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USING SOCIAL COGNITIVE THEORY TO UNDERSTAND CHILD AND ADOLESCENT PSYCHIATRISTS' DISCUSSIONS OF SUBSTANCE ABUSE WITH THEIR PATIENTS

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ADOLESCENT PSYCHIATRISTS' DISCUSSIONS OF SUBSTANCE ABUSE WITH
THEIR PATIENTS

DISSERTATION

A dissertation submitted in partial fulfillment of the

Requirements for the degree of Doctor of Philosophy in the

College of Communication and Information

at the University of Kentucky

By

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Lexington, Kentucky

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ABSTRACT OF DISSERTATION

USING SOCIAL COGNITIVE THEORY TO UNDERSTAND CHILD AND

ADOLESCENT PSYCHIATRISTS' DISCUSSIONS OF SUBSTANCE ABUSE WITH

THEIR PATIENTS

This study investigates factors that influence the conversations that child and adolescent psychiatrists have with their patients about substance use. The goal of the study is to gain a better understanding of salient psychological and communication constructs in this context using social cognitive theory as a guide. The study consisted of a national online survey of child and adolescent psychiatrists ($n = 170$) focused on understanding factors that affect self-efficacy and communication competence related to discussing substance use with adolescent patients. Results show that communication apprehension has a strong negative association with perceptions of self-efficacy. Results also show that past positive experiences have a stronger association with self-efficacy than past negative experiences. Results related to communication competence were mixed, with self-efficacy not being significantly related to communication competence; which could indicate potential issues with measurement. Communication competence was found to be related to overall perceptions of training, as well as past positive experiences discussing substance use. These results have implications related to the design and implementation of training interventions for child and adolescent psychiatrists to improve their level of comfort in discussing substance use with their patients.

Kevin Wombacher

April 12, 2017
Date

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CHAPTER ONE - INTRODUCTION

Substance abuse, especially among adolescents, is a significant societal issue (Compton, Thomas, Stinson, & Grant, 2007), and prevention efforts focusing on adolescents have received extensive attention by researchers (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995; Gottfredson & Wilson, 2003; Nation et al., 2003). This prevention research has taken a number of different forms, including media campaigns, school-based interventions, and, to a lesser extent, physician interventions. Within the category of physician interventions and screening related to substance use, very little research has focused on mental health settings. Mental health settings, however, represent a unique confluence of factors that make them a particularly promising area of study.

The purpose of this study is to investigate the context of child and adolescent psychiatrists' discussions about substance abuse with their patients. There is a considerable body of literature associated with adolescent substance abuse prevention; however, this body of literature has not been sufficiently extended to the patient-provider context. This study seeks to help extend knowledge both with regard to patient-provider communication and adolescent substance abuse. Social cognitive theory guided and framed this inquiry. Additionally, this study examines the extent to which communication apprehension and communication competence are salient in this context. A survey was conducted of practicing child and adolescent psychiatrists to measure these constructs and determine the relationships between them.

One factor that makes this specific context so important is that mental health practitioners have access to a population that is at increased risk for substance abuse. Research has shown that adolescents dealing with psychiatric illness are at a significantly

greater risk for developing a substance abuse disorder (SUD; Kessler et al., 1997;

Swendsen & Merikangas, 2000). Those adolescents who are treating their psychiatric

illness and thus in regular contact with mental health professionals represent a high-risk

population that is already engaged with the medical establishment.

Additionally, mental health practitioners see their patients more frequently than

pediatric physicians. This allows them to build rapport over time and gain an

understanding of the patients' unique interests and situations. Their role as mental health

practitioners also means that they will already be engaging in conversations with these

patients about potentially sensitive topics. This puts mental health practitioners in a

unique position wherein they have the knowledge to specifically tailor messages to the

patients' interests, as well as training on how to communicate about sensitive topics with

their patients. Unfortunately, mental health practitioners may not always be confident or

comfortable engaging in this type of communication.

Gaining a better understanding of what factors affect practitioners' confidence in

their ability to navigate conversations on substance abuse may lead to training initiatives

to increase practitioner confidence. Gaining a better understanding of how training helps

to develop communication competence and self-efficacy will help to provide insight into

what future training may be most beneficial to mental health practitioners.

Psychiatrists go through a long training process before they are able to practice.

This training includes graduating from medical school and completing a residency

program. Even then, training does not cease as providers are required to earn continuing

medical education credits in order to maintain their certification. When it comes to

training about discussing substance use, there is variation in terms of the quantity and

quality of training that providers receive. The extent to which providers feel that they have been trained in this area should have an effect on their level of confidence, as we would expect people who feel well trained to be more confident than those who feel that they have not received enough training.

Social cognitive theory (SCT; Bandura, 1986) offers a useful framework for understanding this issue due to the central role that self-efficacy plays in the theory. SCT posits that perceptions of self-efficacy are one of the strongest predictors of future behavior. A person who has high self-efficacy and feels confident in their ability to complete a behavior will be more likely to engage in that behavior than someone with low self-efficacy. SCT also posits a reciprocal triadic relationship between personal factors, factors related to the specific behavior, and environmental factors. Personal factors such as attitudes and expectations of how an interaction may go can have a significant effect on perceptions of self-efficacy.

People who expect that an encounter may go poorly, or that a negative outcome is possible, often experience anxiety or apprehension about performing the behavior. When the behavior is a form of communication, this anxiety is known as communication apprehension (McCroskey, 1977). People who are experiencing communication apprehension may avoid communicating. In the patient-provider context, this could mean that a provider avoids discussing certain topics with patients. If discussing substance use causes apprehension, it may not be adequately discussed or treated.

Feelings of apprehension might stem from providers feeling that they have not been properly trained to engage in this type of discussion. If providers feel that they have not received the training necessary to navigate the conversation successfully, they may

experience communication apprehension and avoid the topic altogether. Training should also have a direct effect on perceptions of self-efficacy, as providers who feel they have received good training should feel more confident in their abilities and expertise than providers who feel they have not been adequately trained.

In addition to making providers feel more confident, training should also increase a provider's actual competence. The goal of training is to equip providers with the skills and knowledge necessary to be competent in a specific area. Communication competence is the ability to communicate in a way that is both appropriate and effective (Cupach & Spitzberg, 1983). For providers to be successful, they need to be effective communicators, and this is especially true in mental health settings where patient self-report data may be the only way to diagnose psychiatric issues. Providers who are competent communicators will be able to navigate difficult conversations with their patients better than providers with lower communication competence.

Having gained a better understanding of psychiatrist-adolescent conversations and the factors that are most salient, my ultimate goal is to use this knowledge in the design and implementation of a training program for child and adolescent psychiatrists. Understanding what factors affect self-efficacy and communication competence will allow for those factors to be specifically targeted through training. A training program that improves perceptions of self-efficacy and communication competence should be valuable.

CHAPTER TWO – REVIEW OF LITERATURE

Substance Abuse

The most recent national Youth Risk Behavior Survey (Centers for Disease Control and Prevention, 2015) found that 63.2 % of high school students in the United States had drank alcohol in their lifetime, 38.6% had smoked marijuana, and 16.8% had abused prescription drugs. While these numbers are high, the prevalence is even higher for adolescents in treatment for mental health issues. In a study of 12,662 adolescents in San Diego, for example, Aarons, Brown, Hough, Garland, and Wood (2001) found that 40.8% of adolescents who were in treatment for mental health met the criteria for being diagnosed with a substance use disorder (SUD).

Adolescent substance abuse is linked to decreased personal and educational functioning (Brown, D'Amico, McCarthy, & Tapert, 2001) and dropping out of school (Muthén & Muthén, 2000), as well as mental illness (Grant & Harford, 1995; Kessler et al., 1997; Regier et al., 1990; Swendsen & Merikangas, 2000) and suicide (Dalton, Cate-Carter, Mundo, Parikh, & Kennedy, 2003). Substance abuse also increases risks related to violence (Caetano, Nelson, & Cunradi, 2001; Kilpatrick et al., 1997), injury (Hingson, Heeren, Jamanka, & Hownland, 2000) and car accidents (Chou et al., 2006).

Researchers have done much to understand what factors put adolescents at greater risk for substance abuse. Adolescents who have a parent with a substance use disorder (SUD) are at an increased risk of developing an SUD themselves (Beman, 1995; Kilpatrick et al., 2000). Adolescents who have suffered from abuse or witnessed violence are also at an increased risk of developing an SUD (Duncan, Saunders, Kilpatrick, Hanson, & Resnick, 1996; Kilpatrick et al., 2000, 2003). Adolescents who exhibit

sensation seeking behavior are also at a greater risk of developing an SUD (Hawkins, Catalano, & Miller, 1992).

While these etiological factors are important, for the study at hand, the focus is on psychiatric illness. Adolescents who are dealing with a psychiatric illness, such as depression, are at increased risk for developing SUDs (Weinberg, Rahdert, Colliver, & Glantz, 1998). Adolescents with SUDs have much higher rates of mood and disruptive disorders (Kandel et al., 1999). This means that adolescents who are currently abusing substances are more likely to be seen by a psychiatrist. Khantzian (1997) proposed that one reason for the connection between SUDs and psychiatric illness is that patients attempt to self-medicate with alcohol or other drugs to alleviate psychiatric symptoms.

As mentioned, child and adolescent psychiatrists (CAPs) are treating a population that is at an increased risk for developing an SUD or may be currently suffering from an SUD, which makes them an ideal group to implement substance abuse interventions. CAPs are able to develop personalized relationships because they meet regularly with patients. This level of personal rapport and knowledge positions CAPs to provide tailored interventions to patients who may be abusing substances or experimenting with substance use.

History of adolescent substance abuse prevention. Attempts to prevent and curb substance use date back to the 1920s and 1930s; however, a scientific approach was not taken to preventing substance use until the 1970s (Albee & Joffee, 1977). During the 1970s there was an increased level of attention on drug use, and this attention focused on the fact that drug abuse was no longer simply a problem in poor inner-city areas but had spread to middle and upper class communities (Brown, 1990). This led to President

Nixon's creating the White House Special Action Office for Drug Abuse Prevention, which was created with the intent of promoting drug abuse prevention (DuPont, 2010). This organization was later combined with several others to create the National Institute on Drug Abuse (NIDA).

In 1975, NIDA gathered experts on substance abuse prevention to draft a document summarizing current strategies for adolescent substance abuse prevention (NIDA, 1975). NIDA was able to support prevention efforts through a combination of grant-funding and providing guidance on implementation and evaluation to state and local organizations. The early 1980s resulted in further grants to help test different prevention programs. This included an effort known as the Napa Project, which tested seven different programs meant for middle and junior high school students. The data from the Napa Project showed that many of the tested programs were not effective and cast serious doubt on the idea of using large-scale generic prevention programs to prevent adolescent substance use and abuse (Schaps, Moskowitz, Malvin, & Schaeffer, 1986). Another specific finding from the Napa Project was that prevention efforts that focused specifically on positive youth development rather than drug education were less successful (Schaps et al., 1986). Since then, prevention efforts have focused on research to identify salient behavior change mechanisms and leveraging theory to design effective interventions. Intervention efforts have primarily been designed for implementation in school settings.

School-based prevention programs. Substance use prevention programs that take place in a school setting have long been used in an attempt to reach a large adolescent audience. The effectiveness of these programs has varied (Bangert-Drowns,

1988; Tobler & Stratton, 1997). Efforts have been made to identify the characteristics of school-based prevention programs that are most successful, as well as how to best implement these programs (Gottfredson & Wilson, 2003; Kam, Greenberg, & Walls, 2003). This research has looked at a number of factors related to the success of school-based interventions, including whether or not to target high-risk students, the age range for presentation, the length of the program, who leads the program, and the amount of peer involvement (Gottfredson & Wilson, 2003).

This line of research has led to the development and implementation of several new school-based prevention programs. For example, Project Towards No Drug Abuse (TND) has been developed as a 12-session program specifically targeting teens who are considered high risk. TND has been shown to have positive effects on hard drug use one, two, and even five years after completion of the program (Sun, Skara, Sun, Dent, & Sussman, 2006; Sussman, Sun, McCuller, & Dent, 2003). One interesting aspect of TND is that it is similar in some ways to motivational interviewing (MI), which is a technique employed by psychiatrists (Sussman, 2015). Indeed, Sussman (2015) argues that the underlying behavior change mechanisms in TND have considerable overlap with those employed in group MI sessions. In particular, both group MI and TND seek to help highlight discrepancies between stated goals and the effects of substance use. The Substance Abuse and Mental Health Services Administration (SAMHSA) has developed the National Registry of Evidence-based Programs and Practices to catalog behavioral interventions that are evidence-based like TND. This registry includes school-based interventions such as Life Skills Training (Botvin & Griffin, 2004), Keepin' it REAL (Hecht et al., 2003), and All Stars (Hansen, 1996), which have proven to be effective.

School-based programs have been useful insomuch as they reach a large audience. This broad reach, however, means that the intervention is being provided to students who vary greatly in terms of audience characteristics like sensation seeking, attitudes towards drug, cultural background, and family environment. Having a broad design often sacrifices the ability to target or tailor interventions to specific populations or audience characteristics. An overly broad design can thus result in an intervention that is wide-spread but unsuccessful. While some school-based programs have been shown to be effective, the effect size is often small (Bukoski, 2015). In part because of the limited success of these programs, there have been efforts to design prevention programs that are not school-based but rather focus on families.

Family-based prevention programs. There has also been research focusing on the role of family and family therapy in the prevention of substance use for adolescents. Brief strategic family therapy (BSFT) is one family-based technique that has been used to prevent or reduce adolescent substance use (Horigian & Szapocznik, 2015). BSFT primarily works "through the improvement of family functioning, including effective parental leadership and management, positive parenting, and parent involvement, all of which are risk factors linked to emerging adulthood substance abuse" (Horigian & Szapocznik, 2015, p. 250). BSFT and other family-based prevention efforts (e.g., The Iowa Strengthing Families Program, Triple P) were created in large part on the basis of research that shows that family is one of the biggest, if not the biggest, influence on how adolescents behave and how they develop (Steinberg, 2001; Szapocznik & Coatsworth, 1999). The idea is that, by modifying the family environment and family dynamics, the adolescent's behavior and substance use will also change.

These programs are important in that they focus not just on the adolescent but also on the family environment. Whereas many prevention efforts have focused solely on teaching adolescents refusal or coping skills, the focus on altering home environments to be more conducive to substance abuse prevention is an important development. BSFT has been shown to be effective at getting families to engage in treatment; however, the treatment was not successful in changing adolescent substance use behaviors (Robbins et al., 2011). Family-based prevention programs can be used in conjunction with school-based programs that teach adolescents the interpersonal skills necessary to navigate drug-offer situations. Just as these programs train families and adolescents on how to best deal with substance use, it is important that medical practitioners receive appropriate training.

CAP Training

There are three main training pathways that are used in the field of child and adolescent psychiatry: traditional training programs, integrated training programs, and triple board programs (AACAP, 2016). Traditional training programs involve completing a three-year residency in general psychiatry followed by two years of specialty training in child and adolescent psychiatry. Integrated training programs involve completing five years of training in general psychiatry and adolescent psychiatry at the same time. Triple board programs offer the ability to become board-certified in pediatrics, general psychiatry, and adolescent psychiatry through a three-year training program. In order to maintain their certification, a CAP must complete 24 continuing medical education credits every three years (AACAP, 2016).

When it comes to substance abuse training, there is little standardization. Furthermore, extent to which a residency program emphasizes substance abuse varies

greatly. This means that some CAPs may receive excellent training when it comes to substance abuse, while others may receive very little training at all. This variability highlights the importance of having continuing education opportunities in substance abuse prevention, a long term goal of this project.

Patient-Provider Communication

Research has shown that patient-provider communication plays an important role with regard to treatment outcomes (Ong, De Haes, Hoos, & Lammes, 1995; Williams, Weinman, & Dale, 1998) and patient satisfaction (Korsch, Gozzi, & Francis, 1968; Wanzer, Booth-Butterfield, & Gruber, 2004). This is perhaps the case even more so in mental health settings due to the fact that mental health practitioners rely largely on self-report and other-report data to diagnose patients (Schneider et al., 2004). This is because most psychiatric illnesses cannot be diagnosed through physiological testing like blood tests or MRIs and instead require practitioners to gather information through patient self-report and other-report of those who are close to the patient. Mental health practitioners who are deficient in patient-provider communication skills may be more likely to miss important indicators or to neglect to ask the questions necessary to properly diagnose their patients. Interestingly, Bohnert, Zivin, Welsh, and Kilbourne (2011) found that patients dealing with an SUD or Serious Mental Illness (SMI) had "significantly lower odds of reporting provider communication that was classified as 'very good' or 'good' compared to 'poor'" (p. 273). This could be due in part to dealing with providers who are not comfortable or confident in discussing substance abuse with their patients.

A large portion of research on patient-provider communication has focused on patient outcomes, such as satisfaction or adherence to treatment, and patient preferences

with regard to what type of information they would like to receive and how they would like to receive it (Wright, Sparks, & O'Hair, 2012). It is equally important to understand the physician's perspective in these interactions. Understanding what factors may be affecting providers' willingness to discuss a topic or the skill with which they are able to conduct a discussion can help to illuminate potential areas to improve patient-provider communication. Understanding the specific factors at play and how they inter-relate can allow for the creation of targeted training interventions for practicing physicians and can be incorporated into the training curriculum for future doctors.

With regard to adolescent substance abuse discussions, the majority of research has taken place in primary care settings (Stern, Meredith, Gholson, Gore, & D'Amico, 2007). D'Amico, Miles, Stern, and Meredith (2008) found that brief motivational interviewing interventions for high-risk teens in a primary care setting resulted in reduced marijuana use and reduced intention to use marijuana at a three-month follow-up. Knight et al. (2005) also looked at an MI intervention targeted to reduce substance use and drinking and driving, and the findings showed that the motivational interviewing intervention was successful in reducing substance use. Motivational interviewing has emerged as one of the primary ways to attempt to address adolescent substance abuse and has shown to be a good fit for brief interventions in primary care settings (Fournier & Levy, 2006). A review of the literature looking at the use of motivational interviewing to reduce adolescent substance use found that two-thirds of motivational interviewing studies were successful in reducing substance use (Barnett, Sussman, Smith, Rohrbach, & Spruijt-Metz, 2012).

While primary care settings are important, they greatly differ from mental health settings with regard to how patients and providers interact, the setting they interact in, and communicative expectations. Primary care visits typically involve the doctor asking the patient questions and conducting a physical examination. Mental health visits differ in that there is no physical examination component and the visit consists exclusively of an interview where the doctor asks the patient questions. Because of this interview format, patients expect to answer a variety of questions and to engage in a conversation throughout their visit. Another differences is that primary care visits take place in an examination room, while mental health visits take place in a setting that is typically more relaxed and is more conducive to a prolonged conversation than an exam room.

Patient-provider communication in mental health settings has long been understudied, and this study seeks to help remedy this neglect. Outside of some research on an intervention for patient activation (Alegria et al., 2008; Cortes et al., 2009), research specific to patient-provider communication in the mental health setting has been non-existent. The social cognitive theory provides a framework to help guide formative research in this area.

Social Cognitive Theory

Social cognitive theory (SCT) provides the theoretical foundation for this study. SCT was developed by Bandura (1986) as a way of explaining how children learn to behave. However, SCT can be used in a much broader context than child development and can help to explain behavior change and the cognitive processes that underlie behavior.

SCT is perhaps best known for the concept of triadic reciprocal determinism. According to Bandura (2011), triadic reciprocal determinism means that "behavior, cognition and other personal factors, and environmental influences all operate as interacting determinants that influence each other bidirectionally" (p. 2). Simply put, behavior affects and is affected by the environment in which it occurs. The environment affects and is affected by the person enacting the behavior. Finally, the person affects and is affected by the behavior. These three constructs all simultaneously influence each other, creating triadic reciprocal determinism. With regard to provider discussions of substance use, a provider's level of self-efficacy and communication apprehension will affect how they view the behavior of discussing substance use with their patients. Environmental constraints can also exist in the treatment context and affect a provider's cognitions and view of the behavior.

Beyond the idea of triadic reciprocal determinism, there are several important underlying constructs that are vital to SCT. These constructs are self-efficacy, motivation, outcome expectancies, and structural factors.

Self-efficacy. Self-efficacy is one of the key constructs in SCT, and according to Bandura (1986), it plays an important role in personal agency. Self-efficacy can be defined as "people's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives" (Bandura, 1991, p. 257). Self-efficacy is how confident someone is that they can complete a certain task or reach a specific objective. Self-efficacy plays an integral role in SCT and is directly involved in determining the types of goals that people set for themselves (Bandura, 1989, 1991).

Self-efficacy can also affect perceptions of one's environment (Bandura, 1986). High levels of self-efficacy may make barriers seem less imposing, whereas low self-efficacy may result in even minor barriers seeming insurmountable. For this reason, self-efficacy is frequently the target of interventions, as it is more feasible to change an individual's level of self-efficacy than it is to change environmental barriers.

Motivation. People who are more confident in their ability tend to set higher goals for themselves. According to Bandura (2011), "people seek self-satisfaction from fulfilling valued goals" (p. 47). Goals serve as a motivational factor in determining whether or not to engage in a behavior. Goals are set based on observing outcomes that people view as being favorable. Someone who is motivated by a goal to engage in a behavior is much more likely to engage in that behavior than someone for whom that behavior does not fulfill any goal.

Goals can be set after seeing someone else enact a behavior that was rewarded. This aspect of SCT is often referred to as behavioral modeling. According to Bandura (2011), "people are more likely to exhibit modeled behavior if it results in valued outcomes than if it has unrewarding or punishing effects" (p. 24). If people see the outcomes associated with a behavior as good or beneficial, then they are more likely to enact that behavior. If they see negative outcomes associated with a behavior, then they are more likely to avoid enacting that behavior. For CAPs, training is one way that they can see behavior modeled. If they are trained in an environment where they frequently are exposed to discussions of substance abuse, they will, according to SCT, base their outcome expectancies on this exposure.

CAPs should have a goal of providing quality care to their patients and thus should be motivated to engage in any behavior that furthered that goal. Therefore, if CAPs felt that discussing substance abuse with a patient would help them achieve the goal of providing quality care, they would be motivated to discuss the topic. Motivation is not enough on its own, though. A provider with high self-efficacy should expect that most of their interactions will go fairly smoothly, whereas a provider with low self-efficacy might worry about what will happen when they broach the topic of drugs with their patients. The level of self-efficacy that a provider has will help shape how they expect an encounter might unfold, and in SCT this is referred to as an outcome expectancy.

Outcome expectancies. Outcomes can be evaluated differently by different individuals; in other words, there can be different outcome expectancies. Bandura (2002) says, "the value of a given outcome is largely determined by its relation to other outcomes rather than inheres in their intrinsic qualities. The same outcome can function as a reward or punisher depending on social comparison between observed and personally experienced outcomes" (p. 131). This means that outcomes are not inherently good or bad but rather are evaluated based on how they compare to other potential outcomes. In situations where multiple outcomes are possible, a person must weigh the different potential outcomes and the valences of those outcomes to determine if that behavior is one that they wish to engage in.

In addition to just considering whether an outcome is positive or negative, an individual must also make a judgment about how likely each outcome is based on their situation. For example, a CAP might feel that discussing substance abuse with a patient

could result in a negative reaction or a breakthrough in treatment. If the CAP thinks it is highly likely the patient will react negatively, they will be less likely to bring the subject up. On the other hand, if they think there is a good chance the conversation could lead to a positive breakthrough in treatment, they will be more likely to bring the subject up.

Structural factors. Even if a person has positive outcome expectancies and believes that an encounter may go well, there may be structural factors that make it difficult or impossible to enact a specific behavior (Bandura, 1986). In many cases there are multiple structural factors in play at a given time (Bandura, 1986). For example, a CAP may wish to have an in-depth discussion about substance abuse with their patient but may be limited by the amount of time that they have with the patient, or the patient may have other psychiatric issues that require prioritization. In that situation, the CAP may have the necessary self-efficacy and motivation and the outcome expectancy that the conversation will go well but will not undertake the behavior because of perceptions of these structural factors.

SCT and CAPs. SCT serves as an appropriate framework for understanding CAP discussions of substance abuse for several reasons. Gaining a better understanding of what factors lead to CAP self-efficacy in SUD discussions can help to provide in-roads for training to increase self-efficacy for CAPs. Increasing self-efficacy may help to change a provider's perceptions of existing structural barriers, so that a barrier that may have once seemed insurmountable now seems manageable. Increasing self-efficacy can also help change the outcome expectancies that CAPs have. If CAPs feel that it is more likely that the conversation will go well, they will be more motivated to engage in it. If

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CAPs feel motivated and confident that they can overcome barriers and have a positive outcome, they should be more likely to engage in these conversations.

Another reason that SCT is appropriate to guide this project is due to the inclusion of structural factors, which research has shown are often a very real problem with regard to patient-provider communication (Barry et al., 2004). CAPs operate in an environment that is not entirely within their control. Time is often a barrier as providers are limited in the number of topics they may be able to discuss with a patient. Acknowledging that this environment may hinder or promote certain behaviors is important. CAPs may be motivated and possess high self-efficacy, but if there are significant barriers present or simply a perception that barriers are present, discussions about substance abuse may not occur.

Third, the role of outcome expectancies in SCT requires CAPs to draw on previous experiences in attempting to calculate different potential results of discussing substance abuse. In cases where CAPs have more experience, they may be more likely to be able to accurately predict the potential outcomes. These expectancies are also tied to self-efficacy, as CAPs who have had their self-efficacy raised may feel that they now can avoid negative outcomes that they have experienced in the past.

Fourth, SCT involves an aspect of motivation. Most CAPs should be highly motivated to engage in behaviors that they believe would be beneficial to their patients and that would fall within their role as a psychiatrist. Therefore, in situations where conversations about substance abuse are not taking place, there might be some factor that is reducing motivation. All of these factors explicate the ways in which the SCT fits with the context of CAP discussions of substance abuse. An SCT approach should shed light

on how training can be used to improve these conversations and where this training should focus.

Beyond these SCT-related constructs, there are important communication constructs that can supplement this theoretical approach and provide important focus on the communicative aspect of CAP-patient interactions. Next, I address two of these constructs: communication competence and communication apprehension.

Communication Competence

The model of communication competence proposed by Spitzberg and Cupach (1984) posits that knowledge, skills, and motivation and the interactions between these concepts inform perceptions of communication competence. In order for someone to be a competent communicator, all three elements must be present to a certain degree. The degree to which each element must be present in order for a communicator to be perceived as competent varies based on the context (Spitzberg & Cupach, 1984).

Knowledge is a fundamental requirement for competency, as a communicator who lacks knowledge of how they ought to act in a situation will likely act in ways that violate expectations. Simply knowing how to act or communicate is not enough, though; a person must also be possess the skill to actually enact the behaviors correctly. These "communication skills are the repeatable goal-oriented action sequences involved in message production and interaction" (Spitzberg, 2013, p. 130). Knowing how to communicate and possessing the skill to communicate does not guarantee that competent communication will occur, however. Someone may well know what behavior is expected and choose to ignore it. Motivation "concerns the approach and avoidance orientation to

communication" (Spitzberg, 2013, p. 130). A communicator must be motivated to engage in a conversation in order to be considered competent.

Communication competence has been conceptualized in a number of different ways, and no single theory of communication competence has emerged. However, most researchers can concur that communication competence is related to two main dimensions: appropriateness and effectiveness (Cupach & Spitzberg, 1983). "Communication competence can now be formally defined as the degree to which meaningful behavior is perceived as appropriate and effective in a given context" (Spitzberg, 2013, p. 130).

Judgments of competence are based on contextually-based expectations (Spitzberg & Cupach, 1984). This means that what may be seen as a competent response in one culture or environment may be seen as incompetent in another. These expectations of competence are based on the cultural norms associated with the specific communicative context. For example, a patient seeing a gastroenterologist might expect to be asked about bowel movements, but this same conversation would be a significant deviation from expectations at the dentist's office.

In terms of communication competence, then, CAPs need to have knowledge of interpersonal communication principles, the skills to enact those principles, and the motivation to do so. Furthermore, patients probably will expect CAPs to behave and communicate in a specific way based on their understanding of the treatment context. For example, patients will expect for CAPs to ask them about very personal subjects that may not be discussed with other medical professionals.

With regard to SCT, communication competence should act on perceptions of self-efficacy, as well as on outcome expectations. The knowledge and skill aspects of communication competence should result in CAPs who are highly competent communicators also exhibiting higher levels of self-efficacy. When estimating how likely they will be able to successfully discuss substance abuse, CAPS who believe they are skilled and knowledgeable should be more likely to believe they can navigate the conversation. Additionally, CAPs who are competent communicators should have a more positive set of outcome expectations, as their belief in their own skill and knowledge should lead them to believe they can more easily avoid negative outcomes.

In the medical setting, the effectiveness component of communication competence may be more salient than the appropriateness component, due to the cultural norms that allow for doctors to ask their patients questions what would normally be deemed inappropriate in other social settings. When a patient visits a doctor, the patient should expect to be asked questions about their health and behavior. When a child visits a CAP, the child should expect that the CAP will ask them questions about their life as part of the visit. This type of interview format is present in most treatment settings, but it is especially important in mental health settings where self-report data is the primary diagnostic tool. Since patients should expect to be asked questions about their lives, it is unlikely that they would consider these questions to be inappropriate given the setting. For this reason, this study focuses on the effectiveness component of communication competence rather than the appropriateness component.

Communication Effectiveness in Patient-Provider Settings

For the purposes of this study, I chose two different conceptions of communication effectiveness to examine. The first is the multiple goals perspective, which has been used to look at interpersonal communication as a goal-driven behavior that is meant to manage multiple competing goals (Berger, 2004). The second framework is person-centeredness. Person-centeredness has to do with the extent to which communication acknowledges that the other party is a unique individual with a unique life experience (Epstein et al., 2005).

Multiple goals. At the heart of the multiple goals perspective is the core assumption that communication is a tool that human beings use to attain goals (Berger, 2004; Wittgenstein, 1953). This assumption fits well with an SCT approach, which also emphasizes the role of goals in motivating human behavior, because research from the multiple goals perspective has also looked into how goal enactment motivates and explains behavior (Wilson, 2002).

Berger (2004) defines goals as "desired end states for which individuals strive" (p. 50). Such goals might include gaining compliance from a person, strengthening a relationship, or getting another person to disclose information. Due to the complex nature of human interaction, however, social interactions often involve managing more than just one clear-cut goal. Berger (2004) writes, "language use occurs in the dynamic crucible of social interaction where the multiple goals pursued by cointerlocutors may be at once both opaque to interaction parties and, at the same time, highly unstable over time" (p. 49). That is, not only that there are often multiple goals present in a given social

interaction but also that these goals vary in terms of how stable they are over time and how transparent they are to others.

There are three goals that are salient in almost all social interactions: task, identity, and relational (Caughlin, 2010; Dillard, 1990). Task goals are also referred to as instrumental goals in some multiple goals research (Clark & Delia, 1979). These task, or instrumental, goals "refer to the main task toward which communication is directed" (Caughlin, 2010, p. 827). Depending on the interaction, the specifics of the task goal will change. In some cases, a person may be attempting to seek information from a conversational partner as the task goal. In another case, the task goal may involve providing emotional support to a friend. It is important to understand that the context of the interaction shapes the task goal. Research has looked at a range of task goals, including information seeking (Brashers, Goldsmith, & Hsieh, 2002) and providing support (Burleson, 2009).

In the case of CAPs, the primary task goal is often to gather information from a patient so that a diagnosis can be made. The exact nature of this goal may change throughout the interaction as CAPS attempt to seek information on a number of different topics. With regard to substance use, the task goal would focus on gathering information about the patient's current substance use, as well as their attitudes toward substance use. In a case where a patient was actively using substances, the task goal may shift from gathering information to persuading the patient to cease their substance use.

Identity goals are related to managing how people present themselves, as well as helping to protect a conversational partner's presentation of self. In this way, it is similar to the concept of facework. People want to present themselves in a way that allows them

to be viewed positively by others, and they also want to aide their conversational partner in how they present themselves. This means that people often communicate in a way that helps others avoid embarrassment or shame. Successfully enacting these identity goals will allow both parties in a conversation to present themselves in a positive manner and will avoid communicating in a face-threatening way.

In the context of CAPs, this means that CAPs want to present themselves as being professional and non-judgmental and as having the best interests of their patient at heart. CAPs should also communicate in a way that will allow their patients to present themselves in a positive manner. This is especially important in conversations about substance use, as adolescent patients may feel that they are being accused of substance use or feel that they are being judged for their choice to engage in substance use. If the patient feels judged or threatened in this way, it will result in a failure to achieve these identity goals. If a patient is given the opportunity to discuss their behavior and what meaning it has in their life in a context that is free of judgment, they should feel that they have been given the opportunity to manage their identity more fully.

Relational goals refer "to communicating in ways that reflect and promote the type of relationship one has, or wishes to have, with a partner" (Caughlin, 2010, p. 827). Relational goals vary depending on the stage of a relationship. For example, in the beginning of a friendship, relational goals would serve to "set the tone" of a friendship and establish basic expectations of how the relationship functions. In an already established relationship, relational goals serve to maintain or modify the existing tone of the relationship.

In regard to CAPs, relational goals will vary based on whether the patient is new or if they have already established a relationship with the provider. CAPs will want to establish a relationship based on trust, mutual respect, and common treatment goals. If a CAP is able to establish and maintain this type of relationship, the patient should be more likely to disclose sensitive information and comply with treatment recommendations.

Some goals may be highly transparent, like a CAP asking a patient about how their mood has been over the past several weeks. The CAP simply wants information about the patient's moods in order to gain a better understanding of their functioning. Other goals may be more opaque, such as when a CAP asks a patient about their friends. Asking about friends and what types of things their friends do may allow the CAP to gain an understanding of different risky behaviors the patient may be engaging in with their friends without directly asking about it.

One assumption of the multiple goals perspective is that communication goals frequently conflict with each other (Caughlin, 2010). Although some goals may be compatible with each other, there are others that may not be possible to achieve concurrently. For example, a friend may wish to engage another friend in a discussion about their substance use but may also want to be seen as a good friend who is not judgmental. In this situation, they may feel that discussing their concerns about their friend's substance use would result in them being seen as judgmental, and it may not be possible for them to address the substance use and come across as non-judgmental. In those situations, people must choose which goals they wish to focus on and which goals they are willing to forego. Very skilled communicators may be able to redefine the situation such that goals are no longer competing and can be achieved simultaneously

(Clark & Delia, 1979). Understanding which goals an individual is choosing to pursue can help to explain the type of messages that they produce.

CAPs have to carefully manage interactions with their patients in order to be attendant to all three goals. A heavy focus on task goals that neglects to attend to identity or relational goals will be unsuccessful as there may not be enough rapport established to convince the patient to disclose highly personal information. On the other hand, if CAPs attend primarily to identity and relational goals but neglect task goals, they may not be able to obtain the information necessary to successfully treat the patient. A failure to adequately attend to any of these three goals could result in the interaction going poorly. This illustrates the importance of communication competence, as CAPs must be highly competent communicators in order to successfully manage all three goals simultaneously.

Caughlin (2010) outlines how a multiple goals framework can be used to evaluate message sophistication. "A useful way of conceptualizing the quality or sophistication of communication is to examine the extent to which a communicator is able to effectively manage competing communicative goals" (Caughlin, 2010, p. 830). To this end, messages can be evaluated to determine the extent to which they attend to and manage the different goals that may be present in a situation. This assessment technique commonly involves having study participants craft messages in response to a specific communicative situation, and then having coders rate and evaluate the messages on the basis of a multiple goals framework.

For instance, Caughlin et al. (2009) asked participants to craft a message in response to a variety of scenarios in which their sibling had revealed that they were HIV positive to see how the messages varied in response to variations in the scenario. The

scenarios varied in terms of what types of goals were being focused on. Two scenarios focused on task goals: one on the goal of revealing the HIV status, the other on receiving support. Two other scenarios focused on identity goals: one on avoiding negative evaluations, the other on preventing subsequent disclosures. Two scenarios focused on relational goals: one on maintaining the relational bond with the participant, the other on the participant's right to know the information. Participants crafted messages in response to these scenarios and these messages were then analyzed to determine what functions they served and the extent to which the functions varied based on the scenario participants were presented. To establish these codes, all of the authors examined one-fourth of the data to identify message functions, and then they met to compare their results and resolve any discrepancies. This resulted in a codebook that was then used to code the remainder of the data. The functions included expressions of emotion (sadness, anger, fear, concern, surprise) and provision of support (explicit advice, instrumental support, relationship affirmation, emotional support, privacy assurance, etc.), as well as several others. The results showed that the types of messages participants produced varied significantly based on the scenario that they were presented. Specifically, the scenario focused on revealing HIV status was more likely to elicit messages that contained negative emotional expressions while the scenario focused on preventing further disclosure resulted in messages that offered less emotional support. Several of the scenarios resulted in messages that did not significantly differ.

This study shows that different scenarios bring different goals to the forefront and that the messages designed in response to these scenarios also differed as they attempted to manage the goals. It also shows that asking participants to craft messages in response

to a given scenario and then analyzing the created messages using a multiple goals framework is a valid method for assessing the presence of multiple goals.

Patient-Centeredness. Patient-centeredness in medicine is described as "a moral philosophy with three core values: (1) considering patients' needs, wants, perspectives and individual experiences; (2) offering patients opportunities to provide input into and participate in their care, and (3) enhancing partnership and understanding in the patient-physician relationship" (Epstein et al., 2005, p. 1517). This idea of patient-centeredness is an alternative to the paternal model of medical communication, which positions the physician as the sole authority figure who decides how treatment will proceed. Patient-centeredness dictates that patients should play an active role in their care and that they should be able to have a voice in how their medical care progresses. Rather than simply following "doctors' orders," patients ought to partner with providers in determining the course of treatment such that it mirrors the priorities and values of the patient.

Under the rubric of patient-centeredness is patient-centered care. Patient-centered care "refers to actions in service of patient-centeredness, including interpersonal behaviors, technical interventions and health systems innovations" (Epstein et al., 2005, p. 1517). It looks broadly at how the medical system can allow for patient-centered experiences and how the system can best embody the ideals of patient-centeredness. Whereas patient-centeredness is a philosophical framework, patient-centered care is an attempt to put that philosophy into work in the real world.

Patient-centered communication is even more specific in that it focuses on communication and how communication among patients and providers can promote patient-centeredness and patient-centered care. Epstein et al. (2005) explicate four ways

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that patient-centered communication takes place. The first is through understanding the patient's perspective. Providers need to communicate with patients to get the patients to reveal their thoughts and feelings. The second is understanding that every patient has a unique psychosocial context. Patients come from a variety of cultural and social backgrounds, and it is important for providers to understand that each patient is uniquely situated. Third, providers need to work to ensure that "there is a shared understanding of the problem and its treatment with the patient that is concordant with the patient's values" (Epstein et al., 2005, p. 1517). It is not simply enough to understand what the patient thinks and feels; providers need to take the patient's values into consideration when collaborating on a treatment plan. Plans that conflict with a patient's values or beliefs directly contradict the concept of patient-centeredness.

Finally, providers need to allow for shared decision making with the patient to the extent that the patient would like to participate. Rather than the paternal model where providers make all of the decisions, patient-centered communication means that patients should share in the responsibility of making choices that affect their health. Some patients may not feel comfortable sharing in health decision making processes, while others may be eager to participate. Just as each patient has a unique psychosocial context that needs to be accounted for, patients will also vary in terms of their interest in shared decision making, and this preference should be respected.

Patient-centered communication can be effective in changing communication behaviors, health behaviors, and perceptions of satisfaction (Lewin, Skea, Entwistle, Dick, & Zwarenstein, 2001). The fact that patient-centered communication can help change health behaviors is important because convincing patients to make behavioral

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changes can be difficult and is often one of the goals that providers have during

treatment. A meta-analysis by Zolnierek and DiMatteo (2009) found that patient-centered

communication leads to significantly increased patient adherence. This finding should not

be surprising as patients who have a say in determining their course of treatment should

be more likely to adhere than patients who have a treatment plan thrust upon them

without having any say. Since patients are consulted and share in the decision making,

they will be able to increase the likelihood that the treatment plan will help them meet

their personal health goals.

With regard to CAPs, I would expect that CAPs who employ patient-centered

communication may also expect to have a better relationship with their patients. Patients

who feel that they are being listened to and that their goals are being attended to in

developing a treatment plan may also be more willing to disclose about sensitive

behaviors like substance use. This increased disclosure and adherence could allow for

CAPs to develop treatment plans that involve curtailing substance use.

A three-level person-centered coding system was developed by Applegate (1980),

and then Burleson (1984) used a variation on this hierarchical coding system to evaluate

the degree of person-centeredness present in a message. "The hierarchically ordered

levels of Applegate's system are taken as reflecting a progression from position-oriented

speech that denies the relevance and legitimacy of the affective features of individual

perspectives to person-oriented speech that explicitly recognizes, articulates, and

legitimizes the inner affective experiences of others" (Burleson, 1984, p. 145). Person-

centeredness is conceptually appropriate since it focuses on acknowledging an

individual's perspective and autonomy. Patient-centered communication shares this focus

but is specific to a medical environment, whereas person-centeredness is not contextually bound.

Burleson (1984, 1985) used this system to evaluate comforting messages, with the idea being that messages that were more person-centered would be more comforting. Burleson (1984) looked at comforting messages produced by grade school students in response to a scenario in which an acquaintance was upset. The results showed that students who were more cognitively advanced were better able to produce sophisticated comforting messages that employed a person-centered approach. Burleson (1985) further explored the production of comforting messages using this modified three-tier hierarchical coding system. He argued that messages that score higher on this coding scheme do so in part because they are better able to attend to the complex goals present in the situation. "[H]ighly sensitive comforting strategies are behaviourally more complex than less sensitive comforting strategies; they are more complex because, in addition to demonstrating concern for a particular instrumental goal, they also reflect the pursuit of several other goals" (Burleson, 1985, p. 267). This explanation shows that this hierarchical coding system is conceptually consistent with a multiple goals perspective. The use of this coding system provides another framework for understanding which messages should be most communicatively competent.

Communication Apprehension

Communication apprehension has been the focus of a great deal of research, but little of this research has taken place in health contexts (Booth-Butterfield, Chory, & Beynon, 1997). Communication apprehension (CA) is the degree to which a person feels fear or anxiety related to interacting with other people (McCroskey, 1977). Research has

shown that individual personality characteristics such as extroversion, confidence, and adventurousness are associated with different levels of general CA across all settings (Booth-Butterfield & Booth-Butterfield, 1992; Dwyer & Cruz, 1998), and this is known as trait CA. Trait CA is conceptualized to mean that a person experiences high anxiety or fear about oral communication situations, whether they be real or just potential (Kearney & McCroskey, 1980). This anxiety often results in them avoiding these situations when possible.

Apart from trait CA, there is also state CA, which refers to a person's level of apprehension when faced with a specific communicative context or situation (Booth-Butterfield et al., 1997). For the current study, state CA is the focus, as the specific communicative context is on discussing substance abuse with patients.

Of the research on communication apprehension in patient-provider interactions, the focus has been on apprehension experienced by the patient (Booth-Butterfield et al., 1997). Providers are not immune to experiencing communication apprehension, however. Work by Weigel, Parker, Fanning, Reyna, and Gasbarra (2007) showed that nurses endured high levels of apprehension in dealing with dying patients and that less experienced nurses endured higher levels of apprehension than their more experienced counterparts. In addition, Lang, Rowland-Morin, and Coe (1997) and Servaty, Krejci, and Hayslip (1996) looked at communication apprehension in medical students.

Lang et al. (1997) found that medical students had less communication apprehension than average college students and that male medical students experienced less CA than their female counterparts. Servaty et al. (1996) found that nursing students and pre-med students experienced less communication apprehension about talking about

death than regular college students. The current study seeks to add to the literature on provider communication apprehension by better understanding the effect that communication apprehension has on CAP conversations about substance abuse.

Integrating Theory and Constructs. With regard to SCT, communication apprehension should act on three different constructs: outcome expectancies, self-efficacy, and motivation. Communication apprehension is, in and of itself, a fear or anxiety, so a person engaging in a behavior that they are apprehensive about will experience anxiety (McCroskey, 1977). In other words, CAPs who are apprehensive about discussing substance abuse will consider that fear or anxiety when they assess the potential outcomes of broaching substance abuse. Communication apprehension has been shown to have a negative relationship with perceptions of self-efficacy (Hopf & Colby, 1992). I would expect that this relationship would hold in the mental health treatment context and that CAPs with higher communication apprehension would have lower self-efficacy. Additionally, research has shown that apprehension can reduce motivation (Dobos, 1996). CAPs who are apprehensive about engaging in this discussion should be less motivated to do so.

I am proposing a model to explain the relationship between training quality perceptions, psychiatric practice experience, communication apprehension, communication competence, and self-efficacy for CAPs in discussing substance abuse with their patients (see Figure 1). Motivation is not included in this model as it is assumed that all CAPs will be motivated to perform tasks related to their job. Outcome expectancies are represented in the model through perceptions of past experiences, as these past experiences are used to generate expectations of future encounters. This model

incorporates the hypotheses and research questions outlined next. This model provides a

framework for understanding how these important concepts inter-relate and provides

insight into what paths may be the most beneficial to target for a training intervention.

Figure 1. Proposed Model
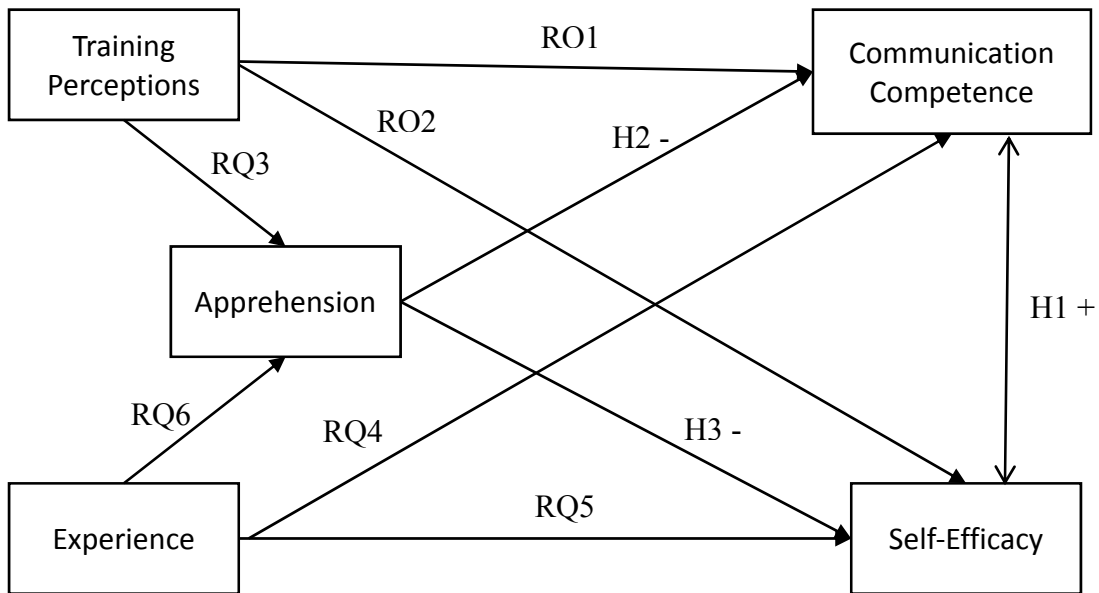
Hypotheses and Research Questions

The literature review provides the foundation for several hypotheses that seek to

explicate the relationship between self-efficacy, communication competence (as assessed

through managing multiple goals and person-centeredness), and communication

apprehension. Where the extant literature was sparse or insufficient to support a

hypothesis, a research question is proffered.

According to Spitzberg and Cupach (1984), communication competence is in part

composed of aspects of knowledge and skill. As Bandura (1986) considered self-efficacy

to be a judgment that performance of a behavior is attainable, I would expect that CAPs

who are able to craft more effective messages would also be more likely to also report higher levels of self-efficacy.

H1: Self-efficacy and communication competence will be positively associated.

Past research has shown that communication apprehension and communication competence are negatively related (Rubin, Rubin, & Jordan, 1997). People who experience apprehension about communicating also tend to be less competent communicators. Thus, CAPs who report feeling apprehension about discussing substance abuse are expected to also score lower on measures of communication competence. Individuals who experience apprehension report lower levels of self-efficacy than those who do not experience apprehension (Hopf & Colby, 1992). Participants who report feeling apprehensive about engaging in conversations about substance use would be expected to be less skilled in crafting effective messages.

H2: Communication apprehension will be negatively associated with communication competence.

H3: Communication apprehension will be negatively associated with self-efficacy.

A portion of the training that psychiatrists undergo relates to developing communication skills in addition to their knowledge of psychiatric illnesses. This relates to the skill and knowledge elements of communication competence as posited by Spitzberg and Cupach (1984) in their model of communication competence. More specifically, CAPs who believe that they were well trained ought to perceive themselves as better communicators and feel more confident in their ability to successfully navigate sensitive conversations with their patients. CAPs who believe that they have not

adequately been trained would be expected to have less confidence in their ability and perceive themselves as less competent in handling this conversation. However, there is not enough extant literature to support the use of a hypothesis in this case.

RQ1: What is the relationship between training quality and communication competence?

RQ2: What is the relationship between training quality and self-efficacy?

Communication apprehension should also be related to the extent that a CAP feels they have been well trained. I would expect that a CAP who feels that they have received high quality training might experience less apprehension than a CAP who feels that they have not received adequate training. However, there is no literature to support the use of a hypothesis in this situation.

RQ3: What is the relationship between perceptions of training quality and communication apprehension?

CAPs who are more competent communicators and who are able to craft better messages ought to have better experiences than their counterparts who are less competent communicators in this context. One would expect that CAPs who have more positive previous experiences would be more competent communicators and that CAPs who have experienced more negative reactions would be less competent communicators about substance abuse. However, there is no extant research in this area to support the directionality of this relationship.

RQ4: What is the relationship between previous experience discussing substance abuse and communication competence?

How do CAPs' previous experiences discussing substance abuse affect their confidence in their ability to navigate these conversations? A CAP who has experienced many negative reactions to discussing substance abuse in their career may feel less confident in their ability to broach the subject than a newer CAP who has not had any negative patient responses. A CAP who has experienced many positive and rewarding interactions with patients when discussing substance abuse, however, would be expected to have higher self-efficacy than a newer CAP who had not had these experiences to draw on.

RQ5: What is the relationship between previous experience discussing substance abuse and self-efficacy?

CAPs who have had primarily negative experiences in the past may experience more anxiety when bringing up the subject with a new patient, whereas a CAP who has had primarily positive experiences discussing substance abuse should have less anxiety and apprehension about bringing up the subject.

RQ6: What is the relationship between previous experience discussing substance abuse and communication apprehension?

CHAPTER 3 – METHOD

Formative Research

Prior to this study, I completed formative research to inform the design of the

dissertation survey. This research took the form of interviews with practicing CAPs. In

total, 21 interviews were completed with CAPs. The sample varied greatly in terms of

years of experience and was also geographically dispersed across the country. Since the

sample was so varied, I was able to capture a wide variety of perspectives about the role

of CAPs in treating and diagnosing substance use and abuse. Just like the participants

varied in age and geography, so did they vary in the type and quality of training that they

received related to substance use.

Interviews focused on gaining an understanding of how and when CAPs

discussed substance use with their patients. I asked participants to recall specific

interactions that had gone well and specific interactions that had gone poorly to

understand what factors led to those positive or negative outcomes. I asked questions

about the type of training that the participants had received, as well as what types of

training they would like to see when it came to dealing with adolescent substance use.

The insight gleaned from these interviews provided a basic understanding of how

substance use conversations function and which constructs may be most salient. Several

participants reported feeling low levels of confidence, which affected their willingness to

bring up the topic. This helped inform the decision to focus on self-efficacy. Along the

same lines, participants indicated that while they felt they had good communication

skills, they did not always know the best way to bring up substance use. This provided

the rationale for including communication competence in the survey. Participants also

expressed apprehension about potential negative reactions to the topic, which led to the inclusion of communication apprehension in the survey.

Participants varied greatly when it came to their perceptions of the quality of their training. Some participants felt that they had not received enough training to deal with substance use issues competently, while other participants felt that they had received comprehensive training on substance use. This led to the inclusion of a measure about perceptions of substance use training. Lastly, participants were easily able to recall times conversations had gone well and times they had gone poorly. This led to the inclusion of a scale related to these past experiences to determine how they were related to other constructs.

Participants

The present participant sample consisted of 170 CAPs (79 male, 89 female, 1 preferred not to answer) who were currently practicing psychiatry and specialize in treating children and adolescents. The average age of the respondents was 49.56 years ($SD = 14.38$, range 28-86 years). Information about participant race/ethnicity was not collected. Participants had an average of 18.46 years ($SD = 13.75$) of experience in practicing psychiatry, with some participants still being in training.

Procedures

Survey design was informed by previous research that involved interviewing CAPs about their experiences discussing substance abuse with their patients (Wombacher, Watterson, Scott, & Harrington, 2017). Once the survey was finalized, it was reviewed and approved by the University of Kentucky's institutional review board. Regional professional groups for CAPs were then identified, and contact information for

group leaders was collected. There were approximately 40 different regional CAP groups that were contacted to see if they would be willing to distribute the survey to their members. It is not possible to determine a response rate, as information about the size of each contacted group is not available.

Group leaders who were willing to participate distributed an email to their members about the study. Participants received an email with a brief explanation of what the study sought to understand along with a link to the survey instrument. Participants were instructed to complete the survey at their convenience. The survey was hosted using Qualtrics, which securely collected and stored all participant responses. Data collection took place over the course of eight months and exhausted all possible avenues for participant recruitment. The national organization for CAPs declined to distribute the recruitment email for this study, which made recruitment more difficult as it necessitated contacting a myriad of regional groups to recruit participants. Best efforts were made to recruit as many participants as possible.

Measures

The online survey questionnaire used a variety of established measures, as well as one measure that was created specifically for this study. Cronbach's alpha was used to assess the reliability of each measure; intraclass correlations were used to assess intercoder reliability of measures of communication competence.

Self-Efficacy. As self-efficacy is related to performing specific behaviors in specific contexts, Bandura (2006) argues that measures of self-efficacy must be individually tailored to the specific behavior at hand. In order to measure CAP self-efficacy in relation to CAP–patient interactions related to substance abuse, I developed a

scale specific to that context. A group of practicing CAPs was asked to help develop

items for this measure based on their experiences. They were asked to create short patient

vignettes that proposed a potential treatment situation regarding substance use. In order to

make sure that these items were realistic, the items were then tested for face validity by

having all of the CAPs in the group critique them and provide feedback. The proposed

scale was then piloted with 19 respondents who were practicing CAPs who did not

participate in the item creation process. This pilot study showed that the vignettes

presented situations that varied in terms of difficulty.

Items for measuring the self-efficacy of discussing substance abuse with a patient

are found in Appendix A. Although Bandura had recommended scoring items from 0 to

100, in this study, we asked participants to respond with a score between 1 and 7 to

indicate the level of confidence that they would have in their ability to deal with the

presented scenario. The decision to deviate from Bandura's recommendation was due to

the fact that participants would likely be more comfortable with the more traditional

range of 1-7. A score of 1 indicated a very low level of confidence, while a score of 7

represented high confidence. The scale had a mean score of 5.5 and a standard deviation

of 0.91. The reliability of this scale was assessed with Cronbach's alpha. The reliability

for the scale in this study was $\alpha = .84$.

Communication Competence. Communication competence was measured by

having participants craft a message in response to a given scenario. Appendix B contains

the prompt and instructions that were used to generate these messages. These messages

were then coded using a multiple goals perspective as one coding framework and using

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Burleson's (1985) hierarchy of person-centeredness as another separate coding framework.

Coding for the multiple goals framework involved evaluating each message on the extent to which it successfully attended to task, identity, and relational goals. Each message was rated by three independent raters across each of the three dimensions. Messages were scored between 1 and 7 for each of the three goals, with a score of 7 representing a message that was extremely successful in attending to a goal and a score of 1 representing a message that was extremely unsuccessful in attending to a goal. Raters made independent ratings for each message on task, identity, and relational goals.

Coding for person-centeredness involved coding each message according to the hierarchy set out in Burleson (1985). This hierarchy contains three levels: denial of individual perspectivity, implicit recognition of individual perspectivity, and explicit recognition and elaboration of individual perspectivity. In keeping with this hierarchy, raters scored messages between 1 and 3, with a score of 1 representing denial of individual perspectivity, a score of 2 representing implicit recognition of individual perspectivity, and a score of 3 representing explicit recognition and elaboration of individual perspectivity.

An initial round of rating was done with a selection of 25 messages, which represented 16% of the total 150 messages. After this round of rating, all three raters met to discuss their results and develop specific rules to clarify rating. A second set of 25 different messages was then rated. On the basis of these 50 ratings, I assessed inter-rater reliability using intraclass correlations.

Intraclass correlations (ICC) are a way of looking at how reliable multiple raters are when rating multiple messages. In simpler terms, it looks at how well the different raters' scores "hang together," which means that all of the raters rate an item similarly. ICCs are used rather than other measures of inter-coder reliability such as Cohen's kappa because the messages are being coded at the interval level rather than the nominal level. So, for example, if one rater rated an item a 6, another rated it a 7, and the third rater rated it as a 6, that would indicate good reliability between the raters since they all gave similar scores, even though they did not all have exactly the same score. ICC scores between .60 and .74 are considered good, while scores between .75 and 1.00 are considered excellent (Cicchetti, 1994).

Ratings of task were reliable with an intraclass correlation of .72. Ratings of relationship were reliable with an intraclass correlation of .73. Ratings of identity were reliable with an intraclass correlation of .80. Ratings of person-centeredness were reliable with an intraclass correlation of .75. Since ratings across all four dimensions were reliable, the three raters then rated the remaining 100 messages.

After all 150 messages had been rated, tests for reliability were conducted using intraclass correlations. Ratings of task were reliable with an intraclass correlation of .72. . Ratings of identity were reliable with an intraclass correlation of .72. Ratings of relationship were reliable with an intraclass correlation of .70 Ratings of person-centeredness were reliable with an intraclass correlation of .72. These tests indicated that ratings were reliable for all four dimensions of communication competence. As each message was scored by three raters, mean scores were calculated for each message, and these means were used in the analysis.

Table 1 provides nine sample messages that vary with regard to how they were scored for managing multiple goals. There are three examples of messages that scored high, three examples of messages that had moderate scores, and three examples of messages that had low scores.

Communication Apprehension. Apprehension was measured using a modified version of the situational communication apprehension measure (SCAM), which was developed by Richmond (1978). The scale uses a 20-item, 7-point Likert-style questionnaire. The measure focuses on state apprehension, rather than trait apprehension. It was modified to focus specifically on apprehension about discussing substance abuse with patients. The scale has proven to be highly reliable in the past. Participants were presented with a patient vignette and asked to respond based on how they would feel in the presented situation. This scale resulted in a mean score of 59.8 and a standard deviation of 18.15. This measure is included as Appendix C. The reliability for the scale in this study was $\alpha = .70$.

Experiences Discussing Substance Use. Experience discussing substance use issues with patients was measured using a modified version of the Positive and Negative Quality in Marriage Scale (PANQIMS) by Fincham and Linfield (1997). This scale asks participants to separate their positive and negative feelings about their marriage and report them independently. Three items ask them about the extent to which they have positive feelings about their marriage, and another three items ask them about the extent to which they have negative feelings about their marriage. This scale is designed in this way to recognize that there can be good and bad aspects of relationships and these do not always directly offset each other. Items were modified to apply to positive and negative

qualities related to discussing substance abuse with patients. The scale consists of six items and uses a 10-point scale. The past positive experiences sub-scale had a mean score of 6.54 and a standard deviation of 1.86. The past negative experiences sub-scale had a mean score of 4.51 and a standard deviation of 1.83. This measure is included as Appendix D. The reliability for the positive past experience scale in this study was $\alpha = .94$, and the reliability for the negative past experience scale in this study was $\alpha = .91$.

Training Quality. Training was assessed using four Likert-type items. These items asked participants to rate the quality of their training as it pertains to substance use. Questions on training focused on four specific aspects: medical school training, training during residency, continuing medical education, and overall training (including medical school, residency and continuing medical education).

Analysis

The original analysis plan involved testing a structural equation model, which would have allowed for a more nuanced understanding of how these constructs were related. With the present sample size, however, analysis was restricted to correlations. Analyses consisted of one and two-tailed Pearson correlations to determine whether there is a significant relationship between constructs. Significance is set at the .05 level for these tests.

CHAPTER 4 - RESULTS

Analysis consisted of a series of one and two-tailed correlations to determine the relationships between different constructs. The results of these correlations can be found in tables 3-11 that report the full results of each test. A table reporting descriptive statistics is also available (see Table 2).

H1 proposed a positive relationship between self-efficacy and communication competence. As a reminder, communication competence was conceptualized as effectiveness and operationalized using frameworks based on multiple-goals and person-centeredness. Results showed there was no significant association between self-efficacy and person-centeredness, task goals, identity goals or relationship goals. Therefore, H1 was rejected (see Table 3).

H2 hypothesized that communication apprehension would have a negative association with competence. There was a weak negative correlation between relationship goals ($M = 3.00$, $SD = 1.26$) and communication apprehension ($M = 59.8$, $SD = 18.15$), r (130) $= -.177$, $p < .05$, $r^2 = .23$. Task goals, identity goals, and person-centeredness were not significantly correlated with communication apprehension, however. Therefore, H2 was partially supported (see Table 4).

H3 hypothesized that communication apprehension would have a negative association with self-efficacy. Results showed a strong negative correlation between self-efficacy ($M = 5.5$, $SD = 0.91$) and communication apprehension ($M = 59.8$, $SD = 18.15$), r (140) $= -.617$, $p < .01$, $r^2 = .38$. Therefore, H3 was supported (see Table 5).

RQ1, which examined the relationship between perceptions of training quality across four dimensions (medical school, residency, continuing medical education, and

overall training) and communication competence, found that there was a weak positive relationship between task goals ($M = 4.17$, $SD = 1.42$) and perceptions of overall training ($M = 3.3$, $SD = .74$), r (150) $= .202$, $p < .05$, $r^2 = .04$. There was also a weak positive relationship between task goals ($M = 4.17$, $SD = 1.42$) and perceptions of continuing medical education training ($M = 3.22$, $SD = 0.75$), r (150) $= .179$, $p < .05$, $r^2 = .03$. Identity goals ($M = 4.02$, $SD = 1.47$) were not associated with any training perceptions. Relationship goals ($M = 3.00$, $SD = 1.26$) were positively correlated with perceptions of overall training ($M = 3.3$, $SD = .74$), r (150) $= .151$, $p < .05$, $r^2 = .02$, but not with any other training perceptions. Person-centeredness ($M = 2.17$, $SD = 0.70$) was positively associated with perceptions of medical school didactic courses ($M = 2.44$, $SD = 0.89$) , r (150) $= .146$, $p < .05$, $r^2 = .02$; however, it was not associated with any other perceptions of training quality (see Table 6).

RQ2 was examined using a two-tailed Pearson product-moment correlation to examine the relationship between perceptions of training quality across four dimensions (medical school, residency, continuing medical education, and overall training) and self-efficacy (see Table 7). Results showed a moderate positive relationship between self-efficacy ($M = 5.5$, $SD = 0.91$) and perceptions of overall training ($M = 3.3$, $SD = .74$), r (169) $= .424$, $p < .01$, $r^2 = .18$. There was also a moderate positive correlation between self-efficacy ($M = 5.5$, $SD = 0.91$) and perceptions of continuing medical education training ($M = 3.22$, $SD = 0.75$) , r (166) $= .37$, $p < .01$, $r^2 = .14$. There was a weak positive correlation between self-efficacy ($M = 5.5$, $SD = 0.91$) and perceptions of residency training ($M = 3.3$, $SD = .97$), r (169) $= .134$, $p < .05$, $r^2 = .02$. Self-efficacy was not associated with perceptions of medical school didactic courses ($M = 2.44$, $SD = 0.89$).

RQ3 was examined using a two-tailed Pearson product-moment correlation to determine whether perceptions of training quality were associated with communication apprehension. Results showed a weak negative correlation between perceptions of continuing medical education training ($M = 3.22$, $SD = 0.75$) and communication apprehension ($M = 59.8$, $SD = 18.15$), $r(138) = -.206$, $p < .05$, $r^2 = .04$. There was also a moderate negative correlation between perceptions of overall training ($M = 3.3$, $SD = .74$) and communication apprehension ($M = 59.8$, $SD = 18.15$), $r(141) = -.284$, $p < .01$, $r^2 = .08$. Communication apprehension was not associated with perceptions of medical school didactic courses ($M = 2.44$, $SD = 0.89$) or residency training ($M = 3.25$, $SD = 0.97$).

In order to examine RQ4, which concerned the relationship between previous experience discussing substance abuse and communication competence, a two-tailed Pearson product-moment correlation was used. Past negative experiences ($M = 4.51$, $SD = 1.83$) were not significantly correlated with person-centeredness, task goals, identity goals, or relationship goals. Past positive experiences ($M = 6.54$, $SD = 1.86$) had a weak positive correlation with task goals ($M = 4.17$, $SD = 1.42$), $r(148) = .167$, $p < .05$, $r^2 = .03$, but was not significantly correlated with person-centeredness, identity goals, or relationship goals (see Table 9).

In order to examine RQ5, which concerned the relationship between previous experience discussing substance abuse and self-efficacy, a two-tailed Pearson product-moment correlation was used. There was a moderate positive relationship between past positive experiences ($M = 6.54$, $SD = 1.86$) and self-efficacy ($M = 5.5$, $SD = 0.91$), $r(166) = .478$, $p < .01$, $r^2 = .22$. There was a moderate negative relationship between past

negative experiences ($M = 4.51$, $SD = 1.83$) and self-efficacy ($M = 5.5$, $SD = 0.91$), r (165) = -.306, $p < .01$, $r^2 = .09$ (see Table 10).

In order to examine RQ6, which concerned the relationship between previous experience discussing substance abuse and communication apprehension, a two-tailed Pearson product-moment correlation was used. This resulted in a moderate negative correlation between communication apprehension ($M = 59.8$, $SD = 18.14$) and past positive experiences ($M = 6.54$, $SD = 1.86$), r (138) = -.46, $p < .01$, $r^2 = .21$. Additionally, there was a moderate positive correlation between communication apprehension ($M = 59.8$, $SD = 18.14$) and past negative experiences ($M = 4.51$, $SD = 1.83$), r (139) = .311, $p < .01$, $r^2 = .10$ (see Table 11).

CHAPTER 5 - DISCUSSION

The goal of this study was to gain a better understanding of self-efficacy and communication competence in the context of CAP conversations with patients about substance use. By better understanding how these concepts relate to one another, as well as what factors influence them, future researchers will have a starting place for designing training interventions that may help to improve these important constructs. Designing training that will increase self-efficacy and communication competence should lead to CAPs being able to diagnose and treat substance use disorders better since they will be more likely to engage in the discussions to begin with and be more skilled in them when they do happen.

Self-Efficacy and Communication Competence

I expected that self-efficacy and communication competence would be positively related. Logically, it makes sense that someone who is highly competent at a behavior would also feel highly confident in their abilities. The results, however, did not support this however, as self-efficacy was not significantly associated with any of the four aspects of communication competence (task, identity, relational, and person-centeredness).

One explanation for this result is that the method of assessing communication competence through open ended responses to a scenario failed to generate messages with sufficient variance. It is possible that participants lacked either time or motivation, and thus, did not craft messages that accurately represented their true level of competence. This could result in a situation where the variance between the messages created by more competent participants and less competent participants is reduced.

It is also possible that participants' confidence in their abilities is not grounded in reality. It could be that while participants' perceived themselves to be highly skilled, and thus highly confident, in reality they were not as skilled as they thought. This would explain why we do not see a positive relationship between self-efficacy and communication competence.

Another potential explanation for this is that CAPs who are highly confident may take a more direct approach, which would result in a more straightforward message style focused on only task goals. Rating messages using a multiple goals framework is an evaluation of message sophistication (Caughlin, 2010). Therefore although a direct message would score high on task goals, it would score lower on relational and identity goals than messages that are more elaborate. CAPs who are very confident may try to "get to the point" rather than craft more elaborate messages.

It is not entirely surprising that self-efficacy and identity goals, relational goals, and person-centeredness are not associated, either, since the measure of self-efficacy was specific to substance use (which represents the task goal in this context) and did not include their confidence in their ability to craft messages that would build a relationship or allow a patient to present a positive identity. The non-task elements of competence that were measured could be understood as global aspects of competence that are not limited to just the context of substance use. A CAP who is able to successfully attend to identity and relational goals should be able to do so across a number of different potential topics, whereas the task goal is limited to a specific context.

This study also served as a test of the self-efficacy scale that was developed for the specific context of treating adolescent substance use. The scale showed good

reliability. The scale was also tested for face validity by experts who felt that it was valid. In terms of convergent validity, apprehension and self-efficacy would be expected to have a negative relationship, and this negative relationship was present in this study. Since the scale was developed in accordance with the directions of Bandura, there is no reason to believe that it does not accurately measure self-efficacy as conceptualized in SCT. This scale may be useful in future research, even for providers who are not CAPs but who need to discuss substance abuse with their adolescent patients. For example, this same scale, with only minor modifications, could be used with pediatricians or psychologists.

Training Quality and Communication Competence

I hypothesized that perceptions of training quality on substance use would be positively associated with communication competence, and I assessed perceptions of training quality across three specific contexts (medical school, residency, continuing education) and as an overall impression. Results showed that task goals were associated with continuing medical education, as well as the overall evaluation of training on substance use. This would indicate that those participants who felt they had received good training on substance use from continuing medical education classes, as well as overall, are better able to craft messages that directly address substance use. Relational goals were associated with overall evaluations of substance abuse training. There is not a clear explanation for why participants who believe they have received better overall training on substance use would be better able to attend to relational goals. It is possible that participants who felt they received better training overall in substance use also received better training overall in other areas that may affect how they approach

managing relational goals. Person-centeredness of messages was associated with medical school didactic courses. This may be explained by the shift in focus in medical schools towards teaching a more patient-centered style of care (Core Competencies, 2017).

The results also show that training received in medical school and residency programs may not be effective, as these measures were not associated with task, relational, or identity goals. It would appear based on the results that continuing medical education courses are the most effective training method since perceptions of the quality of that training had the strongest relationship with the task aspect of communication competence. This has two main implications. The first is that continuing medical education may serve as a good avenue to target for further training on substance use. Since continuing medical education has a positive relationship with task goals, this would indicate that this training has the ability to improve CAPs' skills when it comes to crafting messages specifically related to substance use. Training methods that do not translate to real world competence are of little value, but the results would indicate that continuing medical education efforts have resulted in translatable skills. The second implication is that more work needs to be done to improve the quality of substance abuse training that is provided in medical school. The mean score for perceptions of quality of medical school training was 2.44, whereas means for all other aspects of training had means above 3 on a 5-point scale (see Table 2). An intervention that helps to develop these skills earlier in a CAP's career could be beneficial rather than having to wait until they are practicing to take continuing medical education courses on substance use.

Training Quality and Self-Efficacy

I posited a positive relationship between perceptions of training quality on substance use and self-efficacy. The results showed that self-efficacy was associated with residency programs, continuing medical education, and overall training evaluations but not with medical school training. Overall training and self-efficacy exhibited a moderate association, which would indicate that CAPs who feel they have been trained well feel more confident. The relationship between continuing medical education and self-efficacy was also moderately strong, which shows that continuing medical education programs are fairly successful at translating into real-world confidence. While perceptions of residency training were also related to self-efficacy, the relationship was much weaker than the one between self-efficacy and continuing medical education. At this point it is difficult to explain why training in residency does not seem to translate to self-efficacy in the same way as continuing medical education does. One explanation could be that there is little standardization in terms of how residency programs approach substance use training and the extent to which it is given specific emphasis and training. Continuing education classes offer CAPs the opportunity to focus on specific skills and competencies, and this more focused approach to training might be the only focused training on substance use that a CAP ever receives, depending on their residency experience. This focused training on substance use should have a stronger effect on self-efficacy. The lack of a relationship between self-efficacy and perceptions of training quality may indicate that substance use training is either not happening in medical school or is ineffective when it does happen since it does not have any association with perceptions of self-efficacy or communication competence.

Training Quality and Communication Apprehension

The results related to the relationship between training and communication apprehension may help explain why overall training translated into self-efficacy more than residency training did. These results showed a negative relationship between overall training and communication apprehension, which means that CAPs who felt that they had received good training overall experienced less apprehension than their peers who felt that they had received worse training. This negative relationship also held for continuing medical education, as it was negatively associated with communication apprehension; thus, CAPs who felt that they had experienced good continuing medical educational training on substance use experienced less communication apprehension than their peers who did not feel as confident about their continuing medical education training. It is possible that training works on self-efficacy in two ways: directly and indirectly through apprehension. If training is successful in lowering apprehension, this could lead to increased self-efficacy in addition to the increase in self-efficacy we would expect from attending a skills training.

One interesting finding with regard to training had to do with perceptions that the quality of overall training was better than any of the specific types of training (medical school, residency, continuing medical education). That is, perceptions of overall training had a mean score that was higher than the mean for any of the specific types of training discussed (see Table 2). This could indicate that there are aspects of training that were not adequately measured. For example, there may be unofficial methods of training that were not measured, and these unofficial methods of training may be helping to raise overall perceptions of training such that it is higher than all of the component pieces. If that is

the case, understanding the form that this unofficial training takes could be quite helpful. As it stands now, it would appear that training is more than the sum of its parts, since CAPs perceive their overall training as being better than any of the single elements of it.

Previous Experiences Discussing Substance Use with Patients

The results of this study have shed more light on how previous experiences discussing substance abuse affect communication competence, communication apprehension, and self-efficacy. The results related to the relationship between past experiences and communication competence showed that past negative experiences were not associated with any of the elements of communication competence. This is somewhat expected since competence is a set of skills, and it is unlikely that having a bad experience would erode someone's skills. It is possible that individuals could learn from a negative experience and become more skilled by avoiding making the same mistakes over again, but it seems implausible to think any type of experience would result in someone becoming less skillful. It is also possible that the lack of relationship stems from the fact that any apprehension or anxiety created by thinking about past negative experiences was dissipated by the time the CAPs crafted their message, similar to how they may not have experienced apprehension when responding to the message crafting scenario in the same way that they would in a real treatment scenario.

The results also showed that past positive experiences were positively associated with task goals. This result is encouraging because once CAPs start having successful conversations with their patients, that success may build on itself. As they have more positive experiences, they feel more confident and competent, which could in turn lead to

them having even more positive experiences. This could create a reinforcing cycle wherein positive experiences and competence serve to bolster each other.

The results also show the strong relationship between past experiences and self-efficacy. Past negative experiences had a negative association with self-efficacy, whereas past positive experiences had a positive association with self-efficacy. These results align with SCT, which states that past experiences would be used to generate outcome expectancies that act on perceptions of self-efficacy. The most interesting aspect of these results is that the association between positive past experiences and self-efficacy is stronger than the association between negative past experiences and self-efficacy. This means in the long-run, if a CAP has an equal number of positive and negative experiences, there should be a net positive effect on self-efficacy due to the fact that the relationship between past positive experiences with self-efficacy is stronger than the relationship between past negative experiences and self-efficacy. One explanation for why past positive experiences have a stronger relationship than past negative relationships could be that past positive experiences represent an expectancy violation. CAPs may expect these conversations to go poorly, and when they go well, this violates their expectations, making them stand out more in their memory. This question could be explored in future research.

The results also showed that past negative experiences had a positive relationship with communication apprehension, which is to say that the more negative experiences someone has, the more apprehension they will experience. Conversely, the results showed that positive experiences had the opposite effect, with past positive experiences being negatively associated with communication apprehension. Similar to the relationship

between past experiences and self-efficacy, past positive experiences have a stronger association with CA than the past negative experiences do. This means that in the long run, past positive experiences should outweigh past negative experiences and result in lowered communication apprehension.

Communication Apprehension, Communication Competence, and Self-Efficacy

Communication apprehension is an important construct in the context of this study as it is expected to act on both communication competence and self-efficacy. The literature on communication apprehension suggests that it will be negatively associated with communication competence. This was partially supported, as relational goals were found to have a weak negative association with apprehension, which measures the amount of anxiety or fear a CAP may experience when thinking about discussing substance use with their patients. One explanation for apprehension not having a stronger negative relationship with task, identity, and person-centeredness comes from the fact that the participants were not actually experiencing the apprehension when they crafted their messages. They were able to craft their message in a controlled environment at their own pace and even had the ability to go back and edit their message. Obviously this is not the case in a treatment context, when they have to craft a message on the fly and are not able to edit it once they have said it. So while some CAPs may experience apprehension when they are actually interacting with patients, it makes sense that this level of apprehension and its effects might be muted when they are crafting a message as a response to a survey rather than in a treatment context. This could result in associations not being statistically significant, as in the case with task, identity and person-centeredness, or in statistically significant associations, such as the one between

communication apprehension and relational goals, being weak. It is worth noting that although the association between communication apprehension and identity was not statistically significant, it was, as predicted, negative. The association between communication apprehension and person-centeredness was also negative, just not statistically significant.

When it comes to self-efficacy, the expected negative relationship between communication apprehension and self-efficacy was strong. This result shows us that communication apprehension and self-efficacy are closely related, and reducing communication apprehension may serve as an effective method for increasing self-efficacy or alternatively that increasing self-efficacy would serve to reduce communication apprehension. This could mean that future training efforts should focus on reducing apprehension in an attempt to raise self-efficacy. Using role-play scenarios, especially scenarios that are fairly easy, could help CAPs get more comfortable having these conversations and build self-efficacy. This combination of more exposure to the behavior along with increased self-efficacy should result in less apprehension.

Implications for Training Development

These results have important implications with regard to the development of training programs for adolescent substance abuse treatment and prevention. Continuing medical education is an appealing option for the development of training since it can be made available to current CAPs who are practicing and not just CAPs who are still in residency or medical school. Developing separate training for residents could also be beneficial as it would allow them to have a more advanced set of skills when they begin practicing on their own.

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In terms of implications for actual training content, the findings related to past experiences could offer a useful avenue. The results showed that past positive experiences had stronger associations with self-efficacy and communication competence than past negative experiences. A training program that in part, asks participants to think back on positive experiences that they have had could be efficacious. Focusing on what techniques worked in those successful past interactions should help to increase self-efficacy. It may also be useful for the training to provide guidance on how to best frame messages about substance use when talking with adolescents. Providing guidance on how to attend to relational and identity goals while also directly addressing substance use could be helpful for providers who have not been trained in motivational interviewing or other techniques that take this sort of approach. Using roleplaying activities could also be useful in attempting to increase self-efficacy. Roleplays could allow CAPs the opportunity to exercise their communication competence by crafting messages in a scenario where they can receive coaching and feedback without the danger of having a negative reaction from a real patient. It is important that these roleplay situations are challenging enough that they help CAPs build skills, but not so difficult that they are frustrating. This could lead to CAPs gaining both skills and confidence, which could lead to reduced apprehension.

Limitations of Study

The primary limitation for this study was the sample size, which limited the type of statistical analysis that could be performed. CAPs are a small specialty within the medical community, so the population was limited from the start. This was exacerbated by the fact that practicing physicians are very busy and often do not have the time to

participate in research, and thus can be hard to recruit. Ultimately, it was not possible to gather a sample large enough to have the necessary power that would be needed for model testing or other advanced multivariate statistical testing. A sample size of 350 to 400 would have been necessary to run these tests. The sample was adequate for basic univariate testing, however.

The survey design was also limited because the length of the survey needed to be kept as short as possible in order to make recruitment easier. Ideally, it would have been beneficial to collect more in depth information, for example, about the geographic region that CAPs practice in and the resources that they have available in their practice or nearby. This information could help determine whether structural factors, like access to adolescent substance abuse treatment centers, have an effect on communication competence or self-efficacy. Because CAPs are quite busy, however, it is unlikely that they would be willing to fill out a long, in depth survey. This lack of time could also explain why some of the crafted messages were quite short and direct. Crafting a more nuanced message takes more time, and many of the participants may not have felt that they had this extra time. Using a survey to collect these messages rather than having the CAPs craft the messages as part of a roleplay scenario limited the ecological validity of the study.

Directions for Future Research

This study represents a good starting point for understanding patient-provider communication in mental health settings; however, considerably more research is needed to develop this area. This study is restricted to CAPs and their conversations with adolescent patients about substance use. CAPs have several other challenging topics to

discuss with the patients, of course, and exploring conversations in those areas (e.g., aggression, risky sexual behavior) will be important. In addition, there are, of course, many other healthcare providers that provide care for persons with substance use disorders, and substance use affects a wide range of ages. This area is ripe for future research.

With regard to CAP conversations about substance use, more research needs to examine what types of messages are most effective in addressing adolescent substance use. While there has been considerable research related to how adolescents respond to mass media messages related to substance use (Farrelly, Niederdeppe, & Yarsevich, 2003; Palmgreen, Donohew, Lorch, Hoyle, & Stevenson, 2001; Zhao, Strasser, Cappella, Lerman, & Fishbein, 2011), there has been relatively little work done on how adolescents respond to interpersonal conversations about substance use. Messages can be analyzed through a multiple-goals perspective, but we cannot guarantee that those messages will be effective with adolescents. A study having adolescents rate messages and explain what they like and dislike about each message could shed more light on what message elements are most influential.

It is also important to look at how training can be used to improve CAP self-efficacy and competence in these discussions. While it is informative from a theoretical perspective to know what factors affect self-efficacy and competence, being able to actually improve attitude and behavior and improve the quality of care offered is an important translational goal. Developing training based on the findings of this study and determining the extent to which it is effective in improving CAP self-efficacy and competence is worth undertaking.

Investigating conversations about other risky behaviors like self-harm, eating disorders, or risky sexual behaviors is also important. The types of messages that are successful in navigating conversations about a risky behavior like substance use may also be successful when applied to other risky behaviors that adolescents engage in.

Conclusion

The current study and its results represent a first step toward gaining a better understanding of patient-provider communication in mental health settings. As this area of study has been neglected, there is still an incredible amount of work that must be done to gain a foundational understanding of how patient-provider communication in mental health settings differs from work that has been done on patient-provider communication in other settings. Understanding concepts like self-efficacy and communication competence represents a logical place to start as they shed light on how providers gain confidence in their abilities and how that confidence translates into actual skills.

The results of this study show that CAPs may not receive training in medical school or residency that is translating into real world skills and confidence when it comes to discussing substance use with adolescents. The results also offer some information about training approaches that may be efficacious, such as approaches that focus on reducing apprehension. A CAP's past experiences discussing substance use with patients are also highly relevant to their current level of confidence. Interestingly, past positive experiences seem to have a stronger effect on apprehension and self-efficacy than negative experiences, a finding that may be possible to leverage in the design of future training programs. My hope is that the results of this study can be used to inform the

development of future training for CAPs and can be expanded upon to gain further

insight into patient-provider communication in mental health settings.

Table 1.

Example messages for communication competence

Messages with high scores for competence

- How are you coping with the suspension? What does smoking do for you? Seems like it was important enough to you to risk suspension for. Does it calm you down in some way, relieve stress, or help you focus? Sometimes kids see their family members smoke while growing up and are used to it or see it serving the same function it did for the family member. Is that the case for you, by any chance?   How are you feeling about school? Want to go back? What are your overall goals? How can I help yu achieve them? Does smoking get in the way of them at all? Should I be worried about how much you're smoking or how it's affecting your life? I think I am worried. Do you know why? If I shouldn't be, why not?   Would you consider cutting down or quittig? If so, I can prescribe you some gum to help reduce cravings or a patch.. Are those things you've seen anyone else use to get off of cigarettes? Any 'harder' drugs you are experimenting with that I should know about? Examples would be heroin, cocaine meth, E / molly, LSD, bath salts, spice (synthetic cannabis), stimulants, benzos, 'pills'? Has anyone in your family ever used street drugs? Did you ever see them do them, growing up? What was it like for you to see that? Does it still affect you?
- I would start by asking him if he could tell me about experiences at school. I would then try to slowly steer him toward tobacco use and ask directly about it. I find that talking with young people openly and honestly results in honest answers. I would then work with him to map out a plan to discuss how to move to better patterns and how to discuss this plan with his grandparents who likely already know some of these facts because of suspension.
- I've been told you're here to see me because you were suspended from school for smoking on school grounds. Is that right? (hope he says yes) Can you tell me what happened? (depending on his answer: -minimization, -denial, -projection of blame,- shame ad contrition) I will take the conversation from there, trying to stay engaged, starting where he is and make sure he feels supported and heard.

Messages with moderate scores for competence

- I'm not going to write this down, and what you say in here is confidential. How much weed do you smoke?...
- First, I would clarify if he understands why I'm seeing him. After going through the scenario of him coming and his understanding, I would ask: "So what happened at school?"
- Hi, how are you? What can I help you with? Do you have any concerns about your tobacco use?

Messages with low scores for competence

- How are you doing today?
- I understand you got suspended from school
- What do you like to do with your friends?

Table 2.

Descriptive Statistics

Variables	N	Mean	SD
1.Self-Efficacy	169	5.50	.909
2. Person-Centeredness	150	2.17	.705
3. Task	150	4.17	1.42
4. Identity	150	4.02	1.47
5. Relational	150	3.00	1.26
6. Medical School Didactic Courses	170	2.44	.890
7. In Your Residency	170	3.25	.972
8. Through Continuing Medical Education	167	3.22	.753
9. Overall Throughout Your Career	170	3.30	.745
10. Communication Apprehension	141	59.80	18.15
11. Past Positive Experiences	167	6.54	1.86
12. Past Negative Experiences	166	4.51	1.83

Note. Scale range for Training items is 1-5, for Self-Efficacy, Task, Identity, and Relational is 1-7, for Person-Centeredness is 1-3, Past Positive and Negative Experiences is 1-10, and for Communication Apprehension is 20-140.

Table 3.

Correlations for communication competence and self-efficacy

Variables	1	2	3	4	5
1.Self-Efficacy	1				
2. Task	.101	1			
3. Identity	.024	.382**	1		
4. Relational	.067	.329**	.730**	1	
5.Person-Centeredness	-.016	.400**	.822**	.703**	1

*Note. *p < 0.05. **p < .01.*

Table 4.

Correlations for communication competence and communication apprehension

Variables	1	2	3	4	5
1.Communication Apprehension	1				
2. Task	.005	1			
3. Identity	-.115	.382**	1		
4. Relational	-.177*	.329**	.730**	1	
5.Person-Centeredness	-.087	.400**	.822**	.703**	1

*Note. *p < 0.05. **p < .01.*

Table 5.

Correlations for self-efficacy and communication apprehension

Variables	1	2
1.Self-Efficacy	1	
2. Communication Apprehension	-.617**	1

*Note. *p < 0.05. **p < .01.*

Table 6.

Correlations for training measures and communication competence

Variables	1	2	3	4	5	6	7	8
1.Task	1							
2. Identity	.382**	1						
3. Relational	.329**	.730**	1					
4. Person-Centeredness	.400**	.822**	.703**	1				
5. In medical school didactic courses	.126	.121	-.011	.146*	1			
6. In your residency	.088	.097	-.037	.085	.450**	1		
7. Through continuing medical education opportunities	.179*	-.066	.034	.033	.167*	.163*	1	
8.Overall throughout your career	.202**	.030	.151*	.023	.061	.298**	.597**	1

Note. $*p < 0.05.$ $**p < .01.$

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Table 7.

Correlations for training measures and self-efficacy

Variables	1	2	3	4	5
1.Self-Efficacy	1				
2. In medical school didactic courses	-.015	1			
3. In your residency	.134*	.450**	1		
4. Through continuing medical education opportunities	.370**	.167*	.163*	1	
5.Overall throughout your career	.424**	.061	.298**	.597**	1

*Note. *p < 0.05. **p < .01.*

Table 8.

Correlations for training measures and communication apprehension

Variables	1	2	3	4	5
1.Communication Apprehension	1				
2. In medical school didactic courses	.047	1			
3. In your residency	-.070	.450**	1		
4. Through continuing medical education opportunities	-.206*	.167*	.163*	1	
5.Overall throughout your career	-.284**	.061	.298**	.597**	1

*Note. *p < 0.05. **p < .01.*

Table 9.

Correlations for communication competence and past experiences

Variables	1	2	3	4	5	6
1. Past Positive Experiences	1					
2. Past Negative Experiences	-.141	1				
3. Task	.167*	-.054	1			
4. Identity	.078	-.026	382**	1		
5. Relational	.151	.007	.329**	.730**	1	
6. Person-Centeredness	.073	.001	.400**	.822**	.703**	1

*Note. *p < 0.05. **p < .01.*

Table 10.

Correlations for self-efficacy and past experiences

Variables	1	2	3
1. Past Positive Experiences	1		
2. Past Negative Experiences	-.141	1	
3. Self-Efficacy	.478**	-.306**	1

*Note. *p < 0.05. **p < .01.*

Table 11.

Correlations for communication apprehension and past experiences

Variables	1	2	3
1. Past Positive Experiences	1		
2. Past Negative Experiences	-.141	1	
3. Communication Apprehension	-.460**	.311**	1

*Note. *p < 0.05. **p < .01.*

Self-efficacy of Discussing Substance Abuse

Please rate how certain you are that you can discuss substance abuse with your patient in the situations described below.

1	2	3	4	5	6	7

Extremely uncertain   Extremely confident

___1 Your colleague has asked you to see their adolescent daughter for a screen. There is a strong family history on both sides for opiate abuse.

___2 You are seeing a 13 year old male for an initial evaluation for Obsessive Compulsive Disorder. His parents are very protective and want to be in on the interview. You would like to complete a risky behavior inventory and are wondering how that would go with parents present.

___3 A colleague has called you about a referral. He is concerned that his patient, a 16 year old male, is using marijuana daily. The patient does not want to discuss substance use and is afraid his parents would punish him if they found out.

___4 You are seeing a 17 year old female for social anxiety. She is getting better with therapy and an SSRI. She mentions that drinking at parties really helps her have a good time.

___5 You have a referral on a 13 year old. He was neglected by drug abusing parents and is now being raised by his grandparents. The school has suspended him for using tobacco on school premises.

___6 You will be seeing a new patient who is a 15 year old female. She was a straight A student until this last semester, when her grades plummeted. Her parents are concerned that she is just not herself and that her new boyfriend may be using a lot of marijuana. The patient adamantly denies using marijuana to her parents.

___7 You have been seeing this patient since grade school for depression. She is now in college and is back to see you for your twice-a-year visit. She shares that last weekend she drank and had a black out and suspects she had sex with someone she does not know.

Appendix B

Message Development

Based on the following scenario, please craft a message that you would use to initiate a discussion of substance abuse with this patient:

> You have a referral on a 13 year old. He was neglected by drug abusing parents and is now being raised by his grandparents. The school has suspended him for using tobacco on school premises.

Appendix C

Situation Communication Apprehension Measure

Directions: Please complete the following questionnaire about how you would feel in this situation:

You have a referral on a 13 yo. He was neglected by drug abusing parents and is now being raised by his grandparents. The school has suspended him for using tobacco on school premises.

There are no right or wrong answers. Just respond to the items quickly to describe as accurately as you can how you felt while interacting with that person.

1	2	3	4	5	6	7

Extremely inaccurate   Extremely accurate

_____1. Apprehensive

_____2. Disturbed

_____3. Peaceful

_____4. Loose

_____5. Uneasy

_____6. Self-assured

_____7. Fearful

_____8. Ruffled

_____9. Jumpy

_____10. Composed

_____11. Bothered

_____12. Satisfied

_____13. Safe

75

_____14. Flustered

_____15. Cheerful

_____16. Happy

_____17. Dejected

_____18. Pleased

_____19. Good

_____20. Unhappy

Items to Measure Past Experiences

For each of the following statements, please indicate your evaluation of how positive or negative the experiences were.

<u>Items Measuring Positive Experiences Discussing Substance Abuse</u>

1. Considering only your positive experiences discussing substance abuse, and ignoring the negative ones, evaluate how positive these experiences are.

   0   1   2   3   4   5   6   7   8   9   10

   Not positive at all   Moderately Positive   Extremely positive

2. Considering only positive feelings you have towards discussing substance abuse, and ignoring the negative ones, evaluate how positive these feelings are.

   0   1   2   3   4   5   6   7   8   9   10

   Not positive at all   Moderately Positive   Extremely positive

3. Considering only good feelings you have about your discussions of substance abuse, and ignoring the bad ones, evaluate how good these feelings are.

   0   1   2   3   4   5   6   7   8   9   10

   Not positive at all   Moderately Positive   Extremely positive

Items Measuring Negative Experiences Discussing Substance Abuse

4. Considering only your negative experiences discussing substance abuse, and ignoring the positive ones, evaluate how negative these experiences are.

0	1	2	3	4	5	6	7	8	9	10

Not negative at all   Moderately negative   Extremely negative

5. Considering only negative feelings you have towards discussing substance abuse, and ignoring the positive ones, evaluate how negative these feelings are.

0	1	2	3	4	5	6	7	8	9	10

Not negative at all   Moderately negative   Extremely negative

6. Considering only bad feelings you have about your discussions of substance abuse, and ignoring the good ones, evaluate how bad these feelings are.

0	1	2	3	4	5	6	7	8	9	10

Not negative at all   Moderately negative   Extremely negative

Appendix E

Items to Assess Perceptions of Training Quality

Please rate the quality of training on substance abuse that you received (very low quality, low quality, average quality, high quality, very high quality)

1. In medical school didactic courses

1	2	3	4	5
very low quality	low quality	average quality	high quality	very high quality

2. In your residency

1	2	3	4	5
very low quality	low quality	average quality	high quality	very high quality

3. Through continuing medical education opportunities

1	2	3	4	5
very low quality	low quality	average quality	high quality	very high quality

4. Overall throughout your career

1	2	3	4	5
very low quality	low quality	average quality	high quality	very high quality

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VITA

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EDUCATION

M.A., Communication, Saint Louis University, St. Louis, MO, May 2013

        Adviser: Kevin Wright, Ph.D.

        Focus: Health and Computer-Mediated Communication

        Thesis: *An exploration of the relationship between source credibility and perceived emotional support in online social support communities*

B.S., Communication, Bradley University, Peoria, IL, December 2010

        Major: Public Relations

        Minor: Marketing

PUBLICATIONS

Peer Reviewed Journal Articles

Wombacher, K., Herovich, E**.,** Sellnow, T., & Seeger, M. (In Press). Communication, crisis, place, and renewal. *Journal of Contingencies and Crisis Management.*

Dai, M., **Wombacher, K.,** Matig, J. J., & Harrington, N. G. (In Press). Using the Integrative Model of Behavioral Prediction (IMBP) to Understand College Students' Hook-Up Sex Beliefs and Behaviors. *Health Communication.*

Wombacher, K., Reno, J., Williams, G., & Johnson, L. (In Press). Does YikYak promote risky health behavior on college campuses? *Health Communication.*

Wombacher, K., Harris, C. J., Buckner, M. M., Frisby, B. N., & Limperos, A. M. (In Press). The effects of computer-mediated communication anxiety on student perceptions of instructor behaviors, perceived learning, and quiz performance. *Communication Education.*

Wombacher, K., Reno, J., & Veil, S. (2017). NekNominate: Social norms, social media and binge drinking. *Health Communication, 32,* 596-602.

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Lee, H., Wright, K. B., O'Connor, M., & **Wombacher, K.** (2014). Framing medical tourism: an analysis of persuasive appeals, risks and benefits, and new media features of medical tourism broker websites. *Health Communication, 29,* 637-645.

Edited Chapters

Wombacher, K. (Forthcoming). Intercoder reliability standards: Reproducibility. In Allen, M. (Ed.), *The SAGE Encyclopedia of Communication Research Methods.*

Wombacher, K. (Forthcoming). Intercoder reliability techniques: Scott's pi. In Allen, M. (Ed.), *The SAGE Encyclopedia of Communication Research Methods.*

Wombacher, K. (Forthcoming). Reliability: Knuder-Richardson. In Allen, M. (Ed.), *The SAGE Encyclopedia of Communication Research Methods.*

HONORS AND AWARDS

R. Lewis Donohew Graduate Fellowship ($500)	2013 – 2014
Martha and Howard Sypher Memorial Graduate Scholarship ($500)	2014 – 2015
Graduate School Academic Year Fellowship ($15,000)	2015 – 2016
Health Communication Research Fellowship	2015 – 2016
Risk Communication Research Fellowship	2015 – 2016
Health Communication Research Fellowship	2016 – 2017