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Case Study Examining the Treatment Effect of Trainee Psychologists in Schools

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CASE STUDY EXAMINING THE TREATMENT EFFECT OF TRAINEE PSYCHOLOGISTS
IN SCHOOLS

by

Elliot L. Broch

A Dissertation Submitted in
Partial Fulfillment of the
Requirements for the Degree of

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ABSTRACT

CASE STUDY EXAMINING THE TREATMENT EFFECT OF TRAINEE PSYCHOLOGISTS IN SCHOOLS

by

Elliot L Broch

The University of Wisconsin-Milwaukee, 2017
Under the Supervision of Professor Kyongboon Kwon

The effects of school- based therapy carried out by trainee psychologists were examined in four urban schools (k4-8th grade) in socio economically disadvantaged neighborhoods. Additionally, the treatment effects were compared between students serviced by trainees compared to those receiving treatment from licensed professionals. Trainee psychologists obtained moderate effect sizes (equivalent to that procured by licensed professionals) on measures of social emotional functioning. Discipline problems did not increase or decrease at a different rate for those receiving counselling from trainees and licensed professionals compared to their same age counterparts. Although students receiving therapy from trainees and licensed professionals made academic progress in reading and math commensurate with their peers, those receiving therapy from licensed professionals evidenced a larger improvement on measures of reading than those receiving services from trainees. In addition, students with less severe initial symptoms made more progress compared to those with severe symptoms. Progress in reading and math was also higher for younger students compared to older students.

To
my parents,
my wife
and my children

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Case Study Examining the Treatment Effect of Trainee Psychologists in Schools

Introduction

Childhood and adolescence is a period of pronounced development across physical, cognitive, behavioral, social and emotional dimensions. However, it is also a time of significant vulnerability to the influences of stress, negative influences from families and peers, and the beginning of mental illness. The large number of children in the United States suffering from mental health difficulties has become progressively more evident (National Institute for Health Care Management Foundation [NIHCMF], 2005, Perou et al 2013). Mental health problems or mental disorders, if unrecognized and untreated can lead to significant deleterious consequences including school drop-out (Breslau et al. 2011), poor social relationships (Bhatia, 2007), less vocational success, justice system contact and early mortality (O'Connell et al., 2009). There is substantial evidence for the efficacy of treatment of mental disorders in young people and outcomes are more likely to be favorable if evidence based treatment is provided early in the course of the mental health disorder (Rutter et al., 2008, Kutcher et al., 2011).

Estimates range as high as 20% of community populations experiencing emotional and behavioral difficulties and the majority of youth with mental health problems go untreated (Merikangas et al, 2011, Romero et al., 2014). Furthermore, in large urban schools, some researchers have noted a greater concern, in that it has been estimated that over 50% of children attending these schools demonstrate significant social emotional and learning difficulties (Center for Mental Health in Schools, 2008). Related to this recognition, the School Mental Health International Leadership Exchange (SMHILE) is bringing together leaders from regions and countries across the world to exchange ideas, create dissemination and leadership strategies and

to help promote the best research, policy, and practice directions for the field (Short, Weist, & McDaniel, 2014). A critical challenge is to convince policy makers of the value of mental health in schools. For example, school leaders may not support this agenda based on the view that schools should not be in the “mental health” field and with the concerns of taking on a responsibility that will be burdensome in terms of resources and cost. In addition, education administrators emphasize academic success, but may not see the potential of positive mental health functioning in contributing to this success (Kutcher, Wei, & Weist, 2015). Recently, a World Health Organization report (Suhrcke and De Paz Nieves, 2011) highlighted the need to shift perspectives from viewing improved mental health as a product of education, to seeing it as a factor that determines educational outcomes.

Wei & Kutcher (2012) report that a challenge faced by many countries is to provide adequate human resources for delivery of education services let alone essential mental health interventions. Unfortunately, even in developed countries the resources are not adequate. For example, a survey of school mental health programs administered in the United States suggested that more than 70% of district leaders reported an increase need for services, while concurrently experiencing decreasing funding levels (Foster et al, 2005). Given these realities, new strategies for providing mental health services to students such as engaging primary care facilities, community based programs (recreation centers) and empowering non-specialist providers, such as healthcare workers, caregivers, teachers and others have been suggested (Wei & Kutcher, 2012).

Stepped Care Models

Another approach to address the gap between the high demand for mental health services and the limited availability of counsellors or therapists is stepped care models. The stepped care system design essentially involves offering patients treatment at different ‘steps’, with the intensity of treatment increasing at each step if they fail to benefit at previous steps (Richards et al, 2012). For clients presenting with common mental health problems the majority of them would be offered some form of low intensity treatment first under the stepped care design. Those that do not improve are then referred on to higher intensity interventions. Examples of low-intensity treatments for common mental health problems include group sessions, computer based treatment and guided self-help treatments. Low intensity treatments usually incorporate just a few sessions with a para-professional mental health worker (Bennett-Levy et al, 2010). High-intensity treatments such as cognitive behavior therapy usually take the form of one-to-one treatment sessions between a licensed mental health professional and the patient and are spread over a number of weeks or months. The basic incentive to introduce stepped care approaches to the organization of mental health services for common mental health problems is that low-intensity treatments are often both effective and less costly. Access to low-intensity forms of treatment may reduce the need for more expensive treatments for many clients, while increasing access to more involved forms of treatment for those that require it (Cuijpers et al, 2010). These models are all united under the same goal; to increase service utilization efficiency to meet the growing mental health service demands.

Use of Trainee Therapists

One form of stepped care is the use of supervised trainee therapists to increase treatment access. An important relationship has existed between providers in health care clinics and graduate students seeking essential practical experience (Boggs & Dounce, 2000). Training sites enable trainees to learn new techniques, refine their skills, and to receive supervision. In return, training sites receive free or low cost therapists who increase the capacity of the clinics to meet the overwhelming service demands (Nyman et al., 2010). In the recent difficult fiscal environment, the use of graduate students and trainees in the implementation of mental health services has become so commonplace that few question the practice (Constantine & Gloria, 1998, Nyman et al., 2010). In addition, graduate students and trainees are progressively being called upon to help provide services to populations that lack access to mental health care such as in rural areas (Rishel & Hartnett, 2015) or with underserved minority students (Grossman et al, 2007). However, it is essential that the relationship remain symbiotic. Trainees must receive indispensable practical training, but clients are also entitled to comprehensive and efficacious treatment. In fact, it would not be ethical to allow students “to practice” on clients unless the services can be shown to benefit those undergoing therapy. The degree to which trainee-provided services are efficacious remains an empirical question.

The current study examined the outcomes associated with trainee psychologists. Additionally, it compared the outcomes of trainee psychologists to licensed professionals operating in schools. It also attempted to provide insight into factors that might play a role in the effectiveness of trainees (age of students, level of severity, type of presenting problems etc.).

Literature Review

Consistent with the literature on psychotherapy in general, more research has been conducted examining trainee therapists' efficacy with adult populations than with children and adolescents (Kazdin, 2003). Therefore, this literature review first reviews the pertinent studies carried out with adult populations and the insights gleaned and then concentrates on the child and adolescent literature. Finally, research pertaining to trainees operating in schools will be discussed and how this relates to the current study.

Efficacy of Professional and Trainee Therapists Working with Adults

The broad findings of therapy across a range of treatments for a variety of disorders, suggests that psychotherapy for the adult population evidences medium to large effect sizes (Lambert, 2013). Psychotherapy has been found to be more effective than many evidence based medical practices, some of which are costly and cause significant side effects (Wampold, 2007).

The first review comparing the effectiveness of professionals and paraprofessionals treating clients with a variety of services was carried out by Durlak in the late 1970's. Durlak (1979) reviewed 42 studies that compared the outcomes of paraprofessionals with professionals across a number of domains, including individual and group psychotherapy, crisis counselling, behavior modification, social and vocational rehabilitation, and academics-adjustment and mental health related services. Professionals were defined as those individuals with post-baccalaureate, formal clinical training in professional programs of psychology, psychiatry, social work, and psychiatric nursing. Counsellors without these credentials were categorized as paraprofessionals. Durlak (1979) reported that 28 studies indicated no difference in outcomes between professionals and paraprofessionals, 12 studies favored paraprofessionals, and only 2

studies favored professionals. This review suggested that paraprofessionals could perform equal to, or outperform their better-trained counterparts.

A number of criticisms against the early reviews have been advanced. Firstly, to test the difference between professionals and paraprofessionals in a meaningful manner, one must ensure that there are no other confounding factors. However, different types of treatment modalities and various characteristics (e.g. age, length of treatment) were found to vary systematically between the professional and paraprofessional groups. The type of definitions used to designate therapists into professional or paraprofessional was somewhat arbitrary considering that in 25% of the studies graduate students were considered professionals. Furthermore, some studies focused on vocational counselling instead of psychotherapy (Nietzel & Fisher 1981). These issues made it difficult to come to any conclusion.

Later reviews (Atkins & Christensen, 2001; Stein & Lambert, 1995; Chris-Christoph et al., 1991) which incorporated more rigorous inclusion criteria produced somewhat different results. Chris-Christoff et al (1991) analyzed the effects of therapist experience across a select group of studies that specifically addressed outcomes associated with specific treatment approaches. Findings suggested that therapist experience was positively correlated with treatment outcomes, especially when manualized interventions were used. Stein & Lambert (1995) reviewed 36 studies and found that different levels of training and experience led to differences in outcomes. They limited their inclusion to psychotherapy, excluding research that included vocational counselling and academic advice related to educational difficulties or learning problems. The results suggested a modest but consistent treatment effect size favoring therapists who had more training. Additionally, three well controlled studies (included in the review) suggested that independent clinicians tend to evaluate clients of more trained and

experienced therapists as somewhat more improved compared to clients of less trained and experienced therapists. In addition, Stein & Lambert (1995) reported that studies with larger sample sizes tended to demonstrate larger effect sizes favoring more experienced therapists compared with studies that used a smaller sample size. Finally, it was found that therapists who had not attended graduate school and who worked in community mental health centers and clinics were more likely to produce higher premature dropout rates than their better trained counterparts (Stein & Lambert, 1995).

Atkins & Christensen (2001) examined a number of factors and inconsistencies that seem to have contributed to the lack of consistency in reviews. The lack of a unified definition of professionals or paraprofessionals, (allowing for similar groups such as graduate students to be categorized as either) resulted in each group representing a very heterogeneous entity. While not possessing a professional degree, paraprofessionals are usually not untrained or inexperienced. Many may have had years of experience working with a particular population or may have received specialized training as part of a study. Related to this issue, professionals may also vary in their level of degree or amount of experience. Doctoral level professionals (PhD, MD) were normally assigned the same code, even though their experiences in delivering mental health services could range from a few months to many years. In addition, many studies do not report the level of supervision received or consultation provided. It is likely that younger or less trained therapists could have received greater supervision and consultation than that received by more experienced therapists. Despite these methodological problems and ambiguities, Atkins & Christensen (2001) concluded that the existing research supports the efficacy of untrained therapists. However, trained therapists were shown to have superior outcomes in specific areas, such as greater client retention, briefer therapies, and better overall well-being of the clients.

The relationship between level of clinical experience and therapeutic outcome in time limited therapy was evaluated by Burlingame et al (1989). Experienced therapists and trainees conducted time limited therapy with a prescreened homogenous group of clients. Fifty seven clients at a university counselling center were selected using a structured interview with clients. Clients had to meet predetermined inclusion criteria(ability to form a therapeutic relationship, having a specific definable problem, one successful relationship in the past, good premorbid history) and exclusion criteria (severe depression, acute psychosis, borderline personality disorder, anger as a main problem, lack of a consistent sense of self-identity, unrealistic expectations of therapy). Twelve therapists (6 interns with 1-5 years of experience and 6 licensed staff with 4-15 years of experience) were randomly selected from a pool of staff volunteers from a university counselling clinic and were randomly assigned to 3 training conditions (no training in brief therapy, self-instruction, and intensive training in brief therapy). Clients were randomly assigned to therapists for 8 sessions of time limited therapy. Clients of experienced therapists had consistently superior outcomes compared to clients of their less experienced colleagues. In addition, the study also found that the rates of client improvement paralleled the intensity of therapist training irrespective of therapist experience. Therapists who received greater training in time limited therapy evidenced superior outcomes and this pattern did not differ across the two experience conditions. Thus, experienced and less experienced therapists equally benefited from specific training in time limited therapy. This study revealed that amount of therapist experience as well as type and intensity of training are important predictors of client outcomes. In addition, the researchers suggested the skills needed for time limited therapy may be qualitatively different than those needed for general therapy (hence the benefit accrued to both inexperienced and experienced therapist from training). It must be noted, that the clients in this study were

homogenous and controlled; thus, they may not be characteristic of clients in regular clinics and hospitals. In addition, the therapists used in this study from a university counselling center may be dissimilar enough from therapists in general practice so results may not be generalizable. Furthermore, short term therapy could be markedly different from regular therapy in terms of favoring experienced therapists.

Driscoll et al (2003) carried out a study at a university run outpatient clinic that attempted to better define level of training and experience (Client contact hours). Participants (racially representative sample of community in Tallahassee Florida, N = 83), were assigned to trainee therapists based on availability in a therapists caseload. Based on the diagnosis (which varied widely), clients were treated using empirically validated treatments (cognitive therapy, exposure treatments for anxiety disorders, dialectical behavioral therapy etc.). The clinic was the first placement for doctoral students in the clinical psychology program at Florida State University and trainees saw approximately 4 clients per week and received 3 hours a week of supervision from a clinical psychologist, and 2 hours per week in staff conferences devoted to case presentations and intensive instruction for empirically validated treatments. Multiple regression analysis suggested that trainee experience (even when controlling for therapy dose or number of sessions, and initial severity) was positively correlated with treatment outcome. In fact, trainee experience accounted for 71% of the variance in outcome. The experience of practicum students appeared to have a positive influence on treatment outcome across a variety of diagnoses. These results suggest that time, experience, and supervision leads to therapists' skills becoming more developed and more effective. Since previous studies have operationalized the therapist experience variable in terms other than actual hours of client contact, the results of this study seem to suggest the possibility that the positive relationship between trainee experience and

client outcome may have been masked due to the imprecise definitions of experience. A prominent feature of the present study is related to their use of manualized and empirically supported treatments. It must be considered, that trainees do not improve merely due to time meeting with clients, rather through the combination of direct experience in conjunction with practice using therapies that have been shown to work for respective client issues. Thus, those who learn the manuals and engage in protracted practice will perform better than those who do not. This could also explain why some previous studies that did not use manualized or empirically supported treatments demonstrated little to no differences in outcome as a function of therapist experience. Perhaps both more and less experienced therapists will perform equally when therapy is unstructured or therapists use strategies lacking rigorous evidence for their efficacy. Overall, this study emphasizes the importance of training and experience on client outcomes and suggests the need to examine trainee competence before working with clients. Trainees with more experience seem to achieve greater outcomes than trainees with less experience. However, the authors only used one outcome measure that was completed by the trainee therapists themselves. Although the measure is widely used and has adequate psychometric properties (i.e., interrater agreement), the measure may only account for the trainees conceptualization of client functioning and may be subject to bias. In addition, the study compared level of experience within the category of trainees. Perhaps the pattern would be different if all categories of proficiency and experience were included (trainees, professionals etc.).

Outcomes of a manualized cognitive behavioral therapy with acceptance and commitment therapy using 14 novice therapists that were treating 28 undiagnosed clients at a university clinic in Finland was investigated by Lappalainen et al (2007). The length of the

therapy was approximately 10 sessions. The trainees received 20 hours of diagnostic and intervention theory and 30 hours of group supervision (3 hours a week). Results indicated that the trainees achieved a large effect size using the acceptance and commitment therapy (ACT) and a small effect size using the cognitive behavioral therapy. Results suggest that even with limited exposure to the therapeutic approaches, trainee therapists could produce positive changes. Counterintuitively, the trainee therapists effected greater change when using Acceptance and Commitment therapy than when using traditional Cognitive Behavioral therapy even though they had received more training and supervision for Cognitive Behavioral Therapy (CBT). Perhaps CBT takes longer to master and apply than does the ACT. This seems to suggest that trainee therapists can learn new techniques and effect change with clients although the effect sizes achieved were not as great as that found for experienced therapists. The researchers note that the sample size, and sample composition (Majority women), may limit the generalizability of the results to other settings. This study again emphasizes the importance of considering level of training and experience when deciding the allocation of clients to trainees.

Bados, Balguer, & Saldana (2007) conducted a study to examine the efficacy of trainee therapists treating patients (59 patients, 42% were students or staff) presenting with anxiety disorders at the Behavioral Therapy Unit of the University of Barcelona using cognitive behavioral therapy. The authors concluded that the large effect size (1.09), suggests that cognitive behavioral therapy applied by trainee therapists under conditions of standard clinical practice is effective. However, the pre-post effect size was slightly lower than those observed in other Spanish studies and in international meta-analyses. In addition, the percentages of clients who improved or recovered were slightly lower than those reported in reviews of anxiety disorders. Results also indicated that the trainees needed twice as many hours of treatment to

achieve the same outcome and the drop-out rate (33%) was higher than those reported in other meta-analyses. The authors suggested that the lower efficacy in the study might be because therapy was administered by trainees. In addition, results could be due to the contrast between treatment conducted in artificial contexts and the current study reflecting standard clinical practice (i.e. therapists seeing fewer cases, selected clients etc.). This same conclusion was reached by Ryum, Stiles, & Vogel, (2007) who also reported that therapy provided by graduate students in Norway produced effect sizes in the medium range, but few clients met criteria for reliable and clinically meaningful change. This reveals that therapists in training may not perform as well as experienced therapists. The above studies suggest that clinicians and supervisors need to consider the ethical ramifications and evidence for using trainees (especially inexperienced trainees) to conduct therapy with clients.

Forand et al, (2011) carried out a study to assess the effectiveness of Cognitive Behavioral Therapy delivered by a group of trainee therapists in a clinic situated in an urban academic medical center. A General outpatient sample with few experimental controls was used which although more generalizable to other outpatient clinics, obviously has decreased internal validity. Participants (61.8% Caucasian) were selected from a research database (N = 249) , had a diagnosed mood or anxiety disorders and at least three sessions of available symptom data. Therapists in the study were primarily pre-doctoral clinical psychology interns and first and second year postdoctoral fellows. Adherence to treatment techniques and principals was emphasized and supervision was intensive (1 hour of individual, 1 hour of group, 1 hour of group video supervision per week and postdoctoral fellows received 3 hours of individual and 1 hour of group), although treatment was not manualized. Cognitive behavioral therapy delivered by trainees was found to be effective, with about 48% of the sample meeting criteria for recovery on

standardized measures of depression and anxiety. The interns were found to produce outcomes commensurate with therapists in other outpatient clinics and in randomized controlled trials. When recovery as a function of initial severity was considered, trainees were less effective compared to more experienced therapists when treating severe depression. However, rates of recovery for anxiety disorders were similar across all levels of initial anxiety severity. This could be due to therapist competence mattering less when treating anxiety symptoms (as exposure/behavioral therapy might be less sensitive to variations in therapist skill level) or perhaps differences in the level of training and competency in treating anxiety versus depression. Previous studies have demonstrated the influence of therapist competence on therapy outcomes (more experienced therapists evidence better outcomes) when treating depression that is severe or complex (DeRubeis et al, 2005; Strunk et al, 2010). This suggests that level of severity should be examined before allowing trainees to work with clients. However, this study seems to suggest that for moderate symptoms, trainee therapists may be able to achieve results similar to fully licensed therapists. The level of supervision in the above study seems to be more intense than that reported in other studies and this could contribute to the level of efficacy realized by the trainees. In other words, perhaps the trainees in this study performed so well due to the significant level of supervision, which is rarely provided in regular outpatient clinics limiting the generalizability of the study.

Wampold & Brown (2005) analyzed data from a large sample of patients (adults) from a managed care organization (6,146 patients seen by 581 therapists). The patient variables available for the analysis were gender, age, and diagnosis, and provider variables available included age, gender, professional degree and years of practice. Results indicated that therapist age, gender, degree, and years of experience did not explain the variability among therapists, nor

did the patients age, gender or diagnosis. This seems to suggest that when analyzing a large sample of data from a naturalistic setting, experience level may not be correlated with therapist outcomes. Limitations of the study include that data was collected in a naturalistic setting, precluding experimental manipulations. In addition, patients were not randomly assigned to therapists and so the influence of biased assignment could have affected the results. Results did not consider or compare level of efficacy as a function of whether the therapists were trainees or licensed professionals and so this does not directly inform whether trainees are as efficacious as professionals.

Solem et al (2009) investigated whether inexperienced student therapists could successfully learn exposure and response prevention therapy for obsessive compulsive disorder. The therapists had been studying psychology for 3 semesters and none had previous clinical experience. Before starting treatment, the students were provided with a didactic introduction to the treatment of obsessive compulsive disorder. Training was based on a commonly used treatment manual for obsessive compulsive disorder and students were also introduced to general therapy skills. Students received 2 hours of group supervision weekly that focused mainly on case presentations and consultation. Clients (N= 20) had a primary diagnosis of Obsessive compulsive disorder and all but one had previously attended professional psychological treatment. Researchers reported large effect sizes (2.1), and 65% of the clients achieved clinically significant changes at post treatment, which is at or above that found in comparable studies with more experienced therapists. This study seems to suggest that using manualized treatments with good supervision, trainee therapists can achieve results comparable to that of their more experienced counterparts. However, it must be noted that there was a small sample size, nearly all of the clients had previously been through treatment, and the diagnostic assessors

also supervised the student's potentially compromising objectivity. In addition, Ost et al (2012) analyzed the outcome of 591 clients at a training clinic in Sweden. The clients had mainly anxiety and depression and received cognitive behavioral therapy for on average 18 sessions. The trainees were mainly women. The students received a total of 120 hours of group supervision, and an additional half an hour a week of individual supervision. Effect sizes were moderate to large and 63% of clients had a significant positive change as measured by the Beck Anxiety Inventory, and 60% showed significant improvement on the Beck Depression Inventory. This study suggests that for a manualized, highly structured intervention with sufficient supervision, trainees can perform well when treating clients with depression and anxiety disorders.

Minami et al (2009) analyzed archival data from a large Western public university that provides direct clinical services (to university students and staff) with additional emphasis on outreach, consultation and the training of masters and doctoral students in psychology and social work. A total of 6,099 clients (served by 191 therapists) data was analyzed although demographic and diagnostic data was not routinely collected. Trainees at the clinic provided roughly half of the amount of direct clinical hours and therapy. Results indicated that counselling services provided to clients with clinically significant distress were very effective. Evaluation of the treatment effectiveness against the wait list control suggested that approximately 80% of clients treated for two or more sessions were better off after receiving treatment than the average patient randomly assigned to a wait list control. Counterintuitively, treatment outcome did not positively correlate with the therapist training level. Interns had the highest treatment effect sizes, followed by practicum students, and then licensed staff. This same result was found by Budge et al (2013). The findings of these studies seem to contradict studies that show either:

experienced therapists display better outcomes than trainees (i.e. Burlingame et al; 1989; Atkins & Christensen, 2001; Stein & Lambert, 1995 Chris-Christoph et al., 1991; Powell et al, 2010, Driscoll et al, 2003) or those studies that show no differences based on training level (Nyman et al, 2010, Wampold & Brown, 2005). This seems to suggest that trainees may outperform their licensed counterparts. However, the results of this study should be considered with caution due to a number of limitations. Clients were not randomly assigned to therapists. Specifically, authors report that approximately two thirds of the clients were reassigned to a therapist other than their intake therapist due to a number of clinical and logistical factors. Clients were assigned to therapists based on the therapist's availability in light of overall case load, therapist's interest in working with the client based on the case report, and the team leader's comfort with the assignment. Clients who presented with multiple difficulties and especially those with substance abuse were assigned to senior staff. The natural selection of potentially treatment resistant cases being matched up with the most experienced therapists may have clouded the effects of experience on effectiveness. Furthermore, the current study cannot be generalized to the natural clinical settings because of significant differences in client population. The researchers failed to report the level of supervision that each category of therapist received and this could be a confounding factor (i.e., if interns received more supervision than practicum students and professionals this could explain their elevated efficacy). As noted above, within each category (intern, practicum student, licensed professional), there is often great variability in number of years of experience, and this could also have masked any correlation between level of experience and resulting outcome.

Nyman, Nafziger & Smith (2010) analyzed the data of 264 students who had sought out counselling services from a university counselling center and who had completed at least 6

sessions. During the 3 year data collection, therapy was carried out by doctoral level mental health professionals, pre-doctoral interns, and practicum students. A multitier supervision was used in which professional staff supervised intern students, who in turn supervised practicum students. The researchers carried out a multivariate analysis of variance while controlling for levels of initial problem severity to ensure that there was no significant difference in level of initial severity between the therapist groups. Data suggested that a client who received therapy from the clinic experienced moderate improvement in symptoms regardless of whether they were treated by a licensed professional, an intern therapist, or a practicum therapist. This seems to contradict previous research displaying trends favoring more experienced therapists (Atkins & Christensen, 2001; Burlingame et al, 1989; Stein & Lambert, 1995; Chris-Christoph et al., 1991; Driscoll et al., 2003; Huppert et al, 2012). With good supervision, trainee therapists may evidence outcomes similar to experienced therapists. A number of limitations must be kept in mind when interpreting the results of this study. The data collection from a university counselling center located in the rural western United States restricts the level of generalization to other populations (fairly homogenous sample in terms of racial diversity). In addition, client progress was only tracked over 6 sessions of counselling and therefore it is entirely possible that differences in therapist experience may only become apparent after a longer period of time. Finally, the researchers do not specify the amount of supervision each group of therapists received and so it is possible that the amount and type of supervision could have been a confounding factor that could explain the lack of difference between the various therapist groups.

The efficacy of trainee therapists compared to licensed and experienced therapists is mixed when considering the literature on adult populations (Atkins & Christensen, 2001; Burlingame et al., 1989; Chris-Christoph et al., 1991, Driscoll et al, 2003., Huppert et al, 2012.,

Nyman et al., 2010., Stein & Lambert, 1995, Wampold & Brown, 2005). However, a review of the literature suggests a number of common themes. Importantly, the degree to which trainee performance matched professional levels seemed to correlate with degree of supervision and training (Driscoll, 2003, Forund et al., 2011). In particular, trainees trained to competency in manualized treatment protocols and followed by supervision were found to achieve outcomes commensurate with or outperform their more qualified counterparts (Budge et al, 2013, Minami et al, 2009, Nyman et al, 2010, Wampold & Brown, 2005 et al). Another variable considered in the literature is the negative relationship between level of client severity and outcomes achieved by trainees (Driscoll et al, 2003, Forund et al, 2011). These findings speak to the importance of considering the level of client severity when assigning trainees or determining appropriate level of supervision required to maintain ethical practice (DeRubeis et al., 2005, Forund et al., 2011, Strunk et al., 2010).

Psychotherapy with children and adolescents

Important differences between psychotherapy for adults and treatments carried out with children warrant attention. Firstly, the majority of treatment for children and adolescents is initiated by parents, teachers or other adults in the child's life. Typically, adults also identify many of the referral concerns and treatment goals, pay for the treatment and determine the length of therapy. Although young people participate in the therapeutic interventions, they may not agree with adult conceptualizations, and they have been found to exert less influence than adults on the emphasis and direction of therapy (Hawley & Weisz, 2003; Weisz et al, 2013). Due to this lack of control, it is understandable that children and adolescents begin therapy with low motivation. A large part of therapy with this population may be rapport building, promoting engagement/buy in, in order to obtain the desired results and progress. Youth and adult

psychotherapy also differ with respect to the information sources available. Youth therapy involves multiple informants (Child, parent, teacher etc.) each with different, perceptions, motivations and agendas. Typically, the reports provided by these stakeholders do not show a high level of consistency in terms of the strengths and problems faced by the child (De Los et al., 2010). On the one hand, constraints in self-awareness and expressive language compromise the accuracy of the child's report. In addition, the accuracy of the adult responder may be limited by lack of opportunity to observe the child in multiple settings, the effects of the adults own life stresses or mental health difficulties, and by other agendas (i.e. to obtain more help, fear of protective services etc.). Another factor idiosyncratic to children is the fact that they exert less control over their external environments. Their home, family, and schools are selected and shaped by adults and are not factors that children can significantly alter. Thus, an understanding of a youth's social context and involvement of key adults are very important in working with youngsters (Weisz et al., 2013). In addition, an understanding of child development and ensuring that therapeutic activities are appropriate for children is another challenge faced by therapists working with children. Working with children and adolescents require a different knowledge base (child development) and set of skills (rapport building, keeping children engaged etc.) than that needed to be successful with adults. This could influence the efficacy of trainee therapists with this population.

Efficacy of Professionals and Trainees Working with Children

Randomized trials since the 1960s have tested a wide range of increasingly well investigated treatments for youth mental health and behavioral problems. Many of the studies showed that structured, manual guided treatments produced significant benefit when compared to control groups of various kinds. Meta-analyses synthesizing these studies across a broad range of

treated problems (e.g., Casey & Berman, 1985; Kazdin, Bass, Ayers, & Rodgers, 1990; Weisz, Weiss, Alicke, & Klotz, 1987; Weisz, Weiss, Han, Granger, & Morton, 1995) have shown mean effect sizes in the medium to large range (i.e., .5–.8) and comparable to that found for adult psychotherapy (Weisz et al., 2013).

Studies examining psychotherapy outcomes with children and adolescents have yielded somewhat stronger evidence for the importance of therapist experience. Dush, Hirt, and Schroeder (1989) reviewed 48 studies of a cognitive therapy (primarily utilizing self-statement modification techniques). Overall, children who were 11 years of age and older tended to show more improvement than younger children and studies containing a larger proportion of girls showed larger outcomes. The researchers did not find any statistically significant differences whether the self-statement modification was delivered individually or in group format. Clear association between level of training and outcomes was found. Doctoral level therapists achieved outcomes over seven times larger than those of therapists without graduate training. This is especially relevant given that self-statement modification is a straightforward procedure, and it was common for experimenters to train undergraduates, teachers, or others to provide the treatment. This study suggested that more skill, subtlety, and expertise might be needed to obtain acceptable treatment outcomes. However, besides being outdated, these studies all focused on self-statement modification, which does narrow its generalization to other interventions.

A number of earlier meta-analyses found an interaction between level of experience and the type of disorder treated. For example, in a meta-analysis of 108 controlled studies conducted by Weisz et al (1987), no training effect was found for children presenting with externalizing problems (impulsivity, delinquency etc.) across three levels of training: professionals (holding a doctoral or masters degree), graduate students and paraprofessionals (comprised of parents,

teachers, or others lacking mental health training but trained to administer therapy). However, for young people who presented with internalizing problems (anxiety, depression, phobias), professional therapists outperformed both graduate students and paraprofessionals.

Similar results were reported by Weisz and colleagues (1995) when reviewing psychotherapy for children and adolescents using an additional 150 controlled child and adolescent studies. Treatment outcomes were found to be better for adolescents compared to children and for individual therapy compared to group therapy. In addition, therapy had more beneficial effects for adolescent female majority samples compared to male majority samples but this was not found to be the case for children. Again, professionals demonstrated better outcomes with children exhibiting internalizing (anxiety, depression) problems compared to paraprofessionals. Paraprofessionals evidenced better outcomes than professionals with externalizing problems with younger children, but professionals performed equally well regardless of the age of the child. It must be noted, that the paraprofessionals (who like trainees lack the qualifications possessed by professionals) in these studies had received training and supervision provided by professionals who had in most cases designed the techniques and interventions. In addition, the procedures used often had been fitted to the training level of the therapists. It is possible that the kinds of behavior management interventions used with externalizing problems (aggression, impulsivity) may be clear cut enough to be taught to parents and teachers but that interventions for more subtle and less overt problems may require greater expertise to evidence good results.

In contrast, more recent literature reviews that focused on treatment for depression did not find any differences between graduate students and professional therapists in terms of outcomes (Michael et al, 2005). For example, Santor and Kusumaker (2001) found no difference

in the level of effectiveness for therapists with more specialized psychotherapy backgrounds (i.e. doctoral psychologists, psychiatry residents), compared to therapists with less specialized training (i.e. nurses, social workers). In addition, Kolko and colleagues (2000) found that therapist years of experience did not interact with outcomes.

A number of variables may be responsible for the inconsistencies in the literature. First, in the Michael et al (2005) study, the graduate students were being closely supervised by professionals. Additionally, the vast majority of the studies used in the Michael et al (2005) review utilized a manualized intervention protocol. Second, there may be differences in the treatment of depression as opposed to anxiety and other internalizing disorders (which did find better outcomes for professionals over trainees). In fact, in the Weisz et al studies (1987;1995) only 6 of the 40 internalizing studies were coded as depression whereas the other studies were coded as phobias, anxiety, somatic complaints and withdrawal.

A more recent study attempted to investigate the impact of therapist training or experience level on therapeutic outcomes by ensuring a more accurate definition of the therapist experience construct (as utilized in Driscoll et al., 2003) . Powell et al (2010) reviewed data (N = 137) from a university based mental health clinic serving a racially diverse group of children (average age 8.6 years old) and families in a large city in the Midwestern United States. The clinic was often the first practicum experience for students entering the university's doctoral program and required at least one hour a week of individual supervision. Less experienced therapists also received an additional 1.5 hours of group supervision that included case presentations, didactic training, and instruction in theory and application of evidence based practices. Therapists were assigned cases depending on their availability although on occasion assignment may have been related to the level of impairment. Level of therapist experience was

operationalized as the number of client hours that had been accrued as opposed to categorical labels (i.e. graduate student, professional therapist etc.). This is suggested to overcome the limitations of using categorical labels that may mask the effects of experience. Using discriminant analysis, the number of direct client contact hours, number of outside practicum experiences, and the number of days in training in the doctoral program were all positively associated with treatment completion and goal completion. In contrast, therapist age and clients income level was not associated with treatment completion. This seems to suggest that for a wide range of client problems (43% externalizing problems, 21% internalizing problems, social skills deficits, learning problems, developmental disabilities, abuse etc.), trainee experience is important when treating children and adolescents. Overall, this study again emphasizes the importance of training and experience on client outcomes.

However, limitations of this study include a more subjective interpretation of outcomes. Treatment outcomes were derived from examination of various reports found in a client's file. Clients were coded as completed or not completed with completed suggesting agreement between the therapist, clinical supervisor, and clients' family that treatment goals had been met. Outcomes coded as not completed were characterized by information suggesting that treatment ended before goals had been fully met. However, this may not be as rigorous and interpretable as studies that use standardized rating scales and empirically validated measures. Additionally, this study seemed to include students in a training program comprised of first year practicum students and progressively more advanced doctoral and perhaps post-doctoral students. However, it is not clear from the study how amount of experience would impact outcomes in terms of paraprofessionals compared to graduate trainees and professional therapists. It must be noted, that this study underscores the fact that not all trainees are alike and outcomes may depend on

the level of training and years of experience each trainee has attained. Thus, considering the level of experience of the trainee and the level of complexity and severity of the client would be important.

Understanding discrepancies regarding therapist effect in the literature

Many studies have operationalized the therapist experience variable in terms other than actual hours of client contact. The results of the Powell et al (2010) study seem to suggest the possibility that the positive relationship between trainee experience and client outcome could have been masked due to the imprecise definitions of experience. Besides the lack of a unified operational definition of professionals, graduate students and paraprofessionals in the literature (allowing for groups to be categorized as either), each group is a very heterogeneous entity. Confusing matters, while not possessing a professional degree, paraprofessionals are usually not untrained or inexperienced. As was stated above in the adult literature, many may have had years of experience working with a particular population or may have received specialized training as part of a study. Related to this issue, professionals may also vary in their level of degree or amount of experience. Doctoral level professionals (PhD, MD) were normally assigned the same code, even though their experiences in delivering mental health services could range from a few months to many years.

In addition, many studies do not report the level of supervision received or consultation provided. It is likely that younger or less trained therapists could have received greater supervision and consultation than that received by more experienced therapists. This may boost their outcomes compared to more qualified/experienced therapists. A prominent feature of the Powell et al. (2010) study is related to their use of empirically supported treatments. It must be

considered, that trainees may not improve merely due to time meeting with clients, rather, they improve as a result of the combination of direct experience in conjunction with practice using therapies with empirical support for respective client issues. Interestingly, earlier studies often did not utilize manualized and evidence based techniques. This could also explain why some previous studies demonstrate little to no differences in outcome as a function of therapist experience. Perhaps both more and less experienced therapists will perform equally when therapy is unstructured or therapists use strategies lacking rigorous evidence for their efficacy.

School Based Mental Health Services

The social-ecological perspective emphasizes that a child's functioning is shaped by both genetic/ individual characteristics and a range of nested contextual systems, such as families, neighborhoods and schools (Bronfenbrenner, 2001). Each of these systems interacts with the other systems to influence child development. Considering that youth spend a considerable amount of their day in school and this may be a key context for the identification of mental health concerns, a growing number of researchers have recommended that mental health professionals be more involved within the school context (Cooper et al., 2013, Hoffman & Carter, 2004). This need is particularly pronounced with racial and ethnic minority youth (Yeh, 2004). This is sometimes the only context where low income youth receive professional mental health services (Bontrager & Lyon, 2015, Coleman, 2004, Yeh, 2004). Evidence suggests that as in the general education sector, school based mental health services have in fact contributed to a reduction in service based disparities related to ethnicity or socioeconomic status (National Association of School Based Healthcare, 2008). Following the social-ecological framework, researchers have argued for an expansion of school-based mental health services, such that schools, community programs and agencies work in collaboration with families to target youth

mental health concerns. School-based intervention should be particularly effective for improving outcomes for children for a number of reasons. Firstly, there is a social network providing support (teachers, teaching assistants, peers) to help the child practice and generalize skills learnt in therapeutic sessions (Squires 2010). In addition, the social network can be engaged in providing important information to help with more accurate case formulation and information gathering. Reciprocally, onsite school mental health professionals can contribute information about the systemic practices in the school and provide opportunities for school development work (Squires 2010). Furthermore, school staff have greater access to parents and family and can orchestrate other support services as needed, particularly in complex and demanding cases (Fox & Butler, 2009). Other advantages include normalizing service provision so that children no longer consider it a stigma to receive services and making it easier to carry out preventative work, to ensure that problems are tackled before they become pathological (Fox & Butler, 2009).

Having said the above, there are a number of challenges associated with operating mental health services within the school context. Schools are plagued with a lack of funding or inconsistent support for programming (Satcher & Druss, 2010). Particularly difficult, is the fluctuations in funding depending on the economy. In addition to lack of materials and concrete resources (space to conduct mental health interventions), schools also struggle to provide adequate mental health staff. Schools may not have staff to deliver therapy, to form teams to implement groups and universal interventions (Satcher & Druss, 2010, Stein, 2008). Almost 65% of school psychologists report that they are too busy to provide the range of services that would reduce psychopathology. Some are overwhelmed with IEP evaluations, some are isolated without access to collaboration and supervision and many are itinerant serving several schools (Walker, 2008). Another challenge faced by mental health professionals attempting to provide

services in schools is finding time in school schedules to deliver services. This involves fitting programs into existing schedules while not taking time from critical academic subjects. Equally important is trying to avoid taking time away from electives and free periods that could lead to student resentment, resistance, or refusal of mental health services (Mihalic, Fagan, & Argamaso, 2008). Teaching staff and administration must be on board and supportive of mental health services for these services to be successfully carried out in the school setting. Difficulties with staff turnover, with staff attitudes (Social functioning is not part of a teachers' responsibility) and with staff stress levels can undermine programming (Langley et al, 2010). Although family support is important regardless of the setting, it is particularly important in a school setting. If the notion of receiving treatment makes a parent feel criticized or embarrassed especially in front of other school based professionals, implementation of services will be compromised (Silva et al., 2006). Martin, Lauterbach, & Carey (2015) provide an additional potential barrier to outside therapists engaging in therapy in schools. It is not uncommon for other mental health professionals operating in the schools to resent and oppose other helping professionals working in the school. School based mental health professionals feel that they possess the skills to engage in counselling but have little time to do so. This can lead to a lack of cooperation as they feel that more professionals with their training should be employed to carry out this important work. In order for a school based mental health program to operate, it is necessary to have school based professionals that take ownership of the logistics and that facilitate the services. It is unlikely to be a successful program without insider support and coordination.

Relationship between mental health services and academic progress

Including data looking at academic progress for students receiving mental health services is an important endeavor for a number of reasons. Firstly, many stakeholders feel that the point of school is to promote academic success and that is what they emphasize in terms of the allocation of finances. If it can be shown that services targeting mental health in turn positively impacts academic performance this may influence resource allocation.

In addition, teaching and learning in schools have a strong social, emotional, and academic component (Durlak et al, 2011, Wang & Walberg, 2004). Emotions can facilitate or impede a child's engagement, perseverance, commitment, and school success (Durlak et al, 2011). Educators, policy makers and the general public agree that schools should graduate students who possess strong skills in core academic subjects, are able to work well with others in socially and emotionally skilled ways, and behave respectfully and responsibly (Association for Supervision and Curriculum Development, 2007). Thus, schools are charged with the role of engendering not only students' academic and cognitive development, but also their social and emotional development. Extensive developmental research indicates that effective mastery of social emotional competencies is associated with greater wellbeing and better school performance. (Durlak, Weissberg, Dymnicki & Schellinger, 2011, Eisenberg, 2008, Masten & Coatsworth, 1998, Nix et al, 2013). In contrast, students who fail to achieve social emotional competence are found to experience a variety of personal, social and academic problems (Eisenberg, 2006, Nix, 2013). This is especially true for students with emotional disturbances (Siperstein, Wiley & Forness, 2011). In fact, Siperstein, Wiley & Forness, (2011) found that students with significant emotional problems made no measurable academic progress over an academic year regardless of their initial academic level (functioning in the low or average range)

and their family social economic status (low versus high income). This is in line with other researchers who found that students with emotional disturbance did not improve academically over a 5 year follow up period from the beginning to end of elementary school (Anderson, Kutash, & Dunowski, 2001). Furthermore, even those students described as presenting with more mild symptoms and initially performing in the average range academically, did not make any statistically significant gains in reading or math over the course of a year (Siperstein, Wiley & Forness, 2011).

Other researchers have also found significant positive correlations between the level of social skills and academic performance of students of various ages (Henricsson & Rydel, 2006, Rahib Abadi 2000, Seyfried, 1998, Usher & Taylor, 1981, Welch, parks & Weidman, 2001). In fact, Samadzadeh, Abbasi, & Shabbazadegan, (2011) reported that even when controlling for IQ, thinking style and psychological hardiness, social skill competency significantly predicted level of academic achievement. Milsom & Glanville (2010) carried out a study with over 11,000 high school students with various disabilities to ascertain the relationship between social skill competency and academic achievement for this population. Results indicated that social skills are important predictors of grades and that enjoying school and getting along with teachers and peers is very important to academic success. Of the three social skill domains examined, cooperation was found to predict grades directly. Skills in both cooperation and self-control were found to play an important role in the participants' relationships with teachers and with students.

Possessing low levels of social assertiveness skills was a significant predictor of difficulty with other students but not with teachers. These factors in turn predicted academic success. Thus, promoting greater social emotional competencies in children might directly and indirectly impact their academic success and future life goals. Considering the relationship

between poor social emotional functioning and academic performance it would be important to track as an outcome measure academic functioning for students receiving interventions targeting social emotional skills.

Outcomes for School based mental health

Meta-analyses focusing on school based group counselling and psychotherapy has yielded overall effect size values between 0.58 and 0.98 suggesting moderate to strong effects (Baskin et al., 2010, Cooper et al., 2013, Mendelson et al., 2015). A number of studies have found that school based mental health programs decrease negative behaviors (Pfiffner, Kaiser & Burner, 2011), promote better emotional outcomes (Jay, Langley, & Stein, 2011, Nelson, Martella, Marchand-Martella, 2002), decrease disciplinary referrals and school absences (Hall, 2000), lower suspension and truancy rates (Jay, Langley, & Stein, 2011, Nelson, Martella, Marchand-Martella, 2002, Wyman et al., 2010) , and contribute to better academic outcomes (Nelson, Martella, Marchand-Martella, 2002, Walter et al., 2011, Wyman et al., 2010). Rupani, Haughey, & Cooper (2012) carried out a mixed methods approach to ascertain the mechanisms by which counselling ameliorated mental health problems in the school. Results from the semi-structured qualitative interview and rating scales suggested that counselling benefited students' academic achievement by improving their concentration, motivation to study and attend school, their classroom behavior and their relationships with teachers.

In contrast, other studies found no improvement or even negative effects on school outcomes (Hains & Ellmann, 1994, Boyle, Cunningham, & Heale, 1999, Hanley, Sefi & Lennie, 2011). Researchers have hypothesized, that negative outcomes were associated with the short intervention and follow up periods, and the outcome measures not being aligned with

intervention goals and not sensitive to change (Weiss, Harris, Catron & Han, 2003). Kang et al. (2013) suggest that another factor differentiating the studies is the difference in implementation of research based interventions and community based programs. Research based programs are highly supervised and the intervention is implemented with integrity according to strict protocols. This leads to better results compared to interventions implemented in “real world” settings. In addition, Kang et al. (2013) point out that only a small fraction of the studies published report outcomes from routine practice programs. Obviously, evaluating programs that have been conducted in routine settings is important for our understanding of current practice in the schools.

Reese et al. (2010) carried out a meta-analysis using 65 school based psychotherapy and counselling dissertations over a 10 year period. Interestingly, despite the lack of peer review, Reese and colleagues (2010) suggested that dissertation studies may provide a more realistic and less biased estimate of the effectiveness of school based services as published studies may yield a bias with resulting higher effect size values than non-published studies. Results indicated a moderate effect size for school based therapy (0.44), and students who received intervention improved on average roughly 0.5 standard deviations more than did students who received no treatment. Interventions with elementary aged students yielded the largest effect sizes (0.65) when compared to other school age categories. Although not consistent with Dush, Hirt, & Schroeder (1989), and Weisz, (1995), this is consistent with previous school based studies that also found larger effect sizes for elementary students receiving therapy (Prout & DeMartino, 1986, Prout & Prout, 1998). A possible explanation of differences may be the fact that the studies carried out by Weisz (1987; 1995) had difficulties producing operational definitions of child versus adolescent studies. For example, studies were categorized as child studies if they

had a mean age of 12 or younger and adolescent studies were characterized by a sample with a mean age of 13 or older. Since the studies were relying on the mean ages and not the exact ages of the samples, it is difficult to make firm conclusions based on age. In addition, these studies were carried out in the schools whereas the studies carried out by Weisz (1987;1995) included interventions in all settings.

Efficacy of trainee therapists in the schools

Baskin et al. (2010) carried out a literature review using 107 studies examining the efficacy of counselling and psychotherapy interventions in schools. Results indicated a medium effect size (0.45) which is slightly lower compared to other studies of child therapy and mental health services (Cooper et al., 2013, Mendelson et al., 2015, Reese et al., 2010). Interventions were found to be more efficacious for adolescents than with children. This could be due to a higher level of cognitive and emotional development and sophistication in adolescents. In addition, this study included interventions that involved consultation, non-traditional counselling with unstructured interactions, interventions for learning issues, and training programs, which could all influence the results. Same gender groups did significantly better than mixed gender groups. Single gender groups may promote greater depth and disclosure than that attained in mixed gender groups. Furthermore, no significant differences in outcomes were found for predominantly European American groups compared to those with more diverse racial and ethnic groups. Treatment modality (i.e. individualized intervention, group intervention, class wide intervention) was not found to be significant. Licensed professionals (effect size = 0.62) outperformed paraprofessionals (effect size = 0.45), who in turn outperformed graduate students (effect size = 0.17). Overall, the results of this study suggest that higher efficacy may be found with older students, using single gender groups, and having professional therapists. Baskin et al,

2010 also reviewed the types of interventions carried out in school settings. Cognitive behavioral therapy was utilized 50% of the time, psychoeducational counselling interventions 29% of the time, interpersonal process 18% of the time and play therapy 4% of the time.

Of particular interest, Baskin et al (2010) found that graduate students were outperformed by both professionals and paraprofessionals. This could be due to the wider variety of interventions included in the study (learning problems, training programs etc.). In addition, only a small number of studies were included in the review that focused on the effects of interventions carried out by graduate students and trainees (29 out of 132 studies). Limitations of this study include the fact that it did not look at or track students who dropped out of interventions, which could perhaps lead to misleading results and biases in the samples. In addition, very few studies were included in which the effects of individual therapy (15 out of 132 studies) was investigated as the vast majority focused on group interventions. It is not clear whether any of the studies investigating individual therapy were carried out by trainees. The researchers also mention that few of the studies linked outcomes to the school context, such as discipline records, academic functioning and the like. Outcomes that are directly related to school functioning may provide a more ecologically valid measure of whether therapy was successful or not.

Overall, the literature suggests that therapist training and experience is an especially salient variable when working with children and adolescents (Baskin et al., 2010, Dush, Hirt, & Schroeder, 1989, Powell et al, 2010) with some research suggesting that it may be especially important for internalizing disorders such as anxiety (Weisz et al., 1997, 1995). The literature is mixed, however, when it comes to whether counselling is more beneficial for various genders and ages although it appears that same gender groups may promote a greater likelihood for

successful outcomes. In addition, the literature in general suggests that trainees seem to perform better when provided adequate supervision and the level of severity fits their competency level (Driscoll, 2003, Forund et al., 2011). However, research conducted in the school context indicates that trainees do not appear to obtain acceptable outcomes commensurate with professional therapists and paraprofessionals.

However, more recent studies utilizing evidence based manualized treatments with significant supervision appear to demonstrate that graduate students can evidence acceptable results when working in the school (Galla et al. 2012, Kasari et al. 2012, Tang et al. 2009, Serafini, Shipley & Stewart. 2016, Yeo, Goh, & Liem. 2016) . For example, seven graduate students in an Educational Psychology program carried out a social skills intervention under weekly supervision to improve the social skills and peer engagement of children with high functioning autism (Kasari et al. 2012) . Sixty children (ages 6-11) were randomly assigned to a child mediated intervention (interventionist worked individually with the child 2 times a week for 6 weeks), a peer mediated intervention (three typically developing children were taught strategies for engaging children with social challenges) an intervention in which they received either treatments or a control group. Outcomes were measured through direct observations, peer, self and teacher reports and results indicated that peer mediated treatments were superior to non-peer mediated interventions which were in turn superior to the control group even over a 3 month follow up. When controlling for class size, and baseline scores, children with autism spectrum disorders who received both a peer and a child mediated intervention made the greatest gains on the social network survey (children voting for who they like to associate with) generating a large effect size.

Yeo, Goh, & Liem (2016) carried out a non-randomized pre and post-test evidence based cognitive behavioral manualized treatment (once a week for 4 weeks) carried out by a psychology graduate student for test anxiety with 115 fourth grade students in a Singapore school. The students in the intervention group reported significantly lower anxiety levels at 2 month follow up compared to the control group with a moderate to large effect size of 0.7. This suggests that even when engaging in brief, school based group cognitive behavioral therapy trainees can elicit a significant reduction in symptomology with moderate effect sizes similar to that of group based interventions for anxiety in the literature (Weems et al. 2009).

Group versus individual therapy conducted by trainees

Insomuch as the vast majority of school interventions included in Baskin et al (2010) meta-analysis was in group format, it would be important to consider if this factor could influence the outcomes of practicum students and trainees. For example, a more recent randomized controlled study of individual therapy seems to suggest that doctoral students can achieve results commensurate with their professional counterparts (Galla et al., 2012). Galla et al. (2012) reported the results of a randomized controlled study on the effectiveness of an individual manualized cognitive behavioral intervention conducted in schools by doctoral students for children diagnosed with an anxiety disorder. Trainees received supervision and had one year of experience working with clients although none had experience working with anxiety disorders. In post treatment, 72.3% of participants in the experimental group showed significant improvement compared to only 5.6% in the wait-list control group. In addition, 95.5% of the students in the experimental group no longer met criteria for an anxiety disorder compared to 16.7% of those in the wait list control group. Effect sizes post treatment were 2.53 and 1.62 on two measures suggesting a large effect size. At one year follow up, 71.4% of children continued

to demonstrate the positive treatment response and 83.3% of the children in the experimental group were still free of an anxiety disorder diagnosis. These impressive results are all the more interesting considering earlier meta-analyses suggesting that trainees were often significantly outperformed by professionals when treating internalizing disorders, especially anxiety. However, due to the small sample size at follow up (24 students), and the high attrition rate during the follow up period results reported in Galla et al. (2012) must be interpreted with caution. In addition, the trainees in this study had already engaged in therapy with clients for a year and therefore the results may not apply to less experienced trainees.

Another randomized study carried out by Tang et al. (2009) utilizing a manualized evidence based intensive interpersonal psychotherapy for depressed adolescents with suicidal risk in school also found that counselling psychologist trainees were able to obtain impressive results. A total of 35 adolescents were randomly assigned to the treatment condition (2 sessions a week for 6 weeks) and 38 were assigned to the treatment as usual condition (Support and psychoeducation without interpersonal psychotherapy components). Supervision was provided to the trainees throughout the treatment. Results indicated that school-based interpersonal psychotherapy evidenced significantly greater effects compared to the treatment as usual control condition in reducing severity of depression, suicidal ideation, anxiety, and hopelessness in depressed adolescents. However, a number of limitations may limit the generalizability of this study. Firstly, the sample size was relatively small and the study took place in Taiwan with very little demographic information about the sample available. This may limit the generalizability of the study to other countries and demographics. In addition, the treatment as usual condition did not include two sessions a week and the meetings were irregular, thus compromising the comparability of the control group to the experimental group.

Serafini, Shipley & Stewart (2016) carried out a study in which psychology doctoral students (under supervision) completed a school-based substance abuse intervention (4 weeks of motivational enhancement therapy followed by 4 weeks of skills training) with a racially diverse group of adolescents (n = 264). Students were referred by school personnel if there was a suspicion of substance use and were included in the study if they had used alcohol, marijuana, or other drugs during the three months prior to referral. Students that were invited to join the study were randomly assigned to the treatment condition or a waitlist control condition. Results indicated that there was a significant reduction in the use of alcohol, marijuana, and the negative effects of substance abuse over the course of the study. These studies suggest that graduate students and trainees may be able to obtain satisfactory outcomes especially when utilizing individual evidence based, manualized treatments, and when being provided adequate supervision.

Although both group and individual psychotherapy utilize similar orientations, strategies and share the same desired outcomes, each modality has potential advantages and difficulties associated with it (Zirkelback & Reese, 2010). For example, individual therapy enables a professional to delve deeper into each clients' problem, to focus their attention on one client at a time, and to deliver a more personalized intervention. Conversely, group therapy is more cost efficient, provides a supportive group with models and opportunities for vicarious learning, and the give and take of conversations, with feedback. However, it does not allow the therapist to provide each client with the same level of individualized attention, and at times can lead to children learning nonproductive behaviors from peers.

Meta-analyses analyzing which modality promotes more successful outcomes for children and adolescents have produced mixed results with four out of nine studies favoring

individualized therapy, two suggesting no difference between the modalities and three demonstrating the superiority of group interventions (Zirkelback & Reese, 2010). There are several challenges specific to groups that must be addressed to provide effective treatment (Burlingame, Strauss, & Joyce 2013). For example, besides the knowledge and skill set needed to conduct good quality therapy, it is important for the leaders to know how to choose and create the correct group composition and ensure the balance needed for productive therapy sessions. Group therapists also must understand how to structure groups, how groups develop, and how foundational social psychological processes impact groups (i.e. conformity, power, management of conflicts, etc.). This is particularly important given the high salience of peer influence in children and adolescent populations, requiring swift implementation of conflict management and resolution skills. Furthermore, an understanding of organizational psychology (i.e. leadership style, group processes) and a deep knowledge of group level mechanisms of change are important. Based on the above, it would seem that conducting group therapy requires additional training besides knowledge of therapeutic techniques, interpersonal skills and the like. Considering that the preponderance of studies conducted in schools are in group format, it is possible that the outcomes attributed to trainees in schools may be related to this modality. Perhaps trainee therapists especially early on in their practice do perform more successfully when conducting individual therapy with clients and mastering these skills are necessary prior to conducting group therapy. Thus, a study ascertaining the treatment outcomes of clients receiving individual therapy from trainees may provide additional insight into circumstances and contexts that are more conducive to successful trainee therapy.

Research Questions and Hypotheses

Trainee therapists have been utilized to provide mental health services in the schools. Whereas the treatment effects of trainee therapists in the school context have been examined for group counseling (Baskin et al. 2010), few studies have examined the results of trainees conducting individual therapy. The goal of the current study was to examine the efficacy of trainees/graduate students conducting individual therapy in the schools. In addition, few studies if any, utilized school-based outcomes such as discipline problems, social emotional functioning and academic functioning to document treatment effects. Thus, school based outcomes were the focus of this study. To understand the treatment effects of trainees providing services in the schools, two research questions were addressed. First, do students who receive individual counselling from trainee therapists demonstrate improvement in social emotional functioning, discipline problems and academic functioning. Second, are the treatment effects similar or different between trainees and licensed professionals? Also, results in the literature have been mixed with regard to the effects of therapy as a function of students' age, type of problem (externalizing/internalizing) and level of severity. Therefore, they were included as covariates.

The following hypothesis were developed for each research question:

1. It was predicted that students who underwent individual therapy carried out by trainee therapists would evidence improved social emotional functioning, decreased discipline problems and improved academic achievement.
2. It was predicted that students who underwent therapy with licensed professionals would exhibit greater improvement in social emotional functioning, a decrease in discipline problems and improved academic functioning compared to students who

underwent therapy with trainees. Since the literature suggests that level of severity, type of problem being addressed (Internalizing compared to externalizing) and the age of a child can impact outcomes, these factors were included as covariates.

Method

Participants

Children. Data were collected from 2014-2016 for students ($N = 90$) who had received counselling from trainee therapists ($n = 46$) or licensed professionals ($n = 44$) due to concerns with social, emotional, or behavioral difficulties. The sample was 100% African American and consisted of 63 males and 27 females with an average age of 9.8. In addition, 70% of the students were referred for externalizing problems and only 30% for internalizing problems. Children categorized as mild/moderate made up 44% of the sample whereas those categorized as severe made up 56% of the sample. The counselling took place in 4 charter schools in the Midwest United States over 2 school years. All of the schools were non-fee paying and were located in urban areas of high socio-economic disadvantage (83% free or reduced lunch). Considering the nature of counselling and the time it takes to exert an effect, only students who underwent at least 8 therapy sessions were included in the analysis. Over the two years, only two students receiving services from licensed professionals (one refused to engage in treatment and the other student moved schools) and one student serviced by trainees (Parent revoked consent) were excluded from the analysis.

Research Design

The current study involved examining outcomes of naturally occurring therapy cases without manipulating any variables. Students were not randomly assigned to their respective therapists rather students were assigned based on supervisor appraisal including whether a trainee possessed the requisite expertise for a case, availability, parent preference etc. Therefore

the current study can be characterized as a case study. This study consisted of comparing baseline functioning (pre-therapy/counselling) to endpoint functioning (post therapy/counselling) for a group of children who received individual school based therapy from trainee psychology students and a group of children who received treatment from licensed therapists/school psychologist.

Trainee Therapists

Trainee therapists (n = 9) utilized in this study were clinical psychology doctoral students (7 females and 2 males) with a mean age of 29. Six of the trainee therapists had already completed their masters degree and 3 were pre masters level therapists who had not completed their masters thesis. All trainees were from one training institution. The average number of years spent in the program was 2 years with a range from 1 to 4 years completed. In addition, they had received prior training in evidence based therapeutic techniques although they varied in terms of the number of semesters of clinical experience and contact with clients (average years of therapy experience = 2.9 years). Some of the students had already procured therapy experience through employment and undergraduate training prior to beginning the program. In order to join the school based practicum and taking into account the need for continuity for children, trainee therapists had to commit to working in the school for the entire school year and to undergo a criminal background check.

Licensed Professionals

Licensed professionals (N= 3 mean age = 34) utilized in this study were composed of one male and one female licensed professional counsellor and a licensed school psychologist (male) with a mean level of experience of 6 years providing therapy to clients (range 2-9 years of

experience). All of the therapists were post masters, who had completed their training and were licensed by the state in which they worked in.

Measures

Strengths and Difficulties Questionnaire. The Strengths and Difficulties Questionnaire (SDQ, Goodman & Goodman, 2009) is a brief screening tool for child mental health which can be completed by parents, teachers and children over the age of 12 (See Appendix B). It is widely used for research purposes in the United States and many other countries around the world and has been used to monitor the effectiveness of routine clinical services in clinics and in schools (Goodman, & Goodman, 2009). The SDQ consists of 25 items, some positive, others negative in which respondents use a 3 point Likert type scale to indicate how far each attribute applies to the target child. Besides an overall score, the items can be grouped into 5 scales of five items each, generating scores for emotional symptoms (e.g. Often unhappy, depressed and tearful), conduct problems (e.g. Often lies or cheats) hyperactivity/inattention (e.g. Restless, overactive, cannot stay still for long), peer problems (e.g. Generally liked by other children), and prosocial behavior (e.g. kind to other children). All of the scales (besides the prosocial behavior scale) contribute towards a total difficulties score. Total difficulties scores can range from 0-40 with higher scores indicating more compromised psychological functioning. The total difficulties score, has been shown to have good concurrent validity with other measures of child psychological distress (Bourdon et al, 2005). A number of studies have indicated that across the full range of the parent, teacher and youth SDQ, children with higher total difficulty scores have greater psychopathology (Goodman & Goodman, 2009). Bourdon, Goodman, Rae, Simpson & Koretz (2005) utilizing very large national population sample provided normative banding to aid in the interpretation of the SDQ. The average total difficulties score in a representative US

sample was 7.1. Total difficulties scores of 0-11 are associated with low difficulties, 12-15 was associated with medium difficulties and scores over 16 were associated with high difficulties. In addition, reliability of the measure is generally satisfactory with a mean inter-item consistence of 0.73, mean retest stability of 0.62, and acceptable levels of parent/teacher inter-rater reliability of 0.62 (Goodman, 1997). In the current study, this measure was filled out by teachers to evaluate student functioning in school and responses were entered into an online scoring system to obtain the scores. Psychometric properties for teacher responses on the SDQ have generally been greater than that found for other respondents. The total difficulties score for forms completed by teachers demonstrated a reliability coefficient of 0.87 and stability over 4 to 6 months of 0.8 (Goodman, 2001). Alpha was not calculated for the current sample due to scoring occurring through an online system which calculates subscale and total scale scores. In addition, raw data was not retrievable from the scoring system. Although it is best practice to provide the reliability data for a local sample, other researchers have relied on reliability data from prior studies when the information was not available for their own data (Nyman, Nafziger, & Smith, 2010, Kasari, , Rotheram-Fuller , Locke & Gulsrud, 2012).

Discipline Problems. In response to an infraction (i.e. talking during instruction, classroom disruption, defiance etc.), students receive feedback which can result in various numbers of withdrawals from their electronic bank accounts. Students are awarded \$20 daily and can lose various amounts of electronic money dependent on the type of infraction (e.g. \$4 for chewing gum, \$6 for talking during class, \$15 for significant disrespect towards an adult etc.). For middle school students, this is depicted to them as electronic currency and each student ends the school day with up to \$20 in their account if they do not experience any discipline problems. In contrast, elementary school students are provided feedback using a posted color system that

reveals to them the nature of their day using a particular color that equals the electronic currency system. Teachers receive considerable training with regard to the types of infractions that warrant a specific consequence and this information is also in the teacher handbook. The number of withdrawals is recorded in a computerized system as well as a narrative as to the type of infraction, where it occurred and what happened. This data provides an overview of the child's behavior each day with larger numbers of withdrawals indicating more serious difficulties in classroom behavior. Specifically, the current study utilized the number of significant behavioral problems recorded on a student's record (i.e. 15 withdrawal or more for offenses such as gross disrespect towards adults, verbal aggression or threats towards others, student requiring 4 or more redirections, physical contact between students, significant defiance) as this data is available for both elementary and middle school. In contrast, the school data base only records the more minor offenses for middle school whereas elementary students receive this feedback in the form of colored cards by their name but this information is not documented in the system. This system captures classroom functioning for students who struggle with externalizing problems. Baseline discipline problems were calculated by school quarter and a pre-measure of discipline for all students in the study was obtained from quarter 2 and a post-measure from quarter 4 of the school year.

Analysis from school data over the past two years suggests a pattern in which discipline problems for students generally increase between quarter 2 (Beginning October 29th and ending January 19th) and quarter 4 (Beginning April 10th and ending June 13th) of each school year. Considering this pattern, discipline scores were calculated by subtracting the post- test discipline score from the baseline discipline score to obtain a difference score. The average increase in discipline problems for this period was also calculated for the general student population. The

average increase was subtracted from the difference score for each child, generating a score that reveals the change in discipline problems relative to their peers. A positive score would indicate that the students discipline problems worsened (increased) compared to that found for same age peers. In contrast, a negative score would indicate that the student's discipline problems decreased compared to their same age peers. A score of 0 would indicate that the students discipline problems followed the same pattern as that seen by their same age peers.

Type of problem. Type of referral problem was ascertained from a combination of referral information, record review and interviews with teachers and/or parents carried out by the building based school psychologist. Based on this information, students were categorized into two groups: mostly externalizing (i.e. classroom disruptions, defiance, behavioral problems, outbursts etc.) or mostly internalizing (symptoms of depression, withdrawal, anxiety, grief). The literature has been mixed regarding whether the efficacy achieved by trainees is impacted by the type of problem (Mostly externalizing versus mostly internalizing). Therefore, this study attempted to control for its potential influence on the outcomes. Considering that the type of problem was coded at intake based on the opinion of one individual (the building school psychologist), the pre SDQ scores were used to provide a validity check for this. A number of studies have been carried out that demonstrate the ability of the SDQ to differentiate between internalizing and externalizing disorders (Goodman & Scott, 1999, Goodman, Renfrew, Mullick, 2000, Mathai, Anderson, Bourne, 2004). Studies have also demonstrated that the SDQ (Emotional distress and behavioral difficulties subscales) are equivalent to the Child Behavioral Checklist (CBCL) in terms of their ability to predict and differentiate between internalizing and externalizing disorders (Goodman & Scott, 1999). The validity check was carried out by comparing those categorized as mostly externalizing or mostly internalizing at intake to the pre

SDQ subscales pertaining to internalizing and externalizing problems (pre SDQ emotional distress scale versus behavioral difficulties scale). The studies above found that the emotional distress scale performs commensurate or better than the CBCL on identifying internalizing problems and the behavioral difficulties scale in identifying externalizing problems.

Level of initial Severity. Level of severity was ascertained from a combination of referral information, record review and interviews with teachers and/or parents by the building based school psychologist. Students were categorized into two groups: mild/moderate or severe.

Level of severity was determined at intake by the site based school psychologist (record review, teacher interview etc.) and each student was categorized as severe or mild/moderate. However, this is only based on one individual's categorization that might be subjective. Therefore, the pre-test SDQ was used as a validity check for this categorization. Studies have shown that across the full range of the total SDQ scores, higher scores indicate greater psychopathology (Goodman & Goodman, 2009). Therefore the pre SDQ scores can be used to check the validity of the students categorization into either mild/moderate or severe. The validity check will compare students in each category (mild/moderate versus severe) to see if those in the severe group have higher mean pre SDQ scores compared to those in lower group.

Academic Performance. Measures of Academic Progress (MAP) is a computerized adaptive achievement test in reading and mathematics. The computer adjusts the difficulty of the question based on how a child answered previous questions so that each student takes a unique test. The MAP assessment was administered 3 times a year in the fall, winter and spring providing information regarding student academic progress in reading and mathematics. The MAP assessment provides standard scores in the form of Rasch Unit (RIT) scores, which is a

standardized, stable, equal interval vertical scale (Northwest Evaluation Association 2008). RIT scores range from 160 to 240. Students typically start at the 160-170 level in the third grade and progress to the 230-240 level by high school [growing 5-6 RITS per grade]. A RIT measure of 200 represents typical performance of students in the Fall of grade 5. Pre-test measures were obtained in the fall for all students in the study and again in the spring as a post-test measure.

It is the nature of the Rasch Unit scores to increase for students between the fall and spring of any academic year on the MAP assessment. In order to evaluate student academic performance it was necessary to ascertain for each student what the expected average growth was for a student in that grade. Then the average student growth for their respective grade level will be subtracted from the student's growth to generate difference scores. Specifically, this measure was calculated by subtracting the post measure from the pre measure to generate the difference score and then the average student growth for that grade was subtracted from this difference score. Positive difference scores indicate progress above that of their same age peers. In contrast, negative scores indicate less progress than same age peers.

Procedure

The current study procedure was reviewed and approved by the University of Wisconsin-Milwaukee Institutional review board on July 22nd 2016 (See Appendix A).

Student referrals. Procedures for accepting students into counselling followed school based protocol with referrals from teachers and parents directed to the building school psychologist (consent from guardians was necessary in all cases). One school psychologist was assigned to each of the two buildings and was responsible to coordinate services in their buildings. Referrals were analyzed by the School Psychologist (Record review and brief

parent/teacher interview) to obtain more information and ensure that the counselling was warranted. Students were categorized as mostly externalizing (i.e. classroom disruptions, emotional outbursts etc.) or mostly internalizing (i.e. symptoms of depression, withdrawal, anxiety, grief) depending on the information gleaned from the review of records. Students were allocated to either school based mental health professionals (Licensed therapists/ School Psychologist) or to a trainee psychologist based on availability and also level of severity and presenting difficulties. Students were not randomly assigned to their respective practitioners due to ethical considerations and ensuring that trainees were not allocated clients beyond their level of training and comfort. In addition, trainees began with one client and took on additional cases based on comfort level up to a total of five clients per semester.

Intake and therapy sessions. Once a student was allocated to a therapist, the therapist asked the child's classroom teacher to fill out the SDQ to gauge the level of presenting problems and to inform the practitioner of potential goals and areas to work on with the student. Since all therapists (including trainees) already had formal training and exposure to evidence-based practices, they were provided the autonomy to choose the interventions they had expertise in and felt were appropriate for the clients presenting problems. Trainees completed summaries of therapy sessions weekly (See Appendix C) in which the goals they were working on with the students, progress made towards the goals, a session overview, techniques and strategies they used, what went well, what, if anything did not go well, clinical impressions and their plan for the next session (See appendix C). Professional therapists were not required to complete detailed reports although information concerning number of sessions was recorded. Post-test data was collected either when the client's functioning improved enough so that counselling was no longer

deemed necessary (decided by school psychologist in collaboration with social worker trainee therapist, teacher and parent) or when the school year ended.

Supervision. Trainee therapists received 2 hours of group supervision weekly at their university and received individual supervision with their site supervisor (School psychologist) once a week for an hour. The group supervision involved case presentations and discussions of difficulties encountered and potential intervention ideas. The individual supervision involved direct observation of the trainee working with children and feedback/ discussion with the trainee around particular children and intervention ideas.

Intervention integrity. Besides direct observations of at least three sessions, session summaries were completed after every session (weekly) and submitted to the university supervisor and the practicum site supervisor. This enabled the supervisors to monitor treatment integrity and to ascertain the frequency, length, number of sessions, the types of interventions being implemented by trainees and progress towards goals.

Intervention techniques. Trainee therapists had already completed coursework and training in therapeutic skills, therapeutic techniques and the like before beginning the practicum. One of the goals of the study was to ascertain the effectiveness of trainee therapists during routine practice. Although trainees received supervision and consultation, trainees were provided with the discretion to choose the types of therapeutic modalities they felt best targeted the presenting problems. As was mentioned above, trainees submitted to their university and site supervisor a session summary for each session they completed, which was reviewed as part of the supervision. In order to summarize the types of interventions carried out by the trainee therapists 3 sessions were chosen, reviewed and coded by the author for each of the trainee

therapists providing a total of 27 sessions reviewed. In order to choose the sessions, three dates were chosen (November 3rd, January 19th, April 26th). It was felt that to choose a session too early in the process (i.e. in September/October) may reflect rapport building as opposed to the techniques used. In addition, sessions at the end of the school year may be affected by school related events and termination activities. The session that occurred in the week of these dates for three different randomly selected students who received treatment from each therapist was used to review the types of interventions being implemented.

Results

This section first provides descriptive statistics regarding the variables. Since the level of severity (mild/moderate or severe) and type of presenting problem (mostly externalizing or mostly internalizing) of each child was categorized based on the review of one professional (school psychologist), a validity check of these categorizations was carried out and is presented. Next, the intervention modality employed by trainee therapists is described and finally the analysis for the two hypotheses is presented.

Descriptive Statistics

Descriptive statistics for pre and post-test measures are displayed for trainees and licensed professionals in Table 1. The pre SDQ scores were not found to vary significantly between the providers ($t_{(76)} = 0.47, p = 0.64$) suggesting that the initial level of severity of students assigned to trainees and licensed professionals did not differ. In addition, the baseline discipline problems between students assigned to trainees compared to those assigned to licensed professionals did not significantly vary ($t_{(87)} = -1.10, p = 0.3$). Students serviced by both trainees and licensed professionals began treatment in the high difficulties range (SDQ total difficulties

score >16) which indicated significantly compromised social emotional functioning on average for students receiving services (Bourdon, Goodman, Rae, Simpson & Koretz, 2005). In terms of academic functioning, students who received counselling from licensed professionals began services significantly more proficient in reading ($t_{(78)} = -2.26, p = 0.03$) and math ($t_{(78)} = -2.38, p = 0.02$) compared to those who received services from trainees. Licensed professionals provided counselling on average to students who were older than those serviced by trainees ($t_{(88)} = -4.11, p = <0.001$). Overall, the distribution of the age of the students receiving services was negatively skewed with a greater number of older students receiving services compared to younger students. Students aged 10-12 were particularly well represented. Trainees on average completed more counselling sessions ($M = 19.6$) than licensed professionals ($M = 16.8$). This difference was statistically significant ($t_{(87)} = 2.18, p = 0.03$).

Table 2 demonstrates that aside from the correlation between the measure of reading and math (which were significantly correlated for both the pre and post measures), correlations between the pre measures were not found to be significant. In contrast, for the post measures, the correlations between SDQ and the other outcome variables were found to be statistically significant. Specifically, lower SDQ scores at post test was associated with less discipline problems, and higher scores on both the reading and math measures (See table 2).

Table 1

Mean and standard deviation scores for pre and post- test measures by therapist type.

	N	Pre-test M(SD)	Post-test M(SD)
<hr/>			
Trainee			
SDQ	40.00	17.7(6.59)	15.28(6.90)
Discipline	46.00	4.00(4.57)	4.63(4.50)
MAP Reading	42.00	181.64(24.39)	195.24(20.39)
MAP Math	42.00	185.64(26.20)	202.38(20.03)
Number of Sessions			19.63 (6.13)
Range for sessions			8-32
Child Age			8.74 (2.66)
Range for child age			4-13
<hr/>			
Licensed Professional			
SDQ	38.00	18.39(6.45)	15.24(5.10)
Discipline	43.00	5.14(5.18)	7.09(5.36)
MAP Reading	38.00	193.21(21.04)	204.08(15.62)
MAP Math	38.00	198.11(19.78)	211.16(16.72)
Number of Sessions			16.84 (5.97)
Range for sessions			8-34
Child Age			10.93 (2.39)
Range for child age			5-14

Table 2

Correlations between outcome variables for pre (bottom left) and post (top right) measures

	1	2	3	4
1. SDQ	–	0.26*	-0.27*	-0.24*
2. Discipline	0.22	–	0.07	0.04
3. Reading	-0.09	0.10	–	0.85**
4. Math	-0.17	0.12	0.87**	–

Note: * $p < .05$ ** $p < 0.01$

Validity of initial level of Severity and type of Problem categorization

Validity of initial level of severity. The initial level of severity (mild moderate versus severe) was determined based on a records review and brief interviews. The validity of this categorization was examined based on the pre SDQ scores. For combined therapist groups there was a difference in the pre SDQ scores between those categorized as mild/moderate ($M = 12.94$) compared to those categorized as severe ($M = 21.98$). This difference was found to be statistically significant ($t(76) = -8.17, p = < 0.001$) This supports the validity of the initial level of severity categorization carried out using a records review and interviews.

Validity of type of problem. The type of problem (mostly externalizing versus mostly internalizing) was also determined based on a records review and brief interviews. A number of studies have been carried out that demonstrate the ability of the SDQ to differentiate between internalizing and externalizing disorders (Goodman & Scott, 1999, Goodman, Renfrew, Mullick, 2000, Mathai, Anderson, Bourne, 2004). Studies have demonstrated that the emotional distress and behavioral difficulties subscales of the SDQ are equivalent to the Child Behavioral Checklist (CBCL) in terms of their ability to predict and differentiate between internalizing and externalizing disorders (Goodman & Scott, 1999). The validity check was carried out by comparing those categorized as mostly externalizing or mostly internalizing at intake to the pre SDQ subscales pertaining to internalizing and externalizing problems (pre SDQ emotional distress scale versus behavioral difficulties scale). Students who were categorized as mostly externalizing exhibited greater difficulty on the pre SDQ behavioral scale ($M = 5.33$) compared to the amount of difficulty exhibited on the SDQ emotionality scale ($M = 2.71$). This difference was found to be statistically significant ($t_{(54)} = -7.02$, $p = <.001$) suggesting that those categorized as mostly externalizing based on record review and interviews also were reported by teachers to exhibit more externalizing problems on the SDQ compared to internalizing or emotional problems .

In contrast, students categorized as mostly internalizing based on record review and interviews exhibited greater difficulty on the SDQ emotionality scale ($M = 4.52$) compared to the SDQ behavioral scale ($M = 2.83$). This was also found to be statistically significant ($t_{(22)} = 2.64$, $p = 0.02$). This suggests that those categorized as mostly internalizing indeed were reported by teachers to exhibit significantly more emotional problems than behavioral problems. In addition, table 1 reveals that those categorized as mostly externalizing evidenced greater pre measure

scores in behavioral and discipline problems than those categorized as mostly internalizing which further corroborates the appropriateness of the categorization.

Intervention Modality Employed by Trainee Therapists

To describe the types of interventions carried out by the trainee therapists the author chose and coded 3 sessions for each of the therapists. This resulted in a total of 27 sessions reviewed and coded. In order to choose the sessions, three dates were chosen (November 3rd, January 19th, April 26th). It was felt that to choose a session too early in the process (i.e. in September/October) may reflect rapport building as opposed to the techniques used. In addition, sessions at the end of the school year may be affected by school related events and termination activities. The session that occurred in the week of these dates for three different randomly selected students who received treatment from each therapist was used to review the types of interventions being implemented. The review suggested that cognitive behavioral techniques (Social skills training, role playing, self-instruction, exploration of thoughts, feelings and levels of arousal, cognitive restructuring) were utilized 32% of the time. Psychoeducational counselling interventions (psychoeducation around sleep hygiene, health life choices, discussing life events, discussing ones feelings, discussing issues at home or school) was utilized 24% of the time and therapy targeting interpersonal process (interactions with peers, interactions with adults, family dynamics etc.) was utilized 18% of the time. Play/art activities (talking while playing a game/drawing, processing life events and experiences through playing with models/toys or creating art etc.) was utilized in 22% of the sessions, client centered (listening to student process, demonstrating empathy, empowering student) therapy was utilized 5% of the time.

Assumptions for statistical Analysis

Assumptions for parametric tests were examined including the requirement of a continuous interval or ratio scale, normality and homogeneity of variance. Examination of histograms including skewness and kurtosis suggested that the SDQ variable was slightly negatively skewed and the discipline variable exhibited a significant positive skew. Deviation from normality was confirmed by the Kolmogorov-smirnov statistic. Although minor departures from normality does not compromise the test, the discipline variable significantly deviated from normality and therefore caution should be taken when interpreting this variable. Levene's test of homogeneity of variance was carried out for all outcome variables as a function of therapist type and assumptions were met. Additional assumptions (Homogeneity of regression slopes and independence of the treatment effect from covariate) for the second hypothesis(ANCOVA analysis) was completed and variables were found to meet required assumptions.

Results for Hypothesis 1

It was predicted that students who underwent individual therapy carried out by trainee therapists would evidence improved social emotional functioning, decreased discipline issues and improved academic growth.

Social Emotional Functioning. Students who received counselling from trainee therapists exhibited a significant improvement in social emotional functioning on the SDQ between pre ($M = 17.7$) and post measures ($M = 15.28$, $N = 40$). Results from a paired samples t test indicated that this effect was significant ($t_{(39)} = 2.39$, $p = 0.02$). An effect size (Cohen's d) of 0.37 suggests that counselling carried out by trainees exerted a moderate effect.

Discipline problems. As was described in the measures section the pattern for all students in the school was for discipline problems to increase between pre-test (quarter 2) and post-test (quarter 4). In order to control for this trend, discipline scores were calculated by subtracting the post-test discipline score from the baseline discipline score to obtain a difference score. The average increase in discipline problems for this period was also calculated for the general student population. The average increase was subtracted from the difference score for each child, generating a score that reveals the change in discipline problems relative to their peers. A positive score would indicate that the students discipline problems worsened (increased) compared to that found for same age peers. In contrast, a negative score would indicate that the student's discipline problems improved (decreased) compared to their same age peers. A score of 0 would indicate that the students discipline problems followed the same pattern as that seen by their same age peers. Thus, in contrast to the analysis of social emotional functioning (which merely compared functioning between baseline and post intervention) this

analysis is looking at change or difference scores while accounting for average student population.

Students who received counselling from trainees experienced on average 4 discipline problems during the baseline period (quarter 2) compared to the general school population who experienced on average 1.22 discipline problems during this time period. The average student increased by 0.74 problems between quarter 2 and quarter 4 (calculated by subtracting the average discipline problems in quarter 4 from the average discipline problems in quarter 2), whereas students who received counselling by trainees only increased by 0.63 discipline problems. A one sample t test was carried out to see if the increase in discipline referrals was significantly different between the general school population and those students who received counselling from trainee therapists.

Results from a one sample t test ($N = 46$) indicated that although students who received counselling from trainees experienced more initial discipline problems compared to their peers, they were found to increase in discipline problems at about the same rate as their peers ($t_{(45)} = -0.15, p = 0.87$). This suggests that those students who received counselling from trainees did not deteriorate or worsen any more or less than their peers over the school year.

Academic progress. As was mentioned above, in order to examine student academic progress it was necessary to determine the expected average growth for a student in that grade. Then, the average student growth for each respective grade level was subtracted from the student's growth to generate difference scores. Specifically, the post measure was subtracted from the pre measure to generate the difference score for each child; subsequently the average student growth for that grade was subtracted from this difference score. Positive scores indicated

that a child's degree of academic progress is greater than that of their same age peers. In contrast, negative scores indicated that a child's degree of academic progress is less progress than same age peers. A one sample t test was carried out to evaluate if students who receive counselling from trainee therapists progressed academically commensurate with their same aged counterparts. Thus, in contrast to the analysis of social emotional functioning (which compared functioning between baseline and post intervention) this analysis is looking at change or difference scores while accounting for average student growth in that particular grade.

A one sample t test ($N = 42$) indicated that for reading, students who received counselling from trainee therapists progressed commensurate with their same aged peers ($t_{(41)} = 0.96, p = 0.34$). However, for math, students who received counselling from trainee therapists progressed at a significantly higher degree compared to same age peers ($t_{(41)} = 2.03, p = 0.05$). This suggests that students who received counselling from trainee therapists continue to progress academically commensurate with their same age peers in reading and improved at a higher rate than their peers in mathematics.

Results for Hypothesis 2

It was predicted that students who underwent therapy with licensed professionals would exhibit greater improvement in social emotional functioning, a decrease in discipline problems and improved academic functioning compared to students who underwent therapy with trainees. Since the literature suggests that level of severity, type of problem being addressed (Internalizing compared to externalizing) and the age of a child can impact intervention outcomes, these factors were included as covariates.

In order to compare outcomes between licensed professionals and trainee therapists, there were several steps taken to conduct the analysis. Difference scores for all outcome variables were calculated for both the trainee group and the licensed professional group and were used to ascertain degree of improvement (See Table 3). As was mentioned above, higher SDQ scores indicate more maladaptive functioning. Since the difference scores in SDQ were calculated by subtracting the pre SDQ score from the post SDQ scores, positive scores indicated improvement. In addition, positive values for the MAP reading and math variables suggest improvement in functioning whereas negative values for the discipline variable suggests improvement in functioning (i.e. decrease in discipline referrals). As was noted previously, the analysis for social emotional functioning focused on comparing baseline and post- test functioning. In contrast, the analysis for discipline and academic functioning focused on difference scores and how each participant changed compared to average students in the school. An analysis of covariance (ANCOVA) was conducted for each of the dependent variables to answer the second research question. The between group variable in the analysis was the type of therapist. The covariates consisted of the level of initial severity (mild/moderate, severe) type of presenting problem (mostly externalizing, mostly internalizing) and the age of the child (continuous variable).

Table 3

Mean and standard deviations of difference scores for variables by therapist type.

Difference Scores	
M(SD)	
<hr/>	
Trainee	
SDQ	2.43(6.4)
Discipline	-0.11(4.81)
MAP Reading	1.38(9.32)
MAP Math	2.83(9.05)
Licensed Professional	
SDQ	3.16(5.67)
Discipline	1.21(4.84)
MAP Reading	3.18(12.47)
MAP Math	3.08(8.90)

Note: Calculations for difference scores:

SDQ = Pre SDQ – Post SDQ; (Positive scores indicate improvement)

Discipline = Post Discipline – Pre Discipline; (Negative scores indicate improvement)

MAP = Post measure – Pre measure; (Positive scores indicate improvement)

Social Emotional Functioning. For this analysis, SDQ’s were available for 40 students who received services from trainees and 38 students who received services from licensed professionals. After controlling for initial level of severity, type of problem, and age, no statistically significant difference was found in terms of social emotional progress for students who received counselling from trainees compared to those students who received counselling from licensed professionals ($F_{(1,73)} = 0.01, p = 0.9$). The ANCOVA results and Least Square Means are summarized in Table 4.

Table 4

Analysis of Covariance and Least Squares Means for SDQ

Independent Variables	Df	Mean Square	F Ratio	P Value	Partial η^2
Therapist	1	0.33	0.01	0.92	0.00
Age	1	48.23	1.36	0.25	0.02
Type of problem	1	78.94	2.23	0.14	0.03
Severity	1	74.85	2.12	0.15	0.03
Error	73	35.37			

Least Square Means		
Variables	Parameter	SDQ
Therapist	Professional	2.11
	Trainee	2.25
Type of Problem	Mostly Externalizing	3.31
	Mostly Internalizing	1.05
Level of Severity	Mild/Moderate	1.13
	Severe	3.23

Discipline problems. For this analysis, discipline information was available for 46 students who received services from trainees and 43 students who received services from licensed professionals. After controlling for initial level of severity, type of problem, and age, no statistically significant difference was found in terms of change in discipline problems for students who received counselling from trainees compared to those students who received counselling from licensed professionals ($F_{(1,84)} = 2.49, p = 0.12$). The ANCOVA results and Least Square Means are summarized in Table 5.

Table 5

Analysis of Covariance and Least Squares Means for Discipline

Independent Variables	Df	Mean Square	F Ratio	P Value	Partial η^2
Therapist	1	58.80	2.49	0.12	0.03
Age	1	21.46	0.91	0.34	0.01
Type of problem	1	0.03	0.00	0.97	0.00
Severity	1	7.13	0.30	0.58	0.00
Error	84	23.66			

Least Square Means		
Variables	Parameter	Discipline
Therapist	Professional	1.48
	Trainee	-0.32
Type of Problem	Mostly Externalizing	0.6
	Mostly Internalizing	0.56
Level of Severity	Mild/Moderate	0.89
	Severe	0.28

Academic progress. For this analysis academic data was available for 42 students who received services from trainees and 38 students who received services from licensed professionals. After accounting for initial level of severity, type of problem and age, students who received counselling from licensed professional therapists progressed significantly better in their reading compared to those who received counselling from trainee therapists ($F_{(1,75)} = 4.99$, $p = 0.03$). The effect size was small with therapist type accounting for 6% of the variance in reading scores after the variance of the other variables was accounted for. The average change for trainees was 0.96 compared to the average change in reading scores of 6.79 for licensed professionals. In addition, younger students improved significantly better in reading compared to older students ($F_{(1,75)} = 7.71$, $p = 0.01$). Although still only a small effect size, after excluding the variance of the other variables, age demonstrated a larger effect than the other variables accounting for 9% of the variance in reading scores. Students categorized as mild/moderate progressed significantly better in reading compared to students who were categorized as severe ($F_{(1,75)} = 4.26$, $p = 0.04$). This factor accounted for 5% of the variance in reading scores after excluding the variance explained by the other variables. Although not statistically significant, students with mostly internalizing problems seemed to show a pattern of better progress in their reading compared to students identified as having mostly externalizing problems ($F = 3.78$, $p = 0.06$). The effect size suggested that this variable accounted for 5% of the variance in reading scores after excluding the variance explained by the other variables. The ANCOVA results and Least Square Means are summarized in Table 6.

Table 6

Analysis of Covariance and Least Squares Means for Reading

Independent Variables	Df	Mean Square	F Ratio	P Value	Partial η^2
Therapist	1	523.90	4.99	0.03	0.06
Age	1	808.18	7.71	0.01	0.09
Type of problem	1	396.34	3.78	0.06	0.05
Severity	1	446.57	4.26	0.04	0.05
Error	75	104.89			

Least Square Means		
Variables	Parameter	MAP Read
Therapist	Professional	6.79
	Trainee	0.96
Type of Problem	Mostly Externalizing	1.13
	Mostly Internalizing	6.62
Level of Severity	Mild/Moderate	6.4
	Severe	1.35

After controlling for initial level of severity, type of problem and age, there was no significant difference in math progress between those students who received counselling from trainees compared to those who received services from licensed professionals ($F(1,75) = 1.47, p = 0.23$). Consistent with reading, younger students progressed significantly better than older students in their math progress ($F(1,75) = 4.33, p = 0.04$). No effects were found based on level of severity, or type of problem. Although not statistically significant, the direction suggests that students serviced by licensed professionals (5.08) increased in math more than those who received counselling from trainees (2.37). This pattern is consistent with the results found for reading. The ANCOVA results and Least Square Means are summarized in Table 7.

Table 7

Analysis of Covariance and Least Squares Means for Math

Independent Variables	Df	Mean Square	F Ratio	P Value	Partial η^2
Therapist	1	113.41	1.47	0.23	0.02
Age	1	335.37	4.33	0.04	0.05
Type of problem	1	84.15	1.09	0.30	0.01
Severity	1	148.02	1.91	0.17	0.02
Error	75	77.38			

Least Square Means		
Variables	Parameter	MAP Math
Therapist	Professional	5.08
	Trainee	2.37
Type of Problem	Mostly Externalizing	2.46
	Mostly Internalizing	4.99
Level of Severity	Mild/Moderate	5.18
	Severe	2.27

Discussion

Although in community populations estimates range as high as 20% of children experiencing emotional and behavioral difficulties, greater concerns are apparent in urban schools (Center for Mental Health in Schools, 2008). Furthermore, a greater need for mental health services are reported but decreasing funding for these services are the reality (Foster et al, 2005). Mental health problems or mental disorders, if unrecognized and untreated can lead to significant deleterious consequences including school drop-out (Breslau et al. 2011), poor social relationships (Bhatia, 2007), less vocational success, justice system contact and early mortality (O'Connell et al., 2009). There is substantial evidence for the efficacy of treatment of mental disorders in young people and outcomes are more likely to be favorable if evidence based treatment is provided early in the course of the mental health disorder (Rutter et al., 2008, Kutcher et al., 2011).

Given these challenges, new strategies for increasing access to mental health services are necessary. One such strategy is the use of trainee mental health providers to help increase capacity. Although studies have been conducted concerning trainee therapists working with children (Kolko et al, 2000, Michael et al, 2005, Powell et al, 2010, Santor & Kusmaker, 2001 Weisz et al, 1995), very few studies carried out have examined specifically individualized therapy in the school setting (Galla et al, 2012, Serafini, Shipley & Stewart, 2016, Tang et al, 2009, Yeo, Goh, & Liem, 2016). Furthermore, although a few studies exist in which individualized therapy carried out by trainees was examined utilizing evidence based interventions with a high level of control and supervision, there is a scarcity in the research of studies carried out in a naturalistic manner emphasizing school based outcome measures (Discipline problems, social emotional functioning, academic functioning).

Summary of Findings

This case study attempted to examine the efficacy of therapy carried out by trainee psychologists in 4 urban socio-economic disadvantaged schools. Results of this study suggest that the trainee psychologists generally procured treatment effects comparable to their licensed counterparts with regard to social emotional progress and obtained a moderate effect size. Results also indicated that although students who were receiving counselling from trainees received more baseline discipline withdrawals compared to the average student population, there was no significant increase in the problem compared to that seen by the general student population. In other words, on average, all students exhibited an increase in discipline problems as the school year progressed. Students who received counselling also exhibited a similar pattern to their peers without behavioral concerns. Academically, the students serviced by trainees improved commensurate with their same age peers in reading and improved at a higher rate in math. However, students treated by licensed professionals evidenced significantly more progress in reading compared to those serviced by trainee therapists. Across therapist groups, younger students, and those with less severe symptoms progressed better in reading and younger students progressed better in math.

School based mental health

Considering that youth spend a considerable amount of their day in school, a growing number of researchers have recommended that mental health professionals be more involved within the school context (Cooper et al., 2013, Hoffman & Carter, 2004). School is sometimes the only context where low income youth receive professional mental health services (Bontrager & Lyon, 2015, Coleman, 2004, Yeh, 2004). Evidence suggests that school based mental health

services have in fact contributed to a reduction in service based disparities related to ethnicity or socioeconomic status (National Association of School Based Healthcare, 2008). Meta-analyses focusing on school based counselling and psychotherapy have yielded overall effect size values between 0.58 and 0.98 suggesting moderate to strong effects (Baskin et al., 2010, Cooper et al., 2013, Mendelson et al., 2015). However, a meta-analysis utilizing dissertation and unpublished research (Reducing the publication bias) suggested a moderate effect size for school based therapy and counselling research (Reese et al, 2010). Specifically, a number of studies have found that school based mental health programs decrease negative behaviors (Piffner, Kaiser & Burner, 2011), promote better emotional outcomes (Jay, Langley, & Stein, 2011, Nelson, Martella, Marchand-Martella, 2002), decrease disciplinary referrals (Hall, 2000), and contribute to better academic outcomes (Nelson, Martella, Marchand-Martella, 2002, Walter et al., 2011, Wyman et al., 2010). However, Kang et al. (2013) point out that only a small fraction of the studies published report outcomes from routine practice programs. Obviously, evaluating programs that have been conducted in routine settings is important for our understanding of current practice in the schools. The current study suggested that for overall social emotional functioning a moderate effect size was procured for students who received treatment from both trainee therapists and licensed professionals. This was more consistent with the results of Reese et al, (2010). It is not clear whether this is due to the fact that other meta-analysis utilized studies from peer reviewed journals with a potential publication bias or whether the current study involved routine practice with little control over variables and a lack of uniformity in terms of interventions used. Another factor that could have affected the results was the level of initial severity of students treated. Overall, students in the current study, began therapy with significant needs and were categorized as experiencing high levels of difficulties on the SDQ. This study is

also in contrast to a meta-analysis (Baskin et al, 2010) that found that trainees conducting mainly group therapy in the schools obtained a low effect size. However, these results are in line with a number of more recent studies suggesting that trainees can obtain moderate to large effect sizes when engaging in individual therapy in the school setting (Galla et al, 2012, Kasari et al, 2012, Serafini, Shipley & Stewart, 2016, Tang et al, 2009,).

In addition, this study is consistent with a number of studies suggesting that school based therapy promotes better emotional outcomes (Jay, Langley, & Stein, 2011, Nelson, Martella, Marchand-Martella, 2002) and better academic outcomes (Nelson, Martella, Marchand-Martella, 2002, Walter et al., 2011, Wyman et al., 2010). The current study did find that students who received intervention improved in both reading and math at least commensurate with their peers for both therapist groups. In contrast to research indicating school based treatment decreased negative behaviors and disciplinary referrals (Hall, 2000, Pfiffner, Kaiser & Burner, 2011), the current study did not evidence a specific decrease in discipline problems. In the current study, students who were receiving treatment exhibited greater baseline numbers of discipline problems compared to their same age peers. Unfortunately, there was no significant decrease in this number in response to treatment. This result is interesting when looking at the significant improvement in social emotional functioning revealed from the SDQ measure. Thus, although students improved in terms of overall social emotional functioning and academic performance, they still experienced discipline problems and these did not decrease significantly from baseline. There are possible explanations as to why students may have improved overall in terms of social emotional functioning but did not demonstrate an improvement in terms of behavioral problems warranting disciplinary action. Although there is extensive training and fairly objective criteria for identifying discipline infractions, this measure is still subject to a

level of teacher discretion, time to input an infraction and subjectivity. This could have impacted the results found in this study in terms of the lack of an effect on discipline problems. Another aspect of utilizing discipline data is the heterogeneity of this measure. Students can receive discipline withdrawals for a variety of offenses each of which are very different in nature from the other. It is possible that the individual treatment impacted some categories of offenses more than others. For example, a student may have exhibited more severe disruptive and defiant behavior along with more clandestine behaviors such as gum chewing or talking to peers. The intervention may have reduced the more obvious, severe and disruptive behaviors but not the more mild behaviors that still can result in discipline infractions especially if repeated. However, without analyzing each discipline infraction carefully to categorize it, the impact of the intervention could remain undetected.

The SDQ scale measures factors that are unrelated to those behaviors warranting disciplinary action. For example, the SDQ measures factors related to internalizing problems (fears, worries, clingy, unhappy, somatic) and peer relations (popular, solitary, victim of bullying, a good friend). In addition, although some of the items in the subscales related to hyperactivity (distractible, persistent, restless, fidgety) and conduct problems (lies, fights, bad temper, steals, obedient) would be expected to be related to discipline infractions many may not be reflected in school based reports. Nonetheless, it must be emphasized that students in general evidenced an increase in discipline problems as the school year progressed. In fact, the results of the current study indicate that students who received intervention did not exhibit any increase in discipline problems over and above that which would have been expected from any other student in the school. However, considering the high level of initial discipline problems of the students receiving treatment, the lack of improvement was not encouraging.

Implementing mental health services in a school setting. As was found in previous research, this study found school-based intervention to be effective for improving outcomes for children. Anecdotally but consistent with previous research, therapists speculated that the social network provided support (teachers, teaching assistants, peers) to help the child practice and generalize skills learnt in therapeutic sessions. In addition, the social network was very eager and engaged in providing important information to help with more accurate case formulation and information gathering. Furthermore, school staff utilized their relationships and greater access to parents and family to help orchestrate other support services as needed, particularly in complex and demanding cases (Fox & Butler, 2009). In addition, no evidence was found that children and adolescents considered it a stigma to receive services. This made it easier to carry out preventative work to ensure that problems were tackled before they become pathological. Having said the above, the four schools in the current study had to work hard to provide important materials and concrete resources (space to conduct mental health interventions). The schools utilized in the current study, embraced manifold volunteers, programs, intervention groups and extra-curricular activities creating a challenge to find consistent space and time to provide counselling. Another challenge faced by both the trainee and licensed professionals attempting to provide services in the schools was finding time in school schedules to deliver services. This involved attempting to fit therapy sessions into existing schedules while not taking time from critical academic subjects. In addition, therapists also had to avoid taking time away from electives and free time that could have caused student resentment, resistance, or refusal of mental health services. Teaching staff and administration were very eager and supportive of mental health services, which led to successful implementation of therapy sessions. Although there were some difficulties with staff turnover, and staff stress levels, school based professionals (School

Psychologists) took ownership of the logistics and heavily facilitated the services. The school psychologist's school based knowledge (students, families, classroom schedules, school culture, procedures, administration etc.) and mental health knowledge (Diagnosis, understanding of trauma, stress, types of therapeutic modalities etc.) was important in ensuring that the interventions occurred with integrity and efficiency. The school psychologists were involved in identifying or ensuring that the students were in need of services, helping work with families to complete the consent and additional paperwork associated with providing mental health services, assigning students to their respective therapists, providing supervision for the trainee therapists and consultation for the licensed professionals and helping ameliorate problems that were encountered. Although this could have been undertaken by another staff member or administrator, the school psychologists were in a strong position to successfully facilitate these interventions and monitor progress.

Trainee factors: Importance of Supervision, Training and Manualized treatments

Although the results of trainee therapists compared to licensed and experienced therapists are mixed when considering the literature on adult populations (Atkins & Christensen, 2001; Driscoll et al., 2003; Huppert et al., 2012; Nyman et al., 2010; Stein & Lambert, 1995; Wampold & Brown, 2005), this factor has been found to be more important when working with children and adolescents (Baskin et al., 2010, Dush, Hirt, & Schroeder, 1989, Powell et al, 2010). Importantly, the degree to which trainee performance matched professional levels seemed to correlate with the degree of supervision and training (Driscoll, 2003, Forund et al., 2011, Michael et al, 2005; Powell et al., 2010). In particular, trainees trained to competency in manualized treatment protocols and followed by supervision were found to achieve outcomes commensurate with or outperform their more qualified counterparts (Budge et al, 2013, Galla et

al., 2012; Kang et al, 2013 Minami et al, 2009, Nyman et al, 2010, Tang et al., 2009; Wampold & Brown, 2005 et al; Yeo, Goh, & Liem, 2016). The current case study attempted to ascertain the effectiveness of therapists conducting routine counselling and therapy in a small number of urban schools. Although it was felt that the trainees possessed adequate training (Coursework, exposure to evidence based techniques) and supervision (3 hours of supervision a week), trainees were not directed to utilize standardized protocols, manuals or specific modalities as this is not standard practice for counselling in a school setting. However, trainees had completed coursework and training in evidence based strategies and had exposure to a number of modalities and techniques before beginning this practicum. Therefore, it is important to ascertain that the trainee possesses the requisite knowledge and are provided adequate supervision especially if manualized protocols are not used.

Many studies including the current study operationalized the therapist experience variable in terms other than actual hours of client contact (i.e. trainees versus licensed professionals). Results from the Dricoll et al, (2003) and Powell et al (2010) studies suggest the possibility that the positive relationship between experience and client outcome could be masked due to imprecise definitions of experience. Besides the lack of a unified operational definition of professionals, graduate students and paraprofessionals in the literature (allowing for groups to be categorized as either), each group is a very heterogeneous entity. Confusing matters, while not possessing a professional degree, trainees and graduate students are usually not untrained or inexperienced. Many have had years of experience working with a particular population or may have received specialized training as part of a study or previous employment. Related to this issue, professionals may also vary in their level of degree or amount of experience. In the current study, although the trainee therapists were from one institution, they did vary in terms of number

of years in the program and the number of years conducting therapy. Furthermore, even though the licensed professional therapists on average possessed more years of experience conducting therapy compared to the trainees, there was overlap. This being the case, it is possible that the current study failed to find a significant difference between licensed professionals and trainees due to the heterogeneity of the two groups and overlap in terms training and experience. It must also be mentioned that trainees were found on average to conduct more sessions compared to licensed professionals, which although unlikely may have impacted the results.

Although it was not the goal of the current study to systematically examine the types of interventions carried out during school based therapy, this study attempted to describe the types of interventions carried out by the trainee therapists. The review suggested that cognitive behavioral techniques (Social skills training, role playing, self-instruction, exploration of thoughts, feelings and levels of arousal, cognitive restructuring) were utilized 32% of the time. Psychoeducational counselling interventions (psychoeducation around sleep hygiene, health life choices, life events, ones feelings, education around issues at home or school) was utilized 24% of the time and therapy targeting interpersonal process (interactions with peers, interactions with adults, family dynamics etc.) was utilized 18% of the time. Play/art activities (talking while playing a game/drawing, processing life events and experiences through playing with models/toys or creating art etc.) was utilized in 22% of the sessions and client centered (listening to student process, demonstrating empathy, empowering student) therapy was utilized 5% of the time. This is somewhat in contrast to Baskin et al, 2010 in which cognitive behavioral therapy was utilized more of the time(50%) play therapy was utilized less of the time (3%). Psychoeducational interventions and those targeting interpersonal processes were fairly comparable. An important factor to consider when contrasting the current case study to the meta-

analysis conducted by Baskin et al, (2010), is that the vast majority of the studies included in their review comprised group therapy as opposed to individual therapy, which was the focus of the current study. It will be important for future research to examine systematically the types of interventions carried out routinely in schools and whether specific types of interventions procure better outcomes compared to others. This case study only utilized 9 trainee therapists in a number of urban charter schools, which may not reflect the services being delivered in schools in general.

School based group versus Individual therapy

The current study looked at the outcomes procured by both trainee and licensed professionals conducting specifically individualized treatments in the school setting. Although Baskin et al (2010) reported low effect sizes for trainee's/graduate students working with children and adolescents in the schools, their meta-analysis primarily included group treatments which may have been more difficult for trainee's to implement compared to individual therapy. Individual therapy enables a professional to delve deeper into each clients' problems, to focus their attention on one client at a time, and to potentially deliver a more personalized intervention. Although group therapy is more cost efficient, provides a supportive group with models and opportunities for vicarious learning, there are many challenges specific to groups that can make it more difficult to provide effective treatment (Burlingame, Strauss, & Joyce 2013). This includes issues around group composition, structure of group sessions, how groups develop, social psychological processes and the like. Considering that the preponderance of studies included in Basin et al, (2010) were in group format, it is possible that the outcomes attributed to trainees in schools may be related to this modality. The results of the current study are in line with a number of more recent studies suggesting that trainees can obtain moderate effect sizes

when engaging in individual therapy in the school setting (Galla et al, 2012, Kasari et al, 2012, Serafini, Shipley & Stewart, 2016, Tang et al, 2009,).

The role of child characteristics in therapy

An important relationship has existed between providers in various mental health settings and graduate students seeking essential practical experience (Boggs & Dounce, 2000). Training sites enable trainees to learn new techniques, refine their skills, and to receive supervision. In return, training sites receive free or low cost mental health providers who increase the capacity of mental health care settings to meet the overwhelming service demands (Nyman et al., 2010).

Graduate students and trainees are progressively being called upon to help provide services to populations that lack access to mental health care such as in rural areas (Rishel & Hartnett, 2015) or with underserved minority students (Grossman et al, 2007). This pattern has also become common in the school setting and graduate students have been called upon to provide treatment in the school setting (Galla et al. 2012, Kasari et al. 2012, Tang et al. 2009, Serafini, Shipley & Stewart. 2016, Yeo, Goh, & Liem. 2016) . Although trainees must receive training experiences with a variety of presenting problems, clients are also entitled to treatment that is effective. It is important to examine various factors that may impact the efficacy of treatment carried out by trainee therapists.

Level of severity. One variable mentioned in the literature is the negative relationship between level of client severity and outcomes achieved by trainees (Driscoll et al, 2003, Forund et al, 2011). These findings speak to the importance of considering the level of client severity when assigning trainees or determining appropriate level of supervision required to maintain

ethical practice (DeRubeis et al., 2005, Forund et al., 2011, Strunk et al., 2010). Due to the ethical issues mentioned above, students were not randomly assigned to therapists (trainees versus licensed professionals) in the current study. It was expected that there would be a significant difference between the students serviced by trainees (more mild/moderate symptoms) compared to those serviced by licensed professionals (more severe symptoms). However, this was not the case and there was no significant difference between the overall level of severity of clients treated by trainees compared to those treated by licensed professionals. Although trainees may not have been assigned children with severe symptoms very early on in their practicum, they did end up serving children and adolescents with severe problems. Furthermore, the pretreatment level of severity on average for students being serviced by trainees and licensed professionals was considered to be high. This provided an opportunity to ascertain whether this factor influenced the efficacy of treatment. This case study found no difference between trainees and licensed professionals as a function of the initial client level of severity. However, the study did reveal that regardless of the type of therapist, students with more initial severe symptomology did not progress as well in reading compared to students categorized as presenting with more mild/moderate symptoms. It is interesting to note, that level of severity did not impact social emotional progress or discipline problems for any of the therapist groups. In other words, students with initial severe presentations progressed as well as those with more mild symptoms in terms of social emotional functioning and discipline problems for all therapist groups.

However, it must be reiterated that students were not randomly assigned to their respective therapists. Although no significant difference was found overall in terms of initial level of severity between those students assigned to licensed professionals compared to those

assigned to trainees, students were at times strategically assigned. In contrast to Forund et al, 2011, students who were thought to be too challenging for a trainee to treat would be assigned to a licensed therapist, which may have systematically impacted the types of children seen by trainees.

Type of problem. In terms of overall outcomes for social emotional functioning and discipline problems, no significant difference was found between trainees and licensed professionals even when controlling for type of presenting problems (internalizing versus externalizing problems). Although a number of studies did report that trainees underperformed with internalizing problems compared to externalizing problems (Weisz et al, 1987/1989), school based studies including the current study failed to support this conclusion (Baskin et al, 2010; Galla et al. 2012; Kasari et al. 2012; Michael et al, 2005; Tang et al. 2009; Serafini, Shipley & Stewart. 2016; Yeo, Goh, & Liem. 2016). In the current study, there was no significant difference noted for social emotional progress, discipline problems or academic progress as a function of the type of disorder for any of the therapist types. Although only approaching significance, students in the current study with internalizing disorders may actually make more progress academically in reading compared to those students with externalizing disorders across therapist type. Although internalizing disorders cause a great deal of distress, students are often not as disruptive thereby allowing them to remain in class more than those with mostly externalizing disorders. This could account for the tentative positive academic progress of these students. Having said the above, this factor did not exhibit any relationship with math progress and the result could have occurred by chance.

Age of student. The literature was somewhat mixed when the age of the child was considered. A number of earlier meta-analysis suggested that older children responded to therapy

better than younger children (Weisz et al, 1987/1995). In contrast, a number of school based studies found that younger (elementary aged) students responded better to therapy compared to older students (Prout & DeMartinao, 1986, Prout & Prout, 1998, Reese et al, 2010), whereas a recent meta-analysis suggested an advantage for adolescents over elementary aged children for group based work (Baskin et al, 2010). The current study did not find any significant difference between younger and older children when considering social emotional wellbeing or discipline problems. However, as was noted in the descriptive statistics section, the distribution of the age of the students in the current study was negatively skewed with a greater number of older students receiving services compared to younger students. Since there were fewer younger children, this could have resulted in an inability to detect an effect due to age. In contrast, academically, younger students who received therapy progressed at a higher rate than older students who received therapy even when controlling for average student growth at each grade level. What is particularly interesting is the fact that the other outcome variables (social emotional functioning as measured by the SDQ and discipline problems) did not indicate an advantage for younger students compared to older students. It is entirely possible, that there is an unmeasured factor or attribute related to therapy with younger children compared to older children that differentially affected academic progress for these two groups. Considering the lack of control exerted in the current study, it is equally possible that a school based factor could account for the current results. For example, it is possible that the schools allocated more resources (i.e. larger numbers of teacher assistants for younger grades, more extensive curriculum, more support and interventions for younger grades) compared to those provided for older grades thereby influencing the progress made between these two groups.

The effect of mental health services on academic functioning. The current study included data looking at academic progress for students receiving mental health services. Many stakeholders feel that the point of school is to promote academic success and that is what they emphasize in terms of the allocation of finances. If it can be shown that services targeting mental health in turn positively impact academic performance, this may influence resource allocation. Research indicates that effective mastery of social emotional competencies is associated with greater wellbeing and better school performance. (Durlak, Weissberg, Dymnicki & Shcellinger, 2011, Eisengberg, 2008, Masten & Coatsworth, 1998, Nix et al, 2013). Other researchers have also found significant positive correlations between the level of social functioning and academic performance of students of various ages (Henricsson & Rydel, 2006, Rahib Abadi 2000, Seyfried, 1998, Usher & Taylor, 1981, Welch, parks & Weidman, 2001). In contrast, students who fail to achieve social emotional competence experience a variety of personal, social and academic problems (Eisenberg, 2006, Nix, 2013). This is especially true for students with emotional disturbances (Siperstein, Wiley & Forness, 2011). The current study found that students who received mental health services from trainee therapists progressed commensurate with their same aged peers in the area of reading and actually progressed at a higher rate than their peers in the area of mathematics. In addition, results indicate that students who received services from professional therapist's demonstrated greater progress compared to those who received services from trainees in reading. Considering the literature revealing the academic stagnation and difficulties faced by students struggling socially or emotionally (Durlak, 2011 Durlak, Weissberg, Dymnicki & Schellinger, 2011, Eisengberg, 2008, Masten & Coatsworth, 1998, Nix et al, 2013) these results are encouraging. However, it must be noted, that students receiving services from licensed professionals evidenced a higher baseline proficiency in reading

compared to those serviced by trainees. Thus, it is possible that their initial advantage could explain the continued higher rate of improvement. Having said the above, although licensed professionals also began more proficient in mathematics this did not lead to an advantage in this subject area. Thus, students who were serviced by licensed professionals outperformed students serviced by trainees in reading but not in math. It is not clear as to why this type of therapy should differentially impact reading and math. Although not statistically significant, the direction suggests that students serviced by licensed professionals increased in math more than those who received counselling from trainees. This pattern is consistent with the results found for reading.

In contrast to some previous research demonstrating a positive correlation between social emotional outcome measures and academic performance (Henricsson & Rydel, 2006, Rahib Abadi 2000, Seyfried, 1998, Usher & Taylor, 1981, Welch, parks & Weidman, 2001) , the current study did not find any direct relationship between the social emotional outcome measures (SDQ, discipline problems) and a student's academic progress. However, the study did find that for post measures, the SDQ scores were associated with the other outcome variables. Specifically, lower SDQ scores at post-test was associated with less discipline problems, and higher scores on both the reading and math measures. Thus, although students on average progressed in terms of their social emotional functioning and in the area of academics these two measures were not directly related. In other words a student who improved more socially and emotionally on the outcome measures did not in turn make greater progress academically. However, this study does reveal that children who are generally shown to be vulnerable to academic stagnation and failure, made acceptable progress. Nonetheless, this study does not demonstrate that the intervention may have precipitated and engendered this growth. Due to the

lack of a control group with similar initial symptomology, it is entirely possible that another school based factor caused the academic growth and not the intervention.

Implications

Considering that school is sometimes the only context where low income youth receive effective professional mental health services it is important to ensure that schools can meet the growing demands for these essential services. Unfortunately, funding for these services is not easy to obtain and school based professionals cannot keep up with the demand for this service. This study suggests that utilizing qualified trainees or practicum students during their graduate training is a viable option even for a variety of different presenting problems and levels of severity. Besides providing the trainee a variety of experiences and reliable access to clients, children in the schools were found to benefit from this service. Although the effects of trainees carrying out well controlled and standardized interventions have been studied, not many studies have investigated the effectiveness of trainee therapists engaging in routine practice in a school setting. This case study attempted to look at this and evidenced acceptable outcomes.

Although the main focus of this study was to examine the efficacy of trainee therapists providing treatment in a school setting, it was also found that trainees performed commensurate with licensed professionals on most of the outcome measures (Social emotional functioning, discipline problems, math progress). This is both gratifying but also mystifying. Licensed professionals underwent coursework, training, practicums with supervision, internships with supervision and licensing requirements in order to practice. It is quite surprising that they would not outperform trainees who are less advanced and experienced. This case study seems to

suggest that with adequate supervision these two groups may perform at comparable levels. This does not suggest that higher levels of training are inconsequential as training and supervision lead to a greater depth of practice and the ability to operate independently. In contrast, trainees still rely on supervision and collaboration in order to achieve acceptable outcomes. Obviously, it would not be ethical to evaluate the efficacy of trainees without supervision thereby providing an indication of how important supervision is to outcomes. However, perhaps it would be interesting to look at how much supervision is necessary to procure outcomes commensurate with professionals. This also indicates the power of a supervisor to impact a larger number of clients than they themselves could see alone by providing supervision to trainees.

Including school based outcome measures (discipline problems and academic functioning) was an important aspect of this study and which differentiated it from previous research. It is especially important in terms of convincing donors and stakeholders of the importance of mental health services. Although students receiving treatment progressed in terms of overall social emotional wellbeing and academic progress, it failed to significantly impact behavioral problems in the classroom. Thus, an implication of this study is that individualized counselling helps students with social emotional concerns to benefit from their education, which is an important outcome to educational professionals and those allocating funding. However, equally important to decision makers is the culture of an educational institution and the learning environment. It will be important to look at interventions that impact the noticeable and sometimes disruptive behaviors captured in discipline reports to convince decision makers of the importance of mental health services.

Although it is essential for trainees to be well grounded in evidence based interventions and techniques, it may not be essential to micromanage the trainees in terms of which

interventions they will use with specific students. Rather, with adequate supervision, it may be sufficient to allow the trainees to utilize their judgment to decide on which modality to use.

Many of the more recent studies looking at individual counselling and intervention have generally focused on specific manualized approaches for all of the students in the study rather than allowing trainees to work through cases with a supervisor and provide rationales for why they chose a specific treatment for a particular student. This is an important skill to learn and this discretion helps trainees to promote good decision making and case conceptualization skills.

School based personnel are important participants for a successful implementation of school based mental health to take place. It is essential to have someone who is knowledgeable about the culture of the school, understands the stakeholders in the school, and who is able to facilitate the mental health process being a leader in this endeavor. Related to this, is the need for significant logistical planning to take place to ensure the smooth running of school based treatment. It is important that enough room is available and that preferred times are identified to engender successful implementation. In addition, it is important that the school based professional possess a good knowledge also of psychotherapy and mental health issues in order to help implement a program for trainees. It is essential that trainees only work with students that are within their level of competence. Although the University supervisor can help with this process, a school based professional who is advocating for the students of the school also needs to be heavily involved in this process. School Psychologists are well positioned to take on this role. Their unique knowledge of both school based issues and mental health issues/psychotherapy provides them the ability to undertake all of the roles necessary to facilitate mental health services with a trainee (i.e. supervision of the trainee, interface between the school and the trainee, coordinator of services etc.).

Limitations and Future Research

This case study was undertaken in a naturalistic urban economically disadvantaged school setting with a small sample size and a very homogenous student population (African American students). This limits the generalizability of this study to other populations and settings. In addition, in the school setting, students requiring counselling can vary widely in terms of circumstances, level of severity, preferences for therapist, preferences for staff/administration and involve ethical issues in terms of assignment. This can limit strict experimental control, randomized distribution of students and the internal validity.

The most obvious limitation of the current study is the lack of a control group; thus the changes evident in this study cannot be confidently attributed to the treatment. History, passage of time, and regression to the mean are alternative plausible explanations. Ubiquitous initiatives, interventions and programs occur at schools. It is entirely possible that other events could have coincided with the intervention under study and influenced the results. In general, it is not uncommon for clients with an array of difficulties to improve in functioning even without treatment. In fact, a number of studies explored this phenomenon even within school based treatment (Cooper, M., Pybis, J., Hill, A., Jones, S., & Cromarty, K. 2013). The results from the current study could have been due to this spontaneous improvement. Furthermore, considering that students who are referred by parents and teachers for school based mental health services are often struggling in school, it would be expected that the initial ratings of the students would have been elevated and not fully reflected daily functioning over a period of time. Regression to the mean could explain the overall better functioning of the students at post-test compared to a pre-test. The above problems are weaknesses that this case study shares with numerous effectiveness studies. Future research should attempt to obtain results from a wider range of school types (i.e.

public, charter, private) with a wider range of student demographics to ascertain the generalizability of these results. It should also be the goal of future research to examine possibilities of utilizing control groups (i.e. wait list, delayed start etc.) within ethical guidelines to further bolster confidence in results from interventions conducted by trainee therapists.

Although a review of records and brief interviews were conducted with parents and teachers associated with participants, students were not provided with a formal diagnosis. In addition, even though students were categorized as “Mostly externalizing” compared to “Mostly internalizing”, this category may not have captured the heterogeneity associated with each group (i.e. depression versus anxiety, defiance towards adults compared to aggression towards peers) which although would have suffered from a small sample size in each category, could have been informative and provided information related to different diagnostic groups. Future research should procure larger sample sizes with a wider variety of problems and concerns. In addition, it would be useful for a more full clinical interview to be conducted to ascertain whether a formal diagnosis is warranted or not. Besides providing more information around presenting difficulties, this could also be used to ascertain the effectiveness of interventions with students who have received a formal diagnosis compared to those who are present with more minor problems.

Another limitation connected to the small sample size is that it precludes the use of multilevel statistical analysis that could have been used to look at therapist level influence. Unfortunately, a nesting structure in the data (more than one student receiving therapy from each trainee) precluded using therapist level of experience as an individual level predictor. Considering that trainees are not a homogenous group and are comprised of both experienced and inexperienced graduate students, this factor could have provided additional information concerning the level of training or experience necessary for trainees to obtain acceptable results.

Future research should evaluate these therapist level factors and how this interacts with student level factors (i.e. level of severity, gender, type of presenting problem, age of student etc.)

It was not the goal of this study to systematically examine the types of interventions and techniques used by trainees in a school setting. Future research should evaluate this objectively by utilizing a standardized coding system during direct observation as opposed to relying mainly on session summaries and attempting to categorize these. In addition, this study relied on the opinion of the author to categorize the sessions into various modalities and technique types. Future research should attempt to utilize a number of qualified raters and to calculate inter rater reliability using a coding system. Besides trainees, it would also be important for future research to look more closely at the practices of both the trainees and the licensed professionals operating in schools and whether various practices impact efficacy.

This study utilized the discipline problems and the Strengths and Difficulties Questionnaire (SDQ) as a measure of behavioral problems and overall social emotional functioning. Although there is extensive training and fairly objective criteria for identifying discipline infractions, this measure is still subject to a level of teacher discretion, time to input an infraction and subjectivity. This could have impacted the results found in this study in terms of the lack of an effect on discipline problems. Another aspect of utilizing discipline data is the heterogeneity of this measure. Students can receive discipline withdrawals for a variety of offenses each of which are very different in nature from the other. It is possible that the individual treatment impacted some categories of offenses more than others. For example, a student may have exhibited more severe disruptive and defiant behavior along with more clandestine behaviors such as gum chewing or talking to peers. The intervention may have reduced the more obvious, severe and disruptive behaviors but not the more mild behaviors that

can still result in discipline infractions. However, without analyzing each discipline infraction carefully to categorize it, the impact of the intervention could remain undetected. It would be important for future research to examine further discipline data and whether specific types of offenses are reduced by treatment and intervention compared to others. Although the overall SDQ scores for the teacher version demonstrate good psychometric properties and provide a good overall impression of social emotional functioning it would have provided more confidence had psychometric properties of the local data set been procured. Since the SDQ was scored utilizing an online program this was not possible.

Despite the fact that the current study did find positive results in terms of student social emotional functioning and academic functioning, no indication as to the mechanisms at work were evident. In other words, no association was found between a students' improvement in social emotional functioning and academic functioning. It would be important for future research to uncover the process of change and which specific aspects of functioning improved due to the intervention that lead to improvements in academic functioning.

This study did not investigate whether the effects obtained endured over time and it should be a goal of future research to look at the maintenance of effects procured by trainee therapists in a school setting. Stakeholders who want effective and efficient interventions may be interested in whether ongoing treatment is necessary or if interventions exert their effects even after the actual treatment terminates. The latter may garner more enthusiasm as it ensures that the client possesses the skills to tackle ongoing difficulties without relying on perpetual treatment from a practitioner. In addition, it allows more clients to benefit from the intervention.

In summary, this study found that trainee psychologists were able to offer useful and beneficial services to children in schools comparable with their licensed counterparts. Benefits were particularly apparent when considering overall social emotional wellbeing and academic progress. Although no significant differences were found between trainees and professionals with regard to social emotional and behavioral progress, students who received therapy from professional therapists progressed significantly better academically compared to those who received services from trainees.

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Appendix A:

Date: July 22, 2016

To: Kyongboon Kwon,

CC: Elliot Broch

IRB#: 17.017

Title: Case study of outcomes for trainee therapists conducting individual therapy in schools

After review of your research protocol by the University of Wisconsin – Milwaukee Institutional Review Board, your protocol has been approved as minimal risk Expedited under **Category 5** as governed by 45 CFR 46.110.

This protocol has been approved on **July 22, 2016** for one year. IRB approval will expire on **July 21, 2017**. If you plan to continue any research related activities (e.g., enrollment of subjects, study interventions, data analysis, etc.) past the date of IRB expiration, a continuation for IRB approval must be filed by the submission deadline. If the study is closed or completed before the IRB expiration date, please notify the IRB by completing and submitting the Continuing Review form found in IRBManager.

Any proposed changes to the protocol must be reviewed by the IRB before implementation, unless the change is specifically necessary to eliminate apparent immediate hazards to the subjects. It is the principal investigator's responsibility to adhere to the policies and guidelines set forth by the UWM IRB, maintain proper documentation of study records and promptly report to the IRB any adverse events which require reporting. The principal investigator is also responsible for ensuring that all study staff receive appropriate training in the ethical guidelines of conducting human subjects research.

As Principal Investigator, it is your responsibility to adhere to UWM and UW System Policies, and any applicable state and federal laws governing activities which are independent of IRB review/approval (e.g., [FERPA](#), [Radiation Safety](#), [UWM Data Security](#), [UW System policy on Prizes, Awards and Gifts](#), state gambling laws, etc.). When conducting research at institutions outside of UWM, be sure to obtain permission and/or approval as required by their policies.

Contact the IRB office if you have any further questions. Thank you for your cooperation and best wishes for a successful project.

Appendix B

Strengths and Difficulties Questionnaire

P or T 4-10

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behavior over the last six months or this school year.

Child's name

Male/Female

Date of birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restless, overactive, cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often complains of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shares readily with other children, for example toys, treats, pencils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often loses temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rather solitary, prefers to play alone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally well behaved, usually does what adults request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many worries or often seems worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often fights with other children or bullies them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally liked by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easily distracted, concentration wanders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervous or clingy in new situations, easily loses confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often lies or cheats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Picked on or bullied by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often offers to help others (parents, teachers, other children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinks things out before acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steals from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets along better with adults than with other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many fears, easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good attention span, sees work through to the end	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signature

Date

Parent / Teacher / Other (Please specify):

Thank you very much for your help

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Appendix C

Session Summary

Goal 1				
Goal 2				
Progress (Highlight text)				
Goal 1	Goal met	Good progress	Some progress	No progress
Goal 2	Goal met	Good progress	Some progress	No progress
Session Overview				
Intervention:				
What went well:				
What did not go well:				
Next Steps				
Clinical impressions				

Curriculum Vitae

Elliot Broch

Place of Birth: London England

Education

University of Wisconsin- Milwaukee,

- Ph.D in School Psychology, May 2017

University of Wisconsin- Milwaukee,

- Education specialist degree in School Psychology, May 2009

University of Wisconsin- Milwaukee,

- Master of science degree in Educational Psychology, August 2007, GPA 3.97
- Masters Paper: “ Identifying Evidence Based Interventions for High Functioning Autism and Aspergers Syndrome: A Critical Review of the Literature”

City University (London, England),

- Bachelor of Science in Psychology First class honors, June 2002

Academic Honors and Awards

- Bachelor of Science First Class Honors Degree in Psychology (2002)
- Nominated for the Deans Honors List (2006-2007/ 2014-2015)
- Chancellors Honors List (2005-2006)

Dissertation Title: Case Study Examining The Treatment Effect of Trainee Psychologists in Schools.