Exploring the Effectiveness of a Prevocational Seminar on Self-Efficacy and Work Motivation among Adults Residing in an Inpatient Mental Health Facility

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Objective: This study examined a work-related intervention designed to assist people with serious mental illness (SMI) in overcoming employment barriers.
Methods: A pre- post-test experimental design was used to investigate the effects of a 10-session, prevocational seminar on self-efficacy and work motivation among adults with SMI residing in an inpatient psychiatric facility. Three one-way ANCOVAs were applied to analyze post-test results for the dependent measures.
Findings: Although significant findings were not found regarding the effectiveness of the prevocational seminar on self-efficacy, other interesting discoveries were made. One noteworthy outcome was persons with SMI wanted to work but experienced barriers, including discrimination, decreased motivation, and work disincentives that impeded their return to employment.
Conclusions and Implications for Practice: Vocational rehabilitation (VR) counselors continue to face challenges in their efforts to increase employment among persons with SMI. The results from the present study underscore the need for skills training and innovative VR strategies to mitigate barriers to employment among persons with SMI.

Key Words: *serious mental illness, employment, prevocational training, self-efficacy, work motivation*

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Data generated through the U.S. Department of Labor (2018) showed employment rates among persons with disabilities (PEOPLE WITH DISABILITIES) is 20.7% compared to 68.4% of nondisabled workers.

In 2012, half of all persons with a disability who were not working reported some type of barrier to employment, notably the disabling effects of having a mental health diagnosis (80.5%), lack of education or training (14.1%), lack of transportation (11.7%), and need for special features at their job (10.3%) (Bureau of Labor Statistics [BLS], 2013). In addition, 7.4% of people with a disability reported using some type of career assistance program within the past five years to help them prepare for work or to advance on the job, including vocational rehabilitation centers and one-stop career centers (BLS). Despite rehabilitative service utilization and ongoing improvements in the vocational rehabilitation (VR) system, people with serious mental illness (SMI) continue to represent the group with the largest disparity in relation to labor force participation compared to people without a SMI (Evans-Lacko, Knapp, McCrone, Thronicroft, & Mojtabai, 2013) with a national unemployment rate of over 80% (National Alliance on Mental Illness [NAMI], 2014). However, mental health professionals often believe employment-related services fall outside the purview of their clinical services (Taskila et al., 2014) and are reluctant or unwilling to include employment-related goals as part of the treatment planning. In addition, individuals with SMI often lack the skills necessary to obtain gainful employment but are known to benefit considerably with appropriate interventions. The present study examined an evidence-based pre-vocational employment intervention designed specifically for individuals with SMI and provides recommendations for counseling professionals designed to assist individuals with SMI in overcoming employment barriers.

Employment and SMI

Data indicates while more than 60% of the 7.1 million people receiving public mental health services nationwide want to work, less than two percent receive supported employment (SE) opportunities (NAMI, 2014). According to von Schrader, Malzer, Erickson, and Bruyere (2011), unemployment is viewed as a detriment to establishing and maintaining future employment among people PEOPLE WITH DISABILITIES and is associated with a decline in psychological well-being (Netto, Yeung, Cocks, & McNamara, 2016) as well as increased risk for psychiatric-related hospitalizations among individuals with SMI (Eriksson, Agerbo, Mortensen, & Westergaard-Nielsen, 2010). Khalaf-Beigi, Shahbolaghi, Rassafiani, Haghgoo, and Taherkhani (2015) examined the meaning of work among individuals with SMI and found secondary to obvious financial benefits of employment, people with SMI were similar to the general population in their reports that work gave them a sense of purpose and accomplishment by providing a means for being with others and finding their place in the world. According to Gao, Gill, Schmidt, and Pratt (2010), attaining and retaining competitive employment has become the most important indicator of recovery for people with SMI.

Gainful employment is a fundamental component of an enhanced quality of life for PEOPLE WITH DISABILITIES (Gao et al., 2010; Netto et al., 2016). Although employment-related obstacles continue to emerge among people with SMI, SE and structural modifications of SE (e.g., modified or part-time work schedules) are important for integrating persons with SMI into competitive employment. SE is viewed as a societal mainstreaming agent for PEOPLE WITH DISABILITIES, especially individuals with SMI. The goal of providing a chance for competitive and integrated work for individuals with significant disabilities is critical to their daily functioning. Additional goals of the SE approach are based on the values in which SE was constructed, including person-centered control, attainment of supports, interdependence, and the formation of social connections within the community (Wehman, 2012). There are contemporary sub-models of SE that have emerged, including the individual placement support (IPS) model; however, this model is limited by its ability to facilitate gainful employment among individuals with SMI.

The IPS model is an evidence-based vocational rehabilitation intervention that is based on a client's desire to work, without exclusions regarding client characteristics such as diagnoses, substance use history, and legal system involvement. IPS also prioritizes client preferences, rapid job searches, and time unlimited and individualized support (Becker, Drake, & Bond, 2014) and is the preferred approach for assisting individuals with SMI in acquiring gainful and competitive employment (Campbell, Bond, & Drake, 2009). IPS was created to minimize prevocational training and aims to get people with mental illness into work as quickly as possible by providing ongoing and intensive on the job support (Talbot, Vollm, & Khalfia, 2017). IPS can also be tailored for at-risk populations with little previous work experience (Ellison et al., 2015). Campbell et al. noted IPS was more effective for persons with SMI than traditional vocational approaches (e.g., day hospitals and The19 Fountain House Model) in that an estimated 60% of people with SMI in SE obtained competitive employment. However, while the competitive employment rates for IPS are, on average, 60% (vs. 24% for the control conditions) (Marshall et al., 2014), Loveland, Driscoll, and Boyle (2007) noted almost 75% of people using IPS require additional services such as cognitive, psychosocial skills, and illness management training.

While a number of barriers to competitive employment exist among individuals with SMI, there are several obstacles suggested as being especially predictive and significant in the vocational outcomes of people with SMI. These barriers include discrimination, stigma, fear and anxiety (Netto et al., 2016; Staiger, Waldmann, Rüsch, & Krumm, 2017); deficient interpersonal skills, substance use, poor work history, and reduced motivation (Poremski, Woodhall-Melnik, Lemieux, & Stergiopoulos, 2016); work disincentives such as Supplemental Security Income (SSI) and Supplemental Security and Disability Income (SSDI) benefits (Chow, Croft, & Cichocki, 2015); and negative self-perceptions such as poor self-efficacy (Kukla, Bonfils, & Salyers, 2015). Self-efficacy and work motivation, specifically, are noted as having a significant impact on the management of symptoms, social interactions, work adjustment, and overall job success and well-being of persons with SMI (Contreras et al., 2016). However, in addition to generations of barriers to the employability of individuals with SMI, there remains a need for research that describes successful vocational interventions to address barriers to employment among persons with SMI.

Skills Training and Work Motivation

Skills training and interventions to facilitate the drive to pursue employment can assist persons with SMI in reducing the risk of relapse and subsequently enhance adaptive functioning and the ability to manage symptoms associated with SMI (Mattila-

Holappa et al., 2016). Skills training entails the use of a variety of techniques with highly structured strategies derived from interventions, including psychoeducation, behavioral and cognitive interventions, or a combination of these interventions (Waghorn, Lloyd, & Tsang, 2010). Examples of skills training components include coping skills training, stress management and relaxation training, assertiveness and communication skills training, anger and frustration management, behavioral competencies to SE, generalized problem-solving methods, and self- management (Schirmer, Steinert, Flammer, & Borbé, 2015). However, in order to benefit from skills training, people with SMI must be motivated to participate in the training and simply offering the training may be insufficient.

Margolis and McCabe (2006) noted the key to motivation is the belief that one can succeed. While reduced motivation is a common symptom in SMI and is highly correlated with unemployment, motivationally-laden interventions have been shown to increase employment among persons with SMI. For example, Hampson, Hicks, and Watt (2015) examined the effectiveness of motivational interviewing for increasing employment among individuals with SMI and found significantly higher rates of paid employment at 12-month follow-up among individuals who participated in a motivational interviewing group compared to a control group. However, while the psychiatric rehabilitation literature (e.g., Luciano et al., 2014; Netto et al., 2016) is consistently showing vocational services tend to result in increased employment and reduced use of mental health services, additional research designed to fill the gaps between individual program modifications, cultural issues, technological enhancements, and evidence-based employment interventions is needed.

The present study sought to provide insight regarding an intervention designed to assist persons with SMI in overcoming employment-related barriers. It was hypothesized that if a connection could be established between significant barriers to employment (i.e., self-efficacy and work motivation) and the implementation of a clinical prevocational intervention to reduce these barriers, it would be conceivable these barriers could be reduced to aid in the development of a positive perspective toward work among individuals with SMI.

Methodology

The purpose of this study was to investigate the effects of a 10-session prevocational seminar designed to enhance self-efficacy and subsequent work motivation among adults with SMI residing in an inpatient psychiatric facility. The research questions were as follows:

1. Does a prevocational seminar affect the self-efficacy among an adult inpatient psychiatric sample?
2. Does a prevocational seminar affect the work motivation among an adult inpatient psychiatric sample?
3. Is there a difference between the control and experimental groups after the prevocational seminar has been conducted?
4.

Participants

Participants consisted of 21 adults with SMI (i.e., schizophrenia, bipolar disorder, major depression) who were inpatients at a 50-bed acute care psychiatric facility in the southeastern region of the U.S. Ages ranged from 21-68 ($M = 39.90$, $SD = 14.78$). Of the 21 participants, the majority were female ($n = 13$, 68.9%) followed by males ($n = 8$, 38.1%). Most of the participants were African American ($n = 12$, 57.1%), followed by Caucasian ($n = 8$, 38.1%), and Asian ($n = 1$, 4.8%). The majority ($n = 11$, 52.4%) reported never being married. The highest level of education for the participants varied, with most ($n = 6$, 28.6%) reporting they did not have a high school diploma. The majority of the participants had a primary diagnosis of schizophrenia ($n = 11$, 52.4%), followed by bipolar disorder ($n = 8$, 38.1%), and major depression ($n = 2$, 9.5%). The majority ($n = 14$, 66.7%) reported they received government aid, including social security disability income, Medicaid, Medicare, food stamps, and government housing/housing authority.

Most of the participants were unemployed (81%, $n = 17$), with 9.5% ($n = 2$) employed full-time (30 hours or more per week), and 9.5% ($n = 2$) were employed part-time (less than 30 hours per week). The longest most of the participants had been employed was one year or more ($n = 15$, 71.4%). When queried about the reason participants' previous jobs were terminated, seven (35.0%) reported "other" reasons for their termination, four (20.0%) reported they continued to get sick, and several ($n = 3$, 15.0%) listed fear of losing their benefits as the reason for their termination of employment. Several participants ($n = 4$, 19.0%) reported they felt discouraged with their employment and were unmotivated to work ($n = 3$, 14.3%). When queried about the employment training and/or services they had received, the majority ($n = 12$, 57.1%) reported receiving job training prior to getting a job yet most of the participants ($n = 17$, 81.0%) reported they had not been enrolled in supported employment services. In addition, about half of the participants ($n = 11$, 52.4%) reported they had not received any employment services and 18 participants (85.7%) reported they never received assistance from state vocational rehabilitation services. However, the majority ($n = 13$, 61.9%) reported they believed they had the ability to become employed and most ($n = 16$, 76.2%) were interested in becoming employed.

Setting

The psychiatric hospital where the study was conducted was under the auspice of the Department of Mental Health and offered a continuum of services for residents with SMI in close proximity to their homes. Admission to the facility is initiated through the county court system or through the regional community mental health care programs. Treatment plans are individualized and are prepared and carried out through an interdisciplinary approach by a team of professionals which includes psychiatrists, psychologists, other medical doctors, nurse practitioners, nurses, social workers, recreation therapists, and mental health technicians/counselors. The adult inpatient program includes therapeutic groups, recreation therapy, goal-setting, interaction with mental health professionals, and appropriate medication consultation. Process groups help patients address interpersonal problems and didactic (teaching) groups assist the patients in acquiring skills for dealing with their illnesses. The average patient stay is typically 14 to 21 days and a continuum of care is empathized throughout the patient's stay.

Instrumentation

The instruments used for the collection of data of this study were (a) a demographic measure, (b) the General Self Efficacy Scale ([GSE] Schwarzer & Jerusalem, 1995), and (c) the Work Motivation Scale ([WMS] Brady, 2008). The instruments, excluding the demographic measure, have been used within clinical settings and possess established psychometric properties.

The GSE (Schwarzer & Jerusalem, 1995) was developed to assess optimistic self-beliefs or self-efficacy (i.e., the belief that one's actions are responsible for successful outcomes). The GSE is designed specifically for adult and adolescent populations with one global dimension that is equivalently configured and available across 28 nations (Leganger, Kraft, & Roysamb, 2000; Luszczynska & Scholz; 2005; Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002; Schwarzer & Jerusalem). This scale has been used extensively around the world and is cited across myriad disciplines (e.g., health psychology, applied psychology, communications, business, and rehabilitation).

The GSE includes 10 items that are scored on a 4-point Likert-type scale. The ranges of scored responses are listed as such: 1 = *Not true at all*, 2 = *Hardly true*, 3 = *Moderately true*, and 4 = *Exactly true*. When scoring the responses from the GSE, all 10 items are to be summed to yield a composite score ranging from 10 to 40. The higher the composite score, the stronger the participant's self-efficacy beliefs. The Cronbach's alpha falls well within the high .80s and ranges between .76 to .94 across different sample nations and language versions (Juarez & Contreras, 2008; Schwarzer & Jerusalem, 1995; Wagner, Hoelterhoff, & Chung, 2017).

The Work Motivation Scale ([WMS] Brady, 2008) was created to assist individuals with career development and planning by facilitating the comprehension of their work motives and values. The WMS is a brief, 32-item survey comprised of work-related situational and environmental statements. The responses are scored on a 5-point-Likert type scale. The scored responses ranges are as follows, 1 = *Not Important*, 2 = *Of Little Importance*, 3 = *Somewhat Important*, 4 = *Important*, and 5 = *Very Important*. The WMS has eight constructs or value measures that fall under four work motive categories. Content validity was established by receiving complete agreement of the eight constructs for item/construct relationship among three expert judges (Brady, 2002; Luszczynska & Scholz; 2005). The WMS is a statistically consistent measure with a high validity and reliability. The split-half reliability analysis for the WMS yielded a coefficient of a .89. The results of the Spearman Browns coefficient yielded a median of .82 to .89 for all eight constructs (Brady, 2008).

Intervention

Randomization of participants occurred at the onset of the study. Prior to commencing with the study, facility mental health technicians assigned to the experimental group participated in a three-hour training on the seminar activities, informed consent, and data collection procedures. The individuals providing both the seminar training and those assigned to the control group were all identified as psychology associates and were master's level professionals (either licensed or licensure eligible).

Experimental Group. Tsang and Pearson (1996) developed a social skills model, the Work Related Social Skills Training (WRSST), from which the selected training program for the present study was constructed. This model was selected because of its emphasis on social skills enhancement (e.g., interpersonal skills) which are often deficient among persons with SMI, resulting in major impediments to their employment. The WRSST training is comprised of 10 weekly sessions lasting 1.5 to two hours; however, due to the time constraints imposed by the psychiatric facility, the seminar was designed so it could be completed within one week. The WRSST training sessions are based on the primary principle of attaining and maintaining a job. The WRSST program employs real-life practice among group members (e.g., role play) to assist with the application of skills from one situation to another. Each session of the WRSST includes the following standard components (a) social skills training, (b) warm-up activities, (c) instruction, (d) demonstration, (e) role play, (f) feedback, and (g) homework assignments.

Qualifying participants who were randomly selected for the experimental group went to a multipurpose room where the 10-session seminar took place. The trained psychology associates provided an introduction to the seminar and obtained participants' informed consent to take part in a 10-session prevocational seminar on the premise of attaining and maintaining employment. This was followed by completion of the demographic questionnaire and the dependent measures (i.e., General Self-Efficacy and Work Motivation Scale). Upon completion, the psychology associates collected signed informed consents, demographic surveys, and dependent measures. The remainder of group time was used to facilitate Session 1 of the prevocational session. The seminar content included basic social skills, social survival skills, and work-related skills training used to obtain and retain a job. The seminar occurred for five days (Monday-Friday) for one week, with each seminar lasting 1.5 hours. Before initiating the training, participants were informed they would be asked to complete the questionnaire package again at the end of the week. All participants were presented with certificates for their participation in the seminar.

Control Group. Qualified participants randomly assigned to the control group were escorted to a multipurpose room at a different time during the day, once a day (Monday-Friday) for one week, where they engaged in regularly scheduled group activities. Psychology associates obtained participants' informed consent and asked participants to complete a questionnaire package containing basic demographic information. Before initiating the regularly scheduled group activity, psychology associates informed participants they would be asked to complete the questionnaires again at the end of the week. All participants were presented with certificates for participation.

Data Analyses

Descriptive statistics were used to summarize demographic data. The primary statistical analyses for this study were three separate one-way analysis of covariance (ANCOVA) with the pretest (i.e., dependent measures) as the covariates. The ANCOVA was utilized to remove systematic bias and reduce error variance (Dimitrov & Rumrill, 2003). This design and analysis, a one-way

ANCOVA with pretest as a covariate, is so powerful and so readily attainable in most instances of treatment effectiveness research that it should be taken as the standard to be used routinely unless there are good reasons to the contrary (Warner, 2013).

Results

The participant pool consisted of 50 patients participants; however, a total of 37 individuals were managing symptoms sufficiently to participate in accordance with the hospital's requirements. Of the 37 possible participants, 23 agreed to participate in the study. However, data for two participants were deleted from the sample due to incomplete post-tests. Therefore, the resulting sample consisted of 21 qualified participants (10 experimental and 11 control). We can assume the loss of subjects is random because the pattern of the missingness depends on variables such as demographic characteristics such as ethnicity and gender (Warner, 2013).

Research Question 1

Research Question 1 asked: Does a prevocational seminar affect the self-efficacy among an adult inpatient psychiatric sample? The research hypothesis is the prevocational seminar would positively affect the self-efficacy among an adult inpatient psychiatric sample. A pre- and post-unit assessment of participants' self-efficacy used a 4-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). A one-way analysis of covariance (ANCOVA) was used to analyze the intervention effects. The pre-test scores were used as the covariate in the assessment of differences between groups adjusted post-test means. Analyses were conducted to test each statistical assumption. A Pearson's correlation was used to test the assumption that there was a reasonable correlation between the covariate and dependent variable. The pre-test yielded $r = .629$ significant at the .01 level (2 tailed) and the assumption could be assumed. The second assumption of independence of covariate was examined using an independent samples t-test. No significant difference was found in the pre-test between groups (i.e., control and experimental), $t(19) = .311, p = .759$. The covariate can be used to reduce error variance in the experimental outcome and thus increase the precision of the comparison. The third assumption of homogeneity of regression slopes was used employing a univariate analysis (ANOVA). There was not significant interaction between groups and the pre-test, $F(1, 17) = .112, p = .742$. The requirement for homogeneity of regression slopes was met. Additional assumptions of statistics, including normality, homogeneity of variance, and linearity could be assumed.

Prior to the one-way analysis of covariance (ANCOVA), the main experimental effect for post-test scores was examined (see Table 1). There was no significant difference in post-test scores relating to the control and experimental groups, $F(1, 19) = .949, p = .342$. A one-way ANCOVA was used to increase the precision of the comparison between treatment groups. When controlling for the pre-test, there was no difference among adjusted post-test means for experimental and control groups adjusted post-test means, $F(1, 18) = 2.355, p = .144$. For Research Question 1, the data failed to reject the null hypothesis (see Table 2).

Research Question 2

Research Question 2 stated the following: Does a prevocational seminar affect the work motivation among an adult inpatient psychiatric sample? The research hypothesis was the prevocational seminar would positively affect the work motivation among an adult inpatient psychiatric sample. A pre- and post-unit assessment of participants' work motivation used a 5-point Likert type scale ranging from 1 (not important) to 5 (very important). The Work Motivation Scale is divided into two subscales (i.e., Work Values and Work Motives) for measure. Two one-way analyses of covariance (ANCOVA) were employed to evaluate intervention effects. Pre-test scores were used as the covariates in the assessment of group differences between post-test scores. Preliminary analyses were run to ensure assumptions of ANCOVA were met for both subscale measures.

Work Values Subscale

The basic assumptions of statistics (i.e., normality, homogeneity of variance, and linearity) were fulfilled. A Pearson's r was used to test the first assumption of reasonable correlation between the covariate and the dependent variable, $r = .381$ (Warner, 2013). The assumption was met. An independent samples t-test was employed to examine the second assumption of independence of covariate, $t(19) = .027, p = .831$. There were no significant differences found between groups for the pre-test. Homogeneity of regression slopes assumptions was satisfied $F(1, 17) = .405, p = .533$. Before running an ANCOVA, main experimental effects for post-test scores were assessed (see Table 3). No significant difference was found in post-test scores, regarding the control and experimental group, $F(1, 19) = .341, p = .567$. Subsequently, the one-way ANCOVA was conducted (see Table 4). The main effect for post-test, in reference to the control and experimental groups, was not significant when applying pre-test scores as the covariate to reduce error variance $F(1, 18) = .341, p = .567$.

Work Motives Subscale

Assumptions of normality, linearity, homogeneity of variance,

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Table 1

Main Effect (Before Including Covariate) for General Self Efficacy

Source of Variation	df	SS	MS	F	p	Partial η^2
Groups	1	27.93	27.96	.949	.342	.098
Error	19	559.31	29.44			
Total	20	587.24				

Table 2

One-Way Analysis of Covariance between Treatment Groups Adjusted Post-Test Means for General Self Efficacy

Source of Variation	df	SS	MS	F	p	Partial η^2
Groups	1	40.93	40.77	2.34	.14	.12
Error	18	314.32	17.46			
Total	19	355.25				

Dependent Variables (DV) and Covariate (CV) Scores by Groups

	Control (*n* = 10)		Experimental (*n* = 11)	
	Mean	SE	Mean	SE
Post-test (DV)	32.60	1.72	34.91	1.64
Pre-test (CV)	32.35	1.32	35.14	1.26

and normality were assessed and met. The assumption of reasonable correlation between the covariate and the dependent variable yielded a Pearson's correlation of $r = .383$, in which this assumption was achieved. The assumption of independence of covariate was examined to determine whether the covariates differ across the independent variable groups (Warner, 2013). An independent samples t-test was utilized and no significant difference was detected in the pre-test between groups, $t(19) = .021$, $p = .824$. The assumption of homogeneity of regression slopes used an ANOVA to assess whether the regression slopes differ significantly between groups (Warner, 2013). No significance of interactions between groups and the pre-test was discovered, $F(1, 17) = .379$, $p = .546$; therefore, satisfying the requirement of homogeneity of regression slopes. Main experimental effects were examined for post-test scores (see Table 5). There was no significant difference in post-test scores in reference to the groups, $F(1, 19) = .425$, $p = .522$. Next, a one-way ANCOVA was performed (see Table 6). When controlling for the pre-test, there was not a statistically significant difference between the groups on the post test, $F(1, 18) = .354$, $p = .559$. Tables 4 and 6 illustrate that each ANCOVA, conducted for each subscale, resulted in no statistical significance when controlling for the pre-test, indicating there were no differences among adjusted post-test means for the experimental and control groups. Research Question 2 hypotheses failed to reject the null.

Research Question 3

Research Question 3 stated the following: Was there a difference between the control and experimental groups after the pre-vocational seminar has been conducted? The research hypothesis was there would be a difference between the control and experimental groups after conducting the pre-vocational seminar. The primary statistical analysis for each dependent measure, ANCOVA, (see Tables 2, 4, and 6) was used to explore the posed hypothesis. As a result of each ANCOVA run, there was no difference among adjusted post-test means for experimental

and control groups when controlling for the pre-test. Thus, the data failed to reject the null hypothesis.

Discussion

Employment is an essential component in the recovery of people with SMI (Hari-Prasad & Acaharya, 2014; Metcalfe, Drake, & Bond, 2017). The present study investigated the effects of a prevocational seminar on self-efficacy and work motivation among adults diagnosed with a SMI who were living in an inpatient psychiatric facility. While the study did not find significant differences between the experimental group which received a 10-session prevocational seminar and the control group, several important trends that align with current psychiatric rehabilitation concerns were found. Similar to the majority of participants in the present study, research shows people with SMI typically want to work (Lu et al., 2017; Netto et al., 2016) yet barriers such as lack of education, fear of losing federal supports, underutilization of vocational rehabilitation (VR) programs, exacerbation of psychiatric symptoms, and discrimination and stigma continue to negatively impact work-related confidence and related work motivation among individuals with SMI. While the majority of participants in our study reported having previously worked either part-time or full-time, the majority of them also reported being unacquainted with state VR and supported employment (SE) services or other vocational agencies that provide vocational information such as educational and training opportunities, flexible work schedules, medication management, and basic work etiquette.

Of additional concern is the lack of knowledge about the VR system among mental health counselors who are not trained in rehabilitation counseling programs and their presumption that employment-related services fall outside the purview of their clinical responsibilities (Taskila et al., 2014). Since many individuals with SMI are unaware of the vocational services available to them in relation to returning to work, they turn to

Table 3

Main Effect (Before Including Covariate) for Work Values

Source of Variation	df	SS	MS	F	p	Partial η²
Groups	1	158.45	158.45	.406	.531	.021
Error	19	7408.50	389.92			
Total	20	7566.95				

Table 4

One-Way Analysis of Covariance between Treatment Groups Adjusted Post-Test Means for Work Values

Source of Variation	df	SS	MS	F	p	Partial η²
Groups	1	119.37	119.37	.341	.57	.02
Error	18	6302.72	350.15			
Total	19	6422.09				

Dependent Variables (DV) and Covariate (CV) Scores by Groups

	Control (n = 10)		Experimental (n = 11)	
	Mean	SE	Mean	SE
Post-test (DV)	140.50	6.24	146.00	5.95
Pre-test (CV)	140.88	5.92	145.66	5.65

Table 5

Main Effect (Before Including Covariate) for Work Motives

Source of Variation	df	SS	MS	F	p	Partial η²
Groups	1	163.20	163.20	.425	.522	.021
Error	19	7294.04	389.89			
Total	20	7457.24				

Table 6

One-Way Analysis of Covariance between Treatment Groups Adjusted Post-Test Means for Work Motives

Source of Variation	df	SS	MS	F	p	Partial η²
Groups	1	122.82	122.82	.354	.56	.02
Error	18	6238.58	346.59			
Total	21	440038.00				

Dependent Variables (DV) and Covariate (CV) Scores by Groups

	Control (n = 10)		Experimental (n = 11)	
	Mean	SE	Mean	SE
Post-test (DV)	140.60	6.19	146.18	5.91
Pre-test (CV)	140.98	5.89	145.83	5.62

mental health counselors for assistance in managing their psychiatric symptoms. Working collaboratively with general mental health counselors and providing information pertaining to employment services in their communities could greatly impact successful employment outcomes among persons with SMI.

It is also important to note VR counselors differ in regard to their perceptions of employment for people with SMI. For example, while some VR counselors tend to focus on the underlying benefits of competitive employment such as self-confidence, other VR counselors perceive income as the most positive employment outcomes among persons with SMI (Knaeps et al., 2015). Therefore, it appears the best VR counseling is all encompassing and necessitates training that takes both intrinsic and extrinsic employment outcomes into consideration when providing vocational guidance. In addition, Karakus, Riley, and Goldman (2017) noted although federal initiatives are in place to remove barriers and provide SE services to individuals with SMI, expanded coordination across federal policies is imperative to the advancement of evidence-based and lasting effects of the widespread availability of employment services among individuals with SMI who want to work.

The ongoing stigma surrounding the hiring of people with SMI also needs to be addressed. An example of a simple strategy used to reduce employment rejection among individuals with SMI preparing to enter the job market was noted by McGahey, Waghorn, Lloyd, Morrissey, and Williams (2016) who found individuals with SMI who self-disclosed their mental illness had five times greater odds of employment than persons with SMI who chose not self-disclose this information. Indeed, professionals working with individuals with SMI must continue to explore new ways to reach out and educate potential employers as well as people with SMI as there are numerous interventions that can be utilized to mitigate the stigma associated with SMI.

Limitations

A noteworthy limitation of the present study is the use of a convenience sample of inpatient adults with SMI which limited the generalizability of the study. Another limitation of the study was the potential threats to internal validity, including mortality and diffusion of treatment. Another threat to internal validity involved participants freely communicating about the activities they were and were not participating in, thus presenting the threat of the diffusion of treatment. Additionally, the nature of self-reporting on the dependent measures (i.e., GSE and WMS instruments) may have been a limitation in this study. Researchers have suggested persons with SMI have the ability to correctly self-evaluate their assurance in their ability to perform work related activities (Bibb & McFerran, 2017); however, the cognitive limitation due to psychotropic medications and organicity of the sample in the present study could have an effect on participants' self-reports.

Conclusions and Implications for Practice

Developments from the present study suggest researchers should consider replicating the present study at inpatient psychiatric facilities that provide long-term treatment for persons with SMI, with the goal of extending the intervention time period. As noted,

the original WRSST training (Tsang & Pearson, 1996) was designed to include 10 weekly sessions and time constraints imposed by the psychiatric facility in this study limited the intervention to five sessions within a one-week time frame. In addition, participants may benefit from being connected with SE providers before being discharged to further promote their participation in post-treatment employment services as the majority in our study indicated they wanted to work. Furthermore, early introduction to SE or vocational providers could enhance the tenure rate of those participating in SE, specifically individual placement and support (IPS) models, if introduced before being discharged. This early introduction may increase the opportunity to diminish many of the identifiable barriers to employment. Another potential path for future researchers is to consider conducting the intervention in at least two different settings to afford a more diverse sample of people with psychiatric disabilities and to minimize the possibility of interaction between participants. A more diverse sample might also increase generalizability. It may also be prudent to recruit participants who are in the later stages of recovery as they are likely to be more motivated to fully benefit from training than individuals with acute psychiatric symptomology.

Another recommendation would be to augment the skills training by including trainers from agencies with a vocational focus (e.g., state VR) to provide information regarding the myriad services available to persons with SMI. Future studies may consider an experimental design employing different intervention(s), which could render significant differences between the control and experimental groups. In addition, Hielscher and Waghorn (2015) found disclosure about one's mental health is a complex decision-making process yet clients in SE programs are provided with minimal guidance on how to manage their personal information in the workplace. Including this type of information prior to discharge from an inpatient facility could greatly reduce clients' self-stigma and prepare them on ways to inform potential employers of their disability-related needs.

It also appears some VR counselors feel ill-equipped to provide vocational services for people with SMI. For example, Knaeps, Neyens, Donceel, van Weeghel, & Van Audenhove (2015) found the more specialized VR counselors were, the more likely they were to believe they could deal with problems relating to their clients with SMI and the fewer barriers they experienced as compared to less experienced counselors. As such, it would be prudent to assign clients with SMI who want to become employed to VR specialists who have experience working with clients with psychiatric diagnoses. It is also imperative that VR agencies reach out to clients with SMI through job fairs and social media platforms to help people with SMI become acquainted with the job supports available to them.

Researchers may also want to consider conducting a follow-up survey after participant discharge to further assess the effectiveness of the pre-vocational seminar. Due to the lack of follow-up studies within inpatient settings, a one-month follow-up could significantly augment the knowledge concerning persons with SMI and experimental design studies. Notably, there are insufficient studies which include interventions such as the training seminar in the present study and research of this caliber could

identify specific vocational interventions to increase employment among individuals with SMI who represent the largest disparity group for unemployment in the U.S.

References

Bibb, J., & McFerran, K. S. (2017). The challenges of using self-report measures with people with severe mental illness: Four participants' experiences of the research process. *Community Mental Health Journal*, *53*(6), 747-754. doi: 10.1007/s10597-017-0127-6

Becker, D. R., Drake, R. E., & Bond, G. R. (2014). The IPS supported employment learning collaborative. *Psychiatric Rehabilitation Journal,* *37*(2), 79-85. doi: 10.1037/prj0000044

Brady, R. P. (2002). *Work orientation and values survey administrator's guide*. Indianapolis, IN: JIST Publishing, Inc.

Brady, R. P. (2008). *Work motivation scale administrator's guide* (pp.10-15). Indianapolis, IN: JIST Publishing, Inc.

Bureau of Labor Statistics (2013). *Barriers to employment for persons with a disability*. The editor's desk. Retrieved from http://www.bls.gov/opub/ted/2013/ted_20130522.htm

Campbell, K., Bond, G.R, & Drake, R.E. (2009). Who benefits from supported employment: A meta-analytic study. *Schizophrenia Bulletin*, *37*(2), 370-380. doi: 10.1093/schbul/sbp066

Chow, C. M., Croft, B., & Cichockid, B. (2015). Evaluating the potential cost-savings of job accommodations among individuals with psychiatric disability. *Journal of Vocational Rehabilitation*, *43*(1), 67-74. doi: 10.3233/JVR-1507

Contreras, N. A., Fossey, E., Castle, D. J., Harvey, C., Crosse, C., Morgain, D., & Rossel, S. L. (2016). What is the personal experience of jobseekers with severe mental illness undertaking a cognitive remediation program? *Psychosocial Intervention*, *25*(3), 195-201. doi: 10.1016/j.psi.2016.02.003

Dimitrov, D. M., & Rumrill, P. D. (2003). Pretest-posttest designs and measurement of change. *Work*, *20*(2), 159-165.

Ellison, M.L., Klodnick, V.V., Bond, G.H., Krzos, I.M., Kaiser, S.M., Fagan, M.C., & Davis, M. (2015). Adapting supported employment for emerging adults with serious mental health conditions. *Journal of Behavioral Health Services & Research,* *42*(2), 206-222. doi: 10.1007/s11414-014-9445-4

Ericksson, T., Agerbo, E., Mortensen, P. B., & Westergaard-Nielsen, N. (2010). Unemployment and mental disorders. *International Journal of Mental Health*, *39*(2), 56-73. doi: 10.2753?IMH0020-7411390203

Evans-Lacko, S., Knapp, M., McCrone, P., Thornicroft, G., & Mojtabai, R. (2013). The mental health consequences of the recession: Economic hardship and employment of people with mental health problems in 27 European countries. *PLOS ONE*, *8*(7), 1-7.

Gao, N, Gill, K. J., Schmidt, L. T., & Pratt, C. W. (2010). The application of human capital theory in vocational rehabilitation for individuals with mental illness. *Journal of Vocational Rehabilitation*, *32*(1), 25-33. doi: 10.3233/JVR-2010-0492

Hari-Prasad G., & Vinita A. (2014). A cross sectional study of employment pattern in patients with severe mental illness. *Indian Journal of Occupational Therapy 46(2),* 35-40.

Hampson, M. E., Hicks, R. E., & Watt, B. D. (2015). Exploring the effectiveness of motivational interviewing in re-engaging people diagnosed with severe psychiatric conditions in work, study, or community participation. *American Journal of Psychiatric Rehabilitation*, *18*(3), 265-279. doi: 10.1080/15487768.2014.954158

Hielscher, E., & Waghorn, G. (2015). Managing disclosure of personal information: An opportunity to enhance supported employment. *Psychiatric Rehabilitation Journal,38*(4), 306–313. doi: 10.1037/prj0000127

Juarez, F., & Contreras, F. (2008). Psychometric properties of the General Self-Efficacy Scale in a Colombian sample. *International Journal of Psychological Research*, *1*(2), 6-12.

Karakus, M., Riley, J., & Goldman, H. (2017). Federal policies and programs to expand employment services among individuals with serious mental illnesses. *Administration & Policy in Mental Health & Mental Health Services Research*, *44*(3), 339-344. doi: 10.1007/s10488-017-0794-1

Khalaf-Beigi, M., Shahbolaghi, F. M., Rassafiani, M., Haghgoo, H. A., & Taherkhani, H. (2015). The meaning of work in people with severe mental illness (SMI) in Iran. *Medical Journal of the Islamic Republic of Iran*, 29, 1-8.

Knaeps, J., Neyens, I., Donceel, P., van Weeghel, J., & Van Audenhove, C. (2015). Beliefs of vocational rehabilitation counselors about competitive employment for people with severe mental illness in Belgium. *Rehabilitation Counseling Bulletin*, *58*(3), 176-188. doi: 10.1177/0034355214531075

Kukla, M., Bonfils, K. A., & Salyers, M. P. (2015). Factors impacting work success in veterans with mental health disorders: A veteran-focused mixed methods pilot study. *Journal of Vocational Rehabilitation*, *43*(1), 51-66. doi: 10.3233/JVR-150754

Leganger, A., Kraft, P., & Roysamb, E. (2000). Perceived self-efficacy in health behavior research: Conceptualisation measurement and correlates. *Psychology & Health*, *15*(1), 51-69.

Loveland, D., Driscoll, H., & Boyle, M. (2007). Enhancing supported employment services for individuals with a serious mental illness: A review of the literature. *Journal of Vocational Rehabilitation*, *27*, 177-189.

Lu, W., Yanos, P. T., Stone, B., Giocobbe, G. R., Waynor, W., Reilly, A., & Bazan, C. (2017). The hidden barrier to employment: Untreated and undiagnosed post-traumatic stress disorder. *Journal of Rehabilitation*, *83*(2), 11-16.

Luciano, A., Drake, R. E., Bond, G. R., Becker, D. R., Carpenter-Song, E., Lord, S. S., Swarbrick, P., & Swanson, S. (2014). Evidence-based supported employment for people with severe mental illness: Past, current, and future research. *Journal of Vocational Rehabilitation*, *40*(1), 1-13. doi: 10.3233/JVR-130666

Luszczynska, A., & Scholz, U. (2005). The general self-efficacy scale: Multicultural validation studies. *Journal of Psychology*, *139*(5), 439-457. doi: 10.3200/JRLP.139.5.439-457

Margolis, H., & McCabe, P. (2006). Improving self-efficacy and motivation: What to do, what to say. *Intervention in School and Clinic*, *41*(2), 218-227.

Marshall T., Goldberg, R.W., Braude L., Dougherty, R.H., Daniels, A.S., Ghose, S.S., George, P., & Delphin-Rittmon, M.E. (2014). Supported employment: Assessing the evidence. *Psychiatric Services, 65*, 16–23. doi:10.1176/appi.ps.201300262

Mattila-Holappa, P., Joensuu, M., Ahola, K., Koskinen, A., Tuisku, K., Ervasti, J., & Virtanen, M. (2016). Psychotherapeutic and work oriented interventions: Employment outcomes among young adults with work disability due to a mental disorder. *International Journal of Mental Health Systems*, *10*, 1-10. doi: 10.1186/s13033-016-0101-7

McGahey, E., Waghorn, G., Lloyd, C., Morrissey, S., & Williams, P. L. (2016). Formal plan for self-disclosure enhances supported employment outcomes among young people with severe mental illness. *Early Intervention in Psychiatry*, *10*(2), 178-185. doi: 10.1111/eip.12196

Metcalfe, J. D., Drake, R. E., & Bond, G. R. (2017). Predicting employment in the mental health treatment study: Do client factors matter? *Administration & Policy in Mental Health & Mental Health Services Research*, *44*(3), 345-353. doi: 10.1007/s10488-016-0774-x

National Alliance on Mentally Ill (2014). *Mental illness: NAMI report deplores 80 percent unemployment rate; state rates and ranks listed—model legislation proposed*. Retrieved from: https://www.nami.org/Press-Media/Press-Releases/2014/Mental-Illness-NAMI-Report-Deplores-80-Percent-Une#sthash.N2DRHm2N.dpuf

Netto, J. A., Yeung, P., Cocks, E., & McNamara, B. (2016). Facilitators and barriers to employment for people with mental illness: A qualitative study. *Journal of Vocational Rehabilitation*, *44*(1), 61-72. doi: 10.3233/JVR-150780

Poremski, D., Woodhall-Melnik, J., Lemieux, A., & Stergiopoulos, V. (2016). Persisting barriers to employment for recently housed adults with mental illness who were homeless. *Journal of Urban Health*, *93*(1), 96-108. doi: 10.1007/s11524-015-0012-y

Schirmer, U. B., Steinert, T., Flammer, E., & Borbé, R. (2015). Skills-based medication training program for patients with schizophrenic disorders: A rater-blind randomized controlled trial. *Patient Preference & Adherence*, *9*, 541-549. doi: 10.2147/PPA.S75616

Scholz, U., Gutiérrez-Doña, B., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment*, *18*(3), 242-251.

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp.35- 37). Windsor, England: Nfer-Nelson.

Staiger, T., Waldmann, T., Rüsch, N., & Krumm (2017). Barriers and facilitators of help-seeking among unemployed persons with mental health problems: A qualitative study. *BMC Health Services Research*, *17*, 1-9. doi: 10.1186/s12913-017-1997-6

Talbot, E.C., Vollm, B., & Khalifa, A. (2017). Effectiveness of work skills programmes for offenders with mental disorders: A systematic review. *Criminal Behaviour and Mental Health, 27*, 40–58. doi: 10.1002/cbm.1981

Taskila, T., Steadman, K., Gulliford, J., Thomas, R., Elston, R., & Bevan, S. (2014). Working with schizophrenia: Experts' views on barriers and pathways to employment and job retention. *Journal of Vocational Rehabilitation*, *41*(1), 29-44. doi: 10.3233/JVR-140-696

Tsang, H. W. H., & Pearson, V. A. (1996). Conceptual framework on work-related social skills for psychiatric rehabilitation. *Journal of Rehabilitation, 62*(3), 61-67.

United States Department of Labor (2018). Office of Disability Employment Policy: Disability Employment Statistics. Retrieved from: https://www.dol.gov/odep/

von Schrader, S., Malzer, V., Erickson, W., & Bruyere, S. (2011). Emerging employment issues for people with disabilities: Disability disclosure leaves as a reasonable accommodation use of job applicant screeners. Retrieved from http://files.eric.ed.gov/fulltext/ED537099.pdf

Waghorn, G., Lloyd, C., & Tsang, H. W. H. (2010). Vocational rehabilitation for people with psychiatric and psychological disorders. In J. H. Stone, & M. Blouin. (Eds.). *International Encyclopedia of Rehabilitation*. Retrieved from http://cirrie.buffalo.edu/encyclopedia/en/article/39/

Wagner, E. H., Hoelterhoff, M., & Chung, M. C. (2017). Posttraumatic stress disorder following asthma attack: the role of agency beliefs in mediating psychiatric morbidity. *Journal of Mental Health*, 26(4), 342-350. doi: 10.1080/09638237.2017.1340628

Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques* (2nd ed.). Thousand Oaks, CA: Sage.

Wehman, P. (2012). Supported employment: Introduction to special issue. *Journal of Vocational Rehabilitation*, *37*(3), 139-142. doi: 10.3233/JVR-2012-0617