Factors impacting work success in Veterans with mental health disorders: A Veteran-focused mixed methods pilot study

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Abstract

Background: Veterans with mental illness often have poor employment outcomes. *Objective*: This mixed-methods study sought to understand and describe Veteran perspectives of factors that impact their work success. *Methods:* A sample of 40 employed and unemployed Veterans with post-traumatic stress disorder (PTSD) or other severe mental illness (SMI) completed a survey of factors that impact vocational functioning and provided narrative accounts of their most successful and challenging work experiences. *Results:* Personal motivation, self-efficacy, work skills, interpersonal issues, health, and cognitive problems were rated as most impactful on work. There were no significant differences on ratings of work factors based on employment status. Veterans with PTSD reported significantly more barriers to work success compared with Veterans with SMI, notably, cognitive problems, physical health, and psychological stress. Veterans with SMI were more likely to receive VA vocational services and rated this assistance as beneficial to work success. Narrative findings corroborated the survey results, and yielded additional factors, including economic factors, person/job fit, and Veteran-specific issues. *Conclusions*: Several factors substantially impact work success in Veterans with mental illness. Veterans with PTSD and SMI experience a distinct set of barriers and facilitators, suggesting the need for tailoring clinical and rehabilitative services.

Keywords Employment; Veterans; Mental Disorders; Posttraumatic Stress Disorder

1. Introduction

The problem of work instability among Veterans with mental illness is striking. A 2011 study found that 65% of veterans using VA healthcare were unemployed, and compared to employed Veterans, unemployed Veterans were more likely to have depression, bipolar disorder, PTSD, schizophrenia, or substances use disorders. Further, vocational dysfunction was reported most often in disabled Veterans with schizophrenia, PTSD, and substance use disorders [47]. Not surprisingly, this study also found that unemployed Veterans had significantly lower income than employed persons. Underscoring these findings are recent unemployment rates of 13.1% among Operation Iraqi Freedom/Operation Enduring Freedom (OEF/OIF) Veterans compared to 8.1% in the non-Veteran population. The number of unemployed OEF/OIF Veterans increases substantially when considering an additional 18% of these Veterans who are not considered in the labor force because they are attending school or have stopped looking for a job [46].

These statistics are consistent with findings from studies of Veterans with mental illness across eras. Smith and colleagues [43] found that among male Veterans of the Vietnam era, more severe PTSD symptoms were significantly associated with a greater likelihood of unemployment or part time work. A more recent study examining mental health and work outcomes in Vietnam Veterans drew similar conclusions; PTSD lowered the likelihood of being employed and was associated with lower wages among those who were working [40]. This study also found that major depression and anxiety disorders were related to lower employment rates.

Considering Veterans of more recent conflicts, a review of the quality of life literature, including vocational functioning, concluded that this is an understudied and poorly understood area [41]. The few studies examining employment functioning in Veterans of OEF/OIF with PTSD have evidenced that these Veterans have significantly lower work productivity and suffer on other key work-related outcomes (e.g., absenteeism) compared to Veterans without PTSD

[41]. In addition, Adler et al.[1] found that in Veterans of OEF/OIF, having a psychiatric disorder, including PTSD, major depressive disorder, and/or an anxiety disorder was associated with poor work performance across multiple domains (e.g., time management, mental-interpersonal aspects of the job).

Among the serious consequences of vocational dysfunction in Veterans, the risk of worsening mental health is prominent. For instance, lower vocational attainment in psychiatric populations is linked with a range of poor recovery outcomes, such as more days of psychiatric hospitalization and more severe psychiatric symptoms [8, 27]. Qualitative research has further highlighted the association between the lack of employment and serious personal consequences; depression, self-pity, self-absorption, higher risk of substance abuse, and feelings of worthlessness are common [30]. Not surprisingly, unemployment in people with mental illness is associated with a higher risk of poverty and a greater reliance on government entitlements and the service system [18]. Aligned with these findings, the link between being employed and experiencing good mental health has been repeatedly demonstrated in general population studies [35]. Similarly, in psychiatric populations, work is related to better overall functioning [9, 34] and a host of clinical, social, and quality of life benefits [8, 9, 27].

In order to capture employment difficulties in persons with mental illness living in the community, studies have sought to describe factors that influence a variety of work outcomes. For example, Johannesen and colleagues prospectively studied the correlates of work barriers endorsed by persons with severe mental illness, finding that common barriers (e.g., lack of personal resources such as transportation) and illness related barriers (e.g., medication side effects) were frequently endorsed and negatively associated with future work outcomes, psychosocial outcomes, and clinician rated functioning [24]. In a follow-up study, fewer illness-

related work barriers predicted longer subsequent job tenure, whereas common factors were unrelated to work outcomes [25]. Corbière and colleagues [12, 13] produced a list of several work barriers impacting persons with severe mental illness, including work-related self-efficacy, personal motivation, stigma, labor market factors, structure used by the government (e.g., government entitlement rules that affect eligibility if employed), stress, health, and lack of job preparedness (e.g., education, work skills). Qualitative studies have also investigated factors impacting work in non-Veterans with mental illness (See [4] for a review). For example, key community-based studies examining practitioner perspectives have identified a range of factors influencing work, notably consumer motivation, symptom severity, consumers' fears related to work, and societal stigma of mental illness [19, 39]. In addition, qualitative interviews with consumers add to our understanding in this area, and highlight job related themes contributing to work success, such as interest in the job, challenging job tasks, work confidence, and supportive supervisor and co-worker relationships [23]. Lastly, recent research has shed light on additional elements, such as the role of specific contextual and system-level factors [20].

Despite the serious problem of vocational difficulties in Veterans with mental illness and the great importance of work, a comprehensive understanding of barriers and facilitators in Veterans is lacking, and the existing studies in this area are marked by limitations. Specifically, studies often ignore work facilitators and examine barriers only. This is problematic, as it has been suggested that facilitators and barriers are independent constructs and should be distinguished in order to fully elucidate their clinical and policy implications [5]. Secondly, studies have concentrated on persons with severe mental illness (mostly persons with psychotic disorders), the most severely ill population of persons with mental health disorders. While these findings are certainly important, this bolus of literature ignores a growing subset of individuals,

namely, those with PTSD, who also experience vocational instability. Specifically, none of the primary studies reviewed above included persons with PTSD; Blank and colleagues' [4] review of qualitative studies in this area included only one study with any PTSD participants (only 14.3% of the sample) [36]. Thirdly, studies have overwhelmingly been conducted with non-Veterans. Prior work suggests that Veterans are a special population, with different characteristics and service needs than non-Veterans (e.g., [2, 33]); Veterans also face unique issues of transition and reintegration after separation from the military. Thus, it is reasonable to posit that Veterans may experience the workplace in a different manner. Therefore, the extent to which existing findings generalize to the Veteran population is unknown, and a more in-depth investigation of work barriers and facilitators encountered by Veterans is needed.

To fulfill this need, this study sought to better understand and describe the barriers and facilitators to competitive work and career success in Veterans with mental illness. Using a mixed methods approach, we assessed the impact of perceived barriers and facilitators identified through prior community studies, combined with qualitative methodology designed to gain richer information about the work successes and challenges of Veterans. We chose to interview Veterans directly to be consistent with person-centered services advocated by the Veterans Health Administration [42] and because prior research demonstrates that consumers and vocational staff differ in describing key factors impacting work [21, 22]. Additionally, capturing Veteran perceptions helps fill an important gap in the literature in understanding employment functioning and has important implications for the future delivery of VA vocational services.

We examined two groups of Veterans—those with a diagnosis of PTSD compared to another group of Veterans with diagnoses falling in the broader realm of other severe mental illnesses (SMI; e.g., schizophrenia, bipolar disorder, major depressive disorder). Due to the large

number of Veterans returning from recent conflicts with PTSD and the historic difficulty in finding and maintaining competitive work for Veterans with SMI, these were appropriate populations for study. In addition, prior studies of vocational rehabilitation approaches, such as the Individual Placement and Support (IPS) model of supported employment, have primarily focused on consumers with SMI [7]. Little is known about barriers and facilitators for those with PTSD and how these may differ from other diagnostic groups. In a related vein, shedding light on the vocational barriers and facilitators faced by Veterans with PTSD is in line with recent calls for an adaptation of evidence-based supported employment services for this population [15, 38, 45]. In order to best tailor supported employment services, a comprehensive understanding of the unique factors that impact work outcomes is necessary. Furthermore, in order to capture a range of factors influencing work outcomes, we interviewed employed and unemployed Veterans. While the main purpose of the study was exploratory, we anticipated that the diagnostic groups would differ on barriers and facilitators to work success, given the different clinical features of the disorders. We also expected that unemployed Veterans would tend to emphasize barriers to work, whereas employed Veterans would tend to highlight more work facilitators.

2. Methods

2.1. Design

This mixed methods study examined the perspectives of 40 Veterans receiving mental health care at a Veteran Affairs Medical Center (VAMC) in an urban Midwestern city. Veterans were recruited from outpatient mental health clinics specializing in the treatment of SMI, PTSD, and general outpatient mental health care. Through in-person interviews and a written survey, we collected background information, work history, ratings of facilitators and barriers to work

success, and narratives of work experiences. The study used a convergent parallel mixed methods design [14] in which qualitative and quantitative data sources were collected together in the same phase, analyzed separately, and results were examined for areas of convergence and divergence. This study design has the strength of offering a more comprehensive understanding of the phenomenon of work functioning in Veterans with mental illness, in that different, yet complementary, information was sought through qualitative and quantitative methods [14].

2.2. Sampling

Veterans were eligible for the study if they had a chart diagnosis of PTSD or a diagnosis falling under the umbrella of SMI (schizophrenia spectrum disorder, bipolar disorder, or major depressive disorder). Purposive sampling was conducted to recruit Veterans from both diagnostic groups with and without current competitive employment. Veterans were excluded from the study if they were working in a noncompetitive work position, had a severe medical condition, dementia, or another serious cognitive impairment that would prevent participation in the study. Veterans were not excluded from the study if they had a comorbid diagnosis of a substance use disorder. The sample included 10 Veterans with SMI who were currently unemployed (including 4 Veterans with a diagnosis of schizophrenia, 5 Veterans with a diagnosis of schizoaffective disorder, and 1 Veteran with a diagnosis of psychotic disorder NOS), 10 Veterans with SMI who were currently employed (including 3 Veterans with a diagnosis of schizophrenia, 4 Veterans with a diagnosis of schizoaffective disorder, and 3 Veterans with a diagnosis of bipolar disorder), 10 Veterans with PTSD who were currently unemployed, and 10 Veterans with PTSD who were currently employed. All 40 participants completed the survey of employment barriers and facilitators, however, only 39 participants completed the narrative interview, as one participant chose to complete the interview at a different time, but did not return.

2.3. Procedure

Recruitment was conducted with the help of clinicians working in VA mental health clinics. Clinicians were provided study information and approached eligible Veterans about the study. Interested Veterans were referred to study personnel who further described the study and scheduled times to review consent procedures and conduct interviews. The interviews were conducted by the first and second authors (a clinical psychologist and a doctoral student in clinical psychology, respectively). After obtaining written informed consent, a narrative interview was conducted in which participants discussed their least and most successful competitive work experiences. The interviewer then administered a brief pencil and paper survey in which participants were asked to respond to Likert scale items assessing the degree to which specific factors act as barriers or facilitators to work success. Following the Likert scale items were three open-ended questions probing for barriers and facilitators that were not previously identified in narrative interviews or included in the survey. Veterans were paid $30 for participating in the study. All procedures were approved by the Institutional Review Boards at [XXX] university and at the VAMC.

2.4. Measures

Participant background characteristics included gender, ethnicity, educational attainment, marital status, disability status, entitlements received, income level, residential status, military background, and current competitive employment status (employed or unemployed). Work history information included number of months and number of jobs worked during the past six months. Employment descriptives were collected for employed participants including current hours worked per week, job tenure (number of months worked at the current job), wage rate, and type of job.

Narrative interviews focused on positive work experiences to better understand what factors contribute to success [11]. However, we were concerned that we may miss important features that contribute to difficulties finding and keeping a job. So, we expanded our interview to ask for two stories. First, participants were asked to tell a story about a time when they felt they were successful in employment and maintained a competitive job for at least six months. Then, Veterans were asked to tell another story describing a time when they struggled to find or keep a competitive job in the community. Veterans were probed for more information for clarification. This portion of the interview took place prior to the survey on barriers and facilitators so that participants could respond more broadly from their own experiences.

The survey of employment barriers and facilitators consisted of 20 items scored on a Likert scale probing the degree to which factors play a role in Veterans' work success (See Appendix 1). Because no current measures were designed to systematically assess barriers and facilitators to work functioning in Veterans with mental illness, the survey was developed by study investigators based on key factors that have been identified by prior literature examining competitive employment in community samples of people with mental illness [12, 13, 19-21, 26]. Existing measures, including a barriers checklist used with non-Veterans [6] and a Likert-style survey examining work barriers [12] also influenced the design of the current survey. Thirdly, absent from community-based surveys and checklists, factors that tend to be particularly relevant or unique to veterans (e.g., VA vocational assistance, VA disability compensation, cognitive deficits) were also taken into consideration in the newly designed survey. For each item, participants were asked to respond to the following question, "To what extent do the following play a role in your ability to work in a competitive job?" The scale ranged from 1 = "does not play a role" to 5 = "plays a very large role." Participants were then asked to indicate

whether each factor is helpful or harmful. For instance, “co-worker relationships” could play a large or small role, and could be perceived as helpful or harmful to work success. The internal consistency of the scale was good (Cronbach’s alpha=.83) and there was evidence of convergent validity, as several of the barriers and facilitators identified through the survey were also explicated during the interview. In addition, the scale was sensitive to differences in work barriers and facilitators between participants with SMI and those with PTSD (see results below).

To ensure more thorough identification of barriers and facilitators, the interviews were concluded with the following three open-ended questions: “Are there any other things that you have not already mentioned, related either to the job directly or other circumstances, which help you to keep your job?” “Are there any other things that could make it difficult for you to keep your job for a long time?” “Are there any other things that you have found helpful to make you successful in your career in general?”

2.5. Quantitative Data Analysis

Survey data was analyzed using the Statistical Package for the Social Sciences, Version 19 (SPSS 19). Descriptive statistics (i.e., means and standard deviations) were generated for background variables and survey items to characterize Veteran perspectives on barriers and facilitators to vocational functioning. Preliminary analyses were conducted to examine whether statistical assumptions of the ANOVA test were met and to compare groups on background characteristics and work history. Diagnostic groups (SMI vs. PTSD) and groups based on employment status (employed vs. unemployed) were compared on survey items using two way analysis of variance (ANOVA) with Tukey’s post hoc tests to further elucidate group differences. Cohen’s d effect sizes were also calculated. Significance levels were set at $p<.05$.

2.6. Qualitative Data Analysis

Qualitative analyses of open-ended questions and narrative interviews followed an inductive, interpretive, consensus-based approach [10, 32]. The qualitative software program Atlas-ti was used to organize data and aid analysis. First, the three study authors independently read interview transcripts and identified preliminary barriers and facilitators to work functioning using an open coding approach. We met and discussed preliminary codes in an iterative process to generate a consensus codebook, including detailed descriptions of each (see Table 1 for a listing of codes describing work factors and examples of each as barriers and facilitators). Next, we used this codebook to rate all transcripts on the presence or absence of the codes (focused coding); dominant themes evidenced through salience and/or frequency were identified. Lastly, we conducted targeted analyses of the codes. We first identified the codes that emerged from the narratives that appeared different from the domains we assessed in the survey. We then looked specifically at codes that reflected the quantitative findings to see if the content of the categories differed across the four groups. For this portion of the analyses, we examined coded text and systematically compared the types of quotations within and across the four groups to identify patterns. We divided the codes among the analysis team, wrote summaries of each, and then shared them for editing and discussion.

3. Results

3.1. Sample Characteristics

As seen in Table 2, the vast majority of the sample was male and more than half the sample was white. The mean age of the sample was 50.6 (SD=12.1) and participants had been diagnosed a mean of 16.1 years (SD=13.3) prior to the study. The majority of participants were living independently. A quarter of the sample completed high school, half of the sample had completed some college, and another quarter had completed four or more years of college. All

were Veterans, and over half had served in the Army. With regard to income, the general pattern reflected greater income for employed participants and for those with PTSD.

The four groups differed on age and length of time diagnosed, with the PTSD employed group being significantly younger than the other three groups, $F(3, 36)= 6.94$, $p=.001$, and diagnosed for significantly less time, $F(3,36)=3.95$, $p=.016$. Another notable difference is in regard to combat status; almost all PTSD employed Veterans had been involved in combat, compared to only 10% in the SMI groups, $\chi^2(3)=27.7$, $p=<.01$. In addition, employed participants with PTSD were significantly more likely to be involved in recent conflicts (OEF/OIF, Operation New Dawn), $\chi^2(3)=40.0$, $p<.01$. Lastly, the groups differed on VA disability and social security disability status. All participants with PTSD were receiving VA disability compared with roughly half in the SMI groups, $\chi^2(3)=11.9$, $p=.008$. With regard to social security disability, a significantly greater number of unemployed veterans with SMI were receiving these benefits compared with the other three groups, $\chi^2(3)=10.5$, $p=.015$. The four groups did not significantly differ on other background variables, $p>.05$.

3.2. Work History

Currently employed participants worked the majority of the last 6 months (M=5.6 months; SD=1.2) and held an average of 1.2 (SD=0.5) jobs during that time, whereas currently unemployed participants worked very little during that period (M=0.7 months, SD=1.9), $t(38)=-9.80$, $p<.01$. There were no significant differences between Veterans with SMI and PTSD in their work history in the past six months.

3.3. Current Employment

All working Veterans were employed in competitive jobs, per the inclusion criteria. The majority of employed Veterans expressed the intention to continue working, either at their

current jobs/company or in a search for new jobs (N=7, 70% in the SMI employed group and N=9, 90% in the PTSD employed group). With regard to unemployed participants, all SMI Veterans desired to work in the future and 40% (N=4) were currently looking for a job. Conversely, for unemployed participants with PTSD, only 4 (40%) reported that they would like to work in the future.

Employed participants had been working at their current jobs for a substantial period of time, averaging 58.2 months (ranging from 2 to 207 months; SD=67.6), and most were working full time, averaging 36.1 hours per week (SD=11.5), with no significant differences between diagnostic groups. The full working sample averaged a wage rate of $17.6 per hour (SD=8.3). The wage rate was significantly higher for participants with PTSD (M=$22.3; SD=8.0) than participants with SMI (M=$11.6; SD=3.4), $t(14)=3.32$, $p=.005$.

3.4. Facilitators & Barriers to Work Success

As shown in Table 3, employed participants rated personal motivation, perceived competence in completing work duties, confidence in completing job tasks, and work skills as large facilitators for work success (mean rating of 4 or higher). Relationships with co-workers and supervisors were also perceived to be important, but to a more moderate degree (mean rating between 3 and 4). Employed participants rated cognitive problems, mental health symptoms, and psychological stress as the greatest barriers, although the mean of these items was lower than the mean of the aforementioned facilitators. For unemployed participants, personal motivation was perceived to have the most important role in work success. Mental health symptoms, work skills, and physical health problems were moderate to large factors impacting work success. Unemployed participants also rated psychological stress and cognitive problems as moderate barriers to work success.

Two-way ANOVA results demonstrated an interaction effect between diagnosis and work status on one work factor, main effects for diagnostic group on several work factors, and no main effect differences based on employment status. Regarding the interaction, level of work skills was significant, $F(1,36)= 5.87$, $p=.021$. Specifically, lack of work skills was rated as a greater barrier to work by the PTSD unemployed group compared to the SMI unemployed group, mean difference=1.70, $p=.018$, $d=1.40$. Survey items with main effects for diagnosis were ratings of physical health problems, $F(1,36)=8.35$, $p=.006$, $d=.90$; cognitive problems, $F(1,36)=12.15$, $p=.001$, $d=1.48$; psychological stress, $F(1,36)=4.21$, $p=.048$, $d=.67$; and differences approached significance with regard to mental health symptoms, $F(1,36)=3.07$, $p=.088$, $d=.57$. In each of these cases, participants with PTSD rated these factors as having a greater negative impact on work success compared to participants with SMI. In contrast, participants with SMI rated vocational assistance as a greater facilitator to work success than participants with PTSD, $F(1,36)=7.29$, $p=.011$, $d=.89$.

3.5. Qualitative Findings

As shown in Table 1, qualitative analysis identified codes that emerged as barriers and facilitators to work. Qualitative coding, done independently of quantitative results, reflected many of the same categories endorsed in the survey. In the following section, we present themes that emerged as impactful on work success that add to and in some instances, go beyond our quantitative findings to enhance our understanding.

Three codes emerged as unique from the quantitative findings: contextual factors, Veteran status, and personal traits and values. Contextual factors applied when participants were "setting the stage" for their most successful or challenging job experiences. In several cases, participants described their age as a barrier to finding work. The context also pertained to other

personal history, such as criminal background, housing, or transportation. In addition, this code was sometimes used alongside financial factors, reflecting difficult personal financial situations associated with overall economic downturn, which acted as a barrier to finding or keeping work (e.g., company layoffs). Discussions of financial factors also encompassed the role of disability benefits, which acted as both a barrier and facilitator to work for all groups. For example, some unemployed Veterans mentioned that these benefits provided crucial financial support for them and their families, but also acted as a deterrent to seeking work out of reluctance to potentially disrupt their entitlements.

Veteran status referred to a set of factors that stemmed from or were related directly to military service; themes ranged from unique experience and skills gained in the military, issues of reintegration to the civilian world, and an altered self experience following military service. As with other codes, this could be both a facilitator (e.g., having learned special military and technical skills, leadership abilities) or a barrier (e.g., mismatch in military skills or expectations not fitting civilian jobs), although it was most often mentioned as a barrier. The third category, personal traits and values, included a wide range of individual characteristics. The most consistently mentioned trait was related to high motivation to work (also described as perseverance or work ethic), which was covered in the survey. However, additional traits were also coded in this category, such as interpersonal skills (“I usually have an excellent rapport with people”), perfectionism (“I've always had a desire to do everything perfect”), or values (“My priority is my mental health, my physical health, being able to overcome adversities, I guess. My priority is not with a job.”).

We also compared quotes across the four groups of participants to determine differences in how they talked about facilitators and barriers. We focused on the main areas that

discriminated between the groups in the quantitative analyses above: physical health, mental health (including cognitive problems and psychological stress), and work skills (reflected in the code job preparedness). Physical health was mentioned similarly across the four groups, generally reflecting poorer physical health being a barrier to work, including military injuries (also illustrating veteran status as a code). For instance, one unemployed veteran with PTSD stated, "Well, despite the other things…just shifting from (country) to the civilian world, it was also some of my disabilities that made it pretty difficult (to work). The shrapnel injury in my knee, my arm, and my hands, they don't work as well as they used to, especially on small tasks."

Mental health issues, particularly cognitive problems, emerged differently in stories across the four groups, consistent with quantitative survey differences above. Specifically, while the broader code of mental health was discussed frequently across all four groups, cognitive symptoms were more prominently featured in stories of participants with PTSD. For example, an employed Veteran with PTSD said: "My mental issues as far as just being able to focus and pay attention. I have short-term memory issues, even now, six years later. And, I can't remember anything. My wife has to follow me around with a notepad and write everything down for me and then constantly remind me. So, yeah, those things played a big role in why I failed at that job." In contrast, the SMI groups talked about general mental health or symptoms of their illness (more than cognitive difficulties per se). For instance, an employed Veteran with SMI commented, "I got fired from the job that I was working and after that…I wound up hospitalized for mental health and I guess you'd say I just now getting back on my feet." Several other Veterans with SMI emphasized the difficult period prior to being diagnosed and treated for their mental illness in which their vocational abilities were limited: "at first it was kind of hard because of my illness, and I was really not in a condition to work like I wanted to, so after I got

up and a few years later and got diagnosed with the right medicine that I'm on now…it really helped me to get better where I did good, or I'm doing good where I'm working now."

Regarding work skills, the job preparedness code was used with similar frequency across groups, but the types of skills were different. Participants with PTSD mentioned the translation of military skills to the civilian workplace (again highlighting veteran status), predominantly as a barrier to work. In other cases, military skills (i.e., leadership skills, appreciation of order and structure) were a benefit to career success in the civilian sector. Both PTSD groups mentioned Veteran-specific training and mentorship programs as helpful in facilitating the transition from military to civilian world. This military context of work skills was generally absent from participants with SMI. Instead, the SMI participants mentioned more general issues like education and computer skills. The differences in the work skills themes discussed are also consistent with the type of jobs held. Veterans in the PTSD employed group were working in positions that required higher education and more nuanced skills (e.g., crisis counselor, program analyst), whereas the SMI employed group tended to be employed in jobs requiring only basic skills and less education (e.g., housekeeping).

4. Discussion

To our knowledge, this is the first published study examining the perspectives of Veterans with mental illness regarding key factors associated with both success and difficulty in competitive employment. Working Veterans rated personal motivation and self-confidence in their abilities to perform on the job as the most key facilitators to work success. Convergent themes arose in narrative interviews, with Veterans discussing ways in which being confident in their ability to find a job and perform well at work play a crucial role in their overall work success.

These findings are consistent with research conducted with non-Veterans highlighting the importance of the cognitive underpinnings of work success; specifically, maladaptive thoughts about oneself and expectations about the ability to work interfere with vocational functioning. Similarly, community studies have discovered that work-related self-efficacy significantly predicts work success over time in people with mental illness [e.g., 4, 12, 13, 22- 24, 37]. Taken together, these findings suggest that interventions targeting maladaptive thoughts (e.g., cognitive behavioral therapy, or CBT) pertinent to work may be helpful adjuncts to current VA vocational services; this notion of utilizing cognitive strategies has also been suggested to help "nonresponder" consumers with mental illness who continue to struggle with employment functioning despite high quality vocational services [17]. In a related vein, Johannesen and colleagues [25] found that a decrease in perceived barriers was related to an improvement in employment outcomes in non-Veterans with mental illness; they suggest that CBT may be an appropriate intervention to modify cognitive schemas related to work, thereby decreasing perceptions of work barriers and increasing the ability to cope with existing barriers. In addition, utilizing motivational techniques, such as motivational interviewing, may help increase intrinsic motivation to work.

Veterans also perceived relationships with co-workers and supervisors as central to work success; indeed, navigating the interpersonal setting can be a challenge for both Veterans with SMI and PTSD. This was reflected in the qualitative interviews, as Veterans with PTSD noted that getting along with colleagues in the civilian workplace can be difficult, given differences in work styles, goals, and ways of doing business. Some Veterans also reported difficulty with PTSD symptoms that interfered with their ability to be around and interact with others. Veterans with SMI discussed interpersonal themes often surrounding their illness and the challenges that

psychiatric symptoms present with regard to interacting with coworkers and supervisors. In some cases, interpersonal conflicts and difficulties led to job losses. Conversely, having a strong support system (e.g., spouse, family) and drawing upon a personal and professional network was cited as a facilitator to finding and keeping jobs. This body of findings is in line with literature evidencing the relationship between social functioning and job tenure and career attainment in non-Veterans with SMI [27, 28] and prior research highlighting decreased social and interpersonal functioning in Veterans with PTSD [41,44].

Another primary goal of the study was to understand the differences in work barriers and facilitators between unemployed and employed Veterans. We did not find significant differences in the ratings of individual work factors based on employment status, although, as expected, unemployed Veterans tended to discuss more work barriers, whereas the employed group tended to focus more on work facilitators and rated these as highly impactful with regard to vocational success. That is, many of the factors discussed as facilitators by the employed group were discussed as barriers by the unemployed group. This finding does not agree with previous studies suggesting that barriers and facilitators are separate constructs (e.g., [5]). Several speculations may possibly explain this finding. For instance, many participants had been living a substantial period of time with chronic mental illness and had worked on and off for a period of many years (including military service); thus, it may be that these life experiences afforded the opportunity to recognize how a factor such as symptom severity may vary across time and act as a barrier (i.e. severe symptoms) and a facilitator (symptom improvement or acquisition of enhanced self management skills to cope with symptoms). In a similar vein, in narrative interviews, participants frequently identified a successful work period prior to becoming ill and offered a contrast to current vocational struggles, highlighting the same factors as both facilitators (e.g.,

intact cognitive functioning before illness onset) and barriers (e.g., cognitive impairment in the midst of illness). However, given the discrepancy between current findings and the conclusions drawn by previous studies, further research examining the nuanced constructs of work barriers and facilitators in Veterans is warranted.

Among the key factors recognized by both groups were personal motivation, mental health symptoms, and physical health problems. These factors have also been identified as influential on employment in prior studies gauging the perspectives of vocational staff in the community [39] and non-Veterans with mental illness [4, 19, 25]. In narrative interviews, our participants further described difficulties with specific symptoms of mental illness, as well as the difficulties imposed by undiagnosed and/or untreated SMI and PTSD. These findings are in line with research linking more serious PTSD symptoms with unemployment [29] and certain symptoms experienced in SMI (e.g., negative symptoms in schizophrenia) with poor vocational outcomes [31]. These results also underscore the importance of effective and timely treatment of mental illness to promote work functioning and prevent unfavorable outcomes, such as job ending and problems obtaining work.

A third goal of the study was to understand differences in work barriers and facilitators between Veterans with SMI and those with PTSD. Several noteworthy differences emerged. For instance, Veterans with PTSD reported that cognitive problems interfere with their work success, more so than the SMI group. In narrative interviews, these Veterans discussed the influence of cognitive problems with regard to difficulties completing job tasks; in its most serious form, some Veterans with PTSD stated that cognitive problems, such as difficulty with memory, attention, and concentration, prevented them from working all together or forced them to find jobs with fewer cognitive demands. These findings fit with recent research demonstrating the

major issue of cognitive impairments among OEF/OIF Veterans with PTSD [16]. With regard to job preparedness, unemployed Veterans with PTSD placed more weight on work skills than did unemployed Veterans with SMI. This is in line with the finding that compared with Veterans with SMI, Veterans with PTSD tended to be working higher level jobs that paid a much higher wage. In other words, it may be that the unemployed Veterans with PTSD were seeking jobs in fields that require skills and competency above their current level. This finding may also relate to the notion of person/job fit, as several Veterans with PTSD commented on a mismatch between the vocational skills and abilities they acquired in the military and those required in civilian jobs. The importance of the fit between the Veteran and the job arose in narrative interviews and has been demonstrated in prior studies demonstrating a link between stronger person/job fit and longer job tenure in non-Veterans with mental illness [26].

Moreover, three-quarters of Veterans with SMI were receiving VA vocational services, compared to only 25% of Veterans with PTSD. These statistics are consistent with recent data showing that the vast majority of OEF/OIF Veterans with conditions including PTSD (that study sample also included OEF/OIF Veterans with traumatic brain injury, depression, and/or a substance use disorder) are not receiving VA vocational services [45]. Further, our finding that Veterans with SMI perceived vocational services as a facilitator to work success converges with a large body of literature demonstrating the positive impact of evidence-based vocational services (i.e., IPS model of supported employment) on employment outcomes for Veterans with mental illness [7, 15]. Qualitative studies have also illustrated the important role of high quality employment services in overcoming work barriers [e.g.,5]. Considering the lack of service penetration to Veterans with PTSD, combined with the positive perceptions of other Veteran groups receiving these services and the effectiveness of these services in bolstering vocational

recovery, future studies should explore the impact of more broadly implementing evidence-based vocational services for Veterans with PTSD [15].

In summary, this mixed methods study discovered a complex picture of factors that impact Veterans' with mental illness ability to succeed at work. Both employed and unemployed Veterans stressed the importance of several elements, including personal motivation, work related self-efficacy, workplace interpersonal issues, physical and mental health (particularly cognitive functioning), work skills, and Veteran-specific issues. Many of these factors have been found in previous studies of non-Veterans; however, this study highlights the unique role that cognitive symptoms and Veteran-related issues (e.g., reintegration into the civilian workplace) play with regard to vocational functioning in Veterans with mental illness. Furthermore, a distinct set of key factors based on diagnostic group was elucidated, as Veterans with PTSD highlighted a broader range of barriers that more negatively impacted their work success, whereas Veterans with SMI highlighted the benefits imparted by VA vocational assistance. These findings were supported by participant narratives, as several factors were differentially discussed by Veterans with SMI and PTSD in nuanced fashions. These important distinctions hold implications for service providers, such that vocational services should be tailored based on psychiatric diagnosis to best meet the needs of these diverse Veteran groups and improve employment outcomes. The necessity of tailoring vocational services to bolster employment outcomes is further corroborated by first person accounts by vocational specialists providing services to non-Veterans with mental illness [5].

While this study contributes to our knowledge of the barriers and facilitators that Veterans with mental illness face, the sample was purposely small as a pilot study, and generalizability may be limited. In addition, the survey was newly developed by the authors;

while it had good internal consistency and adequate sensitivity to detect differences between diagnostic groups on several items, further examination of the survey and its psychometric rigor is needed. It is also noteworthy that compared with the other groups, employed Veterans with PTSD were significantly younger and more likely to have participated in Gulf War-era II conflicts, including combat experience. These differences suggest a cohort effect in addition to potential diagnostic differences, and warrant further exploration to gain a richer understanding of the unique factors that influence young Veterans' work success after separating from the military. Lastly, future research is necessary to develop and further refine strategies to overcome employment barriers and better take advantage of facilitators in order to improve vocational functioning and enhance work success in these vulnerable groups of Veterans.

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Table 1: Qualitative Codebook of Work Factors as Barriers and Facilitators

Code	Barrier	Facilitator
Mental Health (includes stress and cognitive functioning)	"When I was, not only undiagnosed, wow, I struggled then. I lost a lot of jobs. I could get a job, but, I mean, I couldn't keep it 'cause I was also self-medicating and, as I say, I was undiagnosed and I do realize that I suffer from, command hallucinations and I have attacked coworkers, supervisors. I even urinated on one." (P16)	"I think I was goal oriented. I was focused at that time. My attention was focused on the task at hand. I was able to concentrate, and as I look back how the mental illness has developed, I see clearly a real detrimental effect of the mental illness on concentration, focusing, attention, you know, yeah." (P27)
Physical Health	"And I was like [age] 21, 22 when I got out. I was medically discharged, so I had a lot of, instability with myself knowing that I don't have a career now since I'm injured and, and now I have to start over, like, what do I do? Where do I go? Being a disabled veteran seemed like it was a disabled advantage." (P18)	"being physically fit" (P32) in response to being asked what helped him be successful in his current job)
Substance Use	"I was drinking and partying a lot and, because of my drinking I couldn't hold on to a job. I just didn't go in. I felt like drinking, you know, I'd get a paycheck and then miss a couple days, and do that until they let me go. And then usually I'd draw unemployment 'til that run out, then I would find another job." (P1)	"and finally one guy gave me a chance because I was a recovering alcoholic." (P1)
Relationships (on the job or with friends and family)	"Sometimes coworkers can make it difficult, 'cause they don't know what you're feeling or how you're feeling, side effects medically or prescription-wise. Whatever the case is, some of 'em just don't have an idea and so some of the things that they say are like, 'What are you thinking? Why would you say something like that?'"(P18)	"I got a great supportive wife and that's key. That's huge. She helped me when I was pretty nuts at times, helped me tremendously. [She has] always been a great source of strength, support and motivation, [and] encouragement and [she] has trust and confidence in me, so I can help accomplish the tasks that I have to do." (P23)
Financial Factors (includes pay, disability entitlements)	"I just didn't make enough money. My wife was pregnant and we were gonna have our first baby and we had a tiny, tiny house and I couldn't afford to move and she was still in college, so I went to the Army 'cause it would provide a job, a steady paycheck and a roof over our head with great benefits." (P44)	"It was a good job. They had a lot of benefits there. They had cost of living checks every three months and, I thought that I would retire from there because that was a good paying job." (P2)
Job Preparedness (includes job skills, education, work history)	"Some of it was lack of skills or, not lack of skills, but more uncertified. Like, I'm a skilled labor, but I'm not certified to do certain things." (P19)	"So I think the key for me is just being diverse as far as my trades go. Being able to do more than one thing. Although I'm tile brick mason, like I've said, I do lots different things. So that, you know, kinda makes me a little valuable." (P22)
Job Performance	"After the effects of the mental illness, I see a major decline in my work performance. It's very evident. Not reliability, no productivity, you know. But previous to that I was a good employee." (P27) also coded for mental health	"Within six months I was promoted to a crew leader; which I held that position for the next three or four years" (P29)
Work Related Self-Efficacy	"Right now I just don't feel like I can do much other than school. That's the only thing I'm successful at." (P30)	"I just started out being like a normal little busser and I worked my way up to bakery manager, which is not like extremely important, but, the level of responsibility that was given to me at a young age. I was good at managing everything in my life. I could balance everything." (P34)

Code	Barrier	Facilitator
Personal Traits/Values	"I've been kind of phasing myself out of that [job], partly because I can't stand working on the weekends, first shift. I've been doing it since July, so it really hurt my social life" (P41).	"Showin' up every day, havin' a good work ethic, havin' a good attitude, tryin' ta please people and tryin' to do a good job and show that you care about your work. Good appearance is always a plus. Good attitude's a must. Just being gracious and thankful for the opportunities." (P32)
Enjoyment	"Oh, I hate it [my current job]. I'm looking for a different job every day" (P40)	"Lovin' my job, enjoyin' what I do. Then you have to enjoy somethin' if you're gonna do it for your adult life." (P32)
Person/Job Fit	"Just not doing what I was really cut out to be and do, you know. I was born to be a Marine. I was born to be in law enforcement." (P3)	"I'm reclusive. If I can work by myself and be given what my task and then being able to turn them in once completed, that, that helps."(P22)
Contextual Factors	"It was always easy for me to find a job and … in 2008 or 2007, I was trying to find work and I couldn't find any work and no one wanted to hire me. I was getting older and right now I'm 54 years old now and it's kind of hard for me to find a job" (P2)	"Ah, I worked nights, slept daytime. Kept me out of trouble that way." (P6)
Treatment Services	"During this time it's like, you know, where can I go? Who's gonna help? And, and there wasn't enough, there wasn't any programs that kind of geared me to helping me do this or do that, besides unemployment" (p18)	"Which helps me keep my job is still being in full contact with my clinical nurse and my social worker. I see my social worker once a week. We talk for about an hour, which is awesome. So, having them in my midst is a good mixture." (P18)
Medication	"Well, I wasn't on medication. I had stopped all medication. I was hyper at times and it was hard to get along with people." (P38)	"Just makin' sure that I can stay on medication and get the counseling I need. Uh, 'cuz if I can't stay focused which I, I need my medication and counseling to stay focused, I will not be able to move up or um, so that's, that just plays the biggest role I think." (P47)
Veteran Issues (specifically referred to veteran status as impacting their ability to find work, keep a job, or be successful on the job)	"…when you get kicked out of the service, when I got kicked out in 1992, it was just like, well, here you go. It just basically seemed like I was walking out of jail. And there was no training besides the training I learned from combat and, you know, how to be a leader and, but I mean, not civilian skills." (P18)	"I had a different insight than a lot of the people who worked there. There were no veterans. I was the only veteran to graduate from (College) in this class … I helped establish a lot of programs that are beneficial for veterans who are trying to matriculate into college and get that transition period together. I helped a lot with that. And that's something I am proud of." (P34)

Table 2: Sample Descriptives

	SMI employed[2] N=10		SMI unemployed[2] N=10		PTSD employed[1,2] N=10		PTSD unemployed[2] N=10		Total N=40	
Variable	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
Age	52.0	9.8	54.3	5.3	38.6	9.7	57.6	13.6	50.6	12.1
Years since diagnosis	21.3	16.0	20.4	12.8	5.0	2.8	17.7	12.3	16.1	13.3
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender:										
Male	9	90%	9	90%	10	100%	9	90%	37	92.5%
Ethnicity:										
African American	3	30%	7	70%	1	10%	3	30%	14	35%
White	7	70%	3	30%	7	70%	7	70%	24	60%
More than one race					2	20%			2	5%
Marital Status:										
Not married	7	70%	10	100%	4	40%	3	30%	24	60%
Married/ Living with a partner	3	30%			6	60%	7	70%	16	40%
Housing:										
Structured congregate living or living with family (not spouse)			1	10%					1	2.5%
Own apartment or house – alone or with spouse, friends, etc.	9	60%	7	10%	9	70%	7	60%	32	80%
Homeless or temporary living situation	1		2	20%	1		3	10%	7	17.5%
Education:										
Completed high school or GED	4	40%	4	40%	1	10%	1	10%	10	25%
Some college (includes Associates)	4	40%	5	50%	5	50%	6	60%	20	50%
Completed 4 years of college or more	2	20%	1	10%	4	40%	3	30%	10	25.0%
Service Branch:										
Army	4	40%	6	60%	9	90%	4	40%	25	62.5%

	SMI employed[2] N=10		SMI unemployed[2] N=10		PTSD employed[1,2] N=10		PTSD unemployed [2] N=10		Total N=40	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Navy	4	40%	1	10%	0		0		5	12.5%
Air Force	1	10%	1	10%	0		0		2	5%
Marines	2	20%	2	20%	2	20%	5	50%	11	27.5%
National Guard	1	10%	0		1	10%	0		2	5%
Combat:										
Yes	1	10%	1	10%	10	100%	9	90%	21	52.5%
Military Conflict										
OEF/OIF	0		0		9	90%	0		9	22.5%
Operation New Dawn	0		0		1	10%	0		1	2.5%
Desert Storm	1	10%	0		0		3	30%	4	10%
Vietnam	0		0		0		6	60%	6	15%
Other	1	10%	1	10%	0		0		2	5%
Disability Status (VA):										
Yes	5	50%	4	40%	10	100%	10	100%	29	72.5%
Disability Status (Social Security):										
Yes	2	20%	7	70%	1	10%	2	20%	12	30%
Annual Income:										
$0 - $10,000	0	0	7	70	0	0	2	20%	9	22.5%
$10,000 - $20,000	3	30%	1	10%	0	0	2	20%	6	15%
$20,000 - $30,000	2	20%	1	10%	0	0	1	10%	4	10%
$30,000 - $40,000	2	20%	0	0	2	20%	2	20%	6	15%
$40,000 - $50,000	0	0	1	10%	3	30%	0	0	4	10%
$50,000 and higher	1	10%	0	0	5	50%	3	30%	9	22.5%
Refused	2	20%	0	0	0	0	0	0	2	5%

[1]The PTSD employed group significantly differed from the other groups on age, length of time since diagnosis, combat status, and military conflicts served.

[2]Both PTSD groups significantly differed on receipt of VA disability and social security disability benefits compared with participants with SMI.

Table 3: Facilitators and Barriers to Work Success[a]

	SMI employed N=10	SMI unemployed N=10	PTSD employed N=10	PTSD unemployed N=10	All participants N=40
Items	**M(SD)**	**M(SD)**	**M(SD)**	**M(SD)**	**M(SD)**
Interesting job tasks	3.4(1.4)	--	3.8(1.3)	--	3.7(1.4)
Challenging job tasks	3.2(1.0)	--	4.0(1.2)	--	3.6(1.1)
Job and career goal match	3.4(1.3)	--	4.3(1.0)	--	3.7(1.3)
Confidence completing job tasks	4.0(0.8)	--	3.9(1.0)	--	4.0(0.9)
Perceived competence completing work duties	4.1(0.7)	--	4.2(0.6)	--	4.1(0.7)
Relationships with supervisors	3.4(1.4)	--	4.1(1.1)	--	3.8(1.3)
Relationships with coworkers	4.2(0.8)	--	4.2(0.8)	--	3.9(1.2)
Physical Health problems	2.3(1.7)	2.8(1.6)	3.4(1.7)	4.4(0.8)	3.2(1.6)
Mental health symptoms	3.2(1.7)	3.6(1.4)	4.1(1.4)	4.3(1.3)	3.8(1.5)
Cognitive problems	3.2(1.5)	2.3(1.4)	4.3(1.3)	4.3(1.3)	3.6(1.6)
Psych Stress	3.2(1.3)	3.0(1.5)	4.0(1.3)	3.9(1.1)	3.5(1.3)
Stigma	2.7(1.5)	2.9(1.5)	2.9(1.7)	3.2(1.7)	2.9(1.6)
Drug use	1.6(1.4)	2.1(1.4)	1.4(1.3)	1.8(1.7)	1.7(1.4)
Alcohol use	1.4(1.0)	1.9(1.4)	2.1(1.5)	2.2(1.7)	1.9(1.4)
Education	3.0(1.3)	3.0(1.3)	3.2(1.5)	3.3(1.6)	3.1(1.4)
Work skills	3.9(0.7)	3.0(1.6)	3.9(1.2)	4.7(0.7)	3.9(1.2)
VA vocational assistance	3.2(1.7)	3.3(1.1)	2.0(1.7)	1.8(1.7)	2.6(1.7)

	SMI employed N=10	SMI unemployed N=10	PTSD employed N=10	PTSD unemployed N=10	All participants N=40
Items	**M(SD)**	**M(SD)**	**M(SD)**	**M(SD)**	**M(SD)**
Motivation	4.4(0.5)	4.0(1.2)	4.4(0.8)	4.2(1.3)	4.3(1.0)
Psych medication side effects	2.4(1.3)	2.2(1.3)	3.3(1.6)	2.8(1.8)	2.7(1.5)
Disability benefits	2.4(1.4)	2.6(1.6)	3.5(2.0)	3.6(1.9)	3.0(1.8)

[a]Likert scale ranging from 1 to 5

Appendix 1: Barriers and facilitators to competitive employment survey

	Does not play a role 1	**Plays a slight role 2**	**Plays a moderate role 3**	**Plays a large role 4**	**Plays a very large role 5**	***Helpful***	***Harmful***
1A. Interesting job tasks	☐	☐	☐	☐	☐	☐	☐
2A. Challenging job tasks	☐	☐	☐	☐	☐	☐	☐
3A. A good match between the job and career goals.	☐	☐	☐	☐	☐	☐	☐
4A. Confidence in successfully completing job tasks	☐	☐	☐	☐	☐	☐	☐
5A. Perceived competence in completing work duties.	☐	☐	☐	☐	☐	☐	☐
6A. Relationships with supervisors	☐	☐	☐	☐	☐	☐	☐
7A. Relationships with co-workers	☐	☐	☐	☐	☐	☐	☐
Part B is to be administered to all veterans (working or unemployed).							
1B. Physical health problems	☐	☐	☐	☐	☐	☐	☐
2B. Mental health symptoms	☐	☐	☐	☐	☐	☐	☐
3B. Cognitive problems (i.e., difficulty concentrating, paying attention, focusing, learning tasks)	☐	☐	☐	☐	☐	☐	☐
4B. Psychological Stress	☐	☐	☐	☐	☐	☐	☐
5B. Stigma of mental illness	☐	☐	☐	☐	☐	☐	☐
6B. Drug use	☐	☐	☐	☐	☐	☐	☐
7B. Alcohol use							
8B. Current education level	☐	☐	☐	☐	☐	☐	☐
9B. Level of work skills	☐	☐	☐	☐	☐	☐	☐
10B. Amount of VA vocational assistance received (e.g., assistance from a VA vocational specialist)	☐	☐	☐	☐	☐	☐	☐
11B. Personal motivation	☐	☐	☐	☐	☐	☐	☐
12B. Psychiatric medication side effects	☐	☐	☐	☐	☐	☐	☐

13B. Disability benefits (VA disability benefits and/or Social Security benefits)	☐	☐	☐	☐	☐	☐	☐