

SYMPTOM REPORTS AND ILLNESS BEHAVIOR AMONG EMPLOYED WOMEN AND HOMEMAKERS

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ABSTRACT: The purpose of this study was to determine the extent to which women's roles are associated with their symptom reporting and their illness behavior. Data were obtained from 259 married women residing in a probability sample of households in a single community. A positive and statistically significant relationship was found between the number of a woman's role responsibilities and the number of symptom complexes she reported. The best multivariate model to explain the variance in symptom-complex reporting included two variables related to the woman's role demands, having an ill spouse and having three or more children.

Role density had only modest effects on illness behavior. Women who were employed or who had an ill child were significantly less likely to cut down on their activity because of symptoms than were women with neither responsibility. Women who had children of pre-school age were more likely to consult the lay network for their symptoms than were women whose children were older. Family pressures seem to be more important in the generation of symptoms than the woman's employment status. Women's roles had minimal effect on their illness behavior.

More than 37 million American women were gainfully employed in 1975, a figure that represents 46.5% of all women 16 years of age and older.¹ Although in past decades there has been a marked tendency for women to "drop out" of the labor force in their early 20s, a time probably coinciding with marriage or with birth of the first child, women of childbearing age now represent a substantial proportion of the female labor force.² According to the United States Department of Labor,³ the number of working mothers with children under the age of 18 has increased ninefold since 1940 and now stands at 13.6 million. More than one third of these women have children under six years of age.³ If this trend for women to be employed outside the home is not reversed, it is likely that a majority of women in this country will be gainfully employed throughout their lives.

In the wave of research about employment of mothers, little attention has been devoted to the health status of the woman herself. In fact, only recently have investigators begun to analyze employment status in terms of such dependent variables as mental and physical illness. These studies have yielded conflicting results regarding illness experience among employed women and homemakers. Although several investigations show that employed women report

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fewer symptoms than homemakers,⁴⁻⁸ one recent study showed no association between employment status and reporting of symptoms.⁹ Another recent study demonstrated that women with the least demanding immediate family situations (those who had no children) and those from the most demanding social arenas (those who were poor) reported the most morbidity.⁷ Yet another demonstrated that women who had been full-time employees for more than a year were healthier than wives not employed outside the home.¹⁰

The literature also provides conflicting reports on the effects of employment on illness behavior. Finseth and colleagues found that women presumed to be homemakers stood out as high users of health maintenance organization (HMO) services when compared with women presumed to be employed.⁸ The homemakers made more visits to the HMO and received more prescription medications. Pope and McCabe also found that employed women visited the doctor less often for any reason and contacted the physician less often for diseases with a large emotional component than did housewives.⁹ On the other hand, Rivkin's findings demonstrated the opposite: employed women used health services more frequently than women who were not employed.⁷ This was especially true for employed women who were married and had children. Rivkin suggested that employed women who had many responsibilities inside and outside the home entered the health care system when they were ill, whereas women who were not employed were more likely to stay in bed or reduce their activity in response to symptoms.

It is likely that inconsistency in results from previous investigations can be attributed in part to the lack of attention paid to the multiple roles that women perform in addition to gainful employment. Thus, the purpose of this study is to determine the extent to which the number and type of role responsibilities affect the reporting of symptoms and illness behavior in a population of married women with children.

HYPOTHESES

It is likely that multiple and diverse role responsibilities affect both symptom reporting and illness behavior, but via different mechanisms. While symptom reporting is likely to be a function of role strain, illness behavior is more likely to be a function of its compatibility with a woman's total complement of roles.¹¹ One hypothesis was that women with multiple role responsibilities are subject to role strain and therefore report more symptoms than women with fewer role responsibilities. Another hypothesis was that when women with multiple and diverse role responsibilities are ill they engage in illness behaviors that are most compatible with their roles. In particular, women with many role responsibilities should be less likely to spend a day in bed due to their symptoms, cut down on their usual activity, or consult with the lay network than women who have had fewer responsibilities. On the other hand, women with many and

diverse role responsibilities would be more likely to seek professional services for their symptoms and use nonprescription medications than would their counterparts with fewer role responsibilities. Women with multiple role responsibilities have little leeway to choose illness behaviors that interfere with performance of their other roles. Taking a nonprescribed drug might provide symptom relief and compete minimally with the time allocated to other roles. As Rivkin suggested,⁷ women with dense role responsibilities use health services since alternative illness behaviors, such as staying in bed, are simply not compatible with their responsibilities. Using health services also provides women who cannot perform their roles with legitimation to rest.

METHODS

The dataset used to test these hypotheses was derived from the AAFP-UNC study of the organization, utilization, and assessment of primary medical care.¹² The focus was on two areas: experiences of residents in a community prior to their entrance into the health care system and the effects of the system on those who gained access to it and used its services.

The data analyzed in this report were obtained by means of a survey of 1,122 households in the Fort Wayne, Indiana, SMSA. The sampling approach was designed to include 1,000 households representative of the entire community, with sampling by households in census tracts within five geographic areas of the city and suburbs. For a more detailed description of the sampling strategies and study designs, see the earlier work of Hulka and Cassel.¹²

The data were collected on two occasions: participants were interviewed in their homes at the initiation of the study and again approximately five weeks later. Data were collected by a trained interviewer who interacted with each family member separately. All persons 14 years of age or older reported for themselves. No proxy respondents were used. Several topics were included in the survey but those of primary interest to this study relate to the illness experiences of women and their families. Sociodemographic data were also collected.

Sample

Of the 1,122 households participating in the study, there were 266 families in which all family members had completed all parts of the study and in which the adult female was either employed or a homemaker, had one or more children, was married, and was 60 years of age or younger. Seven nuclear families were excluded because the mother was looking for work, going to school, or not working because of illness, retirement, or disability.

The women in the sample were between 18 and 60 years of age, with a mean age of 37.4 for the employed women (EW) and 35.0 for the homemakers (HM). There was a larger proportion of Black women and college-educated

women among the employed group. There was a larger representation of poor women (Hollingshead's group V)¹³ in the employed group as well. The number of children per family was similar for the EW and HM (2.4 and 2.5, respectively), but there were fewer preschoolers in the EW families (with 36.4% of the EW having one or more preschool children as opposed to 57.3% of the HM).

Of the employed women, 72% worked full time. They were most likely to be clerical and sales workers (39.8%), but their occupations ranged from unskilled laborers to higher executives. Women in both groups were most likely to have a regular source of health care (97.7% of the EW and 98.8% of the HM). Both the employed women and the homemakers had insurance policies (97.7% of each group). Most insurance policies were group/employer-sponsored, with only 1.1% of the EW and 0.6% of the HM naming Medicaid as a source of third-party payment.

Definitions

The AAFP-UNC study involved a novel approach; reports of morbidity utilized a description of symptom complexes rather than individual symptoms. A list of possible complaints was read to each subject, who was then asked to indicate which of these had been experienced over the last four weeks. Subjects were then asked to group the symptoms they perceived to be related. It was thought that the person's perceptions of which complaints were related in what was termed a "symptom complex" would be more relevant to illness patterns and illness behavior than isolated complaints. Information was then obtained regarding each symptom complex, together with illness behavior related to it, and any use of the health services during the preceding four-week period. The duration of each symptom complex was estimated, and the person's perception of seriousness, worry, disability, and behavior associated with the symptom complex was elicited.

To explore *illness behavior* patterns, data were analyzed for a single symptom complex chosen at random from those the women reported during both interviews. When only one symptom complex was reported, it was included in the following analysis. The women were asked to indicate what they had done in response to the symptom complex—cutting down on usual activity, resting in bed, using nonprescription drugs, consulting the lay network, or visiting a health professional.

An index of *role density* was constructed by summing the number of roles likely to produce intense demands for women in the study group. Rivkin had suggested that the family contextual variables most likely to influence women's illness experiences were both the *number* and *ages* of her children and especially the presence of preschoolers, since they represented the greatest role obligations for adult women.⁷ In addition, the presence of an ill spouse or ill children in the family was thought to increase considerably the woman's responsibilities. Being employed outside the home created yet another set of role responsibilities. Thus,

the index of role density was created by summing the number of the following roles applicable to each woman: (a) being the mother of three or more children, (b) being the mother of one or more preschool children, (c) having a child who was ill during the study period, (d) having a spouse who was ill during the study period, and (e) being employed outside of the home.

RESULTS

Reporting of Symptom Complexes

The first hypothesis to be tested in this study was that there would be a positive association between role density and the number of symptom complexes the women reported. The number and percentage of women and the number of roles they performed are given below:

Number of roles	Frequency	Percent
0	6	2.3
1	35	13.5
2	82	31.7
3	81	31.3
4	46	17.8
5	9	3.5

There was a significant positive correlation between role density and symptom complexes (Spearman's $\rho = 0.253$, $p < 0.0001$). The percentage of women reporting one or more symptom complexes increased with the number of roles the women performed (see Figure 1). About 50% of the women performing none or one of the roles reported symptoms, whereas 80% of the women performing four of the roles and 89% of the women performing all five reported symptoms.

The effect each of the roles had on reporting of symptom complexes was examined by considering the mean number of symptom complexes reported and the percentage of women in each category of each role reporting one or more symptom complexes. As illustrated in Table 1, the mean number of symptom complexes differed significantly only when a child or a spouse was ill.

A number of sociodemographic variables were examined to determine whether they confounded the association between role density and symptom reporting. The candidate variables included the woman's age, education, race, and social class. Of these, only social class was correlated, although weakly, with the number of symptom complexes that the woman reported (Kendall's $\tau = 0.111$, $p < 0.018$). Women from lower social classes reported the greatest number of symptoms. None of the other variables was associated with role density.

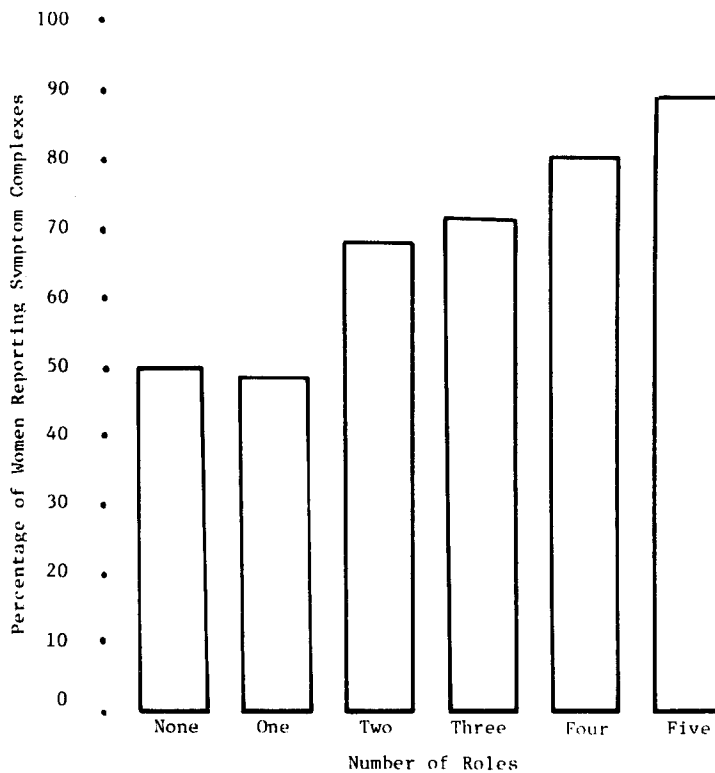


FIGURE 1. Percentage of Women with Symptoms According to the Number of Roles Performed.

To assess whether the relationship between role density and symptom reporting held when the effect of social class was taken into account, forward stepwise multiple regression analysis was used. The results in Table 2 suggest that when social class was controlled by forcing it into the equation on the first step, role density made a significant improvement in the model but explained only 6.9% of the variance in the number of symptom complexes reported.

Because examination of the full aggregate of role responsibilities may have masked important individual effects of some role responsibilities, an attempt was made to find the best model of the roles taken individually. Being the mother of three or more children and having an ill spouse seemed to have the greatest effect on the number of symptom complexes that the woman reported; together these explained 8.1% of the variance in the number of symptom complexes (part 2 of Table 2).

Illness Behavior

In the presence of symptoms, people can select from a variety of behavior resources in connection with their illness: use of the services of a health professional, resting in bed, cutting down activity, consulting the lay network, or

TABLE 1
Mean Number of Symptom Complexes and Percentage of Women Reporting Symptom Complexes According to Role Responsibilities

<i>Role Responsibilities</i>	<i>Mean Number of Symptom Complexes Reported</i>	<i>Percentage of Women Reporting ≥ 1 Symptom Complex</i>
Three children		
Yes	1.54 (1.4)**	72.4
No	1.21 (1.1)	67.1
Preschool children		
Yes	1.37 (1.2)	72.9
No	1.28 (1.3)	64.7
Ill child*		
Yes	1.45 (1.3)	71.7
No	1.01 (1.1)	62.5
	<i>t</i> = 2.51, <i>P</i> < 0.013, 257 <i>df</i>	
Ill spouse*		
Yes	1.61 (1.3)	76.6
No	0.90 (1.0)	57.4
	<i>t</i> = 4.76, <i>P</i> < 0.000, 251 <i>df</i>	
Employed outside the home		
Yes	1.27 (1.1)	71.6
No	1.36 (1.3)	67.8

**P* values were adjusted to reflect the number of tests performed according to the method described by Dunn and Clark.¹⁴ Tests in this table were therefore considered to represent a statistically significant difference only when *P* < 0.01.

**One standard deviation is in brackets.

using nonprescription drugs. The second premise guiding this study was that the density of the woman's role responsibilities would affect her ability to engage in various types of illness behavior. In particular it was hypothesized that:

1. Role density would be negatively associated with the number of days spent in bed because of symptoms, the number of days of reduced activity, and consultation with the lay network.
2. Role density would be positively associated with the use of professional services for symptoms and the use of nonprescription medications.

Taken together, the woman's role responsibilities did not have important effects on four of the five types of illness behavior described here. Only the number of days on which the woman cut down on her usual activity was negatively affected by role density (Spearman's $\rho = -0.149$, $p < 0.025$).

It can be readily seen from Table 3 that the woman's roles, taken individually, had minimal effect on the five types of illness behavior, with only three exceptions. Women who had preschool children were more likely to consult the lay network for their symptoms than were women who did not have preschool children ($\chi^2 = 6.276$, 1 *df*, $p < 0.01$). Women who had one or more ill children were less likely to cut down on their activity to cope with their symptoms than

TABLE 2
Models to Explain Variance in the Number of Symptom Complexes Reported

1. Effect of Role Density				
<i>Variable</i>	<i>Beta</i>	<i>Partial F</i>	<i>P Value</i>	<i>Cumulative R² for Each Step</i>
Social class*	0.115	3.591	0.029	0.018
Role density	0.227	14.005	0.000	0.069
Total $F_{2,256} = 9.530, P = 0.001$				
2. Effect of Individual Roles				
<i>Variable</i>	<i>Beta</i>	<i>Partial F</i>	<i>P Value</i>	<i>Cumulative R² for Each Step</i>
Social class*	0.111	3.459	0.029	0.018
Ill spouse	0.257	18.456	0.000	0.084
Three or more children	0.125	4.398	0.037	0.099
Total $F_{3,255} = 9.286, P = 0.000$				

*Hollingshead and Redlich.¹³

were their counterparts with no ill children. In fact there was a negative correlation between having an ill child and the number of days on which the woman reduced her activity (Kendall's $\tau = -0.131, p < 0.035$). Likewise, there was a negative relationship between employment outside the home and the number of days on which women cut down their activity (Kendall's $\tau = -0.114, p < 0.013$).

TABLE 3
Number and Percentage of Women Using Five Types of Illness Behavior According to Role Responsibilities

<i>Role Responsibilities</i>	<i>Consulting a Professional</i>		<i>Consulting the Lay Network</i>		<i>Using Nonprescribed Medications</i>		<i>Resting in Bed</i>		<i>Cutting Down on Activity</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
	≥ 3 children									
Yes	16	22.5	9	12.7	23	32.4	8	11.6	57	19.7
No	31	28.7	20	18.9	31	28.7	8	11.4	80	23.1
Preschool children										
Yes	30	29.4	23	23.0	33	32.4	13	13.3	23	23.2
No	17	22.1	6	7.8	21	27.3	7	9.2	15	19.7
Ill child										
Yes	34	25.4	21	15.9	40	29.9	14	10.9	24	18.5
No	13	28.9	8	17.8	14	31.1	14	13.3	14	31.1
Ill spouse										
Yes	31	25.6	21	17.5	37	30.6	12	10.1	24	20.3
No	16	27.6	8	14.0	17	29.3	8	14.5	14	24.6
Employed outside the home										
Yes	20	31.7	8	12.7	20	31.7	6	9.7	9	14.5
No	27	23.3	21	18.4	34	29.3	14	12.5	29	25.7

DISCUSSION

The hypothesized relationship between role density and symptom complex reporting was observed. This was not consistent with Rivkin's work showing that women with the least demanding family situations reported the most morbidity over a two-week period.⁷ Although role density explained about 5.1% of the variance in the number of symptom complexes reported, two variables contributing to that index constituted a better model: having three or more children and having an ill spouse. Although the direct relationship between number of children in the family and morbidity is contrary to Rivkin's findings, it would appear consistent with the role strain explanation. The clustering of symptoms in families might account for the association between symptom reports from both the husband and wife.¹⁵ The effect of social class on symptom reporting has also been documented by Rivkin, who attributed its influence on morbidity to the more stressful social experiences of women from the lower social classes.⁷

In sum, these findings are consistent with the notion that morbidity among women is related to demands associated with their roles, especially caring for many children and coping with illness of other family members. These demands appear to be more important determinants of morbidity than social class. When social class is forced into the stepwise multiple regression equation before allowing other variables to enter the model, illness of the spouse and number of children both entered the model and made significant contributions to explaining the variance in symptom-complex reporting. Such relationships constitute support for Nathanson's notion that for women illness may be a response to the stresses and strains inherent in the performance of many demanding roles.¹¹

Of the five kinds of illness behavior studied, only cutting down on usual activity seemed to be influenced by role density. In particular, having an ill child and being employed were both negatively associated with the number of days of reduced activity, a relationship consistent with the notion that women cope with their illness in ways that are compatible with the demands of their roles.¹¹ A relationship between employment and use of professional services was conspicuously absent from this sample. It seemed that while employment precluded being able to cut down on one's activity, it did not foster other types of illness behavior. Women with young children were more likely than those with older children to consult with their peers. This may be a function of younger women having less of a fund of health information and requiring validation of their illnesses. Thus, in this sample, there appears to be meager empirical support for the proposition that illness behavior is a function of its compatibility with a woman's roles.

Although some investigators have expressed concern about the health effects of employment for women, it appears that family stressors are more important determinants of symptoms than is employment. Women's roles appear to exert minimal effects on illness behavior, with the exception of the

predictable findings that women who must care for a sick child or go to work cannot cut down on their activity as readily as others and that women who have young children are more likely to consult with their peers about symptoms than women who have older children. It appears that while women adjust fairly well to the demands of employment, family pressures manifest themselves in symptoms and to a limited extent influence the woman's behavior in times of illness.

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