

# A Factor Structure of a Presenting Problems Checklist: Comparing Levels of Distress and Impairment

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A FACTOR STRUCTURE OF A PRESENTING PROBLEMS CHECKLIST:  
COMPARING LEVELS OF DISTRESS AND IMPAIRMENT

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ABSTRACT  
A FACTOR STRUCTURE OF A PRESENTING PROBLEMS CHECKLIST:  
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Marquette University, 2012

In recent decades, there has been an increase in the number of students seeking services at university counseling centers with severe presenting problems. This has created a demand for an increase in resources at the counseling centers. One tool that can be used to increase efficiency is a presenting problems checklist (PPC). An individual's level of distress and impairment associated with the presenting problem is often indicative of course of treatment and therapy outcome. The present study conducted an exploratory and confirmatory factor analysis on a PPC that was presented to 5,926 clients from the Johns Hopkins University Counseling Center between the years of 2002 and 2008. Next, a multiple regression was conducted in order to determine which factors predicted distress and impairment. In the EFA, six factors were extracted and the CFA revealed that it was a poor model fit. The multiple regression analyses revealed that five out of the six factors were good predictors of an individual's level of distress and four of the six variables were good predictors of an individual's level of impairment. Implications include the limited utility of PPCs and the need to develop better resources for counseling centers to run more efficiently.

TABLE OF CONTENTS

CHAPTER

I. INTRODUCTION.....1

    A. Increasing Severity of Problems.....1

    B. Need for Improved Efficiency.....5

    C. Presenting Problems Checklists.....6

    D. Factor Analysis.....8

    E. Distress and Impairment.....9

    F. Summary.....12

    G. Present Study.....13

II. METHODS

    A. Participants.....14

    B. Materials.....14

    C. Procedure.....16

III. RESULTS

    A. Exploratory Factor Analysis.....16

    B. Confirmatory Factor Analysis.....18

    C. Distress and Impairment.....20

    D. Multiple Regression Analyses.....20

IV. DISCUSSION

    A. Analysis of the JHUCC PPC.....22

    B. Predicting Clients’ Distress and Impairment.....24

C. Future Directions.....	27
D. Conclusions.....	27
V. BIBLIOGRAPHY.....	28

## A Factor Structure of a Presenting Problems Checklist:

### Comparing Levels of Distress and Impairment

University counseling centers are extremely helpful resources for students who suffer from mental health problems while they are in college. In order to provide the best possible services for the large number of students at a university, counseling centers need to utilize their staff and resources as efficiently as possible. One important component in running an efficient counseling center is to have a thorough understanding of the types of services that the students require.

The following will review the primary reasons that counseling centers might be lacking the resources necessary to accommodate the increasing needs of clients, such as the increase in severity of presenting problems in college students. This review will also examine possible solutions to increasing efficiency, with a particular focus on determining the presenting problems of students at a university counseling center. Additionally, the role of distress and impairment will be discussed as it relates to understanding an individual's presenting problem.

### **Increasing Severity of Problems**

There are an increasing number of students seeking help at college counseling centers for serious problems such as personality disorders, eating disorders, depression, substance abuse, sexual assaults, and suicidal ideation (Erdur-Baker, Aberson, Barrow, & Draper, 2006; Heppner et al., 1994; Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998). Historically, counseling centers primarily treated issues relating to informational or educational needs. In the 1980s and 1990s, however, there began an increase in the number of students seeking services for more serious emotional and behavioral problems.

Pledge et al. (1998) surveyed college counseling staff from 1989 to 1995. Over this time, the staff identified an increase of problems such as suicidality, substance use, history of psychiatric treatment and hospitalization, depression, anxiety, and an overall increase in reports of distress.

Erdur-Baker et al. (2006) were compelled to conduct their study in response to the observations by clinicians that there were more students seeking services for problems that appeared more serious over the years. In their study, the researchers examined a clinical population, which consisted of 3,767 students, who had an intake appointment at a university counseling center, in 1991 and in 1997. A total of 32 counseling centers participated in the study. They also examined a non-clinical sample, using data collected between 1994 and 1995. The nonclinical sample consisted of 2,718 students who were recruited through class activities and recruiting sessions at student housing. The results showed that participants who were seeking therapy had significantly more severe problems than a non-clinical student population, suggesting that those who sought therapy were significantly more distressed than those who did not. Furthermore, they found that participants in the 1997 clinical sample reported the most problems in each of the identified domains, providing support for the notion that the severity of problems increased over time. They also found that those in the 1997 sample reported longer problem chronicity compared to the nonclinical sample in all domains. This is particularly concerning considering that the problems include more severe issues such as anxiety, adjustment problems, and suicidal ideation.

In 2010, Gallagher conducted the annual National Survey of Counseling Center Directors which surveyed 320 counseling center directors, who represented 2.75 million

students eligible for counseling services and 317,000 students who sought services. The vast majority of the directors (91%) reported an increase in the number of students seeking counseling services with severe psychiatric problems. Between 2005 and 2010, 70.6% of directors reported an increase in crisis issues requiring an immediate response (i.e., suicidal ideation), 68.0% reported an increase in psychiatric medication issues, 45.7% reported an increase in issues relating to alcohol abuse, and 45.1% reported an increase in illicit drug use. Directors also reported that the incidence of self-injurious behavior, on-campus sexual assault, eating disorders, and problems relating to previous sexual abuse increased. Additionally, Gallagher (2010) revealed that 24% of clients who sought services at counseling centers were on psychiatric medication, which represented increase from 20% in 2003, 17% in 2000, and only 9% in 1994.

Benton, Robertson, Tseng, Newton, and Benton (2003) examined client presenting problems at a counseling center between 1988 and 2001. Benton et al. (2003) explained that a limitation of previous counseling center surveys is that counseling center therapists and directors may provide biased responses if they are being asked to report retrospectively on changes in client presenting problems. Therefore, Benton et al. examined archival data of over 13,000 students who sought services at a campus counseling center. Their results indicated that out of 19 problem areas, 14 showed significant increases. An interesting finding was that before 1994, the most frequently reported problem was relationship difficulties. After 1994, however, stress and anxiety were the most frequently reported difficulties. This study found that not only was there an increase in severity of problems, but that the increases were dramatic. The number of clients who reported depression doubled, the number of students who reported suicidal

ideation tripled, and the number of clients who reported sexual assault quadrupled over the 13-year period.

Green, Lowry, and Kopta (2003) found that college students seeking therapy experienced significantly more distress, more impairment, and had more symptoms than students who did not seek counseling services. Furthermore, individuals in a college counseling center endorsed symptoms that were similar to those of adults seeking outpatient psychotherapy. These results suggest that college students who seek counseling are symptomatically more similar to outpatients than they are to other college students. Students who are seeking help at universities are not doing so for minor concerns and Green et al.'s (2003) results substantiate observations by counseling center directors that presenting problems have become more severe.

The exact reasons for the increase in severity of presenting problems remain unknown. A potential reason for the increase in severe cases at college counseling centers is that society has been less likely to stigmatize mental disorders in recent years, so students may feel more comfortable seeking services. Another reason might be that college is more stressful for students than it was in the past. Furthermore, students who would not have been able to attend college in previous generations, such as those with severe mental illness, are now able due to improvements in medications that manage their conditions. This may also help explain the reason that more students are currently taking psychiatric medication than in the past. An additional possibility for the increase in severity of presenting problems is the increased diversity on college campuses in recent decades. Erdur-Baker et al. (2006) found that among college students, all minority groups, except African Americans, have increased their help-seeking behavior, indicating

that these individuals may contribute to the increased number of students seeking psychological services. Another possible explanation is that services are more easily accessible to students in recent years than they were in the past.

### **Need for Improved Efficiency**

Despite the increased demand on counseling centers, there has been an insufficient increase in funding in staffing of counseling centers. Guinee and Ness (2000) surveyed 67 counseling center directors from across the country between 1990 and 1996, and they found that the majority of counseling center directors reported an increase in number of students seeking services (62.9%), but almost half reported no changes in the number of full-time professional staff (43.6%). Since there are more students seeking services and their problems are more severe, it clearly creates a strain on the staff at the counseling center, especially if there are no additional staff members to compensate for this increase.

In accordance with this, of the directors Gallagher (2010) surveyed who were in the same position five years prior, 94.6% reported that their job was more stressful than it was five years earlier. One of the major reasons, endorsed by 61%, was managing the increased pressures on the center due to increasing complexity of student problems. They also found that the average ratio of counselors to students at most schools is 1 counselor to 1,600 students, indicating a large demand for clinicians. Moreover, the more complex problems in the clinical samples require a disproportionate amount of staff time compared to those who present with more minor concerns. Most counseling centers are designed to perform short-term therapy and 27% of the centers place limits on the number of counseling sessions allowed (Gallagher, 2010). Since more severe cases tend

to require more time to treat, resources should be available to help the treatment become more efficient and hopefully allow the process to move along more quickly, especially during the intake procedure.

This increased demand has created a need to increase resources and make better use of existing resources in counseling centers to meet the changing needs of the students. For example, clinicians should be appropriately trained to handle the most common presenting problems at their institution. There should also be an effective way to gather information about a person's presenting problem to quickly determine what type of treatment the person will likely require and potentially how long treatment should last (Hansen, Lambert, & Forman, 2002). Because there are a limited number of sessions available at many university counseling centers, the time that a clinician has with a client should be used as efficiently as possible to ensure that the client is able to gain the most benefit from the limited number of sessions.

In the study of students' presenting problems reviewed above, Pledge et al. (1998) provided further support for the need for increased efficiency. In their research, they encountered many staff members of counseling centers who reported consistently needing assistance in dealing with more serious presenting problems. They also acknowledged that if the most common presenting problems can be identified, then students in training programs could learn how to deal with these issues and be better prepared to meet the needs of clients with more severe problems.

### **Presenting Problem Checklists**

To improve the efficient use of resources, university counseling centers need to assess a client's presenting problems quickly and effectively. Presenting problem

checklists (PPCs) have become a popular and useful component of the intake process because they help clinicians gain an initial understanding of the individual's reasons for seeking therapy and plan to provide services accordingly (Heppner et al., 1994). Benton et al. (2003) emphasized the increased importance of understanding diagnoses today compared with in the 1980s when working in a college counseling center. It is necessary that professionals working in the counseling center be prepared to deal with more serious issues and have a more thorough understanding of symptoms and diagnoses. Identifying symptoms during the intake process, particularly ones that are indicative of psychopathology, is also helpful in identifying important domains for the clinician to address with the client and gather more information about a potential diagnosis. Moreover, if it is known which presenting problems are most common at a given counseling center, or in a given population such as college students seeking psychotherapy, it might be easier to train staff accordingly, as suggested by Pledge et al. (1998).

Using PPCs has historically been the most common way to assess client concerns at intake (Heppner et al., 1994). The most commonly used PPC is the Mooney Problem Checklist (Mooney & Gordon, 1950), which consists of 330 problems and addresses concerns across 11 areas. Another common PPC is the Computerized Assessment System for Psychotherapy Evaluation and Research (CASPER; McCullough & Farrell 1983), which is a computerized system that is designed to assess presenting problem and behaviors at intake (McCullough, Farrell, & Longabaugh, 1986). This PPC was developed in an attempt to help bridge the scientist-practitioner gap by creating a PPC that was convenient for practitioners, but also conducive to conducting research. It

includes 127 questions and assesses 13 problem categories including categories such as mood problems, physical symptoms, and thought problems, among others. Other commonly used problem checklists include the Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno & Villaseñor, 1988), the College Adjustment Scale (Anton & Reed, 1991), and the Problem Checklist (Nezu, 1985). Heppner et al. (1994) explain that, despite the large number of problem checklists that currently exist, there remains a need for more effective tools to assess presenting problems at counseling centers. One way to do this is to condense the information so that it is more practical, by using PPCs that are more brief.

Heppner et al. (1994) acknowledged that PPCs can be difficult for clinical sites to use because they can result in a large amount of information for clinicians to digest, especially if they attempt to address all major potential problem areas. These authors and others (e.g., Diemer et al., 2009) have endeavored to condense the information in PPCs using various techniques, including factor analysis.

### **Factor Analysis**

With regard to PPCs, factor analysis has proven to be beneficial in a number of ways. First, PPCs by definition contain a large number of items, and it may be difficult for a therapist to evaluate and understand the information quickly. A factor analysis is helpful in reducing the number of areas that a clinician needs to identify immediately, which can save time in assessing the reason for the client seeking services.

Second, factor analysis has benefits beyond condensing information, such as assisting in establishing construct validity for a measure (Hayton, Allen, & Scarpello, 2004). To be specific, confirmatory factor analysis provides an assessment of the

goodness-of-fit of hypothesized models. This allows researchers to confirm that a model is actually a good fit for the data by examining various fit indices (Hu & Bentler, 1998).

Determining validity benefits those who use a PPC in a clinic setting by ensuring that they are measuring clients' presenting problems as accurately as possible. It also allows them to understand which problem domains are, and which might not be, included on the checklist. This addresses concerns that were examined by Diemer, Wang, and Dunkle (2009), who argued that checklist research has tended to use inappropriate methodology and consequently failed to effectively measure clients' presenting problems. In their study, they examined the properties of a PPC at an academically selective institution, and six factors were extracted: Academic Fears and Worries, Substance Use and Severe Concerns, Depression, Loneliness/Social Competence, Sexual and Intimate Relationships, and Traumatic Experiences. A CFA revealed that the model was a good fit, indicating that these six factors were properly measuring what they intended to measure for the given population.

In summary, factor analytic procedures can reduce the large amount of information in PPCs into a more manageable number of valid factors. These factors are of use to clinicians because they can contribute to understanding the problems of their clients more quickly, and also because they shed light on domains beyond presenting problems. For example, factors extracted from a presenting problems checklist can help understand the levels of distress or impairment that a client is experiencing.

### **Distress and Impairment**

Regardless of the use of PPCs, all clinicians need to evaluate a client's level of distress and impairment. Distress and impairment are the reasons that clients seek therapy

and are often a major focus of therapy. By definition, distress and impairment are key elements in diagnosing someone with a psychological disorder (APA, 2000). The DSM-IV-TR states:

Each of the mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) (APA, 2000, p. xxxi).

Impairment has typically been measured as problems in occupational and interpersonal functioning. Occupational impairment involves the inability to perform expected duties at work or school, whereas interpersonal impairment involves a decreased ability to fulfill social roles with friends and family. Distress, on the other hand, has typically been measured by rating overall perceived health (Whisman & Uebelacker, 2006). Distress tends to be measured subjectively, whereas impairment can be measured both subjectively and objectively. For example, impairment in domains such as occupation can usually be substantiated with evidence beyond a client's subjective perception.

Certain predictors of distress and impairment have been already been investigated. For example, gender has been shown to be related to differing levels of distress and impairment. Studies have shown that there are significant differences between male- and female-typed personality disorders in relation to the levels of distress and impairment (Funtowicz & Widiger, 1999; Howell & Watson, 2002). Personality disorders that were more commonly diagnosed in women (e.g., Dependent, Histrionic, Borderline) were more likely to show higher levels of distress and lower levels of

impairment, whereas personality disorders more commonly diagnosed in men (e.g., Paranoid, Antisocial, Obsessive-Compulsive) were more likely to show higher levels of impairment and lower levels of distress. Howell and Watson (2005) expanded these findings by examining this pattern in Axis I disorders. They found that symptoms of disorders that are more prevalent in males (e.g., symptoms of Conduct Disorder, Alcohol Dependence, Attention-Deficit/Hyperactivity Disorder) were associated with higher levels of social and occupational impairment and less distress, and the opposite effect for disorders that are more prevalent in females (e.g., symptoms of Bulimia Nervosa, Major Depressive Episode, Trichotillomania). These findings suggest that there are particular disorders that are associated with differing levels of distress and impairment based on gender.

Whisman and Uebelacker (2006) determined that individuals with high levels of relationship discord experienced higher levels of both distress and impairment, even when controlling for mood, anxiety, and substance disorders. Their study suggests that relationship problems can be a source of distress and impairment, regardless of psychological disorders being present, and that these factors can influence clinical outcomes. This demonstrates that interpersonal factors, and not just psychopathology, can contribute to levels of distress and impairment.

Furthermore, symptoms alone are not necessarily predictive of treatment seeking or treatment outcome. Howard, Lueger, Maling, and Martinovich (1993) showed that individuals who experience similar symptoms report different levels of distress and impairment. Certain individuals with specific symptoms may seek therapy, whereas others with the same symptoms may choose not to seek therapy. They found that the

levels of distress and impairment related to the symptom determined whether the individual sought treatment. Likewise, they showed that decreasing levels of distress over the course of therapy was associated with fewer psychological symptoms and decreased impairment. These findings illustrate the importance of distress and impairment, and not symptoms alone, when predicting the individuals who will seek therapy. Generalizing to the PPC literature, understanding which presenting problems are associated with different levels of distress and impairment can help to more effectively target appropriate therapies or interventions for those who have presenting problems that tend to be more distressing or impairing than others. Furthermore, given that decreases in distress tend to occur more quickly than decreases in impairment, determining levels of distress and impairment based on presenting problems may indicate a prediction of the client's outcome.

### **Summary**

Studies show that in recent years, there has been an increase in the number of students seeking services at university counseling centers with more severe presenting problems. This has resulted in an increased burden on university counseling centers and requires improved resources to accommodate this change. One way for counseling centers to adapt to changing client needs is by having resources that will make the process of seeing a client more efficient. One way to do this is to use a PPC in order to quickly assess the initial presenting problem, and allow the clinician to have an idea of the types of services the client may be seeking. In order to determine whether a PPC is an effective tool to be used, it is helpful to conduct a factor analysis, because it will show whether the PPC is accurately measuring what it aims to measure.

In addition to understanding the presenting problem, a clinician must also assess the extent to which a client is distressed or impaired, because this is largely indicative of the presence of a psychological disorder and is also predictive of treatment outcome. Understanding which presenting problems tend to be associated with differing levels of distress or impairment would be useful to clinicians who are interested in quickly assessing the initial problems that students have when coming to their clinic. This information might help with the goal of becoming more efficient with resources by indicating which therapy or type of intervention might be most effective for an individual.

### **Present Study**

The present study aimed to expand the existing literature on the relationship of levels of impairment and distress to specific presenting problems. The goal of the study was to determine which factors, or categories of presenting problems, were related to higher levels of distress and impairment in a university setting. The first purpose of this study was to conduct an exploratory factor analysis of half of the sample of clients who completed a PPC during their intake session at Johns Hopkins University Counseling Center (JHUCC). The second purpose was to conduct a confirmatory factor analysis on the remaining half of the data to determine whether the model was a good fit for the data. The final purpose of this study was to examine how levels of distress and impairment related to the problems that individuals endorsed on the PPC, specifically to the factors that were extracted in the factor analysis.

## Method

### Participants

Participants were 5,926 individuals who completed an intake questionnaire at Johns Hopkins University Counseling Center (JHUCC) between 2002 and 2008. The sample was 63% female, and ranged in age from 15 to 60 years, with the vast majority between ages 18 and 25 ( $M = 22.84$ ,  $SD = 5.01$ ). When asked to identify race, 63.7% of the participants reported being Caucasian, 19% Asian, 5.9% Latino(a)/Hispanic, 5.1% African American/Black, 3.1% Biracial, 0.4% Native American, and 2.8% Other. When asked about marital status, 82.5% of the students reported being single, 13.7% reported being or in a committed relationship, 0.6% reported being separated, 0.7% divorced, and 1.4% indicated “other” relationship status.

### Materials

**Personal Identification Form.** The Johns Hopkins Personal Information Form (PIF), contained a 44-item “presenting problems checklist” (PPC). Participants rated the 44 items on a five-point Likert Scale, choosing one of the following options: 0 (not a problem or not applicable), 1 (slight problem), 2 (moderate problem), 3 (serious problem), or 4 (severe problem). Items on the list assess a diverse range of concerns; examples of items include “Academic concerns; school work and grades,” “Self-confidence or self-esteem; feeling inferior” and “Irritable, angry hostile feelings; difficulty expressing anger appropriately.” (see Appendix for all items).

The PIF was developed by a committee that reviewed intake questionnaires from counseling centers across various campuses. They determined the problem areas most commonly identified by clients in the open-ended responses on intake questionnaires.

The members of the committee analyzed the most common responses and used this information, combined with their clinical judgment, to determine the statements on the PIF. The questionnaire was originally designed for clinical purposes, and this study aims to examine its psychometric properties.

**Behavioral Health Questionnaire-20.** All clients at JHUCC also completed the Behavioral Health Questionnaire (BHQ-20; Kopta & Lowry, 2002) for a psychotherapy intake. The BHQ-20 is a 20-item self-report measure that assesses mental health in the following realms: well-being, psychological symptoms, and life functioning. The psychometric properties of the BHQ-20 suggest that it is a valid and reliable measure for assessing mental health in community adults, college students, college counseling students, and adults in outpatient psychotherapy. It has been shown to have high internal consistency (coefficient alphas  $\geq .72$ ). Test-retest reliability was examined for college students over two weeks, and good support was found. Construct validity and concurrent validity were established (Kopta & Lowry, 2002).

The participant's level of distress was measured by the question from the BHQ-20 that asks "How distressed have you been [in the past two weeks]?" Participants rated their answers on a Likert scale, choosing one of the following: 0 (extremely distressed), 1 (very distressed), 2 (moderately distressed), 3 (a little bit distressed), or 4 (not at all distressed).

Four BHQ-20 items assessed the participants' level of impairment. These items asked participants to respond to the prompt "how have you been getting along in the following areas of your life over the past two weeks?" in regard to nonfamily social relationships, life enjoyment, work/school, and intimate relationships. They indicated

their answer on a Likert scale, choosing one of the following: 0 (terrible), 1 (poorly), 2 (fair), 3 (well), or 4 (very well). A total score was computed by summing the participants' responses for the four items assessing impairment, and possible impairment scores ranged from 0 to 16.

### **Procedure**

When a prospective patient arrived at the counseling center for an intake session, the PIF and BHQ-20 were administered as part of the normal clinic routine before being seen by a clinician. These measures were distributed to all clients seen at the JHUCC between 2002 and 2008. They were distributed as part of the standard intake procedure. The results of the questionnaires were made available to the treating clinicians. Clients consented to participating in research at intake for treatment, as a portion of the therapy consent form directly stated that information collected during treatment could be utilized for research, but all information would be deidentified before being used in research. The Johns Hopkins University Institutional Review Board approved the consent form used at the Johns Hopkins University Counseling Center. Clients did not receive any compensation for participating. The Marquette Institutional Review Board granted approval for the use of the archival data for the current study.

## **Results**

### **Exploratory Factor Analysis**

Before conducting a factor analysis, the suitability of data for factor analysis was assessed. First, it was important to consider sample size. According to guidelines outlined by Tabachnik and Fidell (2007), a sample size greater than 1,000 is considered "excellent" for conducting a factor analysis, and the sample size of the present study was

well above this recommended size. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy value was .89, exceeding the recommended value of .6, and placing it in the “meritorious” category (Kaiser, 1974). Barlett’s Test of Sphericity reached statistical significance ( $p < .001$ ), supporting factorability of the correlation matrix.

The data file was randomly split in half using SPSS 18.0. An exploratory factor analysis using maximum likelihood was conducted on half of the dataset for the 44 items on the PPC for a sample of 2,996 participants. Analyses were conducted using an oblimin rotation, because it could not be assumed that the factors were independent of one another. The number of factors was determined based on a Chi-square goodness of fit test, factor loadings, and determination of whether the items in the factors were conceptually consistent with one another. The scree plot was also examined. These methods are consistent with those recommended by Tabachnik and Fidell (2007) as the most effective when determining a factor structure.

Six factors, which explained 41.09% of the variance, were extracted. The factors all had eigenvalues greater than 1.40. Using the criteria for inclusion on any particular factor that an item had to have a factor loading of .30 or greater, 5 of 44 items did not load on any factor (feeling overwhelmed by a number of things, hard to sort things out; problem adjusting to the university; grief over death or loss; relationship with roommate; sexual matters). The item “problem pregnancy” was dropped because it was endorsed infrequently. Ten items cross-loaded, and the item was placed into the factor with which it had the highest loading. Loadings of variables on factors are shown in Table 1. A maximum likelihood analysis revealed a significant goodness of fit test ( $\chi^2(946) = 5745.99, p < .001$ ). The six factor model was compared to the five factor solution and the

seven factor solution. Although the  $\chi^2$  value was significant for the six factor solution, it was also significant for the five factor solution ( $\chi^2 (946) = 12,571.93, p < .001$ ) and the seven factor solution ( $\chi^2 (946) = 8,772.28, p < .001$ ). The five factor solution was not a good fit because it had one factor that contained items that conceptually belonged on two different factors. The seven factor solution was also not considered to be a good fit because it contained one factor with only two items. Therefore, after examining all the possible solutions, the six factor solution was determined to be the best fit.

All factors were internally consistent and well defined by the variables. Reliability scores can be found in Table 2. The six factors of the final model were labeled based on the apparent underlying theme of the questions in each factor. The six factors were labeled Depression, Severe Psychopathology, Academic Concerns, Anxiety, Physical Problems, and Interpersonal Problems.

### **Confirmatory Factor Analysis**

A confirmatory factor analysis (CFA) was conducted on the remaining half of the data, which consisted of 2,930 participants, to confirm whether the factors extracted in the exploratory factor analysis were a good model fit. The CFA was conducted using Amos 18.0. The six latent factors were based on the six factors extracted in the EFA. The following goodness-of-fit indices were used to evaluate model fit: Chi Square, RMSEA, and CFI. The standards for a good fit were a nonsignificant Chi Square,  $RMSEA \leq .05$ , and  $CFI \geq .90$  (Kline, 2010; Hu & Bentler, 1998). Analyses were run using maximum likelihood estimation.

The solution for the six-factor model was tested. Fit indices were as follows:  $\chi^2_M (650) = 9,295.89, p < .001$ ,  $RMSEA = .07$  (90% CI = .069 - .072), and comparative fit

index (CFI) = .73. Results indicated that the minimum was achieved. In order to improve model fit, modification indices were examined for expected parameter change (EPC) values, and those with the highest values were thought to be correlated. All standardized factor loadings were above .30, except for problem 14 (“conflict/argument with parents or family member”). This item was not deleted from the model, because eliminating this item would have left only two items for the factor, and a minimum of three items are needed for a factor. See Table 3 for standardized regressions weights for each of the items in the CFA, and see Figure 1 for the path diagram.

In an attempt to improve model fit, modification indices were reviewed for expected parameter change (EPC) values. The values revealed that some of the error terms were correlated, and the model was modified to reflect these correlations. This yielded a model with the following indices:  $\chi^2_M(643) = 6823.77, p < .001$ . RMSEA = .06 (90% CI = .059 - .061), suggesting that the model had reasonable error of approximation. Comparative fit index (CFI) = .80. All standardized factor loadings were above .30, except for one item (“conflict/argument with parents or family member”) which was not significant. Although this model showed a slight improvement in model fit compared to the original model, it cannot be considered to be the final model because the correlations between error terms were added based on the modification indices, which are purely mathematical rather than theoretical. Because there was no theoretical rationale to use the error indices, the final model to be considered is the original model without the error terms. Therefore, it can be concluded that based on the standards for a good fit listed above, this model was not a good fit.

## **Distress and Impairment**

Analyses were run to determine if there were significant differences in distress and impairment scores based on gender and ethnicity. Distress scores were only available for 2,597 participants, and impairment scores were available for 2,511 individuals.

An independent samples *t*-test revealed that men ( $M = 2.24$ ,  $SD = .82$ ) reported significantly higher levels of impairment than women ( $M = 2.37$ ,  $SD = .76$ ;  $t [2299] = -4.00$ ,  $p < .001$ ). An independent samples *t*-test revealed no significant differences between males and females in their distress scores ( $t [2299] = -.59$ ,  $p = .56$ ).

A one-way ANOVA was run and revealed significant results for distress ( $F [6, 2263] = 4.71$ ,  $p < .001$ ) and impairment ( $F [6, 2263] = 8.49$ ,  $p < .001$ ) among ethnic groups. These results indicate that one or more of the means for ethnicity were significantly different from the other group means. Tukey's HSD post-hoc analyses were run to determine which means were different and showed that Caucasians ( $M = 9.60$ ,  $SD = 3.06$ ) reported significantly lower levels of impairment than those who identified as African American ( $M = 8.72$ ,  $SD = 3.06$ ), Asian ( $M = 8.58$ ,  $SD = 3.27$ ), and Biracial ( $M = 8.40$ ,  $SD = 3.08$ ). For distress, results indicated that Caucasian students ( $M = 1.87$ ,  $SD = .88$ ) reported significantly less distress than Asian students ( $M = 1.64$ ,  $SD = .87$ ). See Table 4 for all means and standard deviations based on ethnicity.

## **Multiple Regression Analyses**

Two standard multiple regression analyses were conducted. The first was conducted to determine the extent to which each of the factors found in the factor analyses predicts levels of distress. The second was to determine the extent which the factors predict impairment. The means and standard deviations for the independent and

dependent variables can be found in Table 5. It is important to note that given the poor model fit as determined by the CFA, in which the factors were found to be poor measures, the following results should be interpreted with caution.

Evaluation of assumptions revealed that the assumptions of multicollinearity, independence of observations, linearity, multivariate normality, homoscedasticity, and absence of multivariate outliers were not violated for either model.

**Predicting Distress.** Table 6 displays the correlations between the variables, and Table 7 displays the standardized regression coefficients ( $B$ ), the unstandardized regression coefficients ( $\beta$ ), and the semi-partial correlations ( $sr_i^2$ ). The overall model was significant,  $F(6, 2163) = 233.45, p < .001$ , with adjusted  $R^2$  at .39. The adjusted  $R^2$  value indicates that 39.4% of the variability in an individual's distress level is predicted by the six factors. Examining the individual regression coefficients revealed that five out of the six variables were significant predictors of distress: depression, severe psychopathology, academic concerns, anxiety, and physical problems.

**Predicting Impairment.** The second regression analysis determined the relationship of each of the factors to levels of impairment. Table 8 displays the standardized regression coefficients ( $B$ ), the unstandardized regression coefficients ( $\beta$ ), and the semi-partial correlations ( $sr_i^2$ ). The overall model was significant,  $F(6, 2163) = 186.85, p < .001$ , with adjusted  $R^2$  at .34. The adjusted  $R^2$  value indicates that 34% of the variability in an individual's impairment level is predicted by the six factors. Examining the individual regression coefficients revealed that four out of the six variables were significant predictors of impairment: depression, severe psychopathology, anxiety, and interpersonal problems.

## **Discussion**

The present study sought to contribute to literature regarding presenting problems at a university counseling center. First, an exploratory and confirmatory factor analysis and confirmatory factor analysis were conducted on a presenting problems checklist from Johns Hopkins University Counseling Center to evaluate its factor structure and validity. The extracted factors were used to conduct a multiple regression in order to determine which factors predicted distress and impairment.

### **Analysis of the JHUCC PPC**

The exploratory factor analysis revealed that six factors could be extracted from the PPC: Depression, Severe Psychopathology, Academic Concerns, Anxiety, Physical Problems, and Interpersonal Problems. A confirmatory factor analysis revealed that this was not a good model fit for the data. It can, therefore, be concluded that this PPC was not an effective tool in assessing the six factors extracted in this study. Although it can provide some information about the responses to individual items, results indicated that this particular PPC cannot provide a psychologist with information in the six domains identified in the EFA regarding the reason for seeking treatment.

There are several potential reasons for the poor model fit. One potential problem is that the sixth factor, Interpersonal Problems, was not a strong factor. It was included in the model because the loadings met criteria to be included in the final factor solution of the EFA. These loadings were not very strong, especially for one of the three items on the factor (conflict/argument with parents or family member). All items were included because otherwise, there would have been a two-item factor, which would have required the entire factor to be eliminated. This was not desirable because the other two items on

the factor were thought to be important to include in the model because the loadings for those items were much higher. It is possible that the weak loading on this factor contributed to the poor model fit, and that the fit may have been stronger without the final factor being included, and further studies may explore this option.

It is also possible that questions on this PPC were written in such a way that did not effectively capture the constructs that they sought to assess. One flaw with the PPC might stem from the way in which the checklist was developed. Instead of examining presenting problems of students across various campuses, it might be helpful to consider the primary presenting problems of students that are specific to JHUCC and modify the questions to be more specific to this population. Diemer, Wang, and Dunkle (2009) emphasized the importance of ensuring that a PPC reflects problems that are specific to a particular university. Different universities contain different types of students, and the most common presenting problems tend to vary across university settings. It is possible that the PPC in the present study was a poor model fit because the questions were not carefully selected to represent the presenting problems most typical of the population at JHUCC. Based on this, it is possible that modifying the questions to better fit the typical presenting problems at JHUCC might produce a PPC with a better model fit.

Based on Diemer et al.'s (2009) theory of differing presenting problems among different universities, they seem to provide additional support for the notion that PPCs may not be the most effective tool to assess presenting problems. If PPCs need to be modified for every single site at which they are used, then the level of efficiency that is hoped to be gained from the PPC becomes diminished. Therefore, university counseling

centers should explore alternate ways to improve efficiency in their clinics in regards to assessing client presenting problems.

The findings from this study provide evidence for the lack of utility for this particular PPC, but also raise concerns about the use of PPCs in general. It is possible to conclude that PPCs are not necessarily the most effective tool to assess presenting problems. Even though PPCs are the most commonly used and most accepted way to assess presenting problems during an intake, they are not necessarily as useful for this task as they are often portrayed (Heppner et al., 1994). Heppner and colleagues described two possible reasons that this is the case. First, individuals tend to present with such a wide variety of problems, and it is challenging to include all of these problems in one checklist. Furthermore, individuals tend to use different problem-solving techniques for different problems, which makes it difficult to ask every client to classify their problems in the same way. It must be considered that even if a PPC is modified, it still may not be the most effective tool to use during the intake procedure to gather information about presenting problems.

### **Predicting Clients' Distress and Impairment**

The study also examined the relationship between the factors extracted from the PPC and distress and impairment. In light of the findings of the CFA, which indicated that the model was not a good fit, and therefore not a good measure of the six constructs, it is important to remember that the findings regarding distress and impairment must be interpreted with caution.

The analyses showed that collectively, the factors predicted both distress and impairment. Specifically, Depression, Severe Psychopathology, Academic Concerns,

Anxiety, and Physical Concerns predicted an individual's distress, whereas Depression, Severe Psychopathology, and Interpersonal Problems predicted an individual's impairment.

This finding confirmed that individuals were more likely to seek treatment if they were experiencing high levels of distress, even if their level of impairment was low (e.g., Howard et al., 1993), suggesting that distress was a good predictor of treatment seeking. To be specific, these results suggest that distress due to academic problems, anxiety, and physical difficulties for students at JHUCC were better predictors of treatment seeking than impairment in these domains. Individuals experiencing high levels of impairment and low levels of distress, however, tend to be less likely to seek treatment on their own. Instead, these individuals are more likely to seek treatment unwillingly, or not to enter into treatment at all.

The findings show that many of the factors predicted both distress and impairment, but did not discriminate well among which factors tend to predict distress and which ones tend to predict impairment. This is likely because most individuals who are seeking counseling services are doing so because they are either distressed or impaired or both. It can, therefore, be concluded that the individual factors are not necessarily good predictors of distress or impairment on their own. Further studies would need to be conducted in order to identify the specific constructs that are better predictors of both distress and impairment.

An examination of gender found no gender difference in distress scores, but showed that men reported significantly higher levels of impairment than women. This is consistent with the findings by Howell and Watson (2002). These researchers found that

disorders more common to males were associated with higher levels of impairment and lower levels of distress, whereas the opposite effect was found when examining disorders more common in females.

When ethnicity was examined, it was revealed that Caucasian students reported significantly less impairment than African American, Asian, and Biracial students. Caucasian students also reported significantly lower levels of distress than their Asian counterparts. These results support Erdur-Baker and colleagues' (2006) theory that the increase in severity of problems at university counseling centers can be attributed, at least partially, due to the increase in diversity on college campuses. They found that there was an increase in minorities who seek services at counseling centers, which is likely due to the increase in minority populations across campuses. Given that these populations seem to present with higher levels of impairment and some present with higher levels of distress, this might help explain the reasons that college counseling centers are experiencing an increase in severity of presenting problems.

### **Future Directions**

The implications of this study apply directly to practicing clinicians at a university counseling center. Even though the PPC in this study was found to be a poor measure of psychological symptoms, university counseling centers must continue to develop ways to run their centers more efficiently. One way to do this, as suggested by Pledge et al. (1998), is to shift the focus to increased training for current clinicians and clinicians training to work in university counseling centers. By doing this, it will increase the ability of clinicians to assess presenting problems more efficiently without the use of a

PPC. It will also allow the clinicians to learn how best to anticipate the needs of the client in relation to treatment and outcome.

Future studies could examine whether a difference exists in levels of distress and impairment between those who are self-referred to the clinic compared to those who are referred by someone else. It might be hypothesized, for example, that individuals who are self-referred would be more likely to experience distress, whereas those who are referred by someone else might be more likely to exhibit impairment.

### **Conclusions**

The present study examined the psychometric properties of a PPC from a university counseling center and determined that it was a poor measure of presenting problems, but the extracted factors did predict levels of distress and impairment. The need remains for increased efficiency at university counseling centers due to the increase in severity of presenting problems among college students in recent decades. This study highlighted the importance of developing reliable and valid measures or techniques that will assist in improving efficiency at college counseling centers.

The study suggested that creating a valid and reliable measure will also help measure levels of distress and impairment. This could allow clinicians at university counseling centers to better predict course of treatment and even potential outcome for their clients, which would create a more efficient intake process and a better understanding of treatment and outcome.

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Table 1

*Factor Loadings for Exploratory Factor Analysis with Oblimin Rotation of PPC Items*

Item	F1	F2	F3	F4	F5	F6
General lack of motivation, interest in life; growing sense of detachment and hopelessness	.78					
Generally unhappy or dissatisfied	.66					
Depression	.66					
Have been considering dropping out or leaving school	.62					
Concern that thinking is very confused	.49		.40			
Time management, procrastination, getting motivated	.48					
Fear of loss of contact with reality	.44	.38				
Sleep problems (can't sleep, sleep too much, nightmares)	.38				-.50	
Violent thoughts, feelings, or behaviors	.37	.44				
Loneliness, homesickness	.37			-.33		
Academic concerns; school work and grades	.32		.67			
Decision about selecting a major and/or career	.30		.36			
Irritable, angry hostile feelings; difficulty expressing anger appropriately	.30					
Anxiety, fears, worries				-.33	-.38	
Relationship with friends and/or making friends				-.62		
Confusion over personal or religious beliefs and values		.37				
Feeling overwhelmed by a number of things; hard to sort things out						
Problem adjusting to the university						
Self-confidence or self-esteem; feeling inferior				-.70		
Alcohol and/or drug problem		.40				
Pressures from family for success			.60			
Physical stress (headaches, stomach pains, muscle tension, etc.)					-.70	
Fear that someone is out to get me		.63				
Eating problem (overeating, not eating or excessive dieting)					-.42	

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Shy or ill at ease around others			-72
Grief over death or loss			
Concerns about health; physical illness			-58
Relationship with roommate			
Concern regarding breakup, separation, divorce			.83
Relationship with romantic partner			.80
Concerns related to being a member of a minority	.46		
Conflict/argument with parents or family member			.43
Problem pregnancy	.56		
Feel that someone is stalking or harassing me (by phone, letter, or email)	.68		
Concern over appearance			-.62
Issues related to gay/lesbian identity	.48		
Sexual matters			
Test anxiety		.65	
Alcohol/drug problem in family	.31		
Pressures from competition with others		.58	-.35
Overly high academic standards for self		.62	
Stage fright, performance anxiety, speaking anxiety			-.50
Sexually abused or assaulted, as a child or adult	.37		
Physically or emotionally abused, as a child or adult	.35		.31

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Factor labels:

- F1: Depression
- F2: Severe Psychopathology
- F3: Academic Concerns
- F4: Anxiety
- F5: Physical Concerns
- F6: Interpersonal Problems

Table 2

*Reliability Ratings for Factors*

Factor	Cronbach's Alpha
Depression	.84
Severe Psychopathology	.72
Academic Concerns	.73
Anxiety	.77
Physical Concerns	.65
Interpersonal Problems	.58

Table 3

*Standardized Regression Weights for All Items in Confirmatory Factor Analysis*

Factor and Item	Estimate
<b>Depression</b>	
Time management, procrastination, getting motivated	.50
Loneliness, homesickness	.56
Generally unhappy or dissatisfied	.83
General lack of motivation, interest in life; growing sense of detachment and hopelessness	.82
Depression	.81
Irritable	.43
Concern that thinking is very confused	.56
Have been considering dropping out or leaving school	.53
<b>Severe Problems</b>	
Confusion over personal or religious beliefs and values	.43
Concerns related to being a member of a minority	.37
Issues related to gay/lesbian identity	.31
Alcohol and/or drug problem	.32
Alcohol/drug problem in family	.36
Sexually abused or assaulted, as child or adult	.35
Physically or emotionally abused, as child or adult	.45
Fear that someone is out to get me	.52
Fear of loss of contact with reality	.56
Violent thoughts, feelings, or behaviors	.54
Fear that someone is stalking me	.40
<b>Academic Concerns</b>	
Decision about selecting a major and/or career	.41

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Pressures from family for success	.54
Pressures from competition with others	.69
Overly high academic standards for self	.67
Test anxiety	.55
Academic concerns; school work and grades	.57
Anxiety	
Stage fright, performance anxiety, speaking anxiety	.42
Relationship with friends and/or making friends	.51
Shy or ill at ease around others	.61
Self-confidence or self-esteem; feeling inferior	.81
Concern over appearance	.63
Anxiety, fears, worries	.62
Physical Concerns	
Eating problem	.43
Concerns about health; physical illness	.51
Physical stress	.68
Sleep problems	.67
Interpersonal Problems	
Relationship with romantic partner	.74
Concern regarding breakup, separation, divorce	.79
Conflict/argument with parents or family member	.25

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\**Note:* all loadings were significant at  $p < .001$

Table 4

*Means and Standard Deviations for Ethnicity Based on Distress and Impairment*

Ethnicity	Distress		Impairment	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Caucasian	1.87	.88	9.60	3.06
African American	1.75	.87	8.72	3.06
Asian	1.64	.87	8.58	3.27
Latino/Hispanic	1.86	.83	9.23	2.97
Native American	1.54	.43	8.29	3.55
Biracial	1.59	.80	8.40	3.08
Other	1.81	.86	9.48	3.05

Table 5

*Means and Standard Deviations for Independent and Dependent Variables*

Variable	Mean	Standard Deviation
Independent Variables		
Depression	1.14	.87
Severe	.22	.40
Academic	1.16	.82
Anxiety	1.13	.83
Physical	.83	.80
Interpersonal	.80	.93
Dependent Variables		
Distress	1.81	.87
Impairment	9.37	3.1

Table 6

*Zero-Order Correlations of Independent Variables for Distress and Impairment*

Variables	Depression	Severe	Academic	Anxiety	Physical	Interpersonal
Depression	1.00	--	--	--	--	--
Severe	.46	1.00	--	--	--	--
Academic	.53	.33	1.00	--	--	--
Anxiety	.60	.40	.49	1.00	--	--
Physical	.54	.42	.40	.47	1.00	--
Interpersonal	.30	.36	.18	.22	.24	1.00

Table 7

*Standardized and Unstandardized Coefficients of Independent Variables for Distress*

<b>Variables</b>	<b><i>B</i></b>	<b><math>\beta</math></b>	<b><math>sr^2</math> (unique)</b>
Depression	-.62	-.62**	-.43
Severe	.27	.12**	.10
Academic	.11	.10**	.08
Anxiety	-.06	-.05*	-.04
Physical	-.12	-.11**	-.09
Interpersonal	-.03	-.03	-.03

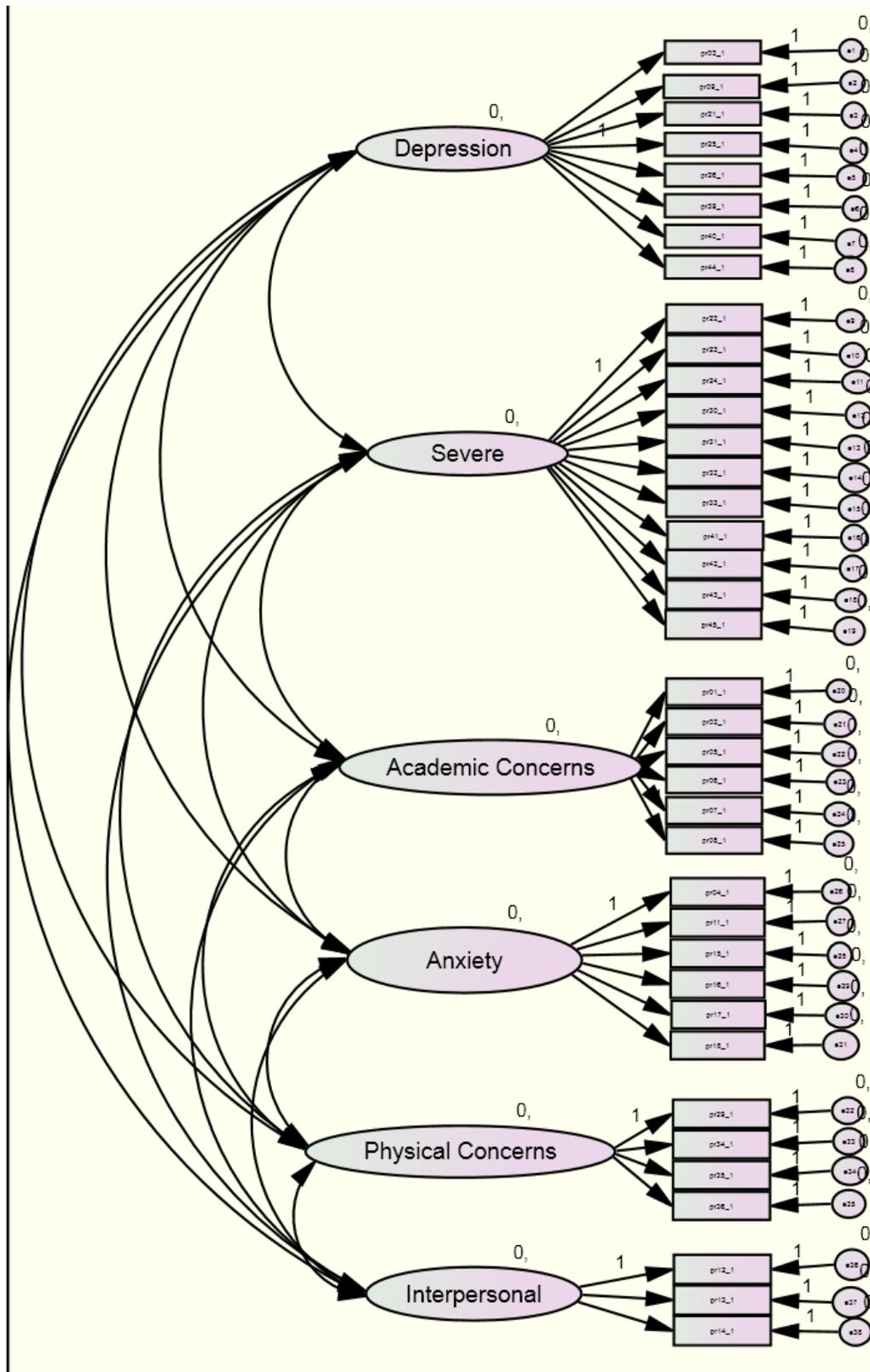
\* $p < .05$ \*\* $p < .001$

Table 8

*Standardized and Unstandardized Coefficients of Independent Variables for Impairment*

<b>Variables</b>	<b><i>B</i></b>	<b><i>β</i></b>	<b><i>sr</i><sup>2</sup> (unique)</b>
Depression	-.47	-.52*	-.36
Severe	.21	.11*	.10
Academic	.01	.01	.01
Anxiety	-.10	-.10*	-.07
Physical	-.01	-.01	-.01
Interpersonal	-.11	-.13*	-.12

\* $p < .001$



*Figure 1.* Confirmatory factor analysis model of the six latent factors extracted from the EFA

## Appendix

## Presenting Problems Checklist

The following information will help us learn about issues that are problematic for you.

Please take the time to mark each of the following items with either a “0”, “1”, “2”, “3”, or “4” indicating the degree to which that issue is a problem for you at the present time.

This list is not exhaustive, but covers many of the common problem areas seen by our Counseling Center staff. Thank you!

0 Not a Problem (or not applicable)	1 Slight Problem	2 Moderate Problem	3 Serious Problem	4 Severe Problem
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1. Academic concerns; school work and grades
2. Test anxiety
3. Time management, procrastination, getting motivated
4. Stage fright, performance anxiety, speaking anxiety
5. Overly high academic standards for self
6. Pressures from competition with others
7. Pressures from family for success
8. Decision about selecting a major and/or career
9. Loneliness, homesickness
10. Relationship with roommate
11. Relationship with friends and/or making friends
12. Relationship with romantic partner

13. Concern regarding breakup, separation, divorce
14. Conflict/argument with parents or family member
15. Shy or ill at ease around others
16. Self-confidence or self-esteem; feeling inferior
17. Concern over appearance
18. Anxiety, fears, worries
19. Feeling overwhelmed by a number of things; hard to sort things out
20. Problem adjusting to the University
21. Generally unhappy and dissatisfied
22. Confusion over personal or religious beliefs and values
23. Concerns related to being a member of a minority
24. Issues related to gay/lesbian identity
25. General lack of motivation, interest in life; growing sense of detachment and  
hopelessness
26. Depression
27. Grief over death or loss
28. (Item Deleted)\*
29. Eating problem (overeating, not eating or excessive dieting)
30. Alcohol and/or drug problem
31. Alcohol/drug problem in family
32. Sexually abused or assaulted, as a child or adult
33. Physically or emotionally abused, as a child or adult
34. Concerns about health; physical illness

35. Physical stress (headaches, stomach pains, muscle tension, etc.)
36. Sleep problems (can't sleep, sleep too much, nightmares)
37. Sexual matters
38. Problem pregnancy
39. Irritable, angry hostile feelings; difficulty expressing anger appropriately
40. Concern that thinking is very confused
41. Fear that someone is out to get me
42. Fear of loss of contact with reality
43. Violent thoughts, feelings, or behaviors
44. Have been considering dropping out or leaving school
45. Feel that someone is stalking or harassing me (by phone, letter, or email)

\*This item was deleted prior to data collection.

Marquette University

This is to certify that we have examined this copy of the thesis by

Julia Rubinshteyn, B.A.

and have found that it is complete and satisfactory in all respects

This thesis has been approved by:

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Thesis Director, Department of Psychology

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Dr. Michael Wierzbicki, Committee Member

Approved on

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(Date filled in by thesis director)