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Mental Health Research Productivity of Nasp-Approved School Psychology Programs: 2010-2015

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MENTAL HEALTH RESEARCH PRODUCTIVITY OF NASP-APPROVED
SCHOOL PSYCHOLOGY PROGRAMS: 2010-2015

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Abstract

With the evident need for mental health support of children and adolescents, there are identified professionals prepared to provide services within the school setting. The school psychologist is considered a key resource for providing mental health services such as preventive and crisis response (Dwyer, 2004; Armistead, 2008). Based on our country’s mental health needs and the significant role that schools can make in meeting those needs, it is pertinent to take a closer look at the literature specifically related to mental health. This review focused specifically on the field of school psychology’s contribution to mental health literature and established a baseline of how much nationally recognized school psychology training programs and their core faculty members are contributing to the existing pool of knowledge.

The current study was adapted from the dissertation conducted by Carper (2002) and the later published article by Carper and Williams (2004). Carper’s research in 2002, reviewed all scholarly productivity of faculty in American Psychological Association (APA) - accredited school psychology doctoral programs in order to obtain results on authorship credit and themes between 1995-1999. The current study has employed methods consistent with Carper and Williams in order to highlight productivity data of mental health related articles from faculty in National Association of School Psychologists (NASP) - approved school psychology programs providing masters, and education specialist degrees between 2010-2015. Article abstracts were compiled via PsycINFO and ERIC by confirmed faculty first and last name. Faculty scholarly productivity was measured by calculating authorship credit. To determine authorship credit for articles that indicate more than one author the proportionate formula, initially implemented by Howard et al. (1987), was be applied: \((1.5^{n-1})/(\sum 1.5^{i-1})\). Article abstracts were coded for four general themes of assessment, intervention, consultation, and issues related. Additional coding
was performed for subcategories within the general themes. Analyzing the data related to mental health served to identify the top scholarly producing NASP - approved school psychology programs and faculty, principal publishing journals, and the general mental health publication themes within the school psychology field during the six-year span.

A function of the school psychologist role is to meet the mental health needs of students by providing social-emotional prevention and consultation support, counseling intervention, and response to crisis. However, historically, the role of conducting assessments and evaluations has dominated the school psychologist practice with mental health intervention coming up short (Agresta, 2004). The current study has identified the contribution of school psychologists in higher academia to this area of literature in 2010-2015 as the responsibility and pressure to implement and provide mental health services grow for practicing school psychologists.
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Dedication

This dissertation is dedicated to my children, my home team: Ka’ili’ula and Kamalei.
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Chapter One

Introduction

School violence and tragedy are familiar words that have not been a stranger to our national and community news. While tragedy should not be measured by the number of lives lost, it is often the events with the most death and injury counts that we remember the most. Heart-breaking events that end in tragedy have been documented on school campuses since before the 1800’s; however, over the past 20 years we may recall the following headlines:

On April 20, 1999, in Littleton, Colorado two students of Columbine high school, Eric Harris and Dylan Klebold, killed 12 students and one teacher, and injured 24 others before taking their own lives.

On March 21, 2005, in Red Lake, Minnesota 10 people were killed and five others were wounded by 16-year-old Jeffrey Weise as he shot his grandfather, grandfather’s partner, and a tribal police officer, prior to heading to Red Lake high school where he continued his killing spree.

On April 16, 2007, in Blacksburg, Virginia, twenty-three-year-old, college student, Seung-Hui Cho went on a killing rampage at Virginia Tech University. He killed 32 students and faculty members and injured more than 17 students before committing suicide. At the time (04/16/07), it was reported by NBCnews.com that Cho made two separate attacks on the same day resulting in the worst death toll by a single gunman.

On April 2, 2012, in Oakland, California at Oikos University, forty-three-year-old, One L. Goh murdered seven students in an execution manner and injured three students in a nursing classroom. Goh, a recent student of Oikos University, committed the school shootings and then fled the scene to a nearby Safeway where he turned himself into law enforcement.
On December 14, 2012, the lives of twenty children and seven adults at Sandy Hook elementary school in Newtown, Connecticut were taken abruptly by twenty-year-old, Adam Lanza. According to news records, Lanza shot and killed his mother at home and then drove to Sandy Hook elementary school. Victims at Sandy Hook elementary school were first grade children, ages six and seven and the adults included four teachers, the school principal, and the school psychologist. He committed suicide when law enforcement arrived to the school.

On December 18, 2014, twelve-year-old Reagan Carter committed suicide at her home in Bardstown, Kentucky, by overdosing on cough medicine. Her mother claims bullying was the cause.

On February 27, 2015, fourteen-year-old Carla Jamerson hung herself in the bathroom of her parents’ home in Las Vegas, Nevada. Bullying was a factor considered as the cause by her mother.

On February 14, 2018, in Parkland, Florida, 19-year-old former student, Nikolas Cruz, killed 17 students and injured 16 other people during the shooting at Marjory Stoneman Douglas High School.

The list of events is only a snapshot of the cumulative record of events that have occurred due to school violence. The reality is that events like those mentioned have an extensive effect on the mental health of the community that unfortunately include the students, staff, and families (The National Prevention Council, 2014). It also triggers a question of concern for the mental health of the individuals who are responsible for the execution of such events that result in hurting the lives of others or of hurting their own. Factors such as violence, mental illness, and social stressors impede the functioning of our children and youth on a daily basis thus it is imperative that the field of school psychology continue to support and advocate for the
outstanding needs of our students and their families beyond academic achievement. The necessity for a focus on mental health is undeniably justified.

**Statement of the Problem**

The National Alliance of Mental Illness (NAMI, 2010) reported approximately 21 percent of children ages 9 to 17 have a diagnosable mental or addictive disorder that causes at least minimal impairment (U.S. Department of health and human services [US DHHS], 1999) and that only 20 percent of those children with mental disorders are identified and receive mental health services (U.S. Department of health and human services, 2000). More recently, Hass and Domzalski (2012) noted a similar trend across several studies reviewed in 2012 indicating that approximately “20 percent of children suffered from a diagnosable mental health disorder”.

The National Association of School Psychologists (NASP; 2010) best practices suggests that a ratio of 1,000 students per school psychologist, and 500 to 700 students per school psychologist are the maximum ratios when more comprehensive and preventive services are being provided. Recently, NASP noted that in the 2014-2015 school year the ratio was estimated to be 1,381 to 1 in the United States (Walcott, Hyson, & Loe, 2017). According to those statistics and based on the estimated ratio in 2014-2015, each practicing school psychologist may have approximately 276 students (20% of the population) suffering from a diagnosable mental health disorder.

In a report of the surgeon general (2001), the United States Department of Health described mental health as “the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity”. Echoing similar mental health concepts, the National Prevention Council (2014) addressed positive mental health and strategies to achieve it. The council
indicated “positive mental health allows people to realize their full potential, cope with stresses of life, work productively, and make meaningful contributions to their community p.1”.

The school setting has been a long standing service provider recognized as a beneficial resource for meeting the mental health needs of children (Little & Akin-Little, 2013; Skalski & Smith, 2006; NASP, 2006; US Surgeon General, 1999; Doll, Nastasi, Cornell, & Song, 2017). Schools have been considered the setting that creates the most opportunity to provide services as children spend so much time there. This time and access allows practitioners to reach so many more children that may not be necessarily brought to a clinic or private doctor’s office. In addition, youth may feel more comfortable accessing mental health support at school; a setting potentially less intimidating then a private clinician’s office.

In March of 2010, President Obama signed a comprehensive health care reform into law (P.L. 111-148) called the Patient Protection and Affordable Care Act (ACA, 2010). Under ACA 2010, also known as Obamacare, a number of changes were approved. Significantly for the field of school psychology was the federal definition of mental health service professional. According to P.L. 111-148 or ACA 2010, “(22) The term ‘mental health service professional’ means an individual with a graduate or postgraduate degree from an accredited institution of higher education in psychiatry, psychology, school psychology, behavioral pediatrics, psychiatric nursing, social work, school social work, substance abuse disorder prevention and treatment, marriage and family counseling, school counseling, or professional counseling.” Cunningham, Grimm, Brandt, Lever, and Stephen (2012) describe five broad, but critical areas that were additionally outlined by the reform: increased access to health care, expanding Medicaid coverage, children’s health insurance program (CHIP) reauthorization, health insurance required coverage exchanges, and school-based health centers (SBHCs). Importantly, children and
families were given increased access and opportunities to obtain mental health services that were considered and continue to be substantially needed.

Through the 2010 Affordable Care Act, over the course of four years $200 million in grant funds were designated for school-based health centers or SBHCs (Valeta, 2011; Smith, 2013). As of 2013, Smith (2013) reported 520 school-based health-care programs were awarded funding through ACA. These SBHCs are typically located in school settings to provide services to the students and families with schools playing an integrated role. Cunningham et al. (2012) identified mental health care as the number one reason for SBHC student visits. ACA funding has supported the growth and implementation of mental health services in the school setting. With the promotion and substantial financial support of SBHC programs through ACA, there came a call for qualified mental health providers.

More recently, in May of 2017, the American Health Care Act (AHCA), nicknamed as Trump care, was put into place by the current United States administration. The AHCA provides states with the option to eliminate mental health coverage and parity. The changes may potentially increase the cost of mental health coverage, as well as make mental and behavioral health, and substance abuse treatment an option for insurance policies to provide in basic plans. More than ever, it is extremely important to consider other options and avenues to promote and provide supports for mental healthy living, educational institutions being one of the main options for children, youth, and families.

Cunningham et al. (2012) described the challenge as the “need for a highly trained workforce with knowledge and skills related to evidence-based practices and programs and effective work with children and families. There is a growing need to advance the training of mental health service within the school.” With the evident need of mental health support, federal
The law definition of mental health service professional has identified various school professionals prepared to support the promotion of mental health. The school psychologist is one of those identified specialists employed in the school system trained to provide mental health support including prevention, intervention, and crisis response (Dwyer, 2004; Armistead, 2008) and is the focus of the current research discussion.

The National Association of School Psychologists (2013) supports that school psychologists are specifically and uniquely trained in this line of work and should be recognized as qualified health professionals. According to the role and function outlined by NASP, “School psychologists work with students to provide counseling, instruction, and mentoring for those struggling with social, emotional, and behavioral problems” all of which are considered an intricate part in “creating safe, healthy, and supportive learning environments that strengthen connections between home, school, and the community for all students”.

With the profession of school psychology identified as a significant resource for mental health in the schools it is imperative and strategic to recognize that school psychologist practitioners can meet those needs by assisting in the organization of systems and the implementation of services (Poland, 1999; Dwyer, 2004; Franklin, & Duley, 2005; Sheridan, Napolitano, & Swearer, 2005; Armistead, 2008; Suldo, Friedrich, & Michalowsky, 2010). School psychologists have the training and background which allows for the provision of mental health services in order to assist in the promotion, intervention, and maintenance of a positive learning environment (Perfect & Morris, 2011). Despite the defined skill set of the practicing school psychologist, the need for mental health support does not inevitably equate to increased practice. The practice of school psychologists has been studied time and time again, and too
often similar barriers are recognized that may limit the engagement in mental health related activities.

Research indicates school psychologists spend the majority of their time conducting assessments for special education (Bramlett, Murphy, Johnson, Wallingsford, & Hall, 2002; Agresta, 2004; Larson & Choi, 2010). Although practitioners would like to provide more counseling services, it is an area that lacks time and attention (Agresta, 2004) due to various reasons such as services are provided by other professionals, and lack of time. Eklund et al. (2017) illustrated through a survey of school psychologists that with increased practitioner to student ratios, school based mental health services decreased.

DuPaul (2011) encourages professional research self-reflection in order to map progress and to target areas in need of improvement for advancement and growth. The significance of our country’s ongoing mental health needs is apparent. Given the upward trend in need and the concept that school psychologists are considered one of the main resources of mental health support in the schools, it is important to begin by reviewing the scholarly contribution of the school psychology profession to the mental health literature that serves as the foundational basis for science practitioners working in the field.

**Nature of the Study**

The current study serves as a preliminary review of the existing body of mental health literature and sought to establish a baseline of scholarly productivity published by associated faculty of NASP approved programs. Research has supported the positive influence of mentors at the doctoral level for areas of research productivity, program completion, and career development (Fagenson, 1989; Fagenson-Eland, Marks, & Amendola, 1997; Kram, 1988; Wilde & Schau, 1991; Hollingsworth & Fassinger, 2002). The knowledge and specialty interest of
faculty who prepare school psychologists for practice in the “real world” can play an influential role in the mental health preparedness of professionals at graduation. Thus, this information is valuable for future prospective school psychologists when investigating programs of interest.

There are many ways to assess the leading schools in scholarly publication such as surveys (self-report, reputation surveys), educational transcripts, and student educational outcome data (Brooks, 2005); however, these measures are not always considered consistent, and/or available for review. Many higher educational institutions require professors to meet continuous publication goals and expectations. To identify professors who are contributing to the mental and behavioral health literature, it is necessary and logical to take a look at the publication data of school psychology program faculty. Publication data is a quantitative way to measure continued contribution and growth to the knowledge pool, and allows for a quick, objective view on university quality (Brooks, 2005). A limitation identified is that it is just that; a quick snapshot of the university program or programs in terms of published articles. The review of publications does not account for other types of activities that faculty may be the facilitator or participant (i.e. webinars, conferences, public lectures, trainings, continued education units, etc.). While this limitation is recognized, publication data of peer-reviewed journals has been a long standing practice when measuring higher education quality.

The current study was adapted from the dissertation study conducted by Robin Michele Carper completed in 2002. Carper (2002) analyzed the scholarly productivity, publication outlets, and article themes of school psychology programs accredited by the American Psychological Association (APA). Results indicated the top APA - accredited school psychology programs in terms of amount of publication data, the overall journals in which studies were most frequently published, and the general themes of the top ten school psychology programs based
on publication data. According to Carper (2002) the general theme of interventions was found to make up 26% of publications topics of the top 10 publication producing programs from 1995-1999. At 26% of publications, intervention was identified as the second largest theme among the categories of professional issues, descriptive studies, and other psychoeducational issues (47%), assessment (20%), and consultation (7%).

Similar to Carper (2002), the current study analyzed the scholarly productivity of faculty. However, due to the growing mental health needs of our children in the immediate community and the more widespread country, it is not only significant, but essential to highlight the mental health productivity of faculty in National Association of School Psychologists (NASP) - approved school psychology specialist level programs. The goal of the current study is to further investigate the general concept of mental health productivity in addition to placing a microscope on the theme of mental health intervention related articles. The current study will ascertain the quantity of scholarly publications, which school psychology programs are being credited with publications, and identify the principal publishing journals.

Publication data between 2010 through 2015 were obtained through the online search engines PsycINFO and the Educational Resources Information Center (ERIC). PsycINFO is an online search engine maintained by the American Psychological Association. ERIC is an online electronic library provided by the Institute of Education Sciences of the United States Department of Education. Publication data will be pulled from both search engines in order to increase the probability of locating journal articles written by school psychology higher education faculty members.
Research Questions

In reviewing the publication data from 2010-2015, the following questions will be investigated:

- Which NASP approved institutions/school psychology programs are most credited with articles specifically related to mental health and mental health interventions?
- Which faculties within NASP approved institutions have the highest authorship credit for articles specifically related to mental health and mental health interventions?
- What are the principal journals in which school psychology faculty publish articles related to mental health and mental health interventions?
- What are the principal article themes of school psychology faculty mental health and intervention specific articles?

With the impacts of life events varying on a continuum from minor stress to trauma and crisis, it is evident the need for continual mental health support exists. School psychologists are professionals within the school system that are capable of meeting the continuum of needs by providing social-emotional/behavioral prevention, consultation support, intervention, and response to crisis. However, historically, the role of conducting assessments and special education evaluations has been a large responsibility of the school psychologist practice and has consistently took precedence over mental health and intervention roles (Agresta, 2004). In answering the research questions, the current study hopes to identify higher academia’s contribution to the existing pool of knowledge as the responsibility to implement and provide mental health services grow for practicing school psychologists.
Chapter Two

Literature Review

School violence, and other distressing events easily draws attention to mental health needs; however, there are so many other related mental health issues that may impact our state of functioning and school performance. Both children and adults will go through life events which may potentially affect performance in the school setting. Financial strain, homelessness, divorce, changes to family systems, and loss of loved ones are only some examples of what people experience on a daily basis. These daily difficulties are just as important to address as the traumatic events that make the news because of the potential effect on an individual’s emotional stability, and/or ability to function. Whether it is teaching in front of the classroom, or engaging in a classroom lesson to learn a new concept, both students and educators are asked to put aside their personal needs Monday through Friday in order to perform their best for educational attainment. However, sometimes those personal matters simply cannot be put aside. When this occurs there are identified professionals in the schools to provide support.

Chapter two consists of a brief overview of the school psychologist as a mental health provider, and the concept of school based mental health (e.g. prevention, interventions, and consultation) within the profession of school psychology. The literary contribution of school psychology graduate training programs will be discussed along with the assessment of programs through productivity, and lastly measuring scholarly productivity in the field of school psychology.

The School Psychologist as a Mental Health Provider

Counseling roles in the school setting have historically been shared by various counseling professionals such as school psychologists, school counselors, and school social workers
(Arbuckle, 1967; Nugent, 1973; Humes & Hohenshil, 1987; Radin & Welsh, 1984, Agresta, 2004). Over the years, the roles and functions of these three “mental health professionals” have become broader and have begun to overlap. Suggestions have been identified on how to manage the provision of mental health services in the schools among these three professions (Arbuckle, 1967; Nugent, 1973; Humes & Hohenshil, 1987, Gibelman, 1993). Arbuckle (1967) suggests an ecumenical movement or a dialogue between professionals to move forward together to better serve children through the educational system. Nugent (1973) expressed that better distinction in roles and referrals should be defined to organize the delivery of services suggesting school psychologists and school social workers primarily receive involuntary referrals and school counselors handle voluntary referrals. Humes and Hohenshil (1987) list eight solutions for school psychologists, counselors, and social workers to better provide broad services to pupils which include teamwork, organizational relationships, university departments recognition of overlapping roles, mutual respect, communication, all specialties to provide individual counseling, all specialties to provide group counseling, and all specialties to be an active participant with students identified with a disability. Gibelman (1993) continues to support the importance of collaboration between the school social workers, counselors, and psychologists in order to improve the role, influence, and effectiveness of services.

Although the identification of multi-disciplinary mental health providers exists in the schools, the National Association of School Psychologist (NASP) defines, “School Psychologists help children and youth succeed academically, socially, behaviorally, and emotionally.”

“School Psychologists work with students to provide counseling, instruction, and mentoring for those struggling with social, emotional, and behavioral problems.”
“School Psychologists promote wellness and resilience by reinforcing communication and social skills, problem solving, anger management, self-regulation, self-determination, and optimism.” – The National Association of School Psychologists (NASP pamphlet What is a school psychologist?)

All of these statements clearly imply the ability and expectation of all school psychologists to provide mental health support in the schools. However, a review of the literature illustrates the general understanding of service delivery of counseling by school psychologists and the continual identification of barriers to fulfilling that role.

Bramlett, Murphy, Johnson, Wallingsford, and Hall (2002) conducted a survey design gathering information on time allocation of the practicing school psychologist and types of referrals that were received. Bramlett et al. (2002) surveyed 800 school psychologists who were members of the National Association of School Psychologists. The research team designed a survey to specifically assess the role of school psychologists, type of referrals, the professionals’ consultation practices, and crisis team involvement. Results from three hundred seventy completed and returned surveys indicated psycho-educational assessment as the most common role utilizing 46 percent of the practitioners’ time. Subsequent roles and functions included consultation (18%), interventions (13%), and counseling (8%). Intervention services which include counseling continue to represent a small portion of school psychologists’ typical practice. It is suggested that factors such as large assessment caseloads may be the reason for restricted intervention and counseling services and providing an easy access to intervention ideas may promote provision of services (Bramlett, et al., 2002).

Agresta (2004) studied the actual amount of time dedicated and the ideal amount of time spent on twenty-one professional tasks among school social workers, psychologists, and
counselors. She also studied the feelings of competition between the three professions to provide services. The survey was mailed out to 1200 randomly selected professionals who were members of the School Social Work Association of America, the National Association of School Psychologists, and the American School Counselor Association. With a sample of 400 professionals from each area of that practice, a total of 486 responses were received. Of the total responses 136 were received from school psychologists.

Agresta (2004) identified the tasks to which participants reported dedicating at least 10 percent or more of their time. Results supported that out of 21 roles, three were identified as roles which were given most of school psychologists’ time. These roles included psychometric testing (24.83 percent), report writing (15.70 percent), and administrator and teacher consultation (10.73 percent). The amount of time spent on psychometric testing and report writing was significantly higher than the reported ideal amounts of time school psychologists would like to spend. On the other hand, school psychologists indicated an ideal of spending more time on individual counseling (11.86 percent). This amount was significantly higher than the actual time spent on this role for school psychologists as well as social workers, and counselors. Feelings of competitiveness between the groups were reported as somewhere between seldom and never. Agresta concluded that while social workers, psychologists, and counselors would like to do more individual counseling, this role is not hindered by the competition from the practitioners within the other professional groups, but is more likely to be hindered by competing demands to fulfill other roles (Agresta, 2004).

Larson and Choi (2010) conducted a survey comparing the time dedicated to specific roles and functions prior to and after the reauthorization of P.L. 94-142, the Individuals with Disabilities Act of 2004 (IDEA, 2004). A stratified random sample of 500 school psychologists
was obtained from NASP to be invited to participate in the survey. Cover letters and questionnaires were sent out via mail. An additional follow-up letter and questionnaire was sent out 3 weeks after initial mailing. 204 responses (return rate of 41%) were received at 4 weeks after the follow-up letters. According to Larson and Choi (2010), results indicated significant decrease in traditional roles such as assessment and eligibility determination; however, the traditional roles of assessment continued to be reported as the top role of school psychologists with 47 percent of time spent in psycho-educational assessments. There were no changes to reported time spent counseling prior to and after IDEA 2004 which remained at only 7 percent of time spent.

With the increased focus on mental health, Hanchon and Fernald (2013), surveyed the provision of counseling services among school psychologists. Hanchon and Fernald (2013) reported approximately half (58%) of the surveyed professionals indicated the provision of counseling services in the schools on a weekly basis as one way to meet the mental health needs of students. Familiar barriers identified included training, time, role identity, and low expectations to provide services. Results were alarming to the authors and raised concerns with school psychologists’ assuming the role as mental health leaders in the schools.

Little and Akin-Little (2013) describe the specific mental health of children with trauma based needs and reminds us how schools are a logical place for support with school psychologists as the suggested mental health provider. Little and Akin-Little (2013) provide three examples of evidence-based cognitive behavior therapy programs that target trauma in children. Research-based programs are available and have shown success; however, the author’s central objective was to call on the attention and action of school psychology training programs to consider the need for in-depth training of trauma treatment within doctoral level programs as
opposed to an overview of interventions. Little and Akin-Little (2013) additionally encourage the training or continued education of current practicing school psychologists.

Hicks, Shahidullah, Carlson, and Palejwala (2014) conducted a survey of nationally certified school psychologists’ use of evidence-based interventions (EBI) in schools. Lack of time was reported as the most prevalent barrier followed by lack of resources, and financial constraints (Hicks et al., 2014). In addition to external barriers, 71% of respondents reported a perceived inadequacy of graduate program training in behavioral evidence-based interventions. Thus, it is important for graduate training programs to focus not only on building skills of evaluation, and implementation of behavior evidence based interventions, but graduate programs must also prepare practitioners on how to use EBI’s given the confines of the environmental factors of the real world work setting (Hicks et al., 2014).

According to the National Association of School Psychologists, counseling has always been considered a prominent part and expectation of the school psychologist’s role. It has been a service that school psychologists are considered qualified to provide, are expected to provide, and would like to provide more frequently (Agresta, 2004). Nevertheless, study after study, school psychologists continue to report most of their professional time is not spent on providing counseling, but rather majority of time is highly devoted to psycho-educational assessment and report writing. Agresta (2004) also found that the barrier to increased provision of individual and group counseling is not the perception of competitiveness between professionals or territorial perceptions as Humes and Hohenshil (1987) previously described it to be. In 2017, Eklund, Meyer, Way, and McLean continue to report time as a top barrier, and similarly to Agresta (2004) identifies that increased caseloads (staffing ratios) has a significant relationship with the provision of mental health services. Eklund et al. (2017) results illustrate that lack of training and
lack of interest received low responses as barriers to the provision of services. However, as of late, Eklund et al. (2017) additionally identify individual state criteria (e.g. licensure and role limits) of the school psychologist as “qualified health professionals” for Medicaid reimbursement was highly reported as to impede the ability to access funds and ultimately the provision of mental health services through the lack of financial resources. Despite practitioners continued desire to include provide more mental health support such as counseling in daily practice, the reality is that the provision of mental health services has struggled to surpass the quantity and time-consuming responsibility of diagnostic assessment, report writing, and clerical duties on the school psychologists’ evolving and growing list of role and functions. As the school psychologist role continues to broaden, we cannot ignore that school psychologists are mental health providers, and must find a way to better address the needs of children in schools given the significance of mental health on academic achievement.

**Mental Health in the School Setting**

The federal acknowledgment of school psychologists as mental health providers has opened up the doors for school practitioners to support the needs of our community in a greater capacity, and the National Association of School Psychologist (NASP, 2010) strongly supports the idea that school psychologists are well prepared to provide those supports. Due to current employment of mental health professionals (i.e. school psychologist, school counselors, and school social workers), and variables such as time with students, accessibility, and lack of stigma, schools become the logical and convenient location to begin attempts to meet the mental health needs of children and youth. Aside from the obvious factors, schools cannot deny the compelling research supporting the powerful relationship that remains with mental health and academic achievement outcomes (Suldo, Gromley, DuPaul, & Anderson-Butcher, 2014).
However, with opportunity comes challenge. Hass (2013) and Eklund et al. (2017) describe meeting mental health needs by way of the school psychologist (state specific) is a challenge in itself, but concurrently claims that the same difficulties are being faced by practitioners in school districts across the nation.

In order to meet the growing needs of children, numerous frameworks have been discussed in the literature when an objective to reconcile with the reality of the actively working school psychologist and the barriers of the “real world”. Forman, Ward, and Fixsen (2017) present comprehensive behavioral health services as coordinated care, and describe it as the future of best practice care for children. Forman et al. (2017) define comprehensive behavior health services as “multitiered, evidence based, integrated, and involving interprofessional collaboration within the school as well as with other healthcare professionals outside of the school”.

In 2004, Nastasi also suggested a comprehensive school-based mental health program to facilitate mental health promotion, prevention, intervention, and treatment. Nastasi (2004) includes that the school psychologist can play a key role in the implementation of such a program utilizing skills beyond assessment and diagnosis. School psychologists are viewed as the ideal professionals to lead the reform for combining public mental health and public education. Nastasi provides a table which outlines the possible roles of the school psychologist in a comprehensive mental health program which include: assume leadership role in comprehensive mental health programming, advocate politically, provide organizational consultation, serve as liaison among school, community, and families, facilitate inter-agency coordination of services, facilitate interdisciplinary efforts, develop school discipline plan, develop, identify, or adapt classroom-based mental health promotion, conduct classroom-based programs, conduct groups
for at-risk students, provide individual or group counseling for early intervention, provide counseling and therapy for identified students, educate staff and parents, and design or conduct formative research.

Similarly, Astramovich, Hoskins, and Bartlett (2010) identify that school counseling programs appear to have shifted from providing direct services such as individual and small group counseling to an academic and vocational approach. This being the case, direct counseling services will decline and social-emotional needs will continue to suffer. In order to address this issue, Astramovich et al. (2010) propose the development of comprehensive school-based counseling centers (CSBCCs) to provide mental health services as well as academic and career support. In order to meet the needs of students, the CSBCC model would allow counselors to provide a continuum of support and counseling services ranging from academic advising to long term individual or group counseling without having to refer to an outside agency.

More recently, research continues to advocate for behavioral health services in schools that are comprehensive with the goal of reaching as many youth and highlighting the role of the school psychologist. Doll, Nastasi, Cornell, and Song (2017) define school based services as complex systems in schools that involve delivery of a diverse set of services for a range of mental health needs that demand the collaboration between school and community providers in order to sustain success. Doll et al. (2017) describe case examples of the Participatory Culture-Specific Intervention Model (PCSIM; Nastasi, Moore, & Vargas, 2004) to illustrate a few approaches that were carried out. The PCSIM framework calls on the school psychologist to assume the role of collaborative consultant in order to support and facilitate school/community teams in research/planning, implementation/evaluation, and partnership decisions.
Hess, Pearrow, Hazel, Sander, and Wille (2017) discuss the need to shift the school psychologist function from a reactive to a preventive mindset in which the school psychologist supports early intervention and the reduction of risks through the implementation of a multitiered system of supports (MTSS). Hess et al., (2017) outlines MTSS following a public health model which includes levels of support consistent with providing universal programs to all students, selective interventions for students that are identified to as requiring targeted instruction, and finally, indicated interventions being specialized and intense of which only a small amount of students will typically require. These levels also known as tiers, address the continuum of mental health needs by providing prevention, assessment, intervention, and monitoring of progress. Hess et al. (2017) reiterate that school psychologists have the opportunity to play a key role in improving and supporting mental health services through their training and background knowledge of MTSS’s, and the specific skills of leadership and consultation/collaboration.

The literature suggests another option to address the current state of the preventive and intervention counseling needs in the schools. Jones, Kadlubek, and Marks (2006) proposed that a single session treatment paradigm may be a method to effectively provide counseling support. They indicate single session therapy as not only a skill set for practitioners, but suggest that it be the initial approach to all counseling situations.

“In effect, the school psychologist would structure each initial counseling intervention session as if there would be only one primary treatment session. The goal in the session would be to create conditions for essential problem solving in that session with intent that this would be followed only by a brief follow-up to monitor progress and reinforce positive responses.”
Jones, et al. (2006) also directly address how single session treatment may be implemented into a response to intervention model. Single session treatment allows school psychologists to provide counseling services suitable to the environment and in small amounts of time. While Jones, et al. suggests single session therapy implementation by school psychologists, the reality is that it could be potentially applied to practice by any trained school-based mental health provider.

Splett, Fowler, Weist, and McDaniel (2013) suggest school psychologists must move away from the traditional roles such as assessment and to take a greater leadership role in school mental health. Splett et al. (2013) advocate that school psychology training programs increase recruitment of prospective students with an interest in school mental health and promote interest in current students, ensure school mental health experiences in programming, ensure graduate courses provide sufficient information regarding the continuum of school mental health services, encourage a specialization in school mental health prevention and intervention, and graduate program are recommended to partner with community agencies for training opportunities. Additional suggestions were made for professional organizations and school districts to highlight school mental health practices and training, and that individual school psychologists become active and more visible as a mental health provider among school and community partners (Splett et al., 2013).

Regardless of professional orientation (psychology, counseling, or social work), the current state of school climate, mental health, and social-emotional/behavioral problems call for a greater focus on mental health services in schools. Comprehensive school based mental health program is a longstanding framework that involves levels of various levels of support, and interventions to meet the mental health and social-emotional needs within the confines of the
present day educational system. Comprehensive school-based model would allow school psychologists, school counselors, and school social workers alike to collaborate and provide an array of mental health services reaching more children, and families. The framework includes the implementation of a multitiered system defining levels of intervention and the collaboration with community providers. The evolving role of the school psychologist has given the school-based practitioner a multitude of opportunities to use the various skills that school psychologists are prepared with. However, school psychologists must find a balance in practice and explore (research) different ways to positively meet the diverse mental health needs of the population being served.

**Literary impact and contribution of school psychology training programs**

Based upon the research of professional role and functions, and time spent on specific tasks, it has been a common theme that formal assessment for special education is considered a primary barrier for the lack of provision mental health services by school psychologists. Given that the majority of time is utilized for psycho-educational assessment (Keith, 1992; Bramlett, et al., 2002; Agresta, 2004; Larson, et al., 2010), it would appear as though the high caseloads involving assessments and traditional role of diagnostic evaluations continue to have the greatest impact on the school psychologist involvement in meeting the mental health needs of students. Despite the statistics of minimal counseling in practice, school psychologists continue to be recognized as a major resource of mental health support in the schools; school mental health provider. For that reason, it is imperative that we continue to self-reflect as a profession and measure our scholarly contributions to the mental health literature.

In an attempt to obtain a greater understanding of the school psychologist as a mental health provider in the schools and how it translates from research, to training, and ultimately to
practice, the current study suggests a review of the literature and analyzing the publication data of school psychology authors. Questions that require answers include: Who and where are the school psychologists and programs that are leading the mental health discussion for the profession? How much is the field of school psychology contributing to the mental health literature, and more specifically the intervention research? Which research topics within mental health are most prominent within the school psychology community? For these answers, the current study will look to scholarly publication productivity data.

The literature discusses multiple ways to measure the quality of higher education (Brooks, 2005), which include surveys, research productivity, student outcomes, and a suggestion to use more than one measure to determine quality. According to Brooks (2005) reputational assessments or surveys began with the early work of Raymond Hughes in 1925. Hughes utilized the opinions of university faculty to create a ranking of top institutional departments. The assessment of university quality expanded from program departments to ranking entire institutions as well as the number and ranks of university faculty members providing feedback. While considered a longstanding method and practice, reputational assessments have been criticized as being subjective and biased. Student outcomes and experiences are also described by Brooks (2005) to provide important information regarding the quality of higher education.

Faculty research is another important factor that has been identified when discussing the quality rankings of higher education. Faculty research productivity involves analyzing the amount of research output that is generated by specific institutions or departments and those with higher amounts of productivity receive higher reputational marks. The literature suggests that using single factors (e.g. surveys, productivity, student outcomes, citation) independently may
not give a complete picture regarding higher education quality and support the use of multiple factors (Brooks, 2005; Roberts, Davis, Zanger, Gerrard-Morris, & Robinson, 2006; Kranzler et al., 2011). However, despite this criticism as an independent factor, over time, faculty publication authorship has been regarded as an objective option and included in studies to reflect faculty, program, department, and institution accomplishments. The measurement of productivity by way of authorship credit has been consistently utilized to review the school psychology literature trends (Webster, Hall, & Bolen, 1993; Carper & Williams, 2004; Roberts et al., 2006; Kranzler et al., 2011; Villarreal & Umaña, 2017).

**Measurement of Scholarly Productivity**

The measurement of scholarly productivity may be executed using various methods. Measurement of faculty research can be considered a simple process when using counting strategies such as Cole and Coles (1973) straight count where only the first author receives full credit for the publication (Lindsey, 1980; Egghe et al., 2000). Another counting strategy described in the literature is called standard or normal counting. In standard counting, full credit (1) is given to each author listed. The bibliometric literature describes other counting methods to determine multiple authorship credit which include fractional counting (Lindsey, 1980), geometric counting (Egghe et al., 2000), arithmetic counting (Van Hooydonk, 1997), and harmonic counting (Hagen, 2008).

**Fractional counting.** Fractional $i$th author credit $= \frac{1}{N}$

Fractional counting is described as the division of authorship of one article by the number of authors (N). In fractional counting, each article is still equal to one credit; however, each author is given the same amount of credit regardless of the ordinal position in authorship. Lindsey (1980) proposed fractional counting in response to the lack of consideration of multiple
authorship in the empirical procedures surrounding publication and citation counting. In fractional counting equal division of credit between authors is considered the best solution until a method is found to evaluate the relative contribution of each author (Lindsey, 1980).

**Geometric counting.** Geometric ith author credit = \( \frac{2^{N-i}}{2^N-1} \)

Geometric counting or Pure geometric count is based on author rank and total number of authors of publications. The geometric counting method proposed by Egghe et al. (2000) identifies credit to each author summing up to one.

**Arithmetic counting.** Arithmetic ith author credit = \( \frac{N+1-i}{(1+2+...+N)} \)

Another counting method discussed in the bibliometric literature is arithmetic counting. Hagen (2009) described arithmetic counting as allotting twice as much credit to first authors when there are only two authors with no fixed ratio of allotment when \( N \) increases. Thus, after two authors, first author credit decreases rapidly and continuously.

**Harmonic counting.** Harmonic ith author credit = \( \frac{1}{\left[ \frac{1}{1} + \frac{1}{2} + \cdots + \frac{1}{N} \right]} \)

More recently, Hagen (2008; 2009) suggested the method of harmonic counting in which the ratio of credit allotted to each author is always consistent despite the total number of authors. In harmonic counting, the first author always receives twice as much credit as the second author, the second author always gets 1.5 times more than the third author, the third author always gets 1.33 times more than the fourth author, and so on (Hagen, 2009). Hagen argues harmonic counting provides a more accurate bibliometric allocation of authorship credit in comparison to the arithmetic, geometric, and fractional models.
**Proportional Formula.** Historically, the psychology research focusing productivity has also implemented a counting method identified as the proportionality formula which was first documented by Howard, Cole, and Maxwell, 1987.

\[
\text{Proportionate } i\text{th author credit} = \frac{(1.5)^n - 1}{\sum (1.5)^i - 1}
\]

Howard et al. describes author credit that is assigned proportionately is “where n is the total number of authors and i is the particular author’s ordinal position.” By using this formula author’s credit declines proportionately for each subsequent author named.

**Chronological review of School Psychology Scholarly Productivity Studies**

Over the past 40 years, there has been an interest and importance in studying school psychology scholarly productivity. Studies have reported the examination of publication data employing a multitude of methods in order to identify themes, trends, and productivity. Earlier studies focused on article themes and trends of research interests identified in specific journal titles. Later studies continued to explore the school psychology literature themes and journals; however, many expanded the research to include other factors such as graduate programs, faculty, and authorship credits. The following is a chronological review of the studies which provided impetus for the current study.

O’Callaghan (1974) reviewed articles dating from 1963-1973 with the purpose of mapping out the published interests and concerns of school psychology. Articles were pulled from a total of five journals, three specific to the field of school psychology (The Journal of School Psychology; Psychology in the Schools; The School Psychology Digest) and two within the general field of psychology (The American Psychologist; Professional Psychology). Articles were read and categorized into 16 topic categories. O’Callaghan ranked the categories by number of articles and discussed trends in the descriptive data by dividing the time span of 10 years into
three intervals. O’Callaghan found that initially in 1963-1966, the category of professional identity ranked highest; however, instrument development and validation which consistently ranked in the top three over the entire decade ranked the highest in 1970-1973. Overall, O’Callaghan (1974) summarized that the field of school psychology was gradually evolving indicating an upward trend in the diversification of published interests.

Seven years later, Clark, and Reynolds (1981), presented a paper at the Annual Convention of the American Psychological Association, discussing their examination of content and trends of articles published from 1974-1980. The study replicated O’Callaghan’s method (1974) and reviewed articles from the Journal of School Psychology, Psychology in the Schools, the School Psychology Digest which was later renamed as the School Psychology Review, the American Psychologist, and Professional Psychology. Articles were classified using O’Callaghan’s (1974) 16 categories. In addition to providing descriptive data, Clark and Reynolds’ further compared the results to O’Callaghan’s results using a chi-square analysis and spearman’s rho to determine correlations and statistically detect research trends. The intent was to determine if the publication trend of diversification described by O’Callaghan (1974) continued in the literature and to what degree the articles published from 1974-1980 mirrored the call for a more broadly defined role for school psychologists at the time.

In 1984, Clark and Reynolds published the results of the 1981 presentation which included the identification of categories rank order by number of articles, as well as the university or agency which contributed the most published articles to the school psychology research literature for each individual year reviewed (1974-1980). They found the category of instrument development and validation continued to represent as the most frequent area of publication for school psychologists as it was the highest ranking category for six out of the
seven years studied. Their statistical analysis identified gradual changes in the distribution of themes over time. In addition, over the seven-year span, the top three agencies recognized for contributing to the literature were identified as University of Arizona, University of Georgia, and Temple University.

In 1987, Howard, Cole, and Maxwell conducted a study to identify the relationship between reputational ratings and research productivity within the area of psychology from 1976-1985. The study was done as an update of a previous study (Cox and Catt, 1977) reviewing institutional research productivity in the 13 journals of the American Psychological Association (APA). Howard implemented a proportionate formula for author credit: Credit = \( \frac{1.5^{n-1}}{\sum 1.5^{i-1}} \). Individual faculty credits were assigned based on publications found. Credits were added together for associated institutions in order to rank total institution productivity in the field of psychology. In order to make comparisons with previous study results reported by Cox and Catt (1977), Howard et al. only included institutions with doctoral level programs in psychology. Faculty numbers were estimated via two data sources: APA members and full-time graduate faculty. Howard et al. reported a fairly strong relationship between reputation rankings and productivity ratings. The top 75 contributing schools were ranked. The top 5 schools were University of Illinois, Urbana-Champaign, University of California, Los Angeles, Stanford University, University of Wisconsin, Madison, and University of Minnesota. When results were adjusted for faculty size the following top 5 schools were identified: John Hopkins University, Harvard University, Yale University, Princeton University, and University of Illinois, Urbana-Champaign. Although Howard, et al. focused on the general area of psychology, the study influenced future publications studies in school psychology. Following the Howard, et al.
publication the proportionate formula \( \text{Credit} = \frac{1.5^{n-1}}{\sum 1.5^{i-1}} \) designated for multiple author credit was implemented by numerous subsequent school psychology productivity studies.

In 1993, Webster, Hall, and Bolen ranked institutions by productivity ratings calculated by frequency and author credit. Productivity was reviewed from 1985-1991 of journals considered as the major journals of school psychology (Psychology in the Schools, Journal of School Psychology, and School Psychology Review) and newly identified school psychology journals (Professional School Psychology, and Journal of Psychoeducational Assessment) for a total of five journals. From this study, Webster et al. identified the top 50 publishing institutions in the five school psychology journals. Once the top 50 institutions were identified productivity ratings were calculated based on frequency using straight counting (where the first author receives full credit) as well as proportionate authorship credit formula (Howard et al., 1987). Institutions reviewed were not limited to doctoral granting program institutions. Instead, institutions offering both a school psychology doctoral and terminal degree were included to allow for a comparison of publication productivity between program levels. Out of the 50 top schools, the following were identified as the top five schools for frequency (number of publications) and productivity (authorship credit formula): University of Nebraska, Lincoln, Louisiana State University, Memphis State University, Texas A & M University and University of Texas, Austin. Nearly all institutions identified as high producing by Webster et al. were those with doctoral programs in school psychology. Specifically, only one institution (East Carolina University) with a terminal sixth-year degree program made the top 50 productivity list.

Four years later, Steven Little (1997) was the first to report specific author names as the 50 top contributors to the school psychology literature from 1987-1995, and the graduate education of those top contributors. Little obtained data by reviewing the six major school
psychology journals representing the profession at the time of the study (Journal of School Psychology, School Psychology International, School Psychology Review, School Psychology Quarterly, Journal of Psychoeducational Assessment, and Psychology in the Schools). Little calculated credit in three ways: standard counting (where every author listed is given equal credit), straight counting (where only the first author receives credit), and by applying the proportionate formula used by Howard et al. (1987). All three data sets were reported; however, authorship credit of proportionate formula was the primary data set used for rankings. Data was examined to determine the leading 50 authors, the universities or institutions of graduate attendance of leading authors, and the categories or themes of articles (e.g. assessment, intervention, consultation, and issue related article). Results revealed the top ten out of 50 publishing authors by authorship credit as Huebner, E.S., Gresham, F.M., Fagan, T.K., Oakland, T., Shapiro, E.S., Elliott, S.N., Naglieri, J.A., Clarizio, H.F., Phelps, L., and Bracken, B.A. The top five out of 50 degree granting universities of top authors identified were Georgia, Indiana, Minnesota, Texas, and Wisconsin. Furthermore, top authors and university articles were categorized into themes resulting in the top three authors and top three universities, respectively, in the following categories by percentage of publications: assessment (Jack Naglieri, Stephen Elliott, and Kevin McGrew; Ohio State, Southern Mississippi, and Penn State), intervention (William Jenson, Jack Kramer, and John Fantuzzo; Utah, Pittsburgh, and Nebraska), consultation (William Erchul, Terry Sutkin, Thomas Kratochwill, Susan Sheridan, and Joseph Witt all tied; Wisconsin, Texas, and Arizona State), and issue related (Thomas Oakland, E. Scott Huebner, and Thomas Fagan; Kent State, Indiana, and Temple).

In 2004, Robin Carper and Robert Williams published an article based on the dissertation study completed by Carper in 2002. The study reviewed the school psychology literature from
1995-1999 using PsycINFO database to identify the top publishing school psychology doctoral programs accredited by the American Psychological Association (APA) based on publication data of program faculty. Program publication rates were calculated using two methods: proportionate formula for authorship associated with the program, and standard counting (each program affiliated with the article received one full credit). Carper and Williams (2004) were the first to review all publications of school psychology faculty in APA-accredited programs. Articles were analyzed to determine the top publishing school psychology program faculties, the major publishing journals of school psychology program faculty, and the principle article themes. A total of 53 institutions with school psychology programs were ranked. The top ten programs by authorship credit were Texas A & M University, Lehigh University, Louisiana State University, McGill University, University of Wisconsin-Madison, University of South Carolina, University of Florida, University of Nebraska-Lincoln, University of Washington, and Syracuse. Publications of all school psychology faculties were sorted by publishing journals which were then subdivided into major school psychology journals (School Psychology Review, School Psychology Quarterly, Journal of School Psychology, Psychology in the Schools, and School Psychology International) and journals outside of school psychology. The top three publishing school psychology journals from 1995-1999 were School Psychology Review, School Psychology Quarterly, and Journal of School Psychology. The top three publishing journal outside of school psychology from 1995-1999 were Journal of Applied Behavior Analysis, Journal of Psychoeducational Assessment, and Journal of Educational & Psychological Consultation. Article themes of the top ten school psychology programs by authorship credit were recognized using Little’s (1997) coding system. The following are the top 3 programs that were identified by frequency of articles for each theme: assessment (South Carolina, Texas A &
M, and Wisconsin), intervention (Louisiana State University, Lehigh, and Syracuse), consultation (Nebraska, Wisconsin, and Louisiana State University), and professional issues (Texas A & M, McGill, and Florida). Percentage of articles within themes from 1995-1999 were reported as the following: professional issues – 47%, intervention – 26%, assessment – 20%, and consultation – 7%.

In 2005, Davis, Zanger, Gerrard-Morris, Roberts, and Robinson continued to examine productivity of the school psychology literature with the purpose of identifying the top 20 persons who contributed to the school psychology literature within four journals (Journal of School Psychology, Psychology in the Schools, School Psychology Quarterly, and School Psychology Review) from 1991-2003. Davis et al., analyzed the data using a standard counting method in which the authors were given one full credit for each article authored regardless of number of authors and credits were summed. The top 9 out of the top 20 authors identified were Kratochwich, Thomas R.; Skinner, Christopher H.; Elliot, Stephen N.; Kehle, Thomas J.; Sheridan, Susan M.; Gresham, Frank M.; Shapiro, Edward S.; DuPaul, George J.; and Hughes, Jan. Additional information (e.g. university affiliation, graduating university, year doctoral degree received, average number of authors per article, number of first author articles, and number of single author articles) was collected to examine the potential for collaboration among the top publishing authors of school psychology. Davis et al. (2005) reported “10 out of the top 20 (50%) were first author on at least half of their articles.” Based on this information, results suggested that the top article producing school psychology faculty members are taking a more supportive role in comparison to education psychology faculty.

Roberts, Davis, Zanger, Gerrard-Morris, and Robinson’s (2006) study was conducted as a follow-up to Little (1997). School Psychology scholarly literature from 1996-2005 was analyzed.
to identify the top 50 contributors. Roberts et al. implemented two methods of counting including the proportionate formula (Howard et al., 1987; Webster, 1993; Little, 1997; Carper & Williams, 2004) and standard counting (Little, 1997; Carper & Williams, 2004) and compiled them for comparison. Results included two lists: top 50 most productive authors based on proportionate formula (Top 10 are Bray, Melissa A., Kratochwill, Thomas R., Kehle, Thomas J., Sheridan, Susan M., Skinner, Christopher H., Merrell, Kenneth W., Hintze, John M., Keith, Timothy Z., DuPaul, George J., and Elliot, Stephen N.), and top 50 most productive authors based on number of articles (Top 10 are Bray, Melissa A., Kehle, Thomas J., Skinner, Christopher H., Kratochwill, Thomas R., Elliot, Stephen N., Sheridan, Susan M., Hintze, John M., Eckert, Tanya L., Witt, Joseph C., and Merrell, Kenneth W). Roberts et al. suggested that while the method of counting does not necessarily matter for top producing authors, it is important for studies of productivity specifically in the field of school psychology to include and analyze data in multiple ways.

The following year, 2007, Wagner, Lail, Viglietta, and Burns identified the top 20 publication producing faculty members employed by APA - accredited school psychology programs from 2000-2005 using the standard counting method. The median number of publications for each university was obtained to determine the top 10 producing universities and the average number of publications based on Carnegie Foundation Classification (2006). The top 10 of the 20 faculty members between 2000 and 2005 were identified as Skinner, Christopher; Bray Melissa; Reynolds, Cecil; Kehle, Thomas; Huebner, E. Scott; Kratochwill, Thomas; Luthar, Suniya; Halperin, Jeffrey; Gresham, Frank; and DuPaul, George. The top 10 APA - accredited training programs ranked by median publications were as follows: University of Connecticut, University of California, Santa Barbara, University of Minnesota, Louisiana State University,
Kranzler, Grapin, and Daley (2011) replicated and extended Carper and William’s study (2004). The study reviewed the school psychology literature from 2005-2009 using PsycINFO database to identify the top publishing school psychology doctoral programs accredited by the American Psychological Association (APA) based on core 2010 faculty productivity. Kranzler et al. (2011) conducted the study in order to compare doctoral programs by ranking, and to determine trends in the literature. Author credit was calculated using two methods. The proportionate formula (Howard et al., 1987) was used to determine program ranking, as well as a second method, similar to standard counting. In this method, instead of each author receiving one full credit as in standard counting, each program affiliated with the article received one full credit just as in Carper and William’s study (2004). In addition to the methods applied by Carper and William (2004), Kranzler et al. ranked doctoral programs by measuring citation counts. Citation counting is a method applied to determine the impact and influence that specific articles have had on the field of school psychology. Publication data was also sorted by publishing journals (i.e. major school psychology journals and other social and behavioral science journals).

Kranzler et al. considered the major school psychology journals as: Journal of School Psychology, Psychology in the Schools, School Psychology International, School Psychology Quarterly, and School Psychology Review. Articles were also classified by research themes based on the categories introduced by Little (1997) and further adapted by Carper and Williams (2004). Results indicated a total of 59 APA school psychology programs. The top 10 out of 59 schools by authorship credit were University of Minnesota, Lehigh University, Louisiana State University, University of Connecticut, University of Oregon, University of South Carolina, State
University of New York – Albany, University of Georgia, McGill University, and Syracuse University. Schools falling in the top 10 out of 59 schools by number of journal publications were listed as University of Minnesota, University of Oregon, University of South Carolina, Lehigh University, Louisiana State University, McGill University, Texas A & M University, University of Connecticut, University of Tennessee – Knoxville, University of Georgia, and North Carolina State University. Kranzler found that school psychology programs increased their overall publications by 46%; however, proportions remained the same when comparing major school psychology journals and other journals with major school psychology journals publishing approximately 30% of total articles. The top three publishing school psychology journals from 2005-2009 were Psychology in the Schools, School Psychology Review, and School Psychology Quarterly. The top three publishing journals outside of school psychology from 2005-2009 were Journal of Behavioral Education, Assessment for Effective Intervention, and Journal of Psychoeducational Assessment. Rather than classify articles of the top ten school psychology programs, Kranzler et al. classified all of the articles produced by school psychology programs using Little’s (1997) coding system to determine a percentage. The percentages calculated for each theme were considered highly consistent with that of Carper and William’s results of publication from 1995-1999. Percentage of articles within themes from 2005-2009 were reported as the following: professional issues – 56%, intervention – 21%, assessment – 20%, and consultation – 3%.

Grapin, Kranzler, and Daley (2013) continued their investigation on publication productivity of all faculty affiliated with APA - accredited doctoral programs from 2005-2009. Based on their data set described in 2011, Grapin et al. (2013) studied the overall research productivity and scholarly impact for the field of school psychology, as well as examined the
implications of rank and gender. Data analysis included continued use of the proportionate formula (Howard et al., 1987) to determine authorship credit and the total citations were calculated for each faculty member to determine impact of scholarly work. Normative data analyses (i.e. descriptive statistics, and frequency distributions) and two-way ANOVA were also applied in order to study gender (male and female) and rank (assistant professor, associate professor, and full professor) differences in productivity and impact. According to results, faculty published approximately 5.8 articles over a 5-year span or 1.2 articles per year. Results indicated school psychology faculty tends to collaborate as majority of articles were published with between two to four authors. Two-way ANOVA results indicated significant mean differences for gender on measures of productivity and scholarly impact. Grapin et al. (2013) found that although women outnumbered the men in APA-accredited faculty, men faculty were more productive in terms of authorship credit and impactful in terms of citations across a ranks. Mean differences for faculty rank did not present as statistically significant and was considered not related to research productivity or scholarly impact. Grapin et al. (2013) also ranked all faculty of APA - accredited doctoral programs and provided two top 25 lists based on scholarly productivity and scholarly impact between 2005 and 2009. The top 10 out of the top 25 publication productive faculty were Matthew Burns, George DuPaul, Frank Worrell, Sheri Bauman, Theodore Christ, Scott Huebner, David Miller, Sandra Chafouleas, Thomas Dishion, and Frank Gresham.

Studies have taken an interest in the intervention scholarly productivity as low ratios of intervention publications have been documented and the need for focused evaluation research have increased with practice expectations (Bliss, Skinner, Hautau, & Carroll, 2008; Villarreal, Gonzalez, McCormick, Simek, & Yoon, 2013; Villarreal, Castro, Umaña, & Sullivan, 2017;
Villarreal & Umaña, 2017). In 2008, Bliss et al. analyzed articles published in four school psychology journals from 2000 to 2005 in order to better describe the intervention evaluation represented in the literature. Bliss et al. categorized the body of literature as 40% narrative, 29% correlational, 16% descriptive, 8% causal-experimental, 4% causal-comparative, 2% meta-analytic. Bliss et al. further analyzed the 8% of causal-experimental articles. When looking at the 8% causal-experimental articles, target behaviors were considered 48% behavioral-social, 43% academic, 6% cognitive/emotional, and 3% other. Bliss et al., suggested that researchers in the field of school psychology were beginning to increase experiment-based studies.

Villarreal et al. (2013) continued the focus on empirical articles by analyzing intervention research from 2005 to 2009; however, they increased the body of literature to include articles in six school psychology journals rather than just four. Out of the articles reviewed, 50.8% were reported as empirical and those empirical studies were coded for different factors such as setting, and type (Villarreal et al., 2013). Results indicated the following percentages for intervention type: 43.4% social/behavioral, 40.1% academic, 13.9% multiple intervention types, and 2.6% emotional. Villarreal et al. (2013) suggest upward trends in academic interventions over social behavioral; however, their overall analysis of publication data continued to illustrate low amounts of school psychology intervention studies and the necessity to address research-to-practice gap remained.

In a follow-up study, Villarreal et al. (2017) took an updated look at intervention research characteristics in articles published in school psychology journals between the years 2010 and 2014 and expanded their analysis by looking at other characteristics such as disability types and intervention level. Villarreal et al. (2017) found 65.8% of articles were considered empirical, and further indicated that intervention studies conducted with preschool through grade 12 accounted
for 11.1% of the empirical articles. Those intervention articles were coded similarly to Villarreal et al. (2013), and the following percentages were reported for intervention target: 53.4% social/behavioral, 37.6% academic, and 9% multiple intervention types. It is important to note that studies involving emotional interventions were no longer represented or reported as a separate target.

Another article recently published (Villarreal and Umaña; 2017) studied the intervention research productivity published in six specific school psychology journals over a ten-year period (2005-2014). The purpose of the study was to highlight top contributors (e.g. authors and university programs) to the body of intervention research published in the chosen journals as well as identify the themes of the intervention research. The Journal of Applied School Psychology, Journal of School Psychology, Psychology in the Schools, School Psychology International, School Psychology Quarterly, and School Psychology Review were explored for any and all articles considered as intervention defined as articles that involved an independent variable (i.e. treatment or intervention) that was manipulated by the researcher and data collected on a related outcome (Villarreal and Umaña, 2017). All authors were identified and information such as university affiliation were coded, not just those affiliated with a specific program (e.g. APA accredited). The information was organized to determine authorship credit (e.g. proportional formula and straight count), university credit, training affiliation of authors, and research characteristics. The top 5 out of the 30 top publication productive faculty were Matthew Burns, Christopher Skinner, John Begeny, Gary Cates, and Susan Sheridan. Universities falling in the top 5 out of 30 schools reported by number of journal publications were listed in highest to lowest order were University of Tennessee-Knoxville, University of Connecticut, University of Minnesota, University of Virginia, and University of Oregon. Syracuse University, University of
Wisconsin-Madison, and University of Tennessee-Knoxville were programs graduated the most authors (three authors each), and were also identified as a top 30 university for number of articles. Villarreal and Umaña (2017) reported on intervention characteristics from the top 30 authors (2005-2014) indicating the following percentages: intervention setting (school 88.1%; non-school 10.4%; mixed 1.5%), and intervention type (academic 44.8%; nonacademic 44.8%; mixed 10.4%).

**Summary**

With the current events headlines filled with crisis and violence, the importance of mental health and specific intervention literature is clear. With school psychologists at the forefront of mental health provided in the schools, it is natural to review the body of knowledge that school psychology programs contribute. However, it is unclear how well the literature reflects the reality of needs in the field and for school psychologists in practice. The goal of the current study is to implement the historical practice of reviewing the literature and emulate methods implemented in previous studies with a specific focus on mental and behavioral health for the field of school psychology. The intent is to provide a description of the scholarly productivity, discuss the trends over time, highlight the possible implications for training programs, and practice.
Chapter Three

Methodology

Methodology of this study was adapted from the dissertation study conducted by Robin Michele Carper completed in 2002. Carper (2002) analyzed the scholarly productivity, publication outlets, and article themes of APA-accredited school psychology programs. Results indicated the top APA-accredited school psychology programs in terms of amount of publication data, the overall journals in which studies were most frequently published, and the general themes of the top ten school psychology programs based on publication data. According to Carper (2002) the general theme of interventions was found to make up 26% of publications topics of the top 10 publication producing programs from 1995-1999. Intervention was identified as the second largest theme among the four broad themes of assessment, consultation, intervention, and related issues.

Purpose of Study

The current study analyzed the scholarly productivity of faculty associated with National Association of School Psychologists (NASP) approved school psychology Educational Specialist (Ed.S.) programs. The goal of the current study is to investigate publications related to the concept of mental health and to further investigate the theme of intervention as it is related the concept of mental health. Analysis of publication data intended to identify the top scholarly producing institutions, principal publication journals of mental health related school psychology articles, publication totals for the main six school psychology journals, broad themes of mental health related articles, and the top scholarly producing faculty of school psychology programs.
Sample

The sample included school psychology masters, specialist/terminal programs approved by the National Association of School Psychologist (NASP) as of February 1, 2015. Determination of NASP – approved status was determined based upon the provided online listing provided by NASP website.

According to NASP, NASP assigns three types of decisions that result from NASP reviews: NASP approval/national recognition – full, NASP approval/national recognition – with conditions, and not approved. Once granted full approval status, graduate programs are given recognition of approval for a period of 5 or 7 years. The published NASP list dated February 1, 2015 was reviewed to identify specialist level programs by approval type. A total of 134 institutions were identified with full approval for a specialist level program.

According to NASP’s standards for graduation preparation (2010),

“School psychology program faculty members are those designated for primary teaching, supervisory, and/or administrative responsibilities in the program and who participate in comprehensive program development and mentorship activities, including ongoing decision-making, planning, and evaluation processes. Program faculty may hold full-time or part-time assignments in the program, but ongoing participation in a number of comprehensive program activities is a key factor. In contrast, other faculty may contribute to the program only by teaching a course(s) or by participating in another limited activity(s), for example, on a limited adjunct, affiliated, or related basis.”

NASP (2010) also offers the following guidelines in regards to faculty for full accreditation:
Evidence is provided that program faculty total at least three full-time equivalents and are in sufficient numbers to support candidate learning. 2) At least two school psychology program faculty members (including the program administrator) hold doctoral degrees with specialization in school psychology and are actively engaged in school psychology. 3) Other school psychology program faculty members, as applicable to the program, hold doctoral degrees in psychology, education, or a closely related field with specializations supportive of responsibilities in the program. (p.3)

With this knowledge of NASP faculty expectations, the 134 NASP - approved school psychology specialist level programs were researched through college online websites in order to determine school psychology program faculty names as of. Assistant and associate faculty members meeting NASP requirements will be initially considered for the sample; however, adjunct and emeritus faculty members will be excluded. A second step was taken to verify faculty members retrieved from online websites. A letter was sent via electronic mail (see Appendix A) to each institution department head and/ or department coordinators requesting feedback. A verification email was received from 57 out of 134 program heads. A total of 543 school psychology NASP – approved program faculty members were identified and utilized to search for publication data related to mental health.

Procedures

Initial Data Collection

The primary sources of publication data collection were online databases PsycINFO and The Education Resources Information Center (ERIC) sponsored by the Institute of Education Sciences (IES) of the U.S. Department of Education. According to the American Psychological Association (APA), PsycINFO allows access to records dating from 1597-present.
As of October 2014, there were 2,562 journals covered by the PsycINFO database, 99% of which are peer-reviewed. APA reports that the PsycINFO database is updated weekly (American Psychological Association, 2014, http://www.apa.org/pubs/databases/psycinfo/coverage.aspx). ERIC provides access to education related literature and resources from 1966-present published in almost 900 journals (Education Resources Information Center, 2014, http://eric.ed.gov/). In addition, according to EBSCOhost description, ERIC provides access to over 1.3 million records of education literature and resources.

Faculty first and last names were searched via University of Nevada, Las Vegas Libraries EBSCOhost with PsycINFO and ERIC databases selected. In an attempt to obtain all articles possible, faculty middle names, middle initials, and maiden names were considered when conducting publication searches. Other advanced options indicated during search included year selection (2010-2015), and language (English). This procedure was repeated for each of the 543 school psychology NASP – approved program faculty members. Publication references were imported to RefWorks (a web-based bibliography and database manager). Scholarly publications are defined as journal articles that may include empirical studies and analyses of professional issues within the literature. Publications that are considered book chapters, comments, rebuttals, obituaries, and reviews (e.g. book, and movies), critiques, errata, or corrigendum were not included in this analysis. Database output identifying header “reference type” was initially utilized to categorize the publication types to be included or excluded from the data set. A second review of individual abstracts was conducted to identify and confirm reference type. Once relevant publication data was determined data analysis occurred to provide descriptive observations of school psychology productivity.
Data Analysis

The following analysis procedures are outlined to address each research question area which include productivity of identified institution programs, productivity of school psychology Ed.S. faculty based on authorship credit, productivity within journals and specifically the six major school psychology journals, and article themes and subcategories of intervention under the broad concept of mental health.

Productivity of institution programs. Each article was given a score of one and tallied for each corresponding institution/university program designated by PsychINFO and ERIC database abstract output. Articles flagged with more than one institution were given a score of one credited to the institution associated with the first author. Articles (25 total) were found to be associated with more than one institution. The publication totals were calculated for each institution and then sorted to identify the leading institutions for publication of articles identified as mental health related in addition to articles identified with the theme of interventions.

Productivity of school psychology Ed.S. faculty based on authorship credit.

Historically, the proportionate formula was implemented by Howard et al. (1987) in review of psychology based publications and subsequently used by those such as Webster, Hall, and Bolen (1993), Little (1997), Carper (2002), Carper and Williams (2004), Roberts, Davis, Zanger, Gerrard-Morris, and Robinson (2006), Kranzler, Grapin, and Daley (2011), and Grapin, Kranzler, and Daley (2013) to conduct research and review of school psychology publications. Thus, to remain consistent with prior research procedures, authors of articles written independently were given an authorship credit score of one, and the identical proportionate formula was utilized determine authorship credit for articles which indicated more than one author.
Credit = \( \frac{(1.5 \cdot n^{-1})}{\sum 1.5 \cdot i^{-1}} \)

The amount of credit assigned is based on ordinal position. The formula determines a credit score based upon the total number of authors (n) and the specific author’s ordinal position (i) as listed. Accordingly, authors listed first are given the most credit and authors following in sequential order will receive decreasing amounts of credit with a total authorship credit score of one. The formula was employed to create an authorship credit chart with credit scores for articles with one author to up to fifteen authors (see Appendix E). Author credit scores were identified and tallied for each school psychology faculty member and used to rank faculty based on scholarly productivity for articles related to mental health and additionally scholarly productivity for articles coded under the broad theme of intervention.

**Productivity within journals.** Each article was given a score of one and tallied for each corresponding journal designated by PsychINFO and ERIC database abstract output. The publication totals were counted and then sorted to identify the journals which published the most mental health related articles as well as articles identified as within the broad theme of interventions.

This study further evaluated the publication data for the five major journals of school psychology reviewed by Carper and Williams (2004) with the addition of a sixth school psychology journal (i.e. NASP’s online journal). Titles reviewed included Psychology in the Schools, School Psychology Review, School Psychology Quarterly, Journal of School Psychology, School Psychology International, and the Journal of Applied School Psychology (as the sixth major school psychology journal). Publication data for these specific journals were derived from the initial publication database identified by faculty author search and then ranked.
**Themes.** High productivity ratings for universities are not considered the only measure of research activity (Brooks, 2005). However, scholarly productivity can be considered an indication of progressive research. This being the premise, article themes were analyzed to determine areas of progressive research in school psychology as it relates to mental health. The analysis of the principal themes will be based on Little’s (1997) coding system and Carper’s (2002) adaptation of Little’s coding system. Little (1997) identified four broad themes which included assessment, intervention, consultation, and issue related articles. Carper (2002) further adapted Little’s (1997) coding system by identifying specific definitions of each broad theme. Specifically, Carper (2002) defined the broad area of intervention into four subgroups of independent variables, dependent variables, review of literature, and academic. Those four subgroups were then further defined as behavioral, cognitive, counseling-other, or academic (see Appendix B).

For the purpose of this study, the concept of mental health was defined as any article related to social-emotional, well-being, and/or behavioral topics. Coding definitions were adapted from Carper’s (2002) study. Upon initial review of title and abstract, articles considered as meeting the definition of ‘mental health’ were included in the initial database. Articles were then coded for the four broad themes of assessment, intervention, consultation, and issues related. Subgroups were defined for the themes of intervention, consultation, and issues related (see Appendix C). Articles solely focused on academic interventions and academic outcomes were not included. Coding decisions were based upon the article title and available abstracts in PsycINFO and ERIC database.

Reliability of the coding procedure was tested similarly to Carper (2002). A Ph.D. candidate within the University of Nevada, Las Vegas Educational Psychology and Higher
Education school psychology program coded a random sample of article abstracts which included approximately 20% of the initial dataset of 473 article abstracts equating to 95 articles. Articles generally in alphabetical order were assigned a number. An online random number generator (Stat Trek) was utilized to generate a random number table of 95 numbers. An inter-rater reliability data form was created to code the 95 articles (see Appendix D). Coding definitions, blank coding forms, and reference abstracts were provided to the secondary rater to complete coding set independently. Inter-rater reliability between primary and secondary rater results were 87% for the broad themes, and 46% for subcategories.
Chapter Four

Results

The results of this study are presented to address each research question which include productivity of identified institution programs, productivity of school psychology specialist level faculty based on authorship credit productivity, journals and specifically the six major school psychology journals, and article themes and subcategories of intervention under the broad concept of mental health.

A total of 134 NASP approved school psychology specialist level programs and their institutions were identified. Out of the 134 programs a total of 84 were found to be associated with a faculty member that published an article defined as related to a mental health topic. Out of those 84 programs, a total of 40 were flagged with mental health articles coded specifically as intervention. Institutions were given a credit of one for each article flagged.

Institutions ranked in the top ten are reported by mental health publication totals with a range of 9-27 (refer to Table 1). The top five ranked institutions in descending order for total publications and subsequently in alphabetical order included University of South Florida (27), Brigham Young University (25), Sam Houston State University (25), University of Oregon (20), State University of New York – Buffalo (18), Temple University (18), and University of Minnesota (16).
University/Institution Rankings

Table 1. Institutions ranked 1-10 for publications in Mental Health

<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution Name</th>
<th>Total Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of South Florida</td>
<td>27</td>
</tr>
<tr>
<td>2</td>
<td>Brigham Young University</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Sam Houston State University</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>University of Oregon</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>State University of New York - Buffalo</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>Temple University</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>University of Minnesota</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>Kean University</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Michigan State University</td>
<td>13</td>
</tr>
<tr>
<td>7</td>
<td>University of Nebraska – Lincoln</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>Northern Illinois University</td>
<td>12</td>
</tr>
<tr>
<td>8</td>
<td>University of Kansas, Lawrence</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>St. John’s University</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Columbia University, Teachers College</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>Rider University</td>
<td>9</td>
</tr>
</tbody>
</table>

Institutions ranked in the top six are reported by intervention specific publication totals with a range of 2-8 (refer to Table 2). The top five ranked institutions for intervention specific articles were additionally recognized as a top ten publishing institution with the exception of Northeastern University. Institutions in descending order for total intervention publications and subsequently in alphabetical order included Brigham Young University (8), Michigan State University (7), Kean University (6), University of Minnesota (6), St. John’s University (5), Columbia University, Teachers College (3), Northeastern University (3), Temple University (3), University of Nebraska – Lincoln (3), and University of South Florida (3).
Table 2. Institutions ranked 1-5 for publications in Intervention

<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution Name</th>
<th>Total Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brigham Young University</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Michigan State University</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Kean University</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>University of Minnesota</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>St. John's University</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Columbia University, Teachers College</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Northeastern University</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Temple University</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>University of Nebraska – Lincoln</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>University of South Florida</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to institution totals, faculty productivity of NASP approved school psychology specialist level programs were reviewed. In review of faculty publications involving mental health including social-emotional, and behavior topics a total of 1,016 authors were documented. Out of the 1,016 authors, a total of 182 authors were considered associated with a NASP approved program. Out of those 182 faculty members, a total of 64 were identified to have published one or more mental health article coded specifically as intervention. Faculty authors were given authorship credit based upon a proportional formula (Howard et al., 1987).

School psychology faculty ranked as top 25 are reported by mental health publication totals with a range of 2.03-9.28 articles (refer to Table 3). The top five ranked faculty in descending order for total publications included Shannon M. Suldo (9.28), Patricia Lowe (8.46), Amanda Venta (7.23), Amanda B. Nickerson (5.89), and Nathaniel von der Embse (4.89).
Faculties ranked in the top 20 are reported for intervention specific publication totals with a range of 0.42-2.83 (refer to Table 4). Faculty ranked within the top five for intervention specific articles and were additionally recognized as a top 25 publishing faculty included Raymond DiGiuseppe (2.83), Melissa Allen Heath (1.45), David N. Miller (1.00), and Christina Hamme Peterson (1.00). Additional school psychology faculty ranked within the top five for
intervention specific articles in descending order for total publications included Melissa Bray (1.08), Marla R. Brassard (1.04), Pamela E. Guess (1.00), and John J. Murphy (1.00).

Table 4. Faculty Ranked 1-20 for Authorship Credit - Mental Health - Intervention

<table>
<thead>
<tr>
<th>Rank</th>
<th>Faculty Name (Last, First)</th>
<th>Total Author Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DiGiuseppe, Raymond</td>
<td>2.83</td>
</tr>
<tr>
<td>2</td>
<td>Heath, Melissa Allen</td>
<td>1.45</td>
</tr>
<tr>
<td>3</td>
<td>Bray, Melissa A.</td>
<td>1.08</td>
</tr>
<tr>
<td>4</td>
<td>Brassard, Marla R.</td>
<td>1.04</td>
</tr>
<tr>
<td>5</td>
<td>Guess, Pamela E.</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>Miller, David N.</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>Murphy, John J.</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>Peterson, Christina Hamme</td>
<td>1.00</td>
</tr>
<tr>
<td>6</td>
<td>Jewell, Jeremy D.</td>
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</tr>
<tr>
<td>7</td>
<td>von der Embse, Nathaniel</td>
<td>0.94</td>
</tr>
<tr>
<td>8</td>
<td>Kehle, Thomas J.</td>
<td>0.92</td>
</tr>
<tr>
<td>9</td>
<td>Giuliani, Nicole R.</td>
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</tr>
<tr>
<td>10</td>
<td>Suldo, Shannon M.</td>
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</tr>
<tr>
<td>11</td>
<td>Volker, Martin A.</td>
<td>0.76</td>
</tr>
<tr>
<td>12</td>
<td>Sheridan, Susan M.</td>
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<tr>
<td>13</td>
<td>Cook, Clayton R.</td>
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<tr>
<td>13</td>
<td>Wang, Cixin</td>
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</tr>
<tr>
<td>14</td>
<td>Brown, Jacqueline A.</td>
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</tr>
<tr>
<td>15</td>
<td>Cook-Cottone, Catherine</td>
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</tr>
<tr>
<td>16</td>
<td>Boccio, Dana E.</td>
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</tr>
<tr>
<td>16</td>
<td>Gubi, Aaron A.</td>
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</tr>
<tr>
<td>16</td>
<td>McCabe, Paul C.</td>
<td>0.60</td>
</tr>
<tr>
<td>16</td>
<td>Meyers, Adena B.</td>
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</tr>
<tr>
<td>16</td>
<td>Nickerson, Amanda B.</td>
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<tr>
<td>16</td>
<td>Sapountzis, Ionas</td>
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</tr>
<tr>
<td>16</td>
<td>Stoiber, Karen Callan</td>
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</tr>
<tr>
<td>16</td>
<td>Sullivan, Amanda L.</td>
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</tr>
<tr>
<td>16</td>
<td>Walcott, Christy M.</td>
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</tr>
<tr>
<td>17</td>
<td>Lerner, Jennifer Block</td>
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</tr>
<tr>
<td>18</td>
<td>Li, Chieh</td>
<td>0.51</td>
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<tr>
<td>19</td>
<td>Briesch, Amy M.</td>
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</tr>
<tr>
<td>19</td>
<td>Fischer, Aaron J.</td>
<td>0.47</td>
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<tr>
<td>19</td>
<td>Hartshorne, Timothy S.</td>
<td>0.47</td>
</tr>
<tr>
<td>19</td>
<td>Splett, Joni D.</td>
<td>0.47</td>
</tr>
<tr>
<td>20</td>
<td>Raffaele Mendez, Linda M.</td>
<td>0.42</td>
</tr>
<tr>
<td>20</td>
<td>Swearer, Susan M.</td>
<td>0.42</td>
</tr>
</tbody>
</table>
Review of article reference data determined school psychology faculty published mental health related articles in a plethora of publication outlets (206 journals). Out of the 206 journal titles, a total of 55 were identified to have published one or more mental health article coded specifically as intervention. Journals were given a credit of one for each article flagged.

Journals ranked in the top ten are reported by mental health publication totals with a range of 6-38 (refer to Table 5). The top five ranked journal titles in descending order for total publications included Psychology in the Schools (38), School Psychology Quarterly (19), Communique (17), Journal of Psychoeducational Assessment (15), and Psychological Assessment (13).

**Publication Outlets of School Psychology Program Faculties**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Journal Title</th>
<th>Total Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychology in the Schools</td>
<td>38</td>
</tr>
<tr>
<td>2</td>
<td>School Psychology Quarterly</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Communique</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Journal of Psychoeducational Assessment</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Psychological assessment</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>Journal of Applied School Psychology</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>Contemporary School Psychology</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>School Mental Health</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>Journal of School Violence</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>School Psychology International</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>Journal of Child and Family Studies</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Journal of Counseling &amp; Development</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Journal of School Psychology</td>
<td>6</td>
</tr>
</tbody>
</table>

Institutions ranked in the top four are reported by intervention specific publication totals with a range of 2-11 (refer to Table 6). Journals ranked within the top four for intervention specific articles and were additionally recognized as a top ten publishing outlet included Psychology in the Schools (11), Communique (4), Journal of Applied School Psychology (4),

Table 6. Journals Ranked 1-4 for Mental Health - Intervention Publications

<table>
<thead>
<tr>
<th>Rank</th>
<th>Journal Title</th>
<th>Total Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychology in the Schools</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>Communique</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Journal of Applied School Psychology</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>School Psychology International</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Clinical Practice in Pediatric Psychology</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Contemporary School Psychology</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Journal of Rational-Emotive &amp; Cognitive-Behavior Therapy</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>School Mental Health</td>
<td>3</td>
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<tr>
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Data was synthesized to illustrate the publication totals for the six main school psychology journals (i.e. Psychology in the Schools, School Psychology Quarterly, Journal of Applied School Psychology, School Psychology International, Journal of School Psychology, and School Psychology Review). The journal titled “Psychology in the Schools” ranked number one for total mental health (38) and intervention (11) publications in comparison to the six main school psychology journals and also came in at number one when compared across all
publication outlets. Additionally, the remaining five school psychology journals all published articles related to mental health as well as ranking in the top ten journals with the exception of School Psychology Review which published three articles, but did not rank (refer to Table 7).

Four out of the six main school psychology journals (i.e. Psychology in the Schools, Journal of Applied School Psychology, School Psychology International, and School Psychology Quarterly) were also flagged to have published intervention specific articles and rank in the top four of all publication outlets (refer to Table 8).

**Six Main School Psychology Journals**

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<th>Total Publications</th>
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**Table 7. Mental Health Totals for Six Main School Psychology Journals**

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<td>Journal of School Psychology</td>
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**Table 8. Mental Health – Intervention Totals for Six Main School Psychology Journals**

Faculty first and last names were searched via University of Nevada, Las Vegas Libraries EBSCOhost with PsycINFO and ERIC databases. A total of 452 publications involving mental health (e.g. behavior, social-emotional, and other counseling topics) were identified to be authored by one or more school psychology program faculty. The 452 publications were coded
as one of four broad themes: 78 assessment, 87 intervention, 3 consultation, and 284 related issue. Related issues represented majority of articles pulled (63 percent) which included topics such as classification/diagnostic categories, descriptive, legal issue, practice, research, and training. Intervention articles made up 19 percent, assessment 17 percent, and consultation 1% of total publications (refer to Figure 1).

Publication Themes

![Figure 1. Broad Mental Health Publication Themes](image)

The current study further explored articles coded as intervention. Subcategories were coded for experimental research having an independent and dependent variable, or a review of intervention literature. Studies involving experimental design made up 58 percent of intervention articles, and studies considered as a review of the literature made up 42 percent (refer to Figure 2).
Experimental studies were further coded for type of independent and dependent variables (refer to Figure 3). Definitions were taken from Carper and Williams (2004). The leading independent variable published on was counseling defined as “interventions from a perspective other than behavioral or cognitive behavioral” with 46 percent of intervention articles. Following close behind was cognitive behavioral interventions defined as “interventions that pair behavioral learning principles with cognitive factors (e.g. anger control programs, relaxation training, social problem solving) (Stage and Quiroz, 1997)” with 42 percent. Behavioral intervention defined as “interventions that involve altering behavior, examining the factors that maintain behavior, and developing effective treatments (Kazdin, 1994). Examples include
positive reinforcement, token economies, response cost, and differential reinforcement.” was considered to be published about the least with 12 percent.

Figure 3. Experimental Studies Breakdown of Independent (IV)/Dependent Variables (DV)
Chapter Five

Discussion

Discussion of Findings and Comparisons

With mental health emerging into the spotlight, the importance of reviewing the research continues to grow and presents as noteworthy. School practitioners are being called upon to be knowledgeable, to consult, and potentially implement more and more mental health related interventions in the field. With traumatic events highlighted in the news, they serve as a reminder of how vital it is to address mental health as a whole community. For this reason, it is important to review the school psychology mental health literature base, determine if the research is attempting to meet the evolving needs of the professional practice, and conclude what the next steps for mental health scholarly productivity might be.

Villarreal and Umaña (2017) recently reviewed the intervention (e.g. academic, nonacademic, and mixed) research from 2005-2014 in specific school psychology journals to measure the foundation of literature for all types of evidence-based practice (EBP). Villarreal and Umaña (2017) analyzed the publications identified among the top school psychology journals and/or journals recognized for their association with professional school psychology associations (i.e. National Association of School Psychologists, Division 16 of the American Psychological Association, Society for the Study of School Psychology, and American Academy of School Psychology). A review of all types of academic, nonacademic, and mixed interventions were conducted which aimed to bring intervention research to the forefront of the profession as it has been historically low.

In comparison to Villarreal and Umaña (2017), the current study highlighted the mental health literature and specifically identified intervention related articles under the umbrella of
mental health contributed by the profession of school psychology. Rather than pulling articles related to specific journals, the faculty of NASP approved specialist programs were first identified and then searched for their scholarly works. NASP holds a high standard of training programs both at the specialist and doctoral level in order to promote best practices in the field of school psychology. The use of NASP approved specialist program faculty names were chosen to represent the practitioners of school psychology. Only specialist level programs were used in the sample due to the fact that specialist level programs are responsible for the training of the majority of future practitioners; individuals that would most likely be in the frontlines of mental health support in the schools.

The current study found that between 2010 and 2015 the institutions with NASP approved specialist programs ranked in the top 10 for total published mental health related articles included 13 institutions. These 13 were not previously identified by Villarreal and Umaña’s study (2017) which looked at intervention related articles. Those 13 institutions included University of South Florida, Brigham Young University, Sam Houston State University, State University of New York – Buffalo, Temple University, Kean University, Michigan State University, University of Nebraska – Lincoln, Northern Illinois University, University of Kansas – Lawrence, St. John’s University, Columbia University, and Rider University. Two institutions identified by both the current study and Villarreal and Umaña (2017) were University of Oregon, and University of Minnesota. In addition, one institution, University of Nebraska – Lincoln, was identified on Carper’s (2002) list of institutions with the most publications between 1995 to 1999 which looked at all types of articles written by school psychologist faculty.
In addition, the current study found that between 2010 and 2015 the school psychology faculty associated with a NASP approved program found in both the current study’s mental health publication list and Villarreal and Umaña’s (2017) list was Susan M. Sheridan. School psychology faculty found on both the current study’s mental health intervention publication list and Villarreal and Umaña’s (2017) list were Susan M. Sheridan, Melissa A. Bray, and Thomas J. Kehle. Both lists calculated and assigned authorship credit and ranked names based on authorship credit total. However, the current study is entirely made up of authors initially identified as associated with a NASP approved program while Villarreal and Umaña’s (2017) list allowed for any and all authors regardless of institution affiliation.

Carper and Williams (2004), as well as Kranzler et al., (2011) found that similarly between 1995 to 1999, and between 2005 to 2009 approximately 30% of articles were published in what was considered a major school psychology journal and approximately 70% of articles were published in other social and behavioral sciences journals. The current study found that between 2010 and 2015, mental health related articles were published in a total of 206 journals with approximately 42% of articles published in the major six school psychology journals, and approximately 58% of articles in other journals. It appears that for mental health topics, school psychology faculty publish with more of a balance between designated school psychology journals and other journals. However, for mental health intervention specific articles, faculty authors published approximately 38% in major school psychology journals, and approximately 62% in other social and behavioral sciences journals.

In opposition to Villarreal and Umaña’s (2017) study which reviewed articles published by designated school psychology journals, the current study allowed for inclusion of articles across all journals identified through online databases PsychINFO, and ERIC. Articles identified as
mental health were then coded for themes replicating the work of Carper and Williams (2004) previously completed for school psychology articles published in 1995-1999, and Kranzler et al. (2011) which coded themes for articles published between 2005 and 2009. Interestingly, the results of coding conducted on mental health publications from 2010-2015 continued to mimic the publication trends reported by both Carper and Williams (2004) and Kranzler et al. (2011). Although only articles identified as mental health were included in the study, professional issues continue to lead the research themes (63%), followed by intervention (19%), assessment (17%), and consultation (1%). Based on the results, school psychology faculty authors appear to have consistently maintained the quantity of research for each theme despite the focus on mental health and the evolution of the school psychologist role over the past twenty years. Another possibility for this pattern may involve journal outlets and the selection process of publications themes. Either way, the results illustrate a lack of change over the last two decades in literature themes.

Villarreal and Umaña (2017) coded intervention articles by research design, intervention setting, and intervention type. The current study coded the identified mental health intervention articles similarly to Carper (2002) by independent and dependent variables (58%), and review of intervention literature (42%). Intervention subcategory percentages illustrates the quantity of experimental design research is higher than the quantity of intervention review articles just as identified by Carper (2002); however, the current data shows a slight shift with a 7 percent increase in review articles from the 35 percent previously reported by Carper (2002).

Review of the school psychology scholarly publications illustrate that over time the field of school psychology has increased the total number of articles being published (Carper, 2002; Kranzler et al., 2011). In addition, the profession has evolved from having a highly diagnostic
focus, towards an emphasis on consultation with response to interventions, and has most recently shifted to a concentration on mental health prevention and intervention practices. In general, school psychology scholarly productivity has seen a significant increase (Kranzler et al., 2011). Despite the growth in publications that the school psychology profession has seen and the broadening role of school psychologists, the limited change in the literature themes have not appeared to emulate the “real world” needs and experiences of practitioners.

**Limitations**

The productivity data provides a descriptive view on the scholarly publication of NASP-approved school psychology program faculty members surrounding mental and behavioral health from 2010-2015. Limitations are recognized in the current review including ones related to faculty author identification and program ranking. The list of NASP–approved graduate programs was reviewed for approval in February 2015. Confining the sample to that of NASP-approved programs limited the number of articles obtained within the field. The results are considered a snapshot of scholarly publication given that constraint. A new NASP–approved list date was not indicated online; however, programs were cross referenced with online list available in July 2016. The faculty roster was verified through letters to graduate program heads in July 2016. School psychology programs that obtained full approval after the aforementioned dates were not included in this study.

In addition, if faculty transfers were to have occurred after July 2016 or after program heads responded to the verification email, the dataset of faculty authors may have been affected. Program faculties were initially identified through individual institution websites. Online information was considered as most current, and a verification email was sent to department and/or program chairs. However, if program website was not updated at the time of review,
and/or program head did not respond to the verification email, the initial set of faculties may have been impacted. Article searches were conducted based on faculty names obtained. Faculty names were researched and abstracts reviewed. Consideration of faculty middle names, middle initials, and maiden names were made whenever possible to include all articles written by faculty authors.

NASP school psychology programs are required to identify three core school psychology faculty members; however, some departments identify beyond three faculty to be affiliated with school psychology strain, or departments combine program faculty lists under one department list. Due to the varying ways institutions report school psychology faculty program ranking results may be skewed in the favor of larger programs that have more identified school psychology faculty contributing to the publication pool. Additionally, the current study reviewed the authorship credit scores proportionately given to authors referenced. Authors may have been listed in alphabetical order or in other ways that do not indicate amount of contribution (such as position held, or years in position). The analysis conducted does not account for these possibilities.

As a part of the analysis inter-rater reliability was calculated in order to measure accuracy and consistency of a specific rating scale. The current review was adapted from Carper’s dissertation (2002) which reported inter-rater reliability for major themes as 83% and subcategory themes as 65%. The current study implemented a similar percent agreement two-rater model in order to determine inter-rater reliability and obtained 87% agreement for major themes and 46% for subcategories. In this process the number of ratings in agreement is divided by the total number of ratings. In using this method, the current study does not take chance agreement into account and results may over estimate agreement. The major theme inter-rater
reliability meets the minimum acceptable agreement percent; however, agreement percent of 46% for all subcategories is considered below the acceptable agreement percent and suggests that more than half of subcategory data may be incorrect. For the broad theme of intervention, inter-rater reliability was additionally calculated for experimental (60%) and review articles (55%). Percentages illustrate a decrease in inter-rater reliability as the thematic categories become more and more specific; calling for a clearer description of criteria specifics. Subcategory coding definitions may be revised to include additional guidance for raters such as examples of article topics to ensure a greater understanding of narrow category definitions in order to minimize inter-rater error. The reported subcategory theme data should be interpreted with caution and considered as a preliminary review of the data. Future research is suggested to further investigate subcategory themes.

It is also important to state and understand that scholarly productivity of program faculty is one way to measure educational advancement and contribution to the development of research/knowledge. However, it should be not misunderstood for the only way to measure quality of higher education. Other indications of scholarly excellence include books, book chapters, poster and conference presentations, trainings, and speaking engagements. There are diverse ways to measure programs considered to be in the forefront of research such as citation frequency, reputational rankings, and student educational experiences and outcomes (Brooks, 2005; Roberts et al., 2006; Kranzler et al., 2011). Future research may consider the analysis of publication citation numbers and qualitative data (e.g. interview of graduates, interview of faculty) to further study the impact and themes of productivity.

The purpose of the study was to analyze the publication productivity from 2010 through the 2015 year of faculty identified by the 2015 list. Results do not represent and are not meant to
be generalized to the productivity of institutions and faculty in 2018; however, it is meant to better understand the research being conducted on mental health topics during the period of 2010 to 2015.

With mental health needs on the rise, and schools identified as a logical and convenient location of access for children and families to receive support it is absolutely imperative that school psychologists be informed about research based interventions as it relates to mental health. The descriptive study sought to better understand the mental health publication activity of faculty teaching in NASP approved programs. The information described may be found helpful to prospective students who are interested in mental health when choosing a program of study. The practice of school psychology is continuously evolving with the needs of the children and families in the schools. The current study may also be found helpful to graduate programs as they consider the needs of the current practitioner and the relationship to their choice of research topics or collaboration on studies. However, at minimum, the study serves as a baseline evaluation on the school psychology contribution to mental health literature.
Appendix A

Faculty confirmation letter to graduate program department head

November 2, 2015

To: School Psychology Department/Program Head

My name is Mala Nash. I am a doctoral candidate at the University of Nevada, Las Vegas, Educational Psychology and Higher Education Program. I am gathering data for my dissertation “Counseling Research Productivity of NASP approved school psychology programs: 2010-2014”. Based on the February 2015 NASP approval status your school psychology program will be included in the analysis.

As of November 2015, the following core school psychology faculty members were identified through a review of your program website:

1)  
2)  
3)  

I request that you please confirm the current status of these individuals in your school psychology program. Please place an X next to the appropriate statement:

___ The faculty roster indicated above is complete, accurate, and includes exclusively core school psychology faculty as of November 2015.

___ The faculty roster indicated above is not complete, not accurate, and does not exclusively include core school psychology faculty. Thus, due to changes that have occurred (i.e. transfers, name changes, retirements, etc.) the complete faculty roster (last name, first name, middle initial) is as follows:

1)
2)

3)

I realize that your time is valuable and I greatly appreciate your consideration of my request. I thank you in advance for your response.

Sincerely,

Mala Nash Ed.S.

Doctoral Candidate

UNLV, EPHD, School Psychology
Appendix B

Carper (2002) Coding System and Definition of Intervention

IV=Independent Variables – Any manipulation took place

BEH=Behavior Intervention – Interventions that involve altering behavior, examining the factors that maintain behavior, and developing effective treatments (Kazdin, 1994). Examples include positive reinforcement, token economies, response cost, and differential reinforcement.

COG=Cognitive Behavioral Interventions – Interventions that pair behavioral learning principles with cognitive factors (e.g. anger control, programs, relaxation training, social problem-solving) (Stage & Quiroz, 1997).

CON=Counseling intervention from a perspective other than behavioral or cognitive behavioral.

AC=Academic interventions such as tutoring, not included in one of the previous categories.

O=Other

DV=Dependent Variables – whatever the outcome measure was

BEH=Behavior such as attention, homework completion, fighting, and out of seat.

SOC=Social/Emotional such as cooperation, anxiety, and depression.

AC=Academic content such as reading or math performance.

O=Other

R=Review – review of literature related to behavioral, or emotional interventions including discussion of an intervention.

TR=Training  VS. PR=Practice

Appendix C
Coding System and Definitions of
Assessment, Intervention, Consultation, and Professional Issues Themes
(Adapted from Carper and Williams, 2004)

1) (A) Assessment

Social/Emotional/Behavior – Any instrument used to measure social skills (e.g. depression, anxiety, self-esteem), or behavioral functioning (e.g. aggression, hyperactivity)

2) (I) Intervention

(IV) Independent Variables – Any manipulation that took place.

(Beh) Behavioral – Interventions that involve altering behavior, examining the factors that maintain behavior, and developing effective treatments (Kazdin, 1994). Examples include positive reinforcement, token economies, response cost, and differential reinforcement.

(Cog B) Cognitive Behavioral – Interventions that pair behavioral learning principles with cognitive factors (e.g. anger control programs, relaxation training, social problem solving) (Stage and Quiroz, 1997)

(Cou) Counseling – Counseling interventions from a perspective other than behavioral or cognitive behavioral.

(DV) Dependent Variables – Whatever the outcome measure was.

(Beh) Behavioral – Behaviors such as attention, homework completion, fighting, and out of seat.

(Soc) Social-Emotional – Behaviors such as cooperation, anxiety, depression.
(REV) **Review of intervention literature** – Review of literature related to behavioral or emotional interventions including discussion of an intervention.

3) (C) **Consultation**

(Beh) **Behavioral** – Behavioral consultation is the application of behavior modification principles and techniques to the mutual problem-solving process between two or more professionals (Fagan and Sachs Wise, 1994).

(MH) **Mental Health** – Mental health consultation that is founded on the premise that effective problem-solving can only take place once the feelings of the consultee are addressed (Meyers, Alpert, & Fleisher 1983 in Fagan and Sachs Wise, 1994).

4) (R) **Related to Mental Health/Behavioral Issue**

**Classification/Diagnostic Categories** – Discussion of classification issues or diagnostic categories. Does not include studies where primary focus is an assessment instrument.

**Descriptive** – Studies that describe the characteristics of children, teachers, psychologists, or parents. Does not attempt to differentiate classification categories.

**Legal Issue** – Any issue involving the legal regulation of the profession and school such as court cases (e.g. Larry P.) or legislation (e.g. 94-142)

**Practice** – Any issue related to the practice of school psychology, such as setting, roles, and functions of school psychologists.

**Research** – Research issues or studies involving statistics, methodological, or design issues.
Training – Any issue involving the training and education of school psychologists either within a training program or post-graduate training such as workshops. This includes the entry-level debate and reviews of training programs.
Appendix C

Inter-rater Reliability Data Coding Form

Coding Key: Article # __________

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## Appendix D

### Table 9. Authorship Credit Reference

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  Committee member, Dr. Samuel Song, Ph.D.
  Graduate Faculty Representative, Dr. Wendy Hoskins, Ph.D.