

Linkages Between Employment Patterns and Depression Over Time: The Case of Low-Income Rural Mothers

Mental health and poverty have been linked. How one feels about one's financial situation may influence one's mental health. We examine rural, low-income mothers' employment patterns to seek to determine if depression and perception of changes in financial situation are related. Those who perceive that their financial situation is getting worse reported more symptoms of depression. Those who were consistently unemployed over three years also had more symptoms of depression.

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Introduction

Health is critical to ability to work. The likelihood of keeping or getting a full-time job for both men and women increases with increased positive health (Ross & Mirowsky, 1995). Poverty and mental health are also linked. A substantial amount of research has documented the relationship between mental health and poverty. Women are at greater risk than men for both poverty and depression (Lennon, Blome, & English, 2001). The purpose of this paper is to examine the linkages among mental health, employment status, income and perception of financial situation for rural low-income mothers.

The World Health Organization (2001) noted a connection between mental and physical health and demonstrated that, for people in poverty, there is a higher prevalence of mental and behavioral disorders having negative impacts on the ability to work. Mental health problems are also associated with increased dependence on public assistance and poor outcomes for children, including increased risk for mental and physical health problems and more academic and behavior problems (Ahluwalia, McGroder, Zaslow, & Hair, 2001; Petterson & Albers, 2001).

Rosen, Spencer, Tolman, Williams, & Jackson (2003), studying welfare dependent and non-welfare dependent low-income women, found that both groups were very likely to exhibit symptoms of depression and that those who suffered from depression also had lower rates of labor force participation. Earlier, Moore, Zaslow, Coiro, Miller & Magenheim (1995) documented that 42% of welfare-to-work program participants were clinically depressed. In a sample of rural mothers, life stressors and crises, such as homelessness, family violence, and incarceration or unexpected death of a family member, were found to be factors that impede the ability to maintain employment (Vandergriff-Avery, 2001, Vandergriff-Avery, Anderson & Braun, 2004).

Perception of financial situation is an individual assessment of how one's economic well-being. This perception includes the actual dollar income in addition to other substitutes for income such as transfers and food stamps. This is a micro level measure by which a person compares his or her financial situation to the previous year (Piescher, 2004). Marghi (2004) found perception associated with depression just as others have linked economic hardship with depression (Ross & Huber, 1985). While the actual dollar amount is important, what a person thinks about that amount, and whether the individual thinks the household is, comparatively speaking, doing better/doing worse/or remaining the same has the potential to influence the individual's mental outlook on life.

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 this study was selected based on interview status and employment history of participants over a three-year period. Participants were categorized into four groups based on their employment trajectories over the three years: (i) continuously employed with same job, (ii) continuously employed with different job, (iii)

continuously unemployed, and (iv) variable employment patterns. Because number of participants in the variable employment group was much larger than for the other groups, we selected 50 cases from this group to reduce the sample size to make it comparable to the other groups. As a result, 202 participants were included in this analysis.

Outcome Variables.

A measure of mother's depression was also included in data collection. The measure for depression comes from the Center for Epidemiologic Studies—Depression Scale (CES-D) scale, designed to measure current symptoms of depression in the general population (Radloff, 1977). The 20-item CES-D was administered at each of the three Waves to measure depressive symptoms of participants. Respondents were asked to rate how often they experienced specific situations or feelings in the past week. For example, one item stated, "I felt that everything was an effort." Total scores potentially ranged from 0 to 60 with scores of 16 or higher considered at risk for clinical depression. Cronbach's alphas on this scale were 0.889 (n=195) for Wave 1, 0.908 (n=195) for Wave 2, and 0.928 (n=189) for Wave 3.

Factors.

Participants were categorized into four groups based on their employment patterns over the three years of the study (as described above) to determine whether having any job was more predictive of low risk of depression compared to keeping the same job over time. Perceived financial situation change was measured by a question that asked participants to compare their incomes at Wave 2 to their situation at Wave 3, "Compared with last year, would you say that your family's financial situation has: improved a lot, improved a little, remained the same, gone down a little, or gone down a lot." Responses were coded perception of financial gain, financial stability, or financial loss.

Covariate.

The difference in inflation-adjusted dollars of per capita household income between Wave 1 and Wave 3 was entered into the model as a covariate. Monthly income for Wave 1 (2000) was first adjusted to 2002 dollars by multiplying by 1.428. Secondly, monthly household income for both Wave 1 and Wave 3 was divided by number of household members to obtain the per capita household income. Finally, the difference between Wave 1 per capita income (expressed in 2002 dollars) and Wave 3 per-capita income was calculated and divided by 100 to make the range more comparable to other variables in the model.

Analytical Strategies.

Missing values were imputed by Expectation Maximization (EM) using SPSS v.12.0.2. Because the outcome variables—depression measures—were conducted at three different time points, this study utilized ANCOVA with repeated measures to examine the impact of the factors on depressive symptoms over time, controlling for change in per capita household income between Waves 1 and 3.

Analysis

The sample consists of 202 low-income rural mothers. At the time of the first interview in 2000, they were, on the average, 30 years of age, with the ages ranging from 18 to 53 years. The majority had a partner: 41.1% were married, and 17.8% were living with a partner. They had an average of 2.3 children, with the number ranging from one to seven. Their modal level of education was some college. The majority (69.2%) were non-Hispanic, white. Of those employed, the majority worked in either the service industry (48.0%) or in administrative support (22.4%). Of the 202 participants included in this sample, 20.3% were continuously employed with same job, 28.2% were continuously employed in different jobs over the three year period; 26.7% were continuously unemployed; and 24.8% had a variable employment pattern (they were in an out of employment over the three year period).

The average score on the CES-D was 16.25 in 2000; 15.15 in 2001; and 15.10 in 2002. Mean monthly household income was \$2,062 in 2002, only \$36 greater in real terms than in 2000. Twenty-five percent indicated their financial situation had improved, 21% indicated it had remained the same, and 54% indicated that their financial situation had declined.

Effects of factors on depressive symptom over time

The effect of per capita income difference, employment patterns, and perceived financial situation on depressive symptoms over time is shown in Table 1. Results show depressive symptoms at different waves are not significantly different ($F(2, 188)=2.404, p=n.s.$). No significant effects on depressive symptoms were found for changes in per capita income between Waves ($F(2, 188)=1.319, p=n.s.$), or for employment patterns over time ($F(6,$

378)=.625, $p=n.s.$). A significant relationship was found between perceived change in financial situation and depressive symptoms over time ($F(4,378) = 2.686, p=.031$).

Effect of factors on depressive symptoms between subjects

The results of between-subject effects on depression can be found in Table 2. Statistically significant effects were found for employment patterns on depressive symptoms ($F(3,189) = 5.013, p=.002$.) Perceived financial change also had statistically significant effects on depressive symptoms ($F(2,189) = 8.924, p=.000$).

Table 1.
Multivariate tests of within-subjects effects on depression (n=202).

Variable	Value	F	Hypothesis DF	Error DF	p
Depression	.025	2.404	2	188	.093
Depression*Income difference	.014	1.319	2	188	.270
Depression*Employment patterns	.020	.625	6	378	.711
Depression*Perceived financial change	.055	2.686	4	378	.031

Table 2.
Between subjects effects on depression (n=202).

Variable	SS	DF	MS	F	p
Intercept	6554.665	1	6554.665	1810.451	.000
Income difference	2.564	1	2.564	.708	.401
Employment patterns	54.449	3	18.150	5.013	.002
Perceived income change	64.615	2	32.307	8.924	.000
Employment patterns * Perceived change in financial situation	5.837	6	.973	.269	.951
Error	684.267	189	3.620		

Post hoc comparisons (Bonferroni tests) indicate that participants who were continuously unemployed are significantly more depressed than those who were continuously employed (both with same job and with different jobs). Comparisons between other groups did not show any significant differences. Participants who perceived a decline in their financial situation were significantly more depressed than those who described their financial situation as stable or getting better. Other comparisons, however, did not show any significant differences.

In summary, both employment pattern and perceived financial change over time was significantly related to the level of depression at each interview. Only perceived financial situation change, however, had an effect on the change in depressive symptoms within subject groups over time.

Discussion and Conclusions

The purpose of these analyses was to begin to understand the relationship between employment and depressive symptoms of rural, low-income mothers. We were trying to if rural, low-income mothers suffering from depression find it difficult to work, or if rural, low-income mothers have difficulty getting suitable employment and become depressed. Some intriguing patterns were revealed through these analyses.

Over time, the participants' depressive symptoms did not vary significantly. For this group of rural, low income mothers, little change in depressive symptoms occurred over time in relation to their per capita household incomes and their individual patterns of employment. The most telling results occurred in the between groups analyses. Depressive symptoms increased over time for those who perceived their financial situation was declining over time increased meaning that they were more depressed over time. Further, those who were continuously unemployed had significantly higher depressive symptoms than the other employment pattern groups. Again, they were more depressed over time.

What are the implications of these results? For rural, low income families, consistent employment may reduce stress and depressive symptoms. Policies promoting employment should seek to improve the potential

employability of rural, low-income rural mothers. In rural areas, the stability of the economy and the array of employment opportunities are key factors for family financial stability and mental health of mothers.

For educators, and especially Extension educators working with welfare-to-work programs, these results are very promising because these results reinforce the value of employment to mental health over time. They also support the policy of promoting further education among mothers, especially rural mothers, who are transitioning from welfare-to-work. Welfare-to-work clients should be encouraged to look for employment that has appeal to them on a long-term basis. Policy-makers should be introduced to the idea that “any job” is not necessarily the appropriate strategy for long-term financial self-sufficiency. For financial counselors or educators and mental health workers, the significant finding that perception of financial situation is related to mental health should be incorporated into their work with mothers. Economic security likely is more important to these mothers than just current dollar income. An individual’s perception of their financial well-being may be influenced by their progress or lack of progress over time. This, in turn, has the potential for the individual’s mental health to become more positive or negative based on personal perception of how the household is doing financially.

In conclusion, being consistently employed and believing that their financial situation is improving may lessen rural, low-income mother’s symptoms of depression. Further, symptoms of depression may make it difficult for rural, low-income mothers to be consistently employed, an indication that mental health services must be a priority in low-income, rural communities.

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