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Communication Strategies for the School Nurse Mentor: A pilot training program

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Communication Strategies for the School Nurse Mentor: A pilot training program

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Communication Strategies for the School Nurse Mentor: A pilot training program

Section I-Executive Summary

Mentorship has widespread support among many disciplines for the impact on improved job satisfaction, decreased job turnover and decreased costs to organizations (Chen & Lou, 2013; Maddalena, Kearney, & Adams, 2012; Missen, McKenna, & Beauchamp, 2014). Ongoing support through mentorship is critical to nurses transitioning to a new role (Maddalena et al., 2012) and nurse mentors must be prepared for the role with relevant education tailored to their needs (Chia-Chi, Lin, Chen, Kang, & Chang, 2014). Though literature describing training programs for mentors is limited, some studies have reported an increase in confidence among mentors after training (Gray & Brown, 2016; Feldman et al., 2012). In addition, improved mentoring skills (that includes communication) is in literature (Feldman et al., 2012; Pfund et al., 2013).

In one large urban school district in Ohio, a school nurse, mentorship program was developed and implemented to assist new nurses in their transition to school health. Since no formal mentor training existed within the school district that employs this DNP nurse executive student, plans to conduct a pilot study to measure school nurse, mentor confidence after completion of an educational module on communication skills for the mentor were initiated. The study utilized a pre and post-survey design to measure the impact of the training program.

Section II-Problem Identification

Introduction

School nursing is a specialized autonomous practice of nursing that involves working with students, families, educators and community members to help students succeed in school (National Association of School Nurses, 2011). Because the role is broad in scope, involving knowledge of school law, health promotion, interdisciplinary teamwork and community health, helping a nurse assimilate to the new role can be challenging.

Registered nurses (RN) enter the school health field with various backgrounds including critical care, medical-surgical and psychiatric nursing to name a few. In fact, because of the scope of school nursing, a diverse work experience is preferred. School nurses need to be able to care for both adult and pediatric populations. For example, as part of the school nurse role, nurses see staff members for various medical issues, and care for students in need of mental health counseling, chronic disease management and/or health promotion (Board et al., 2011). Health disparities among racial groups and those in poverty require the nurse to be well versed in strategies to overcome many barriers to student learning resulting from poor health care such as uncontrolled asthma, diabetes, or uncorrected vision or hearing problems.

In Ohio, the process of obtaining school nurse licensure through the Ohio Department of Education (ODE) can help nurses learn about the role of the school nurse, but licensure is not required by law. Registered nurses licensed as school nurses in the State of Ohio must have completed a baccalaureate program in nursing and a post-baccalaureate school nurse, certification program. The program includes education related to nursing practice in the school

setting and educational law. A practicum or internship is also required (Ohio Department of Education, 2014; Licensing and education programs, 2015). Since licensure is not required, nurses employed by boards of education without ODE licensure cannot use the term "school nurse" and since the State of Ohio does not mandate that schools hire Licensed School Nurses (LSN), school districts can decide whether or not to employ nurses or other health personnel such as unlicensed health aids or licensed practical nurses. According to an Ohio Department of Health survey in 2008, only 69% of nurses in Ohio schools held school nurse licensure. Even after obtaining school nurse licensure, nurses entering school health can struggle with role transition and socialization in the new setting until they gain experience in the role. The very nature of nursing practice in an educational setting without the support of other health care professionals can lead to role confusion and subsequent anxiety (Maddalena et al., 2012; Hill & Sawatzky, 2011; Johnson, Hong, Groth, & Parker, 2010). Thus, believing that mentorship is beneficial to the new school nurse professional, especially when provided by confident mentors, this Executive Doctor of Nursing Practice (DNP) student conducted a clinical needs analysis after noting the benefits of mentorship that follows:

The Benefits of Mentorship

Mentorship positively effects the transition of the new school nurse. According to Holmes, Hodgson, Simar, and Nishimura (2010), mentoring is "a series of complex interactions between 2 individuals who have as their primary purpose the growth of the mentee" (p.336). Mentorship can bridge the gap between formal education systems and practice, giving school nurses a connection with an experienced nurse who can support the new role (Houghton, 2003). The added benefit of mentorship is that it can help the mentor and the mentee, leading to

increased job satisfaction on the part of both individuals (Chen & Lou, 2013; Holmes et al., 2010; Houghton, 2003).

In a qualitative study by Gray and Brown (2016), the authors discovered mentors felt ill-prepared to deal with mentees who were struggling even though there was a common assumption among trainees and mentors that "an experienced mentor had all the necessary knowledge to support the development of the trainee" (p. 213). The study demonstrated that mentors felt a heightened sense of responsibility and accountability for the performance of their mentees, which the authors found lead to reluctance of nurses to become mentors. Lack of time was a common barrier as well as the lack of monetary compensation and managerial support. The authors also discovered the introduction of a mentor program facilitated the development of the mentor and improved their sense of confidence and competency.

Clinical Needs Analysis of a Mentorship Program

In one large urban school district in Ohio, school nurse licensure is required of all new nurse hires, but not all prospective school nurses have the credential when they begin the role. Since school nurse licensure is not required at the time of hire, many registered nurses obtain the credential as a contingency of continued employment. Therefore, new nurses may not have completed the practicum required for school nurse licensure, leaving them unfamiliar with many aspects of school health. To compound the problem, a peer assistance and review (PAR) process had been in place since the beginning of school nursing in the district, using a public school teacher model to orient and evaluate first year school nurses rather than a model specific to school nurses.

Unfortunately, public school teachers are not familiar with nursing practice or the school nurse role and cannot legally evaluate nursing practice (Standards of practice relative to

Registered Nurse or Licensed Practical Nurse, 2015). Nursing supervisors tried to improve

support for new school nurses by supplementing PAR with experienced school nurses as

informal mentors. However, lack of resources, including time and money, as well as union rules

without provision for formalized nurse mentors prevented adequate assimilation of school nurses

into this non-traditional work setting. Public School teachers can evaluate the interpersonal and

organizational skills of nurses and to some extent, their professional appearance, but cannot

mentor nurses on nursing assessment and intervention or offer advice on clinic flow, priority

setting or appropriate referral of students and staff. A 2014 informal survey of experienced

school nurses by this author (Appendix A) showed that many experienced school nurses valued

informal mentorship by school nurses as the most important part of orientation that made them

feel comfortable in their new role as a school nurse.

Fortunately, through a union variance in 2015, nursing administrators in this DNP

student's school district developed a mentorship program for school nurses by experienced

LSNs. The variance renews annually. With a few years of union membership approval, the union

reform committee may lengthen the approval process to every two years (B. Carter, personal

communication, May 13, 2016).

Mentorship guidelines were developed (Appendix B) and mentors were selected based on

exceptional evaluations, interpersonal skills and a demonstration of interest and willingness to

mentor others. Monthly mentorship meetings established by administrators, support and

supervise mentors in their relationships with new school nurses. Support of mentors was needed

as mentorship for new school nurses began without mentors having formal preparation for their

role. In fact, during monthly meetings, mentors reported feeling frustrated by the lack of time to

devote to trainees and anxious about the responsibility of "knowing all the correct answers" to

questions posed by new school nurses. Mentors have also described a lack of authority to ensure that their protégés follow up with certain tasks (J. Blair, personal communication, February 22, 2016).

The literature identifies risks of mentoring as identified by mentors. The investment of time and emotion in helping the protégé adapt to a new role can take a toll and in the business world for example, judgment of the mentor could questioned if the protégé is not progressing in a timely manner, or the mentor wrongly judges the positive progress of the protégé (Zey, 1991). According to Zey, when managers recommend promotion for a protégé, "there is always the risk that the senior manager will miscalculate and the sponsored person will fail in the new position," which could result in demotion or termination of the manager (p. 10). Though this risk is unfounded in the school district, mentors may still feel anxious when their mentees do not perform well.

Once formal mentorship of new school nurses by experienced LSNs was established, school nurse mentors needed professional development in order to provide high quality orientation and support to the new school nurse and mitigate mentorship risks. In addition, the new school nurse mentor needed to build confidence in the ability to mentor effectively. It was important that professional development opportunities take into consideration time constraints of mentors and provide content consistent with best practices for mentoring behaviors.

Significance of the Problem to Nursing

The stress of role transition by nurses is well documented (Hill & Sawatzky, 2011; Maddalena et al., 2012; Johnson, Hong, Groth, & Parker, 2010) and the literature supports the positive benefits of mentorship to the discipline of nursing including improved job satisfaction and decreased job turnover for the new nurse, as well as the experienced nurse mentor. (Chen &

Lou, 2013; Maddalena, Kearney, & Adams, 2012; Missen, McKenna, & Beauchamp, 2014).

Nursing turnover is costly to organizations. In a literature review of ten articles on nursing

turnover costs in various organizations, Li and Jones (2012), discovered inconsistencies in the

way financial loss is conceptualized and measured with costs incurred ranging from $21,000 to

over $82 million per fiscal year.

Similar results reported in a comparative review of four articles by Duffield, Roche,

Homer, Buchan and Dimitrelis (2014), demonstrated nursing turnover costs as a global issue.

Turnover costs for the United States, New Zealand, Canada and Australia were studied and

revealed costs ranging from $20,561 (United States) to $48,790 (Australia), prompting the

authors to recommend a "greater focus on nurse retention by policy makers" (p. 2704).

Temporary replacement costs were identified as the "largest expense to health care organizations

across all four countries" (p. 2708). In the urban district of this DNP project, school nurse salary

costs the district $110,000 per year for a full time equivalent, which includes salary and benefits

(personal communication Human Resources, Feb. 2016). The hiring process to replace a nurse

takes approximately six to eight weeks. During this time, a school must go without nursing

coverage, or nurses pulled away from other buildings to cover, leaving at least two schools

impacted. Massachusetts Essential School Health Services recently performed a cost-benefit

study and demonstrated that "for every dollar invested in the program, society would gain $2.20"

(Wang et al., 2014, p. 646). The authors found decreased student absence when the nurse was in

the building, which translated to decreased costs to families through minimized wage loss. The

authors also took into account the lost productivity of school staff that must tend to students

when the nurse is absent and medical procedure costs saved by the ability of school nurses to

manage chronic disease.

In addition to financial costs, the turnover of nurses affects quality of care. According to Lartey, Cummings, & Profetto-McGrath (2014), nurse turnover has been associated with lower quality of care as experienced nurses leave the organization. The authors advocate finding ways to retain experienced nurses to prevent a decline in quality patient care.

Mentorship is an important component in the development of the new school nurse and there are mentoring practices that have been shown to predict mentoring benefits, such as welcoming, mapping the future, teaching the job, supporting the transition, providing protection and equipping for leadership (Weese, Jakubik, Eliades, & Huth, 2015, p. 387). When nurses feel welcome and supported, role transition can be positive. Ongoing support through mentorship is critical to nurses transitioning to a new role (Maddalena et al., 2012) and nurse mentors must be prepared for the role with relevant education tailored to their needs (Chia-Chi, Lin, Chen, Kang, & Chang, 2014). Organizations must develop and maintain a mentoring culture that includes leadership support, evaluation and a commitment to mentorship (Ibitayo & Baxley, 2014; Hill & Sawatzky, 2011), especially since there is a lack of role clarity among LSNs as well as perceived confidence in the ability to mentor effectively.

Literature Review

A mentor defined by the Merriam Webster dictionary is: "someone who teaches or gives help and advice to a less experienced and often younger person; trusted counselor or guide, tutor or coach" ("Mentor," 2015). In an interdisciplinary meta-analysis, Eby et al. (2012) defined mentoring as "a developmentally oriented relationship between a younger or less experienced individual (the protégé) and an older or more experienced individual" (p. 441). Mentoring has been generally categorized to take place in academic, workplace or personal spheres and can be formal or informal (Meier, 2013; Eby et al., 2012). Zey (1991) defines a mentor as a "person

who oversees the career and development of another person, usually a junior, through teaching, counseling, providing psychological support, protecting and at times promoting or sponsoring" (p. 7). More succinctly, "giving one's time to assist mentees in reaching their full potential" (Leak Bryant et al., 2015, p. 263). Some assert that mentoring is a triad involving the mentor, protégé and an organization because the organization benefits from the relationship between mentor and protégé (Weese et al., 2015; Zey, 1991).

Precepting and mentoring are often used simultaneously, yet precepting is typically used for nurses new to the profession, "whereas mentoring programs provide opportunities for networking and long-term career success" (Ibitayo & Baxley, 2014, p. 93). Chen & Lou (2013) describe the preceptor and preceptee relationship as being more superficial than mentorship and the investment of time shorter; "preceptors possess less seniority and may lack necessary experience" (p. 434). Mentors are able and willing to invest time in a mentee to introduce them to the organization, allow a safe environment for openness and honesty about the challenges of role transition and make introductions to key people that can support the new employee. In addition, mentors are open to sharing their own experiences while motivating and encouraging others (Reitman & Ramirez Benatti, 2014).

There is wide spread agreement in the literature that mentorship programs increase job satisfaction, prevent turnover of employees and decrease costs to organizations s (Chen & Lou, 2013; Weese et al., 2015; Ibitayo & Baxley, 2014; Missen et al., 2014). Missen et al. (2014) found the implementation of a transition program for new nurses, regardless of length, assists with positive job satisfaction and increased confidence of the new employee. The authors also identified a key finding of positive impact on decreasing turnover rates. Another interesting key finding was a decline in satisfaction scores among three studies when participants evaluated job

satisfaction at six months. This finding attributed to reality shock, "defined in the literature over

the last four decades as the period in the first year of practice when reality sets in" (p. 2430).

Though this systematic review demonstrates encouraging results of transition programs

(including preceptorships), the authors point out that eight of the eleven studies as weak in study

design due to sampling, method or low response rate to questionnaires.

     In a systematic review of eleven studies, Missen et al. (2014), sought to investigate

reported job satisfaction and confidence levels of new graduate nurses after various training

programs. To be included in the review, the authors required the studies be quantitative in nature,

and have used comparative analysis, either with control and experimental groups or by pre- and

post-test designs. Common among all eleven studies were two components of training programs,

theoretical or classroom instruction and preceptor-guided clinical experience. Two of the studies

reported having the average of a one-to-one preceptor 716 hours over one year. One study

described a team preceptorship where a novice nurse had a more inexperienced preceptor at the

start of employment, advancing to a more experienced preceptor as the novice nurse gained

expertise.

     Nurse residency programs (NRP) are one way organizations have addressed role

transition in new nurses. Anderson, Hair, & Todero (2012) explored the evidence behind NRPs

in a systematic review of twenty studies on the topic. The authors described two types of NRP's,

a standard three to four month orientation and a comprehensive model involving assignment of a

preceptor and various learning activities and experiences. With the exception of two qualitative

studies reviewed, the remainder of studies were quasi-experimental designs with ex post facto,

two group designs. The authors identified three main categories of outcomes in their review:

"RN self-image, nurse performance behaviors and health care organization outcomes" (p 207).

Most studies reported a positive outcome of self-image as well as report of increased employee

performance and productivity, although the authors suggest relevant competency rating scales

are scarce to measure nurse performance behaviors. The variability of turnover measurement

among studies made evaluation of impact difficult, yet studies supported a dramatic

improvement in retention rates with the implementation of NRPs.

Some important findings from this systematic review were "the need for evidence-based

high quality training for staff nurse preceptors" (Anderson et al., 2012, p. 210). The authors also

determined that "mentoring from trained preceptors should be done for a minimum of six months

and preferable for one year" (p. 210). Studies suggested that mentors need meaningful incentives

and carefully planned professional development to prevent burnout. Unfortunately, the literature

is unclear about the definition of high quality training for the mentor.

There is limited nursing research on the perceptions of mentors regarding their training

for the role or content that should be included in professional development of the mentor. A

mixed method study was completed by Chia-Chi et al. (2014) involving a questionnaire and

focus group interviews. The study took place in Taiwan so may have limited generalizability in

the United States. Eight Taiwan hospitals participated in the study with three hundred and eight-

six nurse preceptors responding. Nurses identified communication skill courses as the most

effective in their education to become preceptors and adult learning theory and principles least

effective. Among focus group respondents, nurses suggested training in relaxation techniques,

conflict and risk management, competency assessment skills and time management skills as

important.

In a correlational mixed design study by Blum (2014), the researcher explored preceptor

perception of support after viewing educational podcasts demonstrating caring responses to

several novice nurse, practice problems. The tools used to measure preceptors' perceptions were statistically sound and identified a positive correlation between the educational intervention and preceptors' feelings of support. The author made the video podcasts available online to all users and recommended uploading them to an intranet host so that employees could access during work hours. Unfortunately, a check of the web address resulted in inaccessible files. Access to viewing video podcasts might have provided the ability to further test preceptor perception of self-confidence in the mentor role contributing to the evidence base for program content of mentor training.

In a qualitative study by Gray & Brown (2016), the authors explored the impact of a training program on experienced mentors and mentor trainees. Using four focus groups, the authors asked about reasons nurses became mentors, the challenges they faced and the learning they experienced from the training program. Questions were also included specific to experienced mentors versus mentor trainees. The study included twelve nurses from adult, pediatric and mental health nursing. Seven of the nurses were experienced mentors and five were mentor trainees. Gray and Brown (2016) identified the following four themes: fear; time conflicts and other challenges; personal investment such as motivation, personal satisfaction and teamwork; context such as organizational support and lack of recognition. According to the authors, an unexpected bonus was the raised awareness of accountability felt by mentors.

Gray and Brown described the training program as a three month opportunity including theoretical content and "experiential learning, which involved an experienced mentor supervising and supporting a student mentor" (p. 212). The program was determined to have improved the theoretical understanding of mentorship while increasing confidence among mentors. The study also highlighted several challenges of mentors such as balancing patient care with mentoring of a

new nurse and lack of recognition and support for the role. Though mentors found the emotional investment of mentoring "daunting," after the training program, the study participants found the mentorship relationship worth the investment (p. 215).

In another qualitative study, McCloughen, O'Brien, & Jackson (2011) interviewed thirteen Australian nurse leaders about their views on mentorship using hermeneutic phenomenology. The nurses, not formally prepared for mentorship, believed that mentoring was an innate part of their personality. The study participants described life events that led up to their mentoring and all considered mentoring as a part of their role as leader. The authors concluded training of mentors should include experiential learning and reflection on experiences of mentoring to guide future relationships.

Much work about the effect of mentorship training in the field of education is available in the literature. In a descriptive and qualitative study done by Feldman et al. (2012), the authors evaluated the impact of a mentorship, training program developed for mid-career and senior faculty chosen as mentors at the University of California, San Francisco. The program included monthly half-day meetings with skill based exercises and case studies. The authors measured the frequency with which mentors (n=38) incorporated what they had learned in mentorship training. In addition, the authors explored perceived importance of mentoring to the mentor's career and confidence in mentoring skills. This study was a continuation of the work the authors completed three years prior and was to determine the long-term impact of a training program for mentors.

Feldman et al. (2012) concluded that confidence in mentoring was sustained for up to three years after the training program; mentors found their mentorship role to be an important aspect of their career. A majority of the respondents (two thirds) reported applying the skills they had learned to their mentoring relationship. Mentors reported lack of time and resources to

support mentoring as challenges to their role. Based on the positive results of the program, the authors developed new mentorship initiatives.

In a training program developed by Pfund et al. (2013) to fill a gap in the literature about programming for mentors, authors adapted the "Entering Mentoring" seminar to meet the needs of clinical and translational researchers at the University of Wisconsin. The components of the program were "(1) maintaining effective communication (2) aligning expectations, (3) assessing understanding, (4) addressing diversity, (5) fostering independence, and (6) promoting professional development" (p. 26); randomized controlled trial was carried out to determine the satisfaction of mentors with the program. Of the 288 mentors selected from across 16 institutions, 144 were assigned to the mentor training programs, the remaining assigned to the control group. Surveys measured the perceived effectiveness of each program component and each learning activity rated according to its usefulness to the respondent. The survey also measured the mentor's perceived skill development.

Pfund et al. (2013) found 88% of mentors reported the training program was worthwhile. The authors found this remarkable because the mentors were "senior faculty with at least 15 years of mentoring experience" (p. 30), and literature had concluded that experienced mentors might not find training beneficial. Significant learning occurred over the six mentoring competencies and 90% reported they would recommend the training to other mentors.

Similar results were reported in a mentor, training program developed by Johnson & Gandhi (2015), where authors found significant improvements in mentor's perceived mentoring skills after a two-day mentoring workshop. The program components were communication, leadership skills, emotional intelligence, and diversity and thirty-four faculty participated from across the United States. The learning activities incorporated, "didactic presentations; break-out

sessions; role-playing; small-group brainstorming sessions" (p. 685). In online surveys

administered before the workshop and again, two weeks later, participants ranked

communication strategies, leadership styles, self-awareness and emotional intelligence as most

important and mentoring literature and life-work balance as least effective.

Table 1

Synthesis Table of Findings

Finding	Blum	Chia-Chi et.al	Feldman et.al	Gray & Brown	Johnson	McCloughen	Pfund et al
Mentor training may increase mentor confidence	------	X*	X	X	X*	-------	X

X= Positive finding   ------= Not reported   X*=Indirect positive finding based on reported improved skill

Literature Summary

A preponderance of the evidence supports mentorship having a positive impact on nurse

turnover and retention and there is wide spread agreement that organizations must support the

mentoring process (Weese et al., 2015; Ibitayo & Baxley, 2014; Missen et al., 2014). Several

challenges identified by mentors included role conflicts, increased workload and stress,

emotional and time investment, and insufficient support from colleagues. It is unclear what types

of programming can best support the role of nurse mentor, but the need for high quality training

for mentors is well supported (Anderson et al., 2012). The literature demonstrates the positive

effects of training programs for mentors (see Table 1), particularly improved confidence and

mentoring skills (Feldman et al., 2012; Gray & Brown, 2016), an increased commitment to the

role of mentor, and feelings of being supported (Blum, 2014). School nurse mentors may benefit

from a training program to increase their confidence in orienting new school nurse professionals

and the literature suggests communication is an important content topic (see Table 1). According

to Bandura (1994), improving school nurse self-efficacy with mentorship has the potential to

improve mentoring effectiveness. In determining how to focus the type of training a school nurse

mentor requires, this DNP student looked to Bandura (1977) to scaffold the DNP project as

reflected in the following sections describing program development.

Section IV-Scaffolding the Project

Theoretical Framework

Bandura's (1977) self-efficacy theory has application to many aspects of nurse

mentorship. Self-efficacy, as a central concept in Social Cognitive Theory (SCT) based on the

premise that when people believe they can be successful, they do better in life. Bandura defines

perceived self-efficacy as "people's beliefs about their capabilities to produce designated levels

of performance that exercise influence over events that effect their life style" (Bandura, 1994, p.

2). The author says the difference between people who see difficulties as challenges and those

that view them as threats is their sense of whether they can be effective at overcoming the

obstacle.

Bandura (1994) describes three sources of self-efficacy (Figure 1). The first is mastery.

When individuals experience prior success, they are more confident that they can succeed with

similar endeavors in the future. Conversely, if success comes too easily, one might come to

expect quick results and become easily discouraged. Secondly, social models can be a source of

positive self-efficacy. According to the author, social models are more effective if they share

commonalities with the individual. The third source is social persuasion. Bandura contends that

this source is least likely to be effective at boosting self-efficacy on its own, but prescribes tips to

make social persuasion more effective. For example, role models can demonstrate situations that

ensure success and avoid situations that guarantee failure. By gradually increasing challenges, a

role model can help a person build a sense of confidence, turning subsequent successes into

future triumphs. Bandura and Adams (1977) demonstrated this effect in their study of people

with snake phobia by implementing desensitizing exercises, starting with the least threatening

exercise and progressing treatment to the most difficult tasks. Utilizing these methods, authors

demonstrated improved self-efficacy in all study participants.
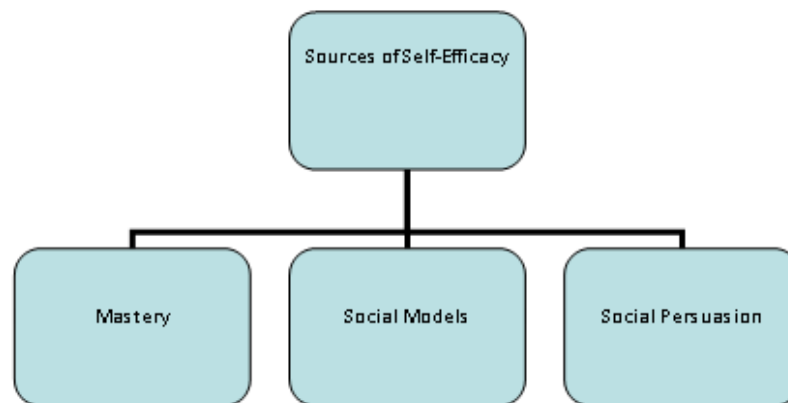
Figure 1. Three sources of self-efficacy according to Bandura (1994)

Bandura (1994) describes the following four psychological processes that affect human

functioning: cognitive; motivational; affective; selection (see Figure 2). Cognitively, individuals

process situations uniquely. The way one views the environment based on previous experience,

or perceived future events determines level of self-efficacy. According to the author, most

human action is first conceived by the individual, taking into account persons' values and experiences. Bandura claims that "the stronger the perceived self-efficacy, the higher the goal challenges people set for themselves and the firmer is their commitment to them" (p. 4). Motivational processes (Figure 2) as described by Bandura (1994) involve forethought and depending on the level of self-efficacy, persons might believe their failures just require more effort (high self-efficacy). Conversely, individuals with low self-efficacy may avoid a task, believing they lack ability. Bandura identifies forethought as a causal attribution motivator. Expectancy also has an effect on motivation by causing an individual to pursue a goal based on whether they expect to be successful. Affective processes play a role in a person's ability to be successful as depressed individuals are more apt to experience low self-efficacy. Bandura points to anxiety arousal and behavior avoidance as two cognitive processes associated with low self-efficacy. Finally, individuals use selection processes to "avoid activities and situations they believe exceed their coping capabilities" (p. 7).
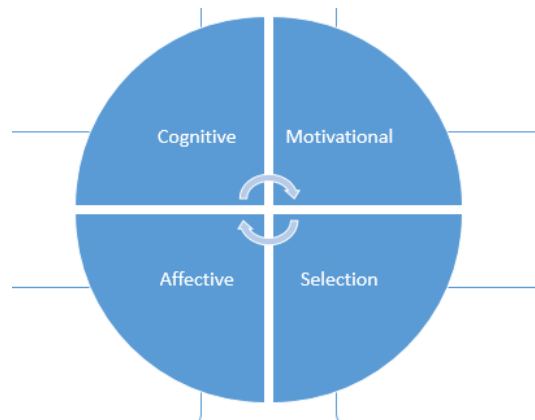
Figure 2. Motivational processes as described by Bandura (1994)

According to Bandura (1994), optimistic self-efficacy has adaptive benefits. The author describes social reality as being full of obstacles and difficulties and posits that those with a

strong sense of effectiveness in the world will be more successful. Interestingly, the author

suggests that when people overestimate their ability to succeed, they fair better than those with a

more realistic sense of self-efficacy. According to the author, this is how social reformers

continue in the face of overwhelming failure when trying to make sweeping social change.

Self-Efficacy applied to School Nurse Mentorship

According to Bandura's self-efficacy theory, experienced school nurses who believe they

can succeed at mentorship will be more effective mentors (Bandura, 1994). The theory provided

a framework to develop different ways of improving self-efficacy. For example, social modeling,

one of the three sources of self-efficacy, incorporated into educational programming provided

learners with examples of communication that encouraged mentees, or effective ways to correct

the protégé that prevents discouragement. Providing mentoring situations where nurses can

practice skills in a safe environment and receive constructive feedback should lead to mastery.

Using encouragement as a source of social persuasion as well as fostering networking among

nurse mentors through group meetings is another way to maximize self-efficacy among new

nurse mentors. As educational programs on social modeling are implemented, an increased

ability to test sources of self-efficacy could add more evidence to support the application of

Bandura's theory to nursing, strengthening the knowledge base in the field and encouraging

more research around mentorship in nursing.

DNP Project
                                      Purpose

The purpose of this DNP project was to develop a training module for school nurse

mentors and determine how the program affected their confidence in mentoring new school

nurses. The literature suggests communication is an important component of mentor training

programs (Chen & Lou, 2013; Chia-Chi et al., 2014; Feldman et al., 2012; Gray & Brown, 2016)

and Bandura (1994) suggests boosting mentor self-efficacy will improve mentoring. An

educational module with an emphasis on communication skills for the school nurse mentor was

developed using Bandura's sources of self-efficacy and presented to school nurse mentors in an

online format (Appendix C). Mentor perceived confidence was measured in a pre/post-

questionnaire.

Method

An educational module was developed for the school nurse mentor on the topic of

communication strategies. An online format was employed to provide more flexibility for school

nurses to complete the program within their own time schedule. Smith's (2014) guide for online

course design was used as a framework to develop the module. Smith incorporates a learner

focused design, encouraging interactive and engaging teaching strategies with an emphasis on

making online navigation easy for the learner. An expert panel of nurse educators was consulted

throughout the developmental process to make sure the lesson plan, content, evaluation and

online experience was appropriate.

The project components were divided into four overarching work goals with the

completion of all work by March 30, 2017 (Appendix D). The first component was the

development of a lesson plan and online training module on the topic of communication for

mentors. Because a measurement tool could not be found in the literature, the second phase of

the project involved the development of a tool to measure the impact of training on self-reported

confidence among school nurses. The third phase was implementation of the educational

program and finally, evaluation of outcomes and write-up of results. Though the cost of contact

hours were donated unexpectedly, the project came in over budget (Appendix E) because the

student version of Softchalk was unavailable, requiring full purchase price of the software.

Development of online training module

Weese et al., (2015) have identified mentoring practices that have been shown to predict

mentoring benefits, such as welcoming, mapping the future, teaching the job, supporting the

transition, providing protection and equipping for leadership. These mentoring benefits were

adapted to create a framework for planning mentor training (Appendix F). Ultimately, seven

learning modules will be developed to address each of the mentoring benefits. For the purposes

of this DNP project, the introductory module was designed and implemented, emphasizing the

importance of communication skills for the school nurse mentor (Appendix G).

Softchalk (2016), an educational authoring software was secured and tutorials and

webinars were completed to learn elements and navigation of the software. DNP project

committee members who are experts in the field of education reviewed and made

recommendations throughout the development of the communication training module. An

outline of the goals and objectives was created (Appendix H) and engaging learning activities

were developed, incorporating self-check quizzes and various interactive learning activities. The

online module included instructions on how to navigate the program, the purpose, risk and

benefits of participation, consent process, educational training and pre/post-survey. The program

was expected to take one hour to complete based on the feedback from six nurses who reviewed

and completed the content while timing their participation. As incentive for participants to

complete the program, a knowledge gap analysis (Appendix I) was completed for the purpose of

documenting contact hours jointly provided by the school district and the Ohio Association of School Nurses.

Creating a measurement tool

Because a tool to measure participant self-report of confidence in mentoring was not found in the literature, a survey was developed with input from a panel of researchers with expertise in the field of education. Once the tool was developed and approved by committee members, nine nurses were invited to give feedback on the validity of the survey, as well as determine the amount of time required to complete the module. Six nurses accepted, and the average time investment was measured to determine the number of continuing education contact hours to award program participants. No changes to the content of the module were required after the nurse review.

To measure outcomes of the project, a quantitative design was used, with an online survey administered before and after the online training module. The survey was created using Qualtrics (2016), an online survey development and data collection software. The data was secured through a username and password, accessible only to the project manager. According to Sylvia (2014), "survey tools that are available online offer a fast and flexible way to gather, measure and sometimes even analyze survey data" (p.26) and should meet the requirements of secure data and ease of data analysis with limited advertising. The authors suggest that Qualtrics can meet these requirements and has "sophisticated features to support multiple research designs in industry and academics" (p. 28). The survey was used to collect demographic information about age, gender, years of experience as a registered nurse and as a LSN, as well as experience with formal and/or informal mentoring or precepting of nursing students. The survey also

collected feedback on the quality of the educational program, the ease of use and whether the nurse would change their practice as a result of what was learned.

A five point Likert survey was developed to measure mentor level of confidence in mentoring new school nurses, with extreme anchors of "not at all confident" on the left and "very confident" on the right. The survey was developed through literature recommendations and the input of several nursing experts in the field of research design in order to ensure reliability, or the extent the survey yields the same results with repeated use and validity (Sylvia, 2014). An open comment question was included to obtain qualitative feedback about the training, such as perceptions and recommendations about the module.

After evaluating the eligibility of nurses for the role of mentor, invitations to participate were sent by email to eligible employees. School nurses were considered eligible if they had worked in the district for at least five years and performed well on evaluations, scoring in the highest category of a four tiered rating system. Eligible school nurses were also recommended for mentorship by their supervisors who evaluated eligibility based on personality traits such as interpersonal skills and a willingness to help new school nurses. The e-mail included information about the purpose of the study, how confidentiality was to be preserved and whether there were risks involved in participating. One nursing continuing education contact hour was offered as incentive to complete the program.

Participants were provided access to two web links. The first to demonstrate navigation between the survey and educational training program, the second, a link to the training. Because the online program was asynchronous, mentors were able to view the program and

questionnaires at their own convenience. The post questionnaire was part of the educational

program and offered at the end of the module.

Implementing the training program

Participants were selected from a population of 102 LSNs in one Midwestern urban

school district. Potential participants were selected from those with excellent evaluation scores,

defined as evaluations in the accomplished category, on a four scale evaluation system of

ineffective, developing, skilled and accomplished in "Induction, Leadership, and Evaluation to

Achieve and Develop" (ILEAD), the evaluation software used by the district (ILEAD, n.d.).

From this list, the Health Services Director was consulted regarding the selection of potential

participants based on personality traits such as interpersonal skills and willingness to assist new

nurses. Forty-six nurses met the inclusion criteria of working in the school district for at least

five years, identified by administrators as having good interpersonal skills and willing to help

new nurses transition to school health. From the final list of 46 participants, invitation to

participate in the educational program and pre/post-questionnaire was extended to all 46 nurses

meeting inclusion criteria.

Participants were asked to complete the study within four weeks. A reminder was sent to

the nurses once a week for a total of three reminders. The names of participants were secured in

a locked cabinet by the project manager and destroyed at the end of survey distribution.

Participant names were not collected in Qualtrics software and survey responses were linked

only to transmission control protocol/internet protocol or IP addresses as identifiers. The project

manager did not have access to the associated IP addresses for participant computers.

Permission to participate in the study was secured from participants through a statement in the first questionnaire item stating school nurse participation and beginning the study is an act of granting permission (Appendix J). The statement also listed the purpose, risks and benefits of the study prior to the administration of the pre-survey. Participants were assured anonymity.

Section IV-Outcome Analysis Plan

Questions

Three questions guided the data collection for this mentor education project (see Table 2). The first was to determine the mentoring experience of school nurses in the Midwestern urban school district in this project. The second question measured the impact of a training program (focused on communication skills) on school nurse mentors' self-perception of confidence in mentoring others. Finally, differences in reported confidence between nurses with more experience and less practiced nurses was considered. School nurse confidence in mentoring was measured before and after the online training program using the following five variables: confidence in mentoring a school nurse; telling a new nurse when they have made an error; writing a professional growth plan for a new nurse; maintaining professional boundaries in the mentoring relationship; initiating a difficult conversation. Comparison of results between those with and without previous formal mentorship was of interest, and whether the age and years of experience of participants would impact report of self-confidence in mentoring (Appendix K and L).

A t-test for dependent samples (paired t-test) and independent samples were used to evaluate the impact of the training program. The t-test measures the difference between means of two groups (Salkind, 2017) and assumes the "amount of variability in each of the two groups is

equal" (p. 212). Because the research design is a pre and post-questionnaire of the same group of school nurses, the assumption of variability was met. In order to determine the likelihood that a t-test will identify a significant difference between scores, a power analysis was performed to determine necessary sample size. For a paired t-test, assuming a power of 0.8 and standard deviation of 1, a sample size of 10, was needed to be 95% confident that the statistical result was not obtained by chance alone (figure 3). In a 2 sample t-test, a sample size of 17 was needed (figure 4).
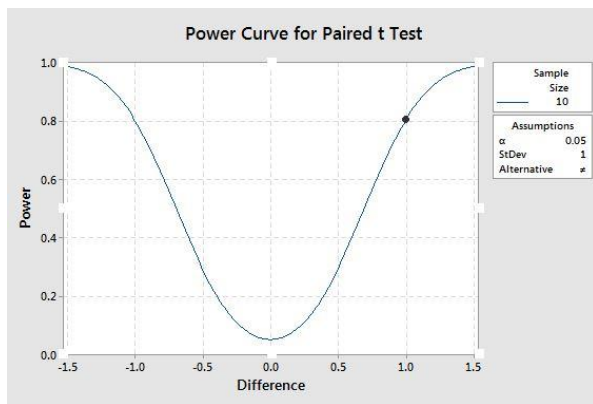
Figure 3. Power analysis for paired t-test   *Figure 4. Power Analysis for 2-sample t-test*
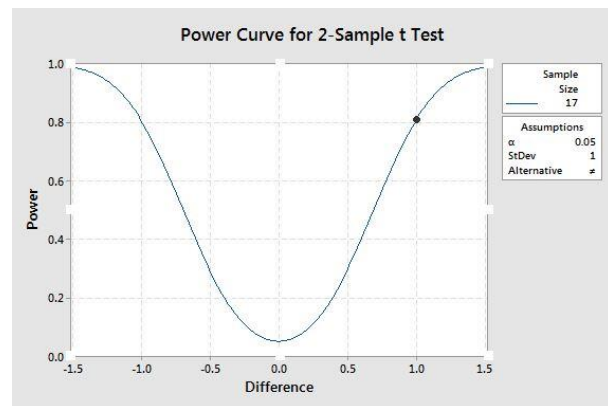
Table 2

Data Analysis Plan

Questions: What is the Mentoring experience of Licensed School Nurses (LSN)? What is the impact of communication training on perceived confidence in mentoring among school nurses? Does nursing experience impact reports of self-confidence over nurses with less experience?		
	Population: LSNs	**Intervention**
Definition	Demographic information about LSNs one Midwestern urban	Training intervention for current school nurse

	school district	mentors and school nurses eligible to mentor (those qualified, but not in a mentoring relationship).
Example	Age (25- ≥65); Gender (male, female, other 'transgender'); Years employed as a school nurse; Years as a registered nurse ; Years of experience in a formal or informal mentoring relationship; Years of experience as a preceptor of undergraduate nursing students (0-2, 3-4, 5-10, 11-15, 16-20, 21-30, >30)	An online training module was developed and presented to current school nurse mentors and school nurses eligible to mentor. A pre and post-survey inquired about the self-perceived confidence of school nurses in mentoring new school nurses before and after completing the module.
Descriptive Statistics	Percentages of each group, averages years of experience as a registered nurse, school nurse, mentoring and precepting	1) Measurement of significant change in pre and post-survey.
Statistical Test	Measures of central tendency; mean and median Measurement of differences in mean	1) Bar Graph 2) Power Analysis 3) Paired t-test 4) 2-Sample t-test

Results

Forty-six nurses were invited to participate in the online mentorship training program. Twenty six participated after three reminders over a four week period. Six responses were rejected because they were identified as coming from identical transmission control protocol/internet protocol or IP addresses. While this could be explained by two schools with more than one nurse assigned, the responses were identical, therefore it was assumed the same nurse made more than one survey attempt and duplicates were removed.

Demographic information in the form of ordinal data (Appendix K) was collected from participants (n=20) including age, years of experience in nursing, school nursing and mentorship

or preceptorship. Data was evaluated using statistical software Minitab 17.3.1 to measure central

tendency (figure 5). All participants were women and ranged in age from 41 to >65 years, with

45% in the 41-55 age year range (n=9) and 45% in the 56-65 year range (n=9). Two participants

(20%) were over the age of 65. Participants were highly educated with 70% holding Master's

degrees or higher (n=14), while 30% held Bachelor's degrees or higher (n=6). Survey

participants reported a long tenure as Registered Nurses (RN) with all but four being RNs for

more than twenty years (80%). Of the twenty RNs, 50% have been LSNs for five to fourteen

years, while 50% reported over fifteen years in the role. Fifty percent of participants reported

working in the school district between 5 and 15 years, while the remaining 50% reported

working in the district over 16 years.

Participants were asked about their experience in mentoring and in acting as a preceptor

for undergraduate nursing students over the span of their careers. Only 10% of respondents

identified being in formal mentoring relationships, while 55% reported informally mentoring for

five or more years. All participants reported experience precepting undergraduate nursing

students, with 20% reporting at least 4 years of experience and 80% five to 20 years of

experience.

Demographic Characteristics of Study Participants (n=20)	
Characteristic	Participants
Sex, n (%)	
Female	20 (100)
Age, n (%)	
41-45 yrs.	3 (15)
46-50 yrs.	3 (15)
51-55 yrs.	3 (15)
56-60 yrs.	5 (25)
61-65 yrs.	4 (20)
>65	2 (10)
Education, n (%)	
Bachelor's	1(5)
Bachelors plus	5(25)
Master's	9(45)
Master's plus	5(25)
Experience in district, n (%)	
5-10 yrs.	4 (20)
11-15yrs	6 (30)
16-20 yrs.	4 (20)
21-30 yrs.	6 (30)
Years as RN, n (%)	
11-15 yrs.	2 (20)
16-20 yrs.	2 (20)
21-30 yrs.	6 (30)
>30 yrs.	10 (50)
Years as LSN, n (%)	
5-10 yrs.	5 (25)
11-15 yrs.	5 (25)
16-20 yrs.	4 (20)
21-30 yrs.	5 (25)
unspecified	1 (5)
Years in Formal Mentorship, n (%)	
0-2 yrs.	16 (80)
11-15yrs	2 (10)
Unspecified	2 (10)
Years in Informal Mentorship, n (%)	
0-2 yrs.	8 (40)
3-4 yrs.	1 (5)
5-10 yrs.	3 (15)
11-15 yrs.	1 (5)
16-20 yrs.	3 (15)
21-30 yrs.	2 (10)
>30 yrs.	1 (5)
Unspecified	1 (5)
Years precepting undergrad nursing students, n (%)	
0-2 yrs.	2 (10)
3-4 yrs.	2 (10)
5-10 yrs.	6 (30)
11-15 yrs.	3 (15)
16-20 yrs.	4 (20)
21-30 yrs.	3 (15)

Figure 5. Demographic characteristics of participants

A paired-samples t-test was performed on a sample of 20 school nurses to determine whether there was a statistically significant mean difference in reported self-confidence before and after the online mentor training program (figure 6). The significance level was set at $p < .05$, or 95% certainty that the effect of the training program was not obtained by chance alone.

Participant's confidence in developing a professional growth plan was higher after the training

program (mean of 3.300 ± 0.571) than before the program (mean of 2.550 ± 0.759), a statistically

significant mean increase of   0.750 ± 0.639 (p = 0.000). Confidence in initiating a difficult

conversation also improved after the training program (3.450 ± 0.510) as compared to before the

training (2.800 ± 0.834). The mean increase in difference (0.650 ±0.671) was significant

(p=0.000). School nurses reported significantly improved confidence in maintaining professional

boundaries in the mentoring relationship after the training program (3.550 ± 0.510) compared to

before the training (3.000± 0.649, p=0.002). General confidence in mentoring and

communicating to nurses they have made an error was not impacted significantly by the mentor

training program.

Measuring self-perceived confidence before and after a mentor training program						
Variable	Pre-training mean	Std Dev	Post-training mean	Std Dev	t-value	Significance
Confidence in mentoring	3.300	0.657	3.555	0.510	2.03	0.056
Communicating to nurse they have made an error	3.200	0.616	3.450	0.510	1.75	0.096
Developing a professional growth plan	2.550	0.759	3.30	0.571	5.25	0.000
Initiating a difficult conversation	2.800	0.834	3.450	0.510	4.33	0.000
Maintaining boundaries in the mentoring relationship	3.000	0.649	3.555	0.510	3.58	0.002
Values correspond to mean scores where 1=no confidence; 2=little confidence, 3=confident; 4 = very confident.						

Figure 6. Self-perceived confidence before and after a training program

A t-test for independent samples was performed to test for differences in report of self-

confidence between experienced nurses and less practiced nurses (figure 7). When taking into

account the educational level of participants, school nurses with Master's Degrees did not have

any advantage over those with Bachelor's degrees in any of the variables measured. School

nurses over the age of 50 did report significantly more confidence than younger nurses when

reporting overall confidence in mentoring with younger nurses reporting a mean confidence of

2.833 ± 0.753 and the older nurses 3.500 ± 0.519 (p = 0.033), yet measures of other variables

showed no significant difference. Experience as a formal mentor or tenure with the district did

not show an impact on reports of self-confidence between school nurses.

Comparing reports of confidence with school nurse age and experience													
All values are pre-training	Educational Level			Age			Experience as a formal Mentor			Length of employment with district		
Variable	Bachelors	Masters	Significance	Under ≤50	Over ≥51	Significance	≤ 2 yrs	≥11 yrs	Significance	≤10yrs	≥11yrs	Significance
Confidence in mentoring	3.000± 0.632	3.429± 0.646	p = 0.188	2.833± 0.753	3.500± 0.519	p = 0.033	3.250± 0.683	3.500± 0.707	p = 0.633	3.000± 0.816	3.375± 0.619	p = 0.454
Communicating to nurse they made an error	3.167± 0.408	3.214± 0.699	p = 0.879	3.000± 0.632	3.286± 0.611	p = 0.355	3.125± 0.619	3.500 ± 0.707	p = 0.435	3.250± 0.500	3.188± 0.160	p = 0.843
Developing a professional growth plan	2.333± 0.516	2.643± 0.842	p = 0.418	2.167± 0.753	2.714± 0.726	p = 0.144	2.500± 0.730	3.000± 1.41	p = 0.709	2.75± 0.5	2.5± 0.816	p = 0.200
Initiating difficult communication	2.833± 0.753	2.786± 0.893	p = 0.910	2.667± 0.816	2.857± 0.864	p = 0.652	2.688 ± 0.793	3.500± 0.707	p = 0.188	3.250± 0.5	2.68± 0.873	p = 0.129
Maintaining boundaries in a mentoring relationship	3.000± 0.632	3.000± 0.679	p = 1.000	3.000± 0.632	3.000± 0.679	p = 1.000	3.000± 0.632	3.500 ± 0.707	p = 0.311	3.500± 0.577	3.563± 0.512	p = 0.833
Values correspond to mean scores where 1=no confidence; 2=little confidence, 3=confident; 4 = very confident.												

Figure 7. Comparing confidence with variables of age and experience

Participants were asked to evaluate the online training program on the following five

factors: whether online training is an effective learning strategy; whether the program was easy

to navigate; if the time to complete the module was appropriate; whether topics were relevant; if

they would change their practice as a result of what was learned (figure 8). The median response

on all items was 3.0 or agree, with the exception for the item "topics were relevant" which was

rated slightly higher at 3.5. One participant disagreed that the time to complete the module was

appropriate. The comment attached to this participant response indicated the content was heavy

and it was recommended to "build in time to stand up and stretch."

Evaluation of Online Training Program for School Nurse Mentors							
Variable	N =	Mean	Minimum	Quartile 1	Median	Quartile 3	Maximum
Online training is an effective learning strategy for me	20	3.350 ± 0.489	3.000	3.000	3.000	4.000	4.000
The online module was easy to navigate	19	3.474 ± 0.513	3.000	3.000	3.000	4.000	4.000
The topics in this module were relevant	20	3.500 ± 0.513	3.000	3.000	3.500	4.000	4.000
I will change my practice as a result of this educ program	19	3.316 ± 0.478	3.000	3.000	3.000	4.000	4.000
The time to complete this module was appropriate	20	3.050 ± 0.686	3.000	3.000	3.000	3.750	4.000
Values correspond to mean scores where 1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree							

Figure 8. Evaluation of online training program

Study participants were asked to give comments and recommendations and their

responses are summarized in figure 9. Participants appreciated the variety of learning activities

and the introduction of humor. Two participants found the program too long, recommending

breaking up the content and adding another contact hour.

Comments and recommendations

I appreciate the amount of time and effort that went into creating this training. You covered topics completely-the right amount of depth- and provided a lot of examples, utilizing a variety of formats. I liked that. It's hard to create a meaningful training program that appeals to a broad base of experience and knowledge, but I think you achieved that. Roles are clearly defined, expectations for outcomes were easily accessed. It was well-organized and through. Should be I be tapped as a mentor in the future I would very much like to refer back to this program. What I absorbed, I will put into practice with my student nurses as their preceptor.

Too me much longer. I would have liked if it were done over time. Thought it had quite a bit of material for just one session.

I really liked the bulletin boards, the mix of types of instruction (reading bulletin boards, videos) and the videos

Very good information

The video examples were very helpful and memorable. Thanks.

Very well written program with helpful information. I feel that the mentoring program has been a very positive aspect in our program.

Nicely done. Good review for me on giving feedback.

Great examples, great audio visual content. Loved videos on handling difficult situations

Information was given in an easy to understand format. The information was practical and easy to implement. Much of the information was knowledge think I had but it was helpful to see that it was also part of research that has been tested to work.

While initiating a difficult conversation I still marked confident vs. very confident after the program. I do have tools and have seen demonstration sand ideas to go forward with as these occurrences arise in the workforce as well as home life. I do feel I can get to the point of feeling very confident after working through some difficult conversations. The online learning was wonderful and I loved the demo clips for to their information and humor.

Recommend 2 CEUs, great written exercises, love the videos, it is all heavy content so build in breaks to stand up, stretch and sit back down. You might add videos between nurse mentors and new nurses on the various subjects and what worked to add real life if folks are willing. Love the difficult discussion content. You might add recommended videos, articles and books to augment content.

Figure 9. Program evaluation comments and recommendations

Discussion

The results of this pilot training program are consistent with the literature, supporting education in communication strategies as an important component of training for mentors (Chia-Chi et al., 2014; Feldman et al., 2012; Gray & Brown, 2016; Johnson & Gandhi, 2015; Pfund et al., 2013). It is interesting to note that nurses in this study reported overall confidence in mentoring before completing the training, as well as communicating to a nurse that they have made an error, presumably a difficult conversation to initiate. It may be that the age of the participants, their longevity in the career of nursing and their tenure with the district provided the confidence to mentor new nurses. Bandura (1994) would suggest the mastery and social modeling that come with nursing experience would be a strong source of self-efficacy for mentors, even in the absence of a formal mentoring experience. This is consistent with McCloughen et al. (2011) who described the "mentoring personality," formed by life events leading up to the role of mentor. As school nurses reflect on past experiences with informal mentoring, they should be able to draw on skills which will have a positive impact on formal school nurse mentorship, therefore reflection should be an important part of mentorship training.

Developing a professional growth plan demonstrated the largest positive change after training. This may be due to the fact that only two respondents identified as formal mentors. The majority of participants identified their mentoring experience as informal, which is assumed to be less dependent on documentation of protégé progress. Participants may not have had opportunity to develop growth plans throughout their nursing careers.

It could be argued that confidence in mentoring does not mean a school nurse mentor will be competent, though according to Bandura (1994), high self-efficacy leads to success. While

promoting self-efficacy through training is important, creating a system of supports for the

school nurse mentor is also key. Opportunities to meet as a group to discuss challenges and

provide peer and administrative encouragement are important elements to a school mentorship

program.

Limitations to the study were small sample size and all participants were from the same

urban Midwestern school district. These factors limit generalizability to other school nurse

settings. In addition, job requirements created a sample of more experienced study participants,

since nurses must have Bachelor's degrees and school nurse licensure, limiting transferability to

organizations that employ newly graduated registered nurses. According to Sylvia (2014),

"survey instruments selected for primary data collection should have established reliability and

validity published in either peer-reviewed scientific literature on in organizational white papers"

(p. 25). The absence in the literature of a tested tool to measure perceived confidence affected the

extent to which outcome statistics could be measured. However, an expert panel of researchers

evaluated the tool prior to implementation.

A strength of the study was the ability to address the needs expressed by current school

nurse mentors for education on the topics covered in the online training program. School nurses

in the district had communicated a desire for a mentorship program for many years and wanted

input into the process of developing the program. This desire and motivation, in addition to the

investment of considerable time and energy by current school nurse mentors created the

momentum to implement the educational program.

Using an online approach to training allowed school nurses to complete the training at

their own pace and in their own time. In a study by Healy, Block, and Judge (2014), the authors

found the most common benefit of online educational programming for teachers was the flexibility to attend class on their own time. It was thought the online approach would contribute to good participation among nurses, though competing disadvantages, such as discomfort with technology, the time involved to complete the training and the absence of social learning as described by the Healy, Block and Judge (2014) may have contributed to lower than expected participation. In this author's opinion, the current culture of social media and ubiquitous online access, with one-line answers to web search questions makes sitting for long periods of online learning difficult. Creating engaging online learning activities is essential, as well as tailoring materials to audience interest. Surveys to identify gaps in knowledge could help better tailor educational programming to the school nurse mentor.

Participants provided valuable recommendations to break up the content into more manageable pieces and dividing the subject matter into two modules may be helpful. Because this was an introductory module and communication was identified in the literature as an important topic for mentors, measurement of confidence with mentoring in the context of communication was an important outcome. For future planning, communication content could be included in module two of the series under the title of "welcoming" (Appendix D), one of the mentoring practices identified by Weese et al. (2015) shown to predict mentoring benefits. The recommendation by participants to include resources such as books and articles for those that want to expand their knowledge of the content would also be beneficial and should be included in future modules.

Conclusion

School nurse confidence improved in three of five variables after the pilot training program for school nurse mentors. This is in spite of the report of overall confidence in mentoring by all participants. School nurses gained confidence in creating a professional development plan for the new school nurse, maintaining boundaries in the mentoring relationship and initiating a difficult conversation. Not surprisingly, more experienced nurses had greater confidence in mentoring than nurses with less experience before completing the training program. Participants provided valuable feedback for improvements to the online training module, including dividing content into smaller sections and providing resources so nurses can further explore the topics presented.

The results of this study support the literature identifying the importance of communication as a part of mentorship training. Providing communication training should lead to improved mentoring behaviors such as welcoming and supporting the role transition for the new school nurse, both shown to predict mentoring benefits. This project contributes to the body of work identifying important topics for inclusion in mentorship training and further research is recommended.

Summary

The aim of this study was to develop a training program for school nurse mentors and evaluate the effectiveness of the program on school nurse confidence in mentoring new school nurses. The literature, though limited in what constitutes effective mentorship training content, suggests that communication strategies may increase confidence in school nurse mentors. Bandura's theory of self-efficacy proposes that increasing nurse confidence will have a positive impact on the school nurse mentor's ability to provide effective mentorship for new school

nurses and this should decrease nurse turnover and promote job satisfaction among new school nurses and their mentors.

Weese et al. (2015) identified mentoring behaviors that have been shown to predict mentoring benefits, and these behaviors were used to create a framework for educational content. An introductory module on the topic of communication was developed and implemented with experienced school nurse (n=20). The results showed improved confidence in three of five variables, including creating a professional growth plan for a new nurse, maintaining professional boundaries in the mentoring relationship and initiating difficult conversations. There was no significant impact of the training program on overall confidence in mentoring or in telling a nurse they have made an error. Nurses over the age of 50 demonstrated greater confidence in mentoring than their younger counterparts.

School nurses found the topics in the training to be relevant and appreciated the variety of interactive learning activities. Some felt the module was too long and should be divided into smaller segments. Participants offered valuable suggestions for improvement of the training program and these will be incorporated in the development of future modules.

References

Anderson, G., Hair, C., & Todero, C. (2012). Nurse residency programs: An evidence-based

    review of theory, process and outcomes. *Journal of Professional Nursing*, *28*(4), 203-

    212.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change.

    Psychological Review, *84*, 191-215.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of Human*

    Behavior, 71-88. New York: Academic Press.

Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change.

    Cognitive Therapy and Research, *1*, 287-310.

Blum, C. A. (2014). Evaluating preceptor perception of support using educational podcasts.

    International Journal of Nursing Education Scholarship. 11(1), 1-8.

Board, C., Bushmiaer, M., Davis-Alldritt, L., Fekaris, N., Morgitan, J., Murphy, K., & Yow, B.

    (2011). Role of the school nurse. Retrieved from

    https://www.nasn.org/portals/0/binder_papers_reports.pdf

Chen, C., & Lou, M. (2013). The effectiveness and application of mentorship programmes for

    recently registered nurses: A systematic review. *Journal of Nursing Management*, *22*,

    433-442.

Chia-Chi, C., Lin, L., Chen, I., Kang, C., & Chang, W. (2014). Perceptions and experiences of

    nurse preceptors regarding their training courses: A mixed method study. *Nurse*

    Education Today, *35*, 220-226.

Duffield, C. M., Roche, M. A., Homer, C., Buchan, J., & Dimitrelis, S. (2014). A comparative

   review of nurse turnover rates and costs across countries. *Journal of Advanced Nursing*,

   70(12), 2703-2012.

Eby, L. T., Hoffman, B. J., Sauer, J. B., Baldwin, S., Kinkade, K. M., Maher, C. P., Evans, S. C.

   (2012). An interdisciplinary meta-analysis of the potential antecedents, correlates and

   consequences of protégé perceptions of mentoring. *Psychological Bulletin*, *139*(2), 441-

   476.

Feldman, M. D., Steinauer, J. E., Khalili, M., Huang, L., Kahn, J. S., Lee, K. A., Brown, J. S.

   (2012). A mentor development program for clinical translational science faculty leads to

   sustained, improved confidence in mentoring skills. *Clinical Translational Science*, *5*,

   362-367.

Gray, O., & Brown, D. (2016). Evaluating a nurse mentor preparation programme. *British

   Journal of Nursing*, *25*(4), 212-217.

Healy, S., Block, M., & Judge, J. (2014). Certified Adapted Physical Educators 'perceptions of

   advantages and disadvantages of online teacher development. *Palaestra*, *28*(4), 14-16.

Hill, L. A., & Sawatzky, J. V. (2011). Transitioning into the Nurse Practitioner role through

   mentorship. *Journal of Professional Nursing*, *27*, 161-167.

Holmes, D. R., Hodgson, P. K., Simar, R. D., & Nishimura, R. A. (2010). Mentoring: Making

   the transition from mentee to mentor. *Circulation*, *121*, 336-340.

Houghton, C. (2003). A mentoring program for new school nurses. *The Journal of School

   Nursing*, *19*(1), 24-29.

Ibitayo, K. S., & Baxley, S. M. (2014). Challenges of the health care system and the need for

    mentoring. In mentoring *today's nurses: A global perspective for success,* 93-108.

    Indianapolis, IN: Sigma Theta Tau International.

ILEAD. (n.d.). Retrieved from http://www.ccsoh.us/ILEAD.aspx

Johnson, A., Hong, H., Groth, M., & Parker, S. K. (2010). Learning and development: Promoting

    nurses' performance and work attitudes. *Journal of Advanced Nursing*, 609-620.

Johnson, M. O., & Gandhi, M. (2015). A mentor training program improved mentoring

    competency for researchers working with early-career investigators from

    underrepresented backgrounds. *Advances in Health Science Education*, *20*, 683-689.

Lartey, S., Cummings, G., & Profetto-McGrath, J. (2014). Interventions that promote retention

    of experienced registered nurses in health care settings: A systematic review. *Journal of

    Nursing Management*, *22*, 1027-1041.

Leak Bryant, A., Aizer Brody, A., Perez, A., Shillam, C., Edelman, L. S., Bond, S. M., Siegel, E.

    O. (2015). Development and implementation of a peer mentoring program for early

    career gerontological faculty. *Journal of Nursing Scholarship*, *47*(3), 258-266.

Li, Y., & Jones, C. B. (2012). 2013. *Journal of Nursing Management*, *21*, 405-418.

Licensing and education programs, 3301 Ohio Administrative Code § 3301-24-05 (2015).

Maddalena, V., Kearney, A. J., & Adams, L. (2012). Quality of work life of novice nurses: A

    qualitative exploration. *Journal for Nurses in Staff Development*, *28*, 74-79.

McCloughen, A., O'Brien, L., & Jackson, D. (2011). Nurse leader mentor as a mode of being:

    Findings from an Australian hermeneutic phenomenological study. *Journal of Nursing

    Scholarship*, *43*(1), 97-104.

Meier, S. R. (2013). Concept analysis of mentoring. *Advances in Neonatal Care*, *13*, 341-345.

Mentor. (2015). Retrieved from http://www.merriam-webster.com/dictionary/mentorship

Missen, K., McKenna, L., & Beauchamp, A. (2014). Satisfaction of newly graduated nurses

      enrolled in transition-to-practice programmes in their first year of employment: a

      systematic review. *Journal of Advanced Nursing*, *70*(11), 2419-2433.

National Association of School Nurses. (2011). Scope of school nursing practice. In *School

      nursing: Scope and standards of practice* (2 ed. (pp. 3-35). Silver Spring. MD: American

      Nurses Association.

Ohio Department of Education Pupil Services License. (2014). Retrieved from

      http://education.ohio.gov/Topics/Teaching/Educator-Licensure/Apply-for-Certificate-

      License/Pupil-Services-Licenses

Ohio Department of Health. (2008). *School nurse survey fact sheet*. Retrieved from

      http://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/chss/school-

      nursing/2008snsurvey.pdf?la=en

Pfund, C., House, S., Spencer, K., Asquith, P., Carney, P., Masters, K. S., Flemming, M. (2013).

      A research mentor training curriculum for clinical and translational researchers. *Clinical

      Translational Science*, *6*, 26-33.

Qualtrics. (2016). www.qualtrics.com

Reitman, A., & Ramirez Benatti, S. (2014). *Creating a mentoring program: Mentoring

      partnerships across the generations*. Alexandria, VA: ASTD Press.

Salkind, N. (2017). T(ea) for two: Tests between the means of different groups. In *Statistics for

      people who (think they) hate statistics* (6th ed., pp. 211-227). Thousand Oaks, CA: Sage

      Publications, Inc.

Smith, R. M. (2014). *Conquering the content: A step-by-step guide to online course design* (2nd

    ed.). San Francisco, CA: Jossey-Bass.

Softchalk. (2016). www.softchalk.com

Standards of practice relative to Registered Nurse or Licensed Practical Nurse, 4723-4 Ohio

    Revised Code § 4723-4-06 (2015).

Sylvia, M. L. (2014). Preparing for data collection. In *Clinical analytics and data management

    for the DNP* (pp. 21-37). New York, NY: Springer Publishing.

Wang, L. Y., Vernon-Smiley, M., Gapinsky, M. A., Desisto, M., Maughn, E., & Sheetz, A.

    (2014). Cost-benefit study of school nursing services. *JAMA Pediatrics*, *168*(7), 642-648.

Weese, M. M., Jakubik, L. D., Eliades, A. B., & Huth, J. J. (2015). Mentoring practices

    benefiting pediatric nurses. *Journal of Pediatric Nursing*, *30*, 385-394.

Zey, M. G. (1991). Mentoring in the modern corporation. In *The mentor connection: Strategic

    alliances in corporate life* (pp. 1-12). New Brunswick, NJ: Transaction Publishers.

Appendix A

Excerpt School Nurse Demographics-Survey Monkey

Answer Choices	Responses	
Community/ Public Health	21.52%	17
Psych/Mental Health	5.06%	4
Hospital/Staff Nurse	63.29%	50
Primary Care/Office Nurse	24.05%	19
Critical Care	25.32%	20
Home Health Care	18.99%	15
Ob/GYN	11.39%	9
Pediatrics	22.78%	18
Educator	13.92%	11
Hospice/Palliative Care	2.53%	2
Pharmacy/Sales Rep	0.00%	0
Quality Assurance	3.80%	3
Case Management	6.33%	5
Administration/Manager	15.19%	12
Military	6.33%	5
Perioperative	5.06%	4
Total Respondents: 79		

When beginning your school nursing career, what was most helpful in making you comfortable in your new role?

Answered: 79   Skipped: 0
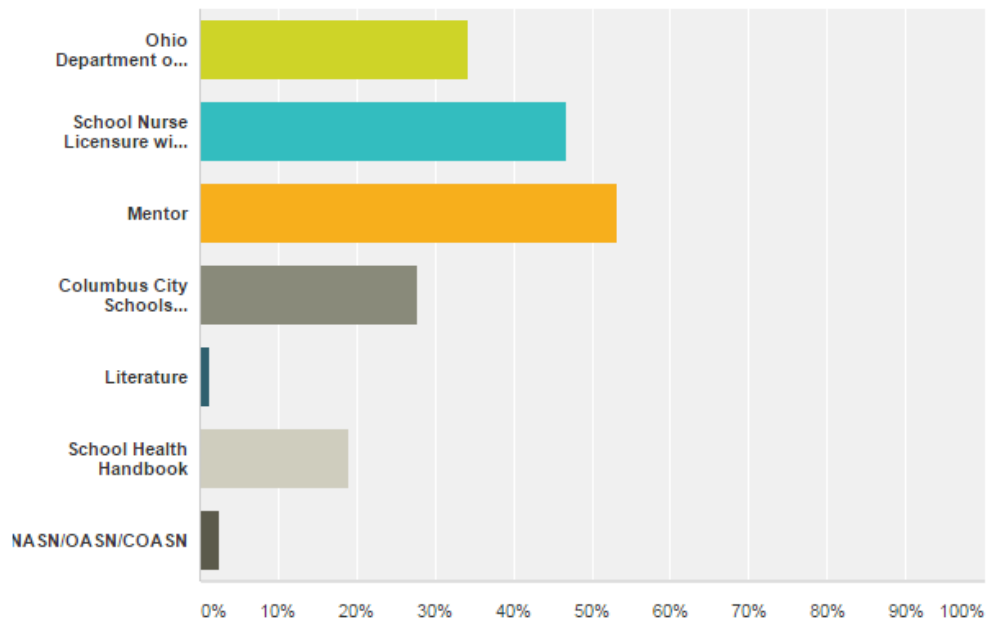
Appendix B

School Nurse Mentorship Guidelines: Columbus City Schools

School Nurse Mentorship Guidelines
Columbus City Schools

History
Per CEA procedures, School Nurses, new to the district, were mentored and evaluated by non-nursing personnel through the Peer Assistance and Review program (PAR). Though PAR personnel were helpful in guiding our nurses in the navigation of Columbus City Schools (CCS) procedures, policies and evaluation of the nurse's personality characteristics, they were not able, nor could they legally evaluate or guide nursing practice. Because a CCS employee can be evaluated by only one individual, the evaluation of nursing practice was delayed until the employee finished the PAR process. This delayed the identification of any weaknesses a nurse may have had in his/her nursing practice and slowed the development of the employee. In May of 2015, a CEA variance was approved, which allowed CCS nurses to develop and implement their own mentorship program.

Rationale
School nursing is a specialized independent practice of nursing that involves working with families, educators and community members for the purpose of helping students succeed in school. Because the role is so broad in scope, involving knowledge of school law, health promotion education, interdisciplinary teams and community health, new nurses are often adapting to the field of school health as well as learning how to navigate the CCS system. Experienced LSNs are able to bridge the gap.

Purpose
LSNs with at least 5 years of experience will be assigned by Health Family and Community Services administrators to mentor School Nurses new to CCS, as well as nurses identified as needing extra support.

Intent
Orientation to school nursing will be guided by the Scope and Standards of Professional Nursing Practice, developed by the National Association of School Nurses (NASN, 2011) and the Health Services Handbook, located online at https://columbus.atlassian.net/wiki/display/hs/Handbook   School Nurses new to the district will be assigned a mentor, who will visit with the new employee, the frequency determined by the mentor. Electronic and phone contact will also occur as needed.

Mentor: CCS LSN with at least 5 years of experience in Columbus City Schools. The School Nurse Mentor will have a regular school assignment that allows for .2 FTEs dedicated to mentorship activity, including planning, time with mentee and documentation.

Responsibilities:
- Participate in mentorship orientation (to be developed)

In collaboration with administration and the mentee:
- Assist mentee with self-evaluation and development of professional goals using SMART framework (specific, measurable, attainable, realistic, and timely.)
- Assess level of need with the mentee. Considerations are experience in the field of nursing, especially school health, whether the nurse holds Ohio Department of Education School Nurse Licensure, and direct observation.
- Develop a plan of professional development Using NASN standards.
- Document progress toward goals
- Communicate with administration on a monthly basis
- Site visits on a weekly and/or as needed basis

Mentee: School Nurses that are new employees with Columbus City Schools, or School Nurses identified as needing extra support in any area of school nurse practice.

Responsibilities
- Participate in self-evaluation , development of professional goals using SMART framework (specific, measurable, attainable, realistic, and timely), and plan for professional development
- Communicate with mentor and administration on a regular basis

Tools:
School Nurse Evaluation Rubric (in revision)
Mentor Visitation Log/Professional Development Plan (to be developed)
iLead online evaluation system (for administration and mentee only)

Appendix C

Online training program format

Communication Strategies for the School Nurse Mentor

Directions on navigation, purposes, risks, benefits, consent granted by

proceeding to program

Pre-survey

Education: Communication strategies for the school nurse mentor

Post-Survey

Send email to author to receive nursing contact hour certificate

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Appendix D

Project Timeline

Communication Strategies for the School Nurse Mentor: A pilot training program for new school nurse mentors										
Project Timeline	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Create Program				###						
IRB approval process Otterbein/Columbus City Schools	**	**	**							
Develop lesson plan: outcomes/evaluation/objectives and content	**									
First draft to project committee		**								
Revisions completed		**								
Design learning activities for lesson plan and import into softchalk				**						
Upload communication module into Qualtrics Survey Tool			**							
Createdirections for the learner on navigation of the module and pre-post survey				**						
Draft of communication module to project committee					**					
Program revisions					**					
Develop Survey Tool					###					
Continue search for statistically tested tool on survey to measure self-confidence	**	**	**							
Compile list of questions (demographic/likert measurement of confidence)		**	**							
Submit survey to research specialists for review and recommendations			**							
Revise survey tool				**						
Submit 2nd draft of tool to experts				**						
Administer survey to volunteer nurses for input on ease of use and content				**						
Determine program sample and Implement Program						###				
Nursing contact hour application through OASN				**						
Review roster of school nurses for mentor eligibility				**						
Select potential program participants				**						
Invite participants by email/explain program risk/benefit/obtain consent					**					
Program participants complete online program and pre-post survey					**					
Data Collection and Analysis									###	
Clean data, import into statistical software and evaluate results						**	**			
Consult with statistics expert as needed						**				
Write up results							**			
Draft to project committee								**		
Draft revisions								**		
Submit final write up									**	
Defend Project									**	

Appendix E

DNP Project Budget

Budget: Communication Strategies for the School Nurse Mentor			
	Unit	Estimated Cost	Actual Cost
Description			
SoftChalk Subscription	**1**	**$150.00 Student Version**	**$500.00**
Contact Hours OASN	**1**	**$50.00**	**$0.00**
	Total	**$200.00**	**$500.00**

Appendix F

Content Map for School Nurse Mentor Training

Introduction	Welcoming	Mapping the Future	Teaching the Job	Supporting the Transition	Providing Protection	Equipping for Leadership

Introduction

Role of the Mentor
- Responsibilitie of the Mentor
- Responsibilities of the Protege

Boundaries
- Confidentiality
- Expectations
- Meeting Frequency and Method
- Planned Activities

Communication Strategies
- Active listening
- Constructive Feedback
- Managing Conflict
- Developing an Action Plan

Welcoming

Introductions
- Nurse as a district employee
- Health Services
- Building Staff

Include in nurse groups
- Hot Pockets
- Screening teams
- Professional Organizations

Mapping the Future

School Nurse Licensure

Broadening Nursing Practice

Professional Development Opportunities
- Fee Waivers
- Professional Development Days

Teaching the Job

Clinic Flow

Forms/Referrals

MTSS/IAT/IEP/IHP

Screening

Disease Surveilance

Staff Training

Supporting the Transition

Assist with communication skills

Development of confidence

Problem solving skills

Providing Protection

Supportive Practice Environment

Showing support for protege success

Equipping for Leadership

Promote opportunities for the protege to lead others
- Wellness initiatives
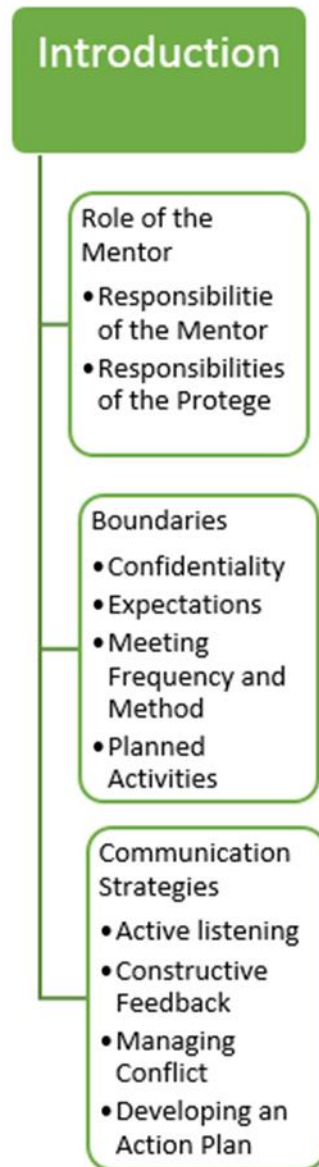- Improved school climate

Promote Autonomy

Adapted from Weese, M. M., Jakubik, L. D., Eliades, A. B., & Huth, J. J. (2015). Mentoring practices benefiting pediatric nurses.

Journal of Pediatric Nursing, *30*, 385-394.

Appendix G

Introductory Mentor Training Module

Introduction

Role of the Mentor
- Responsibilitie of the Mentor
- Responsibilities of the Protege

Boundaries
- Confidentiality
- Expectations
- Meeting Frequency and Method
- Planned Activities

Communication Strategies
- Active listening
- Constructive Feedback
- Managing Conflict
- Developing an Action Plan

Appendix H

Lesson Plan: Module 1

Course Goals:
By the end of this course the learner will be able to:
1. Explain the role of the mentor
2. Identify responsibilities of the protégé
3. Describe appropriate boundaries in the mentoring relationship
4. Provide effective constructive feedback

	Objectives (Course Goal # each objective aligns with) Color and symbols (+ ~ *) indicate alignment between objectives, activities, and assignments **At the conclusion of this module learners will be able to:**	**Assignments and Activities**	**Assessments [how student performance will be assessed]**
Module 1			
Introduction	**Identify characteristics of an effective mentor (#1)**	**Read short article** **Video Clip**	**Check list to identify own mentoring characteristics**
Role of the mentor	**Differentiate between mentor and protégé roles (#1,#2, #3)**	**Concept analysis of mentor diagram** **Article with self-check quiz**	**Self-check quiz**
Role of the Protégé		**Article with self-check quiz**	**Self-check quiz** **Matching quiz: role with responsibilities**
Maintaining Appropriate Boundaries	**Describe considerations for setting boundaries (#1,2,3)**	**Article**	
Communication Strategies	**Describe the steps for engaging in a difficult conversation (#4)** **Describe the steps for providing effective feedback (#4)** **Identify the five components of SMART goals**	**Video: Eight steps for making the difficult conversation** **Feedback Filter diagram** **Case scenarios of a new nurse struggling to adapt to the new school nurse role** **Action Plan Template**	**Feedback reflection exercise** **Perception matrix activity** **SMART Goal self-check quiz**

Appendix I

Gap Analysis for Nursing Contact Hours

Current State-	Desired State-	Gap	Data that supports Gap- input from stake holders, input from target audience, input from previous evaluations, trends in literature.	Purpose or desired outcome-	Outcome Evaluation;
Some School Nurse mentors lack confidence in mentoring practices A mentoring program was recently approved for Licensed School Nurses in Columbus City Schools and because implementation occurred so quickly, mentors were not prepared for the role with a formal training program.	Confidence as a School Nurse Mentor	Knowledge	During monthly meetings, mentors reported feeling frustrated by the lack of time to devote to trainees and anxious about the responsibility of "knowing all the correct answers" to questions posed by new school nurses. Mentors have also described a lack of authority to ensure that their protégés follow up with certain tasks (J. Blair, personal communication, February 22, 2016). Mentorship has widespread support among many disciplines for the impact on improved job satisfaction, decreased job turnover and decreased costs to organizations (Chen & Lou, 2013; Maddalena, Kearney, & Adams, 2012; Missen, McKenna, & Beauchamp, 2014). Ongoing support through mentorship is critical to nurses transitioning to a new role (Maddalena et al., 2012) and nurse mentors must be prepared for the role with relevant education tailored to their needs (Chia-Chi, Lin, Chen, Kang, & Chang, 2014). Though literature describing quality training programs for mentors is limited, some studies have reported an increase in confidence among mentors after training (Gray & Brown, 2016; Feldman et al., 2012). Improved mentoring skills that include communication skills have also been reported (Feldman et al., 2012; Pfund et al., 2013)	School Nurses will report improved confidence after completing this educational program.	Confidence will be measured before and after the online training program and evaluated for statistical significance.

Appendix J
Consent

You are invited to participate in an online training program and survey for a Doctor of Nursing (DNP) project conducted through Otterbein University.

This online program is not recommended for use with smart phones or iPads (some quiz elements may not work properly).

Title of Project: Communications Strategies for the School Nurse Mentor: A Pilot Program
Principal Investigator Name: **Jacqueline Haverkamp, DNP, MBA, RN, FNP-BC**
E-Mail Contact information: jhaverkamp@otterbein.edu
Amy Hotler, MSN, RN, APHN-BC
E-Mail Contact Information: ahotler@columbus.k12.oh.us

The purpose of this online study is to examine the impact of an online educational module on the topic of communication strategies for the school nurse mentor on confidence in mentoring. Your participation in the study will contribute to a better understanding of training needs for the mentor

If you agree to participate
The survey will take approximately 60 minutes of your time. You will complete a pre-survey, an activity about communication strategies for the mentor, and a post survey. You will be compensated with 1 nursing contact hours jointly provided by Ohio Association of School Nurses and Columbus City Schools upon completion of 100% of the program.

Risks/Benefits/Confidentiality of Data
There are no known risks to participating. There are questions about your confidence with mentoring that may cause you to feel uncomfortable. There will be no costs for participating. Although your participation in this research may not benefit you personally, it will help us understand what effective learning topics should be included in mentorship training. Your name and email address **will not** be kept during the data collection phase and no identifiers will be used to connect you to your survey responses. Data results are secured and limited to one researcher with username and password access.

Participation or Withdrawal
Your decision to participate or decline participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time. Withdrawal will not affect your relationship with Columbus City Schools in anyway. If you do not want to participate, click on the choice "stop survey" or close the browser window.
If you do not want to receive any more reminders, you may email me at **ahotler@columbus.k12.oh.us**

Contacts
If you have any questions about the study contact the **Amy Hotler** at **[614-365-5824 #4]** or send an email to **ahotler@columbus.k12.oh.us** Otterbein University's Institutional Review Board (IRB) reviewed and approved the study on September 15, 2016. Columbus City Schools reviewed and approved the study on October 26, 2016.

Beginning the survey implies your consent to participate.

If you agree to participate in the research study, respond to the following question by clicking**: BEGIN SURVEY**
Please do not forward this link to others

Appendix K

Descriptive Variable Plan

Variable Name	LSN Mentors	Age	Gender	Edu	Yrsemployed	YrsRN	ExpMentor	ExpinfMntr	Expprecpt	Pcvconf1
Description	Employed at least 5 years, accomplished recommended by admin	Age at start of inter-vention	Self-identified male, female, transgender	Highest level of education	Years employed with school district	Years as a Registered Nurse	Years of experience as a formal nurse mentor	Years of experience informal mentoring	Years of experience as a preceptor of nursing students	Level of self-confidence reported before a training program on communication skills:

Mentoring new nurse (ConfMent1)
Telling a nurse of error (CommErr1)
Create prof growth plan (ProfGrowpln1)
Maintain approp. boundaries (Bound1)
Initiating diff communication(DiffComm1) |
Data Source	ILead evaluation system			Pre-Survey						
Level of Measurement	Nominal	Ordinal	Ordinal	Nominal	Ordinal	Ordinal	Ordinal	Ordinal	Ordinal	Ordinal
Possible Range of Values	N/A	1=25-30 2=31-35 3=36-40 4=41-45 5=46-50 6=51-60 7= ≥ 65	1=Male 2=Female 3=Other	1= Bachelors 2=Post Bachelors 3=Masters 4=Post Masters 5=Doctoral 6=Post Doctoral	1=0-2 2=3-4 3=5-10 4=11-15 5=16-21 6=21-30 7=>30	1=0-2 2=3-4 3=5-10 4=11-15 5=16-21 6=21-30 7=>30	1=0-2 2=3-4 3=5-10 4=11-15 5=16-21 6=21-30 7=>30	1=0-2 2=3-4 3=5-10 4=11-15 5=16-21 6=21-30 7=>30	1=0-2 2=3-4 3=5-10 4=11-15 5=16-21 6=21-30 7=>30	1=No confidence 2=Little confidence 3=Confident 4=Very Confident
Timeframe for collection	12/1/16-12/15/16									

Appendix L

Outcome Variable Plan

Variable Name	Pcvconf2	Evaluation
Description	Level of self-confidence reported after a training program on communication skills • Mentoring new nurse (ConfMent 2) • Telling a nurse of error (CommError2) • Create prof growth plan (ProfGrowPln2) • Maintain approp. boundaries (Bound2) • Initiating diff communication (DiffComm2)	• Online education is an effective learning strategy • Module was easy to navigate • Topics were relevant • I will change my practice as a result of the material • Time to complete module was appropriate
Data Source	Post-Survey	
Level of Measurement	Ordinal	Ordinal
Possible Range of Values	1=No confidence 2=Little confidence 3=Confident 4=Very Confident	1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
Timeframe for collection	12/12/16 – 1/12/17	
Statistical Test	Paired t-test 2 Sample t-test	

.