

# Functional Adaptation Skills Training (FAST)

## *A Pilot Psychosocial Intervention Study in Middle-Aged and Older Patients With Chronic Psychotic Disorders*

*Thomas L. Patterson, Ph.D., Christine McKibbin, Ph.D.*

*Michael Taylor, Ph.D., Sherry Goldman, M.S.*

*Wendy Davila-Fraga, M.D., Jesus Bucardo, M.D.*

*Dilip V. Jeste, M.D.*

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**Objective:** *Developing behavioral interventions to improve functioning of older patients with schizophrenia and other chronic psychoses has the potential to significantly increase the patients' independence and quality of life.* **Methods:** *The authors evaluated a psychosocial intervention designed to improve everyday living skills of middle-aged and older outpatients with very chronic psychotic disorders (mean duration of illness: 21 years). Forty patients who resided in board-and-care facilities were randomly assigned to either a 24-session functional adaptation skills training (FAST) group therapy program targeting problem areas identified in previous work as being problematic for this population (e.g., using public transportation) or treatment-as-usual. Almost all the participants also received antipsychotics.* **Results:** *Compared with the patients randomized to the treatment-as-usual condition, FAST-treated patients' performance on everyday living skills improved significantly immediately post-intervention and was still significantly better at a 3-month maintenance follow-up period. There was no significant change in psychopathology.* **Conclusion:** *Results suggest that older patients with longstanding psychotic disorders may benefit from participation in this skills-training program.* (Am J Geriatr Psychiatry 2003; 11:17-23)

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Schizophrenia is among the most serious and expensive mental disorders in terms of treatment costs, loss of productivity, and expenditures for public assistance.<sup>1-3</sup> As management of this disorder has improved, more and more patients have been living in the community rather than in institutions. Currently, the most effective mode of treatment is symptomatic and involves the use of antipsychotic drugs. However, reduc-

tions in symptoms do not automatically result in an improved ability to function in the real world. Although a number of studies suggest that cognitive-behavioral therapy (CBT) and social skills training (SST) are effective in improving the quality of life of younger adults with schizophrenia,<sup>4-6</sup> these treatments have shown no consistent effects on a variety of other outcomes, such as positive and negative symptoms, or overall social

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Received June 24, 2002; revised June 28, 2002; accepted September 6, 2002. From the University of California, San Diego, and the VA San Diego Healthcare System. Address correspondence to Dr. Patterson, Department of Psychiatry (0680), University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0680. e-mail: tpatterson@ucsd.edu

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functioning.<sup>7</sup> Moreover, despite the growing number of older schizophrenia patients in the population,<sup>8</sup> most of the psychosocial intervention research has focused on younger patient populations.

Earlier preliminary studies from our center reported that a combination of CBT and SST led to decreased psychopathology in middle-aged and older patients with schizophrenia.<sup>9,10</sup> To our knowledge, no randomized controlled study has examined the efficacy of rehabilitation programs focused on improving everyday functioning in middle-aged and elderly outpatients with schizophrenia and other chronic psychotic disorders. Psychosocial interventions that improve medication adherence, everyday living skills, and general psychosocial functioning may reduce the need for hospitalization and long-term care while minimizing burden on institutional healthcare systems. Given that most published studies did not examine everyday functioning as an outcome measure and that treatment effects were not uniform across all outcomes, we felt that daily functioning was a critical outcome for intervention studies in older patients with psychotic disorders.

The goal of this pilot study was to test the efficacy of an intervention aimed at everyday-living skills training, titled "Functional Adaptation Skills Training (FAST)," specifically designed for community-dwelling middle-aged and older patients with schizophrenia or psychotic mood disorder. We conducted this study in board-and-care (B&C) facilities, where a sizable proportion of the middle-aged and older population of patients with severe mental illness resides, in San Diego County. We hypothesized that patients participating in the FAST intervention would show greater improvements in everyday functioning and in psychopathology than patients randomized to receive treatment-as-usual (TAU).

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## METHODS

### Participants

The study was approved by the University of California, San Diego (UCSD) Human Subjects Protection Program. Eight B&C facilities in San Diego County, each with at least 20 middle-aged and older (>40 years of age) patients with longstanding psychotic disorders, agreed to participate in this project. From this sample of eight facilities, four were randomly chosen for the present study. Ten patients were recruited from each

site and provided an informed written consent. Patients had a DSM-IV-based chart diagnosis of schizophrenia, schizoaffective disorder, or psychotic mood disorder. Patients who had a DSM-IV diagnosis of dementia or a serious suicide risk, or who could not complete the assessment battery, or were participating in any other psychosocial intervention or drug research at the time of intake were excluded from this study. Two B&C facilities were randomly assigned to the FAST intervention condition, and the other two to the TAU comparison condition. The staffing, organization, operational procedures, and nature of patient populations in the two facilities assigned to the FAST intervention appeared to be similar to those in the two assigned to the TAU condition. The average age of the patient population was approximately 45 years; facilities had similar patient-to-staff ratios, and were in neighborhoods with similar demographics.

### Demographics and Assessments of the FAST Intervention and Treatment-as-Usual (TAU) Groups

Demographic and clinical data at baseline were not significantly different between patients in the FAST condition versus the TAU comparison condition, suggesting that the two groups were equivalent at study entry. A majority of the participants were middle-aged white men who had completed high school (see Table 1). Almost all of the participants (100% in the FAST group and 94% in the TAU group) were on antipsychotics and had been on stable doses of medications for at least several weeks.

Assessments were conducted at baseline, at the end of the 12-week intervention, and finally, at a 3-month follow-up, by project staff who were blind to group assignment. Study participants were paid \$20 for completing assessment at each time-point, but were not paid for attending the intervention sessions.

The primary outcome for this study was a change in functional skills assessed using the UCSD Performance-Based Skills Assessment (UPSA<sup>11</sup>). The UPSA involves role-play tasks similar in complexity to situations that an older community-dwelling person is likely to encounter (i.e., general organization; management of finances; social/communications; transportation; and household chores). We also assessed psychopathological symptoms with the Positive And Negative Syndromes Scale (PANSS<sup>12</sup>); depressive symptoms, with the Hamilton Rat-

ing Scale for Depression (Ham-D<sup>13</sup>); and health-related quality of life, with the Quality of Well-Being (QWB<sup>14</sup>) Scale. We also queried patients at each intervention session as to whether they found the information from the previous session helpful (response: Helpful, Not Helpful); whether they could recall the material from the previous session (if they were able to recall any material, a “yes” was recorded); and whether they had practiced using the newly learned skills outside the session (response: Yes or No).

### Development of the FAST Intervention

In order to identify critical areas to target for our intervention, we started by reviewing the literature on the use of skills-training programs for schizophrenia patients. We based some of our strategies on Liberman and colleagues' Social and Independent Living Skills Program.<sup>15</sup> We also relied on our own clinical experience in working with older patients with schizophrenia and on a survey done earlier in our Research Center asking patients and providers which everyday living skills they would like to master. On the basis of this work, we developed a manualized social-cognitive theory-

based<sup>16</sup> behavioral intervention focused on improving six areas of everyday functioning: medication management, social skills, communication skills, organization and planning, transportation, and financial management. The FAST program consisted of 24 semi-weekly, 120-minute group sessions led by two individuals: a master's- or doctoral-level therapist and a para-professional such as might be found in typical B&C management or nursing staff.

We used four sessions per each of the six domains to maximize benefit for persons with cognitive impairment (e.g., built-in repetition, review, and additional skills-building) and to assist individuals who might have missed a session (by using make-up sessions, in-class repetition, and review) since skills taught in each session build upon those learned in previous sessions. Table 2 provides an outline of the domains and skills taught in the FAST sessions. A typical session included the following: 1) review of the appropriate weekly class agenda; 2) review of homework; 3) opportunity for praise for homework practiced; 4) brief discussion of application of skills learned during homework exercise to other life domains (generalization); 5) introduction to new concept/review of current concept; 6) in-session

TABLE 1. Demographics comparisons

	FAST Intervention (n = 16)	Treatment-as-Usual (n = 16)	$t_{[df]}$ , $\chi^2_{[df]}$ ; P
Age, years	47.9 (5.3) Range: 42-59	51.7 (8.5) Range: 42-69	$t_{[30]} = 1.55$ ; p = 0.13
Education, years	12.8 (2.4)	12.2 (2.6)	$t_{[30]} = 0.94$ ; p = 0.82
Gender, n (%)			$\chi^2 = 0.00$ ; p = 1.00
Female	5 (31)	5 (31)	
Male	11 (69)	11 (69)	
Marital status			$\chi^2 = 5.57$ , p = 0.14
Single	5 (31)	9 (60)	
Cohabiting	4 (25)	0 (0)	
Divorced	6 (38)	5 (30)	
Widowed	1 (6)	2 (10)	
Ethnicity			$\chi^2 = 4.04$ , p = 0.40
African American	1 (6)	3 (19)	
Hispanic	0 (0)	1 (6)	
Asian American	1 (6)	0 (0)	
White	13 (81)	12 (75)	
Other	1 (6)	0 (0)	
Diagnosis			$\chi^2 = 0.70$ , p = 0.94
Schizophrenia	9 (56)	8 (50)	
Schizoaffective disorder	4 (25)	3 (19)	
Mood disorder with psychotic features	3 (19)	5 (31)	
Duration of illness, years	21.3 (11.8)	20.9 (12.3)	$t_{[30]} = 0.86$ , p = 0.80
Daily neuroleptic dose (mg chlorpromazine equivalent)	436.2 (659.1)	461.5 (598.1)	$t_{[30]} = 0.30$ , p = 0.37
On neuroleptics, n (%)	16 (100)	15 (94)	$\chi^2 = 0.04$ , p = 0.99

Note: Values are mean (standard deviation), unless otherwise indicated.

practice including behavioral modeling, role-playing, and reinforcement; 7) review of homework; and 8) review of skills learned during the session. For example, Session #2 in the Medication Management domain was structured in the following way: therapists 1) reviewed the agenda for the day; 2) reviewed previous homework (completing personal medication chart with medication names, dosages, and time of administration); 3) praised all attempts at homework and problem-solved to aid those who did not complete homework or had difficulty; 4) discussed problems and skills with a focus on generalizing behaviors to various settings; 5) introduced new material: Importance of Medication Tracking; 6) expanded chart to include daily medication tracking; Introduction to and Use of Pillboxes (behavioral modeling and practice); 7) assigned homework: Daily Medication Tracking and Use of Pillboxes; and 8) reviewed skills learned in the session.

### **Format of Treatment-As-Usual (TAU)**

Participants randomized to the comparison condition were assessed at the same time intervals as those in the treatment condition, but only received their usual medications. Participants were queried about their participation in other interventions both before and after participation in the present study. None of the patients

**TABLE 2. Outline of FAST intervention**

<b>Domain</b>	<b>Skills</b>
Medication management	Track medication administration, monitor psychiatric symptoms and drug side effects, communicate with healthcare providers regarding symptoms and needs, and problem-solving.
Social skills	Engage in appropriate conversation, for example, initiation, maintenance, termination, and active listening.
Communication skills	Recognize different styles of communication — passive, assertive, and aggressive.
Organization and planning	Plan for outings or events, for example, scheduling healthcare or other appointments, items required to take, or items that one needs to provide or obtain.
Transportation	Reading of maps, transportation schedules, and identifying appropriate persons to ask for help.
Financial management	Counting money, writing checks, and reading account statements.

reported participating in any other psychosocial interventions during this study.

### **Statistical Analysis**

We used repeated-measures analysis of variance (ANOVA) to address our main hypothesis: to determine whether participation in the FAST intervention was effective in improving everyday functioning of the patients compared with the TAU condition. All the participants were tested at baseline, immediately after completion of the 3-month intervention, and at a 3-month follow-up, to assess maintenance of intervention effects. Our group variable had two levels (i.e., FAST versus TAU) whereas the within-subjects factor (time) had three levels (baseline, post-intervention, and 3-month follow-up). Additional sub-analyses included use of age as a covariate, and inclusion of B&C facility as a between-groups factor, with subjects nested within facility.

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## **RESULTS**

Eight of the 40 participants dropped out after the baseline assessment and were excluded from further analysis. Thus, 32 patients were included in the present report. In order to determine whether there were systematic differences between these two subgroups (completers versus drop-outs), we examined baseline values on demographic variables (e.g., age, gender, ethnicity), and treatment-outcome-related variables (e.g., UPSA scores). No significant differences between the two groups were found, suggesting that subject attrition did not seem to have biased the study sample in terms of the major variables.

Eighty-eight percent of patients in the FAST condition attended all sessions, and 100% participated in class discussion and exercises. Also, 88% of patients indicated that they found the material to be helpful; most could recall information presented in previous sessions; and 63% reported practicing newly learned skills outside of the sessions.

### **Outcome Variable Distribution**

Before beginning our analyses of intervention effects, we evaluated the distributions of the outcome-related variables at baseline assessment. This examina-

tion revealed that the UPSA scores approached a normal distribution in the TAU group but not in the FAST group. The baseline UPSA scores in the FAST group could not be normalized with standard transformations and were found to be significantly lower than those of the TAU subjects ( $t_{[30]} = 2.38$ ;  $p = 0.02$ ). We therefore decided to compare the FAST and TAU groups in two separate analyses: First, we compared the entire sample of patients ( $n = 16$  each) who participated in the FAST or TAU condition (see below). Next, we sought to make the FAST and TAU groups comparable in the baseline UPSA scores by removing the lowest-scoring individuals until the two groups were equivalent (i.e., the baseline UPSA scores of the FAST group appeared to be normally distributed, and did not differ significantly from those of the TAU group). Using this method, we identified a subset of six individuals who were analyzed separately for some analyses.

We examined change in direct indicators of everyday functioning as well as in psychopathology and QWB among the 32 individuals (16 FAST/16 TAU) who completed all three assessments (see Table 3). There was a significant improvement in the UPSA scores and PANSS Negative Syndrome scores with FAST, compared with TAU. There was a nonsignificant worsening of depressive symptoms in the TAU patients, whereas the FAST and TAU groups showed no significant change in the PANSS Positive Syndrome and QWB scores.

We also examined the effects of B&C and age of

participants on our results and found no change in results (FAST Time  $\times$  Site:  $F_{[2,28]} = 2.16$ ,  $p = 0.15$ ; TAU Time  $\times$  Site  $F_{[2,28]} = 0.82$ ,  $p = 0.45$ ; Time  $\times$  Treatment covaried for age:  $F_{[2,22]} = 4.49$ ,  $p = 0.02$ ); that is, the differences between the FAST and TAU groups in UPSA scores persisted even after controlling for B&C and age.

Next, as mentioned above, we sought to equate the groups on baseline UPSA scores by removing six patients from the FAST group with the lowest scores until the group baseline scores did not differ significantly from those of the TAU group. Compared with the remaining 10 patients in the FAST treatment group, this subset of the 6 lowest-scoring individuals had greater severity of negative symptoms (mean PANSS Negative Syndrome scores: 25.3 versus 13.6;  $t_{[14]} = 4.25$ ;  $p = 0.001$ ), but was similar to the remaining FAST group patients in terms of age, gender, marital status, ethnicity, or severity of positive symptoms.

Among the 10 patients in the FAST condition whose baseline UPSA scores were comparable to those of the TAU group, the overall mean UPSA scores improved from 39.8 (standard deviation [SD]: 4.6) at baseline to 46.5 (SD 3.4) and 46.0 (SD 8.6) immediately post-intervention and 3 months later, respectively. In contrast, mean UPSA scores for patients in the TAU condition remained relatively flat: 40.3 (SD = 8.3); 42.8 (SD = 7.1); and 41.6 (SD = 9.7), at baseline, immediately post-intervention, and 3 months later, respectively. A  $3 \times 2$  (Trials  $\times$  Group) repeated-measures ANOVA

TABLE 3. Mean (standard deviation) of outcome measures at various follow-up times

	FAST Intervention ( $n = 16$ )			Treatment-as-Usual ( $n = 16$ )			Time $\times$ Treatment Interaction ( $F_{[2,29]}$ )
	Baseline	12 Weeks	24 Weeks	Baseline	12 Weeks	24 Weeks	
UPSA (total)	31.9	41.5	42.7	40.3	42.8	41.6	10.37; $p < 0.0016$
Range: 0–100	(11.8)	(9.5)	(9.7)	(8.3)	(7.1)	(9.7)	
PANSS Positive Syndrome	12.5	13.0	12.3	10.4	14.0	13.1	2.04; $p = 0.15$
Range: 7–48	(5.6)	(6.6)	(4.3)	(4.0)	(6.3)	(5.9)	
PANSS Negative Syndrome	16.9	13.0	14.3	10.1	10.9	12.4	4.64; $p = 0.02$
Range: 7–48	(6.6)	(5.1)	(6.0)	(3.2)	(4.0)	(4.4)	
PANSS General Psychopathology	25.0	21.9	23.9	22.3	21.5	23.9	1.22; $p = 0.31$
Range: 16–96	(6.2)	(4.7)	(4.6)	(3.7)	(4.9)	(4.4)	
Ham-D	7.8	7.7	7.2	4.6	8.0	7.9	3.31; $p = 0.053$
Range: 0–50	(6.1)	(5.2)	(4.9)	(2.8)	(5.3)	(5.0)	
QWB	0.53	0.55	0.51	0.49	0.50	0.49	0.38; $p = 0.69$
Range: 0–1.00	(0.08)	(0.10)	(0.07)	(0.08)	(0.07)	(0.07)	

Note: Range provided for each test is for possible scores.

Higher scores on PANSS and Ham-D suggest greater psychopathology, whereas higher scores on UPSA and QWB indicate better everyday functioning and health-related quality of well-being, respectively.

UPSA: UCSD Performance-Based Skills Assessment<sup>11</sup>; PANSS: Positive and Negative Symptoms Scale<sup>12</sup>; Ham-D: Hamilton Rating Scale for Depression<sup>13</sup>; QWB: Quality of Well-Being Scale<sup>14</sup>.

yielded a significant interaction ( $F_{[2,23]} = 5.10$ ;  $p = 0.015$ ). However, we detected no significant change in psychopathology (PANSS and Ham-D) or in health-related quality of life (i.e., QWB scores).

Finally, we conducted exploratory analyses of the subgroup of the six excluded cases whose baseline performance was worse compared with others in the FAST group. A repeated-measures ANOVA revealed that this group's mean UPSA performance improved significantly over time, from 18.2 (SD = 5.0); to 33.2 (SD = 10.8); to 37.2 (SD = 9.4):  $F_{[2,10]} = 9.26$ ;  $p = 0.005$ .

Post-hoc analyses showed that participants significantly improved from baseline to immediately after the intervention ( $t_{[2]} = 3.12$ ;  $p = 0.03$ ), and did not change significantly in the 3 months after completion of the intervention ( $t_{[2]} = 0.02$ ;  $p = 0.99$ ). Also, there was a significant reduction in negative symptoms over the study period: 23.4 (SD = 3.3); 14.0 (SD = 6.6); and 19.2 (SD = 7.6), respectively ( $F_{[2,8]} = 7.42$ ;  $p = 0.02$ ). This difference was due to change during the intervention period ( $t_{[2]} = 4.24$ ;  $p = 0.02$ ). However, there was no significant change in mean PANSS Positive Syndrome, PANSS General Psychopathology, Ham-D, or QWB scores.

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## DISCUSSION

Our findings suggest that among older patients with very longstanding (mean duration, 21 years) schizophrenia or psychotic mood disorder, the 12-week FAST intervention was feasible and produced global improvements on a performance-based measure of everyday functioning. These improvements were evident immediately after completion of the intervention program and persisted at 3-month follow-up. Group differences in health-related quality of well-being and measures of psychopathology were not observed.

It is unclear how the observed behavioral changes may translate into real-life functioning. A number of factors influence functioning in natural settings. For example, different behaviors (e.g., transportation) may be facilitated or hindered by availability of rapid transit systems in specific communities. Other factors that may influence an individual's functioning include the presence or absence of a family caregiver. We have found that only about one-third of older schizophrenia patients have unpaid caregivers;<sup>17</sup> the presence of such

supports may greatly facilitate independent functioning. Thus, although the multi-determinant nature of reaching maximum functional potential makes it difficult to estimate the real-world consequences of our intervention, we believe that rehabilitation success even in small increments is significant in terms of reduced human suffering.

We did not find significant improvements in QWB, PANSS, and Ham-D scores. We speculate that dimensions of psychopathology may require more focused intervention, such as Cognitive Behavioral Social Skills Training,<sup>9</sup> to directly address such symptoms. The QWB is a global measure of subjectively rated health-related functioning and may not capture the specific behavioral domains addressed in the FAST program.

An intriguing observation that resulted from this study was related to our group of "outliers." This subgroup with poor baseline functioning on the UPSA scale had higher ratings of negative symptoms than the remaining individuals randomized to the FAST condition. Exploratory analyses revealed that after participation in the FAST intervention, performance on the UPSA increased to the level comparable to the initial baseline performance of other patients, and severity of negative symptoms decreased. These analyses suggest that lower-functioning older patients with schizophrenia may benefit from the FAST program; however, they may require more intensive interventions to reach levels that higher-functioning patients are able to achieve.

Although our study has several strengths, including use of a theory-based intervention specifically designed for older psychotic patients and the use of a randomized longitudinal design, it also has several limitations, such as its reliance upon performance-based measures. Although performance-based measures may reduce self-report bias, when faced with the real world, in all its complexities, it is unclear how patients' behaviors will play out. There is a need for objective and unobtrusive alternatives to assessment in contrived laboratory settings. Our control condition was TAU, and we cannot rule out a possibility that patient contact alone might have been responsible for the superiority of the FAST. The present study did not examine the effectiveness of our intervention in relationship to gender, patterns of symptoms, or past psychiatric history. Considering factors such as these may provide information to suggest more specific intervention designs. For example, older patients with greater comorbidities may require additional assistance with transportation. In contrast,

younger patients may be better served by programs that focus on employment issues. Also, the FAST intervention was targeted only to the patients themselves. Involving the patient's family, care-providers, and B&C staff, to ensure that they are alert to the skills taught in the FAST and can reinforce these behaviors in the patients, would likely enhance the efficacy of the intervention. We should also note that patients enrolled in this study were recruited from four B&C facilities. Although the latter were randomly selected from a larger sample of eight B&C homes that appeared to be similar, it is possible that staffing or organizational factors of the homes where patients live may make the facilities more or less conducive to development and maintenance of the functional skills that were taught. Future studies should include more sites and attempt to characterize features of B&C facilities that may mediate the success of the intervention. Findings from the present study suggest that participation in the FAST intervention was associated with positive behavioral change in the form of improved performance from baseline to 3-month fol-

low-up. Nonetheless, the observed improvement in functioning was modest. The mean (standard deviation) UPSA scores of our patients after FAST intervention—42.7 (9.7)—were substantially lower than those of middle-aged and older normal subjects as reported in an earlier study—92.6 (5.5).<sup>11</sup> Thus, the results may point to a need for intervention over longer periods of time, given that the patients had had psychotic disorders for many years. Finally, our sample size was small, and most of our patients were middle-aged rather than elderly.

Our findings point to a need to continue to develop and test behavioral interventions designed for older, seriously mentally ill patients in order to improve their real-world functioning.

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## References

- Dixon L, Whoheiter K, Thompson D: Medical management of schizophrenia, in *Comprehensive Care of Schizophrenia*. Edited by Lieberman JA, Murray RM. London, UK, Martin Dunitz, 2001, pp 239-261
- Martin BC, Miller LS, Kotzan JA: Antipsychotic prescription use and costs for persons with schizophrenia in the 1990s: current trends and five-year time series forecasts. *Schizophr Res* 2001; 47:281-292
- Crown WH, Neslusan C, Russo PA, et al: Hospitalization and total medical costs for privately insured persons with schizophrenia. *Adm Policy Ment Health* 2001; 28:335-351
- Benton MK, Schroeder TJ: Social skills training with schizophrenics: a meta-analytic evaluation. *J Consult Clin Psychol* 1990; 58:741-747
- Fischer PJ, Breakey WR: The epidemiology of alcohol, drug, and mental disorders among homeless persons. *Am Psychol* 1991; 46:1115-1128
- Wallace CJ, Liberman RP, MacKain SJ, et al: Effectiveness and replicability of modules for teaching social and instrumental skills to the severely mentally ill. *Am J Psychiatry* 1992; 149:654-658
- Bustillo JR, Lauriello J, Horan WP, et al: The psychosocial treatment of schizophrenia: an update. *Am J Psychiatry* 2001; 158:163-175
- Jeste DV, Alexopoulos GS, Bartels SJ, et al: Consensus Statement: The Upcoming Crisis in Geriatric Mental Health: Challenges and Opportunities. *Arch Gen Psychiatry* 1999; 56:848-853
- McQuaid JR, Granholm E, McClure FS, et al: Development of an integrated cognitive-behavioral social skills training intervention for older patients with schizophrenia. *J Psychother Pract Res* 2000; 9:1-8
- Granholm E, McQuaid JR, McClure FS, et al: A randomized, controlled pilot study of cognitive-behavioral social skills training for older patients with schizophrenia. *Schizophr Res* 2002; 53:167-169
- Patterson TL, Moscona S, McKibbin CL, et al: UCSD Performance-Based Skills Assessment (UPSA): development of a new measure of everyday functioning for severely mentally ill adults. *Schizophr Bull* 2001; 27:235-245
- Kay SR, Opler LA, Fiszbein A: Positive and Negative Syndrome Scale (PANSS) Rating Manual. San Rafael, CA, Social and Behavioral Sciences Documents, 1987
- Hamilton M: A rating scale for depression. *J Neurol Neurosurg Psychiatry* 1960; 23:56-62
- Kaplan RM, Anderson JP, Wu AW, et al: The Quality of Well-Being Scale: applications in AIDS, cystic fibrosis, and arthritis. *Med Care* 1989; 27:S27-S43
- Psychiatric Rehabilitation Consultants: Modules in the UCLA Social and Independent Living Skill Series. Camarillo, CA, Psychiatric Rehabilitation Consultants, 1991
- Bandura A: Perceived self-efficacy, in *Primary Prevention of AIDS: Psychological Approaches*. Edited by Mays V, Albee G, Schneider S. Newbury Park, CA, Sage, 1989, pp 128-141
- Patterson TL, Semple SJ, Shaw WS, et al: Researching the caregiver: family members who care for older psychotic patients. *Psychiatr Ann* 1996; 26:772-784