Initial Outcomes of Mental Illness Self-Management using Wellness Recovery Action Planning

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ABSTRACT

Objective. This study examined changes in psychosocial outcomes among participants in an 8-week, peer-led, mental illness self-management intervention called Wellness Recovery Action Planning (WRAP).

Methods. Eighty individuals with severe mental illness at 5 Ohio sites completed telephone interviews at study baseline and one month following the intervention.

Results. Paired t-tests of pre- and post-intervention 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 classes.

Conclusions. These promising early results suggest that further research on this intervention is warranted.
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 over two decades. (1) Some common self-management strategies for psychiatric disorders include writing down or talking about problems, speaking with or visiting friends, exercise, meditation, artistic endeavors, practicing good nutrition, self-advocacy, and political activism (2). While 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 health disorders. The present study examined changes in 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 5 sites in the state of Ohio. Individuals were recruited from service delivery sites including traditional treatment settings (such as community mental health centers,
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outpatient clinics, and residential programs) as well as self-help/peer support settings (such as consumer-run drop-in centers and mental health support groups). One-hour telephone interviews were conducted by the University of Illinois at Chicago's Survey Research Laboratory. The first interview occurred immediately prior to the intervention and the second in the month after; respondents received research honoraria of $20 and $25, respectively. The protocol included valid and reliable scales measuring symptomatology, (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 8 sessions, meeting for 2.5 hours each week and co-facilitated 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 detailing signs of impending crisis, individuals willing to help, types of assistance preferred, and other desires. The final session covered how to ensure adequate support post-crisis and the benefits of re-tooling WRAP Plans after a crisis to avoid relapse. Model fidelity was assessed weekly, using 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 due to death, prior exposure to WRAP, inability to attend due to changes in work or school schedules, moving away from the area, or because they no longer wished to participate. This left a total of 95 participants who were available to complete a T2 interview. Methods used to avoid study attrition included follow up phone calls made by research staff to subjects between interview time points, efforts to locate missing subjects through their secondary contacts such as family members and clinicians, and multiple opportunities for rescheduling of missed interviews. As a result of these efforts, 80 (84%) completed T2 interviews (1 refused, 6 not locatable, 8 not available). When we compared the background characteristics of those who did and did not complete both assessments, we found no significant differences on any characteristic except that those not completing T2 were significantly less likely to be African American (0% of non-completers vs. 25% of completers). All subsequent analyses were conducted on the 80 individuals who completed both interviews.

The WRAP educators tracked attendance and reported it to the researchers on a weekly basis. On average, participants attended a mean of 5.4±2.8 out of 8 sessions (median=7). Eleven percent attended no sessions and 29% attended all sessions. Two-thirds (n=53) attended 6 or more sessions, a requirement for receiving a “certificate of graduation,” and were classified as “high attenders.” Twenty-two percent (n=18) attended one or more make-up sessions, ranging from 1-3 per individual.

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, while paired-samples t-tests were computed to examine changes within
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subjects from pre- to post-test, both for the total group and then separately for high vs. low attenders.

Results

Participants' average age was 46.6±10.4 years (range=20-67, median=47) and 64% (n=51) were women. Sixty-six percent (n=53) were Caucasian, 25% (n=20) African American, 4% (n=3) Hispanic/Latino, and 5% other race/ethnicities (1 American Indian, 1 Pacific Islander, and 2 mixed). Most (81%, n=65) had a high school diploma or General Equivalency Degree; 11% (n=9) were married/cohabiting; 70% (n=56) resided in their own house/apartment, with a mean household size of 1.9 individuals (median=1). Eighty percent (n=64) reported prior psychiatric hospitalizations; 21% (n=16) reported schizophrenia spectrum diagnoses, 40% (n=30) bipolar disorder, 26% (n=20) depression, and 3% (n=2) personality disorder. All reported receiving mental health services in the six months prior study enrollment: 80% (n=64) received medication management; 74% (n=64) case management; 52% (n=42) support group; and 40% (n=32) crisis intervention. Only 16% (n=13) were employed and 15% (12) reported looking for work in the past four weeks.

Table 1 presents the results of paired-sample t-tests of participants' scores before and immediately following the intervention. There was a statistically significant decrease in global symptom severity, as well as subscales for psychoticism, depression, phobic anxiety, obsessive-compulsive, panic anxiety, paranoid ideation, and general anxiety symptoms. Significant increases were observed in overall recovery as well as every one of the five recovery subscales: 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 hopefulness as well as their scores on the patient self-advocacy scale. Somewhat surprisingly,
significant decreases were observed in participants’ self-reported empowerment. No significant changes were observed in participants’ social support. Finally, there was significant improvement in respondents’ self-perceived physical health.

Table 1. Paired-Sample T-Tests of Changes Pre- and Post-WRAP Participation in Psychiatric Symptoms, Recovery, Hopefulness, Self-Advocacy, Empowerment, Social Support, and Physical Health Perceptions (n=80)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Pre-Test Mean</th>
<th>Post-Test Mean</th>
<th>T Value &amp; Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSI Global Severity Index a</td>
<td>1.50</td>
<td>1.22</td>
<td>-4.64 ***</td>
</tr>
<tr>
<td>Psychoticism</td>
<td>21.16</td>
<td>18.19</td>
<td>-4.66 ***</td>
</tr>
<tr>
<td>Somatization</td>
<td>14.82</td>
<td>13.96</td>
<td>-1.77 +</td>
</tr>
<tr>
<td>Depression</td>
<td>19.28</td>
<td>16.82</td>
<td>-3.67 ***</td>
</tr>
<tr>
<td>Hostility</td>
<td>10.18</td>
<td>9.38</td>
<td>-1.97 +</td>
</tr>
<tr>
<td>Phobic Anxiety</td>
<td>14.26</td>
<td>12.40</td>
<td>-3.89 ***</td>
</tr>
<tr>
<td>Obsessive – Compulsive</td>
<td>17.15</td>
<td>15.16</td>
<td>-3.91 ***</td>
</tr>
<tr>
<td>Panic Anxiety</td>
<td>15.68</td>
<td>13.85</td>
<td>-3.60 **</td>
</tr>
<tr>
<td>Paranoid Ideation</td>
<td>15.38</td>
<td>13.70</td>
<td>-3.26 **</td>
</tr>
<tr>
<td>General Anxiety</td>
<td>15.68</td>
<td>13.85</td>
<td>-3.60 **</td>
</tr>
<tr>
<td>Recovery b</td>
<td>86.95</td>
<td>92.75</td>
<td>4.30 ***</td>
</tr>
<tr>
<td>Personal Confidence</td>
<td>31.39</td>
<td>34.10</td>
<td>4.51 ***</td>
</tr>
<tr>
<td>Willingness to ask for Help</td>
<td>12.09</td>
<td>12.56</td>
<td>2.08 *</td>
</tr>
<tr>
<td>Goal Orientation</td>
<td>19.02</td>
<td>19.96</td>
<td>2.56 *</td>
</tr>
<tr>
<td>Reliance on Others</td>
<td>15.35</td>
<td>16.10</td>
<td>2.38 *</td>
</tr>
<tr>
<td>No Symptom Domination</td>
<td>9.09</td>
<td>9.92</td>
<td>2.56 *</td>
</tr>
<tr>
<td>Hopefulness c</td>
<td>21.16</td>
<td>22.29</td>
<td>2.99 **</td>
</tr>
<tr>
<td>Self-Advocacy d</td>
<td>3.54</td>
<td>3.71</td>
<td>3.33 **</td>
</tr>
<tr>
<td>Empowerment e</td>
<td>2.19</td>
<td>2.07</td>
<td>-3.70 ***</td>
</tr>
<tr>
<td>Social Support f</td>
<td>3.26</td>
<td>3.38</td>
<td>1.58 ns</td>
</tr>
<tr>
<td>Self-Perceived Physical Health g</td>
<td>31.48</td>
<td>34.32</td>
<td>2.80 **</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001, ns=non-significant
a Possible scores range from 0 to 4, with higher scores indicating greater symptomatology. b Possible scores range from 24 to 120, with higher scores indicating greater recovery. c Possible scores range from 8 to 32, with higher scores indicating greater hopefulness. d Possible scores range from 1 to 5, with higher scores indicating greater self-advocacy. e Possible scores range from 1 to 4, with higher scores indicating greater empowerment. f Possible scores range from 1 to 5, with higher scores indicating greater social support. g Possible scores range from 0 to 100, with higher scores indicating better 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 that significant improvement in the high attender group occurred for global symptom severity and total recovery scores, as well as hopefulness, self-advocacy, and self-perceived physical health; empowerment was significantly lower. Significant improvement in the low attender group occurred only for hopefulness and self-perceived physical health, while all other outcomes showed no significant change. To see whether the difference in improvement between high and low attenders was due to the former's use of traditional services, we examined associations between attendance and service use (not shown) and found no differences between high and low attenders on use of traditional clinical services such as case management, medication management, crisis intervention or individual therapy.

Finally, we wanted to know if high attenders differed from low attenders at baseline. Compared to low attenders, high attenders were more likely to be women (77% of high attenders vs. 37% of low attenders), and also more likely to be married or cohabiting (17% of high vs. 0% of low attenders). At time of entry into the study, compared to low attenders, high attenders had significantly lower global symptom severity, as well as lower scores on all symptom subscales except depression. High attenders also had higher self-advocacy scores than low attenders. On all other background characteristics and outcome variables, there were no significant differences in baseline scores by attendance.

Discussion

We found that individuals participating in WRAP, a peer-led, mental illness self-management intervention, showed significant improvement in symptoms and many psychosocial
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outcome areas associated with recovery. Moreover, those exposed to a greater number of WRAP sessions showed greater improvement than those attending fewer sessions, and this difference was not due to patterns of traditional service among those with greater exposure to WRAP. While we cannot attribute pre-post changes in outcomes definitively 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 following WRAP training. However, prior 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 the total number of years respondents 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 size, recruitment from a single state rather than a nationally representative population, reliance on self-report to assess outcomes, and absence of control group comparisons. Moreover, a longer follow-up period may have allowed for greater participant changes. The full study includes a third assessment at 6-months post-intervention, as well as comparison to a control population to address these study weaknesses.

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 to engage in further, 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 health disorders. In so doing, the field stands to benefit, along with the advantages that accrue to those who experience enhanced autonomy and greater self-determination.

References


