Determinants of Mental Health Providers' Expectations of Patients' Improvement

Jeffrey A. Alexander, Ph.D.
Richard Lichtenstein, Ph.D.
Thomas A. D'Aunno, Ph.D.
Richard McCormick, Ph.D.
Naoko Muramatsu, Ph.D.
Esther Ullman, M.S.W.

Objective: **Characteristics of individual mental health providers and of treatment settings were examined to determine their effects on providers' expectations about the improvement of patients with serious mental illness.** ***Methods:*** **The sample consisted of 1,567 treatment providers working in 107 inpatient and outpatient units or programs in 29 Veterans Affairs mental health facilities. They completed a questionnaire about their prognostic expectations and a broad range of attitudes toward job satisfaction, professional relations, and team functioning. Unit or program directors of all 107 units completed another questionnaire about the average functional ability of patients, unit workload, and unit size. Hierarchical linear modeling was used to assess the effects of both individual and unit-level attributes on providers' expectations of improvement in clinical symptomatology and social-functional skills of patients in their care.** ***Results:*** **The providers had generally low expectations about the improvement of patients with serious mental illness. Expectations were higher among staff in units or programs that were smaller and that had an outpatient focus, a greater proportion of staff involved in the treatment team, and higher-functioning patients. Individual characteristics significantly associated with prognostic expectations were occupation, age, and membership on the treatment team.** ***Conclusions:*** **Prognostic expectations among providers of care to persons with serious mental illness vary with identifiable individual and unit or program characteristics. The latter may be amenable to manipulation and intervention to improve mental health providers' prognostic expectations. (*Psychiatric Services* 48:671–677, 1997)**

Dr. Alexander, Dr. Lichtenstein, Dr. D'Aunno, and Ms. Ullman are affiliated with the Serious Mental Illness Treatment Research and Evaluation Center at the Ann Arbor Veterans Affairs Health Services Research and Development Field Program. Dr. Alexander and Dr. Lichtenstein are also with the department of health management and policy in the School of Public Health at the University of Michigan in Ann Arbor, and Dr. D'Aunno is also with the Center for Health Administration Studies in the School of Social Service Administration at the University of Chicago. Dr. McCormick is affiliated with the Cleveland Veterans Affairs Medical Center. Dr. Muramatsu is with the School of Public Health at the University of Illinois at Chicago. Address correspondence to Dr. Alexander at 1385 Summit Road, Berkeley, California 94708.

The goal of psychiatric rehabilitation is to improve the physical, emotional, and intellectual skills needed by patients to live, learn, and work in a particular environment, regardless of psychiatric diagnosis or clinical symptomatology (1). Such skills are developed primarily through personal contact and exchange between providers and patients (2–4). In the context of such provider-patient relations, treatment providers' expectations for patients' improvement often lead to patterns of care that conform to such expectations (3,5,6). For example, a provider who has high expectations for improvement in patients' social skills may devote more energy and attention to working with patients to develop these skills than a provider whose expectations are more negative (7).

Providers' expectations play a particularly important role in the care of patients with chronic mental illness because chronicity challenges providers' sense of professional competence and control over treatment outcomes (5,8). Because complete cure is largely unattainable for this patient population, providers may tend to expect few tangible results from their treatment efforts. Such low expectations for patients' improvement may foster minimal maintenance or custodial care instead of attempts to provide rehabilitation. In some cases, low expectations may even result in

self-fulfilling prophecies whereby patients' progress actually conforms to expectations held by staff (9,10).

Although the importance of providers' expectations in the treatment and rehabilitation of patients with chronic mental illness has been well established, little research has addressed the issue of how such expectations are engendered (11,12). The few studies that have explored the determinants of prognostic expectations for particular patient groups have focused largely on the role of provider training or education in shaping these expectations (13).

By contrast, we assert in this paper that prognostic expectations may be socially constructed, engendered not only by the education, specific training, and experience of individual providers but also by the treatment milieu in which care is provided (14-17). From this perspective, expectations are made and reinforced through interpersonal processes with others (providers and patients) in the provider's social network (18). Because these network relations often operate within treatment units or programs, it follows that prognostic expectations may vary as a function of unit characteristics that define and shape interpersonal processes. Thus we posited that characteristics both of providers and of the treatment settings in which providers work can be expected to influence staff expectations for patients with serious mental illness.

To examine these issues, this study considered two research questions. Controlling for individual characteristics of providers, to what extent are the expectations for patients' improvement held by treatment staff related to attributes of the treatment setting? Controlling for characteristics of the treatment setting, to what extent are expectations for patient improvement held by treatment staff related to demographic, work, or occupational attributes of providers?

Background

Individual characteristics of providers

Treatment staff may be disposed to hold certain expectations of patients' prognoses irrespective of the context in which care is provided. Such expectations are shaped by norms, values, and exposure associated with training, institutional roles, experiences with a variety of patients, or personality traits. Specifically, we hypothesized that providers' expectations would vary by providers' age, position tenure, education, occupation, treatment team membership, and gender.

Tenure and age are proxies for length of experience with chronically ill patients and social attitudes about mental illness, respectively. Experience gained through long tenure may lead to more realistic treatment goals and therefore more positive expectations for improvement (14). Staff members who remain in challenging positions for long periods also may represent a self-selected group who hold positive expectations for patients' improvement. Those with poor expectations for improvement or those who experience burnout may be more likely to leave such positions early in their tenure. Younger age has been reported to be associated with more liberal attitudes about mental illness (19). Furthermore, younger providers are more likely to bring to their work more current orientations toward the treatment of persons with chronic mental illness and the energy necessary to deal with the sometimes intractable problems of this patient group. These characteristics may translate into more positive expectations for patients' improvement.

Prognostic expectations may be socially constructed, engendered not only by the education, specific training, and experience of providers but also by the treatment milieu in which care is provided.

Education and occupation represent not only the professional socialization and training experiences of treatment staff but frequently their socioeconomic status. Previous research has found distinct and dramatic differences in providers' attitudes and knowledge about mental illness as a function of social class and education (20). Treatment staff with more advanced training (psychiatrists, psychologists, and social workers) may show more awareness of patients' strengths and be more optimistic about their prospects for recovery.

Whether or not a provider is a member of a multidisciplinary treatment team may indicate the extent to which he or she is actively involved in the planning of care for chronically ill patients. To the extent that such planning involves direct participation in setting treatment goals and developing strategies to achieve those goals, team participants are more likely to be positively invested in care and rehabilitation than providers who only carry out such plans (21). We anticipated that such investment would foster providers' more positive expectations for patients' improvement.

Finally, gender has been shown to be related to differences in cognitive orientations, styles of social interaction, and nurturing behavior (22; Carli L, unpublished manuscript, 1982). We expected that female providers would have higher expectations for patients' improvement because of their stronger performance on tasks requiring positive social interaction (23).

Treatment setting characteristics

Beyond the effects of individual attributes on providers' expectations, we hypothesized that the context in which work is performed would independently influence such expectations. A provider's immediate work environment structures the rate, processes, and content of interactions with other providers and with patients. Context, in other words, regulates what individual providers do

and see in the course of their day-to-day activity (24,25). Such interaction constitutes the basis for socially constructed expectations for patients' improvement. Because such social interaction occurs within networks within treatment units or programs, we anticipated similarity in prognostic expectations held by providers operating within units or programs with similar attributes.

This study examined five potentially important contextual attributes of the treatment setting—program type (inpatient or outpatient), unit size, breadth of treatment team membership, functional status of the patient cohort, and unit workload.

Treating groups of higher-functioning patients or those who receive care on an outpatient basis may enhance positive expectations for further improvement by exposing providers to patients with better clinical or social functioning (17). By contrast, prognostic expectations may be lower if providers interact primarily with patients in settings where rehabilitation is restricted by more custodial treatment modalities or by extremely dysfunctional patients.

Increased unit size and workload may affect prognostic expectations by reducing the average amount of treatment contact with patients or placing greater emphasis on staff-staff interactions than on staff-patient interactions. When exposure to patients is thus limited, expectations may develop from either superficial (and thus ineffective) treatment encounters or from highly specialized or task-oriented behaviors (21). In both cases, prognostic expectations in such units may be more negative than those developed in contexts that permit more treatment time and a wider range of therapeutic or rehabilitative activity.

Extent of treatment team membership in a program or unit reflects the proportion of providers in the unit who are involved in the planning of care for chronically ill patients. More widespread participation in such planning may help create a collective belief among providers that they have the power to help their patients and may increase a sense of collective self-efficacy among unit staff (26). We expected this collective effect of treatment team membership to occur independently of individual membership on the treatment team.

Methods

Sample

The sample for the study consisted of 1,567 mental health treatment staff working in 29 Veterans Affairs mental health facilities. The primary criterion for unit selection was that the unit include substantial numbers of patients who had a diagnosis of a psychotic disorder (for example, schizophrenia, major mood disorder, or dementia) and a documented cumulative length of stay in VA medical centers of at least 150 days in the past year or five or more admissions to any VA medical center in the past year.

All VA outpatient programs meeting these criteria were selected (N=48), along with two inpatient units from 28 VA facilities and three inpatient units from the remaining facility (N=59). The inpatient units were randomly selected from among all inpatient units at the 29 facilities that cared for a majority of patients meeting the two criteria discussed above.

Data

Data for this study were obtained from two sources. The first was a self-administered questionnaire distributed to all providers of direct patient care in the sampled units in the fall of 1994. This questionnaire included items about providers' demographic characteristics and their expectations about patients and a broad range of attitudes toward job satisfaction, professional relations, and team functioning.

To facilitate the distribution of this questionnaire, a study coordinator was selected at each site. Questionnaires were mailed to the site coordinators together with a videotape explaining the nature and purpose of the survey and the procedures used to protect respondents' confidentiality, as well as descriptions of the questionnaire itself. Site coordinators set up group meetings with staff, showed the video, and distributed the questionnaires.

Staff were given the option of completing the questionnaire or not. Both completed and uncompleted questionnaires were returned to the coordinator in sealed, unidentifiable envelopes. Coordinators then mailed the batch of unopened envelopes to the project research office. From that point, follow-up contacts with nonrespondents were initiated by project staff. The resulting usable survey response rate was 94 percent (N= 1,567).

The second source of data for this study was a questionnaire sent to the unit or program directors of all 107 units to collect data on unit-level characteristics. This survey provided data on the director's assessment of the average functional ability of patients, unit workload, and unit size. All of these questionnaires were completed and returned.

Measures

Although previous studies of providers' expectations have focused on their global attitudes toward mental illness (17) or the provider-patient dyad (2,3), our measures of prognostic expectations were expressed as the number of patients under a provider's care who were expected to show improvement in the coming year in several key outcome dimensions. This focus on improvement for a specific cohort of patients reflects the fact that providers are responsible for multiple patients and the belief that such generalized expectations may influence how individual patients are treated by providers, regardless of the patients' specific circumstances.

Our multidimensional approach to measuring prognostic expectations was adopted from research on psychosocial rehabilitation and discussions with providers of care to persons with serious mental illness (27). Providers were asked to estimate how many patients under their care would exhibit four characteristics during the next year: learn independent living skills, be placed or remain in community housing, improve social skills, and show fewer psychiatric symptoms. Response categories were arrayed on a 4-point scale ranging from 1, few patients, to 4, most patients. Confirmatory factor analysis revealed the presence of a common underlying structure to these four items, and they were averaged to create a single measure of prognostic expectations. The resulting index exhibited good internal consistency (Cronbach's alpha=.78).

Table 1

Descriptive statistics for and Pearson r correlations between characteristics of 1,567 mental health providers in 107 Veterans Affairs inpatient and outpatient settings

Variable and mean±SD[1]	Staff expectations	Age	Female	Education	Position tenure	Team member	Physician	Psychologist	RN	Social worker	OR or PT	LPN or aide
Staff expectations (score) (1.82±.65)												
Age (years) (46.14±10.18)	.001											
Female (.64±.48)	−.077**	−.116**										
Education[2] (14.68±2.09)	.290**	.052*	−.087**									
Position tenure (months) (94.31±87.63)	−.077**	.329**	−.121**	−.238**								
Team member (.63±.48)	.182**	.034	.008	.316**	−.098**							
Physician (.05±.22)	.069**	.252**	−.198**	.253**	−.025	.087**						
Psychologist (.02±.15)	.108**	.029	−.139**	.169**	.043†	.060*	−.037					
Registered nurse (RN) (.28±.45)	−.070**	.053*	.292**	.184**	−.131**	.249**	.146**	−.099**				
Social worker (.12±.32)	.247**	.054*	−.108**	.388**	−.048†	.036	.084**	−.057*	−.228**			
Occupational, recreational, or physical therapist (OR or PT) (.08±.28)	.138**	−.153**	−.063*	.142**	−.025	.089**	−.070**	−.047†	−.189**	−.108**		
Licensed practical nurse (LPN) or nurse aide (.38±.49)	−.301**	−.130**	−.007	−.706**	.215**	−.393**	.181**	−.123**	−.492**	.282**	−.234**	
Other occupation[3] (.06±.25)	.118**	.017	−.046†	.057*	−.043†	.058*	−.061*	−.041	−.165**	−.094**	−.078**	.204**

[1] Unless otherwise indicated, mean values are proportions of the sample.

[2] Grade school=1; high school=9 to 12; college=13 to 16; graduate school=17

[3] Includes clinical pharmacist, dietician, chaplain, physician assistant, psychiatric technician, social work technician, other technician, and other

†p<.10

*p<.05

**p<.01

Measures of providers' characteristics were constructed from data obtained from the provider questionnaire. Education was measured as an interval variable corresponding to the highest grade of school or year of college or graduate study completed. Age was specified as the respondent's age in years. Position tenure was measured as the number of months a respondent had occupied his or her current position in the unit or program. Gender was coded as 0, male, or 1, female. Team membership was assessed on the basis of whether or not a respondent indicated belonging to the multidisciplinary treatment team of the unit or program (0, no; 1, yes).

Occupation was specified as a set of dichotomous variables conforming to the following categories: physician, psychologist, social worker, occupational or recreational therapist, licensed practical nurse (LPN) or nurse aide, registered nurse, and other occupations (clinical pharmacist, dietician, chaplain, physician assistant, psychiatric technician, social work technician, other technician, and other). Registered nurses were designated the reference category in the analyses.

Measures of the treatment setting's characteristics were based on data obtained from both questionnaires. Unit type was specified as a dichotomous variable, inpatient or outpatient. Unit size was the number of treatment staff assigned to the unit at the time of the survey, including treatment staff who were not members of the treatment team. Because our sample contained few part-time staff, we did not weight them differently than full-time staff in calculating unit size. Extent of treatment team membership was based on the number of patient care staff who served as members of the unit's multidisciplinary treatment team. In our statistical model, the inclusion of separate measures of unit size and number of team members allowed us to interpret the coefficient for number of team members as the proportion of unit staff who were members of the multidisciplinary treatment team.

Functional ability of the patient cohort represented the average level of psychological, social, and occupational functioning of patients treated in the unit. It was measured as the weighted mean of the proportion of patients on the unit who were in each of five categories of the Global Assess-

ment of Functioning Scale (GAF) (28). Higher scores indicate less severe impairment. Unit workload was based either on the average daily census (for inpatient units) or the number of outpatient visits (for outpatient programs) during a randomly selected week in April 1994. To standardize the measure for both inpatient and outpatient units, we created separate Z scores for the two types of unit. Thus the workload measure represents a unit's deviation from the mean workload for all units of similar type and size.

Descriptive statistics and separate correlation matrixes for the measures of provider characteristics and treatment setting characteristics are presented in Tables 1 and 2. The mean score for all staff expectations was only 1.823 on the 4-point scale, indicating that, on average, staff expected relatively few of their patients to improve. However, variation was noted in the expectations measure (SD= .654), suggesting that treatment staff differed in the degree to which they expected patients to improve.

Analyses

Our conceptual model explains providers' prognostic expectations using predictors at two different levels of analysis—individual staff member and organizational unit or program. These attributes were structured hierarchically because individual providers work within units or programs, and unit or program characteristics were assumed to affect treatment staff of the same unit similarly. Conventional approaches such as assigning the same unit or program value to all treatment staff in a given unit are inappropriate because they do not account for the lack of independence among observations in a given unit. This situation required a multivariate analytic technique capable of accounting for the multilevel structure of the data in determining the regression coefficients.

We selected hierarchical linear modeling to examine the effects of unit-level and individual-level predictors on providers' expectations of patients' improvement. This modeling procedure adjusts for varying unit-level characteristics by appropriately separating out within-unit vari-

Table 2

Descriptive statistics for and Pearson r correlations between characteristics of 107 Veterans Affairs inpatient and outpatient settings

Variable	Mean	SD	Inpatient unit	Team members	Unit size	Patients' functional status
Inpatient unit[1]	.56	.50				
Team members[2]	9.26	5.93	.728**			
Unit size[3]	14.76	8.91	.808**	.881**		
Patients' functional status[4]	38.68	13.20	−.401**	−.242*	−.311**	
Workload[5]	.00	.99	.035	.228*	.290**	.037

[1] Percentage of sample
[2] Number of staff members who participate in the treatment team
[3] Number of staff members
[4] Global Assessment of Functioning score
[5] Either the average daily census (for inpatient units) or the number of outpatient visits (for outpatient programs) during a randomly selected week in April 1994 (standardized)
*p<.05
**p<.01

Table 3

Final hierarchical linear model of variables examined for associations with mental health providers' expectations for improvement of patients with serious mental illness

Variable	Parameter estimate	SE	Estimated variance
Unit level			
Inpatient unit	−.405***	.110	
Team membership	.025**	.010	
Unit size	−.029***	.008	
Patient functional status	.007***	.003	
Workload	.027	.034	
Individual level			
Age	−.004*	.002	
Female	−.016	.031	
Education	.013	.011	
Position tenure	.009	.008	
Team membership	.071**	.065	
Occupation[1]			
Physician	.098**	.034	
Psychologist	.178**	.074	
Social worker	.252***	.094	
Occupational, physical, or recreational therapist	.196***	.061	
Licensed practical nurse or nurse aid	−.052	.046	
Other	.158***	.058	
Unit mean staff expectations	2.159	.130	
Fully unconditional model without predictor variables			
Individual-level variance			.272
Unit-level variance			.192
Total variance			.464
Final model with predictor variables			
Individual-level variance			.258
Unit-level variance			.068
Total variance			.326

[1] Registered nurses were the reference group for the analysis.
*p<.05
**p<.01
***p<.001

ance from between-unit variance (29). Specifically, the first stage of the analysis estimates the within-unit parameters. These parameters can be random (allowed to vary randomly across teams) or fixed (set as controls with no parameter variance across units). At the second stage, only between-unit variation in the random parameters is analyzed. The final stage involves examining the explanatory power of between-unit variables on the within-unit random parameters (intercepts and slopes) produced as part of the first-stage analysis (29).

Results

Table 3 presents results of the hierarchical linear modeling of individual- and unit-level determinants of prognostic expectations among treatment staff. Three of the individual-level variables in the model were statistically significant predictors of expectations. As anticipated, being a team member and being younger were significantly associated with more positive prognostic expectations. All occupational categories except LPN–nurse aides had significantly higher prognostic expectations than did registered nurses, the reference group for the analyses. Gender, educational level, and position tenure were not statistically significant predictors of expectations after other variables were controlled.

After we controlled for six variables measuring providers' characteristics, four of the five unit-level characteristics were statistically significant predictors of expectations. As expected, extent of team membership was positively associated with providers' expectations. The higher the proportion of team members in the unit, the more optimistic were providers' expectations for patients' improvement. The functional level of the patient cohort was also positively related to staff members' expectations of patients' improvement. The higher the average functional level, the more optimistic staff members were.

Similarly, staff in outpatient programs were more likely to have positive prognostic expectations than staff on inpatient units. This difference between inpatient and outpatient settings remained even after controlling for average functional ability of patients on the unit. Finally, unit size was negatively associated with providers' prognostic expectations. The larger the unit, the more negative were the expectations. Contrary to our hypothesis, unit workload was not significantly related to providers' expectations.

Thirty percent of the total variance in the dependent variable, providers' expectations, was explained by the final model. The final model was better at accounting for between-unit variance (64 percent) than within-unit variance (5 percent) in expectations. This finding suggests that additional, unspecified individual factors might better explain providers' prognostic expectations.

More staff education is needed to ensure that although patients' symptoms have not improved, staff are not discouraged from trying to increase patients' level of functioning

Discussion

In general, the study findings support our thesis that providers' prognostic expectations for patients with chronic mental illness are systematically associated both with attributes of the individual provider and with characteristics of the treatment setting. This finding suggests that prognostic expectations are not randomly distributed among those who provide care to this population. Such expectations, whether positive or negative, are reflected in the experiences, training, and orientation of those who provide care and are reinforced in the social context of patient care on units or in programs.

If prognostic expectations are not random, it follows that organizational interventions may be designed to change them. At least three possible intervention approaches are suggested by our findings. The first consists of selecting staff members who might be expected to possess more positive prognostic expectations, such as younger individuals. A more practical strategy might be to introduce education and training aimed at modifying the expectations of providers who are likely to have low expectations.

An even more promising intervention might be to change the characteristics of the treatment setting. Our study clearly indicates that the setting is related to providers' expectations about patients' improvement. The type of program (inpatient or outpatient), the size of the unit, the extent to which staff are active members of the treatment team, and, to a lesser degree, the severity of illness of the patients treated on the unit were all significant predictors of staff members' expectations for patients. These effects were noted even after variation due to individual characteristics was statistically controlled. The strongest predictor of positive expectations was an outpatient setting. This effect was evident even when other factors, such as the level of severity of illness of the patients treated in the program, were controlled.

The trend toward outpatient and community-based care of persons with serious mental illness may therefore have the additional benefit of increasing providers' expectations for patients' improvement. Rotating staff between inpatient units and outpatient programs may also improve prognostic expectations, particularly among treatment staff currently assigned for long periods to inpatient settings. Furthermore, in both outpatient and inpatient settings, consideration might be given to expanding the number of staff directly involved in treatment planning and to reducing the average size of individual units or programs.

It is interesting that treatment staff did not, in general, make distinctions between the likelihood of patients'

showing improvement in their symptoms and improvement in their overall level of functioning. Research on psychosocial interventions with seriously mentally ill persons indicates that symptoms and functional level can vary independently for many patients, and, more specifically, that rehabilitation efforts can improve functioning even if clinical symptoms remain relatively constant (1). The lack of differentiation between staff members' expectations about symptoms and functioning suggests the need for greater staff education to ensure that even though patients' symptoms have not improved, staff are not discouraged from attempting to increase patients' level of functioning.

This study had several limitations, which may temper any conclusions. First, the study was restricted to VA facilities, which also limits the number of female patients in the study (generally less than 5 percent of the VA patient population). Although VA programming for persons with chronic mental illness is similar to other public and private programming for such patients, there may be systematic differences in the programming or in the characteristics of employees that limit the generalizability of these findings.

Second, the issue of causality cannot be definitively resolved by this study. Although we assume that individual characteristics and aspects of the treatment setting influenced expectations about patients' improvement, alternative explanations may account for the associations found in the study. Foremost among these is the possibility that staff with certain preconceived expectations are more likely to select employment in certain types of programs or roles. For example, staff with high prognostic expectations may disproportionately choose to work in outpatient treatment settings.

Further research is needed to address the issue of causality and to determine whether job or role selection is a major factor in determining how prognostic expectations are distributed among individuals and treatment settings. As we learn more about the expectations of staff treating chronic mentally ill patients, we also need to examine whether the expectations of staff are related to long-term outcomes among these challenging patients. Studies investigating the relationship between staff expectations and patient outcomes should assess both improvement in symptoms and improvement in psychosocial functioning over extensive follow-up periods. ♦

Acknowledgments

This work was supported by the Serious Mental Illness Treatment Research and Evaluation Center, which is sponsored by the Veterans Affairs Mental Health and Behavioral Sciences Service. The authors thank William Van Stone, M.D., for his support.

References

1. Anthony WA, Cohen MR, Farkas M: Professional pre-service training for working with the long-term mentally ill. Community Mental Health Journal 24:258–269, 1988
2. Frank JD: The influence of patients' and therapists' expectations on the outcome of psychotherapy. British Journal of Medical Psychology 41:349–356, 1968
3. Goldstein AP: Therapist-Patient Expectancies in Psychotherapy. New York, Macmillan, 1962
4. Cnaan RA, Blankertz LE, Messinger KW, et al: Psychosocial rehabilitation: toward a definition. Psychosocial Rehabilitation Journal 11:61–77, 1988
5. Friedman CTH, Procci WR, Fenn A: The role of expectation in treatment for psychotic patients. American Journal of Psychotherapy 34:188–196, 1980
6. Ditto PH, Hilton JL: Expectancy processes in the health care interaction sequence. Journal of Social Issues 46:97–124, 1990
7. Bachrach LL: Psychosocial rehabilitation and psychiatry in the care of long-term patients. American Journal of Psychiatry 149:1445–1463, 1992
8. Minkoff K: Resistance of mental health professionals to working with the chronic mentally ill. New Directions for Mental Health Services, no 33:3–20, 1987
9. Learman LA, Avorn J, Everitt DE, et al: Pygmalion in the nursing home: the effects of caregiver expectations on patient outcomes. Journal of the American Geriatrics Society 83:797–803, 1990
10. Rosenthal R, Rubin DB: Interpersonal expectancy effects: the first 345 studies. Behavioral and Brain Sciences 1:377–415, 1978
11. Friedman HS: Interpersonal expectations and the maintenance of health, in Interpersonal Expectations: Theory, Research, and Applications. Edited by Blanck PD. Paris, France, Cambridge University Press, 1993
12. Kirkpatrick H, Landeen J, Byrne C, et al: Hope and schizophrenia: clinicians identify hope-instilling strategies. Journal of Psychosocial Nursing 33:15–19, 1995
13. Gallop R, Lancee W, Shugar G: Residents' and nurses' perceptions of difficult-to-treat short-stay patients. Hospital and Community Psychiatry 44:352–357, 1993
14. Garety PA, Morris I: A new unit for long-stay psychiatric patients: organization, attitudes, and quality of care. Psychological Medicine 14:183–192, 1984
15. Moos RH, Schwartz J: Treatment environment and treatment outcome. Journal of Nervous and Mental Disease 154:264–275, 1972
16. Eden D: Interpersonal expectations in organizations, in Interpersonal Expectations: Theory, Research, and Applications. Edited by Blanck PD. Paris, France, Cambridge University Press, 1993
17. Woodside H, Landeen J, Kirkpatrick H, et al: Hope and schizophrenia: exploring attitudes of clinicians. Psychosocial Rehabilitation Journal 18:140–144, 1994
18. Erickson BH: The relational basis of attitudes, in Social Structures: A Network Approach. Edited by Wellman B, Berkowitz SD. New York, Cambridge University Press, 1988
19. Rabkin JG: Opinions about mental illness: a review of the literature. Psychological Bulletin 77:153–171, 1972
20. Roskin G, Carsen ML, Rabiner CJ, et al: Attitudes toward patients among different mental health professional groups. Comprehensive Psychiatry 29:188–194, 1988
21. Alexander JA, Lichtenstein R, Jinnett K, et al: The effects of treatment team diversity and size on assessments of team functioning. Hospital and Health Services Administration 41:37–53, 1996
22. Eagly AH: Sex Differences in Social Behavior: A Social-Role Interpretation. Hillsdale, NJ, Erlbaum, 1987
23. Wood W: Meta-analytic review of sex differences in group performance. Psychological Bulletin 102:53–71, 1987
24. Eden D: Pygmalion, goal setting, and expectancy: compatible ways to boost productivity. Academy of Management Review 13:639–652, 1988
25. Schuman H, Johnson MP: Attitudes and behavior. Annual Review of Sociology 2:161–207, 1976
26. Shea GP, Guzzo RA: Group effectiveness: what really matters? Sloan Management Review 28:25–31, 1987
27. Beutler LE, Machado PP, Neufeldt SA: Therapist variables, in Handbook of Psychotherapy and Behavior Change, 4th ed. Edited by Bergin AE, Garfield S. New York, Wiley, 1994
28. Diagnostic and Statistical Manual of Mental Disorders, 3rd ed, rev. Washington, DC, American Psychiatric Association, 1987
29. Bryk AS, Raudenbush SW: Hierarchical Linear Models: Applications and Data Analysis Methods. Newbury Park, Calif, Sage, 1992