

Personal Statement about My Research Program

I graduated from the University of Wisconsin-Milwaukee in 2003 and completed my residency and post-doctoral training at Yale University School of Medicine. In 2004, I was appointed as an assistant professor at Oklahoma State University. In 2007, I was hired as an assistant professor of psychology at the University of North Texas to be a core faculty member for its doctoral program in clinical psychology. This move was important to my research program because it freed me from the many administrative responsibilities I had acquired as Director of the training clinic at Oklahoma State University. Trained in the Boulder model, I highly value the integration of science and practice and strive to integrate these elements into all aspects of my work.

As I developed as an independent investigator, I focused my research on two important themes related to the practice of clinical psychology: (1) improving services in the training clinic setting and (2) understanding distress and resiliency following exposure to significant stressors. The common ground between these two research areas is the provision of effective psychological services to those underserved, often financially disadvantaged individuals. Training clinics, in part because of their sliding fees, are a major source of mental health services for underserved populations. Similarly, these groups often have traumatic experiences (Perkonig, Kessler, Storz, & Wittchen, 2000). As a recipient of the NIH Loan Repayment Program for Individuals from Disadvantaged Backgrounds and I view my clinical research both as a contribution of serious scholarship in the field of clinical psychology and as a means of “giving back” to a society that has afforded valued opportunities to me.

Theme One: Improving Psychological Services in the Training Clinic Setting

University-based training clinics serve two important and related functions. They not only provide mental health services to underserved groups, but also serve a critically important training function in mentoring the next generation of psychologists in how to provide effective, evidence-based care to these disadvantaged persons. Thus, my research spans both of these responsibilities.

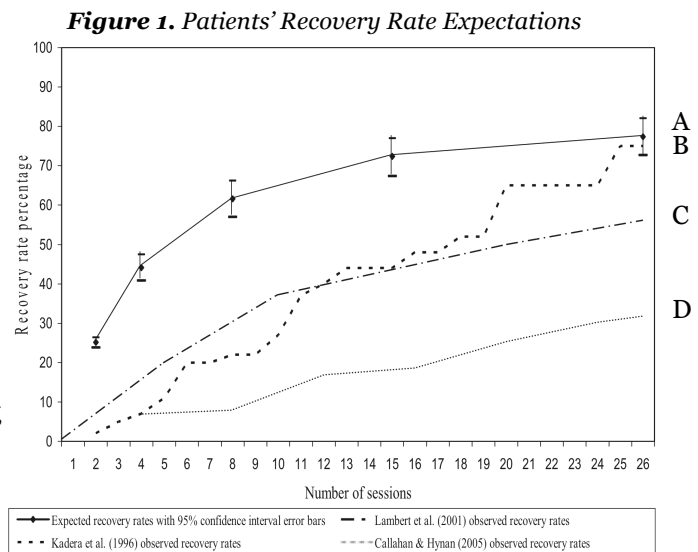
My research on the effectiveness of mental health services underscores the pressing need for more effective means of service delivery. Treatment simply cannot be effective with high attrition rates. Yet, as many as 77% of underserved clients drop-out of treatment—this finding is generally consistent across training sites in the South (Callahan, Aubuchon-Endsley, Borja, & Swift, 2009) and upper Midwest (Swift, Callahan & Levine, 2009). Of clients who remain in treatment, only about one-third experience significant improvement or recovery; the remainder show either no improvement (54%) or continue to deteriorate (13%; Callahan & Hynan, 2005). However, the process of change in this setting is not unique from other outpatient settings (Callahan, Swift, & Hynan, 2006), which provides hope that training clinics could be responsive to efforts directed at improving outcomes.

The high attrition rate observed in training clinics is a major barrier to conducting investigations in these settings. As a result, I have focused several investigations on (1) understanding and (2) interventions to reduce attrition. Within the broad treatment literature, patient attrition demonstrates a multi-faceted relationship with a range of independent variables (e.g., abuse

history, co-morbid diagnoses, discord with treatment). However, the very high rate of premature termination in university psychology clinics suggests that a common variable impacting a broad range of patients may be particularly salient. The existing literature repeatedly documents patient expectations as a common variable contributing to premature termination.

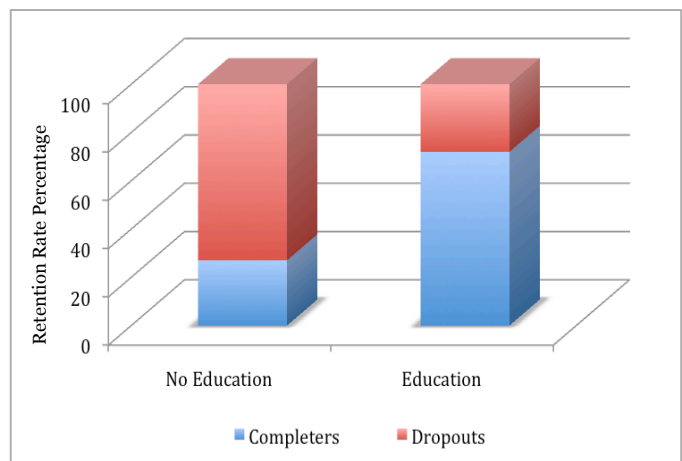
Patient expectations, within the context of expectancy theory, are broadly conceptualized as predominantly reflecting *role* and *outcome* expectancies (Dew & Bickman, 2005). *Role* expectations reflect within-therapy expectations about what will occur, whereas *outcome* expectations are the patient's belief about the effectiveness of treatment. In a recent study we found that the effect of patients' pretreatment *role* expectations on premature termination was moderated by pretreatment *effectiveness* expectancies among university psychology clinic patients (Callahan, Aubuchon-Endsley, Borja, & Swift, 2009).

In light of this finding, we examined both role and effectiveness expectations more closely. With respect to *role* expectations, we found that an individual presenting for treatment with role expectations that fall outside of the normal range are seven times more likely to prematurely terminate therapy (Aubuchon-Endsley & Callahan, 2009). With respect to *effectiveness* expectations, we found that individuals expect to recovery far more quickly (line A; Figure 1) than actually occurs in outpatient settings (lines B-C), including training clinics (line D; Swift & Callahan, 2008, study one).



These findings led my research team to question whether pre-treatment expectancies may be altered so that patients are not disappointed by unmet expectations. We found that patients who were provided with brief information at the start of treatment were significantly less likely to prematurely terminate from treatment. Patients who did not receive the duration education were 6.86 times more likely to dropout of treatment. Thus, a very brief educational narrative, with a prompt to self-reflect, had a strong impact in retaining training clinic patients (Swift & Callahan, 2008, study two). Integration of my research into attrition, expectancies, and psychotherapy outcomes in training clinics is evident in my recent NIH "challenge" grant submission, which is currently under review.

Figure 2. Impact of Education on Patient Retention



My lab's work has brought up additional questions for investigation. For example, how should a determination that a client has prematurely terminated be computed? The literature reports a variety of methods to determine whether a patient has prematurely terminated from treatment (e.g., therapist judgment, missed appointment), most commonly therapists' subjective judgment once they become convinced that the patient truly is not going to return for treatment (which may be weeks or even months after the final session). Reliably capturing such end-point subjective therapist determinations for each patient can pose a major obstacle to research. Findings from our lab indicate that therapists may in large part base their judgment of termination status on whether or not the patient has failed to attend the last scheduled appointment, instead of whether or not the patient has actually improved (Swift, Callahan, & Levine, in press). Thus, our findings pave the way to develop (1) procedures to better categorize attrition, and (2) interventions that can help therapists view attrition in more objective and meaningful ways.

Accuracy of therapist judgments has been a long-standing debate within psychotherapy, but not specifically focused on training clinics where therapists are novice. Recently, we explored convergence between trainees' judgments and clients' judgments on a number of common aspects of psychotherapy. Results indicated fairly poor convergence and suggest a need for greater attention in training to evidence-based practice (EBP), which requires that the treating clinician understand the client's perspective (Swift & Callahan, 2009).

An emerging, but often overlooked issue is whether including client preferences, as required by EBP, has an effect on treatment outcome. Therefore, we recently examined the role of client preferences in the treatment decision-making process (Swift & Callahan, 2009). This meta-analytic review summarized data from over 2,300 clients across 26 studies comparing treatment outcome differences between clients matched and not matched to a preferred treatment. The findings indicated a small significant effect in favor of clients who received a preferred treatment. Despite the heterogeneity of the studies, treatment preference emerged as a significant variable; matched clients have a 58% chance of showing greater improvement and are about half as likely to drop out of treatment.

In addition to progressive depth inquiries, as illustrated above, I have also attended to maintaining breadth of inquiry. For example, my research team has examined how much variance in treatment outcomes may be accounted for by supervisors (Callahan, Almstrom, Borja, Swift, & Heath, 2009) and documented assessment competency in trainees and professionals (Wolfe-Christensen & Callahan, 2008). Further, I have used case study methods to vividly outline research and service deficiencies (in both assessment and psychotherapy services) related to underserved individuals as a function of homelessness (Callahan, 2003), chronic illness (Leedy, Jackson, & Callahan, 2007) and minority status (Callahan, 2007).

Currently, I have several manuscripts in press or under review that continue to add depth and breadth to my research program. With respect to depth, I have an in press manuscript on premature termination (Swift & Callahan) and three empirical studies currently under review that will add to my work on expectancies (Aubuchon-Endsley & Callahan), outcomes (Swift, Callahan, Heath, Herbert, & Levine), and preferences (Swift & Callahan). More broadly, I have theoretical contributions pertaining to training both in press (Collins & Callahan; Swift &

Callahan) and under review (Collins & Callahan). I am particularly proud of a manuscript under review that addresses the internship match imbalance (Callahan, Collins, & Klonoff). This empirical study is a follow-up to an earlier theoretical contribution (Collins, Callahan, & Klonoff, 2008) and presents timely and compelling data for scholarly discussion. The cross fertilization between my research in training clinics, scholarly contributions to training, and training students is allowing me to emerge with national visibility, as evidenced by my invitation to participate as a presenter in a session on “Beyond Individual Psychotherapy: Using Training Clinics to Promote Competence in Program Evaluation, Research, or Supervision” at the historic 2010 Joint Mid-Year Meeting of Training Councils in Psychology, sponsored by the Council of Chairs of Training Councils.

Theme Two: Understanding Distress and Resiliency Following Exposure to Significant Stressors

Many of the reasons individuals seek psychotherapy pertain to unremitting distress (e.g., resultant interpersonal problems, substance abuse, mood disturbance, anxiety) following exposure to a significant stressor. However, most individuals who are exposed to such stressors do not experience such unremitting difficulties. My research aims to understand why some individuals experience unremitting distress while others evidence resiliency with the goal of fostering resiliency in individuals vulnerable to lasting distress.

As noted previously, attention to these issues is strongly needed given the increased rate of traumatic exposure among underserved populations. Such stressors not only impact the exposed individual but can also result in disruptions in family functioning, including disrupted child developmental outcomes among infants of distressed parents, and foster a recurrent cycle of traumatic exposures across generations.

My early work in this area was done in conjunction with my advisor, Mike Hynan, who developed the Perinatal Posttraumatic Stress Disorder Questionnaire (PPQ) for the identification of parents experiencing clinically significant distress following the birth of a premature or medically fragile infant. My work on this measure began with an examination of the convergent and divergent validity (Callahan & Hynan, 2000, 2002). Subsequently, I took the lead with suggesting the modification of items and response scaling to improve the clinical utility of the PPQ (Callahan & Hynan, 2003, Callahan, Borja & Hynan, 2006). These modifications allowed for establishment of a clinical range so that distressed parents could be quickly and reliably identified directly at the point of service (e.g., the neonatal intensive care unit) as being in need of assistance. Since publication this revised measure has received positive attention, adopted for several ongoing clinical and research projects nationally and internationally with known translations into German, French, Portuguese, Hebrew, and Italian. In addition, this work stimulated an invited talk at the annual, national conference of neonatal and perinatal nurses (Callahan, 2007). I recently published a paper in the *Journal of Perinatal and Neonatal Nursing* to (1) identify traumatization risk and protective factors, (2) explain the range of possible mental health sequelae, and (3) describe the use of the PPQ for identification of distress in mothers as well as for outcome tracking when coupled with treatment (Callahan & Borja, 2008). At present, I am finalizing a grant proposal (NIH R15 mechanism to be submitted in September) based on this work to further this line of inquiry at Harris Methodist Hospital in Fort Worth TX.

Aside from depth of inquiry into perinatal-related distress, I have also maintained breadth of inquiry into distress following other significant stressors. These additional contributions illustrate that although some aspects of resiliency might be fixed within individuals, there are also modifiable contributors to resiliency. Thus, interventions targeted toward increasing these modifiable attributes can, by extension, increase resiliency in the face of significant stressors.

For example, I contributed a paper to a special issue of *Professional Practice: Research and Practice* examining therapist changes following life-altering events (Callahan & Dittloff, 2007). This paper was well received, prompting a Japanese journal to request that we submit for peer-review a subsequent paper on this topic (Callahan, & Dittloff, 2008). In addition, my research team examined the roles of positive and negative social interactions in relationship to the source of those interactions and the survivors' emotional outcomes (Borja, Callahan, & Long, 2006). This paper was recently cited as providing an innovative best practice standard (Vernberg et al., 2008) in a recent issue of *Professional Psychology: Research and Practice*. In a follow-up study, my team sought to understand why the existing literature provides inconsistent findings pertaining to the impact of social support on posttraumatic outcomes. In this paper, we report that an interaction between social support (a modifiable variable) and survivor neuroticism (which may not be easily modifiable) may account for such varying outcomes (Borja, Callahan & Rambo, 2009). My research team also examined different operationalizations of the appealing, but vague, construct of resiliency (Borja & Callahan, 2008) and found that "resiliency" may be parsed into unique personality traits and family coping styles, some of which appear modifiable. Most recently, my team has sought to operationalize a comprehensive theoretical model, the Trauma Outcome Process Assessment (TOPA; Borja & Callahan, in press). The TOPA incorporates a large number of fixed and modifiable variables into a model that predicts a range (distress—resiliency) of posttraumatic outcomes. Following optimal specification of the relationships within the TOPA, SEM revealed strong support for the TOPA as a comprehensive identification and treatment model to explain the differential outcomes of those exposed to significant stressors.

Other Scholarship Contributions

I teach the graduate psychological assessment sequence and strongly believe that it is imperative that I attend to (1) illustrating the scientist-practitioner model to students enrolled in my courses, and (2) maintaining my own expertise in psychological assessment. Thus, some of my scholarly publication work has been primarily for this purpose. In addition, I remain active with researchers at Yale School of Medicine, holding a visiting appointment in the Department of Psychiatry since 2004, to contribute to the neuropsychological assessment aspects of longitudinal research (Woods et al., 2007; Hawkins et al., 2008). I am especially proud of work with my student that is now in press (Wisdom, Callahan, & Hawkins, in press) with the journal *Neurobiology of Aging* (most recent impact factor: 5.607) examining the impact of Apolipoprotein (APOE) on neuropsychological functioning.

Summary

Hopefully, I have provided an overview of my work that conveys the quality of my contributions. Quantitatively, my contributions amount to 33 peer-reviewed in press or in print

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publications (24 since coming to UNT in 2007), 8 non peer-reviewed publications, and 46 presentations. I am the first author on all publications pre-2006. Beginning in 2006 I began publishing with graduate students and, occasionally, undergraduate students and I recognize student contributions via authorship (student authors are denoted via asterisk on my CV). Despite this practice, I maintain a steady rate of two publications per year as first author. I have received five internal grants, am a recipient of the NIH loan repayment program grant for disadvantaged individuals, and serve on the editorial board of two journals. Both my students and I have been recognized for the high quality work we have accomplished together. As noted in my CV, my students have been recognized with numerous competitive awards, honors, and fellowships and I have been honored by the Oklahoma Psychological Association with the Oz Parsons award. To date, I have directed eight theses and three dissertations. My first student is now completing internship (Medical University of South Carolina, trauma track) and two students will begin internship this summer at excellent sites (SUNY Upstate Medical Center and Yale University School of Medicine).