

Initial Outcomes of a Mental Illness Self-Management Program Based on Wellness Recovery Action Planning

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Objective: This study examined changes in psychosocial outcomes among participants in an eight-week, peer-led, mental illness self-management intervention called Wellness Recovery Action Planning (WRAP). **Methods:** Eighty individuals with serious mental illness at five Ohio sites completed telephone interviews at baseline and one month after the intervention. **Results:** Paired *t* tests of pre- and postintervention scores revealed significant improvement in self-reported symptoms, recovery, hopefulness, self-advocacy, and physical health; empowerment decreased significantly and no significant changes were observed in social support. Those attending six or more sessions showed greater improvement than those attending fewer sessions. **Conclusions:** These promising early results suggest that further research on this intervention is warranted. Confirmation of the efficacy and effectiveness of peer-led self-management has

the potential to enhance self-termination and promote recovery for people with psychiatric disabilities. (*Psychiatric Services* 60:246–249, 2009)

Although the concept of recovery from mental illness is relatively new, the fact that significant proportions of people with psychiatric disabilities can successfully self-manage their conditions has been documented for more than two decades (1). Some common self-management strategies for psychiatric disorders include writing down or talking about problems; speaking with or visiting friends; exercising; engaging in meditation, artistic endeavors, or political activism; practicing good nutrition; and self-advocacy (2).

Although ample evidence supports the efficacy of structured self-management programs for chronic physical conditions such as diabetes and asthma (3), far less research has evaluated this approach for mental disorders. The study reported here examined changes in measures of recovery and other psychosocial outcomes among participants in a peer-led, self-management intervention called Wellness Recovery Action Planning (WRAP).

Unlike many traditional mental health interventions, WRAP is intended to help people manage a variety of long-term illnesses, whether or not they choose to receive formal services. In fact, WRAP educators are taught to avoid talking directly about

psychiatric diagnoses or using medical or illness-oriented language to frame people's needs (2). Instead, WRAP emphasizes holistic health, wellness, strengths, and social support. WRAP encourages people to move beyond simply managing symptoms to building a meaningful life in the community by using a highly individualized plan for recovery. Instructional techniques promote peer modeling by using personal examples from facilitators' and participants' own lives to illustrate key concepts of self-management, allowing participants to witness the lived benefits of WRAP.

Methods

The sample consisted of the first 108 individuals who enrolled in an ongoing study of WRAP at one of five sites in Ohio. Between October and December 2006, individuals were recruited from service delivery sites, including traditional treatment settings (such as community mental health centers, outpatient clinics, and residential programs) and self-help and peer support settings (such as consumer-run drop-in centers and mental health support groups). One-hour telephone interviews were conducted by personnel at the Survey Research Laboratory at the University of Illinois at Chicago. The first interview occurred immediately before the intervention, and the second was conducted in the month after the intervention.

Respondents received research honoraria of \$20 and \$25, respective-

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ly, for the two interviews. The protocol included valid and reliable scales for measuring symptoms (4), recovery (5), hopefulness (6), self-advocacy (7), empowerment (8), social support (9), and self-perceived physical health (10). All participants provided written informed consent to participate using procedures approved by the institutional review board of the University of Illinois at Chicago.

WRAP was delivered in eight weekly sessions of 2.5 hours each week. Sessions were cofacilitated by two individuals in mental health recovery. Coursework included lectures, group discussions, personal examples from the lives of the educators and participants, individual and group exercises, and voluntary homework assignments. An introductory session conveyed the key concepts of WRAP. The second and third sessions addressed the development of a wellness toolbox, which is a collection of personalized wellness strategies that participants use to maintain recovery and manage functional difficulties. Also included were special exercises to enhance self-esteem, build competence, and explore the benefits of peer support. The fourth session introduced a daily maintenance plan that delineates simple, inexpensive strategies to use every day to stay emotionally and physically healthy, including a triggers management plan for recognizing and responding to symptom triggers in order to prevent crises. The fifth session educated participants about early warning signs and how these signal a need for additional supports or services. The sixth and seventh sessions involved creation of crisis plans that listed signs of impending crisis, named individuals willing to help, and described types of assistance preferred and other desires. The final session covered how to ensure adequate postcrisis support and the benefits of retooling WRAP plans after a crisis to avoid relapse. Model fidelity was assessed weekly by use of a simple checklist to track handouts, discussions, and exercises; fidelity remained above 95% for all sessions at all sites.

Of the 108 participants, 13 (12%) withdrew from the study or became ineligible because of death, prior ex-

posure to WRAP, or inability to attend because of changes in work or school schedules or a move away from the area or because they no longer wished to participate. A total of 95 participants were available to complete the second interview. Methods used to avoid study attrition included follow-up phone calls made by research staff to participants between interviews; efforts to locate missing participants through their secondary contacts, such as family members and clinicians; and provision of multiple opportunities for rescheduling missed interviews. As a result of these efforts, 80 of the 95 participants (84%) completed postintervention interviews (one refused, six were not locatable, and eight were not available). No significant differences in background characteristics were found between those who did and did not complete both assessments, except that those who did not complete the second interview were significantly less likely to be African American (none of the noncompleters were African American, compared with 25% of the completers). All subsequent analyses were conducted with data from the 80 individuals who completed both interviews.

Frequency distributions and descriptive statistics were computed to examine variables at the univariate level. Chi square and independent-samples *t* tests were used to test for differences between respondents, and paired-samples *t* tests examined changes within participants from pre- to posttest, both for the total group and then separately for those with high and low attendance.

Results

Participants' mean \pm SD age was 46.6 \pm 10.4 years (range=20–67, median=47), and 51 (64%) were women. Fifty-three participants (66%) were Caucasian, 20 (25%) were African American, three (4%) were Hispanic or Latino, and 5% were from other racial or ethnic groups (one American Indian, one Pacific Islander, and two mixed-race participants). Most (65 participants, or 81%) had a high school diploma or general equivalency degree. Nine (11%) were married or cohabiting. Fifty-six (70%) resided

in their own house or apartment, with a mean household size of 1.9 individuals (median of one person). Sixty-four (80%) reported previous psychiatric hospitalizations. Sixteen (20%) reported schizophrenia spectrum diagnoses, 30 (38%) reported a diagnosis of bipolar disorder, 20 (26%) reported a depressive disorder, and two (3%) reported a personality disorder. All reported having received mental health services in the six months before study enrollment: 64 (80%) received medication management, 64 (80%) received case management, 42 (53%) participated in a support group, and 32 (40%) received crisis intervention services. Only 13 participants (16%) were employed, and 12 (15%) reported looking for work in the past four weeks.

The WRAP educators tracked attendance and reported it to the researchers on a weekly basis. Participants attended in-person a mean of 5.03 \pm 2.82 of the eight sessions (median of six sessions). Eighteen participants (23%) attended one or more make-up sessions (ranging from one to three sessions per individual). Including both in-person and make-up sessions, nine (11%) attended no sessions, and 23 (29%) attended all sessions. Fifty-three (66%) attended six or more sessions, a requirement for receiving a "certificate of graduation." These participants were classified as high attenders.

Table 1 presents the results of paired-sample *t* tests of comparisons of participants' scores before and in the month after the intervention. A statistically significant decrease was found in global symptom severity. Scores on several symptom subscales—psychoticism, depression, phobic anxiety, obsessive-compulsive, interpersonal sensitivity, paranoid ideation, and general anxiety—also decreased significantly, indicating improvement. Significant increases were observed in the scores for overall recovery, indicating improvement, and all of the five recovery subscales showed improvement: personal confidence, willingness to ask for help, goal orientation, reliance on others, and freedom from symptom domination. Significant increases were found in participants' feelings of

Table 1

Baseline and postintervention scores of 80 participants in Wellness Recovery Action Planning sessions

Measure	Preintervention		Postintervention		t	df
	M	SD	M	SD		
BSI Global Severity Index ^a	2.50	.82	2.22	0.78	4.64***	79
Psychoticism	2.57	.93	2.26	0.89	3.52**	79
Somatization	2.14	.85	2.00	0.84	1.98*	79
Depression	2.70	1.15	2.37	1.06	3.26**	79
Hostility	2.04	.87	1.88	0.78	1.97	79
Phobic anxiety	2.29	1.19	2.01	0.99	3.47**	79
Obsessive-compulsive	2.85	.99	2.52	1.03	3.97***	79
Interpersonal sensitivity	2.83	1.10	2.33	0.85	4.94***	79
Paranoid ideation	2.55	.94	2.28	0.86	3.05**	79
General anxiety	2.61	1.03	2.31	0.96	3.60**	79
Recovery ^b	86.95	14.91	92.75	13.05	-4.30***	78
Personal confidence	31.39	6.87	34.10	5.85	-4.51***	78
Willingness to ask for help	12.09	2.21	12.56	1.87	-2.08*	79
Goal orientation	19.02	3.38	19.96	3.24	-2.56*	79
Reliance on others	15.35	3.43	16.10	2.82	-2.38*	79
Freedom from symptom domination	9.09	3.09	9.92	2.92	-2.56*	79
Hopefulness ^c	21.16	4.68	2.29	4.27	2.99**	76
Self-advocacy ^d	3.54	.46	3.71	0.49	3.33**	79
Empowerment ^e	2.19	.35	2.07	0.37	-3.70***	71
Social support ^f	3.26	.93	3.38	0.91	1.58	79
Self-perceived physical health ^g	39.87	29.28	46.26	30.64	-2.68**	78

^a Brief Symptom Inventory. Possible scores range from 0 to 4, with higher scores indicating greater symptom severity.

^b As measured by the Recovery Assessment Scale. Possible scores range from 24 to 120, with higher scores indicating greater recovery.

^c As measured by the Hope Scale. Possible scores range from 8 to 32, with higher scores indicating greater hopefulness.

^d As measured by the Patient Self-Advocacy Scale. Possible scores range from 1 to 5, with higher scores indicating greater self-advocacy.

^e As measured by the Empowerment Scale. Possible scores range from 1 to 4, with higher scores indicating greater empowerment.

^f As measured by the Medical Outcomes Study Social Support Survey. Possible scores range from 1 to 5, with higher scores indicating greater social support.

^g As measured by the Medical Outcomes Study–Short Form. Possible scores range from 0 to 100, with higher scores indicating better physical health.

* $p < .05$

** $p < .01$

*** $p < .001$

hopefulness, and scores on the patient self-advocacy scale indicated improvement. Somewhat surprisingly, significant decreases were observed in participants' self-reported empowerment. No significant changes were observed in participants' social support. Finally, a significant improvement was noted in self-perceived physical health.

Next, we examined whether attendance at WRAP sessions was related to the likelihood of change by computing paired *t* tests separately for high and low attenders. Results revealed significant improvement in the high-attender group for global symptom severity and total recovery scores, as well as hopefulness, self-advocacy, and self-perceived physical health; however, the mean empowerment score was significantly lower after the intervention. Significant improvement in the low-attender group

occurred only for hopefulness and self-perceived physical health; all other outcome measures showed no significant change. To determine whether the difference in improvement between high and low attenders was attributable to the former group's use of traditional services, we examined associations between attendance and service use (not shown) and found no differences between high and low attenders in use of traditional clinical services, such as case management, medication management, crisis intervention, or individual therapy.

Finally, we wanted to know whether high attenders differed from low attenders at baseline. Compared with low attenders, high attenders were more likely to be women (40 high attenders, or 82%, compared with 11 low attenders, or 36%). High attenders were also more likely to be mar-

ried or cohabiting (nine high attenders, or 18%, and none of the low attenders). At the time of study entry, high attenders had significantly lower global symptom severity than low attenders, as well as lower scores on psychoticism, somatization, and phobic anxiety. At baseline, high attenders also had higher self-advocacy scores than low attenders. On all other background characteristics and outcome variables, no significant between-group differences were found in baseline scores.

Discussion

We found that individuals who participated in WRAP, a peer-led, mental illness self-management intervention, showed significant improvement in symptoms and many psychosocial outcome areas associated with recovery. Moreover, those exposed to a greater number of WRAP sessions

showed greater improvement than those who attended fewer sessions, and this difference was not due to patterns of traditional service use among those with greater exposure to WRAP. Although we cannot definitively attribute pre-post changes in outcomes to WRAP and although some outcomes did not improve, this is the first study to document participant changes across multiple study sites using valid and reliable outcome measures, independent data collection, and fidelity assessment.

One unexpected finding was a significant decrease in empowerment, an outcome that might have been expected to improve after WRAP training. However, previous research on the scale used to measure empowerment in this study (8) found no significant associations between empowerment and number of weekly hours of self-help participation or number of years that a respondent had engaged in self-help activities. Perhaps peer-delivered interventions such as WRAP promote more realistic appraisals of the low degree of control people with mental illness have over their lives and communities, resulting in lower self-perceived empowerment even while hopefulness, self-advocacy, and recovery are enhanced.

Study limitations include a small sample, recruitment from a single state rather than a nationally representative population, reliance on self-report to assess outcomes, and absence of a control group for comparison.

Moreover, a longer follow-up period may have allowed for greater participant changes. The ongoing study from which these data were drawn includes a third assessment at six months postintervention, as well as a randomized control design to address these study weaknesses.

Conclusions

WRAP is now being offered across the country, with formal and informal WRAP initiatives ongoing in all 50 states and U.S. territories. The widespread popularity of this model offers a wealth of opportunities for additional and more rigorous evaluations. Studies of the efficacy and effectiveness of this model in promoting recovery have the potential to advance our understanding of self-management interventions for people with mental disorders. The field stands to benefit from such research, and individuals who participate in WRAP will have an opportunity to experience enhanced autonomy and greater self-determination.

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References

1. Onken S, Craig C, Ridgway P, et al: An analysis of the definitions and elements of recovery: a review of the literature. *Psychiatric Rehabilitation Journal* 31:9–22, 2007
2. Copeland ME: Wellness Recovery Action Plan: a system for monitoring, reducing and eliminating uncomfortable or dangerous physical symptoms and emotional feelings. *Occupational Therapy in Mental Health* 17:127–150, 2002
3. Bodenheimer T, Lorig K, Holman H, et al: Patient self-management of chronic disease in primary care. *JAMA* 288:2469–2475, 2002
4. Derogatis LR (ed): Brief Symptom Inventory: Administration Scoring and Procedures Manual, 3rd ed. Minneapolis, National Computer Systems, 1993
5. Gifford D, Schmook A, Woody C, et al: Construction of a Scale to Measure Consumer Recovery. Springfield, Illinois Office of Mental Health, 1995
6. Snyder CR, Harris C, Anderson JR, et al: The will and the ways: development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology* 60:570–585, 1991
7. Brashers DE, Haas SM, Neidig JL: The Patient Self-Advocacy Scale: measuring patient involvement in health care decision-making interactions. *Health Communication* 11:97–121, 1999
8. Rogers ES, Chamberlin J, Ellison ML, et al: A consumer-constructed scale to measure empowerment among users of mental health services. *Psychiatric Services*, 48:1042–1047, 1997
9. Sherbourne CD, Stewart AL: The MOS social support survey. *Social Science and Medicine* 32:705–714, 1991
10. Ware JE, Kosinski M, Keller SD: A 12-Item Short-Form Health Survey: construction of scales and preliminary tests of reliability and validity. *Medical Care* 34:220–233, 1996