Differences on measures of distress between clients who continue in psychotherapy, drop out prior to intake, and drop out following intake.

Craig A. Healey
University of Windsor

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DIFFERENCES ON MEASURES OF DISTRESS BETWEEN CLIENTS
WHO CONTINUE IN PSYCHOTHERAPY, DROP OUT PRIOR TO INTAKE,
AND DROP OUT FOLLOWING INTAKE

by

Craig A. Healey

B. A. Brock University. 1994

A Thesis
Submitted to the Faculty of Graduate Studies and Research
through the Department of Psychology
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada
1997
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ABSTRACT

This study compared clients who continued in therapy with clients who dropped out before the intake and with those who quit immediately after intake. Differences between groups were examined on the following variables: age at application, length of delay before intake interview, client gender, year in university, scores from the Symptom Checklist-90-Revised, Beck Depression Inventory, State-Trait Anxiety Inventory, and the Post-Session Client Report (a self-report measure of client perceptions of both therapist and intake session). Participants were 855 university students who requested psychological services at a university counselling center between 1993 and 1997. Test scores were more useful than either sociodemographic variables or Post-Session Client Report scores in differentiating between client groupings. Clients who discontinued immediately after attending an intake session scored lower on measures of distress than both those clients who dropped out prior to intake and those who continued in therapy.
ACKNOWLEDGEMENTS

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To my wife Kelly, I wish to thank you for your boundless love, never-ending support and constant encouragement. It has been your strength of belief in me that has given me the determination to reach my goals. The many sacrifices you have made for me are the smallest part of what I mean when I say that this would not have been possible without you. I love you deeply and look forward to living the rest of our lives together.
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Differences on Measures of Distress between Clients who continue in Psychotherapy, Drop Out prior to Intake, and Drop Out Following Intake

Client attrition at the early stages of the therapeutic process is costly to the institution, and may have potential negative effects for both therapist and client (Pekarik, 1985). Much of the research on client attrition has been directed towards the identification of those clients who may be predisposed to dropping out of therapy. For both humanitarian and economic reasons, understanding the factors affecting client attrition and identifying those client characteristics associated with premature termination is important to improving the effectiveness and efficiency of counselling agencies. Given the negative consequences that client attrition can have on the client, therapist, and agency, it is important to increase our ability to identify potential drop-outs and understand those variables which are related to premature termination at each stage of the therapeutic process.

Demographic variables have been studied most extensively as predictors of client drop-out. While some early studies (Cartwright, 1955; Heilbrun, 1961) found that post-intake drop-outs are more likely to be male, recent research has failed to support this finding (Krauskopf, Baumgardner, & Mandracchia, 1981; Marsh, Zabarenko, Stoughton, & Miller, 1989; Orme & Boswell, 1991; Rodolfa, Rapaport, & Lee, 1983). Therapist gender and therapist-client gender match have not been
consistently related to attrition. Epperson, Bushway and Warman (1983) reported that female counsellors had higher attrition rates than did their male counterparts while Rodolfa et al. (1983) found therapist gender not to be related to client attrition in a university counseling center. Orme and Boswell, (1991) reported that neither patient gender, therapist gender nor patient-therapist gender match were related to drop-out before the intake interview.

Minority group membership and low socioeconomic status have also been inconsistent predictors of client attrition. Carpenter, Morrow, Del Gaudio, and Ritzler (1981) as well as Marsh et al., (1989) found that lower socioeconomic status was not related to client drop-out. These findings conflict with those of Sue, Mckinney, and Allen (1976) and Trepka (1986) who both reported that lower socioeconomic status was related to premature client attrition. Younger age seems to be the most consistent demographic predictor of drop out in various psychotherapy settings (Carpenter et al., 1981; Lowe, 1982; Marsh et al., 1989).

In reviewing the literature on client attrition from university counselling centers, Mennicke, Lent and Burgoyne (1988) made the case that university counselling center clients are sufficiently distinctive from other client populations to warrant separate investigation. This point seems to be most clearly supported by repeated findings that the longer the delay before treatment starts, the higher the rate of client attrition in community counselling agencies (Folkins, Hersch, & Dahlen,

Mennicke, Lent, and Burgoine (1988) concluded their review of attrition
from university counselling centers with suggestions for further research that would
help to clarify the reasons behind the lack of consistent results found across studies.
They also questioned the practical utility of research which explores global, static,
client and counsellor variables such as sex and race.

While Mennicke, Lent, and Burgoine (1988) assert the importance of
replication and cross-validation of previous findings, they suggest that increased
attention be given to variables more relevant to the therapeutic context in which
drop out occurs.

The client-counsellor relationship continues to be considered a vital
1957). Following Orme and Boswell (1991), the present study assumes that therapy
begins when the client makes an appointment for an initial interview and
hypothesizes that clients perceptions of the initial interview play an important role in
their decision to return to therapy or discontinue treatment.

A variety of client, therapist, client-therapist relationship characteristics, and
institutional variables have been studied to determine if they affect attrition rates
across different client populations. While a university counselling centre population
may be sufficiently distinct to justify studies on this specific population. the
literature on client attrition from other therapy settings is certainly relevant (cf.
Saltzman, 1984).

Freund, Russell, and Schweitzer (1991) provided evidence that length of
delay between intake and first session was not related to client attrition, client
evaluations of counselling at termination, or client evaluations of counsellors in a
community counselling centre. While length of delay may not affect either client
attrition rates or perceptions of the counsellor: the relationship between perceptions
of the counsellor and attrition rates has not been clearly determined. Client
satisfaction with services has been found to be related to dropout from university
counselling centers in some studies (Greenfield, 1983; Kokotovic & Tracey, 1987;

Previous research into client attrition has grouped clients according to DSM
criteria and found that drop-outs are more likely to experience less severe symptoms
of psychopathology than clients who continue in therapy (Marsh et al., 1989). It
should be noted that Marsh et al. used a fairly wide-ranging definition of drop out;
clients were considered to be drop-outs if they discontinued therapy prior to the
fourth scheduled session. Sparr, Moffitt, and Ward (1993) found that clients in more
intensive treatments had fewer missed psychiatric appointments than those clients in
less intensive therapy programs. This can be seen as further evidence for a
relationship between severity of a client's symptoms and their likelihood of attending therapy appointments and not dropping out of treatment.

A significant problem in the research literature is that investigators often use different operational definitions of client dropout based upon the point in time at which a client terminates therapy (Sue, McKinney, & Allan. 1976; Mennicke et al., 1988; Nicholson. 1994). Clients who drop out before an intake interview are probably acting for different reasons than those who drop out after intake (Pekarik, 1983).

Trepka (1986) reported differences among factors associated with client attrition at different times in the therapeutic intervention from an out-patient psychology clinic. Clients who did not attend an intake session were more likely to have a previous psychiatric history than those who attended the intake. Trepka (1986) also reported that clients who entered into treatment but prematurely terminated therapy were considered by the psychologist to be experiencing lower levels of psychopathology than those who continued in treatment. According to Mennicke, Lent, and Burgoyne (1988), methodologies which did not differentiate between the potentially different groups of drop-outs included in studies may have "washed out" significant results for particular groups of clients.
The Present Investigation

The present study examined variables apparently associated with client attrition from a university counselling centre in an attempt to differentiate between: (a) clients who made an appointment for an intake interview but "quit" therapy before the scheduled intake session (Group One); (b) those who attended an intake interview but failed to attend additional scheduled sessions (Group Two); and (c) those who continued in therapy for at least one session beyond intake (Group Three). In doing so, the present study compared the three groups of clients on three kinds of variables: demographic, measures of distress/symptomatology, and client evaluations of both the intake session and therapist.

Demographic variables of age and gender were included in this study as well as the administrative variable of the number of days between application and intake appointment. The year in which the client is enrolled in university was also examined as a reflection of the unique client population seen in university counselling centers and as a replication of previous research which included the effect of this variable on client attrition (Anderson et al., 1987).

In addition to studying client demographic variables, the present investigation focused on client evaluations of both the intake interview and the therapist as factors related to premature client drop-out. It was hypothesized that immediate post-intake client self-report evaluations of the session and the therapist
would both be useful in differentiating those who quit immediately following intake from those who continued in therapy.

It was also hypothesized that clients experiencing greater levels of distress would be less likely to terminate therapy than those clients whose test scores indicated lower levels of distress/symptomatology. Therapist ratings of client symptomatology according to DSM criteria have found that drop-outs are more likely to be categorized as having less severe symptoms of psychopathology than those clients who continued in therapy (Marsh et al., 1989; Sparr et al., 1993; Trepka, 1986). The present study examined clients scores on a variety of self-report measures completed before the intake interview was conducted to more clearly define the relationship between the degree of client distress and premature client drop-out both before and after intake interviews have been conducted.

Hypotheses

Hypothesis 1: The score on the Beck Depression Inventory (BDI) would be lowest for clients in Group One and highest for clients in Group Three.

Hypothesis 2: The Global Severity Index (GSI) of The Symptom Checklist-90-Revised would be lowest for clients in Group One and highest for those in Group Three.

Hypothesis 3: The trait anxiety subscale score (TAI) on The State-Trait Anxiety Inventory would be lowest for clients in Group One and highest for clients in Group
Three.

**Hypothesis 4:** The state anxiety subscale score (SAI) on The State-Trait Anxiety Inventory would be lowest for clients in Group One and highest for clients in Group Three.

**Hypothesis 5:** Client ages would be lowest for clients in Group One and highest for clients in Group Three.

**Hypothesis 6:** Client year enrolled in university would be lowest for clients in Group One and highest for clients in Group Three.

**Hypothesis 7:** The number of days between making the appointment and the scheduled date for the intake interview (DAYS) would be greatest for clients in Group One and lowest for clients in Group Three.

**Hypothesis 8:** The proportion of male clients would be greatest for clients in Group One and lowest for clients in Group Three.

**Hypothesis 9:** Clients in Group Three would rate the initial session more highly (as measured by question 1 of the Post-Session Client Report) than would clients in Group Two.

**Hypothesis 10:** Clients in Group Three would indicate that they had felt better understood by their therapist (as measured by question 2 of the Post-Session Client Report) than would clients in Group Two.

**Hypothesis 11:** Clients in Group Three would evaluate the initial session as being
more helpful (as measured by question 3 of the Post-Session Client Report) than would clients in Group Two.

**Hypothesis 12**: Clients in Group Three would indicate they made more progress in the initial interview (as measured by question 4 of the Post-Session Client Report) than would clients in Group Two.

The next two hypotheses examined the utility of using sociodemographic variables as compared to test or report variables in differentiating between client groupings. Three sets of variables were tested for ability to differentiate between the three groups of clients: (a) the REPORT group consisted of the four questions on the Post-Session Client Report; (b) the TESTS group consisted of The Global Severity Index of the SCL-90-R, the single score of the Beck Depression Inventory, the single score of the state anxiety subscale of the STAI, and the single score of the trait anxiety subscale of the STAI; and (c) the DEMOG group consisted of sociodemographic variables including the number of days between testing and date of intake appointment, age of client upon application, year in university, and gender.

**Hypothesis 13**: It was hypothesized that the variables in the TESTS group would be more useful in differentiating between client groupings than the variables in the DEMOG group for all participants.

**Hypothesis 14** (using only client Groups Two and Three):

It was hypothesized that the variables in the REPORT Group would be more useful
than the variables in the DEMOG group for differentiating between clients who
dropped out after intake vs. clients who continued in therapy.

Method

Participants

Participants were 1005 university students who completed the application for
psychological services for the first time at a mid-sized Southwestern Ontario
university’s counselling center during the period from September, 1993 to March,
1997. All students applying for the first time, for whom sufficient data was
available, were included. The counselling facility offers outpatient crisis
intervention, short-term therapy, and ongoing psychotherapy.

Therapists

According to the Centre, approximately 90% of the intake sessions were
conducted by psychologists with at least 7 years of post-doctoral experience. The
remaining 10% of intake sessions were conducted by Ph.D. students as part of their
post-Master’s training. Approximately 70 - 80% of the intake sessions were
conducted by women.

Measures

The application for psychological services includes of a standard battery of
three self-report psychological inventories: the Symptom Checklist-90-Revised
(Derogatis, 1983); Beck Depression Inventory (Beck, 1978); and the State-Trait
Anxiety Inventory (Spielberger, Gorsuch, & Lushene. 1970). These three measures are among the most widely used self-report scales in psychotherapy outcome research (Lambert & Hill, 1994). They were chosen for use as a standard battery based on their reliability and validity, ease and rapidity of administration, and sensitivity to therapeutic interventions.

The Symptom Checklist-90-Revised (SCL-90-R) (see Appendix A) is a self-report instrument that asks the respondent to indicate (on a 5-point scale ranging from “0 not at all” to “4 extremely”) the extent to which each of 90 specific symptoms had bothered or distressed the client over the past seven days. Nine symptom dimensions or scales are derived from the SCL-90-R which have been shown to meet traditional standards of reliability (Derogatis, 1983). Three overall distress indices are offered, of which the Global Severity Index (the average rating for all 90 items) is described as “the best single indicator of the current level or depth of the disorder,” and is recommended for use “in most instances where a single summary measure is required” (Derogatis, 1983, p. 11). The raw score for the Global Severity Index was used as a variable in the present study.

The Beck Depression Inventory (see Appendix B) is a 21-item multiple-choice questionnaire that gives a single score indicative of syndromal depression (Kendall, Hollon, Beck, Hammen, & Ingram, 1987). Each item offers the respondent a set of four statements suggestive of no depression, mild depression, moderate
depression, and severe depression. Numerous studies, including a comprehensive review by Beck, Steer, and Garbin (1988) indicate that the Beck Depression Inventory offers good reliability and validity.

The State-Trait Anxiety Inventory (STAI) (see Appendix C) is composed of two subscales, each of which consists of 20 multiple-choice items. The first subscale is designed to assess current levels of anxiety (termed state anxiety), whereas the second is designed to assess proneness to experiencing anxiety (termed trait anxiety). Standardization studies (Spielberger, Gorusch, & Lushene, 1970) indicate high levels of internal consistency for both state and trait anxiety, good test-retest stability for trait anxiety, a lower level of test-retest stability for state anxiety (as would be expected for a state measure), a significant and sizable correlation between state anxiety and stress versus nonstress conditions, and significant and sizable correlations between trait anxiety and three other measures of proneness to anxiety. Raw scores from the state anxiety subscale and the trait anxiety subscale were used as variables in the present investigation.

The Post-Session Client Report (see Appendix D) is a four question self-report measure designed to assess the client’s perceptions of the therapy session just after the session is completed. The validity and reliability of the measure are unknown, as this is used primarily as a check for the therapist on how therapy is progressing and being perceived by the client. Face validity suggests that this
measure does assess elements of the therapeutic relationship such as helpfulness and understanding, which were hypothesized to be relevant to prediction of client attrition.

Procedures

When clients entered the counselling center seeking psychological services, they were asked to complete a computerized test battery composed of the Symptom Checklist-90-Revised, Beck Depression Inventory, and the State-Trait Anxiety Inventory. As soon as a therapist was available after the client completed the application procedure, he or she was seen for an intake session. After this initial session, and for each therapy session thereafter, the client was asked to fill out a Post-Session Client Report (PSCR) to indicate how the session was evaluated by the client. Results from all tests and Post-Session Client Reports were stored (without identifying information) in a computer data bank. This study was conducted on data taken from this anonymous data bank.

Results

Data Screening and Descriptive Statistics

All statistical procedures were performed using SPSS for Windows, version 6.0 statistical package. Prior to analysis, each variable was examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis. The variables were examined separately for each of the three
groups of participants.

Of the total 1005 students who had applied for psychological services between September, 1993 and March, 1997, 138 were missing large amounts of data. Both the Post-Session Client Report (PSCR) and all the data from testing which was scheduled to be completed upon application for services [consisting of the Global Severity Index (GSI) from the SCL-90-R, total score on the Beck Depression Inventory (BDI), STA1 state anxiety score (SAI), and STA1 trait anxiety score (TAI)] were missing. These cases were evenly distributed among the years examined in this study and, since it was unclear how many of them had received treatment previously from the centre, they were removed from further analysis. These 138 cases did not appear to be significantly different from the remaining cases on the demographic information which was available.

The number of days from application to intake were found to be more than three standard deviations from the mean for 12 clients who were removed from further analyses. The number of days these clients waited for an intake appointment ranged from 51 to 240. These clients were offered at least one (most likely several) earlier dates for intake appointments which they declined for unknown reasons. They were therefore no longer considered to be suitable participants for this study.

After examining frequencies for all variables, preliminary analyses focused on assessing means and standard deviations for each variable (see Table 1). There
Table 1

**Means and Standard Deviations for all Variables (N = 855)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
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<td>BDI</td>
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<td>18.95</td>
<td>10.79</td>
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<tr>
<td>GSI</td>
<td>821</td>
<td>1.27</td>
<td>0.66</td>
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<td>SA1</td>
<td>823</td>
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<td>13.12</td>
</tr>
<tr>
<td>TAI</td>
<td>823</td>
<td>50.59</td>
<td>12.64</td>
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<tr>
<td>PSCR</td>
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<td>U-YEAR</td>
<td>836</td>
<td>2.19</td>
<td>1.26</td>
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BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SA1 = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; PSCR = Total score of questions on Post-Session Client Report; PSCR1 = question 1 of the Post-Session Client Report; PSCR2 = question 2 of the Post-Session Client Report; PSCR3 = question 3 of the Post-Session Client Report; PSCR4 = question 4 of the Post-Session Client Report; DAYS = days from application to scheduled intake; U-YEAR = year in University.
was a total of 41 participants in Group One (application only), 196 in Group Two (application and intake session only) and 618 clients in Group Three (continuers). Appendixes E, F, and G present means and standard deviations for all variables for each of Groups One, Two and Three.

Of the 41 clients in Group One, 34% were men (n = 14) and 66% were women (n = 27). Group Two consisted of 33% men (n = 65) and 64% women (n = 126) with 5 client files in this group missing information on gender. Group Three consisted of 26% men (n = 161) and 71% women (n = 441) with 16 client files missing this information.

Scores on the BDI ranged from 0 to 53 (M = 18.95; SD = 10.79), scores on the GSI ranged from .01 to 3.42 (M = 1.268; SD = 0.66), scores on the SAI from the STA1 varied from 2 to 80 (M = 54.20; SD = 13.12) while TAI scores ranged from 1 to 80 (M = 50.59; SD = 12.64).

Responses to question 1 of the Post-Session Client Report ranged from 1 to 4 (M = 2.09, SD = 0.73) and question 2 scores varied between 1 and 3 (M = 1.85; SD = 0.56). Question 3 answers ranged from 1 to 5 (M = 1.85; SD = 0.86) and responses to question 4 also varied from 1 to 5 (M = 3.14; SD = 0.97).

Client ages ranged from 18 to 61 (M = 23.75; SD = 5.60). Clients were not deleted from analysis on the basis of age because all outliers were students and therefore part of the target population. Sample size was also considered to be large.
enough that transformations of data or deletion of cases would not be necessary in order to meet the assumptions of multivariate analysis for this variable.

The number of days clients waited (after removing the aforementioned 12 outlying clients) ranged from 0 to 42 (\(M = 8.18; \ SD = 6.62\)). Clients' year of attending university ranged from 0 (considered to be part-time in their first year) to 6 (graduate students) with a mean of 2.19 (\(SD = 1.26\)).

Relationships between dependent variables

A matrix of Pearson-r (product-moment) correlation coefficients was generated for each pair of variables to assess intercorrelations between all independent variables (see Table 2).

All measures of distress and symptomatology (BDI, GSI, SAI, TAI) yielded strong positive correlations with each other as would be expected. The BDI correlated with the GSI (\(r = .791, p < .01\)), SAI (\(r = .752, p < .01\)), and TAI (\(r = .624, p < .01\)). The GSI was also found to be correlated with SAI (\(r = .722, p < .01\)) and TAI (\(r = .577, p < .01\)) while the SAI was found to be also correlated with TAI (\(r = .532, p < .01\)).

Similarly, there were many positive, although small, correlations found between each measure of distress/symptomatology and the four questions on the Post-Session Client Report (PSCR). The BDI correlated with question 1 (\(r = .141, p < .001\)), question 2 (\(r = .097, p < .05\)), question 3 (\(r = .132, p < .01\)), and question 4
Table 2

Pearson Correlations between all Dependent Variables (n=855)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.BDI</td>
<td>.791** .752** .624** .141** .097*  .132**  .136**  -1.07** -0.62 .178**  .013</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2.GSI</td>
<td>.722** .577** .112*  .070  .117*  .071  -1.25**  -0.40  .184**  -0.24</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3.SAI</td>
<td>.532** .112*  .100*  .118*  .089  -0.56  -0.82*  .125**  0.46</td>
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</tr>
<tr>
<td>4.TAI</td>
<td>.189** .130** .188**  .182**  -1.36**  -0.27  .171**  0.21</td>
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</tr>
<tr>
<td>5.Quest1</td>
<td>.453** .499** .406**  -0.40  -0.21  .065  .046</td>
<td></td>
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</tr>
<tr>
<td>6.Quest2</td>
<td>.410** .384**  .037  -0.043  -0.21  -0.27</td>
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</tr>
<tr>
<td>7.Quest3</td>
<td>.468**  .005  -0.035  -0.54  .049</td>
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</tr>
<tr>
<td>8.Quest4</td>
<td>.101*  .093*  .063  -0.18</td>
<td></td>
<td></td>
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<tr>
<td>9.AGE</td>
<td>.040  -0.084*  .029</td>
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<td>10.DAYS</td>
<td>.106**  -0.033</td>
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<td></td>
</tr>
<tr>
<td>11.GENDER</td>
<td>.028</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>12.U-YEAR</td>
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<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note. * = p < .05. ** = p < .01

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; DAYS = days from application to scheduled intake; U-YEAR = year in University.
(\(r = .136, \ p < .01\)). The GSI correlated with question 1 (\(r = .112, \ p < .05\)) and question 3 (\(r = .117, \ p < .05\)). SAI correlated with question 1 (\(r = .112, \ p < .05\)), question 2 (\(r = .100, \ p < .05\)) and question 3 (\(r = .118, \ p < .05\)). TAI correlated with question 1 (\(r = .189, \ p < .01\)), question 2 (\(r = .130, \ p < .01\)), question 3 (\(r = .188, \ p < .01\)) and question 4 (\(r = .182, \ p < .01\)). The above correlations suggest a weak relationship between greater levels of distress/endorsement of symptomatology and less favourable evaluations of their intake session.

All four questions on the Post-Session Client Report showed moderate positive correlations with each other, as was expected. Question 1 was correlated with question 2 (\(r = .453, \ p < .01\)), question 3 (\(r = .499, \ p < .01\)), and question 4 (\(r = .406, \ p < .01\)). Question 2 was also correlated with question 3 (\(r = .410, \ p < .01\)) and question 4 (\(r = .384, \ p < .01\)) while question 3 was found to also be correlated with question 4 (\(r = .468, \ p < .01\)).

Increased age was weakly correlated with lower scores on BDI (\(r = -.107, \ p < .01\)), GSI (\(r = -.125, \ p < .01\)) and TAI (\(r = -.136, \ p < .01\)). There was also a small relationship found between increased age and male gender (\(r = -.084, \ p < .05\)) as well as increased age and lower levels of satisfaction as to how much progress they felt was made during intake as measured by question 4 of the PSCR (\(r = .101, \ p < .05\)).

A greater number of days between application and intake appointment was
found to have weak relationships with lower levels of SAI ($r = -0.082, p < .05$) and increased satisfaction with how much progress they felt was made during intake ($r = -0.093, p < .05$). Increased number of days was also weakly related to female gender ($r = 0.106, p < .01$).

Female gender was also weakly correlated with increased scores on all test measures. Gender was related to BDI ($r = 0.178, p < .01$), GSI ($r = 0.184, p < .01$), SAI ($r = 0.125, p < .01$), and TAI ($r = 0.171, p < .01$).

**Differences between Groups**

**TEST set of Dependent Variables**

There were significant differences found between the three client Groups using the set of variables consisting of test scores. A one-way MANOVA (see Table 3) with the TEST scores (BDI, GSI, SAI, and TAI) as dependent variables found an overall significant multivariate effect for Group [Wilks’ $F$ $(8, 1626) = 3.40, p < .001$]. Univariate F-tests indicated that group differences were significant for the following individual test scores: BDI [$F(2, 816) = 7.94, p < .001$], GSI [$F(2, 816) = 8.89, p < .001$], and SAI [$F(2, 816) = 5.68, p < .005$].

Tukey-HSD post-hoc comparisons were performed on the three TEST variables which achieved univariate significance (BDI, GSI and SAI) to determine which groups differed most on these variables (see Table 4). BDI was found to be different for Group Two as compared with both Group One (mean difference $= 4.76$.,
Table 3

MANOVA summary with Univariate Effects for TEST score Variables by Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Multivariate F</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>2, 816</td>
<td>899.62</td>
<td>7.94**</td>
<td></td>
</tr>
<tr>
<td>GSI</td>
<td>2, 816</td>
<td>3.80</td>
<td>8.88**</td>
<td></td>
</tr>
<tr>
<td>SAI</td>
<td>2, 816</td>
<td>966.41</td>
<td>5.67*</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>2, 816</td>
<td>464.10</td>
<td>2.92</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8, 1626</td>
<td>3.40**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Multivariate F ratio is based on Wilks’ Lambda.

*p < .01; **p < .001

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory
Table 4

Tukey-HSD between Groups on BDI, GSI, and SAI (n=855)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>20.95&lt;sub&gt;a&lt;/sub&gt;</td>
<td>16.19&lt;sub&gt;b&lt;/sub&gt;</td>
<td>19.66&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>GSI</td>
<td>1.35&lt;sub&gt;ab&lt;/sub&gt;</td>
<td>1.09&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1.32&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td>SAI</td>
<td>58.73&lt;sub&gt;a&lt;/sub&gt;</td>
<td>51.85&lt;sub&gt;b&lt;/sub&gt;</td>
<td>54.61&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

Note. Means in the same row that do not share a subscript differ at p < .05 in the Tukey honestly significant difference comparison.

BDI = Beck Depression Inventory; GSI = Global Severity Index from the SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory.
SE = 1.85) and Group Three (mean difference = 3.47; SE = 0.90). GSI was found to be different for Group Two as compared to Group Three (mean difference = 0.228; SE = 0.55). SA1 was different for Group Two as compared to both Group One (mean difference = 6.88; SE = 2.25) and Group Three (mean difference = 2.76; SE = 1.10).

**DEMOG set of Dependent Variables**

A one-way MANOVA (see Appendix H) with the DEMOG set of dependent variables (age, days waiting, gender, and year in university) found no overall significant multivariate effect for Group [Wilks' $\Lambda$ (8, 1546) = 1.58, $p = .125$].

**REPORT set of Dependent Variables**

A one-way analysis of variance (ANOVA) was performed between Groups Two and Three on each of the four questions of the Post-Session Client Report as well as a variable combining scores on all four questions of the PSCR. None of the four questions of the PSCR nor the overall combined score of all 4 questions served to differentiate between Groups Two and Three (Appendix I summarizes the results of these tests).

**Differences between Genders**

Separate analyses were performed for each gender on the set of variables consisting of TEST scores. This was done because (a) gender correlated significantly with all four indices of distress, and (b) the data being analyzed consisted of raw scores and it has been found that there are differences between genders on the
distribution of responses to tests such as the Symptom Checklist-90-Revised (Derogatis, 1983) and the State-Trait Anxiety Inventory (Spielberger, Gorusch, & Lushene, 1970). Summaries for MANOVAs performed for each gender are presented in Appendixes J and K.

There was an overall significant difference between client Groupings for the TEST set of dependent variables in the analyses examining only men [Wilks' $\lambda$ (8, 446) = 1.98, $p < .05$]. All univariate F's were nonsignificant in this analysis.

Analyses of only women clients found significant differences between Groups for the variables consisting of TEST scores. The MANOVA examining only women using the TEST variables (BDI, GSI, SAI, and TAI) was found to be significant [Wilks' $\lambda$ (8, 1130) = 2.26, $p < .05$]. Univariate F-tests indicated that Group differences were significant for BDI [$F (2, 568) = 7.15$, $p < .001$], GSI [$F (2, 568) = 6.72$, $p < .001$], and SAI [$F (2, 568) = 4.22$, $p < .05$].

Tukey-HSD post-hoc comparisons were performed on the three TEST variables which had achieved univariate significance (BDI, GSI and SAI) to determine which Groups of women differed from one another on these variables and to see if there were differences from what was found in the Tukey tests performed on all participants (as described above). All comparisons which were significant in the original analysis remained significant. One additional comparison was found to be significant using women only; GSI had a mean difference of .355 ($SE = .139; p <$
.05) between Groups One and Two (Table 5 reproduces these findings).

**Differences between combined Groupings**

Since the findings indicated that clients in Group Two have significantly lower test scores than clients in both Group One and Group Two, post-hoc analyses were conducted exploring the effects different methodologies would have on results. Oneway analyses of variance were conducted comparing (a) combined Groups One and Two vs. Group Three, and (b) Group One vs. Combined Groups Two and Three. Results of these tests are presented in Tables 6 and 7.

The pooled variance of combined Groups One and Two are significantly different than that of Group Three on several variables: BDI \( F(1.819) = 9.63, p<.005 \); GSI \( F(1.818) = 12.40, p<.001 \); TAI \( F(1.820) = 5.40, p<.05 \); Age \( F(1.818) = 4.79, p<.05 \); Gender \( F(1.832) = 4.38, p<.05 \).

The ANOVA comparing Group One with a combined Groups Two and Three found that only SAI \( F(1.820) = 5.19, p<.05 \) was significantly different between the two groupings.

**Hypotheses 1-4**

It was hypothesized that those TEST variables which reflect client symptomatology/distress (BDI, GSI, SAI, TAI) would be lowest for clients in Group One and highest for clients in Group Three. These hypotheses were clearly not supported by the data. Clients in Group Two scored significantly lower than clients
Table 5

Tukey-HSD between Groups on BDI, GSI, and SAI (Women clients only) (n=594)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>23.48ₐ</td>
<td>16.98ₜ</td>
<td>20.71ₜ</td>
</tr>
<tr>
<td>GSI</td>
<td>1.51ₐ</td>
<td>1.15ₜ</td>
<td>1.38ₜ</td>
</tr>
<tr>
<td>SAI</td>
<td>59.30ₐ</td>
<td>52.50ₜ</td>
<td>55.69ₜ</td>
</tr>
</tbody>
</table>

*Note.* Means in the same row that do not share a subscript differ at \( p < .05 \) in the Tukey honestly significant difference comparison.

BDI = Beck Depression Inventory; GSI = Global Severity Index from the SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory.
<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>SS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BDI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>1109.75</td>
<td>9.63**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>819</td>
<td>115.24</td>
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</tr>
<tr>
<td><strong>GSI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>5.36</td>
<td>12.397***</td>
</tr>
<tr>
<td>Within Groups</td>
<td>818</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td><strong>SAI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>373.64</td>
<td>2.17</td>
</tr>
<tr>
<td>Within Groups</td>
<td>820</td>
<td>172.03</td>
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</tr>
<tr>
<td><strong>TAI</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>859.31</td>
<td>5.40*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>820</td>
<td>159.18</td>
<td></td>
</tr>
<tr>
<td><strong>AGE</strong></td>
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<tr>
<td>Between Groups</td>
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<td>149.47</td>
<td>4.79*</td>
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<tr>
<td>Within Groups</td>
<td>818</td>
<td>31.18</td>
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<tr>
<td><strong>DAY</strong></td>
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<tr>
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<td>0.00</td>
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<tr>
<td>Within Groups</td>
<td>833</td>
<td>43.86</td>
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<tr>
<td><strong>GENDER</strong></td>
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<tr>
<td>Between Groups</td>
<td>1</td>
<td>0.89</td>
<td>4.38*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>832</td>
<td>0.20</td>
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<tr>
<td><strong>U-YEAR</strong></td>
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</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>0.75</td>
<td>0.47</td>
</tr>
<tr>
<td>Within Groups</td>
<td>833</td>
<td>1.58</td>
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</tr>
</tbody>
</table>

*Note. *p < .05; **p < .005; ***p < .001

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; DAYS = days from application to scheduled intake; U-YEAR = year in University.
Table 7

ANOVA comparing Group One with combined Groups Two and Three (n=855)

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>SS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>173.87</td>
<td>1.49</td>
</tr>
<tr>
<td>Within Groups</td>
<td>819</td>
<td>116.38</td>
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<tr>
<td>GSI</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>0.30</td>
<td>0.70</td>
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<tr>
<td>Within Groups</td>
<td>818</td>
<td>0.44</td>
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</tr>
<tr>
<td>SAI</td>
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<td></td>
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</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>889.24</td>
<td>5.19*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>820</td>
<td>171.40</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>0.10</td>
<td>0.00</td>
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<tr>
<td>Within Groups</td>
<td>820</td>
<td>160.23</td>
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</tr>
<tr>
<td>AGE</td>
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<td></td>
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</tr>
<tr>
<td>Between Groups</td>
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<td>115.60</td>
<td>3.70</td>
</tr>
<tr>
<td>Within Groups</td>
<td>818</td>
<td>31.22</td>
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<tr>
<td>DAY</td>
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</tr>
<tr>
<td>Between Groups</td>
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<td>129.21</td>
<td>2.96</td>
</tr>
<tr>
<td>Within Groups</td>
<td>833</td>
<td>43.70</td>
<td></td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>0.12</td>
<td>0.61</td>
</tr>
<tr>
<td>Within Groups</td>
<td>832</td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>U-YEAR</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>2.67</td>
<td>1.68</td>
</tr>
<tr>
<td>Within Groups</td>
<td>833</td>
<td>1.58</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; DAYS = days from application to scheduled intake; U-YEAR = year in University.
in Groups One and Three on BDI, GSI, and SAI, but there were no significant
differences found on any TEST score between Groups One and Three.

**Hypothesis 5-8**

It was hypothesized that the DEMOG set of dependent variables would be
useful in differentiating between the three client Groups. Results clearly did not
support any of these hypotheses. None of the DEMOG set of variables were useful in
differentiating between any combination of the three client groupings.

**Hypotheses 9-12**

Questions on the Post-Session Client Report did not serve to differentiate
between Groups Two and Three. A one-way ANOVA was performed between
Groups Two and Three found no significant difference between these Groups on any
of the four REPORT questions of the PSCR or on a variable combining scores from
all of the four questions.

**Hypothesis 13**

It was hypothesized that the TEST set of dependent variables would be more
useful than the DEMOG set of variables in differentiating between the three client
Groups. This hypothesis was supported by the finding that the set of variables
consisting of TEST scores was useful in differentiating between the three client
Groups while the sociodemographic (DEMOG) variables were not.
Hypothesis 14

It was hypothesized that the REPORT set of dependent variables would be more useful than the DEMOG set of variables in differentiating between clients who drop-out after intake vs. clients who continue in therapy. Since neither the Post-Session Client Report (REPORT) nor the sociodemographic (DEMOG) set of variables were useful in differentiating between clients who dropped-out of therapy after intake and those who continued in therapy, this hypothesis was not supported.

Discussion

The current study attempted to differentiate between: (a) clients who made an appointment for an intake interview but "quit" therapy before the scheduled intake session (Group One); (b) those who attended an intake interview but failed to attend additional scheduled sessions (Group Two); and (c) those who continued in therapy for at least one session beyond intake (Group Three).

Results showed that 5% of the clients in this study were in Group One. 23% of clients were in Group Two and 72% of clients were in Group Three. The percentage of clients in Group Two is comparable to that of other studies in university counselling centers which show client drop-out rates immediately after intake being between 19% and 25% (i.e. Epperson, Bushway, & Warman, 1983; Krauskopf et al., 1981).

Few studies have been conducted on those clients who drop-out before the
intake interview has been conducted, and these studies have been conducted in a variety of settings. Pre-intake drop-out rates from all studies found which report such rates are considerably higher than the 5% drop-out found in the current study. Trepka (1986) reported a pre-intake drop-out rate from a British private practice being 11% while Carpenter et. al., (1981) found that 34% of patients did not attend a scheduled intake interview at a medical center department of psychiatry. The one study found (Kirk & Frank, 1976) which examined pre-intake drop-out at a university counselling center found that 8.2% of men and 6.2% of women did not attend their scheduled intake session.

Studies conducted at community mental health centers also have reported rates much higher than those found in the current study. Orme and Boswell (1981) found approximately 34% of clients who scheduled an intake at a community mental health center did not attend the intake appointment, and Rock (1982) reported a 22% no-show rate for intakes at an urban community mental health center.

The variables used in the current study to examine differences between groups were of three types: sociodemographic (age at application, number of days waiting for intake, gender, and year in university), scores on tests completed upon application for services (The Global Severity Index of the SCL-90-R, the single score of the Beck Depression Inventory, the single score of the state anxiety subscale of the STAI, and the single score of the trait anxiety subscale of the STAI), and
client evaluations of therapy/therapist (using the Post-Session Client Report).

The demographic set of variables failed to differentiate between the three Groups in the main analysis. The finding that the number of days a client waited for an intake appointment was not related to premature client drop-out is consistent with other studies (Anderson, Hogg, & Magoon, 1987; Rodolfa, Rapaport, & Lee, 1983) conducted in university counselling centres. Client year of attendance at university was also found not to be related to drop out supporting similar findings by Anderson, Hogg, and Magoon (1987).

The initial finding that client gender was not related to client drop-out had also been reported by other researchers in a variety of settings (Krauskopf et al., 1981; Marsh et al., 1989; Orme & Boswell, 1991; Rodolfa et al., 1983). Younger age has been found to be a good predictor of client drop-out in some community settings (Carpenter et al., 1981; Lowe, 1982; Marsh et al., 1989) but was not initially found to be related to drop out in this study of university students (which had very little variability in ages for clients).

The post-hoc analyses revealed that age and gender were related to premature client drop-out, but only if the definition of drop-out included both clients who did not show for an intake as well as those who did not show for their first post-intake appointment (combined Groups One and Two). These findings highlight the importance of methodology in studying client attrition and supports the claim made
by Pekarik (1983) that clients who drop out at different points in the therapeutic process are probably acting for different reasons.

Responding to Mennicke, Lent, and Burgoyne's (1988) call that increased attention be given to variables which have meaning within the therapeutic context, the Post-Session Client Report was included in the analyses as a way to measure client impressions of the intake session and therapist. It was hypothesized that client evaluations of the intake session would be more favourable from those clients who returned for further sessions than from those clients who do not return following intake.

There was no significant difference between clients who dropped out following intake vs. those who continued with respect to client evaluations of either the therapist or the intake session itself. This suggests either that the Post-Session Client Report is not a good measure of client evaluations of either the intake session or the therapist, or that how the intake session itself is conducted and progresses has no impact upon a client's decision to return for further therapy.

The set of variables which did differ between Groups consisted of the test variables. Clients who dropped out of therapy before an intake was conducted had scores on the three measures of current distress (BDI, GSI, SAI) similar to those of clients who continued in therapy. Unexpectedly, women clients who dropped out immediately after attending intake had lower scores on BDI, GSI and SAI than both
those female clients who continued in therapy and those who dropped out before intake. The finding that TAI scores did not differentiate between client Groups is not surprising given that this is a relatively stable trait measure while the other three scores are measures of a client's current state of distress/symptomatology. The post-hoc analysis which combined Groups One and Two and compared them with Group Three did find that clients who continued in therapy had significantly higher TAI scores. It may be that continuers are more likely to stay in therapy because the chronic nature of their distress contributes to their determination to continue with therapy.

These findings suggest that, while there is no way to predict who will attend intake sessions, clients who score low on measures of current levels of distress/symptomatology may be more likely to prematurely drop out of therapy. One possible reason for this finding is that clients who are not in a great deal of distress attend the intake and then decide that therapy is not (or is no longer) needed for them. How many of these drop-outs fail to adequately resolve their problems remains to be determined.

The design of this study allowed for comparisons between groups of clients who dropped out of therapy at different points in the therapeutic process. Conclusions may be offered that post-intake drop-outs differ from both pre-intake drop-outs and continuers in degree of distress/symptomatology. As well, the
comparisons made between different combinations or definitions of premature client drop-out highlight the importance of methodology in affecting results in this area of study.

Limitations of this Study

Several limitations of this study should be acknowledged. First, there was a small number of subjects (n = 41) who applied for psychological services but failed to attend the intake interview. There exists the possibility that this study did not have a large enough number of participants in Group One to find significant differences between groups.

Second, a caveat must be made about the current study's use of an unvalidated instrument, the Post-Session Client Report. While no significant differences were found between the three groups with respect to scores on the Post-Session Client Report, this lack of differences may have been due to this instrument's lack of validity in measuring client evaluations of both the intake session and/or the therapist. It is possible that client evaluations of the therapist and/or the intake session were important factors affecting client drop-out, but the Post-Session Client Report was not sensitive enough to have found those differences which did exist between groups.

The problem of defining client drop-out is common to research in this area and this study also suffers from the self-imposed limitations that rigid definitions for
client groupings entails. The current study defined the three groups of clients based upon what may be seen as small differences between them; continuers are defined as having attended one session more than post-intake drop-outs while post-intake drop-out have attended only one session more than pre-intake drop-outs. The group of clients who are defined as being "continuers" in therapy may contain a significant number of clients who dropped-out immediately following their first post-intake therapy session. More wide-ranging definitions of client drop-out vs. continuers may yield different results.

Suggestions for Further Research

Given the widely varying ranges for pre-intake client drop-out reported in the literature, and the large differences which apparently exist in these rates for university counselling centers as compared to community and private practice settings, it may be useful to examine differences which exist between these settings that may contribute to premature client drop-out. Specifically, procedures administered upon application for psychological services may differ widely across settings and some of these may be factors influencing pre-intake drop out rates. Given that the 5% pre-intake drop-out rate found in the current study is substantially lower than any other rate found in the literature, the possibility that the procedure of administering a battery of psychological tests to clients upon application for services (an administrative policy that is extremely rare) may be a factor contributing to a
greater percentage of clients returning to attend the intake interview in the hopes of obtaining some information regarding their performance on the tests they completed.

Secondly, given that the Post-Session Client Report is an unvalidated instrument, the hypothesis that client evaluations of both the intake session and the therapist are factors related to client drop-out should not be abandoned. A study comparing groups using a standardized instrument may find differences which the Post-Session Client Report was not sensitive to.

The finding that clients in Group Two had lower scores than clients in both Groups One and Three on the three tests measuring current levels of distress requires some clarification regarding the reasons behind client attrition immediately following the intake interview. Did the low levels of distress clients reported experiencing upon taking the psychological tests get reduced to an insignificant level at some point before the first post-intake session? Alternative explanations for the data include the possibility that clients in Group Two were still experiencing significant distress, but that their level of distress was not great enough to give them the incentive to continue the therapeutic process once they had experienced a session for the first time.

It is disturbing to find that clients who do not attend the intake interview (Group One) have scores on the three tests similar to those who continue in therapy (Group Three). There exists the likelihood that some factors influencing client drop-
out at this early stage have not yet been examined. Since clients in Group One have scores on measures of distress/symptomatology similar to clients who continue in therapy for at least one session beyond the intake interview, it should be a priority for clinical researchers to attempt to define those factors which are keeping these clients from attending the intake interview.

It is clear that there is much that is left unknown regarding factors affecting premature client drop-out. Research investigating demographic variables has been contradictory and of questionable utility. Given the likelihood that unknown variables are influencing clients to drop out of therapy prematurely, it may be appropriate to conduct a study on client drop-out at various stages in the therapeutic process which is qualitative rather than quantitative. A study which asks clients who dropped out of therapy in the early stages of treatment to provide information regarding the reasons for their decision is fraught with ethical implications, but may provide new directions for further research in an area of great clinical importance which is suffering from a dearth of fruitful clinical research.
References


Appendix A

Symptom Checklist-90-Revised

Instructions

Below is a list of problems and complaints that people sometimes have. Please read each one carefully. After you have done so, please circle one of the numbers to the right that best describes HOW MUCH THAT PROBLEM HAS BOTHERED OR DISTRESSED YOU DURING THE PAST SEVEN DAYS INCLUDING TODAY.

0 = NOT AT ALL
1 = A LITTLE BIT
2 = MODERATELY
3 = QUITE A BIT
4 = EXTREMELY

1. Headaches .........................................................0 1 2 3 4
2. Nervousness or shakiness inside ..............................0 1 2 3 4
3. Repeated unpleasant thoughts that won’t leave your mind .........................................................0 1 2 3 4
4. Faintness or dizziness ..............................................0 1 2 3 4
5. Loss of sexual interest or pleasure.........................0 1 2 3 4
6. Feeling critical of others........................................0 1 2 3 4
7. The idea that someone else can
   control your thoughts.......................................0 1 2 3 4
8. Feeling others are to blame for
   most of your troubles......................................0 1 2 3 4
9. Trouble remembering things..................................0 1 2 3 4
10. Worried about sloppiness or carelessness..............0 1 2 3 4
11. Feeling easily annoyed or irritated........................0 1 2 3 4
12. Pains in heart or chest......................................0 1 2 3 4
13. Feeling afraid in open spaces or on the streets.......0 1 2 3 4
14. Feeling low in energy of slowed down....................0 1 2 3 4
15. Thoughts of ending your life...............................0 1 2 3 4
16. Hearing voices that other people do not hear..........0 1 2 3 4
17. Trembling.....................................................0 1 2 3 4
18. Feeling that most people cannot be trusted.............0 1 2 3 4
19. Poor appetite................................................0 1 2 3 4
20. Crying easily...............................................0 1 2 3 4
21. Feeling shy or uneasy with the opposite sex............0 1 2 3 4
22. Feeling of being trapped or caught......................0 1 2 3 4
23. Suddenly scared for no reason..........................0 1 2 3 4
24. Temper outbursts that you could not control......0 1 2 3 4
25. Feeling afraid to go out of your house alone........0 1 2 3 4
26. Blaming yourself for things.............................0 1 2 3 4
27. Pains in lower back........................................0 1 2 3 4
28. Feeling blocked in getting things done.............0 1 2 3 4
29. Feeling lonely..................................................0 1 2 3 4
30. Feeling blue....................................................0 1 2 3 4
31. Worrying too much about things.....................0 1 2 3 4
32. Feeling no interest in things.........................0 1 2 3 4
33. Feeling fearful................................................0 1 2 3 4
34. Your feelings being easily hurt.....................0 1 2 3 4
35. Other people being aware of
    your private thoughts......................................0 1 2 3 4
36. Feeling others do not understand you or
    are unsympathetic..........................................0 1 2 3 4
37. Feeling that people are unfriendly or dislike you...0 1 2 3 4
38. Having to do things slowly to ensure correctness...0 1 2 3 4
39. Heart pounding or racing................................0 1 2 3 4
40. Nausea or upset stomach..................................0 1 2 3 4
41. Feeling inferior to others

42. Soreness of your muscles

43. Feeling that you are watched or
talked about by others

44. Trouble falling asleep

45. Having to check and double-check what you do

46. Difficulty making decisions

47. Feeling afraid to travel on
buses, subways or trains

48. Trouble getting your breath

49. Hot or cold spells

50. Having to avoid certain things, places,
or activities because they frighten you

51. Your mind going blank

52. Numbness or tingling in parts of your body

53. A lump in your throat

54. Feeling hopeless about the future

55. Trouble concentrating

56. Feeling weak in parts of your body

57. Feeling tense or keyed up
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</thead>
<tbody>
<tr>
<td>58. Heavy feelings in your arms or legs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>59. Thoughts of death or dying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>60. Overeating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>61. Feeling uneasy when people are watching or talking about you</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>62. Having thoughts that are not your own</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>63. Having urges to beat, injure or harm someone</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>64. Awakening in the early morning</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>65. Having to repeat the same actions such as touching, counting, washing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>66. Sleep that is restless or disturbed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>67. Having urges to break or smash things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>68. Having ideas or beliefs that others do not share</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>69. Feeling very self-conscious with others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>70. Feeling uneasy in crowds, such as shopping or at a movie</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>71. Feeling everything is an effort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>72. Spells of terror or panic</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>73. Feeling uncomfortable about eating or drinking in public</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>
74. Getting into frequent arguments.................................0 1 2 3 4
75. Feeling nervous when you are left alone.......................0 1 2 3 4
76. Others not giving you proper credit
   for your achievements...........................................0 1 2 3 4
77. Feeling lonely even when you are with people..............0 1 2 3 4
78. Feeling so restless you couldn’t sit still....................0 1 2 3 4
79. Feelings of worthlessness......................................0 1 2 3 4
80. Feeling that something bad is
   going to happen to you........................................0 1 2 3 4
81. Shouting or throwing things....................................0 1 2 3 4
82. Feeling afraid you will faint in public.......................0 1 2 3 4
83. Feeling that people will take advantage
   of you if you let them.........................................0 1 2 3 4
84. Having thoughts about sex that bother you a lot............0 1 2 3 4
85. The idea that you should be
   punished for your sins.........................................0 1 2 3 4
86. Thoughts and images of a frightening nature................0 1 2 3 4
87. The idea that something serious is wrong
   with your body..................................................0 1 2 3 4
88. Never feeling close to another person.........................0 1 2 3 4
89. Feelings of guilt………………………………………………..0

90. The idea that something is wrong
    with your mind…………………………………………………..0
Appendix B

Beck Depression Inventory

Instructions

On this questionnaire are groups of statements. Please read each group carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Circle the number beside the statement you picked. Be sure to read all the statements in each group before making your choice.

1. 1. I do not feel sad.

   2. I feel sad

   3. I feel I have nothing to look forward to.

   4. I am so sad or unhappy that I can’t stand it.

2. 1. I am not particularly discouraged about the future.

   2. I feel discouraged about the future.

   3. I feel I have nothing to look forward to.

   4. I feel that the future is hopeless and that things cannot improve.
3. 1. I do not feel like a failure.
   2. I feel I have failed more than the average person.
   3. As I look back on my life, all I can see is a lot of failures.
   4. I feel I am a complete failure as a person.

4. 1. I get as much satisfaction out of things as I used to.
   2. I don’t enjoy things the way I used to.
   3. I don’t get real satisfaction out of anything anymore.
   4. I am dissatisfied or bored with everything.

5. 1. I don’t feel particularly guilty.
   2. I feel guilty a good part of the time.
   3. I feel quite guilty most of the time.
   4. I feel guilty all of the time.

6. 1. I don’t feel I am being punished.
   2. I feel I may be punished.
   3. I expect to be punished.
   4. I feel I am being punished.
7. 1. I don’t feel disappointed in myself.
   2. I am disappointed in myself.
   3. I am disgusted with myself.
   4. I hate myself.

8. 1. I don’t feel I am any worse that anybody else.
   2. I am critical of myself for my weaknesses or mistakes.
   3. I blame myself all the time for my faults.
   4. I blame myself for everything bad that happens.

9. 1. I don’t have any thoughts of killing myself.
   2. I have thoughts of killing myself, but I would not carry them out.
   3. I would like to kill myself.
   4. I would kill myself if I had the chance.

10. 1. I don’t cry any more than usual.
    2. I cry more now than I used to.
    3. I cry all the time now.
    4. I used to be able to cry, but now I can’t cry even though I want to.
11. 1. I am no more irritated now that I ever am.
     2. I get annoyed or irritated more easily than I used to.
     3. I feel irritated all the time now.
     4. I don’t get irritated at all by the things that used to irritate me.

12. 1. I have lost interest in other people.
     2. I am less interested in other people than I used to be.
     3. I have lost most of my interest in other people.
     4. I have lost all of my interest in other people.

13. 1. I make decisions about as well as I ever could.
     2. I put off making decisions more than I used to.
     3. I have greater difficulty in making decisions than before.
     4. I can’t make decisions at all anymore.

14. 1. I don’t feel I look any worse than I used to.
     2. I am worried that I am looking old or unattractive.
     3. I feel that there are permanent changes in my appearance that make me
        look unattractive.
     4. I believe that I look ugly.
15. 1. I can work about as well as before.

2. It takes an extra effort to get started at doing something.

3. I have to push myself very hard to do anything.

4. I can't do any work at all.

16. 1. I can sleep as well as usual.

2. I don't sleep as well as I used to.

3. I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

4. I wake up several hours earlier than I used to and cannot get back to sleep.

17. 1. I don't get more tired than usual.

2. I get tired more easily than I used to.

3. I get tired from doing almost anything.

4. I am too tired to do anything.

18. 1. My appetite is no worse than usual.

2. My appetite is not as good as it used to be.

3. My appetite is much worse now.

4. I have no appetite at all anymore.
19. 1. I haven't lost much weight, if any, lately.
   2. I have lost more than 5 pounds.
   3. I have lost more than 10 pounds.
   4. I have lost more than 15 pounds.

20. 1. I am nor more worried about my health than usual.
   2. I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
   3. I am very worried about physical problems and it's hard to think of much else.
   4. I am so worried about my physical problems that I cannot think about anything else.

21. 1. I have not noticed any recent change in my interest in sex.
   2. I am less interested in sex than I used to be.
   3. I am much less interested in sex now.
   4. I have lost interest in sex completely.
Appendix C

STAI FORM X-I

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

1 = NOT AT ALL

2 = SOMEWHAT

3 = MODERATELY SO

4 = VERY MUCH SO

1. I feel calm ................................................................. 1 2 3 4
2. I feel secure ............................................................. 1 2 3 4
3. I am tense ................................................................ 1 2 3 4
4. I am regretful ............................................................. 1 2 3 4
5. I feel at ease .............................................................. 1 2 3 4
6. I feel upset ................................................................. 1 2 3 4
<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>I am presently worrying over possible misfortunes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>I feel rested</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>I feel anxious</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>I feel comfortable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>I feel self-confident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>I feel nervous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>I am jittery</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>I feel &quot;high strung&quot;</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>I am relaxed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>I feel content</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>I am worried</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>I feel over-excited and &quot;rattled&quot;</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>I feel joyful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>I feel pleasant</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
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</table>
Appendix C (cont.)

STAI FORM X-2

DIRECTIONS: A number of statements which people have used to
describe themselves are given below. Read each statement and then
blacken in the appropriate circle to the right of the statement to indicate
how you generally feel. There are no right or wrong answers. Do not
spend too much time on any one statement but give the answer which
seems to describe how you generally feel.

1 = ALMOST NEVER

2 = SOMETIMES

3 = OFTEN

4 = ALMOST ALWAYS

21. I feel pleasant......................................................... 1 2 3 4

22. I tire quickly............................................................. 1 2 3 4

23. I feel like crying......................................................... 1 2 3 4

24. I wish I could be as happy as others seem to be............ 1 2 3 4

25. I am losing out on things because I can't make up my
mind soon enough...................................................... 1 2 3 4
26. I feel rested.............................................................. 1 2 3 4
27. I am "calm, cool, and collected"................................. 1 2 3 4
28. I feel that difficulties are piling up so that I cannot
   overcome them .................................................... 1 2 3 4
29. I worry too much over something that really doesn't
   matter .................................................................. 1 2 3 4
30. I am happy ................................................................ 1 2 3 4
31. I am inclined to take things hard .................................. 1 2 3 4
32. I lack self-confidence .............................................. 1 2 3 4
33. I feel secure ........................................................... 1 2 3 4
34. I try to avoid facing a crisis or difficulty ..................... 1 2 3 4
35. I feel blue ................................................................ 1 2 3 4
36. I am content ........................................................... 1 2 3 4
37. Some unimportant thought runs through my mind
   and bothers me ...................................................... 1 2 3 4
38. I take disappointments so keenly that I can't put them
   out of my mind ...................................................... 1 2 3 4
39. I am a steady person ............................................... 1 2 3 4
40. I get in a state of tension or turmoil as I think over
   my recent concerns and interests ........................... 1 2 3 4
Appendix D
POST-SESSION CLIENT REPORT

Circle the answer which best applies to each question

A. DO YOU THINK THE SESSION YOU JUST COMPLETED WAS

1. Excellent
2. Very good
3. Pretty good
4. Fair
5. Poor

B. HOW WELL DID YOUR THERAPIST SEEM TO UNDERSTAND WHAT YOU WERE FEELING AND THINKING THIS SESSION?

My Therapist:
1. Understood exactly how I thought and felt
2. Understood very well how I thought and felt
3. Understood pretty well, but there were some things she didn’t seem to grasp
4. Didn’t understand too well how I thought and felt
5. Misunderstood how I thought and felt

C. HOW HELPFUL DO YOU FEEL YOUR THERAPIST WAS TO YOU THIS SESSION?

1. Very helpful
2. Pretty helpful
3. Somewhat helpful
4. Slightly helpful
5. Not at all

D. HOW MUCH PROGRESS DO YOU FEEL YOU ARE MAKING?

1. A great deal of progress
2. Considerable progress
3. Moderate progress
4. Some progress
5. Didn’t get anywhere
Appendix E

Means and Standard Deviations for Clients in Group One for all Variables (n = 41)

<table>
<thead>
<tr>
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<th>M</th>
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<td>20.95</td>
<td>12.06</td>
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<tr>
<td>GSI</td>
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<td>1.35</td>
<td>0.73</td>
</tr>
<tr>
<td>SAI</td>
<td>41</td>
<td>58.73</td>
<td>10.63</td>
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<tr>
<td>TAI</td>
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</tr>
<tr>
<td>AGE</td>
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<td>22.12</td>
<td>3.10</td>
</tr>
<tr>
<td>DAY</td>
<td>29</td>
<td>6.10</td>
<td>4.14</td>
</tr>
<tr>
<td>GENDER</td>
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<td>1.66</td>
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<tr>
<td>U-YEAR</td>
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<td>2.44</td>
<td>1.12</td>
</tr>
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</table>

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; DAYS = days from application to scheduled intake; U-YEAR = year in University.
Appendix F

Means and Standard Deviations for Clients in Group Two for all Variables (n = 196)

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<tr>
<td>GSI</td>
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<td>0.65</td>
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<tr>
<td>SAI</td>
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<td>51.85</td>
<td>13.14</td>
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<tr>
<td>TAI</td>
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<td>48.57</td>
<td>12.57</td>
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<tr>
<td>PSCR</td>
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<td>8.93</td>
<td>2.54</td>
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<td>0.75</td>
</tr>
<tr>
<td>PSCR2</td>
<td>97</td>
<td>1.85</td>
<td>0.62</td>
</tr>
<tr>
<td>PSCR3</td>
<td>97</td>
<td>1.81</td>
<td>0.93</td>
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<td>PSCR4</td>
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<td>3.09</td>
<td>1.03</td>
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<td>5.12</td>
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<td>DAY</td>
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<td>6.46</td>
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<td>0.48</td>
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<td>U-YEAR</td>
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<td>2.20</td>
<td>1.31</td>
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</table>

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; PSCR = Total score of questions on Post-Session Client Report; PSCR1 = question 1 of the Post-Session Client Report; PSCR2 = question 2 of the Post-Session Client Report; PSCR3 = question 3 of the Post-Session Client Report; PSCR4 = question 4 of the Post-Session Client Report; DAYS = days from application to scheduled intake; U-YEAR = year in University.
Appendix G

Means and Standard Deviations for Clients in Group Three for all Variables (n=618)

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<td>GSI</td>
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<tr>
<td>PSCR2</td>
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<td>0.55</td>
</tr>
<tr>
<td>PSCR3</td>
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<td>1.86</td>
<td>0.84</td>
</tr>
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<td>PSCR4</td>
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<td>U-YEAR</td>
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BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; PSCR = Total score of questions on Post-Session Client Report; PSCR1 = question 1 of the Post-Session Client Report; PSCR2 = question 2 of the Post-Session Client Report; PSCR3 = question 3 of the Post-Session Client Report; PSCR4 = question 4 of the Post-Session Client Report; DAYS = days from application to scheduled intake; U-YEAR = year in University.
Appendix H

**MANOVA summary with Univariate Effects for DEMOG Variables by Group**

(n=779)

<table>
<thead>
<tr>
<th>Variable</th>
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<th>$F$</th>
<th>Multivariate $F$</th>
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<td>U-YEAR</td>
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*Note. Multivariate $F$ ratio is based on Wilks’ Lambda.*

* DAYS = days from application to scheduled intake; U-YEAR = year in University*
### Appendix 1

**ANOVA Results of Post-Session Client Report by Group (n=497)**

<table>
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<th>Source of Variance</th>
<th>Df</th>
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<tr>
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<td>0.002</td>
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<td>Within Groups</td>
<td>496</td>
<td>0.319</td>
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<td>Question 3</td>
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<tr>
<td>Within Groups</td>
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<td>Question 4</td>
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<tr>
<td>Total PSCR</td>
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<tr>
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<td>0.002</td>
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<tr>
<td>Within Groups</td>
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Appendix J

MANOVA summary with Univariate Effects for Test scores and Sociodemographic

Variables by Group (Male Clients Only) (n=229)

<table>
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<tr>
<th>Variable</th>
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Note. Multivariate F ratios are based on Wilks' Lambda.

*p < .05

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; DAYS = days from application to scheduled intake; U-YEAR = year in University
Appendix K

MANOVA summary with Univariate Effects for Test scores and Sociodemographic Variables by Group (Women Clients Only) (n=571)

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
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<th>Multivariate F</th>
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</thead>
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<td>7.15**</td>
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<td>6.72**</td>
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Note. Multivariate F ratios are based on Wilks’ Lambda.

*p < .05; **p < .001

BDI = Beck Depression Inventory; GSI = Global Severity Index on SCL-90-R; SAI = state anxiety subscale of the State-Trait Anxiety Inventory; TAI = trait anxiety subscale of the State-Trait Anxiety Inventory; DAYS = days from application to scheduled intake; U-YEAR = year in University
VITA AUCTORIS

Craig Alexander Healey was born on Oct. 15, 1968 in Hamilton, Ontario. In June 1986, he received his High School Diploma from Notre Dame College School. He continued his studies at Brock University in St. Catharines, Ontario, where he graduated with a Bachelor of Arts degree (honours psychology) in June, 1994. Since the fall of 1995, he has been enrolled in the Doctoral programme in Clinical Psychology at the University of Windsor. He obtained a Master of Arts degree in the fall of 1997 from the University of Windsor.