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LSU Mental Health Service program evaluation

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LSU MENTAL HEALTH SERVICE PROGRAM EVALUATION

A Thesis

Submitted to the Graduate Faculty of
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Social Work

by
Elizabeth S. Johnston
B.A. Centenary College, 2001
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dedicated to
my husband, Joseph A. Johnston;
along with my family and friends
for all of their support and understanding.

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Abstract

This study includes a program evaluation of LSU Mental Health Services and its impact on the college students receiving services. The study used both an outcome survey (Schwartz Outcome Survey-10) to determine any changes in current life functioning and a satisfaction survey (Client Satisfaction Questionnaire-8) to assess the client's perceived contentment with services provided. The expectations were that students would demonstrate an improvement in their current functioning after receiving treatment and that their outcome scores would correspond positively to reported client satisfaction scores. Results reveal that the student participants reported significant improvement in their overall functioning. In addition, the participants exhibited a significant positive correlation between functioning and client satisfaction at the 4-week follow-up.

Introduction

University Counseling Centers' Purpose

University counseling centers have always provided counseling for personal issues and career decisions (DeStefano, Mellott, & Peterson, 2001; Pace, Stamler, Yarris, & June, 1996). University mental health centers' duties have expanded beyond counseling to include student referrals to appropriate resources, and counseling centers have also experienced an increase in the severity of mental health problems (Gallagher, 1995; Stone & Archer, 1990), substance abuse (Rivinus, 1988), suicide (Silverman, 1993), and sexual abuse (Aizenman & Kelley, 1988). The new demands require counseling centers to provide a greater number of services to students, whose numbers continue to increase, while universal budget cuts make funding more competitive.

Louisiana State University Mental Health Service

The Louisiana State University Student Health Center (SHC) dedicates its resources to manage the many manifestations of student health issues. The university recognizes the critical nature of student health and supports all of the divisions under the SHC, acknowledging that even a minor impairment can deeply impact a student's functioning and ability to learn. The divisions vary widely and include primary medical care, mental health care, a pharmacy, wellness education, sexual assault victim's advocates, and affordable major medical insurance. The Mental Health Service (MHS) office is an integrated part of the SHC, where all staff members collaborate as needed to meet student needs (LSU Office of Public Affairs; 2005).

Theories on the Counseling Process

Howard, Lueger, Maling, and Martinovich (1993) describe a 3 phase model of therapy outcome as progressive steps from 1) remoralization to 2) remediation to 3) rehabilitation. They argue that therapy "is basically the reverse of the sequence of the [this] development of

psychopathology” (p. 683). Patients typically choose to enter therapy either once they realize that their coping skills are not effective or after they have become overwhelmed with their circumstances and the ineffective coping skills that put them there. The first stage for the demoralized patient is to improve subjective well-being before proceeding to reducing symptomatic distress and eventually improving current life functioning. Surveying patients at sessions 2, 4 and 17, they found a progression that supported their hypothesis. They argue that completion of one stage does not automatically cause improvement in subsequent stages, but is a necessary base to build upon.

Howard et al. (1993) cite multiple phase progression theories of therapy. Uhlenhuth and Duncan (1968) use a two-phase model and found significant symptomatic relief after four weeks. Patients in the first phase encounter a placebo effect on self-perception due to expectation of relief and “suggestibility.” This is followed by a slower improvement in distress reduction and lessened symptoms. Carl Jung, as conveyed by Groesbeck (1985), described four interchangeable stages of confession, elucidation, education and “analysis proper.” Sullivan (1954/1970) also had four stages (formal inception, reconnaissance, detailed inquiry, and termination), all of which he argued could potentially be completed in a single session.

Howard et al. (1996) concede that termination could occur in a positive manner at any stage depending on the phase that the client needs to improve their situation. Remoralization reframes the situation and sometimes allows the client to initiate their own coping mechanisms. Remediation allows the therapist to aid in the development of current mechanisms or the instruction of new coping mechanisms. Finally, rehabilitation is the ultimate essence of psychotherapy and deals with a client’s persistent pathological behaviors. Based on the clients’ specific needs, they can potentially terminate at any session and progress to improved life functioning.

Counseling services are particularly relevant for the typical college population of late adolescents and young adults. Johnson, Ellison and Heikkinen (1989) describe the heightened psychological distress experienced during this stage. Members of this population struggle with issues of independence, identity, intimacy, separation (Erikson, 1968), and increased academic expectations. Gerdes and Mallinckrodt (1994) studied adjustment levels of freshman and found that perceived lack of adjustment can be just as damaging as actual maladjustment to college life. Many students set unrealistic expectations concerning their ability to adjust and engage in self-criticism when they misinterpret their adjustment as poor or inadequate. The same study found that emotional and social adjustment to college life can predict college drop out as well or better than academic adjustment (Gerdes & Mallinckrodt, 1994). Thus, counseling services can provide essential support for this population at a time in development when they are extremely vulnerable. Indeed, young adults in therapy prove to be very receptive to therapeutic principles and internalize the process to utilize in future situations (Rickinson, 1997).

Literature Review

Previous Studies

The validation of effectiveness in the mental health field is not a new concept (Blais, Lenderking, Baer, deLorell, Peets, Leahy, & Burns, 1999). Professionals in social services everywhere have felt pressure to document the outcomes of their patients and to prove the quality of the services they are providing (Blais et al., 1999; Joint Commission on Accreditation of Healthcare Organizations, 1997; Lyons, Howard, O'Mahoney, & Lish, 1997; Sederer, Dickey, & Herman, 1996). The increasing demand for validation of services placed on counseling centers extends to the university setting. Many universities now require justification for clinic funding through program evaluation (Bishop, 1990). In response, researchers demonstrated repeatedly that counseling services increase student functioning (Rickinson, 1998; Draper, Jennings, Baron, Erdur, & Shankar, 2002; Howard et al., 1993) and relieve presenting problems (Rickinson, 1997; Rickinson, 1998; Nafziger, Couillard, & Smith, 1999; DeStefano et al., 2001; Peden, Rayens, Hall, & Beebe, 2001; Vonk & Thyer, 1999). The researchers who performed these assessments created a body of literature on counseling program evaluation by publishing their findings on the effectiveness of university counseling programs.

Draper et al. (2002) completed an archive study from a research consortium database, drawing data from records of clients from multiple universities. The study included clients who completed an initial demographic survey and an Outcome Questionnaire-45 (OQ-45 [Lambert, Lunnen, Umphress, Hansen, & Burlingame; 1994]) at each treatment session. The national database allowed the authors to have an extremely large number of study participants (N=1,698). The findings demonstrated a fluctuating improvement in client functioning over the course of treatment. The clients who did show improvement were those who terminated at sessions 2, 3, 4, 6, and 10.

Howard et al. (1993) hypothesized that therapeutic improvement is a process beginning with subjective well-being and moving on to symptomatic reduction and improvement in current life functioning. Clients, in a private practice setting, were tested with 3 self-report instruments, developed by the authors, prior to treatment and again at sessions 2, 4, and 17. The authors found that clients showed improvement in subjective well-being by session 2, distinctly occurring before changes in other functioning. The final testing at session 17 also showed a progressive improvement level with significant improvement in subjective well-being (1 SD above the mean), and clinical improvement in symptomatic distress (.8 SD above the mean) and current life functioning (.68 SD above the mean).

Rickinson (1998) conducted two studies in this article. Study 1 focused on the long term effectiveness of an intervention aimed at reducing the rate of university drop-out by incoming students. The university identified at-risk students through a questionnaire survey that determined level of commitment to school and referred students demonstrating a low level of school commitment for treatment at the counseling center. The author tracked the students' university enrollment status each semester and use of counseling services. All students who received the intervention remained in school until graduation and did not utilize any other counseling services throughout enrollment. Study 2 compared students who sought counseling to students who did not solicit services. The author administered the Symptom Checklist-90-Revised (SCL-90-R [Derogatis, 1977]) as a pre- and post-test to treatment. The students who did not receive treatment were only included if they showed similar scores to the students who chose treatment. The clients who completed treatment at the counseling center experienced a decrease in distress, with 91% reporting academic improvement and 98% reporting greater efficacy in handling personal problem.

Rickinson (1997) designed a quasi-experimental study that compared counseling center clients with a control group of students who did not seek counseling services but scored similarly on the SCL-90-R on the pretest. Rickinson administered the follow-up post-treatment test at the 4th session interval for clients, and the 4 week interval for the control group. Students who completed treatment showed a significant decrease in distress ($p < .002$); whereas the control group showed no improvement.

Surtees et al. (1998) studied changes in mental health status of first time users of university counseling services who were assessed to have a diagnosis of Major Depression or Generalized Anxiety Disorder using the General Health Questionnaire-30 (GHQ-30 [Goldberg & Williams, 1988]). Clients were given the GHQ-30 both before treatment and 1 year after the initial assessment. Agency therapists provided a written assessment of clients following the initial session. The authors found that 1 year after beginning treatment, one quarter of students had no subsequent episode, one quarter showed general improvement in functioning, and the other half showed mixed results.

DeStefano et al. (2001) compared levels of adjustment to college between students who elected to enter counseling and those who did not seek services with a pre- and post-treatment using the Student Adaptation to College Questionnaire (SACQ [Baker & Siryk, 1989]). The authors found a significant difference on 3 of the 4 scales prior to treatment, with a gap in mean scores of 46.98 ($p < .001$). The post-treatment gap decreased to a mean score difference of 26.34 at a 6 to 8 week interval. While the general student population adjustment originally fell within norms on the scale, the study found that students who entered counseling improved their level of adjustment so that their post-test scores were also within 1 standard deviation of the original mean score.

Nafziger et al. (1999) evaluated a time-limited therapy with a pre- and post-test administration of the College Adjustment Scales (CAS [Anton & Reed; 1991]) at a 6 session interval, which was equal to the average number of session in the 1990s. Student who withdrew from the treatment and study did not show a significant difference in pre-test scores from those who remained. Students who did complete the 6 sessions of treatment exhibited a significant decrease in reported symptoms ($p < .001$).

Peden et al. (2001) studied the reduction of depressive symptoms following a 6 week cognitive-behavioral intervention using a randomized control group study, with follow-up surveys at 1, 6, and 18 months using Beck's Depression Inventory (BDI [Beck, Ward, Mendelson, Mock & Erbaugh; 1961]), the Center for Epidemiologic Studies-Depression Scale (CES-D [Radloff; 1977]), Crandall Cognition Inventory (CCI [Hollon, Kendall, & Lumry; 1986]), and Rosenberg Self-Esteem (RSE [Rosenberg; 1965]). The authors found significant differences between the two groups with each follow-up test (BDI $p \leq .002$; CES-D $p \leq .008$; CCI $p \leq .01$; RSE $p < .01$). Of the women in the control group who received no treatment, 29% reported depressive symptoms at the 18th month follow-up. Whereas, women who received the intervention reflected an improvement in self-esteem and a decrease in depressive symptoms both immediately and over the long term follow-ups. By the 18th month follow-up only 15% of the treatment group reported depressive symptoms, almost half the rate of incidence found in the control group.

Vonk and Thyer (1999) evaluated the effectiveness of short term treatment through a quasi-experimental study with one group of students who received treatment immediately (Group 1) and another group of students from the counseling center's waiting list (Group 2). Group 1 and 2 completed the SCL-90-R on their first visit to the counseling center and at termination. The authors administered the instrument to Group 2 one additional time

immediately before treatment began. Group 1 showed significant improvement over Group 2 during the delayed treatment period, with the gap in improvement declining once treatment began. Clients set their own number of sessions, but were only included in the study if they completed at least 4 sessions and no more than 20.

Thus, a review of program evaluation literature leaves the reader with solid conclusions as to the effectiveness of university counseling programs. Researchers demonstrate that counseling services increase student functioning as demonstrated by a full retention rate following the intervention (Rickinson, 1998), and through improvement in symptomatic distress, interpersonal relationships, and social role fulfillment (Draper et al., 2002). Counseling services also decrease presenting problems, as seen in significant decreases in levels of psychological distress (Rickinson, 1997; Rickinson 1998; Nafziger et al., 1999; DeStefano et al., 2001); lowered presence of depressive symptoms (Peden et al., 2001); and significant decreases in symptomatic criteria for psychiatric disorders among own group and compared to delayed clients (Vonk & Thyer, 1999).

Limitations in Research

Despite efforts to control imperfections in research design, every study experiences limitations that corrupt the accuracy of its findings. One of the major blemishes resides in controlling the quality, quantity, and participation level of study subjects. The subjects of these program evaluation investigations vary according to the agency and requirements of the study. The majority of studies focus on self-referred clients who independently seek counseling services (Howard et al., 1993; Rickinson, 1998; Surtees et al., 1998; Nafziger et al., 1999; DeStefano et al., 2001; Draper et al., 2002; Fischer, 2004). Rickinson also completed studies with final year students who received referrals to the university counseling center (1997) and with students that the university identified as high risk for dropping out of school (1998). Vonk and Thyer (1999)

divided self-referred clients into 2 groups to compare results of clients who received treatment immediately with clients placed on a waiting list, finding that improved client outcome corresponded to participation in treatment. The populations in these studies are all similar in the respect that they utilize campus counseling services as a result of an acknowledged difficulty.

Other pertinent studies, outside of a university setting, document similar findings of client progress and support the literature on university counseling program evaluations. Peden et al. (2001) completed an intervention evaluation on a volunteer sample of college women who had no children, had never been married, enrolled in school as full-time students, had no history of depression, and did not present as suicidal during the intake session. Howard et al.'s (1993) and Fischer's (2004) subjects were not enrolled in college, but participated in private, outpatient clinical settings. Howard et al.'s subjects attended individual therapy at the Northwestern Memorial Hospital's Institute of Psychiatry. Fischer's subjects chose from individual, couple or family therapy offered at Families First in Atlanta, Georgia.

The current body of literature presents studies that assess multiple aspects of program evaluation. The majority of studies concentrate on the same objective of assessing the improvement rate of clients who seek treatment voluntarily (Howard et al., 1993; Surtees et al., 1998; Nafziger et al., 1999; Draper et al., 2002; Fischer, 2004). Vonk and Thyer (1999) used the existence of a legitimate waiting list to compare the progress of clients in treatment with those who received delayed treatment. Other comparison studies engaged participants from a pool of general students who demonstrated similar scores on the pre-test instrument (Rickinson, 1997; Rickinson, 1998; DeStefano et al., 2001). These students created a quasi-control group because they did not request or receive counseling services. A more distinct investigation by Rickinson (1998) examined the effectiveness of university intervention for students with drop-out potential. While Peden et al. (2001) explored the most unique aspect of program evaluation with this

population by studying the preventative effects of an intervention to pre-empt symptoms of depression and to increase participant self-esteem.

Limitations in a research setting are inherent and unavoidable. A major limitation that researchers contemplate is the ethical concerns of using an empirical control group in the course of a study. Many authors specifically acknowledge that creating a true control group could be damaging to the control population in the field of mental health, without which participants are susceptible to maturation and history (Rickinson, 1997; Rickinson, 1998; Nafziger et al., 1999; DeStefano et al., 2001; Fischer, 2004). Researchers develop a second major limitation through conducting their surveys through a single agency which restricts the variety of clients (Rickinson, 1998; Surtees et al., 1998; Fischer, 2004). This limitation becomes exacerbated at agencies with unbalanced or homogeneous populations (Nafziger et al., 1999; DeStefano et al., 2001; & Peden et al., 2001; Vonk & Thyer, 1999; Howard et al., 1993) or when studies limit participation through strict criteria (Rickinson, 1997).

The next category of limitations is participant bias and contains a wide range of variations. One inherent bias lies in the motivating factors of individuals who decide to volunteer versus those who refuse to participate. Studies in this body of literature experienced low interest (46.9%) in follow-up (Surtees et al., 1998), low post-test response rate of 63% (DeStefano et al., 2001), and attrition rates of 54% and 59% in the longer period studies (Peden et al., 2001; Nafziger et al., 1999). Researchers often describe their concerns about the innate bias of self-report assessment tools due to the client's desire to report improvement (DeStefano et al., 2001; Draper et al., 2002) or the placebo Hawthorne effect when clients report a positive outcome after receiving direct attention (Peden et al., 2001). In the course of university counseling evaluation, many authors disqualify segments of the clientele who strictly receive referrals from therapists and clients who withdraw from treatment early (Rickinson, 1998; Surtees et al., 1998; DeStefano

et al., 2001; Peden et al., 2001); while others disqualify not only the early withdrawals, but also clients with severe diagnoses, previous service users, and clients who initiate treatment during finals (Rickinson, 1997).

The last category of limitations incorporates concerns that are specific to individual studies. One particular limitation is accessing the clients' diagnoses information to aid in the interpretation of treatment, which was only overcome by Surtees et al. (1998) and Peden et al. (2001) in this particular body of literature. Moreover, researchers on college campuses find that long-term follow-ups are difficult (Rickinson, 1997; Nafziger et al., 1999; DeStefano et al., 2001), and generally should be dismissed as excessively invasive (Rickinson, 1998). And, the limitation of a small sample size is a rare occurrence in published studies, but is sometimes unavoidable due to the nature of the research (Rickinson, 1998; Vonk & Thyer, 1999). Finally, the most distinct limitations among the body of literature were all within the same study. Fischer (2004) used an instrument that had not been externally validated, the instrument was administered orally which has been shown to increase ratings by 10%, and included significantly smaller cohort groups of clients who attended more than 6 sessions. Thus, some limitations cannot be avoided, but with proper planning and design the impact of limitations on research findings can be minimized.

Leibert (2006) outlines the need for empirical research and much of the conceptual framework that defines quality assessment of mental health services. Empirical research on outcomes in the mental health service sector provides credibility to the entire field by documenting treatment results with standardized measurements. However, researchers are unable to come to a consensus on a principle set of instruments (Waskow & Parloff, 1975). A formal battery of measurements could establish standards and begin the development of a "solid knowledge base about effective psychotherapy" (Leibert, 2006, p. 108; Hill & Lambert, 2004).

Until the instrument series has been formed, Leibert (2006) describes practical and economical recommendations for systematic evaluation of mental health outcome. Instruments should be standardized and established as reliable, valid, appropriately sensitive, available and inexpensive. Indeed, generic, self-report scales allow researchers to monitor multiple aspects of client well-being in a prompt, affordable manner while limiting any outcome bias to the client alone (Leibert, 2006).

The primary basis of program evaluation in every study in this body of literature follows the procedure of using standardized, self-report measurement. These studies predominantly use a quasi-experimental pre-test and post-test design, but the instruments of choice differed from one study to another. While the use of standardized measurement increases validity, using multiple scales provides a greater understanding of the client's progress and perception (Leibert, 2006). Rickinson (1998) combined her study's outcome scale with a supplemental personal change questionnaire to elicit client feedback on services to strengthen quantitative data with qualitative client responses. DeStefano et al. (2001) collected demographic data in conjunction to improve their study's population comparison analysis. Each study collected additional data to improve the interpretability of outcome results.

Researchers also varied in the timing of follow-up surveys. Some studies administered the follow-up survey immediately after the intervention (DeStefano et al., 2001; Rickinson, 1997; Nafziger et al., 1999; Peden et al., 2001; Vonk & Thyer, 1999). DeStefano et al. (2001), Nafziger et al. (1999), Peden et al. (2001), and Vonk et al (1999) all used limited 6 session interventions. Rickinson (1997) focused on a 4 week treatment. Other studies allowed the course of treatment to proceed in a natural manner, with follow-up surveys distributed at particular intervals (Draper et al., 2002; Howard et al., 1993). Draper et al. (2002) studied clients who completed instruments after every session through termination of services, and Howard et al.

(1993) measured outcomes on clients at session 2, 4, and 17. The naturalistic, multiple follow-up studies provided a systematic measurement of outcomes, which describe the course of progress as significant improvements in early treatment with diminishing but cumulative improvements over a greater number of sessions (Howard et al., 1996).

Therapists in many programs begin with a focus on client well-being and symptomatic distress, and then proceed to any life functioning issues if necessary. Counseling is a gradual process to improve client functioning, and length of treatment largely depends on the client's initial level of distress. Howard et al. (1993) defend clients who attend fewer sessions before termination because they often do just as well due to less severe issues. Fischer (2004) found that clients tend to terminate or withdraw from treatment once they reach a moderate level of functioning whether it takes 1 session or 20.

Recommendations for Future Research

What appears to be missing from these studies is an assessment of all efforts by the counseling center. In each study mentioned above, a large percentage of the pool of students is excluded due to early withdrawal or referral to other services at the initial triage session. Vonk and Thyer (1999) described a limitation in their study as session criteria. Participation in their study required each student to complete between four and twenty sessions, one of which had to be a termination session. After two semesters of gathering data, the authors felt the generalization of their findings was limited because they only had 55 participants who met their criteria.

What if the criteria were widened to include all students who utilized the counseling center? Many services provided are excluded from program evaluations because it is not a complete regimen of treatment, but they are still viable services being provided. This study will compare pre-test/post-test outcome surveys and client satisfaction with services provided for the

following three groups: referrals, early termination, and completed treatments (all students whether they receive referrals, terminate prematurely or complete treatment). Hypothesis 1 predicts that all three groups will show improvement in their outcome levels, with clients who complete treatment improving the most and clients who receive referrals improving more than clients who terminate services prematurely. Hypothesis 2 predicts that there will be a positive correlation between changes in outcomes scores and level of client satisfaction, replicating the findings in Larsen, Attkisson, Hargreaves, and Nguyen's (1979) study. The evaluation of all services will provide feedback to the clinicians as to their effectiveness, give insight concerning the welfare of clients who utilize early termination, and reflect on the usefulness of the clinic's referrals.

Method

Research Setting

The mission of the LSU MHS staff is to support students' academic achievement through personal growth by enhancing the clients' mental and emotional well-being. The staff provides evaluation and assessment; crisis intervention; individual and couple therapy; group therapy; psychiatric consultation; and referrals to external resources. The MHS staff designs treatments to tackle student concerns related to anxiety, stress, depression, relationships, eating disorders, substance abuse, sexual or physical trauma, family issues, and adjustment to college life (LSU Office of Public Affairs; 2005).

The staff of LSU MHS includes 1 psychiatrist (5.6%), 4 clinical psychologists (22.2%), 4 clinical social workers (22.2%), 6 social work graduate interns (33.3%), and 3 psychology graduate interns (16.7%). Among the senior staff members, 5 therapists are women (55.6%) and 4 therapists are men (44.4%). All 9 senior staff therapists are Caucasian. Among the interns, 8 therapists are female (88.9%) and 1 therapist is male (11.1%). Three interns are African American (33.3%), and 6 interns are Caucasian (66.7%). The level of experience ranges from less than 2 years, which included all nine interns (50.0%) to 7 members of staff (38.9%) with over 10 years experience, with one staff member each (5.6%) in both of the 2 to 5 year and the 5 to 10 year categories.

The LSU MHS staff welcomes all students and spouses for individual treatment and permits willing, involved persons to attend sessions if requested by the client. MHS policy requests that clients come in for assessment and evaluation in an initial session. At the end of the initial session, the student and therapist come to an agreement as to the best treatment available that is required to improve the presenting problem. When the student agrees to participate in therapy at LSU MHS, the staff utilizes a short-term, solution-focused therapy model. Students

often determine the frequency of sessions and the length of therapy. When students decide to terminate therapy, staff members remind them that their file remains open as long as they are students and they are welcome to return if new issues develop or old ones return.

Not all problems indicate a need for subsequent sessions at LSU MHS. Sometimes the student's impairment can be better assisted by another community resource on or off campus. External resources on campus include the Center for Academic Excellence, Office of Disability Services, the Office of Multicultural Affairs, the LSU Writing Center, the Career Services Center, the Evening School, the Women's Center, the Wellness Education Department, the Psychological Service Center, the International Cultural Center, and the Dean of Students Office. Resources off campus include a 24 hour Baton Rouge Crisis Intervention Center, City Police, Family Service of Greater Baton Rouge, Baton Rouge Mental Health Clinic, Stop Rape Crisis Center, and the Battered Women's Program (LSU MHS; 2005).

Participants

LSU MHS accepts any student, or spouse of a student, that is currently enrolled at Louisiana State University. Demographic data is compiled from these students including ethnicity, gender, classification (e.g. freshman, senior, graduate), and student status (e.g. full or part-time). Table 1 (see page 17) compares the general school enrollment for the fall semester of 2005 with the population of students that contacted MHS for services during the same semester. The racial breakdown of parties shows that the students who utilize MHS are representative of the general student body.

Slight differences exist in the other categorizations of gender, classification, and student status which creates overrepresentation and under-representation of certain demographics. Female students composed 66% of clients at LSU MHS, but only account for 52% of the general student body. Part-time students are also overrepresented, making up 19% of the LSU MHS

population while only 11% of the student body. Lastly, classification representation is skewed by larger percentages of graduate and other students and smaller percentages of freshman and sophomores (see Table 2).

Table 1: Fall 2005 Ethnicity Demographic Data

Ethnicity	Fall Enrollment 2005		LSU MHS Fall 2005	
	Count	Percentage	Count	Percentage
American Indian	127	0.42%	3	0.41%
Asian/Pacific Islander	815	2.67%	13	1.80%
African American	2,713	8.88%	63	8.70%
Hispanic	773	2.53%	16	2.21%
International	1,665	5.45%	25	3.45%
Unknown	914	2.99%	60	8.29%
Caucasian	23,557	77.07%	540	74.59%
Mixed Heritage	Unknown	0%	4	0.55%
Total	30,564	100%	724	100%

Table 2: Fall 2005 Classification Demographic Data

Classification	Fall Enrollment 2005		LSU MHS Fall 2005	
	Count	Percentage	Count	Percentage
Freshman	6,947	22.73%	82	11.33%
Sophomore	5,894	19.28%	119	16.44%
Junior	5,709	18.68%	131	18.09%
Senior	7,159	23.42%	173	23.90%
Graduate	4,507	14.75%	156	21.55%
Other	348	1.14%	56	7.73%
Total	30,564	100%	724	100%

The 2005 fall semester users of LSU MHS were largely representative of the general LSU student body. This data set is promising for our study; however, there is no guarantee that there will be similar correspondence in the fall semester of 2006. Similarly, concerns exist regarding the participant population in comparison to both the general population and other clients who choose not to participate. The participation requirements may potentially skew the population and influence the data. The study does require that participants be first time users of the LSU MHS, be at least 18 years of age, and complete all instruments and surveys.

The study participants will be followed through their natural course of treatment at LSU MHS. Participants will be divided into three subgroups according to their self-reported mode and stage of treatment. Subgroup A will consist of individuals who attend all of their scheduled appointments. Subgroup B will contain individuals who decide to cancel appointments and withdraw from treatment. Subgroup C will include individuals that the staff refers to external resources after the initial assessment and evaluation. All 3 subgroups will be required to complete initial and follow-up instruments when contacted at 4 and 8 weeks after the initial session.

Instruments

All participants will be asked to complete 3 instruments: the Schwartz Outcome Scale-10 (SOS-10 [Blais et al., 1999; see Appendix B]), the Client Satisfaction Questionnaire-8 (CSQ-8 {Larsen et al, 1979; see Appendix C}), and a demographic information sheet (see Appendix D) The SOS-10 will be administered prior to the first session and again at both follow-up contacts. The purpose of this instrument is to gauge the level of progress made by students over the course of their treatment. The CSQ-8 will be provided at each follow-up contact in conjunction with the outcome instrument. . The demographic information will be obtained prior to the first session and used solely to determine the composition of the participant population in comparison to the

general clientele of LSU MHS and to the student body currently enrolled at LSU. Specific client feedback is an important aspect of program evaluation where clients describe their experience at the agency.

The Schwartz Outcome Scale-10 (SOS-10) is a short, effective outcome measure (Blais et al., 1999). Blais and his colleagues at Massachusetts General Hospital developed this instrument in response to significant pressure from managed health care organizations to substantiate treatment effectiveness and to validate the number of sessions (Blais et al., 1999; Steenbarger & Smith, 1996). The necessity of large scale program evaluations prompted researchers to create shorter, time-efficient outcome evaluations (Blais et al., 1999; Lyons et al., 1997; Sederer et al., 1996). The SOS-10 was intended to be used in a “variety of different treatment modalities, including individual psychotherapy, group psychotherapy, family therapy, psychopharmacology, and electroconvulsive therapy” (p. 360).

The instrument is designed to assess mental health and well being through positive outcome measures, without focusing on client pathology. Clients complete 10 Likert questions on the self-administered scale which measures client’s level of functioning over the previous week. The answers are totaled to create a composite score that ranges from 0 to 60. The level of impairment is determined by the scores as minimal (43-60), mild (36-42), moderate (25-35), and severe (0-24). The design allows researchers to use it successfully with all diagnoses, and is sensitive enough to detect changes over various courses of treatment (Young et al.; 2003; Blais & Baity, 2005). Multiple examinations of the instrument’s psychometric properties reveal an internal consistency of .90 and test-retest reliability of .86 and above (Blais & Baity, 2005).

Blais et al. (1999) established validity of the SOS-10 through comparisons to other well established outcome instruments. The scales that confirmed positive psychological health via lower scores showed appropriate negative correlations: Psychiatric Symptoms (-.66), Beck

Hopelessness (-.64), and Negative Affect (-.72). Scales that demonstrated positive psychological health via higher scores also showed appropriate positive correlations: Satisfaction with Life (.78), Positive Affect (.67), SF-12 Mental Health (.76), and SF-12 Physical Health (.36).

Hilsenroth, Ackerman, and Blagys (2001) observed correlations to the Symptom Checklist-90 (-.59) and the Global Assessment of Functioning (.62).

Subsequent research by Young, Waehler, Laux, McDaniel, and Hilsenroth (2003) extended the validity of the SOS-10 through 4 independent studies. Study 1 verified Blais et al.'s (1999) findings on test-retest validity using college students, reporting a .86 correlation between scores ($p < .0001$). Study 2 examined the potential manipulation of scores on the SOS-10 due to self-report by comparison to the Rotter Incomplete Sentence Blank (RISB). The authors found that administrator calculated RISB maladjustment scores showed an appropriate negative correlation ($r = -.56, p < .001$) to SOS-10 scores. Study 3 consisted of a side by side comparison to the Outcome Questionnaire-45, which also demonstrated an appropriate negative correlation ($r = -.84, p < .01$). Study 4 sought to expand SOS-10's validity beyond an inpatient setting, as tested in Blais et al. (1999). Participants from an outpatient practice showed significant differences between their initial and terminations scores, with an average increase of 11.6 points ($p < .001$). All of these results enhance the validity of the instrument and expand its potential utilization in diverse program evaluation settings.

The Client Satisfaction Questionnaire-8 (CSQ-8) was also created out of necessity by Larsen et al. (1979). Larsen et al. refer to the increasing requirement of agencies to document client progress through program evaluations to maintain funding and receive reimbursement. Larsen and colleagues desire to incorporate clients' assessments into therapists' evaluations of client progress. They argue that client input should contribute to a holistic program evaluation;

thereby avoiding the bias of provider-only reporting. However, no standardized scale existed to measure client satisfaction or compare services prior to 1979.

Like the SOS-10 (Blais et al., 1999), Larsen et al. (1979) designed the CSQ-8 to work with all populations and applicable in all settings. The instrument consists of 8 Likert questions that provide a 4-point answer scale without a neutral choice, which requires the client to report a positive or negative experience. The self-administered tool assesses the client's general satisfaction with the agency as a whole. Agency officials can quickly evaluate the instrument's total by reverse scoring 3 items and tallying the points from each answer. Satisfaction levels are determined by total score and fall into 3 categories: low (8-20), moderate (21-26), and high (27-32). Examination of the instrument's psychometric properties showed the questionnaire to have a high internal consistency of .90. The authors completed two studies that determined all 8 items had good inter-item correlation, where sample 1 ranged from .49 to .85 and sample 2 ranged from .39 to .79. The authors intended the questionnaire to be effective as presented, but also to be flexible enough for agencies to supplement with questions tailored to specific services.

Larsen et al.'s (1979) research during development extends the instrument's validity through comparison to scores on the Symptom Checklist-90 (SCL-90 [Derogatis, Lipman, & Covi, 1973]), among categories of individuals, attrition rates during the study, and therapists' perception of client satisfaction. The self-rating scores on both the SCL-90 and CSQ-8 showed an appropriate positive correlation ($r=.53$, $p<.001$) between reported global improvement and satisfaction with services. Larsen and his colleagues categorized individuals according to characteristics and found that trends did exist between the categories of Caucasian/Minority, Male/Female, Employed/Unemployed, Previously Treated/First Time User, and Partial Fee/Full or No Fee; but ultimately these trends lacked true significance. They also contacted clients at a 4 week interval from beginning services to assess their satisfaction level, finding that clients who

terminated treatment had a stronger correlation to lower satisfaction levels ($r=.37$, $p<.01$) than clients who had continued treatment ($r=.27$, $p<.06$). In addition, client satisfaction scores were correlated with therapists' scores on satisfaction working with the client ($r=.42$, $p<.01$) and on perception of client's level of satisfaction ($r=.56$, $p<.01$). While these findings provide a weaker case of legitimacy, they do indicate the validity of this standardized instrument.

Steenbarger and Smith (1996) examine accountability in assessing counseling services. They support the use of a standardized measurement to improve the collection of functional data and conclude that the CSQ-8 is one of the most popular measures of general client satisfaction. The authors acknowledge the CSQ-8 as both time and cost-effective, but challenge it's limitations of assessing the client's perception of benefit and assessing the client's satisfaction with the entire agency instead of the individual therapist or session. Larsen and his colleagues (1979) recognize many flaws in determining client satisfaction through self-reported means, such as the sampling bias inherent to the population willing to respond to a follow-up survey and the influence that client expectations of service has on satisfaction level. However, they did develop an instrument with high internal consistency amid varying client characteristics and settings and show correlative strength with other standardized measures of client outcome.

Procedure

All new clients' first session at LSU MHS consists of an initial walk-in appointment during designated hours. The standard procedure at LSU MHS requires that first time users seeking mental health services complete a student data form and an intake symptom checklist prior to the initial session with a therapist. This study will invite first time users to participate in the program evaluation, and will require participants to complete supplemental paperwork. Eligible students will receive consent forms for this study, the pretest SOS-10, and a demographic information sheet. Consent forms will give the students the option to participate in

follow-up surveys, to refuse follow-up participation, or to refuse participation completely. Students who complete the forms and agree to participate will receive a client copy of the informed consent with their study identification code to keep. Participants will seal all forms in an envelope and a staff member will place the packet in a locked box in the front office.

The first 200 clients from the fall semester of 2006 who agree to participate will be contacted for follow-up questionnaires at the 4 and 8 week interval. Participants will be asked to provide investigators with a private email account for follow-up surveys. Follow-up surveys will consist of the posttest SOS-10 and the CSQ-8. Each participant will receive an individualized email containing instructions on how to complete the attached surveys and how to return them for inclusion in the study. Each attached survey will contain the appropriate participant ID code to connect the follow-up responses with the original survey scores.

The 2 intervals of 4 weeks were chosen to accommodate as many clients as possible while recognizing the time limit of the semester. LSU MHS policy does not limit the number of sessions that a client is allowed. Clients can choose to participate in individual, couple, or group therapy. This procedure will allow for testing the natural course of treatment and for monitoring the clients' genuine progress (Howard, Moras, Brill, Martinovich, & Lutz, 1996). According to LSU MHS attendance data, 71.7% of clients have completed their course of therapy after 4 sessions, and 89.2% have completed therapy by 8 sessions. Client attendance does vary, but is usually one session a week or one session every other week depending on availability. With follow-ups at 4 week intervals, the study will be able to include new clients who seek services in the fall semester without removing students who require more than 4 weeks to complete treatment. The 4 week interval is also important to contact students who withdrew from treatment or received referrals to external resources to get their feedback in a timely manner.

Results

Due to the limitations in data collected, I was unable to divide participants according to treatment status as the study was originally designed. Hypothesis 1 required an alteration from measuring differences in outcome changes between groups to measuring the change in outcome among the participants who completed the study. The new Hypothesis 1 predicts that students who seek services from LSU MHS will show an improvement in overall functioning over the 4-week and 8-week follow-ups. Hypothesis 2 is not dependent upon the categories from Hypothesis 1 and remains unchanged in its prediction that improvement in outcome will correspond positively to client satisfaction scores.

Over the course of the fall semester of 2006, LSU MHS received new request for services from 374 individuals, 52.45% of the 713 total clients. Of the new clients, 65 individuals completed the initial paperwork to participate in the study. Seven of the participants were immediately disqualified due to underage status or absent email address, leaving an active pool of 58 participants, a 15.51% participation rate. The participants demonstrated an attrition rate of 70.7%, with 38 participants never responding and 3 requesting to be removed from the study. The remaining 17 (29.3%) participants varied in their response rate, with 6 (10.3%) completing only the 4-week follow-up survey and 11 (19.0%) completing both follow-up surveys. However, despite my efforts to increase the number of final participants (N=17), the sample size is more than likely too small to detect significant differences.

The demographics of LSU MHS' clientele changed slightly from fall 2005 to fall 2006. As seen on Table 3 (see page 26), the percentages of each ethnic group increased slightly with the exception of American Indians, whose participation dropped from 3 clients to 1. One contributing factor may be the decrease in unknown or unreported ethnicity of clients from 60 (8.29%) to 37 (5.19%). While the clientele embody a fairly accurate representation within the

microcosm of LSU MHS, the percentages alter greatly when examining study participation and completed participants. Out of the active pool, 53 (91.40%) participants were Caucasian American with 2 (3.40%) African American participants and 1 (1.70%) participant each from Asian Americans, Mixed Heritage, and International Students. Of the final completed study participants, the representation decreased again significantly to 16 (94.10%) Caucasian Americans and 1 (5.90%) African American participant.

Other discrepancies did not contrast as strongly with the general population. The classification discrepancy varied in representation as seen on Table 4 (page 26). Of the final participants, the most significant overrepresentation between the LSU MHS clientele and participants was junior class affiliation that showed the greatest initial interest (N=15, 25.86%) and largest number (N=6, 35.29%) in completing the study. Graduate student numbers were not far behind with 14 initial participants (24.14%) and 5 completed participants (29.41%). The gender discrepancy (Table 5, see page 26) that demonstrates an overrepresentation of females receiving LSU MHS services actually remains consistent from clientele (65.36%) to active participants (68.97%) to completed participants (64.71%).

The final three demographics are not tracked in the LSU MHS data: school status, marital status, and whether the client had seen someone previously for mental health concerns. School status described whether the original participants were full-time (N=55, 94.8%), part-time (N=2, 3.4%), or not enrolled (N=1, 1.7%). The participants who completed follow-up surveys were all full-time students (100%). Marital status tracked whether the participants were single (N=47, 81.0%), married (N=4, 6.9%), divorced (N=1, 1.7%), or living with their partner (N=6, 10.3%). Of the participants who completed the follow-up surveys, 11 (64.7%) were single, 3 (17.6%) were married, 1 (5.9%) was divorced, and 2 (11.8%) were living with their partners. Finally, clients who had received treatment prior to using LSU MHS composed 62.1% (N=36) of the

Table 3: Fall 2006 Ethnicity Demographic Data

Ethnicity	Fall Enrollment 2006		LSU MHS Fall 2006		Study Participants		Completed Study	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
American Indian	121	0.41%	1	0.14%	0	0%	0	0%
Asian/Pacific Islander	808	2.76%	14	1.96%	1	1.70%	0	0%
African American	2,644	9.02%	61	8.56%	2	3.40%	1	5.90%
Hispanic	776	2.65%	18	2.52%	0	0%	0	0%
International	1,516	5.17%	26	3.65%	1	1.70%	0	0%
Unknown	841	2.87%	37	5.19%	0	0%	0	0%
Caucasian	22,611	77.13%	552	77.42%	53	91.40%	16	94.10%
Mixed Heritage	Unknown	0%	4	0.56%	1	1.70%	0	0%
Total	29,317	100%	713	100%	58	100%	17	100%

Table 4: Fall 2006 Classification Demographic Data

Classification	Fall Enrollment 2006		MHS Fall 2006		Study Participants		Completed Study	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Freshman	5,912	20.17%	83	11.64%	8	13.79%	2	11.76%
Sophomore	5,738	19.57%	128	17.95%	11	18.97%	2	11.76%
Junior	5,742	19.59%	134	18.79%	15	25.86%	6	35.29%
Senior	7,197	24.55%	157	22.02%	10	17.24%	2	11.76%
Graduate	4,360	14.27%	170	23.84%	14	24.14%	5	29.41%
Other	368	1.26%	3	0.42%	0	0%	0	0%
Unknown	0	0%	38	5.33%	0	0%	0	0%
Total	29,317	100%	713	100%	58	100%	17	100%

Table 5: Fall 2006 Gender Demographic Data

Gender	Fall Enrollment 2006		MHS Fall 2006		Study Participants		Completed Study	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Female	5,912	52.33%	466	65.36%	40	68.97%	11	64.71%
Male	13,976	47.64%	214	30.01%	18	31.03%	6	35.29%
Unknown	0	0%	33	4.63%	0	0%	0	0%
Total	29,317	100%	713	100%	58	100%	17	100%

original participant pool with 37.9% of the participants who had never received mental health guidance before. And among students who had completed surveys, 15 (88.2%) had been previously treated and 2 (11.8%) had not.

A Chi-Square test for independence (see Table 6 in Appendix A) examined a number of demographics to determine which independent variables might impact the completion of follow-up surveys. Previous mental health treatment showed an increased probability of participants completing the follow-up surveys ($p=.008$). There was no significant difference among gender ($p=.652$), ethnicity ($p=.795$), university classification ($p=.690$), school status ($p=.519$), or marital status ($p=.063$).

Table 6: Chi Square Test For Independence Using Demographic Data

Chi Square Test for Independence		Complete Follow-ups		
		No	Yes	
Gender	Male	66.67%	33.33%	p= 0.6522
	Female	72.50%	27.50%	
Ethnicity	Caucasian	69.81%	30.19%	p= 0.795
	Asian American	100.00%	0.00%	
	African American	50.00%	50.00%	
	Mixed Heritage	100.00%	0.00%	
	International Student	100.00%	0.00%	
Marital Status	Single	76.60%	23.40%	p= 0.063
	Married	25.00%	75.00%	
	Divorced	0.00%	100.00%	
	Living with Partner	66.67%	33.33%	
University Classification	Freshman	75.00%	25.00%	p= 0.690
	Sophomore	81.82%	18.18%	
	Junior	60.00%	40.00%	
	Senior	80.00%	20.00%	
	Graduate Student	64.29%	35.71%	
School Status	Full-time	69.09%	30.91%	p= 0.519
	Part-time	100.00%	0.00%	
	Not Enrolled	100.00%	0.00%	
Previous Treatment	No	90.91%	9.09%	p= 0.008
	Yes	58.33%	41.67%	

Hypothesis 1

Hypothesis 1 predicted an increase in scores on the SOS-10, the outcome survey focused on the client's current functioning, between the initial outcome survey score and both follow-up survey scores. To increase my number of study participants, I compared both the initial and the 4-week follow-up scores of the 6 who completed the 4-week follow-up with the 11 who completed both follow-ups using independent, 1-tailed t-tests. I utilized a 1-tailed t-test based on my directional hypothesis that clients would show an improvement instead of remaining unchanged or showing decreased functionality. There were no significant differences between the initial or 4-week follow-up scores between the two groups. The initial scores showed a mean difference in score of 2.45 ($p=.285$). The 4-week follow-up scores showed a mean difference in score of 6.51 ($p=.135$). I also compared the 4-week and 8-week follow-up scores among the 11 who completed both follow-ups with a paired, 1-tailed t-test and found no significant difference between the two scores with a mean difference of 2.364 ($N=11$, $SD 6.577$, $p=.131$). Therefore, the 6 participants who did not complete the 8-week follow-up were included with the 11 who completed both.

The scores on the initial SOS-10 among the original participants showed an initial mean score of 32.86 which falls within the moderate level of severity ($N=58$, $SD 9.083$) with a range from 17 to 55. The participants who completed the 4-week follow-up similarly showed an initial moderate mean score of 32.41, ($N=17$, $SD 8.132$) with a range from 20 to 47. Finally, the participants who completed both follow-ups showed a slightly smaller initial mean score of 31.55, another moderate severity score ($N=11$, $SD 8.915$), with a range from 20 to 47. The 4-week follow-up scores demonstrated a shift to a mean score of 38.12, which falls into the mild level of severity ($N=17$, $SD 11.319$), with a larger range from 12 to 57. The 8-week follow-up

scores showed similar results, maintaining a mean mild score of 38.18 (N=11, SD 10.429) with a range of 20 to 55.

Keeping the 17 active participants combined, paired, 1-tailed t-tests analyzed the improvement in outcome between the initial, 4-week follow-up, and 8-week follow-up scores. The first paired, 1-tailed t-test found a significant difference between initial scores and the 4-week follow-up scores with a mean outcome increase of 5.706 (N=17, SD 9.603, $p=.013$). The second, 1-tailed paired t-test found a greater significant difference between the initial and the 8-week follow-up survey score with a mean score increase of 6.636 (N=11, SD 11.408, $p=.037$).

Hypothesis 2

Hypothesis 2 predicted finding a positive correlation between follow-up outcome scores and client satisfaction scores on the CSQ-8. The raw scores of the CSQ-8 from the 4-week follow-up demonstrated a mean satisfaction score of 20.94 which falls between a low (8-20) and moderate (21-26) satisfaction level (N=17, SD 5.974) with a range from 10 to 31. The scores at the 8-week follow-up decreased slightly but maintained a mean score of 20.73, again falling between the low and moderate satisfaction levels (N=11, SD 7.016), with the same range from 10 to 31.

A 1-tailed Pearson's Correlation found a significant positive correlation ($r=.514$, $p=.017$) between the 4-week follow-up raw scores on outcome and client satisfaction. The 8-week follow-up raw scores found a positive correlation ($r=.490$); however, the data reveal that these results constituted a trend without true significance ($p=.063$). In an attempt to isolate the correlation, I applied another Pearson's Correlation to analyze the relationship between client satisfaction scores and both raw and scale changes in outcome scores. The 4-week client satisfaction score showed no significant relationship to either the raw ($r=.198$, $p=.446$) or scale ($r=.241$, $p=.351$) changes in outcome score from the initial survey to the 4 week follow-up. The

8-week client satisfaction also showed no significant relationship to either raw ($r=.039$, $p=.910$) or scale ($r=.092$, $p=.788$) changes from the initial survey to the 8-week follow-up.

Discussion

The intention of this study was to evaluate the effectiveness of services provided by LSU MHS in improving the functioning of their clients. To analyze the data, I collected demographic information on participants concerning their gender, ethnicity, marital status, university classification, school status, and previous treatment status. To determine improvement, I used the SOS-10 to measure client functioning outcomes, which has been validated for use in a variety of mental health settings and with the college student population. To increase the utility of any findings, I used the CSQ-8 to measure client satisfaction with the agency to provide specific client feedback for the staff at LSU MHS.

The Chi-Square test for independence isolated nominal variables to determine whether specific demographics indicated whether a participant would complete follow-up surveys or not. No significant indicators were found among gender, ethnicity, university classification, school status, or marital status. Although, participants who had received treatment prior to seeking services at LSU MHS were also more likely to complete follow-up surveys than their cohorts who were experiencing treatment for the first time. The speculation surrounding this independent variable leads me to wonder if exposure to previous treatment increases the client's level of comfort in sharing information about their mental health concerns or creates a greater sense of investment since they have come to rely on mental health treatment.

Hypothesis 1

The initial scores on the SOS-10 among the participants who originally agreed to participate showed the mean functional distress at the moderate level with a mean score of 32.86, with scores ranging from severe (17) to minimal (55). The participants who completed the follow-up surveys also showed moderate severity with their initial mean score of 32.41 (N=17), also ranging from severe (20) to minimal (47). The 4-week follow-up scores showed a

significant improvement to a mean score of 38.12 ($p=.013$), and a shift from moderate to mild severity. However the 4-week follow up scores expressed a larger range from 12 (severe) to 57 (minimal), which demonstrates a greater variance in the follow-up results. The 8-week follow-up scores maintained a significant shift from their initial SOS-10 ($p=.037$) scores to a final mean of 38.18 which also falls within the mild severity level with a more constricted range from 20 (severe) to 55 (minimal).

The change in outcome functioning follows the pattern described by Howard et al. (1993) of large initial gains in early sessions with continued moderate improvement over the course of longer term treatment. The largest improvement occurred during the first 4 weeks of treatment resulting in a raw score increase of 5.706 equal to .70 of the original SD. The increasing improvement continued during the second 4 week period but at a slower rate as seen in the raw score increase with of 6.636 equal to .74 of the original SD. Participants demonstrated that they did experience a significant increase in outcome scores after initiating services with LSU MHS.

Hypothesis 2

The CSQ-8 scores from the 4-week follow-up participants presented a satisfaction level that bordered low to moderate satisfaction with a mean of 20.94 ($N=17$, $SD 5.974$), ranging from low (10) to high (31). The scores at the 8-week follow-up decreased slightly but still maintained the borderline moderate rating mean score of 20.73 ($N=11$, $SD 7.016$) with the same range from 10 to 31. A significant positive correlation ($r=.514$, $p=.017$) was found between the 4-week follow-up SOS-10 and CSQ-8 scores. The 8-week follow-up scores also demonstrated the same trend of positive correlation ($r=.490$) but lacked true significance ($p=.063$). The findings are consistent with the expectations of Larsen et al. (1979) for a positive correlation between client satisfaction and outcome scores. The clients experienced a moderate improvement in functioning and reported moderate satisfaction on the 4-week follow-up.

Limitations

Over the course of completing the thesis project, the study suffered from numerous limitations which impact the internal and external validity of the findings. Questions of internal validity must consider a variety of factors. Marlow (2005) describes multiple factors to consider in one-group pretest and posttest study designs: absence of control group, history, maturation, testing, instrumentation, and regression to the mean. The study was completed with no true control group, thereby limiting attribution of LSUMH efforts in cause and effect determination (Nugent, Sieppert, & Hudson; 2001). The small sample size also impedes attribution by limiting the ability to detect any true difference.

Historical influences can impact internal validity for studies completed over time. Due to delays in the Internal Review Board's study approval, the data collection did not begin until 1 month after the fall semester started, around the time that LSU MHS began their waiting list for new clients. Some of the clients shared specific frustrations of extended waiting periods in the comments section of the satisfaction survey, which may be responsible for a lower mean score on the client satisfaction. Another concern of history-treatment interaction refers to the possibility of external influences on client outcome that act solely or in combination with the treatment received, such as input from a friend or relative about the client's situation or maturation of client. Maturation must also be considered over the course of the study which may account for increases in client functioning outside of the services received at LSUMH.

Internal validity in this study can also be examined based on multiple test exposures and instrumentation. The issues of instrumentation are documented by the authors who recognized that in the functionality scale "items are clearly transparent...[and] susceptible to distortion from either a response style...or a global response set" (Blais et al., 1999, p. 369). Finally, regression

to the mean refers to the individual influence the participants had in over- or under-reporting symptomatic distress on the particular days that they responded to the surveys.

Among the specific external validity concerns, one must examine the sample selection method, attrition rates, and reactivity (Marlow, 2005). The participants constituted a sample of convenience that surveyed students who desired treatment and were willing to consent and volunteer for the study's evaluation. Questions surrounding external validity based on attrition arise since the clients who drop out do not share what factors influenced their decision to leave the study (Nugent et al.). The attrition rate finalized at 70.7%, leaving the experiences of a large majority of the original participants unrepresented. Finally, issues of reactive effects are a serious concern in light of the instrumentation limitation cited among internal validity issues. Peden et al. (2001) refers to the placebo, or Hawthorne, effect where individuals respond in a different way when observed or given attention.

Conclusions

Without a current evaluation or feedback system, the staff at LSU MHS can use the findings of this study to begin to understand the current impact and atmosphere among its clientele. The increase in client functioning subsequent to treatment at LSU MHS is consistent with receiving appropriate services for mental health concerns, which should bolster commitment to resume documenting student outcomes. Additionally, the client functioning scores showed a positive association with client satisfaction which may indicate a means of assessing improvement in outcomes that the clients may feel is less invasive of their privacy. These findings should be regarded as a preliminary indication of effectiveness in improving client outcomes even without full representation of student responses to services, bearing in mind that the final participants represented only 2.4% (N=17) of the entire clientele. If LSU MHS intends to continue the practice of assessment, I recommend that they pursue electronic and

anonymous use of the client satisfaction scale (CSQ -8) to collect data because of workload issues and staff shortages.

The original study design had intended to assess individuals who completed treatment, withdrew prematurely, and received referrals to external agencies. With such an assessment, I had hoped to provide insight for the staff at LSU MHS about the impact of their services among these 3 clientele groups. The information may have helped to influence agency policies on contacting clients who drop out of treatment if findings demonstrated significantly lower outcomes, indicating a need for greater effort to reach out to students who terminate early. Perhaps the findings might have indicated a need for revising referral practices to better suit the needs of the student clientele. The answers to these questions may still be obtained with further efforts to assess client outcome and satisfaction with services through future studies.

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Appendix B: Client Satisfaction Questionnaire

CSQ-8

Please help us improve our program by answering some questions about the services you have received from LSU Mental Health Service. We are interested in your honest opinions, whether they are positive or negative. Please answer all of the questions. We also welcome your comments and suggestions. Thank you very much; we really appreciate your help

Circle the answer you feel best describes the LSU Mental Health Service:

- 1) How would you rate the quality of service you have received?
Excellent Good Fair Poor
- 2) Did you get the kind of service you wanted?
Yes, Definitely Yes, Generally No, Not Really No, Definitely
- 3) To what extent has our program met your needs?
Almost all of my needs have been met Most of my needs have been met Only a few of my needs have been met None of my needs have been met
- 4) If a friend were in need of similar help, would you recommend our program to him or her?
No, definitely not No, I don't think so Yes, I think so Yes, Definitely
- 5) How satisfied are you with the amount of help you have received?
Quite Dissatisfied Indifferent or Mildly Dissatisfied Mostly Satisfied Very Satisfied
- 6) Have the services you received helped you to deal more effectively with your problems?
No, They seemed to make things worse No, They really didn't help Yes, They helped somewhat Yes, They helped a great deal
- 7) In an overall, general sense, how satisfied are you with the service you have received?
Very Satisfied Mostly Satisfied Indifferent or Mildly Dissatisfied Quite Dissatisfied
- 8) If you were to seek help again, would you come back to our program?
Yes, Definitely Yes, I think so No, I don't think so No, Definitely not
- 9) How many sessions (including the Initial Consult) have you attended at LSU Mental Health Services? _____
- 10) Did you attend your last scheduled session? (Y/N)_____
- 11) Do you have another session scheduled with a clinician at LSU Mental Health Services? (Y/N)_____
- 12) Do you plan to attend the scheduled session? (Y/N)_____
- 13) During your Initial Consult session, were you referred to another agency either on or off campus? (Y/N)_____
- 14) Do you feel that contact with the LSU MHS helped with your ability to achieve your academic goals? (Y/N)_____

Comments and Suggestions: _____

Appendix C: Demographic Survey

1. Study ID Code: _____
2. Confidential and Secure Email Address for us to contact you: _____
3. Age: _____ (years)
4. Ethnicity (Circle One):
Caucasian American Asian American African American
Native American Hispanic American Multi-Racial
Other: _____ International Student (Country): _____
5. Marital Status:
Single Married Divorced
Living with Partner Separated Widowed
6. Do you have any children? Yes / No
If yes, how many children do you have? _____
7. What brought you to the LSU Mental Health office? (Circle One)
Stress/Anxiety Interpersonal/Relationship Concerns
Mental/Emotional Concerns Alcohol/Drug Use
Financial Concerns Abuse: physical, emotional, sexual
Academic Concerns Other: _____
8. University Classification (Circle One):
Freshman Junior Graduate Student
Sophomore Senior
9. School Status (Circle One): Full-time or Part-time
10. Have you ever seen any professional for mental health issues (including your family doctor)? Yes / No

Vita

Elizabeth Johnston was born in Starkville, Mississippi, in 1979. Growing up, she lived in Huntsville, Alabama; San Ramon, California; and Tupelo, Mississippi. She graduated from Tupelo High School in 1997. She received her Bachelor of Arts in Christian education from Centenary College of Louisiana in May of 2001. While at Centenary, she became a member of Omicron Delta Kappa and received a fellowship from the Fund for Theological Excellence. After graduation she returned to Tupelo, Mississippi, to take a position with a small, family-owned company for 4 years before beginning graduate school at Louisiana State University in August of 2005.

In the School of Social Work, Elizabeth participated in various organizations and welcomed opportunities to present at multiple conferences. She joined the Social Work Student Association and served as an officer both years during her degree program. In April of 2006, she was inducted into the Social Work honor society, Alpha Delta Mu. During her time in the social work program she made presentations in the student forum at the Annual Conference of the National Association of Social Workers of Louisiana and at the 10th and 11th annual Women and Gender Studies Conference on Louisiana State University's campus. She is currently a member of the National Association of Social Workers. She plans to remain in the southeast and to work in a setting that combines direct practice with policy change.