship between these two types of events and mothering appraisal scores and illness record of the baby was demonstrated, but no relationship was found with adequacy of baby checkups.

In a multivariate model, we saw that Mothercraft Appraisal Score was substantially affected by socioeconomic characteristics of the mother, but little by social integration variables. Mothercraft skills, as measured by physical and emotional care of the child and some personality attributes

of the mother, are more likely to be affected by her educational attainment, poverty level, and some secondary social integration measures than by stressful family mobility.

The explanatory power of adequacy of baby checkups lies in the demographic characteristics of the family. A mother with more than one child, including some of school age, is less likely to take her youngest child for checkups than a mother with only one child. Education of the mother has a small effect, and poverty status almost no effect on whether the child receives adequate checkups.

Finally, the number of baby illnesses appears to be related primarily to the socioeconomic level of the mother. However, after controlling on socioeconomic, integration, and stress variables, we found that mothers who experienced residential mobility still reported higher numbers of baby illnesses than mothers in stable households.

The hypothesis that the effects of stressful events on the mother's competence are mediated by participation in primary and secondary social networks is not supported by the data. At least two explanations can be offered to explain the failure to find that social integration has a significant influence on the relationship between household mobility and mothercraft.

First, the use of social integration as a single indicator of social support does not seem to adequately tap the nature of the interaction within the family setting. Social integration as conceptualized in this research referred to the frequency of contact with primary and secondary networks. Most of the mothers in our sample reported frequent contact with friends and relatives and having someone available to help with the

baby. However, such contact was not always positive. Evidence of stress in some primary relationships is gleaned from a cursory review of the nurses' reports. While some mothers reported a warm and supportive relationship with their own mothers, others were unhappy living at home or felt some interference in child-care matters as well as in their life styles. Information about the nature of the interaction within the primary networks would tell us more about whether they are supportive. From the example above, it seems evident that some "contacts" may serve as stressors and, therefore, have negative consequences. Data which analyze network interactions on the basis of content (supportive, nonsupportive, stressful, etc.) could possibly explain some of the differences in our dependent measures.

Church attendance as a measure of secondary integration appears to have the strongest positive mediating effect on the mothercraft variables. Perhaps more frequent attendance can be construed as a consistently positive supportive force. Church attendance is voluntary, and therefore going indicates wanting to go.

Finally, social support is a global concept, of which social integration is possibly but one dimension. Other dimensions of social support are not measured in this research. For example, information about whether the mother's environment provides nurturance or contains personal attachments and alliances would reveal some knowledge about the nature of support relationships. The absence or presence of these other dimensions of social support may be the key.

As in previous research it appears that barriers to opportunity structures among lower socioeconomic groups have negative consequences in

terms of health. A mother's level of functioning is apparently limited by not having information and/or monetary resources. This may increase the baby's susceptibility to illness. As measured here, these variables operating collectively have a negative impact on mothering behavior.

Thus, structural variables in these data offer a better explanation than do social integration ones. Limited education and poverty account for more variance in our measures of mothercraft than does the lack of primary or secondary ties. We suggest that some mobility events can have serious impacts on the health of the child but may be buffered by adequate resources. Statistically controlling for distress in the models where socioeconomic variables are the main explanatory variables makes little difference.

Interestingly, socioeconomic variables do not account for most of the variance in the preventive health behavior measure. Mothers with only the study infant in the household and no older children report a more adequate record of baby checkups. Also, mothers in their early twenties provide better preventive medical care for their infants than do older mothers. It may be that young mothers and mothers with their first child are more "stimulated" about their new roles and committed to being "good" mothers, or simply in need of medical assurance, whereas mothers with a large number of children possibly direct their attention to more immediate needs of the family and/or rely on their previous experience with babies to evaluate the necessity for routine preventive care.

The data support a previous finding that mothers who move report more baby illnesses (Haggerty and Alpert, 1963). We learned that much of this relationship can be explained by socioeconomic status. The poor and less

well educated are more likely to move frequently. We suggest that movement from one residence to another exposes the child to an environmental situation which may be quite different from his or her previous living conditions. This change may consequently result in the disruption in normal scheduling of events (feeding, sleeping, etc.) which may predispose a baby to illnesses.

In conclusion, this exploratory research has demonstrated that family mobility, as measured by household and residential changes, has a modest impact on mothering as measured by the Mothercraft Appraisal Index, adequacy of baby checkups, and baby illnesses. Most of these effects can be explained by level of poverty and education of the mother. For some types of mothering skills, there is evidence that the level of integration into some community organizations mediates the effect of stressful events. It is clear that the measures of social integration are crude, being little more than first attempts at measuring this concept. Future endeavors must refine this area of research and look into both positive and negative aspects of integration.

## APPENDIX A

VARIABLES WITH CATEGORIES USED IN  
MULTIPLE CLASSIFICATION ANALYSESI. Dependent MeasuresA. Mothercraft Skills

1. Mothercraft Appraisal Index: A maternal characteristic scale designed to evaluate a mother's current level of functioning, adapted from Polansky's work (Polansky et al., 1975), was used to measure mothering skills. Each mother was evaluated by a public health nurse on the basis of a checklist of 60 items which addressed three components of mothering:
  - (1) Home environment. Items referred to housing adequacy, safety, cleanliness, and material stimuli (e.g., toys, books, radio, or other material resources).
  - (2) Treatment of child. Items related to the child's personal cleanliness, appropriateness of dress, adequacy of rest, as well as emotional and cognitive attention paid to the child, the latter evaluated through observation of mother's handling of the child, feeding patterns, and stimulation.
  - (3) Personality of mother. Items rated the mother's level of dependency on others, expressions of futility, and lack of verbal communication (or verbal inaccessibility). Scores ranged from -31 to 0 after the third interview, with a mean value of -6.20.

2. Adequacy of Baby Checkups: The second dependent variable referred to the child having received the appropriate number of checkups since birth for a particular time period. The criteria for adequacy of checkups were based on standards of the American Academy of Pediatrics (Christy, 1972) for the child's record at each time period. Adequacy was determined as follows:

3 months = one or more checkups since leaving the hospital after birth;

12 months = three or more checkups since leaving the hospital;

20 months = four or more checkups since leaving the hospital.

Each record was scored as follows:

0 = Inadequate at all three time periods;

1 = Adequate at one time period and inadequate at two;

2 = Adequate at two time periods and inadequate at one;

3 = Adequate at all three time periods.

The range of scores was 0 to 3, with a mean of 2.18.

3. History of Baby Illnesses: The mother was asked whether her baby had experienced any of the following acute illnesses in the time preceding each home interview: colds; diarrhea; diaper rash; other rash; cough; ear infection; other illnesses. The number of positive answers was summed. Thus, there was a possibility of the score ranging from 0 to 21. In actuality, it ranged from 0 to 17, with a mean of 8.93.

## II. Independent Measures

### A. Socio-Demographic Characteristics

1. Education: Completed high school vs. less education.
2. Poverty Status: Income 125% of poverty level or higher vs. less income.
3. Age of Mother: 14-19; 20-24; 25-29; 30-34; 35-50.
4. Race: Nonwhite, white.
5. Presence of Children under 18: Study infant only; two or more children, all younger than 6 years old; two or more children, at least one 6 years or older.

### B. Family Mobility

1. Number of Residential Moves in 17 Months (from the time the baby was 3 to 20 months old): None, 1, 2, 3, or more.
2. Change in Household Composition: Change, no change. At each interview, the household was classified into one of four types, based on the members listed as living in that unit: (1) Mother and child(ren) alone; (2) Mother and child(ren) + husband or male partner; (3) Mother and child(ren) + other relatives; and (4) Mother, child(ren), husband or male partner + other relatives. If the mother's type of household changed at the second or third interview, she was classified as having a change in household composition.

### III. Mediating Variables

#### A. Social Integration

1. Primary Social Integration: (1) Classification of household composition: Mother lives alone with child(ren) vs. Lives with husband or male partner and/or extended family members. (2) "How often do you get together informally with relatives and friends?" Rarely = A few times a year or rarely, if ever; Often = Once a week or more, or 2-3 times a month. (3) "If you need help or advice about your baby, are there people around to help?" No, Yes.
2. Secondary Social Integration: (1) "About how often do you usually attend religious services?" Rarely = A few times a year or less, or Never; Often = Once a week or more, 2-3 times a month, or once a month. (2) "Do you belong to any clubs or organizations?" No, Yes. (3) "How often do you go out for eating, drinking, or seeing a movie?" Rarely = A few times a year or less; Often = Once a week or more, or 2-3 times a month.
3. Work Experience: Never worked; worked before birth; worked after birth of baby, or both before and after birth.

## NOTES

<sup>1</sup>In this study, all the parents interviewed were mothers. Therefore in this paper we use the term "mothering" instead of "parenting." This is not to suggest that what we find is applicable only to mothers, however.

<sup>2</sup>See Appendix A for description of components. A copy of the Mothercraft Appraisal form can be found in Slesinger (1981).

<sup>3</sup>The intercorrelations between the three components and the Mothercraft Appraisal Score (MAS) are as follows:

	Total MAS (60 items)	Home Environment (12 items)	Physical & Emotional Treatment (30 items)	Mother's Personality (18 items)
Total MAS	1.000			
Home Environment	.726****	1.000		
Treatment	.931****	.594****	1.000	
Personality	.742****	.324****	.524****	1.000

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\*\*\*\*p  $\leq$  .001

<sup>4</sup>The correlation between the MAS and baby checkups is .274 (p  $\leq$  .01); between MAS and baby illness it is -.078 (p is not significant).

<sup>5</sup>A recent discussion of the validity of using this type of measure of psychological distress in a community population can be found in Thoits and Hannan (1979).

## REFERENCES

- Aday, Lu Ann. 1971. "Dimensions of family's social status and their relationships to children's utilization of health services."  
Unpublished manuscript. Baltimore: Department of Medical Care and Hospitals, Johns Hopkins University.
- Aday, Lu Ann, and R. Andersen. 1975. Development of indices of access to medical care. Ann Arbor, Mich.: Health Administration Press.
- Andrews, Frank, J. Morgan, and J. Sondquist. 1967. Multiple classification analysis. A report on a computer program for multiple regression using categorical predictors. Ann Arbor: University of Michigan, Institute for Social Research.
- Bice, Thomas W., R. L. Eichhorn, and P. D. Fox. 1972. "Socioeconomic status and use of physician services: a reconsideration." Medical Care 10: 261-271.
- Bullough, Bonnie. 1972. "Poverty, ethnic identity and preventive health care." Journal of Health and Social Behavior 13: 347-359.
- Christy, Raymond A. (ed.). 1972. Standards of child health care. Committee on Standards of Child Health Care. Evanston: American Academy of Pediatrics.
- Coburn, David, and C. R. Pope. 1974. "Socioeconomic status and preventive health behavior." Journal of Health and Social Behavior 13: 67-77.
- Cornely, Paul B., and S. K. Bigman. 1963. "Some considerations in changing health attitudes." Children 10: 23-28.

- Green, Lawrence W. 1970. "Status identity and preventive health behavior." Pacific Health Education Reports, No. 1. Berkeley, Calif.: School of Public Health, University of California.
- Haggerty, Robert J., and J. J. Alpert. 1963. "The child, his family and illness." Post Graduate Medicine 34: 228-233.
- Hepner, R., and N. Maiden. 1971. "Growth rate, nutrient intake and 'mothering' as determinants of malnutrition in disadvantaged children." Nutritional Reviews 29: 219-223.
- Hill, Reuben, and Donald A. Hansen. 1964. "Families under stress." Pp. 782-819 in H. T. Christensen, Handbook of marriage and the family. Chicago: Rand McNally.
- Johnson, Albert L., et al. 1962. Epidemiology of polio vaccine acceptance. Jacksonville: Florida State Board of Health, Monograph #3.
- Langner, Thomas S. 1962. "A twenty-two item screening score of psychiatric symptoms indicating impairment." Journal of Health and Human Behavior 3: 269-276.
- Mechanic, David. 1964. "The influence of mothers on their children's health attitudes and behavior." Pediatrics 33: 444-453.
- \_\_\_\_\_. 1978. Medical sociology. Second Edition. New York: Free Press.
- Meyer, R. J., and R. J. Haggerty. 1962. "Streptococcal infections in families." Pediatrics 29: 539-549.
- Moody, Phillip M., and R. M. Gray. 1972. "Social class, social integration, and the use of preventive health services." Pp. 250-261 in E. G. Jaco, Patients, physicians and illness. Second Edition, New York: Free Press.

- Palay, Miriam G. 1977. Census update, city of Milwaukee, 1975.  
Milwaukee, Wis.: Milwaukee Urban Observatory, University of  
Wisconsin-Milwaukee.
- Polansky, Norman A., R. D. Borgman, and C. DeSaix. 1972a. Roots of  
futility. San Francisco: Jossey-Bass, Inc.
- Polansky, Norman A., C. DeSaix, and S. A. Sharlin. 1972b. Child  
neglect: Understanding and reaching the parent. New York: Child  
Welfare League of America, Inc.
- Polansky, Norman A., C. Haley, and N. F. Polansky. 1975. Profile of  
neglect: A survey of the state of knowledge of child neglect.  
Washington, D.C.: USDHEW, Community Services Administration.
- Pratt, Lois. 1976. Family structure and effective health behavior:  
The energized family. Boston: Houghton-Mifflin Company.
- Slesinger, D. P. 1976. "The utilization of preventive medical services  
by urban black mothers." Pp. 197-219 in D. Mechanic, The growth of  
bureaucratic medicine. New York: Wiley-Interscience.
- \_\_\_\_\_. 1981. Mothercraft and infant health: A socio-demographic and  
sociocultural approach. Lexington, Mass.: D.C. Heath.
- Thoits, Peggy, and Michael Hannan. 1979. "Income and psychological  
distress: The impact of an income-maintenance experiment." Journal  
of Health and Social Behavior 20: 120-138.
- U.S. Department of Health, Education, and Welfare, Community Services  
Administration. 1975. Poverty guidelines in all states except  
Alaska and Hawaii. Washington, D.C.: U.S. Government Printing  
Office.