Personality Types and Personality Disorders

An Honors Thesis

By

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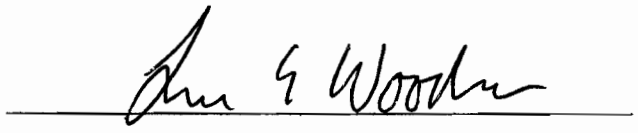

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Abstract

Given that both personality types and personality disorders focus on enduring behavioral characteristics it is not surprising that scientists should strive to discover a relationship between the two. The purpose of the present study was to investigate the relationship between personality disorders as measured by the Personality Diagnostic Questionnaire 4 and the personality traits of introversion, intuition, and thinking as measured by the Keirsey Temperament Sorter II. Significant findings included an overrepresentation of introversion for several of the personality disorders. Significant relationships were also found between thinking and several personality disorders. The results are consistent with the view that abnormal personality is a variant of normal personality rather than representing a qualitatively distinct category. Clinical implications are discussed.

Personality Types and Personality Disorders

The study of individual differences in personality has long been an interest of scientists. Numerous researchers have attempted to show that human behavior may be classified into consistent categories or psychological "types." Today, this process has come to be known as the study of typology. Along with normal personality, abnormal personality has also perplexed scientists for centuries. The proposed study will consider the possibility that abnormal personality may only be an extreme variant of normal personality. This will be tested by examining the relationship between specific normal personality types and certain types of psychopathology.

Myers-Briggs Type Indicator

One of the original theories of typology was developed and published by C. G. Jung (1921). According to Jung, seemingly random variations in behavior are actually quite orderly and consistent. According to Jung's concept, human behavior is reflected in three bipolar scales: extraversion (E) – introversion (I), sensing (S) – intuition (N), thinking (T) – feeling (F). The dominance and mixture of the preferences, he theorized, is highly stable across time.

Expanding upon Jung's theory, Myers and McCauley (1985) developed the Myers-Briggs Type Indicator (MBTI) as a self-report measure to identify these theorized types. The MBTI postulates these preferences as dichotomies in which one pole is consistently dominant. Sixteen distinct MBTI types are possible through interactions between four basic preferences: E-I, S-N, T-F, and J-P.

Descriptions of the basic preferences have been outlined by Jung (1923). The E-I dichotomy reflects whether an individual is an extravert or an introvert. This scale reflects an individuals overall attitude toward the world. Extroverts are primarily oriented toward the outer

world and tend to focus their energy on people and objects. Introverts are more oriented toward the inner world; thus they tend to focus their energy on concepts, thoughts, and ideas. Introverts are also more likely to be interpersonally distancing, resulting in fewer social support structures than extroverts (Carlson, 1980).

The S-N dichotomy reflects an individual's way of perceiving the world around them (Jung, 1923) and deals with the type of inputs used for mental processing. Sensors tend to rely on observable facts or happenings as experienced through the five senses. Those relying on intuition, however, report meanings, relationships and/or possibilities as being worked out beyond the reach of the conscious mind (hunches).

The T-F dichotomy reflects a person's preference between two ways of making judgments. Those demonstrating the thinking preference will make decisions impersonally on the basis of logical conclusions. Conversely, individuals demonstrating the feeling preference will make judgments based on personal or social values (Hirsh, 1991).

Expanding on Jung's theory of dominant function of the preferences, Myers and McCauley (1985) added a scale to reflect an individual's perception and judgment. While this dimension was not explicitly part of Jung's original theory, it was added upon interpretation of the theory by the MBTI authors to reflect how an individual primarily deals with the outer world.

The J-P dichotomy indicates whether a person relies primarily on the perceiving process (S or I) or the judging process (T or F). For example, perception involves all the ways of becoming aware of things, people, happenings, or ideas. Judgment involves all the ways of coming to conclusions about what has been perceived. In other words, individuals give preference to not only *what* they attend to in a situation, but also *how* they draw conclusions about what they have perceived (Myers & McCaulley, 1985). In essence, this scale helps

determine if a person spends more time gathering the information (perceiving) or making decisions (judging) (Hirsh, 1991).

Validity and Reliability of the Myers-Briggs Type Indicator

Unlike the other personality measures, the MBTI is dichotomous; individuals display a dominant preference for only one pole on each of the four scales. Depending on responses, individuals are assigned to a specific "type" for which they scored the highest across the four domains. The psychometric properties of the MBTI are sufficiently documented. Myers, McCaulley, Quenk, and Hammer (1998), reported retest correlations for intervals less than nine months ranging from.77 to .84. Kelly and Jugovic (2001) found "moderate to strong" correlations between the KTS and the MBTI ranging from .60 to .78.

Typology and Personality Disorder Research

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000), personality disorders involve, by definition, "an enduring pattern of inner experience and behavior that deviates markedly from the expectation of the individual's culture, is pervasive and inflexible, has an onset in adolescent or early childhood, is stable over time, and leads to distress or impairment" (American Psychiatric Association, 2000). Naturally, given that both personality types and personality disorders (PDs) focus on enduring behavioral characteristics, it is not surprising that scientists should strive to discover a relationship between the two.

Some researchers suggest that personality disorders are extreme or maladaptive variants of normal personality traits (Widiger & Costa, 1994). According to these researchers, the relationship between personality and personality disorders can be explained through maladaptive traits that are evident in everyone in varying degrees. Widiger and Costa have also identified

over 50 published studies that have shown relations between a personality measure, the Five-Factor Model (FFM; Costa & McCrae, 1985), and personality disorders.

The Five-Factor Model of personality identifies each of five broad domains of personality on a continuum. These domains include extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. These researchers propose that the extent to which an individual is introverted influences the level of an individual's maladaptive functioning. For example, individuals extremely high on neuroticism tend to be impulsive, vulnerable to stress, sadness, and depression while individuals with extremely low levels of neuroticism may experience an inability to experience healthy levels of anxiety, self-consciousness, or guilt (Widiger & Costa, 1994).

Other researchers have used the MBTI in an attempt to discover a relationship between personality type and psychopathology using versions of the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1983) (Lee, 1993; Otis & Louks, 1997; Park, Kim, Hee, 1997). The results from these studies were encouraging. Research conducted by Lee (1993) found significant correlations between the Extraversion-Introversion scale of the MBTI and Social Introversion (Si) scale of the MMPI-2; social introversion being characterized by withdrawal from social contacts and responsibilities (Dahlstrom, Welsh, & Dalstrom, 1960, 1792).

These findings were supported by research conducted by Park, Kim, and Hee (1997) using a version of the MMPI. These researchers identified a depressive tendency (cues such as excessive time spent alone, not socializing, not laughing) in IF types, an obsessional tendency (repetitive thoughts, feelings, and impulses) in IS types, and rigidity (perfectionism, conscientiousness, seriousness, and limited emotional responsiveness) in IT types.

Lastly, consistent with the preceding research, Otis and Louks (1997) identified IT as more likely to have diagnoses of both Antisocial and Avoidant personality disorders as well as Post-Traumatic Stress Disorder (PTSD); all of which are characterized by rigidity. These researchers suggest IT types often result from family-of-origin environments in which individuals felt their need and feelings were not valued or even noticed as the result of neglect, abuse, adoption, or feeling as if their own birth was an intrusion. Perhaps for IT types, such feelings are kept within (introversion) and ruminated upon (thinking). These researchers also identified ISFP type as being more likely to experience higher levels of distress and phobic symptoms.

Dalton, Aubuchon, Tom, Pederson and McFarland (1993) approached researching this issue from a different angle. In an attempt to discover a consistent psychological type among a clinical sample, Dalton and colleagues administered the MBTI to Vietnam veterans already diagnosed with PTSD. Results from their research found dramatic overrepresentations of introversion for the disorder. Also found were recurring instances of the IP, ISTP, and INTP types. Specifically, 95.6% of all PTSD patients were I, 64.5% were IT, and 48.9% were IST types. These researchers suggested that introverts show more avoidance of emotional ties, sensors are more highly attuned to environmental cues, and thinkers spend more time thinking about what has happened. In essence, the combination of these preferences could result in men who are more attuned to anxiety-provoking cues, who continue to think about the cues and who lack the social relationships needed to deal with such experiences.

Some of the most recent research conducted attempting to discover a relationship between personality and psychopathology was conducted by Coolidge, Segal, Hook, Yamazaki, and Ellett (2001). These researchers, however, used the MBTI in conjunction with the Coolidge

Axis II Inventory (CATI-II). The CATI-II is a 200 item, self-report, true-false inventory used to assess personality disorders. It has a mean test-retest reliability of .90 and internal consistency (Cornbach's Alpha) of .76 (Coolidge & Merwin, 1992). This research revealed that personality disorders were more clearly related to MBTI preferences of introversion, intuition, thinking, and perceiving. Schizotypal participants were found to be largely INTP types and ISTJ types were largely obsessive-compulsive. Self-defeating individuals were likely to be IN, histrionic individuals shown to be EF, and IT types displayed more paranoia, passive aggressiveness, and depression.

The Present Research

Due to the finding that introverts are more interpersonally distancing and have fewer social support structures than extraverts (Carlson, 1980), introverts should be much less likely to reach out to others. In turn, this may reduce the likelihood of introverts developing social relationships which are essential when in need of support. Therefore, the proposed study hypothesized that there would be a significant correlation between introversion and personality disorders as defined by DSM-IV-TR criteria to include interpersonal distancing from others such as Avoidant, Paranoid, Schizoid and Schizotypal PDs.

Past research on the relationship between the MBTI and psychopathology has been limited in terms of participant samples. Specifically, two of the studies herein discussed have used clinical samples, and another, participants from a non-western culture. This study will be one of only three revolving around a non-clinical sample of participants. Past research has also been limited with regard to psychopathological measures. For example, only one of the previously detailed studies used a measure other than versions of the MMPI. This study will make use of the Personality Diagnostic Questionnaire-4 (PDQ–4; Hyler, 1994) to assess

psychopathology which has never before been used in conjunction with a version of the Myers-Briggs Type Indicator.

The PDQ-4 consists of 86 true/false items used to assess personality disorders as outlined by the DSM-IV-TR. Items on this measure have been accurately refined to reflect DSM criteria such that one or more question relates to specific personality disorder criteria (Hyler et al., 1988). As most previous research has provided significant findings and both the MMPI and the PDQ-4 assess personality disorders, findings between these two should be comparable.

In addition to the primary hypothesis, the present study will explore the possibility of relationships between psychopathology and two other MBTI preferences. First, a possible overrepresentation of intuition. Jung (1923) described those relying on intuition as reporting meanings, relationships, and possibilities as being beyond the reach or reasoning of the conscious mind. Logically, it would be probable that this may result in individuals who are likely to rely heavily on what they intuitively "understand" instead of what may actually be happening. Therefore, the proposed study hypothesizes that there will be a significant relationship between intuition and personality disorders as defined by the DSM-IV-TR criteria to include unrealistic or imagined situations. These include Borderline, Paranoid, and Schizotypal PDs.

Second, this research will explore a possible overrepresentation of thinking. Thinkers have been described as more likely to make decisions based on logical conclusions (Jung, 1923). Again, it would be logical to deduce that thinkers may also be more likely to ruminate (think) about stressors, thus increasing the likelihood of holding onto and repeatedly processing their negative thoughts. Past research has produced conflicting results regarding the incidence of these preferences. Therefore, the proposed study hypothesized that there would be a significant relationship between thinking and personality disorders as defined by the DSM-IV-TR to include

maladaptive or ruminative thinking patterns. These include Paranoid, Schizotypal, Borderline, Narcissistic, Avoidant, Dependent, and Obsessive-Compulsive PDs.

Method

Participants

Five hundred and ninety five participants from introductory level psychology courses at Ball State University completed the survey in order to partially fulfill a course requirement. However, data from only 412 participants were analyzed. After completing a visual scan, less than one percent (.04%) of the sample was removed for failing to complete more than 50% of the survey items. After looking at the mean completing time (approximately 45 minutes), those participants having a survey completion time of less than three minutes were also excluded (15.6%) as it is unlikely that participants could respond to 254 items in such a short period.

Of the remaining 497 participants, 85 (14.3%) were excluded due to suspicious responding on two validity scales included in the PDQ-4. The first of these scales called "Too Good" is designed to pick up underreporting by respondents. This scale includes four reverse scored items such that responding False, rather than True is the pathological response. Subjects scoring two or more on this scale may underreport their pathology to present themselves in "Too Good" a fashion. The second validity scale, "Suspect Questionnaire" is designed to identify subjects who are lying, responding randomly or not taking the measure seriously. This scale includes two items in which a true response to either is an indication that the results for the entirety of the measure are suspect.

Procedure

Each participant was invited to take part in this study via INQSIT; a web-based system at Ball State University that researchers use as a means of collecting data via online surveys.

Through this system, participants viewed the informed consent page which also provided a description of the study. Those who were interested in completing the survey clicked the "submit" button and were transferred to a page where they were asked to enter their name and computer login in order to get credit for participation. In order to keep participant information separate from responses, participants were asked to click "submit" again to be transferred to the actual surveys (Appendix D). Upon completion of the surveys, an electronic copy of both the informed consent (Appendix B) and debriefing statement (Appendix C) were provided, which participants had the option of printing for their own records.

The surveys were constructed so that students could skip any items that they declined to answer without penalty. However, as the Internet is not a fully secure medium, complete anonymity could not be assured in a web-based survey. Nevertheless, all efforts were extended to assure encryption and firewall protection of survey responses. For example, no survey responses had identifying information attached to them and all research participation information was sent to a separate data file from the survey responses such that identifying information could not be linked directly to the confidential surveys; identifying information was used solely for the purpose of assigning credit. Additionally, the original source files were deleted after the data had been transferred to a password-only guarded flash drive.

Measures

Temperament type measurement. For the purposes of identifying personality type, an abbreviated version of the Myers-Briggs Type Indicator was used, the Keirsey Temperament Sorter II (KTS-II; Keirsey, 1998). The KTS-II is a 70-item, forced-choice measure. When completed the KTS-II yields four scores, one score for each dominant preference (E-I, S-N, T-F, J-P). When compared to the MBTI, the KTS-II yielded concurrent validity ratings ranging from

.60 to .78 (Kelly & Jugovic, 2001). Paper versions of the KTS have produced alpha coefficients of E-I = .74, S-N = .89, T-F = .87 and J-P = .88 (Waskel, 1995).

Personality disorders measurement. As stated above, the PDQ–4 consists of true–false items designed to measure personality pathology as outlined by the DSM-III-TR. Items on this measure have been accurately refined to reflect DSM criteria such that one or more question relates to specific personality disorder criteria (Hyler et al., 1988). Although earlier versions of the scale have been used extensively, relatively few studies have used the PDQ-4 (Mihura, Meyer, Bel-Bahar, & Gunderson, 2003). Internal consistency estimates for the PDQ-4+ (a very similar Personality Diagnostic Questionnaire) scales have been found from .46 to .74 in clinical samples from Italy and China (Fossait et al., 1998; Yang et al., 2000). Ten-day, test-retest coefficients ranged from .48 to .79 (Yang et al., 2000).

Psychological adjustment measurement. The Symptom Checklist–90–Revised (*SCL*–90–R; Derogatis, 1994) is a 90-item self-report inventory of current psychological symptoms with a time orientation of "the past seven days including today." The SCL-90-R measures psychological symptom patterns along nine dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Respondents rated the extent to which the symptom had been bothersome in the past week on a 5-point scale from not at all (0) *to* extremely (4). Reliability, as measured by the Spearman-Brown correction for split-half reliability has been estimated at .94 (Brophy, Norvell & Kiluk, 1988). When compared to the MMPI, the SCL-90-R produced convergent validity ratings ranging from .41 to .75 (Derogatis, Rickels, & Rock, 1976). The SCL-90-R was used solely for validity purposes in this study.

Results

Validity Check

A Pearson's correlation analysis was run on the "PDQ-4 total" and the "SCL-90-R total." The results indicated a strong positive correlation between the "PDQ-4 total" and the "SCL-90-R total," $r = .624$, $p < .001$. These results suggest there is a positive relationship between current psychological symptoms and personality disorder symptoms such that higher emotional distress as measured by the SCL-90-R corresponded to higher overall personality disturbances as measured by the PQD-4.

Descriptives

Participants in the current study were 119 males and 293 females. Participant ages ranged from 18 to 40 with 96% being between the ages of 18 and 21. Over 91% of the participants were Caucasian, 95.6% were single, and 99.3% reported English as being their primary language.

Based on the PDQ-4 results of this study, over 44% of the participants were classified as having an Obsessive-Compulsive PD (OCPD), 12.3% had a Narcissistic PD, and 6.7% had an Antisocial PD. Refer to Table 1 for a complete distribution of personality disorder rates of this study as compared to the general population prevalence rates. Expected frequencies were obtained from the DSM-IV-TR.

Main Analyses

A 2 x 2 x 10 Multivariate Analysis of Variance (MANOVA) was conducted with introversion/extroversion and thinking/feeling as independent measures and each of the personality disorders as the dependent measures. Overall, there were significant main effects found for introversion, Wilk's £= .801, $F(11, 350) = 7.91$, $p <. 001$; thinking, Wilk's £=.828,

$F(11, 350) = 6.59, p <. 001$; and an interaction for Introversion x Thinking, Wilk's £ = .943, $F(11, 350) = 1.92, p < .04$.

Due to significant *F* values in the Multivariate Analysis of Variance, separate univariate tests were performed on each of the personality disorders. Specifically, there was a main effect for introversion on the following variables: Schizoid PD, $F(1, 360) = 21.56, p < .001$ (one-tailed); Avoidant PD, $F(1, 360) = 42.39, p < .001$ (one-tailed); Schizotypal PD, $F(1, 360) = 14.44, p < .001$ (one-tailed); Borderline PD, $F(1, 360) = 15.65, p < . 001$; Dependent PD, $F(1, 360) = 4.53\ p < .04$ (two-tailed). As can be seen in Table 2, the introversion means were higher for Schizoid PD, Avoidant PD, Schizotypal PD, Borderline PD, and Dependent PD. However, the extroversion mean was higher for Histrionic PD, $F(1, 360) = 4.58\ p < .04$.

There was also a main effect for thinking on the following variables: Antisocial PD, $F(1, 360) = 9.12, p < .01$ (one-tailed) ; Schizoid PD, $F(1, 360) = 9.02, p < .01$ (two-tailed); Narcissistic PD; $F(1, 360) = 10.49, p < .001$; Paranoid PD, $F(1, 360) = 9.88, p < .01$ (two-tailed). As can be seen in Table 2, the thinking means were higher for Antisocial PD, Schizoid PD, Narcissistic PD, and Paranoid PD. However, feeling means were higher for Avoidant PD, $F(1, 360) = 6.13$, $p < .02$ (two-tailed); Dependent PD, $F(1, 360) = 8.23, p < .01$ (two-tailed); Histrionic PD, $F(1, 360) = 3.98, p < .05$ (two-tailed).

A significant interaction was found between Introversion and Thinking for Antisocial Personality Disorder $F(1, 360) = 7.21, p < .05$ (two-tailed). Following the interaction results in the MANOVA, a post hoc *t*-test was conducted to test the significance of this F value. The difference between thinking (M=1.64) and feeling (M=1.61) was not significant for extroversion $t(281) = 1.187, p >.05$ (two-tailed). In contrast, the difference between thinking (M=1.79) and feeling (M=.97) was significant for introversion, $t(47) = -2.604, p <.05$ (two-tailed).

Discussion

The purpose of the present study was to explore possible overrepresentations of the introversion, intuition, and thinking preferences in personality disorders as measured by the PDQ-4. It was expected that introverted participants would be more likely to display symptoms of personality disorders, which include interpersonal distancing as a diagnostic criterion (American Psychiatric Association, 2000). Specifically, when participants were classified with the Avoidant, Paranoid, Schizoid, or Schizotypal PDs they were also expected to be more likely to display the introversion preference.

Overall, introverted participants were anticipated to be more likely to display personality disturbances than extroverted participants. Results provided support for this hypothesis. Of the hypothesized personality disorders Schizoid, Avoidant, and Schizotypal PDs were more often displayed by participants classified as introverted. In addition, introverted participants were more likely to display Borderline and Dependent PDs than were extroverted participants. However, it was found that extroverted individuals were more likely to display Histrionic PD than were introverts.

By far the strongest finding in this current study is the consistency in which participants displaying personality disturbances were introverted. This finding is consistent with the aforementioned studies regarding personality type and personality disorders. One possible explanation would be that that because introverted individuals tend to isolate themselves from others this increases their probability of developing a personality disturbance. However, there is also another possibility that is often overlooked; it could be that the personality disorders itself induces introverted tendencies. For example, someone experiencing a personality disorder may find that its symptoms (i.e., anxiety, paranoia, etc.) interfere with social relationships and

therefore intentionally avoid frequent contact with others. Thus, the question becomes, "Do introverted individuals have an increased risk for personality disorders or do personality disorders induce social isolation? Future research should focus on examining the nature of the causal relationships between personality type and personality disorder.

The additional hypothesis that an overrepresentation of intuition would be found was not supported. It was expected that intuitive individuals who are likely to rely heavily on what they intuitively "understand" instead of what may actually be happening may be more likely to display personality disturbances. Specifically, it was expected that intuitive participants would be more likely to display the Borderline, Paranoid, and Schizotypal PDs. Results for this hypothesis were non-significant and inconclusive.

The last hypothesis, that an overrepresentation of the thinking preference would be found was supported. It was hypothesized that thinking individuals may be more likely to ruminate (think) about stressors. Thus, it was expected that thinking individuals would be more likely to display personality disorders as defined to include maladaptive or ruminative thinking patterns as a criterion (American Psychiatric Association, 2000). Specifically, it was that expected that thinking participants would be more likely to display the Paranoid, Schizotypal, Borderline, Narcissistic, Avoidant, Dependent, and Obsessive-Compulsive PDs.

Results were consistent with this hypothesis. Of the hypothesized personality disorders characterized by extreme cognitive disturbances, Paranoid and Narcissistic PDs were more often displayed by participants classified as thinking. In addition, it was found that thinking individuals were more likely to display Antisocial and Schizoid personality disorders than were feeling individuals. However, it was found that feeling individuals were more likely to display Histrionic, Dependent and Avoidant PDs than were thinking individuals.

Interestingly, the Paranoid, Narcissistic, Antisocial, and Schizoid personality disorders are all characterized by extreme *cognitive* turmoil with regard to world values (thinking). However, the Histrionic personality disorder is characterized by extreme *emotional* expressions (feelings) (American Psychiatric Association, 2000). Likewise, the Dependent and Avoidant, or "anxious" personality disorders, are also more hypersensitive to bodily sensations (feelings).

If these findings are replicated successfully, they provide important clinical implications regarding therapy. Assuming that there are personality disorder differences (cognition/thinking versus emotion/feeling) implies that the focus therapy should differ accordingly. Personality disorders of maladaptive thinking should use a cognitive approach while personality disorders of emotion should focus on using an affective based therapy.

Important/Surprising results

In conducting exploratory analyses, perhaps the most surprising finding was the significant interaction between Introversion x Thinking for the Antisocial PD. When participants were found to be extroverted it did not matter if they were of the thinking or feeling preference. However, those participants found to be introverted and thinking types scored significantly higher on Antisocial PD than did introverted and feeling participants.

According to the DSM-IV-TR the characteristics of Antisocial PD include low social orientation (introversion), the use of cognitive distortions (thinking) to victim blame and minimize the consequences of actions, and indifference to the feelings of others (American Psychiatric Association, 2000). The results of the current study suggest that while there are antisocial individuals that are high on social orientation (extroverted) they do not differ on thinking/feeling. However, those participants found to be introverted and thinking types scored significantly higher on Antisocial PD than introverted and feeling. This is important to note

because it suggests that introverted and thinking individuals have a significantly lower capacity for empathy. Therefore, antisocial individuals are more likely the most extreme when they are introverted and less sensitive to their own feelings or the feelings of others. In therapeutic settings these results may indicate that building empathy among introverted and thinking clients will be key in the treatment of Antisocial PD.

The extremely high percentage of almost every personality disorder within the current sample was also surprising. Comparisons of these rates to the population prevalences listed by the American Psychiatric Association (2000) placed these findings at many times the expected rates. Scoring directions for the PDQ-4 state that the "major problem with personality questionnaires has been that there are an excess of false positives as compared to scores generated from structure interviews or from clinical interviews" (Hyler, 1994). Consistent with this disclaimer, a study by Brian Andrews (1998) concluded that "self-report measures yielded diagnoses at a higher base-rate than the structured interview."

The reason for this may be that on a self-report questionnaire a screening threshold is reached whereas a clinician may not consider the pathology as being significant for diagnosis. This may be especially true of a college population where stress is not considered unhealthy, yet the PDQ-4 uses anxiety questions to identify certain personality disorders. Future research with similar populations should seek to establish if these higher rates are an artifact the population being studied (perhaps undergraduate psychology students are more likely to display symptoms of personality disturbances, thus creating a self-selection bias) or the measure being used.

It should also be noted that self-report measures, in general, are vulnerable to demand characteristics (Morrison & Hunt, 1996; Sprangers, 1988) in which the validity of the results may be swayed. Previous research has indicated that "self-report measures are, by their very

nature, influenced by demand features" (Morrison & Hunt, 1996). Participants may have figured out the purpose of the experiment and responded according to what they believed was expected from them instead of responding candidly.

It is also possible that the screening technique used to exclude faulty responses may have created a selection bias created by the researchers in the final data set. For example, over 16% of the original sample was excluded due to completion times of less than three minutes and failure to complete over 50% of the survey materials. This may have eliminated data from less conscientious respondents thus artificially inflating the percentage of highly conscientious participants. As conscientiousness is a common characteristic of OCPD it is not surprising that these rates are especially high.

The most obvious strength of this study is the sample size; the final number being 412 participants. Also, both measures used for this study have been well validated, especially the PDQ-4 which includes scales specifically designed to detect faulty data: "Too Good" and "Suspect Questionnaire." In analyzing the data in the current study, these validity scales were used to attempt to exclude any respondents that did not take the surveys seriously or did not respond honestly. Also, in defense of the Personality Diagnostic Questionnaires, Davidson and colleagues (2001) reported that the measure appeared to serve reasonably well as a screening measure in that it does not miss many valid personality disorder diagnoses even though it may have high false positive rate.

Limitations and additional future directions

Several limitations of the current study should be noted. First, the results of this study are limited by a non-clinical sample from a Mid-western, American university thus the results may be biased to middle-class, Caucasian, college students. Future research should aim to establish

the generalizability of these findings by recruiting a broader, more diverse sample and by studying a clinical sample to determine validity of the KTS-II personality types in predicting personality disorders.

Second, the Jungian types were not verified by any other measure than the KTS-II and personality disorders were not verified by any measure of personality disorder other than the PDQ-4. Also, both of the measures used, the KTS-II and the PDQ-4 are both self-report measures and as a result participant responses are highly subjective. Future research should use additional sources of assessment such as the structured interview or significant-other ratings.

Third, future researchers should use caution in assuming that separate pole preferences add up to make an established type. The KTS-II fails to note the rather large variations are possible within each of the preferences; I/E, N/S, T/F, J/P. This type of measure produces a four letter category, however it does not take in to consideration the differences between those with strong and weak preferences. For example, a person may be only slightly introverted and another extremely introverted. With this measure, both are simply given the label "introverted" with no regard to preference strength. In other words, the poles may not be truly dichotomous but rather continuous. In fact, Jung believed there could never be a pure type in the sense that one orientation existed in the absence of the opposite (Jung, 1921).

It is important to note that many of the findings of the current study replicate previous results from other personality typology/personality disorder research. It is clear that although the MBTI was designed to measure normal personality typology, it is also capable of creating MBTI profiles for personality disturbances that are significantly different from other MBTI profiles. These findings are consistent with the view that abnormal personality is a variant of normal personality rather than representing a qualitatively distinct category.

References

American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed., text revision). Washington, DC: Author.

Andrews, B. P. (1998). *Examination of convergent/discriminant properties of commonly used personality disorder measures using multitrait-multimethod analysis.* Unpublished dissertation. Department of Psychology, State University of New York at Albany, Albany, NY.

Brophy, C. J, Norvell, N. K., Kiluk, D. J. (1988). An examination of the factor structure and convergent and discriminant validity of the SCL-90R in an outpatient clinic population. *Journal of Personality*, *52*, 334-340.

Carlson, R. (1980). Studies of Jungian typology: II. Representations of the personal world. *Journal of Personality and Social Psychology*, *38*, 801-810.

Coolidge, F. L., Segal, D. L., Hook, J. N., Yamazaki, T. G., & Ellett, J. A. (2001). An empirical investigation of Jung's psychological types and personality disorder features. *Journal of Psychological Type*, *58*, 33-36.

Coolidge, F. L., & Merwin, M. M. (1992). Reliabilty and validity of the Coolidge Axis II Inventory: A new inventory for the assessment of personality disorders. *Journal of Personality Assessment*, *59*, 223-238.

Costa, P. T., & McCrae, R. (1985). *The NEO Personality Inventory manual.* Odessa, FL: Psychological Assessment Resources.

Dalhstrom, W. G., Welsh, G. S., & Dahlstrom, L. E. (1960/1972). An MMPI Handbook. Don Mills, Ontario: Lund Press.

Dalton, J. E., Aubuchon, I. N., Tom, A., Pederson, S. L., & McFarland R. E., (1993). MBTI profiles of Vietnam veterans with Post-Traumatic Stress Disorder. *Journal of Psychological Type*, *26*, 3-8.

Davidson, S., Leese, M., & Taylor P. J. (2001). Examination of the screening properties of the Personality Diagnostic Questionnaire 4+ (PDQ-4+) in a prison population. *Journal of Personality Disorders, 15,* 180-194.

Derogatis, L. (1994). *SCL–90–R: Symptom Checklist-90–R.* Administration, scoring, and procedural manual. Minneapolis, MN: National Computer Systems.

Derogatis L.R., Rickels, K., & Rock, A. (1976). The SCL-90 and the MMPI: A step in the validation of a new self-report scale. *British Journal of Psychiatry*, *128*, 280-289.

Fossait, A., Maffei, C., Bagnato, M., Donati, D., Donini, M., Fiorilli, M., et al. (1998). Criterion validity of the Personality Diagnostic Questionnaire-4+ (PDQ-4+) in a mixed psychiatric sample. *Journal of Personality Disorders, 12*, 172-178.

Harre, R., & Lamb, R. (1983). The Encyclopedic Dictionary of Psychology. Cambridge, Massachusetts: MIT Press.

Hathaway, S. R., & McKinley, J. C. (1983). *Manual for the administration of the Minnesota Multiphasic Personality Inventory*. Minneapolis: National Computer Systems.

Hirsh, S. K. (1991). Using the Myers-Briggs Type Indicator in organizations. Palo Alto, CA: Consulting Psychologists Press.

Hyler, S., Rieder, R., Williams, J., Spitzer, R., Hendler, J. & Lyons, M. (1988). The Personality Diagnostic Questionnaire: Development and preliminary results. *Journal of Personality Disorders*, *2*, 229-237.

Hyler, S. E. (1994). Personality Diagnostic Questionnaire–4+ (PDQ–4+). Unpublished manuscript, New York State Psychiatric Institute, NewYork.

Jung, C. G. (1971 [1921]), *Psychological types.* Princeton, NJ: Princeton University Press.

Kelly, K. R., & Jugovic, H. (2001). Concurrent validity of the online version of the Keirsey Temperament Sorter II. *Journal of Career Assessment, 9*, 49-59.

Keirsey, D. (1998). *Please understand me II.* Del Mar, CA: Prometheus Nemesis Book Company.

Lambert, M. J., Burlingame, G. M., Umphress, V. J., Hansen, N. B., Vermeersch, D, Clouse, G., & Yanchar, S. (1996). The reliability and validity of the Outcome Questionnaire. *Clinical Psychology and Psychotherapy, 3*, 106–116.

Lambert, M. J., Lunnen, K., Umphress, V., Hansen, N. & Burlingame, G. M. (1994). Administration and scoring manual for the Outcome Questionnaire (OQ-45.1). Salt Lake City, UT: IHC Center for Behavioral Healthcare Efficacy.

Lambert, J. M., Whipple, J. L., Hawkins, E. J., Vermeersch, D. A., Nielsen, S. L., & Smart D. W. (2003). Is it time for clinicians to routinely track patient outcome? A meta-analysis. *Clinical Psychology: Science and Practice, 10,* 288.

Lee, Christal, R., Ph.D. (1993). Reference lists and research. *Dissertation Abstracts International, 58*(02), 487A. (UMI No. 9401108)

McCaulley, M. H. (2000). Myers-Briggs Type Indicator: A bridge between counseling and consulting. *Consulting Psychology Journal: Practice and Research*, 52, 117-133.

Mihura, J. L., Meyer, G. J., Bel-Bahar, T., & Gunderson, J. (2003). Correspondence among observer ratings of Rorschach, Big Five Model, and DSM-IV personality disorder constructs. *Journal of Personality Assessment, 81*, 20-39.

Morrison A. T. & Hunt, H. T. (1996). "Reals," "roles," and demand features: A critical look at interview versus questionnaire measures of subjective states. *Canadian-Psychology, 37,* 112-119.

Myers, I. B., & McCaulley, M. H. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.

Myers, I. M., MCCaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). *MBTI manual: A guide to the development and use of the Myers-Briggs Type Indicator* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Otis, G. D., & Louks (1997). Rebelliousness and psychological distress in a sample of introverted veterans. *Journal of Psychological Type*, *40*, 20-30.

Park, K., Kim, M. S., & Hee, K. M. (1997). The study of the clinical symptoms of psychological type. *Korean Journal of Counseling and Psychotherapy, 9,* 209-225.

Sprangers, M. (1988). *Response shift and the retrospective pretest: On the usefulness of retrospective pretest-posttest designs in detecting training related response shifts.* Den Haag, Netherlands, Foundation for Educational Research.

Trull, T. J. (1993). Temporal stability and validity of two personality disorder inventories. *Psychological Assessment*, *5*, 11-18.

Widiger, T. A. & Costa, P. T. (1994). Personality and Personality Disorders. *Journal of Abnormal Psychology, 103,* 78-91.

Waskel, S. A. (1995). Temperament types: Midlife death concerns, demographics, and intensity of crisis. *The Journal of Psychology*, *129,* 221-233.

Yang, J., McCrae, R. R., Costa, P. T., Yao. S., Dai, X., Cai, T., et al. (2000). The cross-cultural generalizability of Axis-II constructs: An evaluation of two personality disorder

assessment instruments in the People's Republic of China. *Journal of Personality Disorders, 14*, 240-263.

Appendix A:

Tables

Table 1. Comparison of personality disorder rates in the general population and study sample as measured by the PDQ-4.

Personality Disorder	Percent in current study	Population prevalence based on the DSM-IV-TR
Histrionic	12.6	2-3
OCPD	44.6	1
Schizoid	6.7	Uncommon[a]
Narcissistic	12.3	1
Avoidant	35.4	.5-1
Schizotypal	12.1	3
Dependent	7.1	Most common[a]
Paranoid	33.4	.5-2.5
Antisocial	6.7	4
Borderline	15.8	2

[a] Note: exact prevalence rates not otherwise specified in the DSM-IV-TR.

Table 2. Multivariate Analysis of Variance (MANOVA) for Personality Disorders on the Introversion/Extroversion scale of the KTS-II.

	Introversion	Extroversion	
	Mean (SD)	*Mean (SD)*	*F*(1, 360)
Avoidant	3.69 *(1.46)*	2.11 *(1.47)*	42.39***
Schizoid	1.92 *(1.52)*	1.20 *(1.71)*	21.56***
Borderline	3.23 *(1.39)*	2.35 *(1.41)*	15.65***
Schizotypal	2.84 *(1.39)*	1.99 *(1.40)*	14.43***
Dependent	1.77 *(1.34)*	1.33 *(1.36)*	4.53*
Paranoid	3.20 *(1.38)*	2.84 *(1.39)*	2.86
OCPD	3.34 *(1.32)*	3.31 *(1.34)*	.01
Narcissistic	2.80 *(1.36)*	2.59 *(1.37)*	.96
Antisocial	1.41 *(1.18)*	1.63 *(1.18)*	1.93
Histrionic	1.96 *(1.34)*	2.41 *(1.36)*	4.58*

*p <.05. **p <.01. ***p <.001.

Table 3. Multivariate Analysis of Variance (MANOVA) for Personality Disorders on the Thinking/Feeling scale of the KTS-II.

	Thinking	Feeling	
	Mean (SD)	*Mean (SD)*	*F*(1, 360
Narcissistic	3.04 *(1.33)*	2.56 *(1.34)*	10.49***
Paranoid	3.36 *(1.35)*	2.68 *(1.36)*	9.88**
Antisocial	1.76 *(1.15)*	1.29 *(1.16)*	9.12**
Schizoid	1.79 *(1.13)*	1.33 *(1.15)*	9.02**
OCPD	3.24 *(1.30)*	3.41 *(1.31)*	.707
Borderline	2.87 *(1.36)*	2.71 *(1.37)*	.559
Schizotypal	2.40 *(1.36)*	2.43 *(1.37)*	.01
Dependent	1.26 *(1.31)*	1.85 *(1.33)*	8.24*
Avoidant	2.60 *(1.42)*	3.20 *(1.44)*	6.13**
Histrionic	1.98 *(1.31)*	2.39 *(1.32)*	3.98**

*p <.05. **p <.01. ***p <.001.

Appendix B:

Personality Types and Personality Disorders

Statement of Informed Consent

You are being asked to participate in a confidential research survey. Your participation is entirely voluntary. Please ask questions if there is anything that you do not understand.

Why is this study being done?

The purpose of this study is to examine the relationship between personality, relational styles and psychopathology. We hope to learn whether certain personality types are related to different types of relational styles. This knowledge may help scientists and therapists better understand how certain personalities and mental health affect relations with others.

What is involved in this study?

You will answer a series of questions on the following survey to determine your personality type, psychopathology and preferred relational style.

How many people will take part in this study?

We will have approximately 200 people from Ball State University take part in this study.

How long will I be in the study?

Your participation in this survey should take about one hour. You will receive one hour of credit for this survey toward fulfilling course requirements.

What are the risks of participating in this study?

Some participants may feel that some questions are too personal to answer. Please feel free to skip any questions that you feel are too personal, and feel free to stop your participation in the study at any time. You will not be penalized if you decide to stop participating or decline to answer any questions. Anyone experiencing feelings of anxiety or stress as a result of participating in this study is encouraged to seek assistance from the BSU Counseling and Psychological Services Center in Lucina Hall, 285-1736.

What are the benefits of participating in this study?

You may not personally benefit from being in this study. However, there are two ways in which it is possible for you to benefit.

First, you will be debriefed at the end of the study on what scientists currently know about personality, relational styles, and psychopathology.

Second, you will be exposed to the process of taking a scientific survey, and you will learn about what it is like to participate in psychology research first hand. Not all students are given this opportunity at Ball State University, and participating in this survey study may increase your knowledge about scientific approaches to psychology and how psychological science is often conducted.

What other options are there?

You have the option of not taking part in this study. You will not be penalized for your decision to decline participation.

What about confidentiality?

For this survey, your responses will be completely anonymous. You will not put your name or any identifying information on the actual questionnaires. You will be filling out these questionnaires on a computer. Unfortunately, as the Internet is not a fully secure medium, complete anonymity cannot be assured in a web-based survey. However, all efforts will be extended to assure encryption and firewall protection of survey responses. For example, we do not ask for any identifying information on the surveys. This information will entered on a separate log-in page and will only be used to assign participation credit. This information will not be connected with your responses on the surveys. Your survey responses will be stored in an anonymous database and all original source files will be deleted once you have submitted your survey. There will be no way for anyone to tell which survey you personally completed. Once the anonymous information from all of the surveys has been entered into the researcher's computer, all data will be held for five years, and then will be destroyed.

What are the costs?

There are no costs associated with your participation. You will receive 1 research credit for your participation in this study.

What are my rights?

Taking part in this study is completely voluntary. You may choose not to take part in any or all of this survey, and you may cease responding at any time. You will not be penalized for your decision to decline a response to individual questions or to the survey as a whole.

Who should I call with questions or problems concerning the study?

Questions about this study or your feelings about this study may be directed to the co-investigators: Brandy Pierson and Abby Rosswurm under the faculty supervision of Dr. Lucinda Woodward, Assistant Professor, Department of Psychological Science at Lewoodward@bsu.edu, phone: (765)285-1693. You may contact Brandy Pierson at Brpierson@bsu.edu, phone: (765)977-2382 or Abby Rosswurm at Arrosswurm@bsu.edu, phone: (260) 615-4955 with further question.

For one's rights as a research subject, the following person may be contacted: Coordinator of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, 765-285-5070 or irb@bsu.edu.

If you should have any concerns or questions regarding your participation in this study, please e-mail the co-investigators, Abby Rosswurm at Arrosswurm@bsu.edu or Brandy Pierson at Brpierson@bsu.edu before proceeding further.

We encourage all participants to print a copy of this informed consent for future reference in the event of unanticipated questions or concerns.

If you have any questions, please ask the experimenter before submitting this form. If you have questions at a future date, contact the Co-Investigators listed on this form.

I agree to participate

I decline to participate

Appendix C:

Debriefing Statement

Thank you for completing the Study Personality and Relational Styles. Your participation will help us better understand the relationship between personality, relational styles, and psychological well-being. The current study was designed to assess Myers-Briggs personality type, attachment style, mental heath and interpersonal style. The intent of this study was to discover a relationship between these four psychological concepts. It is hoped that a better understanding of personality will increase our understanding of other consistent aspects of human behavior. Futhermore, these findings might be extended to help mental health professionals understand the dynamic characteristics of personality. I'd be happy to answer any questions you have.

Questions about this study or your feelings about this study may be directed to the research investigators: Brandy Pierson and Abby Rosswurm under the faculty supervision of Dr. Lucinda Woodward, Assistant Professor, Department of Psychological Science at Lewoodward@bsu.edu, phone: (765)285-1693. You may contact Brandy Pierson at Brpierson@bsu.edu, phone: (765)977-2382 or Abby Rosswurm at Arrosswurm@bsu.edu, phone: (260) 615-4955 with further question.

For one's rights as a research subject, the following person may be contacted: Coordinator of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, 765-285-5070 or irb@bsu.edu.

Anyone experiencing feelings of anxiety or stress as a result of participating in this study is encouraged to seek assistance from the BSU Counseling and Psychological Services Center in Lucina Hall at 765-285-1736.

For more information on these topics please see the following:

Bowlby, J. (1973). Attachment and loss: Vol. 2. Separation: Anxiety and anger. New York: Basic Books.

Derogatis, L. R. (1977). SCL-90 administration, scoring and procedures manual. Baltimore, MD: Johns Hopkins University Press.

Henry, W. P. Schacht, & Strupp, H. H. (1986). Structural analysis of social behavior: Application to a study of interpersonal process in differential psychotherapeutic outcome. *Journal of Consulting and Clinical Psychology, 56,* 27-31.

Myers, I.B., & McCaulley, M.H. (1985). Manual: A guide to the Development and Use of the Myers-Briggs Type Indicator. Palo Alto, CA: Consulting Psychologists Press, Inc.

Appendix D:

Survey Questionnaires

1. Age (in years)

2. Gender
A. Male
B. Female

3. Year in school
A. freshman
B. sophomore
C. Junior
D. Senior
E. Graduate
F. Other

4. Marital status
A. single
B. Married
C. Co-habitating
D. Divorced
E. Separated
F. Widowed

5. Ethnicity/Race
A. Caucasian
B. African American
C. Hispanic
D. Asian
E. American Indian
F. other

6. Is English your primary language
Yes/No

MBTI

Instructions: Check either (a) or (b) that best describes you

7. When the phone rings do you
A. hurry to get to it first
B. hope someone else will answer

8. Are you more
A. observant than introspective

B. introspective than observant

9. Is it worse to
A. have your head in the clouds
B. be in a rut

10. With people are you usually more
A. firm than gentle
B. gentle than firm

11. Are you more comfortable in making
A. critical judgments
B. value judgments

12. Is clutter in the workplace something you
A. take time to straighten up
B. tolerate pretty well

13. Is it your way to
A. make up your mind quickly
B. pick and choose at some length

14. Waiting in line, do you often
A. chat with the others
B. stick to business

15. Are you more
A. sensible than ideational
B. ideational than sensible

16. Are you more interested in
A. what is actual
B. what is possible

17. In making decisions do you go more by
A. data
B. desires

18. In sizing up others do you tend to be
A. objective and impersonal
B. friendly and personal

19. Do you prefer contracts to be
A. signed, sealed, and delivered
B. settled on a handshake

20. Are you more satisfied having
A. a finished product
B. work in progress

21. At a party, do you
A. interact with many, even strangers
B. interact with a few friends

22. Do you tend to be more
A. factual than speculative
B. speculative than factual

23. Do you like writers who
A. say what they mean
B. use metaphors and symbolism

24. Which appeals to you more:
A. consistency of thought
B. harmonious relationships

25. In disappointing someone are you
A. frank and straightforward
B. warm and considerate

26. On the job do you want your activities
A. scheduled
B. unscheduled

27. Do you more often prefer
A. final, unalterable statements
B. tentative, preliminary statements

28. Does interacting with strangers
A. energize you
B. tax your reserves

29. Facts are more likely to
A. speak for themselves
B. illustrate principles

30. Do you find visionaries and theorists
A. somewhat annoying
B. rather fascinating

31. In a heated discussion, do you
A. stick to your guns

B. look for common ground

32. Is it better to be
A. Just
B. Merciful

33. At work, is it more natural for you to
A. point out mistakes
B. try to please

34. Are you more comfortable
A. after a decision
B. before a decision

35. Do you tend to
A. say right out what's on your mind
B. keep you ears open

36. Common sense is
A. usually reliable
B. frequently questionable

37. Children often do not
A. make themselves useful enough
B. exercise their fantasy enough

38. When in charge of others are you
A. firm and unbending
B. forgiving and lenient

39. Are you more often
A. a cool-headed person
B. a warm-hearted person

40. Are you prone to
A. nailing things down
B. exploring the possibilities

41. In most situations are you more
A. deliberate
B. spontaneous

42. Do you think of yourself as
A. outgoing
B. private

43. Are you more frequently
A. a practical sort of person
B. a fanciful sort of person

44. Do you speak more in
A. particulars than generalities
B. generalities than particulars

45. Which is more of a compliment:
A. "There's a logical person"
B. "There's a sentimental person"

46. Which rules you more
A. your thoughts
B. your feelings

47. When finishing a job, do you like to
A. tie up all the loose ends
B. move on to something else

48. Do you prefer to work
A. to deadlines
B. just whenever

49. Are you the kind of person who
A. is rather talkative
B. doesn't miss much

50. Are you inclined to take what is said
A. more literally
B. more figuratively

51. Do you more often see
A. what's right in front of you
B. what can only be imagined

52. Is it worse to be
A. a softy
B. hard-nosed

53. In hard circumstances are you sometimes
A. too unsympathetic
B. too sympathetic

54. Do you tend to choose
A. rather carefully

B. somewhat impulsive

55. Are you inclined to be more
A. hurried than leisurely
B. leisurely than hurried

56. At work do you tend to
A. be sociable with your colleagues
B. keep more to yourself

57. Are you more likely to trust
A. your experiences
B. your conceptions

58. Are you more inclined to feel
A. down to earth
B. somewhat removed

59. Do you think of yourself as a
A. tough-minded person
B. tender-hearted person

60. Do you value more in yourself being
A. reasonable
B. devoted

61. Do you usually want things
A. settled and decided
B. just penciled in

62. Would you say you are more
A. serious and determined
B. easy going

63. Do you consider yourself
A. a good conversationalist
B. a good listener

64. Do you prize in yourself
A. a strong hold on reality
B. a vivid imagination

65. Are you drawn more to
A. fundamentals
B. overtones

66. Which seems the greater fault:
A. to be too compassionate
B. to be too dispassionate

67. Are you swayed more by
A. convincing evidence
B. a touching appeal

68. Do you feel better about
A. coming to closure
B. keeping your options open

69. Is it preferable mostly to
A. make sure things are arranged
B. just let things happen naturally

70. Are you inclined to be
A. easy to approach
B. reserved

71. In stories do you prefer
A. action and adventure
B. fantasy and heroism

72. Is it easier for you to
A. put others to good use
B. identify with others

73. Which do you wish more for yourself
A. strength of will
B. strength of emotion

74. Do you see yourself as basically
A. thick-skinned
B. thin-skinned

75. Do you tend to notice
A. disorderliness
B. opportunities for change

76. Are you more
A. routinized than whimsical
B. whimsical than routinized

PDQ-4

Instructions: The purpose of this questionnaire is for you to describe the kind of person you are. When answering the questions, think about how you have tended to feel, think, and act over the past several years.

T (true) means that the statement is generally true for you
F (false) means that the statement is generally false for you
Even if you are not entirely sure about the answer, please try to guess. There are no correct answers.

158. I avoid working with others who may criticize me.
true/false

159. I can't make decisions without the advice, or reassurance, of others.
true/false

160. I often get lost in details and lose sight of the "big picture."
true/false

161. I need to be the center of attention.
true/false

162. I have accomplished far more than others give me credit for.
true/false

163. I'll go to extremes to prevent those who I love from ever leaving me.
true/false

164. I've been in trouble with the law several times (or would have been if I was caught).
true/false

165. Spending time with family or friends just doesn't interest me.
true/false

166. I get special messages from things happening around me.
true/false

167. I know that people will take advantage or me, or try to cheat me, if I let them.
true/false

168. Sometimes I get upset.
true/false

169. I make friends with people only when I am sure they like me.
true/false

170. I prefer that other people assume responsibility for me.
true/false

171. I waste time trying to make things too perfect.
true/false

172. I am "sexier" than most people.
true/false

173. I often find myself thinking about how great a person I am, or will be.
true/false

174. I either love someone or hate them, with nothing in between.
true/false

175. I get into a lot of physical fights.
true/false

176. I would rather do things by myself than with other people.
true/false

177. I have the ability to know that some things will happen before they actually do.
true/false

178. I often wonder whether the people I know can really be trusted.
true/false

179. Occasionally I talk about people behind their backs.
true/false

180. I am inhibited in my intimate relationships because I am afraid of being ridiculed.
true/false

181. I fear losing the support of others if I disagree with them.
true/false

182. I put my work ahead of being with my family or friends or having fun.
true/false

183. I show my emotions easily.
true/false

184. Only certain special people can really appreciate and understand me.
true/false

185. I often wonder who I really am.

true/false

186. I have difficulty paying bills because I don't stay at any one job for very long.
true/false

187. Sex just doesn't interest me.
true/false

188. I can often sense, or feel things, that others can't.
true/false

189. Others will use what I tell them against me.
true/false

190. There are some people I don't like.
true/false

191. I am more sensitive to criticism or rejection than most people.
true/false

192. I find it difficult to start something if I have to do it by myself.
true/false

193. I have a higher sense of morality than other people.
true/false

194. I use my "looks" to get the attention that I need.
true/false

195. I need very much for other people to take notice of me or compliment me.
true/false

196. I have tried to hurt or kill myself.
true/false

197. I do a lot of things without considering the consequences.
true/false

198. There are few activities that I have any interest in.
true/false

199. People often have difficulty understanding what I say.
true/false

200. I keep alert to figure out the real meaning of what people are saying.
true/false

201. I have never told a lie.
true/false

202. I am afraid to meet new people because I feel inadequate.
true/false

203. I want people to like me so much that I volunteer to do things that I'd rather not do.
true/false

204. I have accumulated lots of things I don't need that I can't bear to throw out.
true/false

205. Even though I talk a lot, people say that I have trouble getting to the point.
true/false

206. I expect other people to do favors for me even though I do not usually do favors for them.
true/false

207. I am a very moody person.
true/false

208. Lying comes easily to me and I often do it.
true/false

209. I am not interested in having close friends.
true/false

210. I am often on guard against being taken advantage of.
true/false

211. I never forget, or forgive, those who do me wrong.
true/false

212. A nuclear war may not be such a bad idea.
true/false

213. When alone I feel helpless and unable to care for myself.
true/false

214. If others can't do things correctly I would prefer to do them myself.
true/false

215. I have a flair for the dramatic.
true/false

216. Some people think that I take advantage of others.
true/false

217. I feel that my life is dull and meaningless.
true/false

218. I don't care what others have to say about me.
true/false

219. I have difficulties relating to others in a one-to-one situation.
true/false

220. People have often complained that I did not realize that they were upset.
true/false

221. By looking at me, people might think that I'm pretty odd, eccentric or weird.
true/false

222. I enjoy doing risky things.
true/false

223. I have lied a lot on this questionnaire.
true/false

224. I have difficulty controlling my anger, or temper.
true/false

225. Some people are jealous of me.
true/false

226. I am easily influenced by others.
true/false

227. I see myself as thrifty but others see me as being cheap.
true/false

228. When a close relationship ends, I need to get involved with someone else immediately.
true/false

229. I suffer from low self esteem.
true/false

230. I waste no time in getting back at people who insult me.
true/false

231. Being around other people makes me nervous.

true/false

232. In new situations I fear being embarrassed.
true/false

233. I am terrified of being left to care for myself.
true/false

234. People complain that I'm "stubborn as a mule."
true/false

235. I take relationships more seriously than do those who I'm involved with.
true/false

236. Others consider me to be stuck up.
true/false

237. When stressed, things happen. Like I get paranoid or just "black out."
true/false

238. I don't care if others get hurt so long as I get what I want.
true/false

239. I keep my distance from others.
true/false

240. I often wonder whether my wife (husband, girlfriend, or boyfriend) has been unfaithful to me.
true/false

241. I have done things on impulse (such as those below) that can get me into trouble. Check all that apply to you:

A. Spending more money than I have.

B. Having sex with people I hardly know.

C. Drinking too much.

D. Taking drugs.

E. Eating binges.

F. Reckless driving.

242. When I was a kid (before age 15) I was somewhat of a juvenile delinquent, doing some of the things below.
Check all that apply to you:

A. I was considered a bully.

B. I used to start fights with other kids.

C. I used a weapon in fights that I had.

D. I robbed or mugged other people.

E. I was physically cruel to other people.

F. I was physically cruel to animals.

G. I forced someone to have sex with me.

H. I lied a lot.

I. I stayed out at night without my parents permission.

J. I stole things from others.

K. I set fires.

L. I broke windows or destroyed property.

M. I ran away from home overnight more than once.

N. I began skipping school, a lot, before age 13.

O. I broke into someone's house, building or car.

SCL-90-R

Instructions: Below is a list of problems people sometimes have. Please read each one carefully, and blacken the circle that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY. Blacken the circle for only one number for each problem and do not skip any items.

246a. Headaches
Likert table range=5 "Not at all" "A little bit" "Moderately" "Quite a bit" "Extremely" title="How much were you distressed by:"

246b. Nervousness or shakiness inside

Likert table range=5

246c. Repeated unpleasant thoughts that won't leave your mind
Likert table range=5

246d. Faintness or dizziness
Likert table range=5

246e. Loss of sexual interest or pleasure
Likert table range=5

246f. Feeling critical of others
Likert table range=5

246g. The idea that someone else can control your thoughts
Likert table range=5

246h. Feeling others are to blame for most of your troubles
Likert table range=5

246i. Trouble remembering things
Likert table range=5

246j. Worried about sloppiness or carelessness
Likert table range=5

246k. Feeling afraid in open spaces or on the streets
Likert table range=5

246l. Pains in heart or chest
Likert table range=5

246m. Feeling afraid in open spaces or on the streets
Likert table range=5

246n. Feeling low in energy or slowed down
Likert table range=5

246o. Thoughts of ending your life
Likert table range=5

246p. Hearing voices that other people cannot hear
Likert table range=5

246q. Trembling
Likert table range=5

246r. Feeling that most people cannot be trusted
Likert table range=5

246s. Poor appetite
Likert table range=5

246t. Crying easily
Likert table range=5

246u. Feeling shy or uneasy with the opposite sex
Likert table range=5

246v. Feeling of being trapped or caught
Likert table range=5

247a. Suddenly scared for no reason
Likert table range=5

"Not at all" "A little bit" "Moderately" "Quite a bit" "Extremely" title="How much were you distressed by:"

247b. Temper outbursts that you could not control
Likert table range=5

247c. Feeling afraid to go out of your house alone
Likert table range=5

247d. Blaming yourself for things
Likert table range=5

247e. Pains in lower back
Likert table range=5

247f. Feeling blocked in getting things done
Likert table range=5

247g. Feeling lonely
Likert table range=5

247h. Feeling blue
Likert table range=5

247i. Worrying too much about things
Likert table range=5

247j. Feeling no interest in things
Likert table range=5

247k. Feeling fearful
Likert table range=5

247l. Your feelings being easily hurt
Likert table range=5

247m. Other people being aware of your private thoughts
Likert table range=5

247n. Feeling others do not understand you or are unsympathetic
Likert table range=5

247o. Feeling that people are unfriendly or dislike you
Likert table range=5

247p. Having to do things very slowly to insure correctness
Likert table range=5

247q. Heart pounding or racing
Likert table range=5

247r. Nausea or upset stomach
Likert table range=5

247s. Feeling inferior to others
Likert table range=5

247t. Soreness of your muscles
Likert table range=5

247u. Feeling that you are watched or talked about by others
Likert table range=5

247v. Trouble falling asleep
Likert table range=5

248a. Having to check and double-check what you do
Likert table range=5

"Not at all" "A little bit" "Moderately" "Quite a bit" "Extremely" title="How much were you distressed by:"

248b. Difficulty making decisions

Likert table range=5

248c. Feeling afraid to travel on buses, subways, or trains
Likert table range=5

248d. Trouble getting your breath
Likert table range=5

248e. Hot or cold spells
Likert table range=5

248f. Having to avoid certain things, places, or activities because they frighten you
Likert table range=5

248g. Your mind going blank
Likert table range=5

248h. Numbness or tingling in parts of your body
Likert table range=5

248i. A lump in your throat
Likert table range=5

248j. Feeling hopeless about the future
Likert table range=5

248k. Trouble concentrating
Likert table range=5

248l. Feeling weak in parts of your body
Likert table range=5

248m. Feeling tense or keyed up
Likert table range=5

248n. Heavy feelings in your arms or legs
Likert table range=5

248o. Thoughts of death or dying
Likert table range=5

248p. Overeating
Likert table range=5

248q. Feeling uneasy when people are watching or talking about you
Likert table range=5

248r. Having thoughts that are not your own
Likert table range=5

248s. Having urges to beat, injure, or harm someone
Likert table range=5

248t. Awakening in the early morning
Likert table range=5

248u. Having to repeat the same actions such as touching, counting, or washing
Likert table range=5

248v. Sleep that is restless or disturbed
Likert table range=5

249a. Having urges to break or smash things
Likert table range=5

"Not at all" "A little bit" "Moderately" "Quite a bit" "Extremely" title="How much were you distressed by:"

249b. Having ideas or beliefs that others do not share
Likert table range=5

249c. Feeling very self-conscious with others
Likert table range=5

249d. Feeling uneasy in crowds, such as shopping or at a movie
Likert table range=5

249e. Feeling everything is an effort
Likert table range=5

249f. Spells of terror or panic
Likert table range=5

249g. Feeling uncomfortable about eating or drinking in public
Likert table range=5

249h. Getting into frequent arguments
Likert table range=5

249i. Feeling nervous when you are left alone
Likert table range=5

249j. Others not giving you proper credit for your achievements
Likert table range=5

249k. Feeling lonely even when you are with people
Likert table range=5

249l. Feeling so restless you couldn't sit still
Likert table range=5

249m. Feelings of worthlessness
Likert table range=5

249n. The feeling that something bad is going to happen to you
Likert table range=5

249o. Shouting or throwing things
Likert table range=5

249p. Feeling afraid you will faint in public
Likert table range=5

249q. Feeling that people will take advantage of you if you let them
Likert table range=5

249r. Having thoughts about sex that bother you a lot
Likert table range=5

249s. The idea that you should be punished for your sins
Likert table range=5

249t. Thoughts and images of a frightening nature
Likert table range=5

249u. The idea that something serious is wrong with your body
Likert table range=5

249v. Never feeling close to another person
Likert table range=5

249w. Feelings of guilt
Likert table range=5

249x. The idea that something is wrong with your mind
Likert table range=5