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DEPRESSION AND SATISFACTION WITH HEALTH COVERAGE AND MEDICAL CARE IN THE 1998 NRC HEALTHCARE MARKET GUIDE®SURVEY

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Abstract

The purpose of the present study was to examine the relationships among ratings for depression and health-plan and medical-care satisfaction using data from the 1998 National Research Corporation Healthcare Market Guide[®](HCMG) survey (N = 120,855). Respondents in families in which one or more members had depression (self-report) gave lower satisfaction ratings than those in families in which no member had depression on four global and four composite satisfaction measures. Although satisfaction ratings, generally, were high and depression effects were small, the authors nevertheless recommend efforts to improve access and quality of mental health care.

Keywords

depression; health plan satisfaction; survey

Depression is a very prevalent, costly, serious, and often chronic illness (Pincus & Pettit, 2001). Its treatment, however, is not optimal (Schulberg et al., 1996; Wells, 1994; Young, Klap, Sherbourne, & Wells, 2001). Barriers to successful depression treatment have been identified at the patient, provider, practice, health plan, and purchaser levels (Pincus, Pechura, Elinson, & Pettit, 2001). For example, (a) depressed patients may be more pessimistic and less motivated to seek appropriate care, (b) providers, especially those in primary care, may lack appropriate training and may be in practice arrangements that do not facilitate effective care, and (c) health plans may not offer benefits (or be requested by employers or purchasers to offer

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benefits) that encourage or even allow for effective care. Moreover, despite passage of the 1996 Mental Health Parity Act (Pub. L. 104–204), questions remain about the adequacy of mental health coverage. Is it that more people are covered but with fewer benefits (Jensen, Rost, Burton, & Bulycheva, 1998)? Have treatment options kept pace with scientific advances (Norquist & Hyman, 1999)?

Clearly, problems with quality of health care are not specific to depression (Institute of Medicine, 2001). One strategy to encourage increased quality and to overcome some of these barriers, especially at the health-plan and purchaser levels, is to incorporate measures of consumer satisfaction in health plan and purchaser decision making. Determinants of consumer satisfaction, however, are complex and especially so regarding mental health care (Marshall, Hays, & Mazel, 1996). Nevertheless, consumer satisfaction studies consistently have shown that depression predicts less satisfaction with health care (Druss, Schlesinger, & Allen, 2001; Druss, Schlesinger, Thomas, & Allen, 1999; Hermann, Ettner, & Dorwart, 1998; Marshall, Hays, & Mazel, 1996).

Health plan policyholders appear to be less satisfied with their mental health coverage and care.

In the present study, we explore the relationships among ratings for depression and health plan and medical care satisfaction using data from the 1998 NRC Healthcare Market Guide[®](HCMG) survey (National Research Corporation, 1998), which was fielded shortly after compliance with Pub. L. 104–204 was required. We hypothesized that, despite possible gains, health coverage and care ratings would be worse for families in which one or more members had depression versus families in which no person had depression. In a preliminary analysis of these data (Haviland, Dial, McGhee, & Pincus, 2001), depression was associated with a lower global health-plan satisfaction measure among fee-for-service and HMO (health maintenance organization) enrollees. In the present study, we expand on this analysis and evaluate several satisfaction measures while controlling for factors that also might influence ratings.

METHOD

Data Source

Data were from the 1998 NRC HCMG survey (National Research Corporation, 1998). The survey instrument included questions about consumers' assessments of their health plans, personal physicians, and local hospitals and health systems. In March 1998 it was mailed to 250,000 households in the 48 contiguous states. The sample was drawn from a respondent panel recruited and maintained by National Family Opinion Research, Inc. Selections matched U.S. Census demographics on geographic region, household size, age of the head of household, population density, and annual household income. Returns were closed in May 1998. Responses were received from 163,641 households (65%); actual respondents were the primary health care decision makers in each household.

Subjects

The analytic sample included the 120,855 respondents who answered at least two of the four global satisfaction measures and at least half of the items on each of the four composite satisfaction scales (described below). Missing values were replaced with means of available item responses. If a respondent had a missing value on one of the global items, it was replaced with the average of the other three global items; similarly, the composite scales were constructed by averaging non-missing items together. Of the 120,855 respondents, 87,699 answered all satisfaction questions. Of those 33,156 with missing data, only 2,625 had more than three missing item values.

Survey Measures

The dependent variables in this study are four global rating questions and four composite (multiple-item) scales. The first two global questions were rated on a 7-point scale, which ranged from 1 (completely dissatisfied) to 7 (completely satisfied); the third was rated on a 4-point scale ranging from 1 (definitely not) to 4 (definitely yes); the fourth was rated on a 4-point scale ranging from 1 (definitely yes) to 4 (definitely no). These four items were as follows:

- All things considered, how satisfied are you with your health plan?
- All things considered, how satisfied are you with the medical care you received from your health plan?
- Would you recommend your health plan to family or friends if they needed care?
- Do you intend to switch to another health plan when you next have an opportunity?

We calculated the four composite measures from respondents' ratings of specific aspects of their health care and services, health plan, and most recent doctor's visit. Each individual item was rated on a 5-point scale, ranging from 1 (poor) to 5 (excellent):

- *Access to Care* (5 items; e.g., ease of making an appointment and number of doctors to choose from)
- *Providers' Delivery of Care* (10 items; e.g., attention given to what you had to say, thoroughness of treatment, overall quality of care—last doctor's visit)
- *Plan Customer Service* (2 items; availability of information about administrative issues and ease of paperwork and claims)
- *Cost/Benefits of Care* (4 items; e.g., premium, benefits, and deductible/co-pay)

Internal consistency reliability estimates (Cronbach's *alpha* [Cronbach, 1951]) were adequate for making group comparisons: 0.88 for Access to Care, 0.95 for Providers' Delivery of Care, 0.73 for Plan Customer Service, and 0.87 for Cost/Benefits of Care.

The main independent variable is depression/no depression, which was taken from the following question, "Does any household member have any of the following ailments? (mark all that apply): Diabetes (high blood sugar); Sciatica or chronic back problems; Depression; Arthritis or any kind of rheumatism; Asthma." A total of 15,399 marked Depression (105,456 did not).

Are patients with depression and family members less satisfied with their health plans and medical care?

The case-mix (adjuster) variables are age, gender, perceived health status, education, health plan type, race/ethnicity, and medical problems. We constructed three age categories to protect against the possible nonlinear effects of age (18–34, 35–54, and 55+). Respondent gender is a dichotomous variable (female or male). Perceived health status has five categories (excellent, very good, good, fair, and poor), education has three (some high school or less, completed high school, and some college or more), and insurance plan type has six (traditional/indemnity, health maintenance organization, preferred provider organization, point-of-service, Medicare, and Medicaid). Race/ethnicity has six categories. Respondents were categorized as Hispanic if they answered yes to the question, "Are you of Spanish/Hispanic origin or descent?" (regardless of race). Respondents who answered "no" to this question: American Indian or Alaska native, Asian or Pacific Islander, Black or African American, White, another race or multiracial, or missing. The four medical problems—diabetes, arthritis, chronic back problems, and asthma—were coded yes or no. In a preliminary analysis of these data (Haviland,

Dial, McGhee, & Pincus, 2001), diabetes was associated with higher overall health plan satisfaction ratings.

Analysis Plan

We cross-tabulated depression/no depression and the other independent (case-mix) variables, and tested the significance of associations with a chi-square statistic. We computed mean scores by depression/no depression on each of the four global ratings and each of the four composite measures. Mean differences were tested for statistical significance with *t* tests for independent samples.

With such a large sample, very weak associations and very small differences are statistically significant; hence, we evaluated the strength of the relationships between pairs of categorical variables with Cramer's *phi* (Cramer, 1946). Its value ranges from 0 to 1, and its interpretation is very similar to that of a correlation coefficient. This makes it useful for comparing strength of association across contingency tables of varying dimensions. For the global and composite ratings, we calculated effect size (Cohen's *d* [Cohen, 1992], the mean difference divided by the pooled standard deviation). Values of 0.20, 0.50, and 0.80 correspond to small, medium, and large effects, respectively.

We used linear regression to assess differences in global and composite rating scores between diagnostic groups, controlling for age, gender, perceived health status, education, health plan type, race/ethnicity, and medical problems. For these analyses, n = 98,204 (respondents for whom complete case-mix data were available). We estimated separate ordinary least squares regression models for each global and composite measure.

RESULTS

Across depression/no depression, the differences in the distributions of all case-mix variables —age, gender, education, health status, insurance type, race/ethnicity, and medical problems —were statistically significant (chi square, p < .01). *Phi* coefficients ranged from 0.03 (race/ ethnicity) to 0.19 (health status). The distributions by depression/no depression are shown in Table 1.

Means and standard deviations for the four global rating questions and the four composite measures (scale scores, also, have a possible range of 1–5) are shown in Table 2. All group mean differences (global and composite) were significant (*t* tests, p < .01). Respondents in the depression subgroup consistently gave worse ratings of their coverage and care than did respondents in the no-depression subgroup. All effect sizes (*d*), however, were relatively small (range = 0.12–0.20; median = 0.17).

In all eight regression models, depression was a significant negative predictor of satisfaction when controlling for age, gender, perceived health status, education, health plan type, race/ ethnicity, and medical problems. Diabetes and arthritis were consistent positive predictors of satisfaction. Standardized beta coefficients (and standard errors) for the depression and medical-problem variables are shown in Table 3.

Given that some respondents were, themselves, depressed, whereas others were not, we ran a second set of analyses on respondents in single-family households (n = 25,485; 2,953 depression, and 22,532 no depression). The results were similar to those reported above. Depressed individuals consistently rated their health coverage and medical care lower than did their non-depressed counterparts (d range = 0.17–0.28; median = 23.5). Moreover, depression was a significant negative predictor of satisfaction in all eight multivariate models. Diabetes was a significant, positive predictor in three of the four global and in all four composite models.

Arthritis was a positive predictor in one global (intent to switch) and one composite (cost/ benefits of care) model; asthma was a positive predictor in the cost/ benefits model. Chronic back pain was a negative predictor in two global (overall and medical-care satisfaction) models.

DISCUSSION

Health plan policyholders appear to be less satisfied with their health plan's global performance and with all aspects of coverage and care that we assessed in the present study if one or more family members has depression. However, satisfaction ratings, generally, are high and depression effects are very small.

Why are patients with depression and family members less satisfied with their health plans and medical care? Because these differences persisted even after controlling for demographic factors, health status, and health plan type, selection effects on these ratings are unlikely. Other possibilities include the following:

- *Dissatisfaction with Access to Care.* Despite substantial increases in rates of treatment for depression (Olfson et al., 2002), the limited availability of behavioral health providers (Goldman, 2001), especially psychiatrists, has been identified as a nationwide problem. Do depressed patients face discrimination in accessing general medical care?
- Dissatisfaction with Amount or Quality of Care. Although rates of treatment have increased, the amount or intensity of care has decreased (Olfson et al., 2002). Individuals may be dissatisfied because the desired amount or type of care (e.g., psychotherapy) typically may not be offered or available through their insurance carrier. As noted earlier, serious problems persist in the quality of mental health care. Dissatisfaction could mean that individuals recognize these quality problems, or they do not feel they are getting better to the extent they reasonably could expect.
- Does the mere presence of depression affect the perceptions of individuals as they
 rate many aspects of their lives (including health plan satisfaction)? Clearly, the
 definition of *depression* includes pessimism and hopelessness. Although raters
 included family members who were not depressed, as well as individuals who were
 no longer depressed, we cannot rule out this factor as a source of dissatisfaction.
 Moreover, the higher-than-average satisfaction ratings for families and individuals
 with other chronic diseases suggest that attitudes stemming from the illnesses
 themselves or attitudes toward providers and plans could be important.

Although we were unable to disentangle which one or more of these reasons are at the heart of the differences observed, each suggests different strategies for action. Improving access requires a larger available work-force of behavioral specialists, especially psychiatrists, to reduce maldistribution (Goldman, 2001). In addition (or alternatively), increasing the capacities of the primary sector through integration of behavioral health services also can improve access (Pincus, 2003). The enactment of parity laws may be one strategy for enhancing the availability of care resources and ensuring that there are fewer arbitrary limits in care financing. Also, more intensive quality improvement efforts along with purchaser and consumer monitoring of quality indicators would help to improve quality. Finally, to the extent that lower satisfaction ratings are associated with depression itself, health plans that provide better care for depression may incur adverse selection as more individuals with depression choose to join those health plans. Thus, the better plans may be at risk for lower satisfaction ratings. Improved methods for risk adjustment are needed to avoid penalizing these plans.

The better plans may be at risk for lower satisfaction ratings.

Among the strengths of this study are a large *N* and a nationally representative sample. Moreover, the study included analyses that compared the policyholders who had family members with depression with the policy-holders who had family members with other chronic diseases. Among the study's limits are sample representativeness, particularly the response rate and the missing data. The survey response rate was acceptable (65%); we were able to use a subset of 120,855 who answered two of the four global satisfaction questions and at least half of the items on each of the four composite satisfaction scales. However, we are not able to disentangle to what extent the ratings reflected the medical/surgical health plan or behavioral health plan (or even if there was a carve-out). Finally, we classified families and individuals as "depressed" based on the respondents' self-reports. Respondents were given no criteria for making this judgment, so the determinations likely were made in widely varying ways.

In sum, although consumer reports, increasingly, are seen as valid indices of care quality (Cleary, 1999), the relationship between depression and health care satisfaction, clearly, is complex (Druss, Schlesinger, & Allen, 2001; Druss, Schlesinger, Thomas, & Allen, 1999; Hermann, Ettner, & Dorwart, 1998; Marshall, Hays, & Mazel, 1996). Future research should seek to understand the relationship among clinical status, satisfaction, and process (access and quality) of care.

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	TABLE 1
Sample Characteristics (1998 NRC HCMG Surve	ey) by Depression/No Depression

	Depre	ssion	No Depr	ression	Tot	al	
	n	%	n	%	n	%	Phi
Age							.065
18-34	2.927	19.0	21.232	20.1	24.159	20.0	
35-54	8,235	53.5	46 669	44 3	54 904	45.4	
55+	4.237	27.5	37,555	35.6	41,792	34.6	
Total	15 399	100.0	105 456	100.0	120 855	100.0	
Gender	10,077	10010	100,100	10010	120,000	10010	043
Female	10.666	69.3	66 536	63.1	77 202	63.9	.015
Male	4 733	30.7	38,920	36.9	43 653	36.1	
Total	15 399	100.0	105 456	100.0	120 855	100.0	
Education	15,577	100.0	105,450	100.0	120,055	100.0	040
Lass than High School	1.023	67	4 620	4.4	5 652	17	.040
High School Graduate	3 686	24.1	23 272	22.2	27.050	22.6	
More then High School	5,000	24.1	23,373	22.5	27,039	22.0	
More than High School	10,587	09.2	/0,080	/3.3	87,275	12.1	
10tal Handdh Statur	15,296	100.0	104,088	100.0	119,984	100.0	102
Health Status	2 105	1.4.1	07.544	26.0	20 (10	25.2	.193
Excellent	2,105	14.1	27,544	26.9	29,649	25.3	
Very Good	4,615	31.0	40,310	39.4	44,925	38.3	
Good	4,615	31.0	25,328	24.7	29,943	25.5	
Fair	2,612	17.5	7,837	7.7	10,449	8.9	
Poor	938	6.3	1,352	1.3	2,290	2.0	
Total	14,885	100.0	102,371	100.0	117,256	100.0	
Insurance Type							.104
Traditional	1,419	11.1	11,868	13.3	13,287	13.1	
POS	642	5.0	4,704	5.3	5,346	5.3	
PPO	3,877	30.4	29,987	33.7	33,864	33.3	
HMO	5,254	41.1	36,962	41.5	42,216	41.5	
Medicare	849	6.6	4,085	4.6	4,934	4.8	
Medicaid	733	5.7	1,409	1.6	2,142	2.1	
Total	12,774	100.0	89,015	100.0	101,789	100.0	
Race/Ethnicity							.030
African American	771	5.0	6,363	6.0	7,134	5.9	
American Indian/	120	0.8	486	0.5	606	0.5	
Native Alaskan							
Asian/Pacific Islander	59	0.4	885	0.8	944	0.8	
Hispanic	447	2.9	2.721	2.6	3 168	2.6	
White	13 207	85.8	90.011	85.4	103 218	85.4	
Other/Multiracial	118	0.8	531	0.5	649	0.5	
Missing	677	4.4	4 4 59	4.2	5 136	4.2	
Total	15 300	100.0	105 456	100.0	120.855	100.0	
Medical Problem	15,577	100.0	105,450	100.0	120,055	100.0	
Disbatas	2 857	18.6	12 388	11.7	15 245	12.6	068
Diabetes No Diabetes	2,037	10.0	12,300	11.7	105 610	12.0	.008
No Diabetes	12,342	81.4	95,008	88.3 100.0	105,010	87.4	
Iotal	15,399	100.0	105,456	100.0	120,855	100.0	120
Arthritis	6,928	45.0	28,684	27.2	35,612	29.5	.130
No Arthritis	8,471	55.0	76,772	72.8	85,243	70.5	
Total	15,399	100.0	105,456	100.0	120,855	100.0	
Chronic Back Problems	5,037	32.7	15,337	14.5	20,374	16.9	.162
No Chronic Back Problems	10,362	67.3	90,119	85.5	100,481	83.1	
Total	15,399	100.0	105,456	100.0	120,855	100.0	
Asthma	3,913	25.4	14,640	13.9	18,553	15.4	.107
N. A athena	11.486	74.6	90.816	86.1	102 302	84.6	
No Astrina	11,400	74.0	20,010	00.1	102,502	04.0	

POS = Point of service; PPO = Preferred provider option; HMO = Health maintenance organization.

TABLE 2

Global and Composite Satisfaction Measures: Means and Standard Deviations by Depression/No Depression

	Depression (<i>ion</i> (<i>n</i> = 15,399) No Depres 105,		ssion (n = 456)	<i>Total</i> (<i>N</i> = 120,885)		
	Mean	SD	Mean	SD	Mean	SD	d
Global Ratings							
Overall Health Plan	5.39	1.35	5.63	1.21	5.60	1.23	.20
Satisfaction (scale = $1-7$)							
Health Plan Medical Care	5.57	1.23	5.79	1.08	5.76	1.10	.20
Satisfaction (scale = $1-7$)							
Recommend Health Plan	3.05	0.81	3.16	0.76	3.15	0.76	.14
(scale = 1 - 4)							
Switch Health Plan (scale = $1-$	3.04	0.86	3.14	0.78	3.13	0.79	.13
4)							
Composite Ratings(scale = $1-5$)							
Access to Care	3.58	0.90	3.73	0.84	3.71	0.85	.18
Providers' Delivery of Care	3.77	0.90	3.90	0.80	3.89	0.81	.16
Plan Customer Service	3.43	1.05	3.61	0.98	3.59	0.99	.18
Cost and Benefits of Care	3.32	0.97	3.43	0.91	3.41	0.92	.12

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TABLE 3 Regression Results: Significant (p < .05) Standardized Beta Coefficients and Standard Errors

		Global Me	asures			Composite Me	asures	
Medical/Psychiatric Problems	Overall Health Plan Satisfaction(1–7 scale)	Medical Care Satisfaction(1– 7 scale)	Recommend Health Plan(1-4 scale)	Switch Health Plan(1–4 scale)	Access to Care(1-5 scale)	Providers' Delivery of Care(1-5 scale)	Cost/Plan Customer Service(1–5 scale)	Benefits o Care(1–5 scale)
Diabetes	.024 (.012)	.025 (.011)	.020 (.008)	.020 (.008)	.032 (.008)	.033 (.008)	.023 (.010)	.025 (.009
Arthritis	(010)	×	.016(.006)	.021 (.006)	(001) (001)	(900) (006)	(800.) 600.	.013 (.007
Chronic Back Problems	032(.011)	029 (.010)	024(.007)	016 (.	011 (.	010(.007)	012(.009)	016 (.00
Asthma	I	I	I	(/00	.010 (.007)	.018 (.007)	I	.012 (.008
Depression	038 (.012)	035 (.011)	026 (.007)	030 (. 008)	022 (. 008)	024 (.008)	032 (.010)	018 (.00
Model R^2	.034	.034	.032	.068	.064	.042	.034	.038

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Note: Models adjust for age, gender, education, health status, insurance type, and race/ethnicity.