FINAL REPORT

National Institute of Mental Health

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A Clinical Pilot of the Workplace Fundamentals Module

The results of a decade of studies conducted by Drake and his colleagues have consistently indicated that individuals with serious and persistent mental illness (SPMI) can obtain competitive employment when they receive vocational services focused on rapid job placement followed by comprehensive and unlimited on-the-job support. These vocational services, labelled *Individual Placement and Support* (IPS) services, are provided by "employment specialists" who are integral members of clients' multidisciplinary treatment teams. The specialists attend the teams' meetings, confers with team colleagues, share information about clients' vocational plans and current functioning, and ensure that IPS services are fully considered in any and all clinical decisions about the clients' overall treatment plans.

The efficacy of these services has been particularly well demonstrated in a rigorous evaluation conducted by Drake, McHugo, Becker, Anthony, and Clark (1996). They compared the outcomes of IPS with those of traditional vocational services provided by an independent rehabilitation agency. The traditional services consisted of "individualized intake, pre-employment skills training in a group format, liaison with mental health providers, and follow along supports. The pre-employment training was designed to develop awareness and skills in the three areas of choosing, getting, and keeping a job" (Drake et. al. 1996; pages 395-395).

The results of the study indicated that significantly more participants in the IPS condition found jobs (78.1% versus 40.3%), worked more total hours over the 18 months of the study (average of 607.03 hours versus 205.13), and earned more total income ($3,394.01 versus $1,077.82) than participants in the traditional services condition. This superiority primarily reflected IPS's policy of early job placement. IPS participants were employed earlier during the study period, amassing more total hours worked and total money earned.

However, the on-the-job support services seemed less effective. There were no differences between the conditions in the average duration of participants' longest jobs, the average duration of participants' first jobs (13 weeks, median of 70 days), the proportion of participants employed at the end of the 18 months of the study, and the proportion of participants employed in at least half-time jobs. Thus, IPS did not help participants retain their jobs.

Becker et al. (1998) interviewed participants about the reasons for the loss of their jobs. They reported that the terminations were due to difficult interpersonal relationships, exacerbation of their symptoms, dissatisfaction with the job conditions, and poor work performance. To help SPMI workers retain their jobs, Wallace, Tauber, and Wilde (1999) recently developed a skills training "module" designed to teach workers how to cope with their symptoms and medications on the job, elicit feedback from their supervisors, improve their job performance, socialize with coworkers, and keep motivated. Since the module, titled the W*orkplace* F*undamentals Training* M*odule* (WFM) is focused on keeping a job, it is intended for use with job-finding services such as IPS.

Additional analyses by Drake et al. indicated that the outcomes of both IPS and the traditional services were significantly and substantially correlated with the fidelity of their implementations. Both conditions were implemented at two different sites, and the accuracy of the implementations was periodically monitored at each site. The less accurate IPS site was located close to the more accurate traditional services site, and the differences between the conditions were not significant. The more accurate IPS site was close to the less accurate traditional services site, and the differences were significant and substantial (effect size of 1½ for employment).

These findings prompted this project's PI to request R21 funding to develop a psychosocial skills training program, the *Workplace Fundamentals Module* (WMF), designed to improve job retention. The WFM's content is focused solely on improving jobsite skills such as coping with medication and symptoms on the job, engaging in interactions with supervisors, eliciting feedback and improving job performance, socializing on the job, and keeping motivated. The WFM's highly structured format, the same as that used in all of the skills training

modules produced by the PI and his colleagues, ensures that the WFM is easily and accurately replicated across diverse facilities and staff. The WFM also includes an extensive set of teaching activities and exercises that personalize the training to fit participants' unique work environments.

A pilot evaluation of the WFM indicated that participants learned and retained the material presented in the module, and those who were employed retained their jobs for significantly longer than they had in past employment. However, the pilot evaluation was conducted with a small sample using a quasi-experimental design that did not permit unequivocal attribution of the results to the WFM. Hence, this project was designed to evaluate the WFM's efficacy using a randomized two-group design comparing the outcomes of participants who receive a combination IPS+WFM with those who receive IPS-only.

METHODS

To provide the reader with a context for understanding this project's procedures and results, this section begins with a brief description of the general content, methods, and format of the skills training modules, followed by a detailed description of the development of the WFM.

Modules.

General content. Since 1980, Liberman and his colleagues have produced a series of modules designed to teach SPMI individuals the skills needed to live successfully in the community. Each module is a self contained curriculum that encompasses from four to six skills in a major domain of community functioning such as self - management of medications, coping with symptoms, participating in recreation/leisure activities, and engaging in brief and friendly interactions. Each skill is defined in terms of the behaviors required for successful performance, and these behaviors are the foci of the training.

Training methods. Training is conducted for all skills in all modules using seven "learning activities" administered in the sequence a) introduction, b) videotaped demonstration, c) roleplay practice, d) generation and evaluation of solutions to resource management problems, e) generation and evaluation of solutions to outcome problems, f) completion of in-vivo assignments, and g) completion of homework assignments. The sequence is designed to have participants acquire and practice the behaviors, solve the obstacles that might prevent them from performing a skill or could interfere with their receiving the expected outcomes, and then practice the skill outside of the training environment with and without the trainer's supervision. All skills in all modules are trained with these seven activities administered in the same sequence.

Format. To ensure that the training is easily and accurately conducted across diverse trainers, facilities, and participants, each module is produced and distributed with three highly structured components; Videotape Demonstration, Trainer's Manual, and Participant's Workbook. The Videotape provides consistent modeling of the behaviors to be acquired; the Trainer's Manual specifies exactly what the trainer is to say and do to implement each learning activity and evaluate participants' progress; and the Workbook provides written materials to help individuals learn the skill. The results of numerous studies by Liberman and his colleagues have indicated that the modules achieve their instructional objectives across diverse staff, facilities, and trainees.

Development of the WFM.

Content. Specification of the WFM's content began with a qualitative review of the relevant clinical and research literature. As indicated above, IPS's superiority for helping workers find employment had been well documented, and the WFM was explicitly focused on helping workers keep their jobs. Hence, job finding such as obtaining job leads, producing a

resume, and participating in a job interview were eliminated from the review. The remaining items indicated that workers' difficulties in keeping their jobs could be grouped into four broad areas; a) coping with the symptoms of mental illness and managing psychotropic at the workplace; b) drug and alcohol abuse, c)performance of the specific job tasks and general "work personality" (i,e,, dependability), and d) social relationships with peers and supervisors.

To ensure that the results of the review were current and comprehensive, a total of 76 individuals participated in small groups interviews that elicited their suggestions about the content to be included in the WFM. The 76 respondents included 30 senior and line level clinicians at a number of mental health and vocational rehabilitation facilities, 5 senior program managers, 11 employers of SPMI individuals, and 30 clients who had been competitively employed at least once in the past 5 years. The interview began with open-ended questions about the factors involved in the respondents' most and least successful job experiences (if the respondents were clinicians, their clients' experiences). The interview then shifted to closed-ended questions that asked respondents to rate the relevance to the workplace of the various skills and problems that were included in the previously developed modules.

The interviews were audiotape recorded, and the responses to the open-ended questions were independently coded by 2 raters according to the client, workplace, and support factors that contributed to the successful or unsuccessful outcomes. Worker factors included symptoms, medications, job-relevant supports such as transportation and clothing), job performance, and dependability. Workplace factors included task requirements, monetary and other rewards, and interpersonal relationships with peers and supervisors. Support factors included the type of supporter such as job coach, case manager, family, friends, and/or other mental health and vocational rehabilitation personnel. The 2 raters agreed about the coding of 94% of the responses; the discrepancies in coding the 6% of responses were resolved by mutual discussion and consensus.

Based on these results and those of the literature review, nine skills were defined.

Skills	Content	"Generic" skills
1. How work changes your life	General benefits and costs of work	Develop and apply a knowledge base
2. Learn about your workplace	Specifics about your job	
3. Identify your own stressors	Identify what specifics will be your problem	
4. General problem solving	Learn 7-step method to solve problems	Problem solving
5. Manage symptoms, meds	Solve problems with symptoms & meds	
6. Manage health and hygiene	Coping with physical health & drug abuse	
7. Interactions to improve job	Interacting with supervisor for feedback	
8. Appropriate socializing	Workplace culture & on/off job interactions	
9. Supports & motivation	Know who can help; counter "demotivators"	

Format. Production of the WFM began with specification of the "storyline" and script for its demonstration videotape. The storyline was set as the processes that three participants in an ongoing job club use to solve their workplace difficulties. The three have diverse vocational histories, current jobs, and diagnoses. For example, one of the three is a female with limited vocational experience who has just started a job as a salesperson in the nursery department of a local home improvement store. She feels overwhelmed by the size of the store, the complexity of the department's inventory, and the pace of customers' requests for assistance. Another participant is a male who has worked as a long time member of a janitorial crew. His performance, however, has recently deteriorated with the return of auditory hallucinations. The three characters are followed as the job club is conducted over a number of weeks, and they demonstrate learning and correctly performing the nine skills as each is intriduced.

A "rough-cut" videotape was produced using trained actors who had worked in mental health agencies or were familiar with SPMI individuals, and a brief segment was presented to 10 clients who were administered a14-item multiple choice test of their knowledge of the material

before and after playing the segment. The 10 increased their knowledge from an average of 55% correct pre to 85% post. The clients' comments about the tape were quite positive, and indicated that they found the information potentially valuable. The entire rough-cut video was then presented to another group of clients for general feedback. Based on their comments, the final video was produced with more rapid presentation of the material via transitional audio narratives, summary graphics, and still photos excerpted from the tape.

The Trainer's Manual was then produced with one major difference compared to the Trainer's Manuals used with the other modules. The Roleplay learning activity was rewritten so that it always asked participants to practice using the 7-step method (Skill 4) to resolve either a personally relevant problem or a prepared problem that exemplified a frequent difficulty using the specific skill being trained. The revision was based on the rationale that the "core" skill of the WFM is using the problem solving method to resolve workplace problems, and the more that participants practice the method, the more likely they are to retain and apply it.

Finally, the Participant's Workbook was produced with several differences compared to the Workbooks used with the other modules. The WFM Workbook was specifically designed to guide participants through the process of personalizing the skills to their own workplaces. The Workbook was formatted as an 8½" x 11" loose-leaf "organizer" similar to a Day Runner, and labelled the Job Organizing Book.(JOB). It was filled with blank worksheets, checklists, calendars for the upcoming several years, daily schedules, etc. The calendars and other miscellaneous forms were common items available from several suppliers, but the worksheets and checklists were custom forms that helped participants generalize the skills to their particular workplaces. The forms ask each participant to predict how his/her unique personal characteristics and the specifics of the workplace will alter how he/she implements of each skill. The completed forms constitute an individualized "implementation plan" that is stored in a participant's JOB, and can be review and revised by the participant and his/her support staff at any time.

Pilot implementation. The WFM was piloted with a group of six participants who were employed within seven weeks of beginning the WFM, and a second group of six participants who were unemployed throughout but had work experience and wished to return to the workforce. The WFM was conducted for 12 weeks of semiweekly 1½-hour sessions, separately for the employed and unemployed groups by the same trainer. One participant in each group terminated prematurely for reasons unrelated to the pilot (Wallace, Tauber, & Wilde, 1999).

The results indicated that both groups significantly and substantially improved their knowledge and performance of the material taught in the WFM (average of 42.67% correct pre to 79.67% correct post for the employed group; 27.33% pre to 72% post for the unemployed group), with somewhat lower performance at the 6-month post-training follow up testing. Of the five in the employed group, all kept their jobs for the entire 9-month duration of the pre-post-follow up testings, the longest period of uninterrupted work for 4 of the 5. Of the five in the unemployed group, 2 became employed at the end of the module, 1 pursued further services from the Department of Vocational Rehabilitation, and 1 attempted work but decompensated.

Procedures for this project.

Setting. The project was conducted in collaboration with the Santa Barbara (CA) County Department of Alcohol, Drug Abuse, and Mental Health Services (SB-ADMHS). Santa Barbara County is an area of 2,700 hundred square–miles located 90 miles north of Los Angeles. Its 400,000 residents are clustered in three urban areas; Santa Barbara City (91,000 residents), Santa Maria (77,000 residents), and Lompoc (41,000 residents). Approximately 34% of the county's residents are Latino; 57% are non-hispanic Caucasians; and 9% are African-American, Asian-Pacific, and American Indian (Census Bureau, 2002, http://quickfacts.census.gov/). The county's unemployment rate is similar to the national rate and lower than the state rate. Most jobs are in the services and retail trade sectors (49%), with considerably fewer in each of the next 2 largest sectors, durable manufacturing and agriculture (approximately 8% each).

SB-ADMHS serves approximately 2000 adults who have a DSM-IV diagnosis of an SPMI disorder (59% schizophrenia or schizoaffective disorder, 35% affective disorder, and 6% a mix of diagnoses). All receive continuing care from SB-ADMHS's eight case management teams that function as modified PACT teams. Each team serves a designated group of SPMI clients, and each team member functions as the "point of responsibility and contact" for specific clients. Each team provides selected services in clients' residences and at locations such as Community Mental Health Centers that house several teams. The teams, however, do not provide round-the-clock emergency services, and they broker a number of services to a network of independent contract vendors.

Several procedures were implemented to integrate this project with the case management teams and ensure that participants received high quality clinical care and the IPS model was correctly implemented. The Project Director and other project staff routinely attended each team's weekly clinical review to update the team about the progress of its participants and share clinical information. Project staff distributed copies of the JOB worksheets completed by each team's participants, and an open-ended invitation was extended to all staff to attend any and all sessions of the WFM. Project staff were also available for unlimited consultation at the request of any team.

Selection and recruitment of participants. Participants were selected based on 1) a DSM-IV diagnosis of SPMI including schizophrenia, schizoaffective, bipolar disorder of at least than 2 years duration, 2) no primary diagnosis of substance abuse, 3) no inpatient treatment during the previous 3 months and not more than 3 months total hospitalization in the last year, 4) not less than six months of current residency in Santa Barbara county, 5) 18 to 70 years of age, 6) an expressed interest in obtaining competitive employment, 7) at least two unsuccessful terminations from competitive employment in the past 3 years , 8) obtained or will obtain competitive employment within 6 weeks of enrollment in the project, 9) no medical condition that limited participation in a job. These criteria were designed to select SPMI participants (#1 and #2) with relatively stable symptoms (#3) who were likely to remain in the area for the duration of the procedures (#4), wished to work (#6), and had no obvious impediments to finding and keeping a job (#9). Given the WFM's focus on keeping a job after one has been found, the criteria were also designed to selected participants who were about to be or were just employed (#8) and whose vocational histories indicated that they might benefit from participating in the WFM.

Recruitment began by meeting with each case management team and explaining the project's services and procedures in detail, answering their questions, and distributing written summaries. The case managers were asked to review the rosters of their clients and identify those who met the selection criteria. At the next regularly scheduled meeting between a potential participant and his/her case manager, project staff joined the meeting and explained the project in detail, answering any and all questions asked by the potential participant. If the individual agreed, he/she signed the informed consent form, and an appointment was scheduled for administration of the pretests..

Treatments. Participants were randomly assigned to either the WFM+IPS group or the IPS-only group. Since IPS was conducted in both groups, it will be described first.

IPS-only group. IPS has been described in Drake and Becker (1996), and a manual has been published detailing its specific procedures (Becker & Drake, 1993). Briefly, the services are provided by an "employment specialist" who is responsible for a caseload of up to 25 SPMI clients. As Drake and Becker (1996) note, "the essence of the services is integrating employment specialists into case management teams to provide consumers with practical assistance in finding and maintaining competitive employment" (page 473). The goal is rapidly finding a job, even one that requires only a few hours per week or lasts for a limited duration. The "practical assistance" clients need to find a job is information about the fit between each

one's unique skills and characteristics and a specific job's tasks and workplace (Becker & Drake, 1993). The information can then be used by the clinical team to direct a client toward a potential success and away from a potential failure.

Once employed, the worker is given continuous support services for as long as he/she is working. The supportive services are intended to prevent or minimize "mismatches" between a client's needs and the characteristics of the job and the workplace. A client's hostility and paranoia, for example, may be exacerbated in a workplace that allows teasing interactions among coworkers. The exacerbation may be serious enough to result in the client's termination and symptomatic relapse. The support services might include suggesting that the worker move to a less interpersonally active shift or workplace, asking the team's psychiatrist to consider an increase in the client's medication, or helping the client correctly interpret coworkers' comments.

However, the skills needed to help clients find jobs are different than the skills needed to help them retain their jobs. Job finding requires cultivating relationships with local employers and human resources staff to be aware of jobs as they become available, and determine the specific characteristics of the workplace that will alter the probability of successful employment. In marketing terms, the job finder obtains precise information about the needs of the "buyer" (the employer) in his/her specific workplace, and then "sells" the buyer on the value of the "product" (the client) in the specific workplace. Job support, on the other hand, requires information about the client's needs and the changing characteristics of the workplace so that, in marketing terms, the product and the buyer can be continually adapted to one another, maximizing their outcomes and ensuring a mutually satisfying relationship.

Staff. Thus, for this project, the job finding and support services were separated, and each group was staffed with one ½ time job finder and two ¼ time job supporters. Job finding services for the IPS-only group were provided by the same staff member for the 24-month duration of the project, while two staff members provided the WFM+IPS group's finding services, one for the first 16 months and the second for the remaining 8 months. All three staff were familiar with the general characteristics of SPMI, but the focus of their activities was forming and maintaining relationships with employers, developing job leads, and sharing information with other vocational service providers such as the state Department of Vocational Rehabilitation.

The IPS-only group's support services were provided by the same two staff members during the 24-month duration of the project, while three staff members provided the WFM+IPS group's support services, one for the duration of the project, one for the first 16 months, and one for the remaining 8 months.

Staff fidelity to the IPS procedures. The fidelity with which the job finder implemented the services prescribed by the IPS model was measured with two instruments. First, the Project Director monitored the services using the relevant items from a checklist developed by Becker and Drake (1993). Second, the job finder met individually with the unemployed clients on a biweekly basis to review each client's job-search plan and change it as the client wished. The Project Director reviewed the initial plans, the changes, and the results of the monitoring with the IPS checklist during the periodic supervision meetings with the job finder. Any deviation from the IPS model were easily detected and immediately corrected.

The fidelity with which the job supporters implemented the services prescribed by the IPS model was also measured with two instruments. The Project Director monitored the support services with the same checklist used to monitor job finding services, altered to include only the items relevant for support activities. The supporters met at least biweekly with employed clients to record each client's earnings and hours for the previous two weeks, and review his/her current job-support plan, identify "mismatches" between the client and the job, and develop plans to improve the match. The Project Director reviewed the initial support plans, the changes, and the

results of the monitoring with the IPS checklist during the periodic supervision meetings with the supporters. Any deviation from the IPS model were easily detected and immediately corrected.

WFM+IPS. In addition to implementation of IPS services, semiweekly 2-hour sessions of the WFM were conducted from 2-4 pm by either of the two supporters. The duration of the training was set to 3 months, and make-up sessions were provided individually for participants who missed a session. The thoroughly specified nature of the WFM's learning activities ensured that the make-up sessions provided the identical information as that imparted in the missed sessions.

Staff fidelity to the IPS and the WFM procedures. Staff's fidelity to the job finding and support services prescribed by the IPS model was measured identically to the procedures described above. Additionally, the accuracy with which the supporters conducted the WFM was monitored by periodic administration of the Therapist Fidelity Scale. The scale is a direct observation that assesses how faithfully the trainer follows the form and content prescribed in a module's Trainer's Manual (e.g., "reads the introduction to a skill area", "asks the questions in the manual," "scores answers according to listed criteria," "pauses videotape at marked stop and asks questions in manual," etc., etc.). The observation is scored on a yes/no checklist, and summarized in terms of the percentage of prescribed behaviors performed by the trainer. For this project, observations of a randomly selected 20% of the sessions were conducted by the Project Director, and the supporters correctly performed no less than 90% of the prescribed behaviors. If a participant missed a session, it was conducted individually as soon as possible.

Measures. The effects of the two conditions were evaluated with measures of psychopathology, employment, and social/role functioning. In addition, the process effects of the module were assessed with the Comprehensive Module Test, an interview-based measure of participants' knowledge and performance of the material taught in the module.

Psychopathology. The UCLA expanded Brief Psychiatric Rating Scale (BPRS) was administered to measure individuals' symptoms during the 18 months of their participation. The expanded BPRS is a semi-structured interview that assesses 24 symptoms such as hallucinations, unusual thought content, depression, guilt, anxiety, motor retardation, and withdrawal. The severity of the symptoms are rated by the interviewer on a seven point scale (1=absent to 7=extremely severe) based on the respondent's verbal responses and the interviewer's observations of the respondent's nonverbal behavior. .The interviewers were trained to a criterion interrater reliability of kappa=.8 by the Diagnostic and Psychopathology Unit (DPU) of the Intervention Research Center for Major Mental Illness, IRC, Robert P. Liberman, Principal Investigator. Additionally, all BPRS interviews were audiotape recorded, and a randomly selected 20%

Employment. Earnings and hours worked were provided by the employed participants during their biweekly meetings with their supporter. A randomly selected 15% of these reports were verified by pay stubs or employers' records for those participants who had agreed to have the project staff contact their employers. The definition of employment will be the same as that of Drake et al., 1996; "work in the competitive job market at prevailing rates supervised by personnel employed by the business."

Job Satisfaction was measured with a single question asked during the biweekly meetings with the employed participants, "How satisfied are you with your job?" The respondents rated their satisfaction on the 7-point "delighted-terrible" scale (1=terrible to 7=delighted, anchored at each point).

History. Information about participants' education, marriage, military service, hospitalizations, and psychiatric history was recorded on the IRC's Social and Psychiatric History from. Information about participants' current and past substance abuse, arrests, and convictions was elicited with the Addictions Severity Index (ASI).

Social/Role Functioning. Four measures were administered to assess participants' social and role functioning; the Self-report version of the Independent Living Skills Survey (ILSS, Wallace, et al., 2000), the Colorado Client Assessment Record (CCAR, Ellis et al., 1994), the Behavior And Symptom Identification Scale (BASIS-32, Eisen et al., 1992), and the Short Form of the MOS outcome measure (SF-36; McHorney et al., 1994).

ILSS-SR. The ILSS-SR is a 66-item self-report of a respondent's functioning in eight areas of basic living skills including personal hygiene, appearance and care of clothing, care of personal possessions and living area, food preparation, health maintenance, money management, transportation, and leisure and recreation. Each item describes a specific behavior in each area, and asks the respondent to indicate how often he/she performed the behavior during the previous 30 days; never (0), sometimes (1), often (2), usually (3), always (4). A "no opportunity" response option is provided to account for living environments that limit the opportunities to perform each behavior (e.g., the respondent is not allowed to prepare his/her own meals). The responses (0-4) are averaged across the items in each area, not including those items answered with the "no opportunity" option.

CCAR. The CCAR is a case-manager completed measure that assesses the presence/absence of 60 "problem" behaviors (e.g., Belligerent, Dishonest, Fearful, Nervous, Absenteeism, Social Skills Problem) grouped into nine scales; Feeling/Mood/Affect, Thinking/Mental Processes, Medical/Physical problems, Substance Use, Interpersonal Relations, Role Performance, Socio-Legal, and Self Care/ Basic Skills. After rating the individual's performance on each of the 60 behaviors, the case-manager rates the individual's role performance in each of the nine areas on a 50-point scale anchored by the terms "above average (rating of 1), average, slight dysfunction, moderate dysfunction, severe/extreme dysfunction rating of 50).

BASIS-32. The BASIS-32 is a self-report measure that assesses the degree of difficulty a respondent has experienced in the past 7 days in 32 areas of functioning such as "managing day-to-day life" and "role functioning." Respondents rate their difficulty on a seven point scale, and the ratings are summed to obtain totals for five factor analytically derived scales; Psychosis, Impulsivity, Anxiety/Depression, Interpersonal Relations, and Living Skills. In addition, all 32 items are summed to obtain an overall difficulty score.

SF-36. The SF-36 is a self-report measure that assesses eight areas of a respondent's health including physical functioning, physical limitations in role functioning, pain, general health; vitality, social functioning, emotional limitations in functioning, and general mental health.

Module Test. The Comprehensive Module Test is a roleplay and interview-based measure of individuals' knowledge and performance of the material presented in the module. It is intended as a assessment on the "take" of the independent variable; i.e., did the respondent acquire and retain the specific information and skills given in the WFM's learning activities.

Assessment Procedures. All of the measures except the CCAR were administered pre and immediately post-training (3 months later), and 6, 12, and 18 months after enrollment. To lessen the burden on case-managers, the CCAR was administered just after enrollment and 6, 12, and 18 months later.

RESULTS

The data were analyzed with SPSS 11.0. The analysis was designed to answer four questions; 1) were there differences in the demographic characteristics of the groups despite the random assignment of participants?; 2) did the participants in the WFM+IPS group learn the material presented in the WFM?; 3) were there differences in the groups' employment outcomes?; and 4) were there differences in between the groups in non-vocational outcomes?

Demographic characteristics. A total of 42 participants were recruited in 3 cohorts of 16, 16, and 10, with 2 months separating the recruitment of cohorts 1 and 2, and 3 months separating cohorts 2 and 3. Recruitment for cohort 3 was more difficult than that for cohorts 1 and 2 since the pool of clients who fulfilled the selection criteria of recent unsatisfactory employment AND starting or about to start a new job had been considerably diminished by the recruitment of cohorts 1 and 2. Unfortunately, eligible clients could not be placed on a 1 to 3 month waiting list since the jobs they found needed to be filled immediately.

Five of the 42 participants withdrew shortly after the pretesting for reasons unrelated to the project (moving out of the area; arrested and jailed for a serious assault). Three had been assigned to the WFM+IPS group and two to the IPS-only group.

The table below presents the demographic characteristics of the two groups. As indicated in the table, there were no significant differences between the groups on any characteristic.

Characteristic	WFM+IPS		IPS-only		Comparison
Gender	Female: Male	10 (52.6%) 9 (47.4%)	Female Male	8 (44.4%) 10 (55.6%)	chi square 0.248 (ns)
Ethnicity	Caucasian Hispanic Black Other	15 (79%) 2 (10.5%) 0 (0%) 2 (10.5%)	Caucasian Hispanic Black Other	15 (83.2%) 1 (5.6%) 1 (5.6%) 1 (5.6%)	chi square 1.641 (ns)
Marital Status	Single Married Divorced	13 (68.4%) 2(10.5%) 4 (21.1%)	Single Married Divorced	10 (55.6%) 1(5.6%) 7 (38.8%)	chi square 1.517 (ns)
Military Service	Yes No	3 (15.8%) 16 (84.2%)	Yes No	3 (16.7%) 15 (83.3%)	chi square 0.005 (ns)
Diagnosis	Schizophrenia Bipolar Other	12 (63.2%) 5(26.3%) 2 (10.5%)	Schizophrenia Bipolar Other	8 (44.4%) 8(44.4%) 2 (11.1%)	chi square 1.466 (ns)
Age of Onset	Mean = 27.00 Standard deviation = 8.062		Mean = 24.78 Standard deviation = 9.997		F = 0.557 ns
Years of education	Mean = 13.58 Standard deviation = 2.610		Mean = 14.39 Standard deviation = 2.355		F = 0.978 ns
Alcohol DTs	Mean = 0.79 Standard deviation = 1.653		Mean = 3.35 Standard deviation = 7.93		F = 2.29 ns
Drug ODs	Mean = 0.74 Standard deviation = 1.284		Mean = 0.82 Standard deviation = 1.38		F = 0.04 ns
Arrests	Mean = 2.42 Standard deviation = 4.706		Mean = 1.82 Standard deviation = 2.94		F = 0.203 ns
Convictions	Mean = 1.74 Standard deviation = 4.039		Mean = 1.18 Standard deviation = 1.88		F = 0.274 ns

Learning the WFM. The table below presents the percentage of correct answers to the Comprehensive Module Test given by the two groups over the five test times.

Mean percentage of correct answers to the Comprehensive Module Test (CMT)

Group	Pre	Post	Follow Up 1	Follow Up 2	Follow Up 3
WFM+IPS	38%	72.2%	68.2%	68.5%	67.9%
IPS-only	40.3%	50.8%	50.4%	50.4%	55.2%

The table indicates that the performance of the WFM+IPS group at the pretesting was similar to that of the IPS-only group, but, after training, was superior to that of the IPS-only group and remained so over the 6, 12, and 18 month follow up testings.

These results were analyzed with a Split Plot Factorial ANOVA with one between-subjects variable (group; WFM+IPS and IPS-only) and one within subjects variable (testing time; pre, post, follow ups 1, 2, and 3. The results of the ANOVA are given below, and confirm the pattern of the means indicated above. The main effects and the interaction were significant, and the interaction was further analyzed with a test of simple main effects. The results of the simple main effects analyses indicated that the two groups were not significantly different at the pretest, but were significantly different at all other testings. The results also indicated that the differences among the test times were significant for the WFM+IPS group but not for the IPS-only group. The differences among the test times for the WFM+IPS group was further analyzed with Tukey HSD tests, and the results indicated that the pretest mean was significantly different from all other testings, with no difference among the other testings.

Source	SS	df	MS	F
Between Subjects				
Treatment	.512	1	.512	9.83
Error	.175	35	.005	
Within Subjects				
Test time	.806	4	.201	30.45
Group x Test time	.220	4	.005	8.328
Error	.088	140	.0006	

Employment outcomes. A total of 34 participants, 17 in each group, were employed during the duration of the project. The groups were not significantly different in the percentage of participants who were employed: 17 of 19, 89.4%, in the WFM+IPS group; 17 of 18, 94.4%, in the IPS-only group; chi square = .005).

The biweekly reports of participants' earnings, hours worked, and job satisfaction were summed to provide total earnings, hours worked, and average job satisfaction during the duration of the project. The biweekly reports of participants' job search activities and the records of the job finder were summarized to provide the total number of jobs held by each participant during the duration of the project. The table below presents the mean and standard deviation of each group's employment outcomes, and the results of the t-test analysis of the differences between the groups.

	Employment Outcomes			
Group	Number of jobs	Total hours	Total pay	Satisfaction
WFM+IPS	M = 1.17 S = .393	M = 427.13 S = 430.1	M = $3002.32 S = .$3164.43	M = 5.42 S = 1.05
IPS-only	M = 1.94 S = .1.088	M = 597.21 S = 550.02	M = $4239.18 S = .$4676.49	M = 4.43 S = .999
t test results	t = 2.76 p = .013	t = 1.004 p = .329	t =.903 p = .374	t =2.797 p = .009

Non-vocational outcomes.

Psychopathology. The table below presents the average rating on the 24 items of the expanded BPRS over the five testings. Like the analysis of the CMT data, the results were analyzed with a Split Plot Factorial ANOVA with one between-subjects variable (group; WFM+IPS and IPS-only) and one within subjects variable (testing time; pre, post, follow ups 1, 2, and 3). Neither main effect nor the interaction were significant.

Mean rating on the 24 items of the Expanded BPRS

Group	Pre	Post	Follow Up 1	Follow Up 2	Follow Up 3
WFM+IPS	1.92	1.80	1.79	1.75	1.72
IPS-only	1.90	1.75	1.65	1.71	1.87

Social/Role Functioning.

ILSS-SR. The table below presents the average rating on the 66 items of the ILSS-SR over the five testings. The results were also analyzed with a Split Plot Factorial ANOVA with one between-subjects variable (group; WFM+IPS and IPS-only) and one within subjects variable (testing time; pre, post, follow ups 1, 2, and 3). Neither main effect nor the interaction were significant.

Mean rating on the 66 items of the ILSS-SR

Group	Pre	Post	Follow Up 1	Follow Up 2	Follow Up 3
WFM+IPS	2.45	2.39	2.51	2.51	2.62
IPS-only	2.46	2.42	2.59	2.51	2.49

CCAR. Unlike the expanded BPRS and the ILSS-SR, the CCAR has no overall summary scale that can be analyzed and protect alpha. Hence, one scale, Role Performance, was analyzed since it was the one most likely to be changed by work. The scale consists of items asking about the presence/absence of absenteeism, work performance, acting out on the job, and being disciplined at work or terminated. The table below presents the case managers' ratings on the Role Functioning Scale (higher score indicates higher dysfunction) over the four testings for the CCAR. The results were again analyzed with a Split Plot Factorial ANOVA with one between-subjects variable (group; WFM+IPS and IPS-only) and one within subjects variable (testing time; pre, post, follow ups 1, and 2). The results for time were significant ($F = 9.712$, $p<.001$, $df = 3, 109$).

Mean rating on the Role Functioning Scale

Group	Pre	Post	Follow Up 1	Follow Up 2
WFM+IPS	21.43	21.14	24.14	12.57
IPS-only	23.73	23.13	24.33	8.88

BASIS-32. The table on the next page presents the total difficulty on the items of the BASIS-32 over the five testings. The results were again analyzed with a Split Plot Factorial ANOVA with one between-subjects variable (group; WFM+IPS and IPS-only) and one within subjects variable (testing time; pre, post, follow ups 1, 2, and 3). Neither main effect nor the interaction were significant.

Mean total difficulty rating on the BASIS-32

Group	Pre	Post	Follow Up 1	Follow Up 2	Follow Up 3
WFM+IPS	60.33	55.67	59.50	52.67	59.17
IPS-only	71.00	65.91	60.45	64.27	65.00

SF-36. The table below presents the means for the General Health scale of the SF-36 over the five testings. The results of the Split Plot Factorial ANOVA conducted as described above indicated that neither main effect nor the interaction were significant.

Mean General Health score on the SF-36

Group	Pre	Post	Follow Up 1	Follow Up 2	Follow Up 3
WFM+IPS	67.08	65.42	66.25	69.47	62.50
IPS-only	64.55	62.27	69.09	58.97	60.11

DISCUSSION

The results indicate that the WFM achieved its objectives. Clients who participated in the WFM acquired and retained the information and skills presented in the module, had significantly fewer job turnovers during the course of the project, and were significantly more satisfied with their jobs. Importantly, these results occurred in the context of a relatively "stringent" test of the WFM. Almost all of the subjects were employed just before or just after their enrollment, and the equal duration of their employment and pay indicated that IPS was faithfully implemented for both groups. The equal duration and pay also indicated that differential job experience could not be an explanation of the differential acquisition and retention of the WFM's material. Additionally, all participants had been competitively employed, albeit with one or more unsuccessful terminations, and their education, psychiatric, and community functioning were equally high and stable, and augured for both groups' successful employment. Hence, the differences in turnover and satisfaction appear to be a function of the WFM.

However, the characteristics of the participants reduced the power of the comparisons of the two groups' non-vocational outcomes. The pretest results of the total BPRS scores indicated that participants' psychopathology was rated between "not present" and "very mild;" their overall ILSS-SR score was between "often" and "usually," their rating of problems on the BASIS-32 was between "a little" and "moderate," and their general health status on the SF-36 (scored with the RAND procedures) was rated relatively highly. Thus, there was little "room" for improvement on any of the non-vocational outcomes. Indeed, only the scores on the Role Functioning scale of the CCAR improved. The scale assesses vocational functioning, and the scores improved equally for both groups since their total duration of work and their pay were equal. Without a comparison group that receives non-vocational services, these results cannot be interpreted.

The results of this study are difficult to compare to other studies of IPS since none of the other studies is focused on evaluating additions to the IPS procedures. Rather, the other studies are comparisons of IPS with other treatments. However, this project's results for non-vocational outcomes are similar to those reported by Drake et al. (1996), and while this project's participants were employed for fewer hours, they earned more wages.

The results of this project suggest that the WFM may be a worthwhile addition to IPS. It focuses on the problem of job retention noted by Drake et al, (1996) and others (e.g., Lehman et al, 2002); it is easily and accurately conducted by diverse clinicians; it is well received by participants (Wallace et al, 1999); and it can be used with clients who have minimal vocational

experiences to acquaint them with general characteristics of the workplace (Wallace et al, 1999). However, it's effectiveness with a wide range of clients and clinicians has yet to be determined.

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