Report of The Research Consortium
of Counseling and Psychological Services in Higher Education

Part 2

The Pilot Project:

"Nature and Severity of College Students' Counseling Concerns"

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For several years now, college and university counseling center personnel have expressed concern about the rising level of psychopathology encountered among their clientele. While there are some empirical studies which focus on college students' psychological symptoms (e.g., Cochran & Hale, 1985; Johnson, Ellison & Heikkinen, 1989), no nation–wide baseline data have been collected using standardized methods. Thus, it has not been possible to assess the changing severity of college students' mental health concerns over time across a wide cross-section of institutions. At most, only local campus data have been available.

The pilot project was intended to establish the first effort at collecting data on the nature and severity of college students' counseling concerns using a standardized methodology. Over a series of three consortium meetings in March, April, and October, 1990, a measurement instrument was developed: the "Counseling Concerns Survey." This optical scan booklet was comprised of four sections: (1) a demographic section containing such information as age, ethnicity/race, gender, GPA, academic classification, and major; (2) a 42-item "Presenting Problems" list containing both personal and academic concerns; (3) the 53–item "Brief Symptom Inventory" which is the brief version of the Symptom Checklist–90 (SCL–90); and (4) an 18–item "Family Experiences" list containing various dysfunctional family history characteristics. (See sample booklet in the appendix.)

A standardized administration schedule and procedure were also developed. Each counseling center was asked to give the survey to every student coming for an initial intake appointment during the second week of every month from January through December, 1991. Due to variations in academic calendars across the member institutions, there was some variability in the actual week of each month that the survey was distributed. In a small number of cases, the survey was administered either the first or third week of the month depending on holiday schedules, end-of-term dates, and so on.

Before the intake session, students were given a consent form drafted by each center which met local Institutional Review Board requirements. (See sample consent form in the appendix used by The University of Texas at Austin.) If a client elected to participate, he or she then filled out the survey and handed it in to the receptionist. Some centers chose to review the responses later as part of their own treatment planning processes. Most, however, simply forwarded the booklets on for scanning without any such review. A total of 31 centers participated in the pilot project. (See list in the appendix.)

Since there was likely to be a good deal of variation in the types of counseling services offered at each center and staffing patterns, it was considered important to obtain information about each agency. For example, one could hypothesize that those centers which had psychiatrists on their staff might draw students with more severe psychopathology than those which did not. Thus, a mediating factor in severity presented by clients would be the nature of the services provided by the center in question. A fact sheet was sent to each center asking for a variety of organizational information for later analysis (see sample in the appendix). Centers were categorized according to four types: those which offered a combination of services including personal counseling, career counseling, learning assistance, etc., but which had no psychiatric services; those which offered combined services along with psychiatric services; those which offered only personal counseling services but did not include psychiatric services; and those which offered only personal counseling, along with psychiatric services.

The University of Texas at Austin Measurement and Evaluation Center provided scanning and data storage and analysis services for The Research Consortium. Mid-year and end-of-the year data reports were

distributed and discussed at The Research Consortium meetings in October, 1991, and April and October, 1992. The remainder of this monograph highlights the findings from those reports.

PLEASE NOTE: Approximately 2900 booklets were scanned. Since not everyone answered all items, the totals listed in the tables below do not always equal the grand total.

Section I: Demographics

As noted earlier the first section of the Counseling Concerns Survey contained a variety of demographic items. Also, four questions were posed about previous psychological counseling, current or past use of prescribed psychotropic medication, and the presence of a physical and/or mental disability. These items were considered important in ascertaining current and past history of psychologically–oriented problems. Data were analyzed by gender and ethnicity/race. Since no discernible differences were found by classification and major, no data are presented using these variables. Tables 1—16 summarize the demographic characteristics of the sample.

Table 1–Percentages of Gender X Classification   **(Numbers in parentheses are actual counts.)**

	Freshman	Sophomore	Junior	Senior	Graduate	Special	Total
Male	13.7 (114)	18.3 (152)	19.6 (163)	24.8 (206)	21.9 (182)	1.57 (13)	32.5 (830)
Female	16.0 (275)	19.1 (329)	20.6 (355)	23.3 (401)	19.7 (340)	1.0 (18)	67.4 (1718)
Total	15.2 (389)	18.8 (481)	20.3 (518)	23.8 (607)	20.4 (522)	1.2 (31)	100 (2548)

Table 2–Gender X Ethnicity (%)

	African-Am	Asian-Am	Hisp-Am	Alaskan/AI	White	Int	Total
Male	2.4 (20)	3.3 (27)	6.3 (52)	0 (0)	84.6 (691)	3.1 (26)	32.6 (816)
Female	5.2 (89)	3.0 (52)	6.1 (103)	0.2 (4)	82.5 (1393)	2.7 (46)	67.4 (1687)
Total	4.3 (109)	3.1 (79)	6.1 (155)	.16 (4)	83.2 (2084)	2.8 (72)	100 (2503)
*National	8.9	4.0	5.5	0.7	77.9	2.9	

*Data cited in The Chronicle of Higher Education, 1990 Enrollment

Table 3–Means & S.D. ( ) for Age: Gender X Ethnicity

	African Am	Alaskan/AI	Asian Am	Int	Hisp	White
Male	21.8 (3.9)		21.7 (3.2)	25.1 (4.9)	23.2 (5.6)	23.4 (5.7)
Female	21.7 (5.7)	30.3 (11.5)	21.7 (5.3)	26.2 (11.0)	23.0 (8.6)	22.8 (5.7)

Table 4—Means & S.D. ( ) for GPA: Gender X Ethnicity

	African Am	Alaskan/AI	Asian Am	Int	Hisp	White
Male	2.07 (0.97)		2.92 (0.66)	3.10 (1.08)	2.73 (0.77)	2.74 (0.95)
Female	2.35 (0.90)	2.72 (0.59)	2.71 (0.96)	2.99 (0.97)	2.38 (1.17)	2.77 (1.03)

Table 5—Gender X Previous Psychological Counseling *($p < .001$) (%)

	No	Yes	Total
Male	58.7	41.2	32.0
Female	50.8	49.1	67.9
Total	53.3	46.6	100.0

*Significantly more females reported previously receiving psychological counseling.

Table 6—Gender X Current Use of Psychotropic Medication (%)

	No	Yes	Total
Male	95.5	4.4	32.2
Female	95.5	4.9	67.8
Total	95.2	4.8	100.0

Table 7—Gender X Previous Use of Psychotropic Medication (%)

	No	Yes	Total
Male	91.4	8.5	32.0
Female	89.7	10.3	67.9
Total	90.2	9.7	100.0

Table 8—Gender X Physical/Mental Disability *($p < 0.05$) (%)

	No	Yes	Total
Male	90.4	9.5	32.1
Female	92.8	7.1	67.8
Total	92.0	7.9	100.0

*Significantly more males reported the presence of a physical and/or mental disability.

Table 9–Ethnicity X Classification (%)

	Freshman	Soph.	Junior	Senior	Graduate	Spec	Total	*National
Afr.-Am	19.5	17.9	17.9	32.0	10.9	1.5	4.7	8.9
Asian-Am	13.9	17.4	27.9	25.5	13.9	1.1	3.1	4.0
Hisp.-Am	20.3	17.4	24.4	19.1	18.0	0.58	6.3	5.5
Al. / AI	0.0	20.0	20.0	40.0	20.0	0.0	0.18	0.7
White	13.7	18.9	21.2	24.8	20.1	1.1	82.5	77.9
Int	8.4	12.0	15.6	19.2	43.3	1.2	3.0	2.9
Total	14.2	18.5	21.3	24.6	20.0	1.1	100.0	

*Data cited in The Chronicle of Higher Education, 1990 Enrollment

Table 10–Ethnicity X Previous Psychological Counseling (%) *($p < .001$)

	African-Am	Asian-Am	Hisp-Am	Alaskan/AI	White	Int	Total
No	71.9	67.5	61.7	50.0	51.8	58.7	54.1
Yes	28.1	32.5	38.2	50.0	48.1	41.2	45.8
Total	4.7	3.1	6.1	0.2	82.6	3.1	100.0

*Using chi-square analysis, significantly more Whites reported previous psychological counseling. Though Alaska Native/American Indian and International students might also seem to contribute to the significance, the numbers of students in these cells are very small, thus affecting the validity of the analyses. In most of the subsequent tables, these ethnic/racial categories, along with Asian-Americans, were collapsed into an "Other" category to control for insufficient numbers in the chi-square analyses cells.

Table 11–MALES X Ethnicity X Previous Counseling(%) *($p < .01$)

	African-Am	Hisp-Am	White	Other
No	83.3	75.0	57.4	65.3
Yes	16.7	25.0	42.6	34.7

*Significantly more White males reported receiving previous psychological counseling followed by "Other", Hispanics, and African-Americans.

Table 12–FEMALES X Ethnicity X Previous Counseling(%) *(p < .001)

	African-Am	Hisp-Am	White	Other
No	68.6	58.9	48.8	61.2
Yes	31.4	41.1	51.2	38.8

*Significantly more White Females reported receiving previous psychological counseling followed by Hispanics, "Other," and African Americans..

Table 13–Ethnicity X Currently Using Psychotropic Medication (%)

	African-Am	Asian-Am	Hisp-Am	Alaskan/AI	White	Int	Total
No	98.3	97.5	94.9	100.0	95.0	95.0	95.3
Yes	1.6	2.5	5.0	0.0	4.9	5.0	4.6
Total	4.7	3.1	6.2	0.23	82.5	3.1	100.0

Table 14–Ethnicity X Previous Use of Psychotropic Medication (%)

	African-Am	Asian-Am	Hisp-Am	Alaskan/AI	White	Int	Total
No	96.6	95.0	93.7	83.3	89.8	90.0	90.5
Yes	3.3	5.0	6.2	16.6	10.1	10.0	9.4

Table 15–FEMALES X Ethnicity X Previous Use of Psychotropic Med.(%) *(p < .05)

	African-Am	Hisp-Am	White	Other
No	96.5	93.5	88.8	92.9
Yes	3.5	6.5	11.2	7.1

*Significantly more White females indicated that psychotropic medication had been previously prescribed, followed by "Other," Hispanics, and African Americans.

Table 16–Ethnicity X Physical/Mental Disability (%)

	African-Am	Asian-Am	Hisp-Am	Alaskan/AI	White	Int	Total
No	94.1	92.3	93.0	66.6	91.9	92.3	92.0
Yes	5.8	7.6	6.9	33.3	8.0	7.6	7.9

Section II: Presenting Problems

When the Counseling Concerns Survey Booklet was being designed, members of the Consortium were asked to submit presenting problems lists which appeared in their intake forms. About 15 centers submitted materials for review. A list of 41 items was constructed which represented the most frequently cited items, involving both personal and academic problems. An "Other" item (#42) was also included, but this did not yield any useful data. Subjects rated the "current amount of distress" experienced in regard to each problem on a five–point scale (0 = not at all; 4 = extremely) and the "duration of concern" for each item on a six–point scale (1 = less than a week; 6 = over three years). Tables 17–41 present major findings regarding presenting problems.

Table 17 –Most highly endorsed presenting problems (as defined by the criterion of 25% or more of the sample marking the items as either "3" = Quite a bit of distress or "4" = Extremely distressed).

Males

1	Academic/ school work/ grades
4	Anxiety, fear, worries, nervousness
6	Breakup/ loss of relationship
7	Concentration
9	Dating Concerns
11	Decisions about career/ major
12	Depression
16	Finances
23	Procrastination/ getting motivated
28	Relationships with romantic partner/spouse
30	Self-esteem/ self-confidence
36	Stress Management
40	Uncertain about future/ life after college

Females

1	Academic/ school work/ grades
4	Anxiety, fear, worries, nervousness
6	Breakup/ loss of relationships
7	Concentration
11	Decisions about career/ major
12	Depression
16	Finances
18	Irritability
20	Perfectionism
23	Procrastination/ getting motivated
26	Relationship with family/ parents/ siblings
28	Relationship with romantic partner/ spouse
30	Self-esteem/ self-confidence
36	Stress management
40	Uncertain about future/ life after college
41	Weight problems/ body image

Table 18–Gender Differences X Amount of Distress in Presenting Problems

Females indicated significantly greater amounts of distress on the following items :

2   Adjustment to the university/college
4   Anxiety, fear, worries, nervousness
10   Death or impending death of significant person
12   Depression
13   Developing independence from family
15A Bingeing and vomiting/dieting
15B Fasting/avoidance of food
16   Finances
17   Homesickness
18   Irritability, anger, hostility
20   Perfectionism
21   Physical health problems
22   Problem pregnancy
24   Rape/sexual assault
26   Relationship with family/parents/siblings
27   Relationship with friends/roommate/peers
28   Relationship with romantic partner/spouse
30   Self-esteem/self-confidence
35   Sleeping problem
36   Stress management
38   Test anxiety/speech, performance anxiety
41   Weight problem/body image

Males indicated significantly greater amounts of distress on the following items :

3   Alcohol
31   Sexual concerns
32   Sexual identity/orientation issues
34   Shyness, being ill at ease with people
39   Time management.

Table 19 – Gender Differences X Duration (Chronicity) of Problem

Males indicated significantly longer duration of distress on these items:

7   Concentration
8   Confusion about beliefs/values
9   Dating Concerns
11   Decisions about career/major
12   Depression
14   Ethnic/racial discrimination
16   Finances
18   Irritability, anger, hostility
19   Making friends
23   Procrastination/getting motivated
25   Reading/study skills problems
27   Relationship with friends/roommate/peers
29   Religious/spiritual concerns
31   Sexual concerns
32   Sexual identity/orientation issues

33   Sexually transmitted diseases
38   Test anxiety/speech and performance anxiety
39   Time management
40   Uncertain about future/life after college

Females indicated significantly longer duration of distress on these items:

2   Adjustment to the university/college
15A   Bingeing and vomiting/dieting/using laxatives
15B   Fasting/avoiding food
28   Relationship with romantic partner/spouse
30   Self-esteem/self-confidence

Factor Analysis of Presenting Problems

Factor analysis of the forty-two presenting problems (including "Other"), using principal components in promax rotation, yielded ten meaningful factors and seven factors which were composed primarily of individual variables. Each of these seven presenting problems are only mildly (generally $r < .15$) correlated with any other presenting problems, so they were removed from the analysis and listed as "Specific Life Issues." A second factor analysis of the thirty-five moderately–to–highly intercorrelated presenting problems, using the same principal components methodology in promax rotation, accounted for 60% of the variance using the ten factor solution.

Although several methods were undertaken, including common factor analysis and varimax rotations of both common and principal components analyses, the current approach yielded the most meaningful results. It should be noted that three of the factors in the preferred solution contain only two presenting problems. A review of the correlation matrix corroborates that these three sets of variables are highly correlated with each other and only moderately correlated with other presenting problems.

In addition, the fact that all of the presenting problems on this questionnaire are positively intercorrelated could be used to support a one factor solution, and in fact, all factor analyses conducted yielded one factor with a large eigenvalue and a series of factors with much lower eigenvalues, trailing off into insignificance. This single factor solution is most likely a measure of "Distress" and does not provide a meaningful understanding of these presenting problems. The preferred solution includes all factors with an eigenvalue greater than one.

Factor 1: Study Skills, Time Management, Procrastination, Academic Problems, and Concentration (12% of variance)

Factor 2: Shyness, Making Friends, Assertiveness, Self-Esteem, Friendships (12%)

Factor 3: Sleeping Problems, Depression, Suicidality, Physical Health, Irritability/ Anger (12%)

Factor 4: Perfectionism, Anxiety, Stress Management, Test Anxiety (12%)

Factor 5: Bulimia, Anorexia, Weight/ Body Image (7%)

Factor 6: Sexual Orientation, Sexual Concerns, Religious/ Spiritual, Beliefs/ Values (8%)

Factor 7: Breakup, Romantic Partner, Dating Concerns (8%)

Factor 8: Family Relationships, Autonomy (10%)

Factor 9: Career/ Major, Life After College (9%)

Factor 10: Homesickness, Adjustment to College (7%)

Uncorrelated Presenting Problems: Alcohol/ Drugs, Death of Significant Person, Discrimination, Finances, Problem Pregnancy, Sexual Assault, Sexually Transmitted Disease(s), Other

Presenting Problems By Time of Year

The following tables present percentages of student-clients endorsing "Extremely" (level of distress) for each of the listed presenting problems across three academic periods: Spring, Summer and Fall, 1991.

Table 20–Academic Concerns (Factor 1)

Content	Spring '91	Summer '91	Fall '91	Total
Study Skills	7.5	4.7	6.9	6.9
Time Management	8.9	8.7	11.0	9.7
Procrastination	17.4	11.8	18.4	17.1
Academic	17.2	19.2	21.7	19.2
Concentration	11.5	11.7	15.9	13.2

Table 21–Interpersonal Concerns (Factor 2)

Content	Spring '91	Summer '91	Fall '91	Total
Shyness	6.9	6.8	7.0	6.9
Making Friends	5.6	6.0	5.4	5.6
Assertiveness	4.2	4.6	5.2	4.6
Self-esteem	21.5	21.6	22.8	22.0
Friendships	8.6	7.7	8.0	8.2

Table 22–Depression (Factor 3)

Content	Spring '91	Summer '91	Fall '91	Total
Sleeping Problems	6.7	5.2	9.7	7.7
Depression	18.4	17.2	20.0	18.9
Suicidality	3.7	4.5	3.5	3.7
Physical Health	5.6	4.8	8.1	6.4
Irritability/ Anger	9.1	10.0	8.4	8.9

Table 23–Anxiety (Factor 4)

Content	Spring '91	Summer '91	Fall '91	Total
Perfectionism	9.7	11.8	9.5	9.9
Anxiety	19.2	23.2	22.0	20.8
Stress Management	14.8	19.4	19.9	17.3
Test Anxiety	9.2	8.6	11.2	9.9

Table 24–Eating Disorders (Factor 5)

Content	Spring '91	Summer '91	Fall '91	Total
Bulimia	5.6	3.3	4.2	4.8
Anorexia	3.4	3.8	3.6	3.5
Weight/ Body Image	15.4	11.5	14.0	14.4

Table 25–Sexual Concerns (Factor 6)

Content	Spring '91	Summer '91	Fall '91	Total
Sexual Orientation	2.5	5.2	3.0	3.0
Sexual Concerns	6.8	7.4	7.7	7.2
Religious/ Spiritual	3.2	3.2	3.4	3.3
Beliefs/ Values	6.4	9.8	7.3	7.1

Table 26–Problems in Romantic Relationship (Factor 7)

Content	Spring '91	Summer '91	Fall '91	Total
Breakup	18.8	19.4	19.8	19.3
Romantic Partner	22.7	22.3	22.5	22.6
Dating Concerns	10.0	10.8	9.9	10.1

Table 27–Relationship with Family (Factor 8)

Content	Spring '91	Summer '91	Fall '91	Total
Family Relationships	13.3	15.3	14.4	14.0
Autonomy	7.0	11.5	5.9	7.1

Table 28–Concerns About The Future (Factor 9)

Content	Spring '91	Summer '91	Fall '91	Total
Career/ Major	14.4	15.8	16.0	15.2
Life After College	18.5	18.7	22.6	20.1

Table 29–Adjustment to College (Factor 10)

Content	Spring '91	Summer '91	Fall '91	Total
Homesickness	1.7	2.5	4.4	2.8
Adjustment to College	4.1	6.4	5.8	5.0

Table 30–Specific Life Issues
(Presenting Problems with Low Correlations to other Presenting Problems)

Content	Spring '91	Summer '91	Fall '91	Total
Alcohol/ Drugs	1.5	2.6	2.2	1.9
Death of SO	8.0	6.4	6.6	7.3
Discrimination	0.9	2.6	1.3	1.0
Finances	14.5	17.4	16.8	15.7
Problem Pregnancy	1.3	0.6	1.6	1.3
Sexual Assault	3.4	2.9	5.1	4.0
STDs	2.0	3.0	1.8	2.0
Other	0.0	0.0	0.0	0.0

Presenting Problems By Ethnicity

The following tables present percentages of student-clients endorsing "Extremely" (level of distress) for each of the listed presented problems.[1] [2]

Table 31–Academic Issues (Factor 1)

Content	African-American	Hispanic	White	Total
Study Skills	10.6	13.2	5.9	6.7***
Time Management	14.9	16.7	8.3	9.2***
Procrastination	24.1	21.5	15.9	16.8
Academic	23.7	25.6	18.0	18.8
Concentration	19.8	18.6	12.0	12.9**

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 32–Interpersonal Concerns (Factor 2)

Content	African-American	Hispanic	White	Total
Shyness	5.6	8.1	6.9	6.9
Making Friends	5.4	3.8	5.8	5.6
Assertiveness	9.8	8.2	3.8	4.4**
Self-esteem	17.9	21.8	22.4	22.1
Friendships	8.7	6.3	8.6	8.4

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 33–Depression (Factor 3)

Content	African-American	Hispanic	White	Total
Sleeping Problems	9.6	12.4	6.8	7.3
Depression	23.7	22.4	18.4	19.0
Suicidality	8.9	4.5	3.2	3.6*
Physical Health	11.3	3.8	6.6	6.7
Irritability/ Anger	14.7	9.8	8.6	9.0

* $p < .05$, ** $p < .01$, *** $p < .001$

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[1] Valid percents (based on number of client-students responding to each item) are used for all presenting problems, including the "Other" category, in this section.

[2] Because the "n" per cell is limited in this section, significance levels are provided. Significance levels come from chi-squared analyses crossing ethnicity with level of distress. For simplicity, only the percentage of student-clients endorsing "Extremely" (distressing) are presented here.

Table 34–Anxiety (Factor 4)

Content	African-American	Hispanic	White	Total
Perfectionism	16.4	7.0	9.5	9.7
Anxiety	27.1	25.7	19.5	20.3
Stress Management	18.1	18.2	17.1	17.2
Test Anxiety	16.4	13.0	9.1	9.7*

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

Table 35–Eating Disorders (Factor 5)

Content	African-American	Hispanic	White	Total
Bulimia	4.5	3.4	5.1	5.0
Anorexia	4.8	5.0	3.4	3.5
Weight/ Body Image	12.5	11.9	15.3	14.9

Table 36–Sexual Concerns (Factor 6)

Content	African-American	Hispanic	White	Total
Sexual Orientation	3.6	2.5	3.3	3.3
Sexual Concerns	11.7	8.2	7.1	7.4
Religious/ Spiritual	9.7	5.8	2.7	3.3***
Beliefs/ Values	10.5	11.9	6.6	7.2

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

Table 37–Problems in Romantic Relationship (Factor 7)

Content	African-American	Hispanic	White	Total
Breakup	19.3	19.9	18.9	19.0
Romantic Partner	24.8	24.5	22.1	22.4
Dating Concerns	15.8	11.3	10.1	10.4

Table 38–Relationship with Family (Factor 8)

Content	African-American	Hispanic	White	Total
Family Relationships	13.8	14.5	14.2	14.2
Autonomy	9.8	8.2	6.8	7.1

Table 39–Concerns About The Future (Factor 9)

Content	African-American	Hispanic	White	Total
Career/ Major	22.8	14.3	15.1	15.4
Life After College	22.3	24.1	19.6	20.0

Table 40–Adjustment to College (Factor 10)

Content	African-American	Hispanic	White	Total
Homesickness	2.7	8.2	2.3	2.7***
Adjustment to College	4.3	9.4	4.6	4.9*

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

Table 41–Specific Life Issues
(Presenting Problems with Low Correlations to other Presenting Problems)

Content	African-American	Hispanic	White	Total
Alcohol/ Drugs	2.7	1.9	3.2	2.0**
Death of SO	7.1	7.0	7.5	7.4
Discrimination	6.3	1.3	0.4	0.7***
Finances	25.6	25.8	14.4	15.8***
Problem Pregnancy	0.9	1.3	1.3	1.3
Sexual Assault	2.7	5.2	3.9	3.9
STDs	4.6	2.5	1.8	2.0
Other	20.0	4.0	7.2	7.7

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

Section III: Brief Symptom Inventory (BSI)

From the beginning, the use of the BSI was controversial among the Consortium membership. Some centers had used the instrument and considered it useful. Others had the opposite experience. The available literature indicated two problems. First, the BSI has not been normed on a college population. Second, the sub-scales measuring specific diagnostic problems do not appear to hold up under factor analysis. The scales typically reduce down to one measuring general distress or possibly two factors measuring a "depression factor" and an "anxiety factor." Despite these problems, the BSI was considered the best choice as a screening instrument given its brevity and ease of administration.

Analysis of Variance on the BSI Scales

1.) Gender differences are significant on all BSI scales, with females scoring higher on all scales. The most pronounced differences are on "Anxiety" and "Interpersonal Sensitivity." (See Figure 1 and Tables 42 and 43.)

2.) There are significant ethnic differences on the following scales:

Obsessive-Compulsive, Paranoid Ideation & Psychoticism

Generally, ethnic minorities appear to have higher scores on these scales than do whites.

3.) There are significant sex X ethnicity interactions on the following scales:

Obsessive-Compulsive, Phobic Anxiety & Depression

Generally, ethnic minority females appear to have higher scores than white males and females and ethnic minority males.

4.) Using the center fact sheet, agencies were compared on the basis of the presence or absence of psychiatric services to test out differences in severity as a function of services offered. Configuration of services X BSI Scales indicates significant differences on Hostility and Paranoid Ideation. In both cases, the means from highest to lowest are Combined Services/No Psychiatrists, Combined Services/With Psychiatrists, Counseling Services Only/No Psychiatrists, and Counseling Services/With Psychiatrists.

Factor Analysis of the BSI

Various factor analyses of the BSI indicate the following:

(1) Principal Components Analysis on the BSI items and Common Factor Analysis of the nine BSI scales (using varimax rotation, Harris-Kaiser orthoblique rotation, and promax rotation) yielded two factors as follows:

Factor I Depression
Interpersonal Sensitivity
Hostility
Paranoid Ideation
Psychoticism

Factor II Somatization
Obsessive-Compulsive
Anxiety
Phobic Anxiety

Principal components analysis of the items indicated some split loadings and some overflow of the Obsessive-Compulsive and Anxiety items into Factor I.

(2) Principal components analysis on the 9 BSI scales forcing two factors yields the following factors:

Factor I Depression
Interpersonal Sensitivity
Hostility
Paranoid Ideation
Psychoticism

Factor II Somatization
Obsessive-Compulsive
Anxiety

with Phobic Anxiety split between the two factors.

However, it should be noted that the eigenvalue and proportion of variance clearly show that there should really be only one factor, not two.

Table 42

Means and Standard Deviations ( ) for the SCL-90 or BSI Scales
Comparing College-Age <u>Male</u> Samples Across Three Studies

SCL-90 or BSI Scales (Each Scale Ranges from 0 - 4.)*	Research Consortium Male Sample (N=800)** [BSI]	Cochran & Hale (1985) College Males*** (N=143) [BSI]	Johnson et al. (1989) College Males **** (N=585) [SCL-90]	Johnson et al. (1989) College Males "Self-Understanding" Group**** (N=236) [SCL-90]
Obsessive-Compulsive	1.00 (.89)	1.17 (.77)	1.08 (.82)	1.33 (.82)
Paranoid Ideation	.67 (.77)	1.02 (.79)	.58 (.67)	.76 (.73)
Hostility	.75 (.85)	.97 (.83)	.60 (.66)	.74 (.70)
Somatization	.31 (.50)	.47 (.49)	.42 (.50)	.49 (.52)
Depression	1.17 (1.0)	.99 (.83)	1.23 (.87)	1.58 (.82)
Interpersonal Sensitivity	1.01 (1.02)	.97 (.79)	.87 (.77)	1.18 (.80)
Anxiety	.83 (.80)	.89 (.69)	.83 (.81)	1.03 (.82)
Psychoticism	.83 (.79)	.79 (.67)	.55 (.59)	.80 (.63)
Phobic Anxiety	.33 (.50)	.29 (.27)	.26 (.44)	.38 (.50)
Global Severity Index***	.76 (.59)	.84 (.55)	.75 (.57)	.97 (.56)

*0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

** This number is an approximation since some subjects did not fill out the BSI. Also, there is missing data for some subjects who did not answer some items. Our scoring program, however, controls for invalid profiles due to missing data.

*** General college student sample.

**** The Johnson et al. study focused on students who were seeking counseling services. The "Self-Understanding Group" was composed of persons whose presenting problems were more psychological in nature than was the case for the rest of the sample. The subjects in this study are perhaps the most comparable to the Research Consortium sample, although the instrument used was the SCL-90. Theoretically, the scores on the BSI and SCL-90 should be comparable.

***** Global Severity Index is considered to be the most sensitive overall measure of psychopathology. It combines information on numbers of symptoms and intensity of distress.

Cochran, C. D. & Hale, W. D. (1985). College student norms on the Brief Symptom Inventory. *Journal of Clinical Psychology*, 41 (6), 777 - 779.

Johnson, R. W., Ellison, R. A. & Heikkinen, C. A. (1989). Psychological symptoms of counseling center clients. *Journal of Counseling Psychology*, 36(1), 110 - 114.

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SCL-90 or BSI Scales (Each Scale Ranges from 0 - 4.)*	Research Consortium Male Sample (N=800)** [BSI]	Cochran & Hale (1985) College Males*** (N=143) [BSI]	Johnson et al. (1989) College Males **** (N=585) [SCL-90]	Johnson et al. (1989) College Males "Self-Understanding" Group**** (N=236) [SCL-90]
Obsessive-Compulsive	1.00 (.89)	1.17 (.77)	1.08 (.82)	1.33 (.82)
Paranoid Ideation	.67 (.77)	1.02 (.79)	.58 (.67)	.76 (.73)
Hostility	.75 (.85)	.97 (.83)	.60 (.66)	.74 (.70)
Somatization	.31 (.50)	.47 (.49)	.42 (.50)	.49 (.52)
Depression	1.17 (1.0)	.99 (.83)	1.23 (.87)	1.58 (.82)
Interpersonal Sensitivity	1.01 (1.02)	.97 (.79)	.87 (.77)	1.18 (.80)
Anxiety	.83 (.80)	.89 (.69)	.83 (.81)	1.03 (.82)
Psychoticism	.83 (.79)	.79 (.67)	.55 (.59)	.80 (.63)
Phobic Anxiety	.33 (.50)	.29 (.27)	.26 (.44)	.38 (.50)
Global Severity Index***	.76 (.59)	.84 (.55)	.75 (.57)	.97 (.56)

*0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

** This number is an approximation since some subjects did not fill out the BSI. Also, there is missing data for some subjects who did not answer some items. Our scoring program, however, controls for invalid profiles due to missing data.

*** General college student sample.

**** The Johnson et al. study focused on students who were seeking counseling services. The "Self-Understanding Group" was composed of persons whose presenting problems were more psychological in nature than was the case for the rest of the sample. The subjects in this study are perhaps the most comparable to the Research Consortium sample, although the instrument used was the SCL-90. Theoretically, the scores on the BSI and SCL-90 should be comparable.

***** Global Severity Index is considered to be the most sensitive overall measure of psychopathology. It combines information on numbers of symptoms and intensity of distress.

Cochran, C. D. & Hale, W. D. (1985). College student norms on the Brief Symptom Inventory. *Journal of Clinical Psychology,* 41 (6), 777 - 779.

Johnson, R. W., Ellison, R. A. & Heikkinen, C. A. (1989). Psychological symptoms of counseling center clients. *Journal of Counseling Psychology,* 36(1), 110 - 114.

Table 43

Means and Standard Deviations ( ) for the SCL-90 or BSI Scales
Comparing College-Age <u>Female</u> Samples Across Three Studies

SCL-90 or BSI Scales (Each scale ranges from 0 - 4.)*	Research Consortium Female Sample (N=1660)** [BSI]	Cochran & Hale (1985) College Females*** (N=204) [BSI]	Johnson et al. (1989) College Females (N=1,004)**** [SCL-90]	Johnson et al. (1989) College Females "Self-Understanding" Group**** (N=500) [SCL-90]
Obsessive-Compulsive	1.15 (.91)	1.12 (.66)	1.12 (.81)	1.34 (.78)
Paranoid Ideation	.85 (.86)	.70 (.60)	.67 (.74)	.83 (.83)
Hostility	.85 (.85)	.64 (.58)	.67 (.74)	.83 (.83)
Somatization	.50 (.64)	.39 (.44)	.54 (.58)	.64 (.64)
Depression	1.35 (1.01)	.88 (.69)	1.48 (.95)	1.82 (.92)
Interpersonal Sensitivity	1.35 (1.12)	.99 (.72)	1.03 (.85)	1.32 (.89)
Anxiety	1.22 (.88)	.81 (.54)	.92 (.81)	1.14 (.83)
Psychoticism	.95 (.85)	.56 (.50)	.56 (.60)	.75 (.65)
Phobic Anxiety	.44 (.61)	.32 (.45)	.29 (.48)	.37 (.53)
Global Severity Index***	.95 (.65)	.71 (.42)	.87 (.61)	1.08 (.61)

*0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

** This number is an approximation since some subjects did not fill out the BSI. Also, there is missing data for some subjects who did not answer some items. Our scoring program, however, controls for invalid profiles due to missing data.

*** General college sample.

**** The Johnson et al. study focused on students who were seeking counseling services. The "Self-Understanding Group" was composed of persons whose presenting problems were more psychological in nature than was the case for the rest of the sample. The subjects in this study are perhaps the most comparable to the Research Consortium sample, although the instrument used was the SCL-90. Theoretically, the scores on the BSI and SCL-90 should be comparable.

***** Global Severity Index is considered to be the most sensitive overall measure of psychopathology. It combines information on numbers of symptoms and intensity of distress.

Cochran, C. D. & Hale, W. D. (1985). College student norms on the Brief Symptom Inventory. *Journal of Clinical Psychology*, 41 (6), 777 - 779.

Johnson, R. W., Ellison, R. A. & Heikkinen, C. A. (1989). Psychological symptoms of counseling center clients. *Journal of Counseling Psychology*, 36(1), 110 - 114.

Configuration of Services by BSI Items.

The following tables present specific BSI items where significant differences were found as a function of configuration of services. (Percentages are the total number of people marking each item 1, 2, 3, or 4, i.e., "A Little Bit" to "Extremely.")

Table 44–Configuration of Services X BSI Item 3 (p < .003)

Item 3:   The idea that someone else can control your thoughts.

Combined Services/NO Psychiatrists	Combined Services WITH Psychiatrists	Counseling Services ONLY/NO Psychiatrists	Counseling Services ONLY/WITH Psychiatrists
24%	21%	23%	16%

Table 45–Configuration of Services X BSI Item 15 (p < .009)

Item 15:   Feeling blocked in getting things done.

Combined Services/NO Psychiatrists	Combined Services WITH Psychiatrists	Counseling Services ONLY/NO Psychiatrists	Counseling Services ONLY/WITH Psychiatrists
59%	67%	56%	65%

Table 46–Configuration of Services X BSI Item 21   (p < .008)

Item 21:   Feeling that people are unfriendly or dislike you.

Combined Services/NO Psychiatrists	Combined Services WITH Psychiatrists	Counseling Services ONLY/NO Psychiatrists	Counseling Services ONLY/WITH Psychiatrists
46%	46%	58%	48%

Table 47-Configuration of Services X BSI 24 (p < .02)

Item 24:   Feeling that you are watched or talked about by others.

Combined Services/NO Psychiatrists	Combined Services WITH Psychiatrists	Counseling Services ONLY/NO Psychiatrists	Counseling Services ONLY/WITH Psychiatrists
37%	38%	38%	33%

Table 48-Configuration of Services X BSI Item 35 (p < .03)

Item 35:   **Feeling hopeless about the future.**

Combined Services/NO Psychiatrists	Combined Services WITH Psychiatrists	Counseling Services ONLY/NO Psychiatrists	Counseling Services ONLY/WITH Psychiatrists
53%	63%	53%	55%

Table 49–Configuration of Services X BSI Item 51 (p < .02)

Item 51:   Feeling that people will take advantage of you if you let them.

Combined Services/NO Psychiatrists	Combined Services WITH Psychiatrists	Counseling Services ONLY/NO Psychiatrists	Counseling Services ONLY/WITH Psychiatrists
50%	52%	47%	44%

Section IV: Family Experiences

To ascertain the presence of dysfunctional family histories and characteristics, 18 items were included under the heading of "Family Experiences." These items were thought to cover most of the major dimensions addressed in the literature. Subjects responded to the question, " Did the following occur in your family?", on a "Yes/No/Unsure" format.

Table 50–Gender X Experience (%)

Experience	Male			Female			Total		
	Yes	No	Unsure	Yes	No	Unsure	Yes	No	Unsure
Divorce Separation	28.5	70.5	0.9	30.0	69.1	0.7	29.5	69.6	0.8
Frequent Moves	23.5	75.1	1.3	22.2	76.4	1.3	22.6	76.0	1.3
Unemployment	14.2	83.8	1.8	16.9	81.0	1.9	16.1	81.9	1.9
†Hostile Arguments	41.9	54.0	4.0	46.9	48.8	4.2	45.3	50.5	4.1
Parental Death	6.5	93.1	0.25	6.3	93.5	0.06	6.4	93.4	0.12
Parental Drinking	22.2	73.8	3.8	22.5	72.9	4.5	22.4	73.2	4.3
Parental Drug Abuse	4.5	92.9	2.4	4.3	93.3	2.2	4.4	93.2	2.3
Gambling Problem	1.9	97.0	0.99	1.8	96.2	1.8	1.9	96.4	1.6
Physical Abuse	13.0	82.5	4.4	15.1	80.1	4.7	14.4	80.8	4.6
†Sexual Abuse	3.8	93.4	2.7	9.0	87.0	3.9	7.3	89.1	3.5
†Sexual Assault	4.5	92.4	2.9	18.4	78.1	3.4	13.9	82.7	3.2
Hospitalization	14.9	82.9	2.1	14.2	83.3	2.4	14.4	83.1	2.3
Mental Disorder	12.8	82.7	4.4	12.9	82.9	4.0	12.8	82.8	4.2
Suicide Attempt	12.6	84.2	3.1	13.8	82.6	3.5	13.4	83.1	3.3
Suicide Committed	4.2	95.1	0.62	3.6	95.5	0.83	3.8	95.3	0.76
Illness, dying	16.2	82.7	0.99	15.2	83.3	1.42	15.6	83.1	1.28
Criminal Activity	7.4	91.4	1.1	6.4	92.3	1.2	6.7	92.0	1.2
†Eating Problems	13.5	83.8	2.6	23.4	72.6	3.9	20.2	76.3	3.4

† Statistically significant with females indicating "Yes" more often.

Table 51–Top Ten Family Experiences

1.	Frequent hostile arguing	(45.3%)
2.	Parents divorced or separated	(29.5%)
3.	Family frequently moved	(22.6%)
4.	Parent(s) with a drinking problem	(22.4%)

5. Family member with an eating disorder   (20.2%)
6. Parent(s) unemployed   (16.1%)
7. Family member with illness, injury, or handicap   (15.6%)
8. Physical abuse in family   (14.4%)
8. Family member hospitalized for emotional disorder (14.4%)
10. Rape/sexual assault of family member   (13.9%)

Table 52–Ethnicity X Frequent Hostile Arguments (p < .01)   (%)

	African Am	Hispanic-Am	White	Other
Yes	40.9	51.2	45.3	44.7
No	55.7	40.6	50.8	48.2
Unsure	3.3	8.2	3.8	7.1

*Significantly more Hispanics indicated frequent, hostile arguments occurring in their families followed by Whites, "Other," and African-Americans.

Table 53–Ethnicity X Parental Drinking (p < .05)   (%)

	African Am	Hispanic-Am	White	Other
Yes	22.1	26.0	23.4	12.5
No	74.6	69.8	72.3	82.9
Unsure	3.3	4.1	4.3	3.6

*Significantly more Hispanics indicated having a parent with a drinking problem, followed by Whites, African-Americans, and "Other."

Table 54–Ethnicity X Physical Abuse (p < .001)   (%)

	African Am	Hispanic-Am	White	Other
Yes	20.5	24.4	13.5	13.5
No	75.4	69.6	82.3	77.7
Unsure	4.1	5.9	4.2	8.8

*Significantly more Hispanics indicated physical abuse in the family, followed by African Americans, Whites, and "Other."

Table 55--Ethnicity X Family Members with Mental Disorder (p < .005)   (%)

	African Am	Hispanic-Am	White	Other
Yes	5.8	18.3	13.8	7.1
No	90.1	76.3	82.1	90.5
Unsure	4.1	5.3	4.1	2.64

*Significantly more Hispanics indicated the presence of a family member with a mental disorder, followed by Whites, "Other," and African Americans.

Table 56--Ethnicity X Family Members with Eating Disorder (p < .001)   (%)

	African Am	Hispanic-Am	White	Other
Yes	12.2	19.5	20.8	10.2
No	86.9	77.5	75.8	83.2
Unsure	0.8	2.9	3.4	6.6

*Significantly more Whites indicated the presence of a family member with an eating disorder, followed by Hispanics, African Americans, and "Other."

Section V: Summary Highlights of Findings

Demographics

Clients responding to the survey booklet were fairly well distributed across academic classifications, though there was a slight preponderance of Juniors, Seniors, and graduate students (64%). Women represented over two-thirds (67%) of the sample, while ethnic group representation was at or above national enrollment data for Hispanics, International Students, and Whites.

Women reported previously receiving psychological counseling more often than men (68% women versus 32% of the men). Men reported the presence of a physical or mental disability more often than women (9.5% versus 7.1%). Both white men and women reported previous psychological counseling more often than other ethnic groups. White females reported using psychotropic medication more often than other ethnic groups.

Presenting Problems

Women indicated a significantly greater amount of distress on 22 items as compared to five for men. Conversely, men indicated significantly longer duration of distress on 19 items as compared to five for women. Factor analysis yielded 10 useful factors.

Comparing the levels of distress for each factor and item across the spring, summer and fall terms yielded several significant time differences. However, no consistent trends are able to be discerned until further analysis are conducted.

Several ethnic differences in level of distress were also found. African American students appeared to be distressed more than whites by such problems as study skills, time management, concentration, assertiveness, suicidality, test anxiety, religious/spiritual concerns, discrimination, and finances. Hispanics were more distressed than whites by study skills, time management, concentration, assertiveness, test

anxiety, religious/spiritual concerns, homesickness, adjustment to college, and finances. Whites were more distressed than African-Americans and Hispanics by alcohol/drugs.

Brief Symptom Inventory

Females scored higher than males on all BSI scales, with the most noticeable differences on Anxiety and Interpersonal Sensitivity. African Americans and Hispanics scored significantly higher than whites on the following scales: Obsessive-Compulsive, Paranoid Ideation, and Psychoticism. In addition, African-American and Hispanic females had significantly higher scores on the following scales: Obsessive-Compulsive, Phobic Anxiety and Depression.

To test out possible differences in degree of psychopathology as a function of configuration of services patterns at each center, the BSI was analyzed using counseling center fact information. Specifically, it was hypothesized that centers which offered psychiatric services would draw a more severe clientele than those without psychiatrists. Significant differences were found on two scales: Hostility and Paranoid Ideation. However, the differences were opposite to the expected direction. Centers without psychiatric services had higher (i.e., more severe) means on these two scales than those centers with psychiatrists.

Factor analysis of the BSI confirmed the criticisms raised by others that the scales are not distinct and reduce down to one measuring general distress or possibly two factors measuring depression and anxiety.

Family Experiences

Significantly more females indicated that the following occurred in their families: Hostile Arguments, Sexual Abuse. Sexual Assault and Eating Problems. Ethnic differences were found on the following items with Hispanics indicating their occurrence more frequently than other groups: Frequent Hostile Arguments, Parental Drinking, Physical Abuse, and Family Member with a Mental Disorder. Whites and Hispanics indicated the presence of a family member with an Eating Disorder more than did African Americans.

Conclusion

The pilot project was a successful first attempt to gather standardized data on the nature and severity of college students counseling concerns. The study provides a useful baseline against which to measure changes over time. During 1994, a second survey of clients is anticipated in order to assess fluctuations over a three-year time span (i.e. the freshman in the original 1991 cohort would then be seniors in 1994). This second set of data will help to address changes in severity of presenting problems.

In order to more fully elucidate the mental health issues faced by college students, the collection of a non-clinical sample is also planned during 1993-1994. This will allow an assessment of commonalties and differences between those students who seek counseling services and those who have not sought such assistance. A major methodological challenge will be to increase the representation of Native Americans and Asian Americans in order to conduct valid analyses for the overall sample. A potential replacement for the BSI may also need to be discussed should there be a continuing desire on the part of the membership to collect meaningful, differential diagnostic data.