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An Examination of the Relationship Between Supervision and Self-Efficacy in Early Career School Psychologists, School Psychology Interns, and Practicum Students

Felicia M. Kaas

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AN EXAMINATION OF THE RELATIONSHIP BETWEEN SUPERVISION AND
SELF-EFFICACY IN EARLY CAREER SCHOOL PSYCHOLOGISTS, SCHOOL
PSYCHOLOGY INTERNS, AND PRACTICUM STUDENTS

A Dissertation

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Title: An Examination of the Relationship Between Supervision and Self-Efficacy in Early Career School Psychologists, School Psychology Interns, and Practicum Students

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The purpose of this study is to explore the relationship between self-efficacy and supervision in early career school psychologists and school psychology graduate students who are currently completing either their practicum or internship experiences. The sample consisted of practicing early career school psychologists (ECPs) and school psychology graduate students (50 ECPs, 34 graduate students). Participants completed a demographic survey and the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP). Results indicated that ECPs and graduate students experience relatively low levels of self-efficacy relative to the domains of practice. ECPs reported significantly higher self-efficacy related to counseling than graduate students, but significant differences were not found among the other domains on the HIS-SP. Groups did not differ in their reported satisfaction with supervision, and most participants who received supervision reported feeling satisfied. Future research should focus on replicating this study with a larger sample, and on exploring professional development for ECPs.

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CHAPTER ONE

INTRODUCTION

With the ever-evolving role and increasing demands that many school psychologists face, the need for ongoing professional development and supervision is essential. Effective supervision can serve as a form of professional development to aid in knowledge development and skill acquisition. The National Association of School Psychologists (NASP, 2011) and Harvey, Struzziero, and Desai (2014) urge practicing school psychologists at all levels of experience and practice to receive supervision. However, the recommended frequency and intensity of supervision varies depending on the experience of the school psychologist (NASP, 2011).

The NASP (2010) Practice Model is a framework of organizational principles that guide effective school psychology practice. One such principle from this model asserts that schools guarantee that all school psychologists have access to ongoing mentoring or supervision that promotes growth and leads to improved performance. Additionally, the supervision process should focus on “effective growth and exemplary professional practice leading to improved performance by all, including the school psychologist, supervisor, students, and the entire school community” (NASP, 2011, p. 1). When discussing supervision in the field of school psychology, it is most often discussed in terms of professional and administrative supervision. “Administrative supervision focuses on the service unit, including personnel issues, and legal, contractual, and organizational practices” (NASP, 2011, p. 2). It is most concerned with performance outcomes rather than professional development. For this type of supervision, a school psychologist’s administrative supervisor need not be trained as a school psychologist.

“Professional supervision refers to oversight of the specific professional practices of personnel within one’s own profession, and requires specific training and knowledge in the area of supervision” (NASP, 2011, p. 1). These supervisors are responsible for ensuring that the school psychologist is practicing within professional and ethical standards. They are also responsible for promoting professional development to update and improve skills (NASP, 2011). School psychologists are more likely to receive administrative supervision as compared to professional supervision. Curtis, Castillo, and Gelley (2012) found that 56.2% of school psychologists surveyed received administrative supervision, while only 28.5% reported receiving systematic professional support, mentoring, and/or peer supervision specific to their role as a school psychologist.

The method and frequency of professional supervision should vary based on the experience and developmental level of the school psychologist, with school psychology students often requiring more supervision than practicing school psychologists. Harvey and Struzziero (2008) suggest that it takes between five to seven years of corrected experience to develop expertise in an area. This is consistent with the definition from the American Psychological Association (APA, 2015), which states that a novice or early career psychologist is defined to be within seven years of receipt of his or her degree.

NASP (2011) recommends that school psychology students, such as interns, receive at least two hours of face-to-face, field-based supervision per week. For early career school psychologists, a minimum of one hour per week of supervision or mentoring is recommended. For more experienced school psychologists, NASP recommends continued participation in supervision groups, mentoring, or peer support for professional growth and to aid in problem solving difficult cases (NASP, 2011).

Whenever encountering a new population of students, or any situation where there is no previous experience, school psychologists at all levels of practice require supervision; however, the supervision strategies may vary based on the developmental level of the practitioner.

Beginning school psychology students, such as practicum students, depend heavily on their supervisors due to their lack of experience performing the professional duties associated with the job role. Students working to acquire the knowledge and skills associated with the job role often experience increased levels of anxiety and doubt related to their ability to perform the duties of a school psychologist. This anxiety can be lessened with positive feedback from a supervisor, while negative feedback from a supervisor can increase anxiety (Harvey & Struzziero, 2008). Practicum students tend to lack self-efficacy and confidence in their abilities. As practicum students advance to the level of intern, they tend to act cautiously and perform their job duties with added thoroughness due to a fear of making mistakes. Harvey and Struzziero indicate that negative supervisory experiences can be detrimental to interns. They continue to learn by imitating their more senior colleagues and supervisors. As the school psychologist graduates from practicum student, to intern, and then to early career practitioner, the need for quality supervision remains. When engaging in independent practice for the first time, early career school psychologists tend to quickly realize that they will face professional challenges for which their graduate training did not prepare them. They will need to adapt quickly and seek out the needed professional supervision and resources to be effective, and to feel a sense of self-efficacy related to their profession (Harvey & Struzziero, 2008).

Self-efficacy is a person's belief in his or her own ability to complete a task, or perform a behavior that will lead to a certain outcome (Bandura, 1977). Albert Bandura was the first to use the term self-efficacy, and he introduced four sources of efficacy: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal (Bandura, 1977). The first source that impacts self-efficacy, performance accomplishments, indicates that successes increase levels of self-efficacy, while failures lower one's self-efficacy. Vicarious experiences show the impact that modeling has on self-efficacy. If an individual observes someone, such as a supervisor, with similar characteristics succeed at a task, it increases self-efficacy and positively influences the belief that they could succeed at a similar task. Verbal persuasion suggests that encouragement from another person can positively impact self-efficacy. However, this source has a weaker influence on self-efficacy than one's own performance accomplishments. Lastly, Bandura listed emotional arousal as the final source influencing efficacy, which refers to the physiological symptoms that one's body has when in a stressful situation. If someone is experiencing high levels of stress or uncertainty, they may experience more physiological symptoms, which can then impact performance (e.g., stomach ache, sweaty palms, etc.). It is the person's perception of these physiological symptoms that impact self-efficacy (Bandura, 1977).

Bandura (2006) has further defined self-efficacy as domain specific, which means that these beliefs are linked to specific areas of functioning. In the field of school psychology, this could mean that a practitioner experiences differing levels of self-efficacy related to counseling as compared to assessment, or they could feel more self-

efficacious when consulting with a teacher as compared to when implementing an intervention on their own.

There are very few published research studies that look at self-efficacy in school psychologists, but there are several dissertation studies that have examined self-efficacy within this field. Machoniene and Norvile (2012) looked at the relationship between burnout and self-efficacy in school psychologists. The researchers found that school psychologists with lower self-efficacy were more exhausted, more disengaged, and more likely to feel burnt out. However, one major limitation to this study was the scale that was used to measure self-efficacy, which did not specifically assess the different domains or job roles of professional practice. This limitation contrasts with what is theoretically recommended (Bandura, 2006). The theory predicts that a general measure of self-efficacy will have limited predictive value due to the items having limited relevance to a domain of functioning. These items are usually too general and do not reflect the domains of function, which leads to ambiguity related to what is really being measured (Bandura, 2006).

Dissertation studies that have focused on school psychologists' self-efficacy have focused on either the experienced school psychologist population or school psychology graduate students. These studies have suggested that one promising method for building self-efficacy is through engaging in professional development and supervision (Guiney, 2010; Trangucci, 2013; Trant, 2000). Therefore, the relationship between supervision and self-efficacy may play a vital role in the school psychologist's ability to successfully perform various job duties, and can even affect job satisfaction. In his dissertation, Trant (2000) had shown that increased satisfaction with supervision as a graduate student led to

greater perceived self-efficacy during the first year on the job as a school psychologist. Trangucci (2013) found that when a supervisor modeled counseling and consultation strategies, school psychology interns experienced higher self-efficacy in those areas. In 2010, Guiney found that with more experience, graduate students and practitioners in school psychology reported greater perceptions of self-efficacy related to consultation. Increased peer supervision also led to greater perceived self-efficacy with consultation.

To date, research exploring the relationship between supervision and self-efficacy has been primarily focused on experienced school psychologists, or students in related fields, such as counseling or teaching. For example, Phifer (2013) investigated the impact of supervision on perceived self-efficacy with experienced school psychologists, but extending this line of inquiry with early career school psychologists has been limited (Phifer, 2013).

Statement of the Problem

The purpose of this study is to explore the relationship between self-efficacy and supervision in early career school psychologists and school psychology graduate students who are currently completing either their practicum or internship experiences. There are many self-efficacy studies available for review that examine this relationship in the teacher and counseling professions. However, the field of school psychology has far fewer studies focusing on this topic; especially when examining the relationship between self-efficacy and supervision. Dissertations by Phifer (2013) and Trangucci (2013) appear to be the exception. However, no study has focused on the early career school psychologist population when examining this relationship. Phifer's research sample was comprised primarily of experienced school psychologists, while Trangucci's sample was

comprised entirely of graduate-level school psychology interns. The early career school psychologist (ECP) population is a population that has been excluded from study thus far. More importantly, however, the ECP population are likely to benefit more from supervision and opportunities to build self-efficacy due to their limited professional experience. Therefore, supervision may play a more vital role in shaping the early career school psychologists' self-efficacy in the beginning stages of their careers.

Significance of the Problem

The area of supervision in relation to self-efficacy is important to study because NASP advocates for continued professional development and professional supervision for school psychologists, regardless of their professional experience. NASP specifically indicates that professional supervision is a requirement for early career school psychologists to develop their professional skills (NASP, 2011). However, research has consistently noted that there is a lack of opportunities for professional supervision in the field of school psychology (Chafouleas, Clonan, & Vanauken, 2002; Crespi & Dube, 2005; McIntosh & Phelps, 2000).

Bandura's (1993) research shows that a person's level of self-efficacy can impact how well he or she performs his or her job. The higher one's level of self-efficacy, the more committed he or she becomes to the task, and higher goals are set as a result. In other words, self-efficacy influences motivation. Additionally, perceived self-efficacy to control stressors at one's job, and the belief in how capable one is of performing the job, impacts the level of stress felt at work and can impact burnout (Bandura, 1993). It also influences how long he or she will persist in stressful circumstances (Bandura, 1977).

Bandura (1993) also presented research which suggests a link between self-efficacy of school staff and how it impacts overall school climate. He stated that if school staff collectively view themselves as powerless to improve the academic achievement of their students, they communicate an overall group sense of ineffectiveness, which leads to an overall negative climate for development and growth. Further, students who are taught by teachers with low self-efficacy can themselves show a drop in self-efficacy between elementary and middle school (Bandura, 1993). Although much of the early research on self-efficacy is performed with teachers, school psychologists also arguably have an impact on school climate and student success. Therefore, the impact of their self-efficacy is also important to consider.

This study will focus on early career school psychologists, school psychology interns, and school psychology practicum students since their lack of practical experiences may lead them to benefit from professional supervision, more so than their experienced colleagues, as they navigate the diverse role in their new careers. For the early career and student population, this study aims to examine the relationship between supervision and self-efficacy and discuss the implications for practice.

Research Questions and Hypotheses

Two research questions will be explored to better understand the relationship between supervision and self-efficacy in practicum students, school psychology interns, and ECPs. Hypotheses are presented for each research question based on a review of existing research.

1. Does perceived self-efficacy differ between school psychology graduate students and early career school psychologists in the areas of assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills?

It is hypothesized that the level of self-efficacy will differ between the two groups in the sample. At each level, the individual gains more experience, but they are also likely receiving less structured supervision at each stage as they become more experienced. For example, school psychology students are required to receive supervision, while it is only recommended that early career school psychologists receive supervision in most areas. Therefore, it is believed that with more experience, the school psychologist will achieve higher levels of self-efficacy. For example, in Phifer's (2013) study, she obtained an experienced group of school psychologists for her sample, and they reported relatively high perceived self-efficacy on the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP). Similarly, Guiney (2010) found that greater perceptions of self-efficacy for consultation were reported for graduate students and practitioners as experience increased.

2. Do school psychology graduate students and early career school psychologists (ECPs) who report being satisfied with their supervision experience have higher levels of self-efficacy as measured by the Total Self-Efficacy score on the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP)?

It is predicted that school psychologists and students who are satisfied with their level of supervision may experience higher self-efficacy than those who do not report being satisfied with supervision. When school psychologists perceive that they are receiving a sufficient amount of support from a supervisor, it is believed that they will feel more

confident in their abilities to do their jobs well. Supervision can also serve as a form of professional development, so the school psychologist should be able to expand his or her learning, which could in turn improve perceptions of self-efficacy (NASP, 2011).

Limitations

As with most research studies, this study design has several limitations. One possible limitation is the anticipated history of the participants. It is unknown what content was covered in the training programs that the participants attend or graduated from, and what their general work ethics are. A person's previous experiences can influence self-efficacy and what he or she may expect from a supervisor. Selection and the instrumentation used could also be considered a limitation. The participants will be selected using convenience sampling. Participants were contacted based on their proximity to the researcher, so generalization of the results beyond the sample is impacted. It is also not possible to accurately monitor the response rate for the survey since the survey was distributed via email and through graduate program coordinators and state school psychological associations. Instrumentation is also a possible limitation, because the validity and reliability is not known for all measures, such as the demographic survey. To combat this threat, a modified version of a demographic survey used in Phifer's (2013) study will be administered. Finally, time of measurement could also affect the results. For example, a school psychologist may answer the survey differently at the beginning of the school year than he or she would at the end of the school year. Caseload and job responsibilities can fluctuate throughout the school year.

Definitions of Terms

1. *Administrative Supervision*: “Administrative supervision focuses on the service unit, including personnel issues, and legal, contractual, and organizational practices” (NASP, 2011, p. 2). It is most concerned with performance outcomes rather than school psychology-specific skills. A school psychologist’s administrative supervisor need not be a school psychologist.
2. *Counseling Skills*: Counseling Skills refers to a domain in the Huber Inventory of Self-Efficacy (HIS-SP). It “measures how school psychologists can engage in individual and group counseling consisting of skills in crisis prevention, referral, relationship building, cultural diversity, play therapy, and the effects of medication on children” (Huber, 2006, p. 17).
3. *Early Career School Psychologist (ECP)*: To be considered an early career psychologist, the American Psychological Association (APA) states that the psychologist must be within seven years of receipt of his or her degree (APA, 2015).
4. *Huber Inventory of Self-Efficacy (HIS-SP)*: This scale was developed by Huber (2006) to measure the overall level of perceived self-efficacy in school psychologists. It provides an overall measure of self-efficacy along with five domains, which include Counseling Skills, Intervention and Consultation Skills, Multidimensional Assessment Skills, Professional Interpersonal Skills, and Research Skills.
5. *Intervention and Consultation Skills*: Intervention and Consultation Skills refers to a domain in the HIS-SP. This domain “measures how school psychologists can utilize consultation and intervention skills involving problem-solving techniques such as

- observation, data collection, research, planning, implementation, and follow-up procedures” (Huber, 2006, p. 17).
6. *Multidimensional Assessment Skills*: Multidimensional Assessment Skills is a domain in the HIS-SP. It “measures the complex process of assessment involving administration and scoring of assessment instruments, as well as encompassing ethical and legal guidelines, interpretation skills, report writing, and assessment related decision-making” (Huber, 2006, p. 17).
 7. *Professional Interpersonal Skills*: Professional Interpersonal Skills refers to a domain on the HIS-SP. This domain “measures how school psychologists can engage in professional and positive interaction skills involving interview, rapport building, collaboration, and cooperation” (Huber, 2006, p. 18).
 8. *Professional Supervision*: “Professional supervision refers to oversight of the specific professional practices of personnel within one’s own profession, and requires specific training and knowledge in the area of supervision” (NASP, 2011, p. 1). These supervisors are responsible for ensuring that the school psychologist is practicing within professional and ethical standards. They are also responsible for promoting professional development to update and improve skills (NASP, 2011).
 9. *Research Skills*: Research Skills is a domain in the HIS-SP. Research Skills “measures how school psychologists can understand statistics and research design to adequately conduct, critique, convey, and incorporate findings of research into their practice” (Huber, 2006, p. 18).

10. *School Psychology Self-Efficacy*: “One’s beliefs or judgments about one’s capabilities to engage in the roles and functions related to the profession of school psychology” (Huber, 2006, p. 19).
11. *School Psychology Graduate Student*: For the purpose of this study, a school psychology graduate student includes internship and practicum students.
12. *Internship student*: A graduate student in school psychology who is currently on internship, the culminating training experience which focuses on the application of the entirety of the student’s training to that point.
13. *Practicum student*: A post-master's degree graduate student in school psychology who is not currently on internship.
14. *Self-Efficacy*: A person’s belief in his or her own ability to complete a task. Bandura (2006) has further defined self-efficacy as domain specific, which means that these beliefs are linked to specific areas of functioning.
15. *Supervision*: NASP (2011) defines supervision as inclusive of both administrative and professional supervision. Supervision is an ongoing, systematic process that is positive and collaborative between the school psychologist and supervisor. It focuses on promoting growth and improved performance for the school psychologist, supervisor, and the school community (NASP, 2011).
16. *Supervision Satisfaction*: For the purpose of this study, supervision satisfaction, or satisfaction with supervision, is self-reported on the demographic survey. Participants answer a yes/no question indicating satisfaction or dissatisfaction with supervision. There are separate questions relating to satisfaction with administrative and professional supervision.

Summary

This chapter introduced the research on self-efficacy and supervision. The purpose of the study, research questions, hypotheses, limitations, and definitions of terms were reviewed. This chapter provided a foundation for the literature review which follows.

CHAPTER TWO

LITERATURE REVIEW

The positive relationship between supervision and self-efficacy has been demonstrated in several studies (Trangucci, 2013, Trant, 2000). However, this relationship has yet to be explored as it relates to early career school psychologists. This chapter will provide an overview of supervision and self-efficacy, particularly as it relates to school psychology. Various supervision models will also be explored, and research on supervision of school psychologists, at various stages of training, will be presented. Barriers to supervision will also be discussed. The area of self-efficacy will be examined, starting with the history of the construct. Information related to measuring the construct of self-efficacy will be discussed, and research that examines self-efficacy in the educational setting will be presented. Finally, the limited existing research base that examines the relationship between self-efficacy and supervision will be explored.

Supervision

Supervision is an important aspect of employment that can promote growth and responsible practice across disciplines. Bernard and Goodyear (2009) state that practice alone is not enough to obtain competence. One must also receive feedback through supervision to grow in his or her profession. Within the mental health field, there are many similarities in supervision practices and styles. Much of what is practiced in the supervision of school psychologists is also similar to, or borrowed from, the clinical psychology, counseling, or social work fields. Differences in profession-specific emphasis exist, but much of the theory and underlying pedagogy is similar across the mental health fields (Bernard & Goodyear, 2009).

Supervision Models

There are many recognized models of supervision. Some of the most commonly recognized models include psychotherapy-based, developmental, and the social role models (Bernard & Goodyear, 2009). These three models will be discussed below, and different supervision types within each model will be explored. Evidence from researchers, such as Crespi and Dube (2005) indicate that the style or model of supervision practiced by a supervisor can impact supervisees.

Psychotherapy-based models of supervision. Within the realm of psychotherapy-based models of supervision, psychodynamic, person-centered, cognitive behavioral, systematic, and constructivist models will be outlined.

Bernard and Goodyear (2009) argue that psychodynamic supervision has had the largest influence on supervision in the mental health field. Sigmund Freud was the first supervisor to use this model, which dates to 1902. Supervision with the psychodynamic model transitioned from being patient-centered to supervisee-centered in 1972. The supervisor's role within this model is described as existing on a continuum between "uninvolved expert" and authority figure (Bernard & Goodyear, 2009). The supervisor may adopt the style of a teacher or a questioner role with a focus on the client, the supervisee, or the relationship between the supervisor and supervisee. Supervision within a psychodynamic model is mostly based on self-reports from the supervisee. (Harvey & Struzziero, 2008).

When the person-centered approach to supervision was introduced by Carl Rogers in the 1940s, the model moved away from the self-report method used within the psychodynamic model. Rogers introduced the use of interviews during supervision, and

included an approach very similar to therapy. Rogers stressed that a supervisor must be genuine, empathetic, and warm (Harvey & Struzziero, 2008; Rogers, 1958). The supervisee within this model must be motivated to grow. The use of this supervision model has declined in recent decades (Bernard & Goodyear, 2009).

A more common, and growing, model of supervision is the cognitive behavioral model. This model asserts that a supervisee's behaviors are learned, reinforced, and maintained through consequences. Supervisors within this model assess and monitor the progress of the supervisee. They directly teach the needed skills to the supervisee using imagery techniques, Socratic questioning, role-plays, and rehearsals. Treatment manuals for supervision are also commonly used within the cognitive behavioral model. Outcome measures within this model include whether the supervisee has developed mastery of the skills taught and if they can perform the skills with fidelity (Bernard & Goodyear, 2009). A study by Putney, Worthington, and McCulloughy (1992) showed that supervisees thought supervisors who used a cognitive behavioral approach focused more on a consultative role and the supervisee's skills than supervisors who used a psychodynamic or humanistic approach.

The final psychotherapy-based supervision model is the constructivist approach, which relies heavily on a consultative supervisor role. The supervisor strives to maintain equality between the supervisor and supervisee, while highlighting the supervisee's strengths. The narrative and solution-focused approaches are included under the constructivist model. The supervisor serves the role of helping the supervisee develop his or her own professional story. They are essentially the editor of the supervisee's story. Within the solution-focused approach, the supervisor helps the supervisee to learn to be

more independent, while establishing a collaborative relationship where the supervisor can focus on the supervisee's strengths. The supervisor strives to make small changes with the supervisee, while understanding that there is more than one correct way to perform most tasks (Bernard & Goodyear, 2009).

Developmental models of supervision. Developmental models of supervision date back to the 1960s. One of the most popular developmental models of supervision is the Integrated Developmental Model (IDM; Stoltenberg, 1981). IDM states that supervisees move through four stages of development, and three markers of growth are outlined: awareness of self and others, motivation in training, and the supervisee's degree of independence (Bernard & Goodyear, 2009). The four stages of development include a stage of limited training and experience within the domain being supervised. At stage two, the supervisee transitions from being highly dependent on the supervisor to a highly structured and supportive supervisory environment. In this stage, the supervisee is transitioning away from imitating their supervisor. At stage three, the supervisee uses more of a personalized approach to his or her practice. The final stage occurs when the supervisee can reach stage three across multiple domains, such as treatment and assessment (Bernard & Goodyear, 2009; Stoltenberg, 1981).

In addition to the stage models of developmental supervision, process developmental models will also be discussed. The process developmental models focus on using reflection during supervision. A combination of teaching and reflection make up this practice. Event-based supervision also falls within this model (Ladany, Friedlander, & Nelson, 2005). Event-based supervision focuses on the small events that make up a supervisee's work, and task-analysis is used by some to teach new skills

through this form of supervision. The supervisee's progression through this model depends on his or her readiness to address the issue, the supervisee's developmental level, the supervisor's interventions, and the supervisee's response to the interventions (Ladany et al., 2005).

The final developmental model to discuss is the life-span developmental model by Ronnestad and Skovholt (1993). Ronnestad and Skovholt proposed that therapists continue to grow and learn past their graduate training through professional development. They proposed six stages of development. The first stage is the lay helper phase, which includes novice counselors who quickly identify the client's problem and offer strong emotional support and advice based on their own experiences. Stage two is the beginner student stage, where the supervisee can be described as anxious, dependent, and lacking self-confidence. The supervisee actively looks for a practitioner to imitate. Stage three is the advanced student phase, which includes the practicum and internship stages of graduate preparation. At this stage, the student aims to do his or her role correctly, which can lead to a conservative style. At stage four, the novice professional is formed. At this stage, the individual integrates more of his or her own style and personality into treatment. Stage five is the experienced professional phase, where the professional develops a style that is in line with his or her interests and values. At the final stage, stage six: the senior professional stage, the individual usually has developed an individualized approach, and they become skeptical of anything new in their field of practice. The first few stages are described as the learning phases, where a supportive supervisor is most important. The last phases are described as an unlearning phase,

where the practitioner develops his or her own values and style (Ronnestad & Skovholt, 1993).

Social roles models of supervision. The social roles model of supervision proposes that supervisors draw from their other professional roles when in a supervisory position (Bernard & Goodyear, 2009). The Discrimination Model by Bernard (1979) states that supervisors can serve the role of teacher, counselor, or consultant to improve a supervisee's skills. The teacher role is most commonly used for novice supervisees, while the consultant role is most appropriate for advanced supervisees. This model allows the supervisor flexibility in how they respond to the supervisee. The level of direction and support provided by the supervisor can vary depending on the needs of the supervisee (Bernard, 1979).

Bernard and Goodyear (2009) argued that the most comprehensive supervision model is the Systems Approach to Supervision (SAS) model proposed by Holloway (1995). This model states that the functions of a supervisor fall under the areas of advising/ instructing, supporting/ sharing, consulting, modeling, and monitoring/ evaluation (Halloway, 1995). The relationship between the supervisor and supervisee is the center of this model, and it includes the supervision contract, the phase of the relationship, and the structure of the supervisory relationship (Bernard & Goodyear, 2009).

As highlighted above, supervision practices draw from many theories. Many supervisors draw from a variety of orientations, which leads to a more eclectic supervision approach. Most of the theories discussed above are initiated in the clinical and counseling psychology fields, but many school psychologist supervisors have

adopted them. Theoretical orientations are important to discuss, because they tend to influence the role that a supervisor plays (Bernard & Goodyear, 2009).

Role and Preparation of School Psychologist Supervisors

The National Association of School Psychologists (NASP; 2011) recommends that a professional supervisor have knowledge and training in the area of school psychology. They are responsible for supporting practices that are consistent with NASP's professional standards, and they are responsible for planning professional development to update school psychologists' skills. NASP does not require a supervisor of school psychologists to hold a doctoral degree, but the American Psychological Association's standards state that a supervisor should hold a doctoral degree (Harvey & Struzziero, 2008). Although training in supervision is recommended, few receive it.

Ross and Goh (1993) found that only 25% of school psychologists that they surveyed had received some sort of training in supervision. About half of those were doctoral-level school psychologists, while the remaining were at the specialist level. Of those who received training in supervision, about 65% completed one course or practicum, while about 50% had practice in supervising.

In addition to having training and knowledge in school psychology, a supervisor is responsible for upholding ethical standards. They must strive to promote student growth, while being responsive to the supervisee's needs and continued professional development. They must possess conflict management skills and have knowledge of how the school system runs and functions. Effective communication and interpersonal skills are vital, as well as the ability to take on an authoritative role. An effective supervisor needs to be a good teacher, evaluator, and be able to provide constructive feedback.

Strong technical and clinical knowledge is also necessary (Harvey & Struzziero, 2008). Effective supervisors maintain strong relationships and working alliances with their supervisees (Harvey, Struzziero, & Desai, 2014). They need to display effective consultation skills and the desire to be lifelong learners. For faculty supervisors, it is recommended that they have a minimum of two years of experience in a school setting. Once a faculty supervisor, they should continue working in the field, such as in a practicum setting, to maintain clinical skills (Knoff, Curtis, & Batsche, 1997). Supervisors also need to maintain their own professional development by staying abreast on the research and best practices in supervision. It is important that supervisors only provide supervision in areas in which they are adept (Harvey & Struzziero, 2008).

NASP (2011) recommends that supervisors receive formal training in supervision. They also recommend that experienced school psychologists have opportunities to gain training in supervision, and that supervisors and the supervision programs are evaluated. NASP (2010) also recommends that supervisors have at least three years of experience and a valid state school psychologist credential. It is also recommended that they participate in school psychological professional associations and play an active role in federal, state, and local public policy development (NASP, 2010).

Supervisors can gain training in supervision through various means, including professional workshops, self-study, peer networks, or they can complete formal coursework through a university. Gizara and Forrest (2004) recommend that a supervisor participate in supervision courses and a practicum experience that focus on the evaluative process. In addition, supervisor training should include standards of practice, direction on how to handle ethical issues, and development of norms to address inadequate

practice. They also recommend forming a supervision peer consultation group that meets regularly (Gizara & Forrest, 2004).

Supervision of School Psychologists

To be an effective supervisor, it is necessary to be competent in the practice of school psychology. Without corrective feedback from a skilled supervisor, information learned in graduate school may not transfer to practice. Such skills can also deteriorate without corrective feedback (Harvey et al., 2014). Fowler and Harrison (2001) confirmed that the field of school psychology changes rapidly. It was estimated that the half-life of graduate training in school psychology was about three to five years (Fowler & Harrison, 2001). Due to rapid changes in the field, supervision should be viewed as a vital form of professional development that has the potential to lead to positive changes for the entire school community (Crespi & Dube, 2005). One's supervisor, or happiness with supervision, can also influence job satisfaction.

In a meta-analysis conducted by VanVoorhis and Levinson (2006) that looked at job satisfaction among school psychologists, supervision was included in a list of 18 out of 20 facets of their jobs which school psychologists were satisfied. Policies and opportunities for advancement were the only two areas where school psychologists were not satisfied. In a study conducted by Zins, Murphy, and Wess (1989), it was also found that the majority of school psychologists surveyed were at least moderately satisfied with the supervision they received. However, Thielking, Moore, and Jimerson (2006) found that nearly half of the school psychologists that they surveyed were unhappy with the supervision that they received. They found that the more experience a school psychologist had, the less supervision they received. Also, for those school psychologists

who were serving as supervisors, it was indicated that as the number of student supervisees increased, the school psychologist supervisor tended to receive less supervision. Therefore, as their responsibility and supervision caseload increased, school psychologists were less likely to receive supervision.

Huebner (1992) found that having an incompetent or inflexible supervisor led to emotional exhaustion and depersonalization. Huebner also indicated that school psychologists reported receiving very little supervision, which could contribute to high levels of burnout. School psychologists are more likely to be satisfied with supervision when it is formal versus informal. It is also most beneficial when the evaluation is tailored to the school psychologist (Chafouleas, Clonan, & Vanauken, 2002). Too often, school psychologists are evaluated using systems designed for teachers or that are generalized to cover multiple educational specialists. Chafouleas and colleagues found that one third of the school psychologists that they surveyed did not have access to any sort of supervision. More psychologists desired supervision, and contact with a supervisor who had training in, or knowledge of, school psychology. This has been a common finding across the years. Some researchers report as little as 10% of school psychologists receive clinical supervision (Crespi & Dube, 2005). This same study found that 70% of the sample desired supervision. Ross and Goh (1993) found slightly more favorable results in their study, which reported that 31% of the school psychologists within their sample received clinical supervision. Fischetti and Lines (2003) reported that most school psychologists received supervision on an as-needed basis.

Without sufficient access to trained professional supervisors in the schools, many school psychologists turn to peer groups and consultation with colleagues (Zins &

Murphy, 1996). Zins and Murphy found that nearly 50% of school psychologists surveyed endorsed participating in a consultation group with peers. About half of Zins and Murphy's sample was composed of ECPs. They pointed to the fact that it was challenging for school psychologists, regardless of experience level, to stay current on the rapid changes in best practices and the laws. Having a peer consultation group aided in this process. Peer consultation groups as a form of supervision are common outside the field of school psychology as well. Other mental health and clinical psychology professionals often participate in peer consultation and group supervision. Flexible formats for supervision were viewed positively in the clinical psychology field in a study by Milne and Oliver (2000).

Supervision of the Early Career School Psychologist

The National Association of School Psychologists (2011) recommends that early career school psychologists receive at least one hour of supervision or mentoring a week. Supervisors must be aware of the supervisee's developmental level. These developmental levels are task specific. Therefore, every time an ECP learns a new skill, they are to be considered a novice in this area (Harvey et al., 2014). With appropriate supervision and feedback early on, ECPs can gain expertise in the various domains of practice. Due to the number of new experiences that an ECP faces, quality professional supervision is essential to shaping one's practice and skills.

Ross and Goh (1993) found that less than one third of early career school psychologists, which they defined as less than four years of experience, received a minimum of one hour of individual face-to-face supervision a week. Mentoring programs and a formal process for receiving professional development and supervision

have been proposed for ECPs. More opportunity to engage with peers for supervision was also suggested (McIntosh & Phelps, 2000).

Supervision of School Psychology Graduate Students

The National Association of School Psychologists (NASP, 2011) recommends that school psychology graduate students receive at least two hours of face-to-face supervision a week. However, supervision may look different depending on the student's stage of graduate training. For example, students in their practicum experience tend to focus on specific skills, within a specific setting, while a student at internship needs to apply a comprehensive set of skills across a range of situations (Alessi, Lascuertes-Alessi, & Leys, 1981). Practicum experiences can vary greatly from site to site. NASP provides internship guidelines, but practicum is not as clearly defined, which allows individual programs more independence. Therefore, content, length, and quality of practicum experiences differ based on the practicum site (Li & Fiorello, 2011; NASP, 2010). There is also no accreditation requirement for practicum sites (Li & Fiorello, 2011).

Site supervisors of both internship and practicum students are responsible for communicating the site's expectations, assisting with cases, modeling ethical behavior, and sharing their own experiences with the graduate student (Sullivan, Svenkerud, & Conoley, 2014). Site supervisors also need to teach district procedures and how to apply what was learned in the classroom to real-world situations. Site supervisors and university-based supervisors need to keep in contact to appropriately assess the graduate student's progress, and to make sure expectations are clear (Alessi et al., 1981; Ward,

2001). In the end, the internship or practicum experience should be a learning experience for both the supervisor and supervisee.

Sullivan and colleagues (2014) expressed how limited the research base was related to interns' perspectives of the supervision experience. Much of the research focuses on the practices of the supervisor. For example, there is research to support supervisors' use of an eight-step problem solving process to resolve professional issues as they arise. School psychology graduate students who were trained in this process were more likely to feel a greater sense of self-efficacy in their ability to solve problems that arose in their career (Sullivan et al., 2014). Knoff, Curtis, and Batsche (1997) agreed that the goal of school psychology training programs should be to produce effective problem solvers. In addition to facilitating training in problem solving, graduate programs should also strive to produce school psychology graduates who display effective skill, knowledge, confidence, self-knowledge, and interpersonal relationship skills (Knoff et al., 1997).

School psychology interns have reported that successful site supervisors were easily accessible, taught time management, were optimistic and sensitive, and made sure that the intern's skills were not exploited (Ward, 2001). Ward also surveyed to find what the main job responsibilities were for site versus university-based intern supervisors. She showed that site supervisors spent most of their time reviewing reports, modeling techniques for the intern, and observing the intern. The university supervisors spent the most time sharing resources and providing group supervision. As part of the same study, interns reported that they would have preferred more interaction with their university-based supervisor while on internship. Another study by Loe, Jones, Crank, and Krach

(2009) found that student self-study can be a reasonable option to increase knowledge and counseling skills in school psychology students. Students were satisfied with the process, which included self-guided online modules. This could be an option to increase the students' frequency of contact with the university, and it could also save the university-based supervisor time since face-to-face meetings would not need to occur every week.

Barriers to Supervision

Despite organizations like the National Association of School Psychologists (2011) advocating for increased supervision for school psychologists, there is still a lack of professional supervision in the field (Chafouleas et al., 2002). Barriers to supervision of school psychologists in the schools include funding, time, and the presence of qualified supervisors.

Harvey and Struzziero (2008) wrote that the expense of supervision to the school districts is one of the primary barriers. There is a lack of funds allocated to underwrite supervision services. Quality supervision should occur face-to-face and on a regular basis, which means there is less time to put towards assessment and other traditional school psychological services. In many districts, the geographic distance between supervisor and supervisee also makes supervision difficult. Harvey and Struzziero added that many administrators see face-to-face supervision as a luxury, and they perceive it as less valuable than direct services that a school psychologist provides to students. Harvey and Pearrow (2010) found that after a few years of practice, supervisor evaluations become infrequent and meaningless.

There is also a greater push for schools to address the mental health needs of students. School psychologists are often put in the role as the professional to provide such services. With the passage of the Every Student Succeeds Act (ESSA), school mental health services have been included in multi-tiered systems of support (MTSS). NASP (2016b) advocates for school psychologists to provide such support within the MTSS framework. Although this is positive for diversifying the role of the school psychologist, it is another job responsibility that may take away from valuable supervision time. School psychologists' roles tend to vary from district to district. Therefore, the variability of job responsibilities differs, which can leave even less time for supervision. Depending on the region where the school psychologist practices, community resources could also be limited, which could lead to the school psychologist being called upon to provide or coordinate such services (Harvey & Struzziero, 2008).

Another common barrier to quality supervision lies in the supervisor's training. Many times, school psychologists are supervised by administrators, such as principals or assistant principals, who have little experience or knowledge about the role of a school psychologist. Therefore, these individuals are unable to provide professional supervision. Administrators also tend to supervise many individuals, which means their time is limited with each supervisee (Harvey et al., 2014; Harvey & Pearrow, 2010). One of the most common reasons why school psychologists do not receive supervision is due to lack of an available supervisor (Zins et al., 1989). When they do receive supervision, it is many times not linked to practice issues (Crespi & Dube, 2005). Many practicum and internship level students tend to be supervised by school psychologists with a specialist level degree, which indicates that their training in supervision may have been limited. If

they did receive training in supervision, it was likely to be in skill-specific areas, such as supervision of counseling skills or consultation skills. Training in supervision for systems-level change is rare (Harvey et al., 2014). Ross and Goh (1993) found that only one fourth of the school psychologists that they sampled, who held a supervisory role, had any training in supervision.

Early career psychologists (ECPs) face yet another barrier by being novices in the field. Harvey and Struzziero (2008) indicate that ECPs often struggle with the complexity of their position. They argue that this needs to be addressed at the case and the systems level for an ECP to be able to provide a full range of services. The ECP needs support to clarify complex cases.

Self-Efficacy

When learning from a supervisor, many supervisees learn by observing. Bandura stated that learning occurs through observing a model (Bandura, 1977). The observer's attention to the model, retention of what he or she observes, and the ability to produce what is observed all impact the learning of new behaviors. The individual's motivation to enact what they learn also impacts behavior. This theory stems from Bandura's social cognitive theory, and it is applicable to the practice of supervision of school psychologists (Merrell, 2008).

Social Cognitive Theory and Self-Efficacy

The social cognitive theory is a triangular model that states that behavior, cognitive factors, and personal factors influence each other. Based on this theory, for a person to be successful, they must possess the skills necessary, but they must also believe in their ability to have control over the situation to accomplish the desired goal. The

presence or absence of this belief in oneself can cause two people with the same skillset to perform differently on the same task. Motivation and problem solving can be impacted because of this belief in oneself, in one's self-efficacy (Wood & Bandura, 1989).

Self-efficacy, the belief that one can successfully complete a task, is influenced by four sources of information: performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal (Bandura, 1977; 2006). Self-efficacy is enhanced when an individual perseveres through a task and experiences success (e.g., performance accomplishment). Observing someone like oneself experience success after putting forth effort also improves self-efficacy. Also, if someone is told that they possess the skills to complete a certain task, they are more likely to put forth effort and less likely to doubt their ability. People who are in a position to build efficacy in others, such as a supervisor, need to be conscious of not only improving confidence, but also placing supervisees in situations where they can experience success. Building efficacy through social persuasion does little if the person is repeatedly unsuccessful in his or her endeavors. Lastly, the way an individual views his or her emotional and physical reactions can impact self-efficacy. People who experience high self-efficacy are more likely to feel energized, while someone with low self-efficacy may feel anxious and doubt themselves (Bandura, 1994).

Measuring Self-Efficacy

When measuring self-efficacy, it is important to use a scale that is domain specific. Bandura (2006) explained that a general measure of self-efficacy, that does not target domains of practice, is not connected to the situational demands. Individual items

should reflect the construct being measured, and the items should be phrased using the word “can” as compared to “will” (e.g., *I can...* versus *I will...*). To construct a sound measure of self-efficacy, the researcher needs to have a good understanding of the domains of functioning within the area being measured. Scales should be constructed in a way that allow participants to presently rate their strength in their beliefs to execute a task. Participants should not rate their perceived potential to execute a task, but their current perceived capability. Ratings should also be recorded without identifying information to reduce concerns of social evaluation (Bandura, 2006).

Using Bandura’s model for constructing a self-efficacy scale, Huber (2006) constructed the Huber Inventory of Self-Efficacy for School Psychologist (HIS-SP). The HIS-SP measures the overall level of perceived self-efficacy in school psychologists. It provides an overall measure of self-efficacy along with five domains, which include Counseling Skills, Intervention and Consultation Skills, Multidimensional Assessment Skills, Professional Interpersonal Skills, and Research Skills (Huber, 2006). Huber determined the relevant domains of function for a school psychologist by reviewing authoritative resources in the field. She completed a qualitative deductive interpretational analysis to develop the questions on the HIS-SP. The items are presented on a continuum of less challenging to more challenging roles of school psychologists. This measure is currently the only known comprehensive measure of domain-specific self-efficacy related to school psychology.

Self-efficacy is an important construct to measure in school psychology and education as a whole, because efficacy influences the way an individual thinks and the actions that he or she chooses to pursue. It also takes into consideration the goals people

set and their commitment to achieving them. Self-efficacy influences how much effort one puts into achieving his or her goals and how long he or she will persevere when challenged. This in turn impacts how much stress someone experiences when coping with challenging events (Bandura, 2006).

Self-Efficacy in Education

Bandura (1993) stated that by highlighting self-comparison and deemphasizing social comparison of progress and accomplishments, one was building an environment for promoting academic achievement and self-efficacy. Additionally, the more self-efficacy improves, the better one can cope in difficult situations (Bandura & Locke, 2003). This has been found to be true in multiple educational scenarios, with students, teachers, counselors, and school psychologists.

When school students believe that they can master academic demands and form peer relationships, they are more likely to be able to withstand adversities, and they are at a reduced risk of depression (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). It was also found that if students believed that if they were of higher academic standing than they really were, they were more likely to set high goals, use more efficient problem solving techniques, and they performed higher (Bouffard-Bouchard, 1990). When a student's self-efficacy related to controlling learning outcomes was higher, they tended to achieve higher grades (Bandura & Locke, 2003). Basically, if a student believed that they could perform well academically, they did.

In addition to student self-efficacy, the self-efficacy of teachers has also been a popular area of study. Teachers' sense of self-efficacy has been linked to student outcomes, such as motivation, achievement, and student self-efficacy. Measures of

teacher self-efficacy began in the 1970s, and instruments have evolved over the last forty years. In 1997, Bandura introduced a measure of teacher self-efficacy that was broken down into seven domains of functioning: efficacy to influence decision making, efficacy to handle discipline issues, efficacy to recruit parent involvement, efficacy to recruit community involvement, efficacy to influence school resources, instructional efficacy, and efficacy to create a positive school climate (Tschannen-Moran, Hoy, & Hoy, 1998). Teacher self-efficacy influences behavior in the classroom, such as the effort given while teaching and the goals set. Self-efficacy influences perseverance, and can also impact planning and organization (Allinder, 1994). As teacher efficacy improves, so does overall school climate. Teacher efficacy has shown to be cyclical in that increased self-efficacy leads to greater persistence and performance. This then leads to greater self-efficacy. The opposite is also true: lower efficacy leads to less effort and decreased teacher performance. This then leads to lower self-efficacy (Tschannen-Moran et al., 1998). Teacher self-efficacy also has a direct effect on job satisfaction (Viel-Ruma, Houchins, Jolivette, & Benson, 2010). Viel-Ruma and colleagues found that teachers at the elementary, middle, and high school levels reported relatively equal levels of self-efficacy.

Teachers in training who displayed low teacher efficacy showed a more negative view of students' motivation, and they tended to rely more on strict rules, extrinsic rewards, and punishments. It was also found that teaching efficacy showed a decline during student teaching. Tschannen-Moran and colleagues (1998) suggested that real-world experiences during student teaching may have dulled the positive outlooks held by the students based on their classroom experiences. The researchers suggested that giving

teaching students more real-world experience with managing students' behavior, and providing feedback, prior to student teaching may be beneficial. Teachers in their first year of teaching with high teacher efficacy had greater satisfaction with their job and experienced less stress. These novice teachers with high self-efficacy also rated their teacher preparation programs more favorably (Tschannen-Moran et al., 1998).

Like the research base on teacher self-efficacy, counselor self-efficacy research has shown a relationship between a trainee's level of self-efficacy and how much effort they put forth, and how long they persist, when learning a complex counseling skill. Research shows that counseling self-efficacy tends to be strong for those with some counseling experience over no counseling experience. However, after some experience is gained, the relationship between self-efficacy and supervision was minimal (Larson & Daniels, 1998). Larson and Daniels completed a review of the counseling and self-efficacy research. They found that the relationship between self-efficacy and training in counselors was unclear, with some studies showing that self-efficacy was greater in more advanced students over beginning counseling students. Other studies showed that the growth in self-efficacy was minimal in students after their initial training stages. For example, counseling students in their practicum experience reported an increase in self-efficacy, but advanced practicum students did not show a continued increase. Larson and Daniels pointed to the use of different measures of self-efficacy across studies, which in turn could have led to the varied results. O'Brien and Heppner (1996) found that direct instruction that includes modeling by a supervisor or professor, supportive and encouraging supervision that also focuses on dealing with anxiety, and exposure to enthusiastic practicing counselors led to increased self-efficacy in counseling students.

Research with a group of applied behavior analysis (ABA) therapists also found that the therapists' perceived supervisor support predicted self-efficacy and decreased burnout (Gibson, Grey, & Hastings, 2009)

Counseling self-efficacy research has also looked at the relationship between supervision and self-efficacy. As a result of Larson and Daniel's (1998) research review, they concluded that counselors with no access to supervision, and minimal experience, reported lower self-efficacy than counselors with access to supervision, or greater experience. However, after the counselors gained some job experience, the relationship between supervision and self-efficacy was minimal. It was also reported that positive feedback from a supervisor led to less anxiety for the counselor (Larson & Daniel, 1998). Other studies have confirmed that the type of feedback one receives from a supervisor makes a difference. Not all feedback leads to positive outcomes in supervisees. When receiving positive feedback, counseling students showed an increase in self-efficacy, while negative feedback from a supervisor following a counseling session led to a decrease in counseling self-efficacy. The type of feedback also influenced the supervisee's level of anxiety, with those students who received positive feedback reporting less anxiety (Daniels & Larson, 2001). O'Brien and Heppner (1996) reported that counseling graduate students reported that receiving overly critical comments from professors as one of the top negative experiences with counseling. They suggested that feedback should be supportive. Cashwell and Dooley (2001) confirmed that it is difficult for a counselor to feel effective when they perceive a lack of supervisor support. Cashwell and Dooley pointed to the lack of supervision in the field of counseling, and

their study found that when counselors received supervision, and felt supported, they experienced high levels of self-efficacy.

Research by Fernando and Hulse-Killacky (2005) found that different supervision styles can impact counselors' self-efficacy differently. Prior to their study, the relationship between supervision styles and self-efficacy had not been studied in the counseling field. Fernando and Hulse-Killacky surveyed a group of counseling students and found that students' learning needs were best met through flexibility in supervision styles. An eclectic form of supervision was most effective at improving student self-efficacy. They concluded that if a supervisor's style does not enhance the supervisee's professional development, then the supervisor should incorporate parts of other supervision styles into the supervision process. They also pointed to the fact that the supervisee's self-efficacy cannot be improved if the supervisor is not experiencing optimal levels of supervision self-efficacy (Fernando & Hulse-Killacky, 2005).

Supervision and Self-Efficacy in School Psychology

Supervision, based on Bandura's social learning theory, should focus on the teaching-learning process (Knoff, 1986). Knoff also emphasized that factors, such as a supervisee's level of self-efficacy, influence his or her behavior. Therefore, self-efficacy is a valuable tool for supervisors to be aware of, and responsive to, in the field of school psychology. The research base of the impact of supervision on the self-efficacy for school psychologists is very limited, and most of the research has been completed as part of dissertation research.

Guest (2000) completed a study where she examined school psychologists across the development of their careers. When examining self-efficacy, Guest found that most

school psychologists that she surveyed maintained a high degree of self-efficacy across their careers. This suggests that with increased experience, school psychologists can maintain high levels of self-efficacy. Empirical research has suggested that one promising method for building self-efficacy is through engaging in professional development and supervision (Manz, Mautone, & Martin, 2009; Trangucci, 2013; Trant, 2000). Therefore, the relationship between supervision and self-efficacy may play a vital role in the school psychologist's ability to successfully perform various job duties, and can even impact job satisfaction. Manz and colleagues (2009) determined that school psychologists who received professional development perceived an increase in their self-efficacy. Also, the more time the school psychologists devoted to working with families, the higher their efficacy was in family consultation. Additionally, school psychologists who were assigned to only one school reported higher self-efficacy than school psychologists assigned to two or more schools. This leads one to believe that with more experience, continued learning, and a reasonable caseload, self-efficacy can improve. Interestingly, the number of years employed as a school psychologist, did not show a significant relationship to self-efficacy. These results are somewhat in contrast to Guest's (2000) study.

Mackonieni and Norvile (2012) sampled a group of school psychologists in Lithuania to examine the relationship between self-efficacy, job satisfaction, and burnout. The researchers found that school psychologists who reported that they were dissatisfied with their job also reported lower self-efficacy. In contrast, school psychologists who reported job satisfaction and high self-efficacy were less likely to feel signs of burnout. However, it should be noted that Machonieni and Norvile did not use a domain-specific

measure of self-efficacy for their study. They used a 10-item scale that measured a general sense of self-efficacy. Based on Bandura's (2006) research, measures of self-efficacy should be domain specific to obtain a more meaningful measure of self-efficacy.

Phifer's (2013) dissertation research examined the relationship between supervision and self-efficacy in an experienced group of school psychologists. She found that the format and frequency of supervision did not predict self-efficacy. Her sample had relatively high levels of self-efficacy overall, and she predicted that this was due to her sample being composed of mostly experienced school psychologists. She predicted that her results may have differed if her sample was composed of early career school psychologists. Phifer found no relationship between caseload, role diversity, and self-efficacy. Her research also highlighted that frequency of supervision has a small, but significant, impact on counseling and research self-efficacy. Professional experience also predicted self-efficacy.

When examining the self-efficacy of school psychology graduate students, Reschly and Wilson (1997) found that doctoral students were more confident in their ability to provide research services, evaluation services, or to provide systems consultation services compared to students at the master's/ certification level. Confidence related to assessment skills, individual and group counseling, and consultation with teachers about specific student learning problems did not differ based on the degree level of the student.

In addition to creating a domain-specific scale to measure self-efficacy in school psychologists, Huber (2006) aimed to determine if self-efficacy differed between school psychology graduate students and practicing school psychologists. Using the HIS-SP,

Huber found that perceived self-efficacy was higher for practicing school psychologists than for graduate students. Self-efficacy was higher in the areas of multidimensional assessment skills, counseling skills, and professional interpersonal skills. Like Huber, Guiney (2010) also sought out through her dissertation to create a measure of self-efficacy. However, Guiney's scale specifically measured consultation self-efficacy in school psychologists. She found that greater perceptions of self-efficacy for consultation were reported for graduate students and practitioners as experience increased. She found that years of experience as a student or practitioner increased self-efficacy for consultation, but also time spent consulting was positively correlated to consultation self-efficacy.

Trangucci (2013) found that when a supervisor modeled counseling and consultation strategies, school psychology interns experienced higher self-efficacy in those areas. She also found that the number of hours of supervision was not related to greater self-efficacy. This is not consistent with Huber's (2006) study, which showed that self-efficacy improved with experience. Trangucci also found that developing a supervisory working alliance increases self-efficacy in school psychology students.

Roth (2006) examined differences in self-efficacy, using the HIS-SP, between school psychologists and school psychology students and found that professional school psychologists reported greater self-efficacy in intervention and consultation skills, assessment skills, counseling skills, and professional interpersonal skills than school psychology students. No differences were found in self-efficacy for research skills. Roth went on to explain that self-efficacy is built through experiences with overcoming obstacles. Therefore, Roth's results lead one to believe that with added experiences, and

time to learn from such experiences, professional school psychologists could build higher self-efficacy in common areas of practice. School psychology students likely have far fewer hours of experience in these areas. However, Roth did not make a distinction between early career school psychologists and their more senior colleagues.

While the self-efficacy of graduate students is an important area to study and address, research focusing on the self-efficacy of early career school psychologists is sparse. In one study, early career school psychologists, identified other school psychologists and mentors as having the largest impact on their professional development (Guest, 2000). This points to the importance of supervision early on in a school psychologist's career. In his dissertation, Trant (2000) had shown that increased satisfaction with supervision as a graduate student led to greater perceived self-efficacy during the first year on the job as a school psychologist. Participants felt most efficacious with assessment, while counseling efficacy was rated the lowest. Existing research on supervision and self-efficacy support the need to expand upon the literature to include early career school psychologists' perceptions of self-efficacy and the impact that supervision plays.

Summary

This chapter provided an overview of the research in supervision and self-efficacy, as well as the theoretical background, as described by Bernard and Goodyear (2009) and Bandura (1977, 1993, 1994, 2006). The early career school psychologist (ECP) population is a population that has been excluded from studies of self-efficacy and supervision thus far. More importantly, however, the ECP population is likely to benefit more from supervision and opportunities to build self-efficacy due to their limited

professional experience. Therefore, supervision may play a more vital role in shaping the early career school psychologists' self-efficacy in the beginning stages of their careers.

Using the Huber Inventory of Self-efficacy for School Psychologists (HIS-SP) and a demographic survey, this study aims to evaluate perceptions of self-efficacy in the areas of intervention and consultation, assessment, counseling, interpersonal skills, and research skills (Huber, 2006). Survey questions will also focus on supervision, such as the type, frequency, and satisfaction with the individual's current level of supervision.

CHAPTER THREE

METHODOLOGY

Research Design

This study aims to examine the relationship between self-efficacy and supervision in early career school psychologists and school psychology graduate students. This study will also attempt to determine if supervisees who report being satisfied with supervision have higher overall self-efficacy than those that are not satisfied. The variables within this study will be discussed.

The dependent variable for this study is the school psychologists' and students' self-efficacy. Self-efficacy is measured using the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP; Huber, 2006). Huber's scale measures self-efficacy related to assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, research skills, and provides an estimate of overall self-efficacy. The independent variables include the participants' role (e.g., ECP, intern, or practicum student) and their self-reported satisfaction or dissatisfaction with supervision.

The ancillary variables in this study are collected through the administration of a modified demographic survey from Phifer's (2013) study. The school psychologists and students are asked to provide their sex, their current role (i.e., practicum student, intern, or early career school psychologist), the graduate school that they attended, and their state of employment.

Additionally, the participants answered questions about the level and type of supervision they receive. For example, the questions asked whether the supervisor was a school psychologist or not. The participants also self-reported the frequency of

supervision, type of supervision, and their satisfaction with supervision. Participants answered questions indicating whether they have received any training in supervision. All terminology was defined for the participants on the survey (Appendix C).

Population and Sample

The population which this study aimed to target included practicing ECPs. To be considered an early career psychologist, the American Psychological Association (APA) states that the psychologist must be within seven years of receipt of his or her degree (APA, 2015). Also included were school psychology students who were completing their practicum or internship experience.

The sample for this study was a convenience sample. The researcher contacted NASP-approved graduate program coordinators via email to solicit participation from early career school psychologists and graduate students who were currently in their practicum and internship experiences. Additionally, participants were contacted through state school psychology associations. Since three populations of participants were contacted (i.e., practicum students, internship students, and early career school psychologists) a sample size of more than 100 participants was desired. Cohen (1992) recommends that a sample of at least 97 be obtained for a study with at least six predictor variables. This is given an estimated medium effect size at power = .80 for $\alpha = .05$. School psychologists and students were initially sought from the states of Pennsylvania, Delaware, Maryland, Virginia, Ohio, and New York. However, participants were not limited to these states to participate. Participants were included if they worked or went to graduate school anywhere in the United States of America.

Instruments

Demographic Questionnaire

The demographic questionnaire used in this study was modified from Phifer's (2013) demographic survey. Phifer completed a pilot study with her questionnaire to verify validity. She administered it to ten school psychologists who provided anonymous feedback on readability and validity. Phifer's questionnaire was modified to include questions asking participants if they were satisfied with the supervision they received. These were yes/no questions that were asked for both professional and administrative supervision. Questions were also added which asked if participants had any experience with supervision and about the supervision techniques used by their supervisor during supervision.

The current demographic questionnaire sought information which included the role of the participant (e.g., early career school psychologist, intern, practicum student), their sex, their educational information (e.g., graduate program, highest degree obtained), and their current state of employment or graduate school. The participants were also asked about their job role, and their supervision experiences. More specifically, they were asked about the frequency of supervision, satisfaction with supervision, and the type and format of supervision that they received. It was also asked whether they have any training in supervision and what supervision techniques their supervisor used during supervision. The demographic survey is in Appendix C.

Huber Inventory of Self-Efficacy for School Psychologists

This study uses the Huber Inventory of Self-Efficacy for School Psychologist (HIS-SP) to measure self-efficacy. Huber (2006) created a domain-specific survey of

self-efficacy, which measures “one’s beliefs or judgments about one’s capabilities to engage in the roles and functions related to the profession of school psychology” (Huber, 2006, p. 19). Huber created the HIS-SP based on the guidelines set forth by Bandura (2006), and the questions were created after a review of authoritative resources in school psychology. Using these resources, Huber decided on the most relevant domains of practice. The HIS-SP is composed of 95 items, which are measured using a 7-point Likert scale, ranging from 1- *Not Well at All* to 7- *Very Well*.

The HIS-SP has good internal consistency ranging from .90 to .98. The relevant domains of function that Huber identified include the following areas. The internal consistency for each subscale is also listed: Intervention and Consultation skills ($r = .96$), Multidimensional Assessment ($r = .94$), Counseling skills ($r = .91$), Professional Interpersonal skills ($r = .93$), and Research skills ($r = .90$). The total score internal consistency is listed at .98. Table 1 lists which questions on the HIS-SP fall under each subscale. The self-efficacy score for each subscale is obtained by adding the ratings of each item under the subscale. Table 2 depicts the quartile norms obtained as part of Huber’s (2006) original study, which contained 297 participants, 174 school psychologists and 113 school psychology graduate students. Huber completed a pilot test of the HIS-SP with school psychology graduate students to check for validity and readability prior to completing her study to determine the internal consistency of the HIS-SP. The HIS-SP can be found in Appendix D.

Table 1

HIS-SP Items Under Each Subscale

Subscale	HIS-SP Item Number
Intervention & Consultation Skills	1, 6, 8, 14, 15, 18, 19, 20, 26, 28, 31, 35, 45, 49, 54, 56, 57, 64, 67, 68, 72, 74, 75, 76, 82, 86, 91, 94
Multidimensional Assessment Skills	3, 4, 22, 24, 29, 37, 41, 43, 47, 51, 52, 58, 80, 84, 85, 88, 90, 95
Counseling Skills	13, 34, 69, 71, 78, 81, 87, 89, 93
Professional Interpersonal Skills	23, 32, 33, 38, 44, 48, 59, 60, 61, 70, 83, 92
Research Skills	10, 11, 18, 21, 40, 63, 79

Table 2

HIS-SP Scales Quartile Norms From Huber (2006) Study

Subscales	Quartile Norms	25	50	75	100
Intervention & Consultation Skills		138.00	156.00	167.66	194.00
Multidimensional Assessment Skills		102.00	112.00	119.00	126.00
Counseling Skills		45.00	51.00	56.00	69.00
Professional Interpersonal Skills		68.00	73.00	78.00	84.00
Research Skills		33.50	38.00	41.23	49.00
Total Score		390.50	429.00	458.00	511.00

Procedures

Prior to beginning data collection for this study, Indiana University of Pennsylvania's Institutional Review Board (IRB) approval was obtained. Initial approval was obtained from the IRB, and then prior site approval was granted from each site and submitted to the IRB for subsequent approval.

After initial IRB approval was granted, the demographic questions and HIS-SP questions were loaded into the Qualtrics online survey program. Next, the letters found in Appendix A and Appendix B were emailed to the state school psychology associations of the Mid-Atlantic region, as well as to school psychology graduate coordinators from

NASP-approved programs within this region to gain prior site approval. Once prior site approval was granted to survey university graduate students and school psychology association members, the survey link was provided via email to the program coordinators or state association leaders. The graduate program coordinators and state association leaders forwarded the Qualtrics link with the survey via email to their graduate students, recent graduates, and association members. Along with the link was a letter of informed consent (Appendix E). This letter explained the purpose of the study, the estimated time of completion, a description of the survey used, information on how to withdraw from the study, as well as information about IRB approval. All data collected was kept confidential. The only identifying information that was collected was connected to a drawing that participants had the opportunity to enter for a \$50 *Amazon* gift card at the completion of the survey. This information was kept separate from the data collected. Data collection occurred from March 2016 until September 2016. Table 3 contains the outline of task initiation and completion.

Table 3

Project Task Table

#	Name	Description	Begin	End	Person(s)
1	Present Prospectus	Review research prospectus with dissertation committee	4/15	4/15	Researcher and Dissertation Committee
2	IRB Proposal and Approval	IRB Proposal submission and approval	8/15	6/16	Researcher and Dissertation Chair
3	Construct Survey	Add all survey demographics questions into Qualtrics	3/16	3/16	Researcher and Dissertation Committee
4	Data Collection	Survey emailed to the sample	3/16	6/16	Researcher
6	Defend Chapters 1-3	Present chapters 1-3 to dissertation committee	9/16	9/16	Researcher
7	Statistical Analysis	Statistical analysis of data	12/16	1/17	Researcher
8	Report Preparation	Interpret analysis results	1/17	1/17	Researcher and Dissertation Chair
9	Report Review	Review and refine report	3/17	5/17	Researcher
10	Report Presentation	Present final report to dissertation committee	6/17	6/17	Researcher and Dissertation Committee

Statistical Analyses

Statistical analysis was completed using Statistical Package for the Social Sciences (SPSS) Version 23 for Mac. This section will outline each research hypothesis and the statistical method that was performed to analyze the data used to answer the research question.

Research Question 1

Does perceived self-efficacy differ between school psychology graduate students and early career school psychologists (ECPs) in the areas of assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills?

The first research question aimed to determine if perceived self-efficacy differed between practicum students, intern students, and ECPs in the areas of assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills. It was hypothesized that the level of self-efficacy would differ between the two different groups in the sample. At each level, the individual gains more experience, but they are also likely receiving less structured supervision at each stage as they become more experienced. It is believed that with more experience, the school psychologist will achieve higher self-efficacy.

To analyze the data for this question, a multivariate analysis of variance (MANOVA) will be used to determine if differences exist between the groups (e.g., graduate students and ECPs). To perform a MANOVA, it is assumed that the data is interval, linear, and that the dependent variables are normally distributed within each group. An adequate sample size needs to be obtained, and it is assumed that there is homogeneity of variance within each group of participants. When performing the MANOVA, the independent variables are the two groups: graduate students and ECP. The dependent variables are the level of self-efficacy in the areas of multidimensional assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills.

However, if the assumptions for a MANOVA are not met, nonparametric statistics, such as the Kruskal-Wallis test, will be used. The Kruskal-Wallis test evaluates whether medians of the dependent variable for each group are the same or different across factors. Assumptions for the Kruskal-Wallis include using at least ordinal data, as well as the presence of two or more groups with about equal sample size in each group. Data does not have to be normally distributed, and equal variance is not required.

Research Question 2

Do school psychology graduate students and early career school psychologists (ECPs) who report being satisfied with their supervision experience have higher levels of self-efficacy as measured by the total self-efficacy score on the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP)?

The second research question examined the relationship between satisfaction with supervision and level of self-efficacy in ECPs, school psychology interns, and school psychology practicum students. It will first be determined whether satisfaction with supervision is correlated with overall self-efficacy in ECPs, interns, and practicum students. If the groups are correlated, the data will be further explored to determine if satisfaction or dissatisfaction with supervision leads to a difference in overall self-efficacy among ECPs, interns, and practicum students. It is hypothesized that graduate students and ECPs who report being satisfied with supervision will have significantly higher levels of overall self-efficacy by comparison to those who do not report being satisfied with supervision. When school psychologists and graduate students perceive that they are receiving a sufficient amount of support from a supervisor, it is believed that they will feel more confident in their abilities to do their jobs well. Supervision can also

serve as a form of professional development, so the school psychologist should be able to expand his or her learning, which could in turn improve perceptions of self-efficacy (NASP, 2011).

Multicollinearity will need to be ruled out, and then a correlation analysis will be performed to determine if there is a relationship between supervision and self-efficacy. If a relationship exists, a series of two *t*-tests will be performed, one for each group in the sample. The independent variable would be satisfaction or dissatisfaction with supervision, while the dependent variable would be the total self-efficacy score from the HIS-SP. To perform a correlation analysis, it is assumed that the data is interval and linear. It is assumed that the variables are normally distributed and that there are no significant outliers. To perform a *t*-test, it is assumed that the data is interval or ratio and normally distributed. It is also assumed that there is little to no multicollinearity among the independent variables and that the sample size is appropriate.

Summary

This chapter outlined the methodology for the study. The research design, sample, instruments, procedures, and statistical analyses were discussed. Each statistical analysis was discussed in relation to the proposed research questions.

CHAPTER FOUR

RESULTS

Overview

The purpose of this study was to examine the relationship between satisfaction with supervision and perceived self-efficacy among early career school psychologists (ECPs) and school psychology graduate students. Through statistical analysis using the Statistical Package for Social Sciences (SPSS) Version 23 for Mac, perceived self-efficacy was examined to determine if it differed among ECPs and graduate students who were completing either their internship or practica. A secondary purpose of this study was to investigate if self-reported satisfaction with professional supervision contributed to higher levels of overall self-efficacy. In addition to discussing results pertaining to the research hypotheses, this chapter also explores the information collected through the demographic survey and primary measures.

Sample Characteristics

Initial analysis of the data showed that 212 participants completed at least a portion of the Qualtrics survey. Of the 212 initial participants, 52 reported having greater than seven years of experience as a school psychologist, which did not meet inclusion criteria for an ECP. When these cases were removed from the sample, there were 160 possible participants left. Out of the 160 cases, 76 cases contained missing data and were removed from further analyses. The final sample resulted in 84 participants who completed the survey.

Due to the manner in which the survey was distributed to the school psychology graduate coordinators and the state school psychology associations, it was not possible to accurately calculate a response rate. Graduate coordinators and state associations

forwarded the survey to their students and association members via email. It is impossible to determine how many individuals initially received the survey.

Data Screening

Prior to analyzing the data collected through the Qualtrics online survey, data were screened for missing items, accurate entry into SPSS, and for the underlying assumptions of the analyses. Data were exported directly from Qualtrics to SPSS, and they were coded once in SPSS. Descriptive statistics were calculated to determine means, standard deviations, skew, and kurtosis. These values are depicted in Table 7 and further described below.

Demographic Characteristics

Following approval from the Indiana University of Pennsylvania's IRB, the demographic survey and HIS-SP were loaded into Qualtrics and distributed via email to state school psychology associations and school psychology graduate coordinators in the mid-Atlantic region. The survey was completed by a total of 84 participants. Out of the 84 participants, 40% were graduate students ($n = 34$), and 60% of the sample was comprised of practicing early career school psychology ($n = 50$). Eighty-five percent of the sample identified as female, while 15% identified as male (females $n = 71$; males $n = 13$). This sample contained slightly more female participants than recent research has found to be representative of the field. In a survey of NASP members, 76% of practicing school psychologists identified as female (Curtis, Castillo, & Gelley, 2012). Table 4 displays the percentage of males and females who completed the survey from each group. Eighty-five percent of graduate students who completed the survey identified as female, while 84% of ECPs who completed the survey identified as female.

Table 4

Demographic Data Summary

Demographic Characteristics	Frequency	Percentage of Total Sample
Graduate Student	34	
Male	5	5%
Female	29	35%
ECP	50	
Male	8	10%
Female	42	50%

Although participants were sought mainly from the mid-Atlantic region of the United States of America, participants were not limited to this area. For example, a graduate coordinator may forward the survey link email to his or her student and ECP email databases, which could include students and ECPs who are practicing in different states across the country. Participants practiced, or attended graduate school, in the following states: Colorado ($n = 2$), Connecticut ($n = 1$), Delaware ($n = 7$), Florida ($n = 2$), Iowa ($n = 1$), Maryland ($n = 2$), Michigan ($n = 1$), Nebraska ($n = 1$), New York ($n = 28$), North Carolina ($n = 1$), Ohio ($n = 5$), Pennsylvania ($n = 27$), Virginia ($n = 2$), Washington ($n = 3$), and Wyoming ($n = 1$). Group differences in response rate were not evident, with most ECPs and graduate students responding from the mid-Atlantic region.

Professional Supervision Summary

As part of the demographic survey, participants were also asked about the amount and type of professional supervisions that they received. One hundred percent of graduate students reported receiving professional supervision. Out of the ECPs surveyed, only 46% reported receiving professional supervision ($n = 23$). Professional supervision was defined as “oversight of the specific professional practices of personnel within one’s own profession, and requires specific training and knowledge in supervision” (NASP, 2011, p.

1). Of the 34 graduate student participants who reported receiving professional supervision, 30 participants, or 88% of those receiving professional supervision, reported that they were satisfied with the professional supervision that they received. Therefore, only 12% of graduate students who received professional supervision, were dissatisfied with it. When the ECPs, who reported receiving professional supervision, were asked about satisfaction with professional supervision, 87% ($n = 20$) reported being satisfied with the supervision that they received.

Of those receiving professional supervision, most graduate students met weekly with their supervisor for 30-59 minutes per session. The format of supervision was most commonly listed as individual, with a combination of both individual and group supervision closely following. Most ECPs who reported receiving professional supervision shared that they met monthly with their supervisor for anywhere from less than 30 minutes per session to upwards of 59 minutes per session. A variety of supervision types were endorsed by the ECPs, with six participants reporting group supervision, nine participants reporting individual supervision, and seven participants reporting a combination of both group and individual sessions. Results are depicted in Table 5.

Table 5

Frequency and Percentage of Professional Supervision

Factor	Graduate Student		ECP	
	<i>n</i>	%	<i>n</i>	%
Frequency				
Monthly	1	3%	9	18%
Once a semester	0	0%	1	2%
Quarterly	0	0%	1	2%
Twice a month	2	6%	4	8%
Weekly	31	91%	7	14%
Duration per Session				
< 30 minutes	7	21%	9	18%
30-59 minutes	14	41%	9	18%
60-89 minutes	5	15%	1	2%
90-120 minutes	5	15%	2	4%
120 + minutes	3	9%	1	2%
Format				
Individual	17	50%	9	18%
Group	2	6%	6	12%
Both	15	44%	7	14%

Participants were also asked what job their supervisor held. These results are in Table 6.

Most ECPs and graduate students in the sample reported that their supervisors were fellow school psychologists.

Table 6

Supervision Data Summary

Type of Supervisor	Graduate Student		ECP	
	<i>n</i>	%	<i>n</i>	%
Fellow School Psychologist	22	65%	9	18%
Director of Psychological Services	2	6%	1	2%
Director of Pupil Services	0	0%	4	8%
Director of Special Education	1	3%	3	6%
Professor	4	12%	1	2%
Other	5	15%	5	10%

When asked about supervision techniques commonly used by a supervisor, ECPs most commonly reported their supervisors using developmental supervision strategies. For example, 29 ECPs reported that as they gained more experience, their supervisor gave them less direction but continued to monitor their progress. They may have begun the supervision experience in a “teacher” role, but acted as more of a consultant as they gained more experience (Bernard & Goodyear, 2009). This supervision technique was also most commonly reported by the graduate students, with 28 reporting strategies similar to the developmental style. Five ECPs reported that their supervisor appeared to draw from their strengths to make incremental changes towards goals. Their supervisor may help them organize past experiences to influence future practice. These techniques are most in line with a constructivist style of supervision (Bernard & Goodyear, 2009). No graduate students endorsed this style of supervision. The remaining two ECPs who chose to answer this question indicated that their supervisor encouraged self-report of sessions with students and discussion of how personal issues may impact relationships with students. This description is like what would be found with a psycho-dynamic style of supervision (Bernard & Goodyear, 2009). Again, no graduate students reported experiencing this supervision technique. The remaining graduate student who answered this question indicated that his or her supervisor teaches him or her appropriate skills using behavioral feedback, direct observation, modeling, rehearsing, and role plays. These techniques are most in line with a cognitive-behavioral supervision style (Bernard & Goodyear, 2009).

Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP) Summary

Participants completed the HIS-SP to gauge their perceptions of self-efficacy related to intervention and consultation, assessment, counseling, professional interpersonal skills, research skills, as well as their total perceived level of self-efficacy. The HIS-SP required participants to answer questions about self-efficacy in various areas of practice using a 7-point Likert scale, which ranged from *1- Not Very Well* to *7- Very Well*. Therefore, higher scores on the HIS-SP indicated perceived higher levels of self-efficacy. The five scales within the HIS-SP are not weighted equally. The Intervention and Consultation Skills subscale contains 28 items, with a possible score range of 28-196. The Multidimensional Assessment Skills subscale contains 18 items, with a possible score range of 18-126. The Counseling Skills subscale contained 10 items, with a possible score range of 10-70, while the Professional Interpersonal Skills subscale contained 12 items, with a score range of 12-84. The final subscale was the Research Skill subscale, which contained seven items with a possible score range of 7-49. Overall levels of self-efficacy could range from 387-654.

Table 7 displays the descriptive summary obtained from the HIS-SP. Huber's (2006) research reported quartile norms when describing the level of self-efficacy among school psychologists. The present sample indicated that the average ECP and graduate student participant's overall level of self-efficacy falls within the second quartile. This is markedly different from Phifer's (2013) study, which found average levels of self-efficacy in the fourth quartile when using the HIS-SP with an experienced group of school psychologists. When examining the quartiles further, most ratings of self-efficacy fell within the second quartile across the HIS-SP scales. However, ECPs felt greater self-

efficacy in Assessment Skills, with a mean score in the third quartile. School psychology graduate students had the lowest level of perceived self-efficacy in Counseling Skills, with a mean score that fell within the first quartile. Skew and kurtosis data are also depicted in Table 7 to inspect normality. All skew and kurtosis scores fall within the slight to moderate range, apart from the kurtosis for student Assessment Skills, which was within the high range (Blanca, Arnau, López-Montiel, Bono, & Bendayan, 2013).

Table 7

HIS-SP Descriptive Summary

Scale	<i>M</i>	<i>SD</i>	Quartile	Range	Skew (SE)	Kurtosis (SE)
Intervention & Consultation Skills						
ECP	154.46	17.53	2	115-194	-.03 (.34)	-.19 (.66)
Student	151.35	14.54	2	126-174	-.13 (.40)	-1.08 (.79)
Assessment Skills						
ECP	113.64	8.21	3	97-126	-.53 (.34)	-.71 (.66)
Student	108.56	10.71	2	91-125	-.09 (.40)	-1.39 (.79)
Counseling Skills						
ECP	46.94	6.24	2	32-59	-.23 (.34)	-.45 (.66)
Student	43.79	6.36	1	33-60	.43 (.40)	.07 (.79)
Professional Interpersonal Skills						
ECP	72.98	7.69	2	58-84	-.34 (.34)	-1.16 (.66)
Student	71.62	6.94	2	58-84	-.13 (.40)	-.52 (.79)
Research Skills						
ECP	35.56	6.01	2	25-49	.23 (.34)	-.87 (.66)
Student	36.91	6.22	2	23-47	-.41 (.40)	-.66 (.79)
Total Self-Efficacy						
ECP	418.32	36.93	2	339-502	-.11 (.34)	-.39 (.66)
Student	407.18	35.54	2	346-473	.26 (.40)	-.73 (.79)

HIS-SP Reliability Analysis

The reliability of the HIS-SP was examined using Cronbach's alpha coefficient. Cronbach's alpha is a measure of internal consistency, or the extent to which participants consistently responded to similar items. This measure determines whether scale items consistently measure the same construct. Internal consistency for the total score on the HIS-SP was .97. Each scale of the HIS-SP also displayed acceptable Cronbach's alphas (Intervention $\alpha = .94$, Assessment $\alpha = .91$, Counseling $\alpha = .82$, Interpersonal Skills $\alpha = .92$, and Research $\alpha = .89$). Kuijpers, Van der Ark, and Croon (2013) indicate that standard reliability is .80, while high reliability is .90 when examining Cronbach's alpha.

Correlation Matrix

A correlation matrix was computed to review the relationship among the variables within this study. Table 8 depicts the variables for graduate students, while Table 9 displays the research variables for ECPs. Correlation coefficients of .00 to .20 are considered very weak, .20- .40 are considered weak, .40- .50 are considered moderate, and coefficients above .50 are considered strong (Heiman, 2001).

Examining the matrix for graduate students shows that a weak or very weak relationship is present among scores on the HIS-SP and supervision frequency and the amount of time spent in supervision per session (e.g., supervision time). A significant correlation was found between supervision time and the Intervention domain on the HIS-SP. Moderate to strong correlations were found among most of the domains of the HIS-SP. For example, a strong correlation, and multicollinearity, was found between the Total Self-Efficacy on the HIS-SP and the Intervention domain. The items for the

Intervention domain are included as part of the calculation for the Total Self-Efficacy score. These two scores were never used in analysis together.

Table 8

Correlation Matrix of Research Variables for Graduate Students

	Supervision Frequency	Supervision Time	Intervention	Assessment	Counseling	Interpersonal	Research	Total Self- Efficacy
Supervision Frequency	-							
Supervision Time	-.27	-						
Intervention	-.20	.39*	-					
Assessment	.01	.18	.65*	-				
Counseling	.07	.08	.53*	.46*	-			
Interpersonal	.06	.21	.69*	.62*	.63*	-		
Research	.26	.18	.41*	.39*	.39*	.39*	-	
Total Self- Efficacy	-.02	.30	.90*	.83*	.71*	.83*	.59*	-

Note. All correlations marked with * are significant at $p < .05$.

Like the research variables for the graduate students, the ECPs' variables, listed in Table 9, also showed a weak or very weak relationship between the domains on the HIS-SP and supervision frequency. The amount of time spent in supervision per session was moderately correlated to scores on the Intervention domain of the HIS-SP, and scores from the Research domain of the HIS-SP. A significant correlation was found between the amount of time spent in supervision and the Intervention domain on the HIS-SP, Research domain of the HIS-SP, and the Total Self Efficacy score on the HIS-SP.

Table 9

Correlation Matrix of Research Variables for ECPs

	Supervision Frequency	Supervision Time	Intervention	Assessment	Counseling	Interpersonal	Research	Total Self- Efficacy
Supervision Frequency	-							
Supervision Time	-.35	-						
Intervention	-.06	.50*	-					
Assessment	-.15	.30	.60*	-				
Counseling	.02	.23	.70*	.48*	-			
Interpersonal	-.21	.17	.60*	.59*	.57*	-		
Research	-.26	.43*	.57*	.62*	.29*	.33*	-	
Total Self- Efficacy	-.15	.45*	.93*	.80*	.77*	.76*	.67*	-

Note. Correlations reported as .00 are due to rounding. All correlations marked with * are significant at $p < .05$.

Data Analysis and Hypotheses Results

Research Question 1

Does perceived self-efficacy differ between school psychology graduate students and early career school psychologists (ECPs) in the areas of assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills?

It was hypothesized that the level of self-efficacy would differ between the two groups in the sample. It was believed that with more experience, the school psychologist would achieve higher levels of self-efficacy. Therefore, it was believed that ECPs would have higher self-efficacy than graduate students, which is consistent with prior research and theoretical conceptualizations of the construct.

It was initially proposed that a MANOVA would be performed to analyze the difference in self-efficacy among the groups. However, not all assumptions were met. The assumption of interval or ratio data was met due to using the HIS-SP as the outcome measure. The sample contained at least two independent groups. The sample size, although smaller than desired, was appropriate to perform a MANOVA. These data were examined for outliers using boxplots for visual detection, and using Mahalanobis Distance. Six participants' data displayed outliers and were therefore excluded from the analyses. The assumption of homogeneity of variance was met using Box's M test of equality of variance ($p = .157$). However, the Levene's Test of Equality of Error Variance suggested that significant variance was present in the Assessment scale of the HIS-SP. The data were also linear, as depicted in a scatterplot matrix. The assumption of multicollinearity was ruled out as well. The dependent variables were only moderately correlated. Data

were next checked for normality using the Shapiro-Wilk test of Normality. Data for the Assessment and Professional Interpersonal Skills were not normally distributed, but the other three scales (i.e., Intervention & Consultation, Counseling, and Research Skills) were normally distributed. The assumption of normality was therefore not met.

Due to the inability to meet all the underlying assumptions needed to perform a MANOVA, nonparametric statistics were used. Finch (2005) and Katz and McSweeney, (1980) recommend the use of a Kruskal-Wallis test in this instance. A Kruskal-Wallis test was performed to evaluate differences in self-efficacy among ECPs and school psychology graduate students. The assumptions for the Kruskal-Wallis test include ratio or interval data and equal groups. These assumptions were therefore met.

Table 10 shows that the initial Kruskal-Wallis test was significant for Counseling Skills self-efficacy $X^2(1, N= 84) = 5.53, p = .02$ and for Assessment Skills self-efficacy $X^2(1, N= 84) = 4.65, p = .03$.

Table 10

Kruskal-Wallis Analysis

HIS-SP Scale	Chi-Square	df	p
Intervention & Consultation	.61	1	.43
Assessment	4.64	1	.03
Counseling	5.53	1	.02
Professional Interpersonal	1.05	1	.31
Research	1.18	1	.28

Mann-Whitney *U* tests were conducted to examine pairwise differences between the groups. Type I error was controlled for using the Bonferroni adjustment. Because there are two comparisons within this sample, the adjusted *p* value was .025. The results

of this analysis indicate a significant difference between ECPs' and school psychology graduate students' level of Counseling Skills self-efficacy ($p = .02$). Additional statistics from the Kruskal-Wallis analysis are found in Table 10. ECPs reported significantly higher self-efficacy for Counseling Skills than school psychology graduate students.

Research Question 2

Do school psychology students and early career school psychologists (ECPs), who report being satisfied with their supervision experience, have higher levels of self-efficacy as measured by the total self-efficacy score on the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP)?

It was hypothesized that graduate students and ECPs who reported being satisfied with supervision would have significantly higher levels of overall self-efficacy by comparison to those who did not report being satisfied with supervision. However, due to sample size limitations, there were not enough participants who reported being dissatisfied with their professional supervision to run a correlation analysis. Out of the 50 ECPs included in the sample, 23 reported receiving professional supervision, while 27 reported that they did not receive professional supervision. Of the 23 ECPs who reported receiving professional supervision, 20 endorsed satisfaction with the supervision that they received. This indicates that only three ECPs, who received professional supervision, were dissatisfied with the supervision that they received. When school psychology graduate students were asked the same question, all 34 graduate students who completed the survey reported receiving professional supervision. Since professional supervision is a requirement of practicum and internship experiences, these findings are not surprising (NASP, 2011). Out of the 34 graduate students who received professional supervision,

30 were satisfied with the supervision that they received. Only four graduate students were not happy with their supervision experience. While these overwhelmingly positive self-reports are encouraging for the quality of professional supervision in the field of school psychology, these results did not lend themselves to meaningful statistical analysis due to the lack of variance in participants' responses to this item.

A post hoc decision was made to look at differences in satisfaction with supervision for the total sample. Given the differences between the groups, a nonparametric test was conducted. A Mann-Whitney *U* test was completed to determine differences in total self-efficacy on the HIS-SP between those participants who reported being satisfied with supervision compared to those who were dissatisfied. The results of the test were in the expected direction and significant, $z = -1.98, p < .05$. Participants who were satisfied with their supervision had an average rank of 30.63, while those who reported dissatisfaction had an average rank of 17.36. These results will be discussed further in the Limitations and Future Research Sections to follow.

Summary

This chapter summarized the descriptive data obtained from the demographic survey and HIS-SP. The analyses used to test the research question hypotheses were also discussed. Of the original 212 participants who took the survey, only 84 met inclusion criteria and provided valid, complete responses. Overall, participants reported relatively low levels of self-efficacy on the HIS-SP, with few significant differences among ECPs and graduate student ratings. However, ECPs did report significantly higher Counseling self-efficacy than graduate students. When examining frequency and satisfaction with professional supervision, no correlation analysis could be performed due to the limited

number of participants who reported dissatisfaction with supervision. Most ECPs and graduate students, who reported receiving professional supervision, were satisfied with the supervision that they received.

CHAPTER FIVE

DISCUSSION

Introduction

The purpose of this study was to explore the relationship between professional supervision and self-efficacy in early career school psychologists (ECPs) and school psychology graduate students currently completing either their practicum or internship experience. An ECP was defined as a school psychologist who was within seven years of receipt of his or her degree (APA, 2015). Professional supervision referred to supervision of practices and personnel within one's own area of practice (NASP, 2011). In this case, the supervisor needed to have training and knowledge in school psychology.

As part of this study, ECPs and school psychology graduate students completed a demographic questionnaire, which included information about their supervision experience. Participants also completed the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP; Huber, 2006). Group differences in self-efficacy, as well as supervision practices, were assessed. The relationship between satisfaction with supervision and self-efficacy was explored.

This chapter will discuss the results that were presented in Chapter 4. The results will be interpreted in relation to the research questions. Connections to previous research will be highlighted, and implications for the field of school psychology will be discussed. Finally, the limitations of the study will be outlined and suggestions for future research will be explored.

Research Questions and Hypotheses

Research Question 1

Does perceived self-efficacy differ between school psychology graduate students and early career school psychologists (ECPs) in the areas of assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills?

It was hypothesized that the level of self-efficacy would differ between school psychology graduate students and ECPs. It was believed that with more experience, the school psychologist would achieve higher levels of self-efficacy. However, as the individual gains more experience, they are also likely receiving less structured supervision. A study by Guiney (2010) supports this hypothesis specific to consultation skills. Guiney found that with more experience, graduate students and practitioners in school psychology reported greater perceptions of self-efficacy related to consultation. Increased peer supervision also led to greater perceived self-efficacy with consultation. Guiney used her own created scale, the Counseling Efficacy Scale (CES), to measure counseling self-efficacy.

Phifer (2013) utilized the HIS-SP with a group of experienced school psychologists, with an average of 11 years of experience in the field, and she found relatively high levels of self-efficacy with her experienced sample. Similarly, Guest (2000) found that school psychologists could maintain relatively high levels of self-efficacy across their careers. Roth (2006) also examined differences in self-efficacy between school psychology graduate students and school psychologists, using the HIS-SP, and found that professional school psychologists reported greater self-efficacy in

intervention and consultation skills, assessment skills, counseling skills, and professional interpersonal skills than school psychology students. No differences were found in self-efficacy for research skills. Therefore, previous research supports the hypothesis that with more experience in the field, comes greater perceptions of self-efficacy.

The results from this study partially supported this hypothesis. A Kruskal-Wallis analysis indicated a significant difference between ECPs' and school psychology graduate students' level of counseling skills self-efficacy ($p = .02$). ECPs reported significantly higher levels of self-efficacy for counseling skills than school psychology graduate students. Differences in self-efficacy related to the other domains of practice were not significant. It is believed that the smaller than desired sample size may have impacted the variability and limit the generalizability of these results ($n = 84$). However, these results are consistent with Huber's (2006) original study. She found that school psychologists had higher perceived self-efficacy than school psychology graduate students in counseling skills, as measured by the HIS-SP. However, she also found that school psychologists had higher perceived self-efficacy in professional interpersonal skills and assessment skills. Huber attributed her results to the fact that practicing school psychologists had more experience than school psychology graduate students.

The counseling field has presented mixed results related to self-efficacy and overall experience level. Larson and Daniels (1998) completed a review of 32 studies looking at counselor self-efficacy and found self-efficacy was higher for those counselors with experience as compared to those with no experience. When looking at counseling students' self-efficacy, some studies show higher self-efficacy for more advanced

students, while other studies show that the increases in self-efficacy among counseling students are minimal after the initial stages of training.

Another interesting finding of this study was relative to the overall levels of perceived self-efficacy among the participants. Participants endorsed relatively low levels of self-efficacy as compared to previous research. The average overall level of self-efficacy for ECPs and school psychology graduate students only fell within the second quartile, based on Huber's (2006) norms (see Table 7, page 60). This contrasts with Phifer's (2013) study, in which she found that school psychologists experienced relatively high levels of self-efficacy. Phifer's average total self-efficacy score on the HIS-SP fell within the fourth quartile using Huber's norms. It is again important to note that Phifer's study was comprised primarily of experienced school psychologists, while the present study's sample included ECPs and graduate students, a more inexperienced sample. This could point to the importance of professional development, supervision, and overall experience in building self-efficacy across a school psychologist's career. Findings by Manz, Mautone, and Martin (2009) found that increased time spent working with families led to greater professional efficacy in family-school collaboration. They also found that school psychologists who received professional development in that area showed increased self-efficacy.

These findings are in line with Bandura's (1977) original research on self-efficacy. He indicated that self-efficacy is based on four sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. It is likely that with increased experience, a school psychologist would have more exposure to performing certain tasks, which in time should contribute

to increased performance accomplishments. With increased experience and professional development, a school psychologist should also have more experiences observing other professionals modeling skills in the field, such as counseling skills. However, performance accomplishments and experiences alone are not enough to improve self-efficacy. A school psychologist's perceptions of these events have larger impacts on self-efficacy. For example, does the school psychologist attribute his or her success to the effort that was put forth? Do they feel that the effort that they put forth will make a difference? The work environment and relationship with one's colleagues and supervision can have an impact in these beliefs.

Bandura (1993) proposed that a learning environment that emphasizes improvement as acquirable, focuses on personal accomplishments, and highlights self-comparison, rather than competitive social comparison, is well suited to promote a sense of self-efficacy. In the field of school psychology, supervisors have a responsibility to cultivate an environment where school psychologists can continue to grow by building their skills, confidence, and self-efficacy.

Research Question 2

Do school psychology students and early career school psychologists (ECPs), who report being satisfied with their supervision experience, have higher levels of self-efficacy as measured by the total self-efficacy score on the Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP)?

It was hypothesized that school psychology graduate students and ECPs who reported being satisfied with supervision would have significantly higher levels of overall self-efficacy by comparison to those who did not report being satisfied with supervision.

A previous dissertation by Trant (2000) supports this hypothesis. Trant found that increased satisfaction with supervision as a graduate student led to greater perceived self-efficacy during the first year on the job as a school psychologist.

Due to a lack of variability in the sample, there were not enough participants who reported being dissatisfied with their professional supervision to run a correlation analysis to answer this research question. Twenty-three out of the 50 ECPs included in the sample reported receiving professional supervision, while 27 ECPs reported that they did not receive professional supervision. Of the ECPs who reported receiving professional supervision, 20 endorsed satisfaction with the supervision that they received. Thus, 87% of the ECPs, who received professional supervision, were satisfied with it. All the school psychology graduate students in the sample indicated that they received professional supervision. This is not surprising since the National Association of School Psychologists (NASP, 2011) recommends at least two hours of field-based supervision per week for school psychology interns. Out of the 34 graduate students who received professional supervision, 88% were satisfied with the supervision that they received. Therefore, relatively high levels of satisfaction with supervision were reported by participants. High levels of satisfaction with supervision were also reported by Chafauleas, Clonan, and Vanauken (2002). However, in a study by Thielking, Moore, and Jimerson (2006), only 54% of school psychologists reported feeling satisfied with supervision.

A post hoc, Mann-Whitney *U*, analysis of the total sample showed that there was a significant difference in total perceived self-efficacy between those participants who reported being satisfied with supervision compared to those who reported feeling

dissatisfied. This result is encouraging and generally supports the hypothesis that those who reported feeling satisfied with supervision reported higher overall perceived self-efficacy.

Findings from this study were consistent with previous research on supervision in the field. Over half of the ECPs in the sample were not receiving professional supervision, even though NASP (2011) recommends that newly credentialed school psychologists receive at least an hour a week of supervision or mentoring. Similar findings have been found across decades of research on supervision of school psychologists (Fischetti & Crespi, 1999; Ross & Goh, 1993; Zins, Murphy, & Wess, 1989).

Results of this study are more promising than previous research, which reported that 70% of school psychologists desired supervision, while only 10% reported receiving supervision (Fischetti & Crespi, 1999). Zins and colleagues (1989) found that 23% of school psychologists received supervision, while Ross and Goh (1993) found that 31% of their sample received supervision. Less than one third of the ECPs in Ross and Goh's study received the recommended one hour of supervision per week. A more recent study from Australia found that 66% of school psychologists surveyed received supervision. They also found that school psychologists with less experience or higher caseloads were more likely to receive supervision (Thielking et al., 2006).

In previous research, many school psychologists were evaluated by administrators instead of professionals with experience in school psychology. One study found that 75% of school psychologists were evaluated by administrators. Only 18% of the sample was evaluated by a fellow school psychologist (Harvey & Pearrow, 2010). This study

found that most participants indicated that they were receiving supervision from a school psychologist. Graduate students met more frequently with a supervisor, and for longer, sessions than ECPs. Due to the strict supervision requirements for graduate students, they may have been more likely to meet with a supervisor on a consistent basis, for a set amount of time, to meet internship and practicum requirements.

Implications for School Psychologists

Crespi and Dube (2005) called for a national agenda that emphasizes the importance of professional supervision in the schools. NASP recognizes the importance of supervision and advocates that all school psychologists, regardless of experience level, have access to supervision by an individual knowledgeable about school psychology (NASP, 2011). In 2009, NASP created the Early Career Committee (ECC), with the goal of understanding the support available to school psychologists post-graduation (Guiney, Newman, Silva, Valley-Gray, & Barrett, 2016). This committee created the first national survey of ECPs to help address issues related to lack of post-graduate professional support. Guiney and colleagues found that 90% of ECPs thought supervision was important, but only 38% had access to professional supervision. Most ECPs who did receive supervision, did not meet with their supervisor for the NASP-recommended one hour per week. Mentoring was available to 55% of the ECPs surveyed (Guiney et al., 2016).

The continued lack of supervision for school psychologists, and especially the inexperienced ECPs, is troubling. Supervision and professional development have been found to be one of the most promising ways to increase self-efficacy (Manz et al., 2009). The relationship between supervision and self-efficacy plays an important role in the

school psychologist's ability to successfully perform various job duties, and can even impact job satisfaction (Mackoniene & Norvile, 2012). Manz and colleagues determined that school psychologists who received professional development perceived an increase in their self-efficacy. Research indicates that individuals with lower self-efficacy may be less willing to take risks, lack perseverance when experiencing failure, and avoid the learning process (Larson & Daniels, 1998). Motivation is impacted by one's self-efficacy. This then impacts the goals someone sets for themselves and how much effort they put forth in achieving such goals. Their resilience when presented with failure is also dependent on their level of perceived self-efficacy (Bandura, 1977, 1993). It was also found that experience in an area, without supervision was insufficient to produce changes and improve skills (Ross & Goh, 1993). This could account for the relatively low levels of perceived self-efficacy reported by the ECPs in the present study's sample. Only 46% of the ECPs reported receiving professional supervision, and when compared to Huber's (2006) study norms, the ECPs in this study were within the second quartile for overall self-efficacy.

Recommendations to Improve Supervision for ECPs

Without access to supervision, school psychologists may have greater difficulty developing higher level skills (Harvey & Pearrow, 2010). Best practices in school psychology shift rapidly. Within three to five years of being introduced, half of what is learned in school psychology graduate training is estimated to be out of date (Fowler & Harrison, 2001). Supervision may be one solution to help school psychologists adapt to changes in the field. Guiney and colleagues (2016) recommended that school districts work to formalize supervision and mentoring arrangements. Districts could provide

recognition and compensation for those that volunteer to supervise their novice colleagues. It should be stressed that supervision time can be used as professional development towards renewing certifications. School psychology graduate programs could offer support to those who lack training in supervision. State school psychology associations could also work to advocate for supervision for ECPs, and school psychologists at all levels of experience (Guiney et al., 2016). Researchers, such as Ross and Goh (1993), have reported a lack of training opportunities in school psychology supervision. They found that only 25% of their sample of school psychologists received training in supervision, while only 11% received that training within their school psychology program. Other barriers to adequate supervision include the time involved. Thirty percent of school psychologists in Ross and Goh's sample indicated that they did not have a desire to supervise other school psychologists because it is too time consuming.

NASP (2016a) has recently put forth recommendations for postgraduate mentorship for ECPs. For example, it was recommended that mentors be appropriately qualified, and that a mentor and mentee form a mentorship agreement. Roles and responsibilities should be clearly set. McIntosh and Phelps (2000) recommended that mentoring programs could be a viable alternative to supervision for ECPs. Both the mentor and mentee can benefit from a mentorship. A mentorship also places less pressure on the mentor than a supervisory relationship would on a supervisor. A mentor is not liable for his or her mentee's work as a supervisor may be, and a mentor is not responsible for any evaluative duties. NASP (2016a) outlined recommended guidelines

and best practices for a mentorship relationship. They recommended documenting the content of sessions, as well as progress made towards goals set.

Recommendations to Increase Self-Efficacy Through Supervision

To guide the supervision process, a supervisor or mentor may choose to begin measuring a supervisee's level of self-efficacy. By being aware of areas a supervisee may lack self-efficacy, a supervisor can determine where more structured supervision may be warranted. Larson and Daniels (1998) recommended role plays, modeling, and visual imagery to improve self-efficacy. Positive feedback from a supervisor may also help to increase self-efficacy and serve to lower anxiety (Harvey & Struzziero, 2008; Larson & Daniels, 1998). Also, as one gains positive experiences over time, self-efficacy should improve (Bandura, 1977).

Limitations

The limitations of the present study will be discussed below regarding the possible threats to internal and external validity.

Threats to Internal Validity

As with most research studies, this study has several threats to validity that could have influenced the results. A possible threat to internal validity was the history of the participants. It is unknown what content was covered in the training programs that the participants graduated from or were currently attending, and what their general work ethics were. A person's previous experiences can influence self-efficacy and what he or she may expect from a supervisor.

Selection and the instrumentation used could also affect internal validity. The participants were selected using convenience sampling, which led to many of the

participants being from the mid-Atlantic region of the United States of America.

Instrumentation is also a possible threat, because the validity and reliability is not known for all measures, such as the demographic survey. Another limitation was the size of the sample collected. Only about half of the surveys completed could be included in the study. Many surveys contained incomplete data. This also led to more ECPs than graduate students completing the survey.

Based on the limited number of participants, it was not possible to run parametric analyses when examining the relationship between satisfaction with supervision and overall self-efficacy. The participants in this sample were overwhelmingly satisfied with the professional supervision that they received. Another limitation was the use of a survey that relied on participant self-report. It is possible that participants were not accurate when indicating how efficacious they feel completing various tasks. Due to a sociability bias, participants may have rated themselves more favorably. This threat to validity was minimized due to participants not having to submit identifying information, such as their name, on the survey.

The way this study measured satisfaction with supervision may also be considered a limitation. Participants were to indicate using “yes/no” options whether they were satisfied or not with the professional supervision that they received. Using a Likert scale to indicate satisfaction with supervision may have led to different results. For example, some participants may have been uncomfortable answering a definitive answer like “no” if they experience both positive and negative supervision experiences. It is hypothesized that by obtaining a larger, more even sample, results of this study could have differed.

Measuring satisfaction with supervision on a Likert scale may have also led to more variability in responses, which would have lent itself more to analysis.

Threats to External Validity

There are also some possible threats to external validity. The relationship between the sample and the population could be a threat, because it may be difficult to generalize the results beyond the sample used in the study. Most the sample was from the mid-Atlantic region of the United States of America. Therefore, it may be difficult to generalize the results beyond this area. Another reason it may be difficult to generalize the results beyond this study is due to the way school psychology practicum experiences are set up. Content, length, and quality of practicum experiences differ based on the practicum site (Li & Fiorello, 2011; NASP, 2010). There is also no accreditation requirement for practicum sites (Li & Fiorello, 2011). This could lead a participant from one practicum site to have very different experiences, and therefore varying levels of self-efficacy, than a student from another practicum site. In an attempt to include practicum students with similar levels of experience, only post-master's degree practicum students were included in the study.

As was similarly discussed, related to internal validity, history-treatment interaction and factors related to validity and reliability of the measures used could affect generalization of results. Finally, time of measurement could also impact the results. For example, a school psychologist may answer the survey differently at the beginning of the school year than he or she would at the end of the school year. Caseloads vary throughout a school year, which could influence stress levels and perceptions of competence.

Recommendations for Future Research

The results found that many ECPs were not receiving the recommended one hour of supervision per week, while all school psychology graduate students were receiving professional supervision. Graduate students met with their supervisors more often and for longer sessions than ECPs. When examining self-efficacy, ECPs reported significantly high levels of counseling self-efficacy than graduate students.

It is recommended that future research replicate this study with a larger, national sample, which may lead to more significant findings. This will allow results to generalize more to the entire United States' population of school psychologists and graduate students. With a larger sample, it would also be more likely that the link between satisfaction with supervision and self-efficacy could be explored. When attempting to collect a sample that includes school psychology graduate students, researchers may want to limit themselves to school psychology interns since internship requirements are more explicitly defined than practicum experiences. If including practicum students, researchers should decide on how they want to define the practicum experience prior to collecting data.

Future research into self-efficacy should continue to use a domain-specific measure, such as the HIS-SP. Bandura (2006) recommended the use of domain-specific measures of self-efficacy, because general measures of self-efficacy are too ambiguous and are limited in their predictive value. Future research that focuses on satisfaction with supervision may also want to consider using a Likert scale to measure satisfaction instead of a "yes/no" option. This may lead to more variability in the results.

Future research could also further explore professional development among ECPs. Since over half of the ECPs surveyed reported not receiving professional supervision, it would be interesting to determine what types of professional development they took part in to develop and maintain their skills.

Due to the limited amount of training for school psychology supervisors, it may be interesting to further explore the role and training of the supervisor (Ross & Goh, 1993). It would be thought-provoking to explore a supervisor's perceived self-efficacy and how it relates to their training experiences. Research could further expand to include the experiences and self-efficacy of the supervisee. For example, does low perceived self-efficacy in a supervisor correlate to low self-efficacy in a supervisee? Future research could also further explore specific supervision techniques and the impact they have on a supervisee's self-efficacy. This could help to influence supervision practices in the field.

Although the research into supervision of school psychologists has grown in recent years, there is still work to be done for districts and other employers to understand the importance of professional supervision. The importance of supervision at the graduate level appears to be well understood, but post-graduate supervision still is not a regular occurrence, even though it is recommended by NASP. Additional research to support the need for supervision may make it a more common practice. Incorporating self-efficacy research further helps to support the need for quality supervision. Supervisors help school psychologists to further develop self-efficacy and keep up with changes in the field. The link between supervision, job satisfaction, and burnout has been

established (Huebner, 2002; VanVoorhis & Levinson, 2006). Therefore, supervision may be vital in order to retain qualified school psychologists.

Conclusions

The purpose of this study was to examine the relationship between satisfaction with supervision and perceived self-efficacy among ECPs and school psychology graduate students. The study also aimed to determine whether ECPs and graduate students experienced differing levels of self-efficacy in assessment skills, intervention and consultation skills, counseling skills, professional interpersonal skills, and research skills. Due to obtaining a limited number of participants, too few ECPs and school psychology graduate students reported dissatisfaction with supervision. Therefore, the analysis was unable to be run to determine if a relationship between satisfaction with supervision and perceived self-efficacy existed. However, ECPs did have significantly higher self-efficacy related to counseling skills than graduate students. Significant differences did not exist related to self-efficacy for assessment skills, intervention and consultation skills, professional interpersonal skills, or research skills. Differences in overall satisfaction with supervision were not evident among the groups. However, graduate students did receive supervision more frequently and for more time per session than ECPs.

Reports from this study, as well as recent research (Guiney et al., 2016), indicate that most ECPs are not receiving the recommended one hour of weekly supervision that is advocated for by NASP. Continued research is needed to further support the need, and importance, of supervision for ECPs. These novice practitioners are fresh out of an environment where regular supervision is common practice, and they begin a new

journey navigating their careers for the first time, with much less support than they were previously accustomed to. Continued research looking at the relationship between self-efficacy and supervision could further support the need for professional development and supervision post-graduation.

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Appendix A

Graduate Coordinator Letter

Dear School Psychology Graduate Coordinator,

My name is Felicia Kaas, and I am a school psychologist presently working on my dissertation at Indiana University of Pennsylvania. With my research, I plan to examine the relationship between supervision and self-efficacy in early career school psychologists, school psychology interns, and school psychology practicum students.

I am writing to you to request the participation of your internship and practicum students. It would be greatly appreciated if you could forward this email and the following Qualtrics link to all school psychology students currently completing their practicum experiences or internship experiences. I am also asking for early career school psychologists to complete this survey. The American Psychological Association defines an early career psychologist as seven years or less since the receipt of their degree. I would appreciate it if this survey could be forwarded to your recent graduates as well.

Thank you for your help in furthering my research.

This project has been approved by the Indiana of University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724-357-7730).

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Please follow this link to participate in the study:
https://iup.co1.qualtrics.com/SE/?SID=SV_7VyTpEoDXcRnfUN

Appendix B

Letter to State Organizations

Dear [Name of State Organization],

My name is Felicia Kaas, and I am a school psychologist presently working on my dissertation at Indiana University of Pennsylvania. With my research, I plan to examine the relationship between supervision and self-efficacy in early career school psychologists, school psychology interns, and school psychology practicum students.

I am writing to you to request the participation of your student and early career members. It would be greatly appreciated if you could forward along this email and the following Qualtrics link to all school psychology students and practitioners in your organization. I am asking for practicum students, internship students, and early career school psychologists to complete this survey. The American Psychological Association defines an early career psychologist as seven years or less since the receipt of their degree. I would appreciate it if this survey could be forwarded to your members.

Thank you for your help in furthering my research.

This project has been approved by the Indiana of University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724-357-7730).

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Appendix C

Demographic Survey

1. Please indicate your current role:

Early career school psychologist (Defined by APA (2015) as those individuals with no more than seven years of experience following the receipt of their degree).

School psychology intern

School psychology practicum student

None of the above

2. What graduate school are you attending/ have you attended to receive your school psychology degree?

3. What is your sex?

Female

Male

Other

4. Identify your highest level of education:

Bachelor's Degree

Master's Degree

Educational Specialist (Ed.S.) or Certificate of Advanced Graduate

Study in School Psychology (C.A.G.S.)

Ph.D/ Ed.D. / Psy.D. or Other Related Doctoral Degree

5. In which state are you currently employed (or completing your internship/practicum)?

6. Rank the following job roles from those in which you think you have the most experience to those in which you have the least experience (please rank 1-6, with 1 indicating the role in which you have the most experience).

_____ Assessment: Time designated for the assessment of academic skills, cognitive abilities, and behavior, observation of students, scoring assessments, and report writing.

_____ Intervention: Time designated for designing, implementing or evaluating the effectiveness of student, class-wide, or school-wide interventions.

_____ Counseling: Time designated for individual counseling, small-group counseling, or crisis intervention.

_____ Research: Time designated for researching current best practices, sharing research with school faculty or parents, or evaluating the effectiveness of programs within the school.

_____ Consultation: Time designated for activities involving the problem solving process, such as participation in pre-referral meetings and conferences with parents, faculty and/or administrators.

_____ Supervision: Time designated for supervising other school psychologists, students, or related school professionals.

7. Professional supervision refers to “oversight of the specific professional practices of personnel within one’s own profession, and requires specific training and knowledge in the area of supervision” (NASP, 2011 p. 1).

Do you receive professional supervision as defined above?

Yes

No

Are you satisfied with the professional supervision you receive?

Yes

No

(If you receive professional supervision, answer questions 8-11.)

8. How often do you receive professional supervision?

Please choose one:

Weekly

Twice a month

Monthly

Quarterly

Semester

Yearly

9. What is the average amount of time spent in professional supervision per session?

_____ < 30 minutes

_____ 30-59 minutes

_____ 60-89 minutes

_____ 90-120 minutes

_____ 120+ minutes

10. Who provides the professional supervision?

_____ Principal

_____ Director of Special Education

_____ Director of Psychological Services

_____ Director of Pupil Services

_____ A fellow school psychologist

_____ Other (please specify) _____

11. Describe the format of professional supervision received.

_____ Individual

_____ Group

_____ Combination of both individual and group

12. Have you received any training in supervision?

Yes

No

(If you answered Yes, answer question 13.)

13. What type of training in supervision have you received (check all that apply)?

Graduate course

Multiple graduate courses

Supervision-related internship

Professional development workshop or conference

Read a book or article on the topic

Other: _____

14. Mark all supervision techniques below that your current supervisor has demonstrated:

___ Your supervisor encourages self-report of your sessions with students and discussion of how personal issues may impact your relationships with students.

___ Your supervisor teaches you appropriate skills using behavioral feedback, direct observation, modeling, rehearsing, and role plays.

___ Your supervisor appears to draw from your strengths to make incremental changes towards your goals. Your supervisor may help you organize your past experiences in order to influence your future practice.

___ As you have gained more experience, your supervisor has given you less direction but continues to monitor your progress. They may have begun the supervision experience in a “teacher” role, but act as more of a consultant as you gain more experience.

Appendix D

Huber Inventory of Self-Efficacy for School Psychologists (HIS-SP)

This questionnaire is designed to help us gain better understanding of the kinds of things that create difficulties for school psychology students and professionals. Please rate how well you are currently able to do the tasks described below by writing the appropriate number. Your answers will be kept strictly confidential and will not be identified by name. Please give honest responses related to your perceived capabilities.

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

- | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------|----------|---------------------|----------|--------------------|----------|------------------|
| Not well at all | | Not too well | | Pretty Well | | Very Well |
- ____ 1. How well can you define problem behavior(s) when conducting a functional behavior assessment?
- ____ 2. How well can you terminate a consultative relationship?
- ____ 3. How well can you evaluate the psychometric properties of tests?
- ____ 4. How well can you change or add tests or other assessment procedures as a result of information you obtain early in the assessment process?
- ____ 5. How well can you consult with other school personnel in addressing mental health related issues?
- ____ 6. How well can you identify training needs common to a school (i.e. parent and teacher training)?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1 2 3 4 5 6 7

Not well at all Not too well Pretty Well Very Well

____ 7. How well can you assist teachers and other educators in keeping informed about research related to their profession?

____ 8. How well can you develop a behavioral intervention plan?

____ 9. How well can you adhere to due process guidelines in all decisions affecting students?

____ 10. How well can you understand measurement statistics in adequate depth to evaluate published research?

____ 11. How well can you conduct studies that answer research questions of interest?

____ 12. How well can you establish and maintain rapport with children/adolescents you are assessing?

____ 13. How well can you understand cultural issues that impact home-school collaboration?

____ 14. How well can you implement interventions?

____ 15. How well can you use knowledge of intervention research to generate realistic solutions to problems?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1 2 3 4 5 6 7

Not well at all Not too well Pretty Well Very Well

____ 16. How well can you use critical thinking skills to pull all of the information together when writing a report?

____ 17. How well can you conduct crisis counseling?

____ 18. How well can you incorporate the findings of research into your practice?

____ 19. How well can you perform informal assessments (e.g. phonics test, rate of reading)?

____ 20. How well can you observe a student's behavior in several natural settings (i.e. classroom, playground, lunchroom, etc.)?

____ 21. How well can you summarize the findings of relevant research?

____ 22. How well can you give clinician administered assessment instruments?

____ 23. How well can you interview parents?

____ 24. How well can you follow the legal and ethical standards of school psychology in practice?

____ 25. How well can you administer criterion-referenced tests?

____ 26. How well can you collect data regarding problem behaviors?

____ 27. How well can you give self-report instruments to clients?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1	2	3	4	5	6	7
Not well at all		Not too well		Pretty Well		Very Well

____ 28. How well can you assess instructional environments (i.e. classroom time, motivation techniques, and opportunities provided for practice of skills)?

____ 29. How well can you follow standardized procedures when using assessment tools?

____ 30. How well can you use knowledge of the internet to generate realistic solutions to problems?

____ 31. How well can you set measurable and observable goals?

____ 32. How well can you develop rapport with teachers?

____ 33. How well can you define a problem then obtain agreement about the problem with a consultee?

____ 34. How well can you apply leadership skills for crisis prevention and management?

____ 35. How well can you follow the steps in conducting a functional behavior assessment?

____ 36. How well can you develop an effective counselor-client relationship?

____ 37. How well can you examine school records?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1 2 3 4 5 6 7

Not well at all Not too well Pretty Well Very Well

____ 38. How well can you use positive interpersonal skills when relating to others in professional interactions?

____ 39. How well can you conduct workshops for the training needs of a school or district?

____ 40. How well can you convey research findings to your colleagues and employers?

____ 41. How well can you administer visual-motor tests?

____ 42. How well can you understand family influence on student performance?

____ 43. How well can you administer social, emotional, and behavior measures?

____ 44. How well can you develop rapport with others with whom you interact in a professional capacity?

____ 45. How well can you use assessment findings to develop effective interventions?

____ 46. How well can you recognize your own limitations and biases?

____ 47. How well can you score assessment instruments?

____ 48. How well can you develop rapport with parents?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1 2 3 4 5 6 7

Not well at all Not too well Pretty Well Very Well

____ 49. How well can you design an intervention plan that can be employed across settings?

____ 50. How well can you access information regarding federal and state laws and regulations concerning the assessment of children with special needs?

____ 51. How well can you administer intelligence tests?

____ 52. How well can you evaluate the appropriateness of the norm group when interpreting test scores of an individual or group?

____ 53. How well can you communicate information to diverse audiences?

____ 54. How well can you evaluate the consultative process?

____ 55. How well can you promote partnerships between parents and educators to improve outcomes for parents?

____ 56. How well can you conduct pre-referral interventions?

____ 57. How well can you put planned changes into action within the entire organization?

____ 58. How well can you follow the steps in the assessment process?

____ 59. How well can you interview parents, teachers, students and others?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1	2	3	4	5	6	7
Not well at all		Not too well		Pretty Well		Very Well

____ 60. How well can you use effective listening skills?

____ 61. How well can you interview teachers?

____ 62. How well can you maintain certification or licensure and attend continuing education functions?

____ 63. How well can you critique research that has implications for practice?

____ 64. How well can you follow-up as necessary when involved in the intervention process?

____ 65. How well can you fulfill all legal requirements, in response to law and court decisions?

____ 66. How well can you adapt in difficult situations?

____ 67. How well can you evaluate interventions by collecting ongoing data?

____ 68. How well can you write recommendations for interventions?

____ 69. How well can you understand the effects of medication on children?

____ 70. How well can you interview students?

____ 71. How well can you assess appropriateness of referral for counseling?

____ 72. How well can you clarify implementation procedures and responsibilities?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1	2	3	4	5	6	7
Not well at all		Not too well		Pretty Well		Very Well

____ 73. How well can you help educate parents for participation in Eligibility/ IEP meetings?

____ 74. How well can you select interventions from the alternatives generated?

____ 75. How well can you can help schools and parent work together to design curricula and intervention for students?

____ 76. How well can you decide on what changes need to be made for an intervention to be successful?

____ 77. How well can you administer projective tests?

____ 78. How well can you use group counseling skills?

____ 79. How well can you recognize the basic principles of a research design?

____ 80. How well can you write to effectively communicate the most important points of a psycho-educational assessments?

____ 81. How well can you counsel children from different racial/ethnic groups?

____ 82. How well can you brainstorm a range of possible interventions?

____ 83. How well can you work collaboratively with all members involved in the intervention process?

Write a number 1 to 7 to indicate how well you are currently able to do the tasks described below.

1 2 3 4 5 6 7

Not well at all Not too well Pretty Well Very Well

____ 84. How well can you understand the consequences of assessment-related decisions?

____ 85. How well can you administer achievement tests?

____ 86. How well can you develop a functional hypothesis of the problem behavior?

____ 87. How well can you counsel individual children?

____ 88. How well can you interpret comprehensive assessment results for decision making purposes?

____ 89. How well can you use effective counseling skills?

____ 90. How well can you administer adaptive assessments?

____ 91. How well can you apply school based behavior modification principles and procedures to problems of the consultee?

____ 92. How well can you build a cooperative partnership in a consultative relationship?

____ 93. How well can you use play therapy?

____ 94. How well can you put into action a consultative plan?

____95. How well can you choose assessment instruments for addressing the referral concern(s)?

Appendix E

Consent Letter

Dear School Psychologist/ School Psychology Student,

My name is Felicia Kaas, and I am a school psychologist presently working on my dissertation at Indiana University of Pennsylvania. With my research, I plan to examine the relationship between supervision and self-efficacy in early career school psychologists, school psychology interns, and school psychology practicum students.

This letter serves to inform you of my study, as well as request your participation. All participation is voluntary, and all information collected will be kept confidential. All participants have the right to withdraw from the study while they are taking the survey by simply exiting the browser.

To participate in the study, you will continue on with this Qualtrics survey using the arrow at the bottom of the screen. Participants will be asked questions regarding demographics of training and education, as well as your role and level of supervision. Participants will be asked to complete the Huber Inventory of Self-Efficacy of School Psychologists (HIS-SP). The process should take about 20-25 minutes. All participants will have the opportunity to enter a raffle to win a \$50 Amazon gift card.

This project has been approved by the Indiana University of Pennsylvania's Institutional Review Board for the Protection of Human Subjects on 1/26/2016 (Phone: 724/357-7730). There are no known risks or discomforts associated with this research. The results of this study will be made available to participants upon request.

Thank you for your considerations. Your consent to participate in this study is implied by completing this survey.

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