

2012

Assessing mental health as a measure of work potential

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ASSESSING MENTAL HEALTH AS A MEASURE OF WORK POTENTIAL

A Thesis

Presented To

Eastern Washington University

Cheney, Washington

In Partial Fulfillment of the Requirements

for the Degree

Master of Science

By

James V. Taylor

Spring 2012

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MASTER'S THESIS

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Abstract

Previous research has shown that mental health issues in the work place lead to absenteeism, lost productive time (LPT), and unemployment. This study examined the utility of the Work Potential Profile (WPP) in assessing depression, anxiety, and preoccupation with health as part of a measure of work potential. The main purpose of this study was to establish convergent validity for the WPP by correlating selected WPP profile scores with the MMPI-2 scales of depression (Scale 1), psychasthenia (Scale 7), and hypochondriasis (Scale 1), and to establish divergent validity by correlating the WPP profile scores with the MMPI-2 masculinity-femininity scale (Scale 5). The WPP and MMPI-2 were administered to 202 participants during a psychological evaluation in a private practice, and then selected scales were correlated to determine convergent and divergent validity. It was found that the profile scores of the WPP correlated significantly with their corresponding MMPI-2 scales but did not correlate significantly with the masculinity-femininity scale. In addition step-wise multiple regressions were used to establish which of the selected MMPI-2 scales best predicted selected WPP profile scores. It was found that the combination of MMPI-2 Scale 2 and Scale 7 best predicted the WPP profile score of Stress and Anxiety. Also the same combination of MMPI-2 Scale 2 and Scale 7 best predicted the WPP profile score of Depression/Resentment. Furthermore, the combination of MMPI-2 Scale 7 and Scale 1 best predicted the WPP profile score of Preoccupation with Health. This validates that the WPP helps in better identifying those with decreased absenteeism, LPT, and unemployment because of mental health needs, and to formulate better interventions.

Keywords: [Work Potential, MMPI-2, Depression, Anxiety, Stress, Somatization]

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Mental Health and Work

There are times when a majority of individuals don't feel like getting out of the bed in the morning. The temptation is to "call in sick" because they either feel down, don't want to face their coworkers, or have some physical complaints; after all, it would be impossible to focus on work anyways. However, if too many sick days are accumulated, there is a risk of disciplinary action from employers for absenteeism. This kind of lethargy, anxiety, or stress related illnesses can also be a sign of mental health concerns and can lead to days where it's difficult to get out of bed or find the energy to keep going or to be extremely fearful of the day and of others. Research has shown that depression can lead to a host of problems for individuals such as a loss of productivity, earnings, and possibly unemployment (Lerner, et al. 2004). It would, therefore, be beneficial to assess mental health along with other desirable work traits in those entering the workforce in order to provide support as necessary. This would enable employees to achieve their maximum potential in the work environment.

Mental health concerns costs employers millions of dollars through diverse means such as absenteeism and lost productivity. Mental health concerns are not necessarily obvious and so those in need of support may go unnoticed and fall through the cracks of unemployment and low job retention without proper assessment. It is important to assess mental health as a measure of work potential so that individuals can receive the necessary support to decrease lost productive time (LPT), absenteeism and unemployment (Adler, et al., 2006).

The purpose of this study is to provide convergent and divergent validity data for the Work Potential Profile (WPP) an assessment of mental health as it affect a person's potential to work. The WPP was found to be the only comprehensive instrument that assesses mental health concerns as relates to potential to work. It is important to assess the validity of a measure to ensure that you are measuring what you intend to measure and not something else. For this reason we intend to establish not only convergent validity, that the WPP profile scores correspond with other measures of the same mental health concerns, but also divergent validity, that the WPP scores do not correspond with unrelated measures (Howell, 2010).

Depression in the Work Place:

There are several studies covering the adverse effects of depression on work performance. According to Martin, Blum, Beach, & Roman (1996) even the effects of subclinical depression can lead to a decrease in work productivity. This was found even after controlling for extra variables such as interpersonal stress, job dissatisfaction, and self-report bias. Collateral rater groups including supervisors, coworkers, other workers, and friends and relatives corroborated participants self reports. It was found that these different rater groups' reports did not vary in any significant way. They found that depressive symptoms were consistently linked with performance deficits. Lerner, Adler, Chang, Hood, Perissinotto, and Rogers (2004) conducted a study comparing employees with depression, rheumatoid arthritis, and a control group to look at unemployment, job retention, and productivity loss. Employees were assessed to establish a baseline and then assessed again at a 6-month follow up. It was found that employees with depression reported significantly more medical conditions, had higher rates of unemployment, were making less money although working the same number of hours, had greater productivity loss, and had a higher turnover rate. Using a similar sample, Adler, et al. (2006) looked at job

performance deficits due to depression. Using a longitudinal design they assessed employees at baseline, 6 months, 12 months, and 18 months using the Work Limitations Questionnaire. It was found that the depression group had significantly greater job performance deficits in performing mental-interpersonal tasks, time management, output tasks, and physical tasks. It was also noted that while job performance among depressed workers whose depression was “clinically improved” increased, it did not result in a full recovery as compared to the control group. In a follow up cross sectional longitudinal study by Lerner et al. (2010) it was shown that psychologically demanding, low control, and physically demanding work added to absenteeism and lost productivity at work for employees with depression. Stewart, Ricci, Chee, Hahn, and Morganstein (2003) placed the cost of depression as measured by lost productive time at \$44.01 billion per year. This was compared to the 30.94 billion per year cost for employees without depression. Depression among employees leads to absenteeism, lost productive time when at work, unemployment, high turnover, and increased costs.

Anxiety in the Workplace

Research has shown that anxiety has a similar effect on work performance to that of depression although to a lesser extent. Research by Nardi (2005) found that social anxiety was related to reduced participation in the work force, along with impaired career progression, and impaired work performance. His findings also indicated that much of the costs associated with social anxiety were related to lost income and not related to treatment. This once again highlights the benefits of identifying mental health illness in the work place and the benefits of providing interventions. A study by Waghorn, Chant, White, and Whiteford (2005) showed that not only do anxiety disorders reduce participation in the work force but that those with anxiety disorders

leave the work force earlier. His research also corroborated that those with anxiety disorders reported accomplishing less at work and were associated with impaired career progression.

Waghorn and Chant (2007) found that depression and anxiety cost billions in lost productivity costs through the standard means of working time loss, absenteeism, and LPT. Plaiser et al.

(2010) further confirmed the negative impact of anxiety disorders on work performance. While this effect was less than that of depressive disorders, it was still found to be significant.

Furthermore the greater the severity of the anxiety or depressive disorders the more absenteeism and decreased work performance was found. Anxiety disorders contribute to absenteeism, LPT, and unemployment.

Psychosomatic Complaints in the Workplace

The costly and detrimental link between somatic complaints and reduced work performance has been well established in the research literature. Frese (1985) found that there was evidence for a causal interpretation of stress at work and psychosomatic complaints. In looking at alternate explanations such as income, job security, age, a stressful life, and low SES groups, he found that none of those previously listed items could explain psychosomatic complaints at work as well as the subjective report of stress. Furthermore this relation between stress at work and psychosomatic complaints was not confined to over-raters and under-raters, those individuals that reported either more stress or less stress than the majority of the respondents, but was found across the sample. Findings from Escobar et al. (1987) indicated that somatizers, those who report physical symptoms in place of mental health symptoms, report more disability than non-somatizers. This disability is associated with an increase usage of health services with a preference for medical treatment over mental health treatment. Increases in the severity of somatization were also found to be related to rising levels of depression and anxiety.

In follow up research Sonnentag and Frese (2003) found again that work-related stress has negative effects on participant's health and well-being; and furthermore, that objective stressors, not only the perception of stressors, are linked to poor health. Their research also indicated that access to resources had a positive impact on the health and well-being of workers. Minsky, Etz, Gara, and Escobar (2011) found that as the number of physical complaints increased so did the cost of services. They also concluded that those who reported serious mental health issues also reported three or more physical symptoms. This illustrates that work related factors lead to stress in the work environment which in turn can cause psychosomatic complaints which if unaddressed can lead to rising costs for employers. The accurate identification and treatment of somatic complaints has been shown to improve workers performance (Minsky, et al., 2011).

Methodologies in Assessing Mental Health's Impact on Work

There are various measures and methods for assessing work functioning aside from the WPP. Some of the other measures that are currently available are: (a) The Working-Assessing Skills, Habits and Style Measure (Miles, Grummon, and Maduschke, 1996); (b) The Work Readiness Profile (Rowe, 1995); (c) The Work Performance Assessment (Roessler, Hinman, & Lewis, 1988); and (d) The Work Limitations Questionnaire (Lerner, Amick, Rogers, Malspeis, Bungay & Cynn, 2001). The Working-Assessing Skills, Habits, and Style measure is designed to assess personal habits, skills, and styles that are associated with a positive work ethic (Miles, Grummon, & Maduschke, 1996). This measure does not, however, specifically address the possible presence of mental health concerns that could be impacting an individual's performance. The Work Readiness Profile focuses on physical and social aspects of work and does not assess mental health problems as a component of work readiness (Rowe, 1995). The Work Performance Assessment is a group-administered measure with nineteen assessment situations involving

supervisors and co-workers, which must be set up and acted out (Roessler, Hinman, & Lewis, 1988). The Work Performance Assessment also does not assess mental health concerns. The Work Limitations Questionnaire (Lerner, et al., 2001) assesses the degree to which employed individuals are experiencing limitations due to health problems. The Work Potential Profile assesses six areas as follows: coping, freedom from major barriers, social resources, abilities, motivation, and physical ability. In our study we used the profile scores of Stress and Anxiety, Depression/Resentment, and Preoccupation with Health, which are assessed as part of the Coping and Freedom From Major Barriers area profile scores.

The WPP is the only work assessment instrument found that assesses depression, anxiety, and somatic complaints among potential work candidates. This allows earlier identification of mental health concerns to facilitate the early implementation of support strategies. This would help maximize employee's success by allowing for reducing absenteeism, loss productive time at work, unemployment, and turnover. From a research prospective the WPP could aid in the assessment of the efficacy of intervention strategies. In the past research assessment has been done in a two stage process. First researchers would assess for work limitations and then they would administer a separate measure to assess for the presence of mental health concerns. The WPP would aid researchers by allowing them to assess for the presence of work limitations and mental health concerns at the same time thus possibly removing the need for two tests to be administered.

The MMPI-2

Currently the only measures of personality approved in Washington State by the Department of Social and Health Services (DSHS, 2011) for the assessment of work disability due to mental health concerns are the MMPI-2 and the PAI. For this reason I correlated the

profile scores of the WPP with their associated MMPI-2 scales since the MMPI-2 is the instrument of choice with the practitioner from where the data is to be collected. The use of personality tests to determine the suitability of a candidate for certain types of positions has been on the rise since 1988 (Barford & Tseng, 1994). Personality tests are used in the selection of candidates for such jobs as nuclear power plant operator, air traffic controller, and police officer (Delikat & Kathawala, 1997). While the MMPI-2 has been shown to aid in the diagnosis of mental health concerns (Munley, Busbey, & Jaynes, 1997) it can be costly and time consuming to administer. The MMPI-2 contains a General Problem Area Cluster of work interference; this scale was designed to assess personal difficulties that interfere with work such as tension, worry, obsessiveness, and difficulty concentrating (Groth-Marnat, 2009). This scale combined with the clinical scales of the MMPI-2 could be used to assess work disability. If the WPP correlates well with the MMP-2 it would offer a shorter more convenient form for the assessment of mental health barriers to work as well as simplifying the interpretation of results.

WPP Development and Current Research

The sample used to validate the WPP consisted of 358 participants. This sample entailed 275 unemployed individuals, 121 long-term employed individuals, and 83 employed individuals. The WPP underwent five factor analyses (principal component) studies that identified two major factors being assessed by the instrument, motivation and work potential. As these constructs were consistently assessed in the five studies the authors put forth that the WPP has very high construct validity. Two studies of test-retest reliability were performed on the WPP; one with a sample of 10 employed individuals and the other with a sample of 11 unemployed individuals. These resulted in reliability estimates of .84 and .92. From this, the authors concluded that the WPP has excellent reliability while they acknowledge that the sample was small.

The purpose of my study is to extend the validity research of the WPP as a measure of mental health concerns as they impact work performance that has already been conducted. In order to do this participants who took the WPP as well as the MMPI-2 were selected from archival data obtained by a private assessment firm in Spokane, Washington. The archival data was obtained from applicants referred from the Department of Social and Health Services (DSHS). I hypothesized that the profile scores of Stress and Anxiety, Depression/Resentment and Preoccupation with Health of the WPP will significantly correlate with the MMPI-2 scales of depression, psychasthenia, and hypochondriasis. Furthermore, in order to provide divergent validity data we hypothesize that the WPP scales will not be significantly correlated with the MMPI-2 masculinity/femininity scale. In addition I hypothesized that the MMPI-2 scale of psychasthenia would best predict the WPP profile score of Stress and Anxiety, the scale of depression will best predict the WPP profile score of Depression/Resentment, and the scale of hypochondriasis will best predict the WPP profile score of Preoccupation with Health. This will further establish the validity of the WPP as a measure of mental health concerns as they impact work performance and demonstrate the utility of the WPP.

Method

Participants

Archival data of 202 unemployed individuals was obtained from a private assessment firm in Spokane, WA. These individuals were referred for assessment of ability to work by DSHS. The sample consisted of 95 females and 107 males, ranging in age from 18 to 61.

Procedure

Participants were administered both the MMPI-2 and the WPP as part of their assessment. The participants took the tests on a computer and computer scoring was used. Participants took

the tests in a room individually. The order of the tests was random and part of a battery of test given as part of their assessment. The other tests administered included, but not always, the WAIS, Woodcock Johnson, MACE, and Trails. It was hypothesized that the WPP Stress and Anxiety profile scale would be correlated ($p < .01$) with Scale 7 (Psychasthenia) of the MMPI-2. The WPP Preoccupation with Health profile scale would be significantly correlated with Scale 1 (Hypochondriasis) of the MMPI-2 ($p < .01$). In addition the WPP Depression/Resentment profile scale would be significantly correlated with Scale 2 (Depression) of the MMPI-2 ($p < .01$). It was further hypothesized that the WPP profile scores would not be significantly correlated ($p > .05$) with Scale 5 (Masculinity/Femininity) of the MMPI-2.

A step-wise multiple regression analysis was used to examine the predictability between the WPP profile scores of Stress and Anxiety, Depression/Resentment, Preoccupation with Health and scales 1, 2, and 7 of the MMPI-2. Using Scales 1, 2, and 7 of the MMPI-2 it was hypothesized that scale 7 would best predict the Stress and Anxiety profile score of the WPP. Using Scales 1, 2, and 7 of the MMPI-2 it was further hypothesized that scale 2 would best predict the Depression/Resentment profile score of the WPP. Using Scales 1, 2, and 7 of the MMPI-2, it was hypothesized that scale 1 would best predict the Preoccupation with Health profile score of the WPP

Measures

Work Potential Profile (WPP). The WPP consists of 132 items to which participants respond on a four point Likert-type scale. These items are grouped into the following six categories of work potential: Coping, Freedom from major barriers, Social resources, Abilities, Motivation, and Physical ability. The profile score of Stress and Anxiety is grouped in the category of Coping. The profile scores of Depression/Resentment and Preoccupation with Health

are grouped in the category of Freedom from major barriers. The WPP has been found to have good construct validity and test-retest reliability in the initial studies performed during its development as mentioned earlier.

MMPI-2. The MMPI-2 consists of 567 items to which participants respond using a true-false format. It contains ten standard clinical scales and they are Hypochondriasis, Depression, Hysteria, Psychopathic Deviate, Masculinity-Femininity, Paranoia, Psychasthenia, Schizophrenia, Hypomania, and Social Introversion. There are also a number of supplementary scales that have been derived from combinations of these ten scales. The MMPI-2 has been shown to have moderate test-retest reliability with scores ranging from .67 for Scale 6 to .92 for Scale 0 (Groth-Marnat, 2009). Groth-Marnat (2009) reported that there have been as many as 8,000 studies on the construct validity of the MMPI-2; these studies have established the MMPI-2 as a valid measure.

Results

Pearson Product Moment Correlations demonstrated that Age was not significantly correlated with Stress and Anxiety or Preoccupation with Health. There was a significant correlation between Age and Depression/Resentment ($r = .15, p = .02$). While significant, the size of the correlation was small. Given the results it seems safe to agree with the authors of the WPP that age does not significantly predict mental health concerns at work. No significant difference in Gender with any of the WPP profile scores was found; this is congruent with the findings of the authors of the WPP.

Stress and Anxiety was found to be correlated significantly with Scale 1 ($r = -.45, p < .001$), Scale 2 ($r = -.59, p < .001$), and Scale 7 ($r = -.57, p < .001$) but not significantly correlated with Scale 5. While it was only hypothesized that Stress and Anxiety would correlate with Scale 7 it is

not surprising to find that it correlated with the other measures of mental health concerns as well. Of note, however, is that Stress and Anxiety was found to be more strongly correlated with Scale 2 than Scale 7.

Depression/Resentment was found to be correlated significantly with Scale 1 ($r = -.37, p < .001$), Scale 2 ($r = -.46, p < .001$), and Scale 7 ($r = -.55, p < .001$) and not significantly correlated with Scale 5. Depression/Resentment was correlated most strongly with Scale 7 over Scale 2 which was not anticipated.

Preoccupation with Health was correlated significantly with Scale 1 ($r = -.54, p < .001$), Scale 2 ($r = -.52, p < .001$), and Scale 7 ($r = -.59, p < .001$) and not significantly correlated with Scale 5. While it was found that Preoccupation with Health was correlated with Scale 1, it was more strongly correlated with Scale 7 (albeit, slightly more) which was not anticipated.

Table 1 Inter-Correlations of Variables

	1	2	3	4	5	6	7	8	9
1. Age	1.00								
2. Gender	-.01	1.00							
3. Stress and Anxiety	-.09	.00	1.00						
4. Depression/Resentment	.15*	-.05	.63**	1.00					
5. Preoccupation with Health	-.04	-.01	.62**	.70**	1.00				
6. Scale 1	.22**	.02	-.45**	-.37**	-.54**	1.00			
7. Scale 2	.18**	.07	-.60**	-.46**	-.52**	.55**	1.00		
8. Scale 5	.09	.00	-.08	-.09	-.10	.20**	.18**	1.00	
9. Scale 7	.07	-.09	-.57**	-.55**	-.59**	.52**	.68**	.24**	1.00

* Significance $p < .05$

** Significance $p < .001$

It was hypothesized that Scale 7 of the MMPI-2 would best predict the WPP profile score of Stress and Anxiety. A stepwise multiple regression analysis showed that Scale 2 and Scale 7

best predicted Stress and Anxiety ($R^2=.40$, $F(2,199)=66.27$, $p<.001$). These two indicators accounted for 40% of the variance, and Scale 1 did not contribute enough variance to be included. It was found that Scale 2 significantly predicted Stress and Anxiety ($\beta = -.38$, $p<.001$) as did Scale 7 ($\beta = -.31$, $p<.001$), and again Scale 1 did not contribute enough variance to be included.

Secondly, it was hypothesized that the WPP Depression/Resentment profile score would be best predicted by the Scale 2 of the MMPI-2. However it was found that Scale 7 and Scale 2 combined best predicted the profile score of Depression/Resentment ($R^2=.32$, $F(2,199)=46.00$, $p<.001$). These two indicators accounted for 31.6% of the variance, and Scale 1 of the MMPI-2 did not significantly contribute to the model. It was found that Scale 7 significantly predicted Depression/Resentment ($\beta = -.44$, $p<.001$) as did Scale 2 ($\beta = -.16$, $p<.05$).

Finally it was hypothesized that the MMPI-2 Scale 1 would best predict the WPP Preoccupation with Health profile score. However it was determined that Preoccupation with Health was best predicted by Scale 7 and Scale 1 of the MMPI-2 combined ($R^2=.43$, $F(2,199)=74.03$, $p<.001$). These two indicators accounted for 42.7% of the variance, and that Scale 2 of the MMPI-2 did not add any significant variance to the model. It was found that Scale 7 significantly predicted Preoccupation with Health ($\beta = -.43$, $p<.001$), as did Scale 1 ($\beta = -.32$, $p<.001$).

Discussion

I hypothesized that the profile scores of the WPP would be significantly correlated with their corresponding MMPI-2 scale scores establishing the convergent validity of the WPP. This would demonstrate that the WPP did indeed measure the constructs of mental health as assessed by another measure, in this case the MMPI-2. I chose the MMPI-2 because it is currently used by

DSHS for the assessment of mental health difficulties as a barrier to work, and is considered one of the most influential and widely used objective personality measures (Nietzel, Bernstein, Kramer, & Milich, 2003). While each of the WPP profile scores were significantly correlated with their corresponding MMPI-2 scale scores, it was found that they were more strongly correlated with other related MMPI-2 scale scores. The WPP Stress and Anxiety score was more strongly correlated with Scale 2 (Depression). The WPP Depression/Resentment score was more strongly correlated with Scale 7 (Psychasthenia). The Preoccupation with Health score was more strongly correlated with Scale 7 (Psychasthenia). This appears to demonstrate that the profile scores of the WPP do assess aspects of mental health as measured by the MMPI-2, but not in a direct correspondence with what I believed to be their MMPI-2 scale score counterparts. The fact that the profile score of Stress and Anxiety has a stronger correlation with Scale 2 than Scale 7 raises some concerns about the ability of the WPP to distinguish between depression and anxiety. This also applies to the profile score of Depression/Resentment as it has a stronger correlation with Scale 7 than Scale 2. One consideration is that the purpose of the WPP is to assess mental health concerns as a barrier to work rather than provide diagnosis. To this end the WPP appears to do a good job of identifying mental health concerns that could be a barrier to employment. While not the purpose of this study, the combination of scale scores significantly correlated with the WPP profile scores raises the consideration of MMPI-2 code-types, particularly the 2-7 code-type which seemed to be indicative of the WPP profile scores of Stress and Anxiety and Depression/Resentment. According to Groth-Marnat (2009) code-type interpretations can provide more accurate and clinically useful interpretations of the MMPI-2 clinical scales. Further exploration of the relationship between the WPP profile scores of Depression/Resentment and Stress and Anxiety and the 2-7 code-type appears to be indicated. The research by Plaiser et al.

(2010) demonstrates that anxiety and depression are related in their impact on workplace performance and I feel this provides further support for the interpretation that the WPP profile scores do assess mental health concerns as they impact work performance.

The combination of Scale 7 and Scale 1 being correlated with Preoccupation with Health appears to be consistent with the findings of Frese (1985) and Escobar et al. (1987) about the relationship between stress and psychosomatic complaints. One possible interpretation is the presence of stress and anxiety leading to a focus or preoccupation with psychosomatic complaints as the cause of distress. Convergent validity of the WPP with the MMPI-2 in the assessment of mental health concerns appears to have been established. Groth-Marnat (2009) points out in defense of the MMPI-2 that item overlap for complex, multidimensional variables such as mental health concerns should be anticipated.

The divergent validity of the WPP was examined by looking at correlations between Scale 5 of the MMPI-2 and the WPP profile scores. Divergent validity is important because just as you want to be sure a measure is reporting on what you want to know, you also want to be sure that it is not reporting on unrelated information. Consistent with what the authors of the WPP found, most of the WPP profile scores were not significantly associated with gender. I did find that the Depression/Resentment profile score was associated significantly with gender but the size of the association was small. Scale 5 of the MMPI-2 also was not significantly correlated with any of the WPP profile scores as I hypothesized. This I feel provides evidence for the divergent validity of the WPP.

The step-wise multiple regression analysis appears to support the interpretation that the WPP does assess mental health concerns as they impact work performance. A stepwise analysis was selected since it would add in one variable and then calculate how much of the variance was

accounted for. If it was found to account for a significant portion of the variance then the variable was kept as part of the regression equation. The next variable was then added and how much of the variance it could account for was calculated; also the predictive power of the first variable was recalculated. If both variables were found to be significant predictors without significant overlap they were kept and then the process was repeated with the next variable. If at any time a variable was found to not account for a significant portion of the variance or to have too much overlap with another variable it was then excluded from the equation. Stress and Anxiety was best predicted by Scale 2 and Scale 7 of the MMPI-2. This was not as expected; also Depression/Resentment was best predicted by these same two MMPI-2 scales in reverse order, Scale 7 and Scale 2. Since both Stress and Anxiety and Depression/Resentment were best predicted by a combination of Scale 2 and Scale 7 this raises the consideration again of the MMPI-2 2-7 code-type. The fact that Scale 1 was excluded by the analysis as a predictive variable of the WPP profile scores of Stress and Anxiety and Depression/Resentment is good as it indicates that both of these scales are primarily assessing anxiety and depressive symptoms. This does appear to indicate that the profile scores are identifying elements of depression and anxiety as they affect work performance. The combination of Scale 7 and Scale 1 best predicting the profile score of Preoccupation with Health and Scale 2 being excluded as a predictor appears to be consistent with the findings of Frese (1985) and Escobar et al. (1987). They found evidence of a causal relationship between stress and psychosomatic complaints in the workplace, following this interpretation you could expect the presence of Scale 7 in the prediction of the Preoccupation with Health profile score.

Some of the limitations of this study are that the sample consists entirely of long-term unemployed individuals seeking disability. This could have created a ceiling effect accounting

for the high correlations of all of the MMPI-2 scales with the WPP profile scores. Further analysis of short-term unemployed and employed individuals is indicated to consider the further generalizability of this study. Future directions for research should also consider looking into the MMPI-2 code-types given that the profile scores of Stress and Anxiety and Depression/Resentment were best predicted by a combination of Scale 2 and Scale 7. Further analysis of the possible relations between the WPP and the MMPI-2 could be done as well since there are also additional content scales on the MMPI-2 related to the clinical scales that could be analyzed. This could provide further interpretive data on the WPP profile scores related to mental health concerns. Comparison to other measures besides the MMPI-2 could also provide further validation of the WPP. Reliability studies for the WPP should also be considered due to the limited and unstandardized amount of reliability research that was done in its development.

In summary the WPP does seem to be able to assess mental health concerns as a barrier to employment. The use of the WPP seems suited to identifying possible mental health concerns and the delivery of support strategies to increase worker productivity and success. Its usefulness as a diagnostic tool of mental health concerns is called in to question due to its apparent inability to distinguish between anxiety, depression, and psychosomatic complaints. It is important to note, however that the WPP as proposed by its authors was not intended for use as a diagnostic tool of mental health concerns. While there were strong correlations between the WPP and the MMPI-2, the two measures do propose to assess mental health concerns in different way. Further exploration into the concept of mental health concerns as having varied effects in alternate environments, such as the workplace, in order to develop a more precise measure and expand our understanding of this issue would likely be beneficial not only to employees and employers but to our society as a whole.

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Research Assistant - September 2006-June 2007
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PROFESSIONAL EXPERIENCE

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Spokane Mental Health Adult Outpatient
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-Observed and Administered client intakes
- Program Supervisor - August 2007 – To present
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Positions Held: NOC Staff, Child Development Trainer, Program Supervisor
-Provided a safe living environment and community access for behaviorally and
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-Verbally/Physically de-escalate clients
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-Certified in CPR, First Aid, Blood Borne Pathogens
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