

## **Stability of Employment of Rural Low-Income Mothers and Their Access to Employer Benefits**

Health has been identified as a critical factor in maintaining employment. Health insurance is important to help defray the costs of health care. In this study, logistic regression is utilized to understand the importance of health insurance, as well as other factors, to the stability of employment among rural, low-income mothers. Working 30 hours or more per week and having access to health insurance were significant factors in explaining the stability of employment. Neither family factors nor the type of industry was significant. Policy and education discussions need to address the issue of access to health insurance in maintaining stable employment.

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### **Introduction**

Stable employment, or at least being consistently employed is a key factor for parents to be able to support their families. Good health and the ability to work on a steady basis are critical to rural, low-income mothers. Another issue for low-income rural mothers is health insurance coverage. When employment is sporadic, maintaining health insurance is especially problematic. The purpose of this paper is to explore the relationship between stability of employment over time, and their access to health insurance and employee benefits such as sick leave for rural low-income mothers.

Location of residence is a critical factor in health status. Rural families are more likely to experience poorer health than their urban counterparts. Poor health limits the ability to be employed (Eberhardt, Ingram, & Makuc, 2001). People in rural areas have a higher occurrence of chronic illness, diabetes, cancer, hypertension, heart disease, stroke, and lung disease than urban people (Mulder, Kenkel, & Shellenberger, 2000).

Health insurance is the vehicle through which most U.S. workers access health care services and is one means for accessing and paying for health care to prevent problems or reduce their severity. Having access to health insurance whether through the state (such as Medicaid) or privately through an employer, would increase the likelihood of health issues being treated in a timely manner before they developed into major illnesses or disabilities that would result in lost work days ( Lovell & Hartmann, 2001). Many low-income workers do not have health insurance because they work less than full-time and therefore are ineligible for benefits (Beck, Jijon & Edwards, 1996; Muller, 1990; Strickland & Strickland, 1996).

Status of health along with access to, and affordability of, health care are major factors related to full-time or part-time employability. Access to health insurance is linked to full-time employment. Many rural families are unable to be self-sufficient due to the cycle of employability, health status, access to medical and medical insurance to help pay for it. Acs, Phillips & McKenzie (2000) using the National Survey of America Families data found that only 54.3% of working poor families had employer-sponsored health insurance.

Low income earners are less likely to have employer-sponsored health insurance than higher earners (Daly, Oblak, Seifert, & Shellenberger, 2002). The number of uninsured workers has been rising in recent years. Using SIPP data, Lee (2004) found that only about a third of low-income employed mothers had health insurance from their employers. A high proportion of low-income employed mothers rely on Medicaid (18%) and 28% of the low-income, employed mothers had no health insurance at all. Having employer-sponsored health insurance significantly reduced the probability that the low-income, employed mothers would change jobs: all other things being equal, those with health insurance were three times more likely to stay with that job than those without employer sponsored health insurance. Lee further found that mothers who had employer-sponsored health insurance at a prior job, only moved to a new job if the wages at the new job were at least 25% greater than the former job. Garrett and Holahan (2000) determined that few women who leave welfare for work are covered by private health insurance because either the employer does not offer it or the worker decides that the cost is unaffordable.

## Methodology

Data are from the USDA-funded, longitudinal study NC223/NC1011 “Rural Low-Income Families: Monitoring Their Well-Being and Functioning in the Context of Welfare Reform.” Please refer to Sharon Seiling’s session introduction (titled: Health Care Use, Insurance Coverage & Employment of Low-Income Rural Families) for a description of the project methodology.

The sample for these analyses is the 138 participants who were interviewed in all three waves of data collections and who were employed at the time of the first interview. They reside in 19 rural counties across the country.

Logistic regression was chosen as the best type of analysis for the non-linear dependent variable of employment stability, using three Waves of data. To be in the sample the mother must have been interviewed all three Waves, and she must have been working in Wave 1. In addition, there needed to be complete data on the employment status for Waves 2 and 3. In other words, cases where there was missing data in either Wave 2 or 3 for the dependent variable was eliminated from the study.

The intermittently employed group was assigned a value of “0” and the employed all three years was assigned a value of “1”. This study is interested in the likelihood of employment. The dichotomous nature of the variable in the logistic regression finds a “best fitting” through the maximum likelihood method.

The independent variables were grouped into concepts related to the benefits of working, having medical insurance and the number of hours worked that routinely makes the opportunity to have benefits. In many places the working of 30 or more hours opens the person to benefit packages. The hours worked was grouped into less than 30 hours (0) and 30 or more hours of employment (1). The hours worked for each of the three waves was computed. Also a change in the hours worked between Wave 1 and Wave 3 was computed. In preliminary logistic regression analysis, only the hours worked in Wave 3 was significant. Therefore the other variables were eliminated.

It was assumed that some family level variables would influence the likelihood of stable employment. Having more than one adult in the household as measured by marital status in Wave 3 would be an assistance to stable employment. Since we are interested in the change over time, we chose to include the marital status at Wave 3. The change in marital status was included in preliminary analysis and it was not significant. We were also interested in the number of children and the age of the children in the family. None of these were significant in the preliminary logistic regression model. The family variables were entered into the equation at step 2.

The type of employment was thought to influence the stability of employment. This variable was recoded from 8 types into service (1) and other types (0). This was entered into the equation at step 3.

There were several variables that literature and thought about the employment stability initially that we would have liked to included in the analyses. Whether or not the mother has sick leave available was one of great interest. Since only a few of the mothers had sick leave available to them., this variable was not tested in the model due to missing data.

The Wald statistic provides a measure of whether the beta weight is statistically different from zero. A significant beta will reduce the -2 Log Likelihood (-2LL) value upon the variable’s entry into the equation. The -2LL is similar to the unexplained variance in a regression model and provides the baseline value before variables are entered into the equation. A decreasing -2LL is associated with increasing prediction of the accuracy. The study used logistic regression to study the likelihood of rural mother’s employment being stable.

The initial -2 Log Likelihood baseline value was 165.772 with an initial 69.6 percent of the equation predicted with the dependent variable and an absence of additional variables in the equation. As the variables are entered into the equation, the likelihood of the prediction increasing is measured with the decrease in the -2 Log Likelihood value. Variables that do little for the improvement of the prediction, the Wald will be non-significant. In this study the researchers designated the variables to be entered in 3 steps based on literature and theory. The  $\text{Exp}(B)$  is an indicator of the change in odds resulting from the change in the predictor. Any number greater than 1.0 increases the odds and likewise, and number less than 1.0 decreases the likelihood of the event occurring.

## Results

The sample consists of 138 low-income rural mothers who were employed at the time of the first interview in 2000. At that time, they were, on the average, 30 years of age, with the ages ranging from 18 to 54 years. The majority had a partner: 35.3% were married, and 15.8% were living with a partner. They had an average of 2.4 children, with the number ranging from one to seven. Their modal level of education was some college. Although the sample is somewhat racially diverse, the majority (72.5%) are non-Hispanic, white.

Those who were employed in 2000 were employed primarily in the service industry (48.6%). The next largest category was administrative support (20.3%). The remaining third were spread over seven other categories of employment. Thirty percent of the sample were employed at the time of each of the three interviews and are considered to have stable employment. The remaining seventy percent were employed at the time of the first interview but were not employed at the time of the second interview and/or the third interview. These rural women are considered to have intermittent employment.

About two-thirds of the participants indicated that they were covered by health insurance of any kind. Of those, the majority (56%) were covered by private health insurance of some kind, one third were covered by Medicaid, and the remaining were covered by some other kind of state health plan or other plan. In Wave 1, 52.2 percent of those who were employed worked 30 hours or more per week. In Wave 2, 54.3 percent worked 30 hours or more per week, and in Wave 3, 57.2 percent worked 30 hours or more per week. Many employers make employee benefits available to those who work 30 hours or more per week, thus more than 30 hours was viewed as a critical aspect of the participant's employment.

Family variables are often thought to influence a woman's ability to be employed. We, therefore, looked at change in marital status by Wave 3 as compared with Wave 1. Data indicate a small shift from being single, divorced or separated to be married or partnered.

The overall results of the logistic regression indicated that overall 77% of the employment stability was classified correctly with the model (Table 1). Those who were intermittently employment were correctly classified 92.6 percent of the time while those whose employment was stable were classified correctly only 41.5% of the time. Having medical insurance and 30 hours worked or over predicted the stability of employment. The -2LL decreased significantly between the initial or base analysis and the addition of the Step 1 variables. Family variables (marital status in Wave 3 and change in household size) were added in Step 2. These family variables did not significantly add to the likelihood of stable employment as the -2LL decreased only slightly to 136.353. The addition of the type of employment in Step 3 again did not increase the likelihood of predicting stable employment. Neither did it add to the goodness of the overall fit of the model. In conclusion, of the variables entered into the logistic regression, only those in Step 1, that is, having medical insurance and the number of hours worked, explain the likelihood of this sample of rural mothers having stable employment.

Table 1. Results of Hierarchical Logistic Regression Examining the Stability of Employment (N=138)

Variables	Model Evaluations						Hosmer and Lameshow chi-square
	B	Exp(B)	Wald	-2Log Likelihood	Model $\chi^2$	Cox & Snell R Square	
Step 1: Have medical insurance	.780	2.031	2.738 <sup>a</sup>				Chi-sq .713, df 2, sig. .700
Hours worked	2.150	8.585	16.797 <sup>d</sup>	137.747 <sup>d</sup>	29.419 <sup>d</sup>	.187	
Step 2: Marital status in wave 3	.182	1.204	1.056				Chi-sq 9.163 df 7, sig. .277
Change in household size	-.221	.802	.252	136.353 <sup>d</sup>	29.419 <sup>d</sup>	.196	
Step 3. Type of employment	.258	1.295	.375	135.976 <sup>d</sup>	29.796 <sup>d</sup>	.198	
Overall correctly classified <sup>c</sup> (n=138)					77%		
Stable employment correctly classified (n=41)					41.5%		
Intermittent employment correctly classified (n=94)					92.6%		

<sup>a</sup>  $p \leq .10$  <sup>b</sup>  $p \leq .05$  <sup>c</sup>  $p \leq .01$  <sup>d</sup>  $p \leq .001$

<sup>c</sup> Correct classifications reported from Step 3 of the hierarchical model.

The initial -2 Log Likelihood was 165.772.

### Discussion and Implications

Future studies should investigate the type of benefits the family has available to them through the employment stream. Our results indicate that for this group of employed rural mothers having access to health insurance appears to be important. About two-thirds of the mothers in this sample were covered by health insurance of some sort, but one third were not. The insurance coverage for these rural women was slightly better than Acs, et al. found using the National Survey of America Families data. Unfortunately, because of the small number of cases in this sample, we could not determine if the type or source of insurance is important, or just the fact that the woman is covered at all. Intuitively, access to health insurance should be important in maintaining stable employment, and

similar findings by Lee (2004) confirm our results. Having health insurance allows a person to seek medical care from a provider who is familiar with that person's history, which, in turn, may encourage the person to seek medical care at earlier stages of illness, before it interferes with employment. Another employee benefit that was of interest to us, but too few cases precluded its being included in the analyses, is sick leave. Here too, if one thinks intuitively, having sick leave available may influence the ability to be employed consistently as becoming ill would not jeopardize employment.

The prime factor in this case was the hours of employment for this sample of rural, low income mothers. Being employed more than 30 hours per week greatly increased the likelihood of stable employment. In the discussion of TANF reauthorization, much has been said about low income women just getting a job. We believe that these analyses indicate that, at least in the case of rural low income mothers, full-time employment is a key factor in having stable employment. Our sample is small, and specifically rural so generalizations cannot be made. But the results are intriguing, and should be investigated further. Our data are qualitatively rich and we are planning on looking into this intriguing questions of stability of employment and insurance through qualitative analyses.

What are the policies around the employment that support rural mothers having benefits and also medical insurance available? We know that most of the women did not have employer based health insurance, but rather state or privately funded health insurance when they had it at all. What are the educational messages that support the linkages of stable employment, health insurance, and number of hours employed?

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