Discriminant validity of the Illness Behavior Questionnaire and Million Clinical Multiaxial Inventory-III in a heterogeneous sample of psychiatric outpatients

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Abstract

The discriminant validity of measures of abnormal illness behaviours and psychopathology was examined in three samples differing in illness proneness: a sample of young healthy university students (N = 38), a general community sample (n = 36), and a sample of clinical psychiatric outpatients (N = 36). Adjustment to illness was measured using the Illness Behaviour Questionnaire (IBO: Pilowsky & Spence, 1994), while the Millon Clinical Multiaxial Inventory-III (MCMI-III, Millon, 1994) was used to measure clinical syndromes and personality. MANCOVAs were performed across the three groups on the IBO and the MCMI-III categories separately. As expected clinical outpatients obtained significantly higher scores than did nonclinical groups on most of the IBO scales, suggesting discernible discriminant validity. However, the lack of discrimination between groups on several of the MCMI-III scales raises questions about the test validity of this multidimensional instrument.
Introduction

The test validity of measures of clinical symptoms and personality remains problematic for both clinicians and personality researchers alike (see Carson, 1991; Clark, Watson, & Reynolds, 1995; Nelson Gray, 1991; Sher & Trull, 1996). Perception of changes in moods associated with an illness may play an important role in implementing adaptive behaviours (Turk & Salovey, 1995). Also, individuals judge the severity of symptoms against prior experiences and stored schemata of an illness (Leventhal, 1983; Turk, Holzman, & Kerns, 1986). Illness behaviours refer to the ways in which individuals perceive and report symptoms associated with their conditions. Such a concept has often been used in clinical practice to distinguish between individuals suffering from a physical ailment and those whose somatic complaints are mainly attributable to psychological factors (Pilowsky & Spence, 1994; Turk & Salovey, 1995).

Illness Behaviour Questionnaire

Pilowsky and Spence (1994) designed the illness Behaviour Questionnaire (IBQ), a self-report inventory that assesses an individual's ideas, affects, and attributions of clinical symptoms. The IBQ is a 62-item questionnaire with a dichotomous yes/no response scale that yields scores on seven subscales measuring an individual's attitudes toward illness. The IBQ is primarily used to detect abnormal illness behaviours and to identify physical complaints that are manifestations of psychosomatic disorders. Examples of IBQ items are "Do you ever think that you have an illness which is punishment for something you have done wrong in the past?" and "Do you get the feeling that people are not taking your illness seriously enough when you are sick?" Clinically, the IBQ to some extent distinguishes between patients with a physical syndrome and those who have a largely psychosomatic component to their illness behaviours. Several of the
items pertain to psychological attributes, rather than to physical illness behaviours per se (e.g., "Do you worry or fuss over small details that seem unimportant to others?" and "Do you often find that you get depressed??

The IBQ was derived from factor-analytic studies of chronic pain patients (Pilowsky & Spence, 1994). Recent factor analyses have provided some support for the construct validity of the seven subscales in the instrument (Pilowsky & Spence, 1994; Zonderman, Heft, & Costa, 1985). Although some studies have failed to provide unequivocal support (Main & Waddell, 1987; Stretton, Salovey, & Mayer, 1992), other studies have established the concurrent validity of the IBQ with various measures of anxiety and depression (Grassi, Rosti, Albierti, & Marangolo, 1989; Harkins, Price, & Braith, 1989; Pilowsky & Spence, 1994). Pilowsky and Spence reported moderate to high stability coefficients over a 1 to 12 week retest period ranging from .87 to .67, with a mean coefficient of .80. The test manual also provides correlations between patients' scores and others' perceptions of patients' responses ranging from .50 and .78 (mean=.63).

Patients suffering from physical complaints without demonstrable organic pathology (viz., psychiatric outpatients) usually exhibit significantly higher scores on the IBQ scales labelled Disease Conviction, Affective Disturbance (involving both anxiety and depression), and Irritability than do patients with somatic complaints where organic pathology is established (Pilowsky, Smith, & Katsikitis, 1987). More recent studies (Pilowsky & Katsikitis, 1994; Pilowsky & Spence, 1994) have shown that psychiatric outpatients also tend to exhibit higher levels on General Hypochondriasis and Affective Inhibition, than do patients with somatic disorders.

**Millon Clinical Multiaxial Inventory-III**

The Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1994) is a 175-true/false-item inventory that yields scores on 11 personality patterns, three severe personality patterns, seven clinical syndromes, and three severe clinical
syndromes. Clinical symptoms are assumed to be transient maladaptive states of the individual's basic personality pattern that emerge under perceived stressful situations.

Several factor analyses have provided limited support for the purported MCMI structure (Choca, Shanley, & van Denburg, 1993; Craig & Weinberg, 1993; Lorr, Retzlaff, & Tarr, 1989; Lorr, 1993; Lorr, Strack, Campbell, & Lamnin, 1990; Retzlaff, Lorr, Hyer, & Ofman, 1991). However, the claimed factor structure of the instrument may in part be an artifact produced by item overlap. While Millon asserted that item overlap is consistent with the clinical model of psychopathology, overlapping items cause scales to be linearly dependent (Gibertini & Retzlaff, 1988; Lumsden, 1988; Retzlaff & Gibertini, 1987). Indeed, in clinical settings, Cantrell and Dana (1987), and Piersma (1986) found only limited support for the use of the instrument as a tool in the screening of psychopathology.

The MCMI-III manual reports overall test-retest reliability coefficients ranging from .95 to .82, with an average of .90 over a 5 to 14 day retest interval. However, no long term stability coefficients are provided. The manual reports Cronbach alphas ranging from .95 (Debasement scale) to .66 (Compulsive scale), with a mean of .83. No fewer than 20 of the scales have alphas exceeding .80, suggesting the possibility of some item redundancy in the MCMI-III subscales (see Boyle, 1991; Clark & Watson, 1995; Cortina, 1993).

Studies have generally supported the concurrent validity of the MCMI scales (e.g., Craig & Olson, 1992; Dyer, 1994; Gabrys et al., 1988; McCann, 1991; Montag & Comrey, 1987; Morey & Levine, 1988; Schuler, Snibbe, & Buckwalter, 1994; Terpylak & Schuerger, 1994). Also, there is some evidence of discriminant validity (e.g., McMahon, Flynn, & Davidson, 1985; Morey, Blashfield, Webb, & Jewell, 1988).

Using the MCMI, Vollrath, Almes, and Torgersen (1994a) found that individuals with personality disorders tend to rely excessively on dysfunctional coping.
strategies, to discard social support, to use disengagement, and to vent negative emotions. Similarly, individuals with elevated clinical syndrome scores tend to discard adaptive emotion-focused coping (e.g., seeking social support), and to use maladaptive emotion-focused coping strategies such as disengagement (Vollrath et al., 1994b).

Leaf, Alington, Ellis, DiGiuseppe, and Mass (1992) found that individuals diagnosed with Schizoid, Avoidant, Dependent, Passive-Aggressive, Schizotypal, and Borderline personality disorders on the MCMI were characterized by acute clinical syndromes. Such individuals reported more distress, more negative life events, and more social problems than individuals without disorders. Leaf et al. corroborated previous studies in which normal subjects have consistently scored more highly on the MCMI Narcissistic scale than did psychiatric patients (Dubro, Wetzler, & Kahn, 1988; Reich & Troughton, 1988b; Wetzler, Kahn, Cahn, van Praag, & Asnis, 1990). As the psychiatric condition improved, the score on the scale increased (Joffe & Regan, 1988; McMahon, Flynn, & Davidson, 1985; Reich & Troughton, 1988a).

Whyne-Berman and McCann (1995) investigated personality disorders and defence mechanisms measured by the MCMI. Antisocial personality scores were significantly related to acting out, Compulsive traits were associated with reaction formation, and Passive-Aggressive personality scores were linked with displacement. Paranoid personality tendencies were significantly correlated with projection, while Dependent personality characteristics suggested reliance on introjection. The MCMI Dependent scale appears to be important in determining psychological adjustment, as individuals with elevated Dependent personality were found to have been repeatedly hospitalized (Overholser, Kabakoff, & Norman, 1989).

Millon claimed that the MCMI-III is not intended for use with nonclinical populations, and that "base rate scores" are prefaced on the assumption that the respondent is a member of the "clinical population," broadly defined. However, in
order to assess the utility of the MCMI-III instrument for use with nonclinical populations, the present study examines the personality and symptom characteristics of clinical psychiatric outpatients as compared with a nonclinical group of healthy, young students, and also with a non-clinical sample from the general adult community.

**Hypotheses**

The first hypothesis (H1) proposed that the clinical outpatients would demonstrate significantly more elevated scores than would either of the nonclinical groups on the IBQ and MCMI-III scales (even though non-patients may tend to score more highly than patients on some of the MCMI-III personality scales). It was assumed that a continuum exists ranging from healthy adjustment to psychological maladjustment. H2 proposed that on the IBQ and MCMI-III scales, a general adult community group would perform midway between samples of clinical outpatients and healthy university undergraduates, and that scores would differ significantly between student and community samples. Since the student sample was young and healthy, it was expected that they would exhibit lower levels of illness, chronic pain, illness proneness behaviours, and psychological maladjustment than would older individuals, especially those from lower socioeconomic and educational backgrounds selected randomly from the adult community at large.

**Method**

**Participants**

All data was collected in accord with the Code of Ethics of the World Medical Association after approval had been obtained from the Bond University Ethics Review Committee. Informed consent was obtained from the research
participants after the nature of the testing procedures had been explained to them. The total sample consisted of 110 participants from the Gold Coast area of Queensland who had responded to the items in the MCMI-III and IBQ questionnaires. The overall age of respondents (50 men; 60 women) ranged from 19 to 72 years ($M = 33.12$ years, $SD = 12.95$ years).

In order to test the utility of the IBQ and MCMI-III instruments, three approximately equal-sized groups differing on a continuum of illness-proneness behaviours and psychological maladjustment were administered both instruments. Individuals comprising the two nonclinical groups and the clinical outpatients' group all freely chose to fill out the MCMI-III and IBQ instruments.

A college sample consisted of 38 predominantly young, healthy individuals obtained by randomly surveying undergraduate students enrolled at Bond University. In general, this student group which comprised 18 males and 20 females aged ranged from 19 to 45 years ($M = 24.53$ years, $SD = 6.97$ years) was expected to be quite low on physical illness, chronic pain, illness-proneness behaviours and psychological maladjustment. Although the MCMI-III instrument was designed primarily to discriminate between different psychiatric syndromes, the present comparison between outpatients and nonclinical groups was considered a useful test of the discriminant validity of the MCMI-III and IBQ instruments.

A general community sample consisted of 36 adults who were recruited by surveying individuals from the general adult community at large, located in the Gold Coast region of Queensland. Their participation was mainly solicited through personal contacts of the investigators, and therefore did not represent a truly random sample. They were not paid for their participation, nor were they screened explicitly for psychiatric disorders. This sample comprised a much greater diversity of individuals from differing socioeconomic and educational backgrounds than was the case with the undergraduate student sample, whose members generally came
from more educated backgrounds. The general community sample, which consisted of 13 males and 23 females aged between 19 and 72 years ($M = 38.86$ years, $SD = 15.56$ years), because of its overall greater age composition was expected to be somewhat more prone to physical illness, chronic pain, illness behaviours, and psychological maladjustment than was the university student sample.

The clinical outpatients group ($n = 36$) comprised individuals referred to two Gold Coast psychologists for evaluation primarily because of psychosocial dysfunction that warranted examination by an appropriately trained mental health practitioner-e.g., employment, relational problems, and/or DSM-IV diagnosable psychopathology (predominantly Axis I and II disorders). Most of them suffered from depressive mood, and/or severe personality disorders. Few of the clinical outpatients exhibited discernible Axis III medical conditions. The outpatients who chose to participate in the study did so freely after the nature of the testing requirements had been explained to them. They were informed prior to accepting therapy that they would be asked to complete a battery of psychological tests, and that their responses to the IBQ and MCMI-III instruments would be used for research purposes as well as for psychotherapy. The clinical outpatients sample consisted of 19 males and 17 females whose ages ranged from 22 to 60 years ($M = 36.44$ years, $SD = 10.16$ years).

**Results**

The overall alpha coefficient for the IBQ was .62, and for the MCMI-III subscales alphas were as follows: Personality Patterns (.66), Severe Personality Patterns (.80), Clinical Syndromes (.84), and Severe Clinical Syndromes (.67). Evidently, the high alpha coefficients for the Severe Personality Patterns and Clinical Syndromes may suggest the possibility of some item redundancy in these scales (cf. Boyle, 1991). Means and standard deviations for the undergraduate
students, general community, and clinical outpatient groups on the IBQ and MCMI-III scales are presented in Tables 1 and 2 (also Figs. 1 and 2), respectively.

A one-way between-groups ANOVA revealed that age differed significantly across groups, $F(2,107) = 16.92, p < .001$. Two-tailed $t$-test comparisons (Bonferroni corrected) indicated that the student sample was significantly younger than both the general adult community sample, $t(106) = 5.41, p < .05$, and the clinical sample, $t(106) = 4.50, p < .05$. In view of the significant main effect, age was treated as a covariate in the separate between-subjects MANCOVAs (cf. Huberty & Morris, 1989) performed on the IBQ scales and Modifying Indices, Personality Patterns, Severe Personality Pathologies, Clinical Syndromes, and Severe Clinical Syndromes of the MCMI-III. No significant gender differences were apparent between the three samples.

After adjustment for age differences, the combined scores on both the IBQ and MCMI-III instruments differed significantly between groups. The multivariate effects (Bonferroni corrected) were: IBQ, $F(14,200) = 6.48, p < .05$; MCMI-III: Modifying Indices, $F(6,208) = 8.98, p < .05$; Personality Patterns, $F(22,192) = 3.38, p < .05$; Severe Personality Patterns, $F(6,208) = 4.82, p = .05$; Clinical Syndromes, $F(14,200) = 6.83, p < .05$; and Severe Clinical Syndromes, $F(6,208) = 12.31, p < .05$, respectively. For the IBQ instrument, ANOVAs (Bonferroni corrected) suggested that Disease Conviction, $F(2,106) = 32.45, p < .05$; Affective Disturbance, $F(1,106) = 23.72, p < .05$; and Irritability, $F(2,106) = 23.83, p < .05$, contributed to the overall IBQ main effect. Clinical outpatients scored more highly than both college students and individuals from the community at large on Disease Conviction ($M = 51.81$, $M = 15.55$, and $M = 19.22$, respectively.
### Table 1

**IBQ Group Means and Standard Deviations**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Students</th>
<th>Community</th>
<th>Outpatients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>(SD)</td>
<td>Mean</td>
</tr>
<tr>
<td>General Hypochondriasis</td>
<td>15.34</td>
<td>(14.59)</td>
<td>15.94</td>
</tr>
<tr>
<td>Disease Conviction</td>
<td>15.55</td>
<td>(12.45)</td>
<td>19.22</td>
</tr>
<tr>
<td>Psychological vs. Somatic Perception</td>
<td>46.32</td>
<td>(19.79)</td>
<td>44.44</td>
</tr>
<tr>
<td>Affective Inhibition</td>
<td>40.00</td>
<td>(32.22)</td>
<td>49.44</td>
</tr>
<tr>
<td>Affective Disturbance (Dysphoria)</td>
<td>28.42</td>
<td>(32.76)</td>
<td>37.78</td>
</tr>
<tr>
<td>Denial</td>
<td>45.26</td>
<td>(26.58)</td>
<td>40.47</td>
</tr>
<tr>
<td>Irritability</td>
<td>33.79</td>
<td>(20.59)</td>
<td>32.50</td>
</tr>
</tbody>
</table>

### Table 2

**MCMI-Ill Group Means and Standard Deviations**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Students (N = 38)</th>
<th>Community (N = 36)</th>
<th>Outpatients (N = 36)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Modifying Indices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disclosure</td>
<td>41.42 (17.51)</td>
<td>53.97 (19.50)</td>
<td>61.11 (19.20)</td>
</tr>
<tr>
<td>Desirability</td>
<td>74.50 (13.09)</td>
<td>65.72 (17.65)</td>
<td>58.89 (16.15)</td>
</tr>
<tr>
<td>Debasement</td>
<td>31.53 (24.04)</td>
<td>48.50 (23.63)</td>
<td>67.75 (17.78)</td>
</tr>
<tr>
<td>Personality Patterns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schizoid</td>
<td>33.55 (23.46)</td>
<td>48.50 (23.41)</td>
<td>60.31 (22.85)</td>
</tr>
<tr>
<td>Avoidant</td>
<td>29.89 (26.04)</td>
<td>42.86 (30.24)</td>
<td>57.78 (24.85)</td>
</tr>
<tr>
<td>Depressive</td>
<td>21.58 (25.32)</td>
<td>37.31 (31.12)</td>
<td>57.92 (25.70)</td>
</tr>
<tr>
<td>Dependent</td>
<td>27.29 (23.06)</td>
<td>46.00 (29.28)</td>
<td>63.31 (26.70)</td>
</tr>
<tr>
<td>Histrionic</td>
<td>74.79 (18.78)</td>
<td>60.64 (24.27)</td>
<td>47.75 (22.57)</td>
</tr>
<tr>
<td>Narcissistic</td>
<td>81.29 (20.29)</td>
<td>65.69 (20.60)</td>
<td>54.28 (19.49)</td>
</tr>
<tr>
<td>Antisocial</td>
<td>41.37 (21.23)</td>
<td>52.11 (22.53)</td>
<td>47.64 (23.77)</td>
</tr>
<tr>
<td>Aggressive (Sadistic)</td>
<td>44.16 (22.49)</td>
<td>51.53 (24.56)</td>
<td>51.00 (23.95)</td>
</tr>
<tr>
<td>Compulsive</td>
<td>60.18 (15.67)</td>
<td>55.31 (19.29)</td>
<td>52.56 (18.95)</td>
</tr>
<tr>
<td>Passive-Aggressive (Negativistic)</td>
<td>32.61 (22.02)</td>
<td>52.47 (27.08)</td>
<td>56.75 (28.11)</td>
</tr>
<tr>
<td>Self-Defeating</td>
<td>27.16 (29.92)</td>
<td>35.58 (32.55)</td>
<td>47.97 (32.12)</td>
</tr>
<tr>
<td>Severe Personality Patterns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schizotypal</td>
<td>29.61 (28.12)</td>
<td>41.94 (27.33)</td>
<td>52.43 (24.74)</td>
</tr>
<tr>
<td>Borderline</td>
<td>27.08 (24.96)</td>
<td>41.17 (28.33)</td>
<td>54.81 (25.76)</td>
</tr>
<tr>
<td>Paranoid</td>
<td>35.18 (26.77)</td>
<td>49.44 (28.00)</td>
<td>51.67 (25.25)</td>
</tr>
<tr>
<td>Clinical Syndromes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>34.68 (28.96)</td>
<td>48.42 (30.62)</td>
<td>79.03 (23.76)</td>
</tr>
<tr>
<td>Somatoform</td>
<td>16.89 (21.41)</td>
<td>32.75 (29.47)</td>
<td>61.69 (26.98)</td>
</tr>
<tr>
<td>Bipolar: Manic</td>
<td>50.61 (23.33)</td>
<td>53.72 (20.29)</td>
<td>55.03 (20.92)</td>
</tr>
<tr>
<td>Dysthymia</td>
<td>13.61 (20.79)</td>
<td>32.47 (33.51)</td>
<td>65.53 (24.62)</td>
</tr>
<tr>
<td>Alcohol Dependence</td>
<td>36.47 (29.40)</td>
<td>47.64 (27.82)</td>
<td>44.42 (30.27)</td>
</tr>
<tr>
<td>Drug Dependence</td>
<td>45.87 (21.50)</td>
<td>50.03 (25.29)</td>
<td>43.83 (24.48)</td>
</tr>
<tr>
<td>Post-Traumatic Stress Disorder</td>
<td>21.79 (22.74)</td>
<td>29.81 (26.34)</td>
<td>62.67 (15.92)</td>
</tr>
<tr>
<td>Severe Clinical Syndromes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thought Disorder</td>
<td>28.97 (24.19)</td>
<td>37.97 (28.07)</td>
<td>59.81 (22.07)</td>
</tr>
<tr>
<td>Major Depression</td>
<td>12.71 (18.60)</td>
<td>30.06 (31.91)</td>
<td>64.14 (27.92)</td>
</tr>
<tr>
<td>Delusional Disorder</td>
<td>27.66 (29.25)</td>
<td>38.00 (29.92)</td>
<td>31.92 (29.42)</td>
</tr>
</tbody>
</table>
Fig. I. Mean scale profiles on the IBQ. OH: General Hypochondriasis; DC: Disease Conviction; PS: Psychological versus Somatic Perception; AI: Affective Inhibition; AD: Affective Disturbance (Dysphoria); D: Denial; I: Irritability.
respectively); Affective Disturbance \( (M = 76.11, M = 28.42, \text{ and } M = 37.78, \text{ respectively}) \); and Irritability \( (M = 61.97, M = 33.79, \text{ and } M = 26.08, \text{ respectively}) \).

For the MCMI-III instrument, the variable that contributed most to the Modifying Indices main effect was Debasement, \( F(2, 106) = 27.81, p < .05 \). Clinical patients \( (M = 67.75) \) scored more highly on Debasement than both students \( (M = 31.53) \) and community individuals \( (M = 48.50) \). The univariate main effect for Disclosure was \( F(2, 106) = 16.46, p < .05 \), and for Desirability \( F(2, 106) = 8.25, p < .05 \). Clinical outpatients scored more highly than did students on Disclosure \( (M = 61.11 \text{ and } M = 41.42) \), and lower on Desirability \( (M = 58.89 \text{ and } M = 74.50) \). In contrast, community individuals scored more highly than students on Debasement and on Disclosure \( (M = 53.97) \), and lower on Desirability \( (M = 65.72) \).

For the MCMI-III Personality Patterns significant (Bonferroni corrected) main effects occurred for the Schizoid, \( F(2, 106) = 12.64, p < .05 \); Avoidant, \( F(2, 106) = 10.79, p < .05 \); Depressive, \( F(2, 106) = 16.31, p < .05 \); Dependent, \( F(2, 106) = 16.05, p < .05 \); Histrionic, \( F(2, 106) = 14.14, p < .05 \); Narcissistic, \( F(2, 106) = 14.59, p < .05 \); and Passive-Aggressive, \( F(2, 106) = 13.71, p < .05 \), personality scales. Simple contrasts showed that clinical outpatients scored significantly lower than did the student sample on Histrionic \( (M = 47.75 \text{ and } M = 74.79) \), Narcissistic \( (M = 54.28 \text{ and } M = 81.29) \), and Compulsive \( (M = 52.56 \text{ and } M = 60.18) \) personality scales, and significantly higher on most of the remaining personality scales. Community individuals scored lower than did college students on Histrionic \( (M = 60.64) \) and Narcissistic \( (M = 65.69) \) personality scales, and more highly on the remaining scales.
Clinical outpatients scored higher than did individuals from the community at large on Depressive (M = 57.92 and M = 37.31), Dependent (M = 63.31 and M = 46.00), Avoidant (M = 57.78 and M = 42.86), and Schizoid (M = 60.31 and M = 48.50) personality scales, and lower on Histrionic (M = 47.75 and M = 60.64) and Narcissistic (M = 54.28 and M = 65.69) personality scales, respectively.

Two of the Severe Personality scales of the MCMI-III contributed significantly to group differences (Bonferroni corrected). The Borderline personality scale appeared particularly important, F(2, 106) = 12.63, p < .05, as did the Schizotypal scale, F(2,106) = 8.82, p < .05. Simple contrasts showed that college students scored significantly lower than both clinical outpatients and community individuals on all three scales. Community individuals scored lower than clinical outpatients on the Borderline personality scale only (M = 41.17 and M = 54.81). Four out of the seven Clinical Syndromes scales contributed significantly to the MCMI-III main effect. The univariate effects (Bonferroni corrected) were: Anxiety, F(2, 106) = 26.43, p < .05; Somatoform Complaints, F(2,106) = 28.67, p < .05; Dysthymia, F(2,106) = 37.56, p < .05; and Post-Traumatic Stress Disorder, F(2, 106) = 37.56, p < .05, respectively. Clinical outpatients obtained significantly higher scores than did community individuals and college students on Dysthymia (M = 65.53, M = 37.47, and M = 13.61); Post-Traumatic Stress Disorder (M = 62.67, M = 29.81, and M = 21.79); Somatoform Complaints (M = 61.69, M = 32.75, and M = 16.89); and Anxiety (M = 79.03, M = 48.42, and M = 34.68). Individuals from the community at large scored significantly higher than did students on Somatoform, Bipolar, and Dysthymia scales.

The significant MCMI-III Severe Clinical Syndrome main effect was mainly due to differences in Major Depression, F(2,106) = 36.97, p < .05, and Thought Disorder, F(2,106) = 17.19, p < .05. Clinical outpatients scored more highly than
both community members and college students on Major Depression ($M = 64.14$, $M = 30.06$, and $M = 12.71$) and Thought Disorder ($M = 59.81$, $M = 37.97$, and $M = 28.97$).

**Discussion**

The three groups obtained scores that differed markedly on several of the IBQ and MCMI-III scales, lending partial support to H1. Clinical outpatients reported significantly more elevated scores on MCMI-III scales labelled Debasement, Schizoid, Avoidant, Depressive, Dependent, Self-Defeating, Schizotypal, Borderline, Anxiety, Somatoform, Dysthymia, Post-Traumatic Stress Disorder, Thought Disorder, and Major Depression, than did both nonclinical samples, suggesting greater emotional and personal difficulties, as would be expected.

Similarly, clinical patients exhibited elevated scores on Disease Conviction, Affective Disturbance (Dysphoria), Irritability, General Hypochondriasis, and Affective Inhibition on the IBQ. Apparently, such individuals are convinced that they suffer from an illness; they exhibit high levels of anxiety, depression, tension, and sadness; and they report resentment and interpersonal difficulties (cf. Pilowsky et al., 1987; Pilowsky & Spence, 1994). They also tend to display exaggerated health concerns, being overly preoccupied with physical symptoms, as well as difficulties in expressing emotions (Pilowsky & Katsikitis, 1994). Likewise, Vollrath et al. (1994b) reported that clinical outpatients have less emotional support, and tend to disengage more from goals, and to focus on and vent more emotions than nonclinical samples.

The Depressive personality scale of the MCMI-III was sensitive in differentiating between clinical and nonclinical individuals. Similarly, the Dependent personality scale was a critical indicator of psychological maladjustment. Earlier studies have found the Dependent personality scale to be
sensitive and specific in the assessment of dependency (Miller, Streiner, & Parkinson, 1992), and to display good convergent validity (Morey & Levine, 1988; Torgersen & Almes, 1990), as well as satisfactory concurrent and predictive validity (Overholser & Freiheit, 1994). The finding that the nonclinical groups obtained higher scores on narcissistic personality suggests that self-esteem tends to be lower in a group of mixed psychiatric outpatients than in members of the general adult population at large.

It is not surprising that these measures would discriminate between outpatient and nonclinical samples. What is surprising and interesting (and from a practical point of view raises questions regarding test validity) is the lack of discrimination between some of the MCMI-III personality scales, clinical syndrome scales, and the Delusional Disorder scale. In terms of clinical utility, this apparent lack of discriminant validity may suggest that only some items in these scales can discriminate adequately, and that some items may be poorly written and may not be measuring the syndromes they are purported to measure. These questions must await further research on larger samples than used in the present study, given that item analyses involving small sample sizes are notoriously unreliable (Boyle, Stankov, & Cattell, 1995).

Little support for H2 (that the community group would obtain scores midway between those obtained by the clinical and student sample) was found in relation to the IBQ subscales. In support of H2 though, virtually all of the MCMI-III subscales differed significantly between the two nonclinical groups, suggesting (contrary to Millon's assertion) that this multidimensional instrument may be useful for assessing nonclinical samples.

However, severe personality pathologies measured by the MCMI-III failed to discriminate clinical outpatients from the sample of community adults. While in accord with H2, students differed from the other two groups on each of the scales, only
Borderline personality discriminated between the clinical and community adults. Surprisingly, previous studies have found these scales to have good convergent validity, and to be quite sensitive to psychological maladjustment (Craig & Weinberg, 1993; Millon, 1994; Piersma, 1993; Torgersen & Alnres, 1990; Widiger & Corbitt, 1993). One possibility is that the present study used clinical outpatients rather than inpatients who might have displayed more severe maladaptive features. However, the proposition by Millon and Davis (1996) and others (e.g., Clarke, Minas, & Stuart, 1991; Mayou & Hawton, 1986) that psychiatric morbidity in the community may be more widespread than expected cannot be discounted.

Only half of the personality patterns and none of the severe personality patterns differed significantly between the community and clinical groups, while half of the clinical syndromes and two of the three severe clinical syndromes exhibited corresponding significant differences. Consequently, the differential sensitivity of the personality and symptoms subscales of the MCMI-III instrument may be deficient.

**Summary and Conclusions**

The profile of clinical outpatients on the IBQ was consistent with previous studies which found that psychiatric patients tend to report more abnormal illness behaviour than non-clinical groups. The IBQ discriminated efficiently between the clinical sample and non-clinical samples. The scales labelled Disease Conviction, Affective Disturbance, and Irritability appeared very sensitive to the report of abnormal illness behaviour by clinical outpatients. General Hypochondriasis and Affective Inhibition also appeared to play a role, although to a lesser extent, in discriminating clinical from nonclinical individuals.

The profile of clinical outpatients on the MCMI-III also seemed fairly consistent with earlier findings. The Debasement modifying index, the Anxiety, Somatoform, Dysthymia, and Post-Traumatic Stress Disorder clinical-syndrome scales, as
well as the Thought Disorder and Major Depression severe-clinical-syndrome scales appeared to be particularly sensitive to psychological maladjustment.

Although the present study found limited support for discriminant validity, the utility of the MCMI-III personality scales remains to be further explored. For the severe personality scales, only the Borderline scale differentiated clinical outpatients from either of the nonclinical groups. Similarly, only half of the personality patterns (and none of the severe personality patterns) discriminated between community adults and clinical outpatients. Since the present results provide only partial support for the MCMI-III clinical syndrome scales in the screening of psychopathology, the discriminative validity of the instrument necessarily remains somewhat uncertain. Consequently, the MCMI-III in its present form should be regarded more as a research instrument which has only limited utility for clinical practice and diagnostic considerations.

References


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