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## COMMUNICATION APPREHENSION AFFECTS PERFORMANCE

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COMMUNICATION APPREHENSION  
AFFECTS PERFORMANCE

An Essay Submitted to the  
Office of Graduate Studies  
College of Arts & Sciences of  
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for the Degree of  
Master of Arts

By  
Andrew C. Petry  
2016

The essay of Andrew C. Petry is hereby accepted:

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Author – Andrew C. Petry

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Date

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### **Abstract**

The research outlined in this work is founded on the notion that every individual is affected by a degree of Communication Apprehension (CA), and the level of apprehension individuals experience has the potential to either positively or negatively influence their ability to perform in the workplace. Specifically, this research examines the relationships between the constructs of communication apprehension, performance anxiety, organizational role, and employee performance. The results found that individuals in sales-related professional roles have a significantly lower level of overall CA than the general population; individuals in customer-facing roles displayed no difference in CA level based on sex, organizational level, or region of the country; and there is no correlation between overall CA level and sales performance. The findings offer practical implications for those who recruit and manage sales professionals.

### **Introduction**

Do you remember standing up for the first time in front of a group of your classmates to give a speech in your public speaking class? Sure, you have talked in front of your family and friends with ease and comedic elegance. In fact, you will even sing off pitch at the top of your lungs in front of them. You probably practiced this little speech in front of mom and dad, which they responded to with a standing ovation, but you have not stood in front of a college professor and peers to speak on any topic at length before. The teacher calls out your name and asks you to step to the front of the class. As you stand up, your hands begin to sweat, your heart is pounding out of your chest, each breath seems as though it is not entering your lungs, and you have this knot in the pit of your stomach. You consider sitting back down hoping the professor will skip you. Admittedly, you even contemplate running out of the room never to return again. Deciding to press forward each step closer to the front of the classroom amplifies all the pressure and anxiety. Your hands shake as they hold your three by five note cards, and as the first few words come out of your mouth, they sound more like a crackling squawk than anything from the English language. As you work your way through the speech, you wonder, “What is wrong with me?” You have just become acquainted with communication apprehension.

Communication Apprehension (CA) is a phenomenon that for many affects numerous areas of life whether one is aware or not. For some, it is seen as the blatant discomfort that comes when called upon to speak in front of an audience. For others, it is the bit of anxiety felt before having to converse in group settings or the jolt of nervousness experienced when walking into a meeting. It can also exist in interpersonal communication when calling someone important on the phone or when entering the

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boss's office to discuss an annual review. While some individuals experience communication apprehension to a greater extent than others, the research outlined in this work is founded on the notion that every individual to some extent is affected by a degree of CA, and the level of apprehension individuals experience has the potential to either positively or negatively influence their ability to perform in the workplace.

Customer-facing roles within an organization such as sales, marketing, and customer service are tied closely to the function of public relations as these individuals play an important part in how the organization is seen by those outside of it. In the field of communication, there is a desire to help organizations and individuals better and more capably leverage the power and utility of communication to improve their lives and the success of the organization. Thus, understanding communication apprehension and other psychological factors that may impact these organizational members' ability to effectively promote their organization is an area of study worth continued exploration. It will be important for communication scholars and professionals to address and support industry and academia with connections between theories and practice that will better society.

Specifically, this research examines the constructs of communication apprehension, performance anxiety, organizational role, and employee performance. While there is a wealth of research in the area of CA, there is limited scholarship investigating CA's existence in customer-facing organizational roles. Moreover, there is limited research examining CA's impact on employee performance. Thus, in order to better understand and test the relationship between these variables, past scholarship on each was reviewed and major findings are outlined in the following sections. Specifically,

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the definition of CA, causes, types, effects, and the current treatment methods for individuals with high CA will be examined. Further, the physiological aspect of CA, namely research on anxiety, is explored to better understand what the body is experiencing when a high level of CA occurs. Additionally, literature on the topic of performance – specifically related to sales organizations – is outlined to delineate how performance is defined and the challenges associated with clearly determining accurate and all-encompassing success criteria related to it.

Reviewing past research on each of these complex constructs reveals overlap in many of the factors that comprise each. Thus, three hypotheses are forwarded that predict the relationship between CA and an employee's placement and success in an organization. The hypotheses predict that sales-related professionals those in front-line roles have an overall lower level of CA than the general population as recorded in the literature. However, while these individuals have a lower baseline of CA, the variance of apprehension between them is hypothesized to correlate to their performance. This research was conducted within a medical device organization specifically with the sales and marketing departments. The results of the study were gathered using the PRCA-24 which is a survey of 24 statements that use a Likert rating scale to assess apprehension within four categories of communication to evaluate the individual's level of CA. Also, the organization's sales reports were used to determine the sales professionals' performance for the organization. The research results will be followed by a discussion of the findings. Finally, the concluding portion of the project will highlight theoretical and practical implications for those in the field of organizational study and industry

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professionals tasked with recruiting, selecting, and managing front-line sales professionals.

### **Hypothesis 1**

Those in sales-related professional roles have lower levels of Communication Apprehension than the average population of workers.

### **Hypothesis 2**

Among professionals in sales-related roles, there is no significant difference in CA levels based on sex, title/position, or region within the country.

### **Hypothesis 3**

Employees with higher levels of CA have lower levels of performance than those with lower CA.

## **Literature Review**

Communication Apprehension was initially defined by James McCroskey, the father of CA and a prolific researcher in the field, as “an individual’s level of fear or anxiety associated with either real or anticipated communication with another person or persons” (McCroskey, 1977, p. 78). A more recent definition was expanded by Horowitz (2002), a contemporary of McCroskey, whose research is focused on the effects of anxiety. Horowitz defines CA as “anxiety or fear suffered by an individual of either actual or anticipated communication, with a group or a person, that can profoundly affect their oral communication, social skills, and self-esteem” (Horwitz, 2002, p. 1). Through the past four decades, CA research has been focused mainly on two key perspectives which include trait-based apprehension and state-based apprehension. “A tendency to be anxious when communicating may be specific to only a few settings (public speaking) or



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may exist in most everyday communication situations or may even be part of a general anxiety trait that arises in many facets of an individual's life" (Friedman, 1980).

McCroskey noted, "The original article which advanced the construct of CA included no explicit mention of whether it is a trait of an individual or a response to the situational elements of a specific communication transaction. However, the implication is clear that the construct was viewed from a trait orientation" (McCroskey, 1983, p. 2). In this, McCroskey defines the two key types of CA research constructs. The first, trait-based apprehension, considers CA as something that is experienced by the individual across various situations and time. An individual with trait-based apprehension will have a common sense of discomfort in oral communicative environments which may include public speaking, working in a group, collaborating in meetings, and interpersonal interactions with others. The second, state-based apprehension, is looking at the presence of CA through the factors of a situation during a certain form of communication in which the individual is interacting. Individuals with state-based apprehension will have discomfort in a situation as a result of specific factors relative only to the current state they are encountering which may include a job interview, a speech in front of one's peers, or an interpersonal conversation with one's superior.

Research conducted on CA consistently uses a rating scale that ranges from high levels of apprehension to low with varying degrees between. An individual that is rated having high levels of CA experiences great anxiety and apprehension across multiple situations where oral communication is required. An individual with low levels of CA experiences little anxiety or apprehension during varying situations where oral communication is required. An individual that is found somewhere in the middle is

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considered to have moderate levels of CA and experiences some anxiety and apprehension during some situations where oral communication is required.

As an example, if individuals exhibits high levels of communication apprehension, they will experience anxiety and apprehension in any and every situation where they are required to speak. This individual with high levels of CA would be categorized as having a trait-based apprehension as it is seen across multiple scenarios and situations. Likewise, if individuals exhibit low levels of CA, they are seen as not having trait-based apprehension, but these individuals, though they do not have a trait-based apprehension, may experience moderate or high levels of CA during specific situations where additional factors are present. For instance, if an individual with low levels of CA goes into an interview, they may experience anxiety in response to the added pressure of performing for the interviewer. In this situation, the individuals are thought to be experiencing a state-based apprehension that would not be experienced in most scenarios.

### **Types of Communication Apprehension**

When looking at the types of Communication Apprehension, it is easy to assume that trait-based apprehension and state-based apprehension are the two types. Early in the research, this was thought to be the dichotomy. However, it has proven to be a false dichotomy because of the reality that one cannot be completely separate one from the other. Neither extreme could purely define the real world experiences that are encountered when oral communication is involved. McCroskey states, “It is important that we reject this false dichotomy and view the sources of CA on a continuum” (McCroskey, 1983, p. 3). In an attempt to better define the varying types of CA, a

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continuum model was employed which ranges from extreme trait-based apprehension to extreme state-based apprehension, though neither extreme is likely possible. The four types of CA that were established help to better describe where an individual falls on the continuum between trait-based apprehension and state-based apprehension. The four points that have been established for the continuum include Trait-Like, Generalized-Context, Person-Group, and Situational (McCroskey, 1983).

The term 'trait-like' is used intentionally to indicate a distinction between this view of CA and one that would look at CA as a true trait. [...] Trait-like CA is viewed as a relatively enduring, personality-type orientation toward a given mode of communication across a wide variety of contexts. (McCroskey, 1983, p. 3).

Trait-Like CA includes those individuals who have recorded high scores on the PRCA-24 scale and are found to experience anxiety and apprehension across various oral communication situations. These individuals are thought to be genetically disposed to have higher levels of CA. The assumption that these individuals are born with high levels of CA is a more recent development. As genetic research advances, studies continue to support the notion that genetics contribute to Trait-Like CA in individuals. Additionally, research on the brain is starting to offer added insights on brain chemistry as it relates to those who tend to have higher levels of anxiety and apprehension in most situations.

Moving along the continuum, the next point laid out by McCroskey is Generalized-Context CA.

Generalized-context CA is one step farther removed from pure trait than trait-like CA. CA viewed from this vantage point represents orientations toward

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communication within generalizable contexts. Fear of public speaking, the oldest of the CA conceptualizations, is illustrative of this type of CA. This view recognizes that people can be highly apprehensive about communicating in one type of context while having less or even no apprehension about communicating in another type of context (McCroskey, 1983, p. 3).

McCroskey defined generalized-context as “a relatively enduring, personality-type orientation toward communication in a given type of context.” This point on the continuum is where a large portion of individuals fall with regard to public speaking. “30% to 40% of the general population considered public speaking their number one fear, surpassing fears of heights, sickness, loneliness, and the dark. This finding corroborated by others who report that public speaking is the single most common fear regardless of age, sex, education level, or even preparation and social skills.” (Horwitz, 2002, p. 3).

The next type of CA begins to focus on more specific factors related to the situation in which the oral communication takes place. It is called Person-Group CA.

This type of CA represents the reactions of an individual to communicating with a given individual or group of individuals across time. People viewing CA from this vantage point recognize that some individuals and groups may cause a person to be highly apprehensive while other individuals and groups can produce the reverse reaction. For some people, more apprehension may be stimulated by a peer or group of peers. For others, more apprehension may be stimulated by unfamiliar individuals or groups (McCroskey, 1983, p. 4).

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Person-Group CA is a clear step toward situational factors that are introduced by the other participants in the oral communication process moving the basis for apprehension away from a trait orientation of the individual. It is thought that familiarity with the person or group is directly correlated to the level of apprehension (McCroskey, 1983). As mentioned in the introduction, practicing a presentation in front of one's family and friends does little to prepare the individual for the apprehension brought on when standing before a professor and classroom full of peers. Another factor may include superior-subordinate relationship. When individuals are accountable to another participant they are communicating with, additional stress and anxiety may accompany the transaction. Also, when an individual has a feeling of judgment or evaluation by a person or group this, too, may increase anxiety and apprehension.

The final point on the continuum discussed by McCroskey is Situational CA which is defined as "a transitory orientation toward communication with a given person or group of people" (McCroskey, 1983, p. 5).

This type of CA represents the reactions of an individual to communicating with a given individual or group of individuals at a given time. This is the most state-like of the types of CA. When we view CA from this vantage point we recognize that we can experience CA with a given person or group at one time but not at another time (McCroskey, 1983, p. 5).

Situational CA is the closest point on the continuum to pure state-based apprehension. An individual that has a very low level of CA can experience anxiety and apprehension during a given time, with a specific individual. A clear example of this would be an employee who has a great relationship with a manager and has no anxiety or

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apprehension when speaking with him or her. However, when called in for a performance review, the employee may experience apprehension in response to the situation and timing of the oral communication with this person when meeting for this specific purpose, which is a classic case of Situational CA.

With a better understanding of both trait-based and state-based apprehension and the continuum between each of these two poles on which an individual is found, a richer understanding of the varying challenges and inherent obstacles for effective oral communication are more readily identified. As seen in the literature on treatment of CA, it is vitally important to understand the type of apprehension an individual is facing in order to determine an appropriate course of corrective action to manage or overcome anxiety.

### **Understanding Anxiety**

When looking at Communication Apprehension, it is difficult to determine what exactly is happening to the individual during oral communication from a physiological and psychological perspective. This makes managing or overcoming apprehension that much more difficult. Even if the triggers that initiate the anxiety are identified, it appears as though the individual's natural responses cannot be stopped or altered. Therefore, knowing what anxiety is and how it affects one's ability to function is vital to the process of understanding how apprehension affects the communicator during oral communication. This provides a deeper realization of the causes, effects, and courses of management for CA.

In better defining the affects of anxiety felt due to CA, Horowitz asserts, "Communication apprehension/performance anxiety is a complex phenomenon with

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common symptoms but various etiologies that involve predisposing, precipitating, and perpetuating factors. These factors include neurobiological, psychophysiological, environmental (learned), cultural, cognitive, temperament, and personality traits” (Horwitz, 2002, p. 68). There is a fine line between physiological stress response and performance anxiety. When individuals are facing a stressful situation where they are being evaluated or judged, there is a tendency for the individual’s brain to sense the need to perform resulting in an adrenaline increase. This response of the body can be misinterpreted as a negative reaction and in turn creates fear, stress, and anxiety toward the situation or environment. An adrenaline rush during times of pressure to perform is common to all people. The variance with the individuals’ response is determined by mental interpretation of the physiological response. Horowitz states, “It is the rare individual who does not have a physiological response when challenged with performance or evaluation. How these physiological and mental responses to evaluation are managed is critical to overcoming performance anxiety” (Horwitz, 2002, p. 6). Thus, how an individual perceives the situation impacts whether it invokes anxiety or adrenaline.

Horowitz further contends that anxiety affects all of the core functions of the human body.

Today, anxiety is viewed as a complex phenomenon of the total response of a human being to threat or danger, imagined or real. It has three components: cognitive, physiological, and behavioral. The cognitive aspect is a persistent, chronic sense of uneasiness or dread from negative perceptions about a present or future event or interchange with a person. The concurrent physiological process of

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alarm and activation is marked by changes in neural chemistry, among other responses. The behavioral response is often manifested in an emergency fight-or-flight reaction (Horwitz, 2002, p. 4).

Some common anxiety types are given that help to illuminate what is being experienced and why. The first is known as Transient Anxiety, which Horowitz says is a “common phenomenon accompanying life changes, such as separation of children from parents, first dates, new jobs, moving, or loss of loved ones. Individuals project fears into the future and dwell on the potential external catastrophes, with accompanying loss of identity and self-esteem” (Horwitz, 2002, p. 5). This type of anxiety would coincide closely with Situational CA as it is influenced by the environment and events that are occurring in the individual’s life at a specific time. The additional stress of external challenges makes dealing with and processing additional anxiety that much more challenging. This would appear to escalate individuals’ level of apprehension during oral communication because of their current circumstances of emotional distress. As an example, an individual who has been laid off from a job of twenty or more years and is on the brink of bankruptcy will experience higher levels of apprehension and anxiety in a job interview than an individual that is currently employed and looking for a better opportunity.

The second common anxiety type is Anticipatory Anxiety. “[This anxiety] surfaces when people dwell on future potential foul-ups. Even seasoned speakers, professional musicians, and skilled actors worry incessantly about upcoming performances and fixate on potential catastrophes. This anxiety may or may not disappear during performance” (Horwitz, 2002, p. 5). Some have deemed this method of anxiety as



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a negative self-projection or a negative imagined self. For individuals who have failed or have perceived themselves failing in a recent performance or oral communication encounter, they will expect a similar outcome for future situations that are similar in nature. This type of anxiety is similar to the Generalized-Context CA. Certain oral communication environments are accompanied by a negative expectation, which in turn raises the level of apprehension the individual feels. With a better understanding of the effect self-portrayal plays, one can better prepare for a speech, presentation, or performance.

The third and fourth common anxiety types are familiar to CA research and terminology. These are State Anxiety and Trait Anxiety. State Anxiety is “suffered in a particular situation or with a particular person. [It] can manifest in any or all of cognitive, physiological, or behavioral anxiety components. Fear of certain conversations and public speaking or assertive interactions is a state anxiety for many who have fear only before performance or when they believe they will be evaluated or observed” (Horwitz, 2002, p. 5). This type of anxiety is broad and covers a multitude of scenarios in regard to the types of CA. The continuum between state-based and trait-based CA allows for an influence of state related factors in all oral communication encounters with a larger impact on Situational, Person-Group, and Generalized-Context CA types.

Trait Anxiety is an “individual’s typical level of anxiety independent of specific threatening or dreaded environments. Some have a very high level of trait anxiety, experiencing it internally, even in situations not consciously stressful. Individuals high in trait anxiety are generally blocked in performance and when being evaluated” (Horwitz, 2002, p. 5). With this type of anxiety, the individual feels undue stress and pressure

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across multiple types of oral communication and even in situations where pressure or evaluation is not present. This type of CA and anxiety is the most difficult of the four to overcome for an individual as the anxiety is irrational and therefore more difficult to control.

Understanding better what anxiety is and the common ways it manifests allows for a deeper and richer understanding of CA. An important conclusion from Horwitz's work is that anxiety can be seen as a positive response. If managed and leveraged correctly, it can be a useful tool in growth and productivity. When anxiety is experienced, individuals' adrenaline can become a fuel that enables them to excel during difficult or important situations. Also, the physiological response to anxiety can be life preserving as "an innate survival or defense mechanism that can galvanize a person to recognize and deal with life-threatening situations" (Horwitz, 2002, p. 7). Once the physiological responses are better understood, management of anxiety and apprehension becomes more plausible for the individual who is struggling with oral communication in certain situations and circumstances.

### **Causes of Communication Apprehension**

When considering the causes of Communication Apprehension, one must again look to the fundamental differences between the extreme poles of the CA continuum as there will be varying reasons for the cause of one type versus another as well as a variance in the degree to which each influences individuals based on their position on the continuum. Early on, most researchers assumed CA was learned and therefore could be unlearned or relearned. "Infants were thought to be blank slates, and they learned everything from the environment (other people and experience) as time went on"

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(McCroskey, 2008, p. 166). While this logic has proven to be a variable in the cause of CA, more recent information has emerged about the human brain and its chemistry. With the ever expanding research geared toward understanding this organ and its operation, CA is believed to be influenced by both the individuals' environment and their genetics, which mirrors the long debated nature versus nurture discussion when looking for causes linked to CA. The anxiety felt by the individual is brought on both by physiological and psychological components, making the cause of CA complex but knowable (McCroskey, 2008; Horwitz, 2002).

Current scholarship on trait-like CA defines the phenomena's cause as a combination of heredity and environment (McCroskey, 2008; Horwitz, 2002). Social biologists have conducted research on twins to determine that something other than nurture, learning, and environment has an impact on personality traits and tendencies. They found both identical and fraternal twins had different sociability even though they were brought up in the same environment. This lends to the conclusion proposed that heredity and genetics have an impact on an individual's level of CA. This creates interesting challenges when it comes to helping these individuals manage or overcome their trait-like CA.

The causes of situational CA have garnered much more research than trait-like CA, which is unsurprising given it is much more easily observed, compared, and analyzed. Buss and McCroskey both outlined some basic causal elements in regard to situational CA. They include novelty, formality, subordinate status, conspicuousness, unfamiliarity, dissimilarity, and degree of attention from others (Buss, 1980; McCroskey, 1983).

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Novelty “presents the individual with increased uncertainty about how he or she should behave” (McCroskey, 1983, p. 9). When individuals find themselves in a situation that is new or unique, they have no certainty of how to behave or interact causing much discomfort and will create a lack of self-esteem. In the case of novelty, an individual’s level of CA will increase. This cause, though unavoidable, can be managed by individuals in how they prepare for new, unknown environments where they will engage in oral communication. An example of this would be working with a group of classmates on a project for the first time. Not knowing the individuals in the group and taking on the challenge of a task in a new class environment can elevate anxiety and increase one’s level of apprehension.

The second cause, formality, tends “to be associated with highly prescribed appropriate behaviors, with comparatively little latitude for deviation” (McCroskey, 1983, p. 9). This environment is very rigid and increases evaluation of the individual because of the culture and tradition of an organization. Since there are additional behavioral constraints in this situation, individuals feel little latitude making it easier to make a mistake and increasing their level of CA. An example of this would be attending a funeral or wake. The formality of this event forces individuals to communicate in a very specific defined manner, to dress in a specific way, and to interact with others in a rigid and tense environment. This increases anxiety levels for the individuals for some making them more apprehensive during oral communication with others.

Another situation that presents similar constraints is interacting with an individual or group from a “subordinate position” (McCroskey, 1983, p. 10). CA levels tend to rise when speaking with someone who is at a higher status, since that individual will tend to

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dictate and define appropriate behaviors. Moreover, the superior has the ability to evaluate the individual and offer merit or punishment based on performance. An example of this is an employee giving a presentation before the board of the company to propose new ideas or directions for the organization. Individuals will feel additional anxiety and apprehension in a subordinate position and the reality that this individual or group they are presenting to has the power to decide their future with the organization.

The next cause listed by McCroskey is being conspicuous. “Generally, the more conspicuous people feel, the more CA they are likely to experience” (McCroskey, 1983, p. 10). When individuals are the focus of an event or meeting, this will increase their level of apprehension knowing that others are observing closely. An example of this would be a guest speaker for a corporate event or outing. Everyone attending the event would know of the guest speaker, therefore he or she would have additional pressure and evaluation while interacting with the group.

This is very similar to the next cause of CA, which is the degree of attention. “When people stare at us or totally ignore us when we are communicating, our CA level can be expected to rise sharply and quickly” (McCroskey, 1983, p. 10). This situation works from either perspective. If an individual is getting a lot of attention, it may cause an increased levels of apprehension. Conversely, if an individual is presenting information to a group but some members of the group are not paying attention or appear disinterested in the presentation, it would likewise cause an increased level of anxiety and apprehension.

One of the most well noted and researched causes is the degree of evaluation an individual is encountering when communicating. “When we are evaluated we tend to be

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more anxious than otherwise” (McCroskey, 1983, p. 10). An example of this is a student giving a speech or presentation in school. The purpose of the presentation is to receive a grade, therefore the individual will experience higher levels of anxiety because of the realization that a grade will be given based on his or her ability to prepare and present the given information.

The next two causes include unfamiliarity and similarity. Unfamiliarity is a universal discomfort. “Although not all people react to unfamiliarity in the same way, most people feel much more comfortable when communicating with people they know than when communicating with people they do not know” (McCroskey, 1983, p. 10). Therefore, an individual will experience higher levels of apprehension when communicating with an unfamiliar person or group. Likewise, the next cause, similarity, has parallel principles. “For most people, talking to others who are similar to themselves is easier than talking to people who are greatly different” (McCroskey, 1983, p. 10). Individuals tend to connect with others with whom they have commonalities. When communicating with others who are very different from the individual, it becomes harder to connect and build rapport which in turn increases the tension and anxiety for the individual.

The final cause discussed is prior history. “If one has failed before, it is increasingly likely that one will fear that he or she will fail again, hence be more apprehensive” (McCroskey, 1983, p. 10). Individuals that have tasted defeat in past situations where they presented information to a group, gave a speech, or just interacting with colleagues will display higher levels of anxiety in future interactions of a similar

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nature. The experience of mistakes can become crippling for an individual when facing the challenge to communicate again in the same context.

This is not an exhaustive list of causes of CA, but it is substantial sample. The main areas included illuminate where the feelings of anxiety originate in regard to state-based apprehension. If individuals are aware of what is or can cause them to experience higher levels of anxiety, they can learn to manage and possibly avoid these causes to set themselves up for success in regards to oral communication situations. Individuals with high levels of CA will be predisposed to various causes affecting them more severely, possibly to the point of interfering with their ability to do certain jobs, interact with specific groups, or rise to certain levels of success. However, a working knowledge of the situations and challenges individuals tend to struggle with allows them to choose a career path that avoids these situations as they seek opportunities for success. Based on the notion that individuals will likely avoid those situations and careers that invoke high levels of anxiety, the following hypothesis is forwarded: (H1) Those in sales-related professional roles have lower levels of communication apprehension than the average population of workers. Moreover, given personality and situational variables have a stronger effect on individuals than basic demographical or career status differences, the following is hypothesized: (H2) Among professionals in sales-related roles, there is no significant difference in CA levels based on sex, title/position, or region within the country.

### **Effects of Communication Apprehension**

A review of the literature reveals the effects of communication apprehension (CA), there is a broad range of situations where effects are seen. This is also constantly

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being expanded as additional studies and research are conducted. “Simply put, our results indicated that virtually regardless of context, humans with high CA are handicapped by their CA, whereas humans with low CA are benefitted by their lack of CA” (McCroskey, 2008, p. 167). As McCroskey notes, effects of CA are found across multiple aspects of an individual’s life, whether personal, professional, or scholastic. Additionally, a high level of apprehension can have multiple negative effects on the individual’s ability to function in these various forms of society.

The effects of CA are typically realized in two forms, internal and external. Internal effects of apprehension are thought to affect every individual in varying degrees. “The only effect of CA that is predicted to be universal across both individuals and types of CA is an internally experienced feeling of discomfort” (McCroskey, 1983, p. 16). The physiological response to a stressful oral communication situation is universal. This single aspect of CA is able to be consistently measured to identify an individual’s level of CA. “Since CA is experienced internally, the only potentially valid indicant of CA is an individual’s report of that experience. Thus, self-reports of individuals [...] provide the only potentially valid measure of CA” (McCroskey, 1983, p. 16). The discomfort and anxiety level experienced by every individual allows for a more specific measure and understanding of its effect on said individual. Only the individual can clearly report his or her level of apprehension, as it is an internal response to the environment with which the individual is faced. The true impact this has on an individual’s life is more readily observed and understood when examining the external effects CA has on them.

The external impact of CA is the most widely researched and analyzed of both internal and external effects in regards to the influence a high level of apprehension has



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on a given individual. These areas of research are broad. McCroskey offers a webpage that lists all of his studies that deal with CA some of which are listed below accompanied by a short summary of the researched effects:

1. Daly and McCroskey found that high CAs prefer occupations that have low oral communication demands, while low CAs prefer occupations that require high oral communication demands. Problem: High CAs tend to have lower incomes.
2. Falcione, McCroskey, and Daly found that high CAs who are teachers (elementary or high school) or are federal civil service employees have less job satisfaction than those who are low CAs. Problem: High CAs may experience more turnover in their occupations and/or leave their jobs.
3. McCroskey and Anderson found that high CAs who are college students prefer attending large lecture classes over small classes that encourage interaction. Problem: Students who avoid interaction in class often receive lower grades because they do not participate. Also, because they do not enjoy the classes, students learn less in classes which demand interaction.
4. Scott, Yates, and Wheelless found that high CAs who are college students in small personalized classes are significantly less likely to seek the assistance of available tutors than students with lower CA. Problem: High CAs perform lower as compared to other students in their classes.
5. McCroskey and McVetta found that college students who are high CAs prefer classes where they may sit on the sides or back of the room, while low CAs prefer seats in the center and front of the class. Problem: When teachers require high CA students to sit in the center or front of the class, they learn less.

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6. McCroskey and Sheahan found that high CA college students as compared to those with lower CA are less likely to accept a blind date, have a date, interact with peer strangers, and engage in exclusive (steady) dating. Problem: Students with weak social connections are more likely to drop out of college.
7. McCroskey and Kretzschmar found that college graduates with high CA (even though they are less likely to date) are more likely to marry immediately upon graduation than are graduates with lower CA. Problem: Early marriage has been found to be a good predictor of divorce.
8. Quiggins found high CAs are perceived as both less credible and less interpersonally attractive than are low CAs by low, moderate, and even other high CAs. These results have been replicated numerous in subsequent studies. Problem: Negative attractiveness and low credibility lead to dislike and rejection in social and work environments.
9. Hurt and Joseph found that high CAs are less likely to be turned to as opinion leaders or to be selected as friends than other people. Problem: People who are not opinion leaders have less influence in their work environment, and people who are not selected as friends can be lonely and accepted less in their social lives.
10. Richmond found that high CAs have a less likelihood of being successful in job applicant screening process. Problem: High CAs have less chance of being hired compared to others (McCroskey, 2008, p.167-168).

These examples portray many of the external effects suffered by individuals that are hampered by their high level of anxiety and apprehension. CA affects an individual's

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ability to find work, demonstrate success at work, and obtain high income positions for an organization. Additionally, it affects an individual's social interactions which makes it much more difficult to network with other professional, be liked, make friends, and find significant others. Lastly, it affects the individual's ability to learn in a classroom setting, which will dictate their level and type of education. "It seems reasonable to come to the conclusion that high CA is a very negative trait for a person to have in the U.S. culture, and in at least several other cultures. We know it has many negative effects for about one in five of our acquaintances, our friends, our families, as well as ourselves" (McCroskey, 2008, p. 168).

While there have been several studies hypothesizing a negative relationship between individuals' level of communication apprehension and their success in school, career, personal relationships, etc., there have been few studies providing substantive, quantitative evidence of a link between CA and the potential for success in their career based on performance. When effects of CA are studied, those effects are most often observed in classrooms examining an individuals level of apprehension and its impact on academic achievement and motivation (Comadena & Prusank, 1988; Rubin, Crahan, & Mignerey, 1990; McCroskey, Booth-Butterfield & Payne, 1989; Frymier, 1993; Aitken & Neer, 1993). When CA's effects outside of the classroom are examined, they normally center on the relationship between CA and employee job satisfaction (Daly & McCroskey, 1975; Falcione, McCroskey, & Daly, 1977; Smith, Kendall, & Hulin, 1969), organizational citizen behaviors (Gibbs, Rosenfeld, & Javidi, 1994), and the effect of CA on the interview and hiring process (McCroskey & Richmond, 1979). Only a small number of studies have attempted to examine the level of apprehension an individual has

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and its affect on productivity or performance. One might argue this is a result of productivity and performance being extremely complex constructs to measure.

### **Performance Research**

Performance is difficult to accurately and consistently measure. There is a very large body of research around the topic and especially in the area of sales performance. In large part, the challenge is in defining the correct determinants and then appropriately weighting them to represent an individual's performance level. In a meta-analysis on sales performance research conducted by Churchill, Ford, Hartley, and Walker, they asserted, "the determinants [of sales performance] rank as follows: (1) personal factors, (2) skill, (3) role variation, (4) aptitude, (5) motivation, and (6) organizational/environmental factors" (Churchill, Ford, Hartley, and Walker, 1985, p. 113). While these determinants were found to be predictors of performance it was also noted that each one contributed less than ten percent in regards to the variation in performance (Churchill, Ford, Hartley, and Walker, 1985).

Other researchers have sought to more clearly define the factors that relate to job performance. Personality was one of the major areas studied in correlation with performance. McDougall, who was the first to identify the foundational factors related to performance that are still used today, wrote, "Personality may to advantage be broadly analyzed into five distinguishable but separate factors, namely intellect, character, temperament, disposition and temper" (McDougall, 1932). This idea of five traits sent researchers out to test and retest which traits truly factor into an individual's performance. Finally, in 1963, Norman derived five traits, somewhat similar to the original asserted by McDougall, which became known as 'Norman's Big Five' or more

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simply stated 'Big Five'. These five traits were defined as "Extraversion, Emotional Stability, Agreeableness, Conscientiousness, and Openness to Experience" (Barrick & Mount, 1991).

The Big Five personality dimensions were tested against job performance in a meta-analysis by Barrick and Mount (1991), and they found that some personality traits are a good predictor of performance in some occupations.

Results indicated that one dimension of personality, Conscientiousness, showed consistent relations with all job performance criteria for all occupational groups. For the remaining personality dimensions, the estimated true score correlations varied by occupational group and criterion type. Extraversion was a valid predictor for two occupations involving social interactions, managers and sales (across criterion types). Also, both Openness to Experience and Extraversion were valid predictors of the training proficiency criterion (across criterion types) (Barrick & Mount, 1991, p. 1).

Nearly a decade after the Barrick and Mount meta-analysis, Hurtz and Donovan revisited the study to retest their findings and add additional factors to be tested. They stated, "Conscientiousness was again found to have the highest validity of the Big Five dimensions for overall job performance" (Hurtz & Donovan, 2000, p. 875). Additional insight was found in regards to the validity of Emotional Stability and Extraversion as predictors as well, though they were weaker predictors (Hurtz & Donovan, 2000).

Performance has been tied to the personality characteristics of extraversion, emotional stability, agreeableness, conscientiousness, and openness to experience, and many of these are linked to the causes of CA. Specifically, novelty, unfamiliarity, and

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dissimilarity are linked to openness to experience. A person with high levels of CA do not like situations that are novel or unfamiliar nor are they open to new experiences.

Likewise, degree of attention and conspicuousness relate to extraversion. For example, someone that is out-going would have no issues with being the center of attention, which tends to reveal a lower level of CA. Additionally, formality and subordinate status are similar attributes to agreeableness. An individual who is averse to situations where there is extreme expectation for behavior would be less likely to be flexible and willing to adapt. Based on the overlap in the variable that comprise performance and CA, the following hypothesis is forwarded: (H3) Employees with higher levels of CA have lower levels of performance than those with lower CA.

CA has the potential to have many negative effects on multiple aspects of an individual's life. This creates a need for solutions these individuals can employ to help manage or overcome the challenges associated with higher levels of anxiety and apprehension in oral communication environments.

### **Potential Treatments for Communication Apprehension**

The treatment of Communication Apprehension is a somewhat speculative aspect of research in the fields of communication and psychology. An individual's cause of CA will be directly addressed by one's prescribed treatment. The only aspect of treatment that is commonly agreed upon is that some form of treatment is necessary for individuals struggling with high levels of anxiety and apprehension. Because of the many negative effects CA can have on an individual's life, treatment becomes essential in order to manage or overcome anxiety and fear felt during oral communication situations.

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Horowitz in her discussion of managing CA speaks to the scope of the problem and the few pioneers who are striving to assist those with high levels of apprehension.

The need for professional help to alleviate communication apprehension/performance anxiety is finally being recognized. In the past, a few research centers [...] as well as some private psychologists have offered services [for the treatment] of social phobias. Today, other universities and some professional schools are offering seminars to help performing artists overcome their performance fears. [...] This is heartening for the aspiring and performing artists who have not conquered their fear of performance.

However, there are millions of ordinary, even extraordinary, people also suffering from the related problem of communication apprehension for whom services are not readily available (Horowitz, 2002, p. 137).

Looking at the scope of the problem presented by Horowitz, it will be vitally important that treatment methods are not only effective but readily available for all affected by high levels of anxiety and apprehension.

The current treatment methods that are employed for an individual as prescribed by Richmond and McCroskey include three prominent approaches. These approaches include communication skill development, systematic desensitization, and cognitive restructuring. There have been multiple articles and self-help books written in the vein of shyness and CA; however, these self-help methods have not produced a consistent or reliable result. "Real help must come from a formal treatment program under the guidance of a trained professional" (Richmond & McCroskey, 1998, p. 99). Individuals

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that present with high levels of CA struggle with self-guided treatment, as they need assistance in overcoming the thoughts that trigger the anxiety while communicating.

Before individuals can receive appropriate help with CA, they must be correctly diagnosed. The standard evaluation is the PRCA-24. It is a Likert scale evaluating an individual's level of anxiety, as it is interpreted, in four different communication situations, which include group communication, meeting communication, interpersonal communication, and public speaking. Once individuals rate their apprehension in these varying situations, the results are calculated and fit into a scale that ranges from 24 to 120. The average score is typically reported somewhere between 60 and 70. Therefore, individuals who record a score toward the upper level of this scale are thought to have a high level of trait-like apprehension.

Once an individual has been identified with a high level of CA through the PRCA-24, the next step is to understand the cause. "The basic theories about why people experience fear or anxiety about communication are placed into three categories: (1) excessive activation, (2) inappropriate cognitive processing, and (3) inadequate communication skills" (Richmond & McCroskey, 1998, p. 95). Another way of looking at the origin in order to treat is to evaluate whether the CA is rational or non-rational. "Treatments may be directed either toward communication behaviors or toward cognitions about communication behaviors. That is, our treatment focus can be on communication skills within or across contexts or on the apprehension about engaging in communication within or across contexts" (McCroskey, 1983, p. 14). Two individuals may experience apprehension in a similar situation, like giving a presentation, but for completely different reasons. The first individual may have deficiencies in



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communication skills and experience. The treatment for this individual would be very different than a second individual who experiences apprehension as a result of being evaluated by peers who are observing a presentation even though his or her communication skills and experience are more advanced.

Excessive activation is an abnormal increase in physiological response to the anticipation of public speaking or any form of oral communication that continues beyond the point that an individual can control it. Common excessive activation responses may include, “trembling arms, hands, and legs; shortness of breath; dry mouth; swallowing difficulty; tense muscles; and temporary memory loss” (Richmond & McCroskey, 1998, p. 96). The proposed solution for these individuals will obviously work to help them reduce and control this physiological response. Most individuals experience some sort of physiological activation or response to public speaking. However, most individuals are able to leverage the response to enhance their performance.

Inappropriate cognitive processing refers to individuals’ reporting of high or low levels of CA that are not congruent with their feeling of physiological discomfort in given oral communication situations.

In short, this view sees the person who reports experiencing high apprehension as simply processing the available information inappropriately. One person perceives physiological activation as evidence he or she is excited, while another person perceives it as evidence he or she is terrified. The problem, therefore, is in the cognitive processing of the individual (Richmond & McCroskey, 1998, p. 96).

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The proposed solution for these individuals will work to help them restructure the way they process the physiological responses in their mind, helping the individuals respond rationally to a given communication situation.

Treatment for individuals with inadequate communication skills is straightforward. An individual who struggles with the technical aspects of effectively communicating will be fearful and apprehensive toward such situations. The proposed solution for these individuals will include communication skill development in order to allow for confidence when faced with speaking situations. Communication skill training and development is the most common approach taken by individuals experiencing apprehension, as it is the simplest of the techniques to overcome apprehension, though most will require additional treatment beyond skill training.

The first method for treatment to explore is the most basic and first considered when dealing with individuals who are highly apprehensive: skills training. “Before we look at skills training as an approach in helping people reduce communication apprehension, we need to make clear the primary purpose of skills training – it is to improve skills” (Richmond & McCroskey, 1998, p. 107). Any courses or training programs that help individuals develop their skills can be deemed successful, even if there is no change in individuals’ CA level. In the research done on this training method, it was found that some individuals who improved their skill would become less apprehensive, but others who improved did not have a change in their level of CA, which would point them to exploring another method for treatment (Richmond & McCroskey, 1998). Richmond and McCroskey write,

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An effective skills training program normally includes the following components:

(1) identifying the specific skill deficiency (or deficiencies); (2) determining subskills making up a larger area of deficient skills; (3) establishing attainable goals for acquiring new skills; (4) observing in an individual model the desirable skilled behavior to be learned; (5) developing a cognitive understanding of the nature of the skill to be learned (becoming able to explain verbally what is to be done); (6) practicing the new behavior in a controlled, nonthreatening environment where the helper can observe the behavior and suggest methods of improvement; and (7) practicing the new behavior in the natural environment (Richmond & McCroskey, 1998, p. 108).

The skill training method is somewhat effective, usually for a specific type of apprehension, for instance interviewing. However, it is limited in its ability to help lower an individual's overall CA, as many individuals who have high levels will report a lower level of skill even though it is found to be untrue in many cases (Richmond & McCroskey, 1998).

A second common method for treating an individual's CA is systematic desensitization (SD). SD was a method previously employed for treating other types of anxiety and has gained much traction in use for individuals struggling with CA as a result of excessive activation. "An increasing body of research has indicated that a behavior therapy known as systematic desensitization is highly effective in helping people overcome phobic and neurotic anxieties such as communication apprehension" (McCroskey, 1972, p. 255). After extensive research and testing had been done with SD,

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it was found to be the most effective and frequently used method for treating individuals with high CA.

“There are two primary components in the systematic desensitization method: (1) The first involves teaching the subjects the procedures for deep muscular relaxation. (2) The second involves having the subjects visualize participating in a series of communication situations while in a state of deep relaxation” (Richmond & McCroskey, 1998, p. 99). Richmond and McCroskey detail the full program in their book by laying out session by session the steps needed to achieve desensitization, therefore reducing CA.

Systematic desensitization is an extremely effective method for helping people overcome communication apprehension. Research indicates approximately 90 percent of the people who receive this treatment reduce their levels of communication apprehension, and of those who enter the treatment as high communication apprehensives, 80 percent are no longer high apprehensives after treatment (Richmond & McCroskey, 1998, p. 102).

Cognitive restructuring is a treatment method that is effective for individuals who think irrational thoughts about themselves during oral communication situations. The irrational thoughts could include an inaccurate belief about their abilities or an incorrect interpretation of their physiological responses.

The method of cognitive restructuring (Meichenbaum, 1976) evolved from an earlier method known as ‘rational-emotive therapy’ (Ellis, 1962). Both are based on the idea that people have irrational thoughts about themselves and their behaviors and that these thoughts increase anxiety a person is likely to have about

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situations such as communicating with others (Richmond & McCroskey, 1998, p. 104).

Cognitive restructuring, much like systematic desensitization, is done in multiple sessions spread out over a specified amount of time ranging from a few days to a few weeks. The sessions can be held one-on-one or in a small group setting. “As outlined by Fremouw (1984), the treatment involves four steps: (1) introducing the person being treated to the method; (2) identifying negative self-statements (illogical beliefs); (3) learning coping statements (beliefs to replace the illogical ones); and (4) practice” (Richmond & McCroskey, 1998, p. 104).

### **Recent Research Linked to Communication Apprehension**

Communication Apprehension has been more recently linked to various other fields of study in relation to personality traits, social interaction, and career path decision making. In exploring the reach of influence communication apprehension has on an individual's life, it appears to impact various other aspects ranging from perfectionism to the job for which an individual applies. This research raises the importance of CA as a predictive measure for individuals in many regards to life choices and opportunities for success, which perpetuates the need for solid measurement tools and treatment methods.

Perfectionism and CA were linked in a recent study by Shimotsu and Mottet (2009). The study showed CA was negatively correlated to adaptive perfectionism, which develops the assertion that a healthy desire for achieving at a high level will tend to result in lower levels of CA for the individual. The study also revealed CA was positively correlated to maladaptive perfectionism. Maladaptive perfectionism is when an individual sets unattainable standards and goals for achievement that are self-imposed.

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These standards, when applied to communication, increase the anxiety and apprehension an individual experiences resulting in higher levels of CA for such individuals (Shimotsu & Mottet, 2009).

Career indecision and CA were also linked recently in a study by Meyer-Griffin, Reardon, and Hartley (2009) that correlated the Career Thoughts Inventory (CTI) and the PRCA-24. When individuals have negative or indecisive thoughts toward finding and choosing a career path, they are found to have high CA. When individuals have positive and decisive thoughts about what career to choose, their CA scores are much lower. This reveals a strong correlation to anxiety around career choice and anxiety with communication. This research makes a strong case for CA treatment that is effective for individuals as it relates to their ability to choose a career path (Meyer-Griffith, Reardon, & Hartley, 2009).

A recent study by Merz (2009) was conducted to test whether or not self-construal and perceived control were predictors of CA. It was found that when individuals tend toward interdependent self-construal they would perceive an external control in communicative situations. As a result, it was found to significantly predict communication apprehension for those individuals. This study reveals that individuals that feels like they are not in control during a situation where they are communicating tend to have higher levels of CA and exhibit avoidance behaviors (Merz, 2009).

CA was studied by Honeycutt, Choi, and DeBerry (2009) to see if imagined interactions were a significant predictor of it. Imagined Interactions are the rehearsing and imagining an individual does in order to prepare for a communicative situation. In this study, they tested to see if an individual that conducts less imagined interactions

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would tend to experience higher levels of CA. The results indicated that in the aspect of public speaking CA individuals' level of Imagined Interactions significantly predicts their level of CA. These results reveal a tested treatment for individuals that experience high levels of CA in public speaking situations by teaching the individual to conduct Imagined Interactions before speaking (Honeycutt, Choi, & DeBerry, 2009).

### **Gaps in the Literature**

While the state of research on CA is quite comprehensive, there remain a few areas that could be developed and expanded. One aspect of research that is missing is examining the effect of CA on performance in business. It would be beneficial to find if there is a correlation to individuals' performance based on their level of CA across varying professions. If high CA would affect an employee's performance, organizations may take up the challenge of helping their employees overcome or better manage it.

Another area that is emerging is the study of the human brain and its chemistry. Since CA is thought to be affected by genetics, it would be beneficial for there to be research done to see if that chemistry can be altered. For instance, there was a doctor who had a fear of speaking in front of his peers. He was prescribed beta blockers by his attending physician, which allowed him to confidently and successfully deliver his presentation without apprehension.

Lastly, an area of potential research could examine how one's diet affects CA. Some initial work has been done on gluten and dairy-free diets and the potential benefits these restrictions present in allowing one to function more effectively, especially in stressful situations (Schmitt, 2010).

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“There never will be enough research on communication apprehension until the effects of high CA can be prevented for everyone in our society and in other cultures” (McCroskey, 2008, p. 169).

### **Method**

#### **Participants**

The survey was sent to 67 employees within the sales and marketing department at U.S. Endoscopy, a designer and supplier of niche diagnostic, therapeutic, and support accessories used in the GI Endoscopy and Urology markets throughout the world. Of the respondents targeted, 42 out of 67 completed the survey, indicating a 62% response rate. The sales professionals worked from a home office and were located around the US representing 25 different states, and the marketing professionals worked out of the headquarters in Cleveland, Ohio. The respondents' titles included vice president, director, manager, inside and outside sales specialist, communication specialist, and executive assistant. The participants' tenure at the company ranged from six months to 15 years. The respondents were made up of 15 females and 27 males. 26 of the participants held the position of outside sales specialist and were the only ones to have company-provided performance measures based on an annual sales quota, which was used to determine if there was a correlation between CA and their sales performance. The sales numbers (the actual dollars of sales closed by each sales representative in comparison to the company projected quota for the year) provided a quantifiable way to determine their performance.

#### **Materials**

The online survey was comprised of 28 questions, 24 of which were from the Personal Report of Communication Apprehension (PRCA-24). The PRCA-24 was used



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to ensure construct validity as it remains the field's principal measure of oral CA. All PRCA-24 related questions were answered on a five-point Likert scale to allow for comparative and predictive statistical analysis to be performed. The remaining four questions inquired as to the demographic characteristics of respondents.

The PRCA-24 rates an individual's CA by means of six factors within each of four contexts including small groups, meetings, dyads, and public. The respondents' overall and individual scores within each context were considered within this study. The PRCA-24 includes 24 statements to test individuals' comfort in specific communication situations by asking the individuals to rate their agreement with each statement based on a five-point Likert scale.

Performance of outside sales specialists was measured via the company's 2010 annual sales report. Each respondent's actual performance in dollars was compared to annual quota, and the percentage was calculated to determine the individual's level of performance. Those respondents performing at a 96% or above received a value of 1, which signifies a high performer; those ranking within a 90% to 95% received a value of 2 signifying an average performer; those falling at 89% or below received a 3 signifying the individual is a below average performer.

### **Procedure**

Individuals were selected based on convenience sampling. The sample of 67 employees of U.S. Endoscopy was sent, via email, a link to the electronic version of the survey. All 42 responses were received in a two-week period. They were then calculated in Excel and transferred into Statistical Package for the Social Sciences (SPSS) version 19. Analysis of individuals' CA was measured through a one sample t-test to compare the

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mean of the sample's level of CA to the U.S. average of 66 to consider whether there was a significant difference. Comparative analyses including independent samples t-tests and one-way ANOVA examined whether there was a significant difference in CA levels based on region, sex, and title/position. Comparative and predictive analyses were conducted via independent samples t-test, correlations, and bivariate regression to determine the extent to which CA and performance are related.

### Results

Hypothesis 1 states individuals in sales-related professional roles have lower levels of CA than the general population of workers. In order to test this hypothesis, a one sample t-test was conducted to determine whether the respondents' level of overall CA and contextual CA was significantly different than the PRCA-24 noted general-population neutral point ( $M = 66$ ). Results indicate respondents have low levels of overall CA given the sample's score ( $M = 51.24$ ,  $SD = 12.32$ ) was significantly different from the moderate level ( $M = 66$ ),  $t(42) = -7.76$ ,  $p < .001$ . Further, the group had low levels of CA in all four categories studied: groups ( $M = 11.74$ ,  $SD = 3.59$ ), meetings ( $M = 12.67$ ,  $SD = 4.50$ ), interpersonally ( $M = 11.76$ ,  $SD = 3.71$ ), and public speaking ( $M = 15.07$ ,  $SD = 4.01$ ) given the means for each of the associated variables is significantly lower than the population mean. This finding is reflected in the significant t-values for the variables "Apprehension in Groups"  $t(42) = -5.89$ ,  $p < .001$ ; "Apprehension in Meetings"  $t(42) = -4.80$ ,  $p < .001$ ; and "Apprehension Interpersonally"  $t(42) = -5.64$ ,  $p < .001$ ; and "Apprehension in Public Speaking"  $t(42) = -6.35$ ,  $p < .001$ ). Hypothesis 1 was therefore supported.

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Hypothesis 2 states there will be no difference in a sales professional's level of CA based on sex, title/position, or region within the country. In order to test the independent variable of sex, independent sample t-tests were conducted. Results indicate there is no significant difference between sales-related professional males ( $M = 48.85$ ,  $SD = 11.70$ ) and females ( $M = 55$ ,  $SD = 12.64$ ) with regard to their overall level of CA,  $t(42) = -1.73$ ,  $p = .09$ . Further, there is no significant difference between males ( $M = 11.26$ ,  $SD = 3.45$ ) and females ( $M = 12.60$ ,  $SD = 3.78$ ) with regard to their group-related CA,  $t(42) = -1.17$ ,  $p = .251$ . There is no significant difference between males ( $M = 12.03$ ,  $SD = 4.48$ ) and females ( $M = 13.80$ ,  $SD = 4.4.8$ ) with regard to their meeting-related CA,  $t(42) = -1.23$ ,  $p = .228$ . There is no significant difference between males ( $M = 14.67$ ,  $SD = 4.02$ ) and females ( $M = 15.80$ ,  $SD = 4.02$ ) with regard to their public speaking-related CA,  $t(42) = -.88$ ,  $p = .387$ . There is however a significant difference between males ( $M = 10.89$ ,  $SD = 3.41$ ) and females ( $M = 13.33$ ,  $SD = 3.83$ ) with regard to their dyadic-related CA,  $t(42) = -2.13$ ,  $p = .039$  with females exhibiting higher levels of dyadic CA than males. Hypothesis 2 was supported with regard to sex's relationship to overall CA and in three of the four contextual CA categories.

In order to test whether there is a significant difference in CA levels based on one's title/position, a one-way ANOVA was conducted. It was found that title/position did not significantly affect the dependent variable of overall CA,  $F(2, 39) = .15$ ,  $p = .863$ . Further, there is no significant difference in group-related CA,  $F(2, 39) = .26$ ,  $p = .776$ ; meeting-related CA  $F(2, 39) = 1.11$ ,  $p = .340$ ; dyadic-related CA,  $F(2, 39) = .72$ ,  $p = .493$ ; or public speaking related CA  $F(2, 39) = .72$ ,  $p = .493$  based on respondents'

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title/position. Hypothesis 2 was supported with regard to the independent variable of title/position relationship with overall CA and the four contextual CA categories.

In order to test whether there is a significant difference in CA levels based on region (location within the country), a one-way ANOVA was conducted. It was found that region did not significantly affect the dependent variable of overall CA,  $F(5, 36) = .65, p = .663$ . Further, there is no significant difference in group-related CA,  $F(5, 36) = .34, p = .884$ ; meeting-related CA  $F(5, 36) = 1.27, p = .300$ ; dyadic-related CA,  $F(5, 36) = .32, p = .899$ ; or public speaking-related CA  $F(2, 39) = .07, p = .931$  based on respondents' responsibilities/department. Hypothesis 2 was supported with regard to the independent variable of region's relationship with overall CA and the four contextual CA categories.

In order to test Hypothesis 3, a one-way ANOVA was first used to determine if there was a significant difference in respondents' performance based on their CA scores. It was found that overall CA did not significantly affect the dependent variable of performance,  $F(2, 18) = .35, p = .708$ . Further, the two variables were not correlated,  $r(21) = .16, p = .49$ . Regression analysis revealed overall CA does not explain a significant proportion of variance in performance,  $R^2 = .03, F(1, 1) = .50, p = .488$ .

It was found that group-related CA did not significantly affect the dependent variable of performance,  $F(2, 18) = .44, p = .649$ . Further, the two variables were not correlated,  $r(21) = .17, p = .47$ . Regression analysis revealed group-related CA does not explain a significant proportion of variance in performance,  $R^2 = .03, F(1, 19) = .54, p = .470$ .

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It was found that meeting-related CA did not significantly affect the dependent variable of performance,  $F(2, 18) = .88, p = .431$ . Further, the two variables were not correlated,  $r(21) = .30, p = .19$ . Regression analysis revealed group-related CA does not indicate a significant proportion of variance in performance,  $R^2 = .09, F(1, 19) = 1.82, p = .193$ .

It was found that dyadic-related CA did not significantly affect the dependent variable of performance,  $F(2, 18) = .13, p = .876$ . Further, the two variables were not correlated,  $r(21) = .08, p = .723$ . Regression analysis revealed group-related CA does not explain a significant proportion of variance in performance,  $R^2 = .01, F(1, 19) = .13, p = .723$ .

It was found that public-speaking related CA did not significantly affect the dependent variable of performance,  $F(2, 18) = .12, p = .899$ . Further, the two variables were not correlated,  $r(21) = -.10, p = .657$ . Regression analysis revealed group-related CA does not explain a significant proportion of variance in performance,  $R^2 = .01, F(1, 19) = .20, p = .657$ . Hypothesis 3 was not supported in this study.

## Discussion

Based on the research presented in this project, results support Hypothesis 1 and Hypothesis 2 and reject Hypothesis 3. The first hypothesis asserts individuals in sales-related professional roles have a significantly lower level of overall CA than the average individual. The research findings support this assertion. To most, this claim would seem to be common sense as the respondents examined chose a profession requiring constant oral communication on every level from meeting communication, interpersonal communication, group communication, and public speaking. Whereas this finding is not

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surprising, it does provide further scientific support indicating the CA level of sales professionals is significantly lower than the average individual.

Additionally, findings indicated no significant difference in CA level based on sex. It was interesting that sex didn't make a difference in this study among sales and marketing professionals. To some this may seem obvious considering a sales and marketing professional is going to have a tendency to be outgoing, somewhat assertive, and communicatively inapprehensive. However, it is still beneficial to see that CA levels are similar between men and women. A similar analysis was done to see if there were any significant differences in CA level based on individual roles and location in the country. One may surmise that a sales representative in the Northeast or on the coasts is less apprehensive than those in the Midwest given the cultural stereotypes regarding the personality characteristics of individuals in different regions of the country – for instance, the notion that “New Yorkers” speak their mind. However, the results of this study indicate despite the variances in location, sex, and title, CA is not affected by these variables.

Based on the research presented in this project, there is no direct relationship between CA and performance. To that end, this study disproves the hypothesis that individuals who are reported as having higher levels of CA, in relation to their peers, would have lower sales performance results. This is an intriguing finding given one would surmise sales individuals showing higher levels of CA would be negatively affected resulting in a lower sales performance. Nonetheless, it is worth noting there are several compounding factors contributing to an individual's performance. For instance, the manner and accuracy by which the corporation's management establishes plan

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numbers for the individual representatives may have an effect on their ability to meet the sales plan quota. Also, economic conditions throughout a region or the country could also have an effect on an individual's sales performance. Other factors may include, but are not limited to, personal life situations of the sales individual, individual territory account changes, and competition. To more accurately assess whether CA impacts performance, there must be a consistent method to measure performance where extraneous variables such as differences in management, economic influences, etc. do not interact to muddy a potential relationship between CA and performance. While understandably in the social sciences, research cannot be conducted in a vacuum, this researcher recognizes a need to more precisely measure performance where each respondent's performance is assessed consistently. In light of this, and the results of the study, it has been found in this situation that CA is not directly correlated to an individual's sales performance.

This study presents several implications for those in industry as well as in academia. Those in management positions with connection or oversight responsibility for a company's sales organization should take heed that individuals with lower levels of CA may be drawn to sales related professional roles; however, that does not necessarily mean these individuals are the ones best suited for the job. Corporations are interested in employee performance, hitting the revenue projections, and being profitable companies. To that end, they require employees who perform to the companies' expectation and sales representatives who meet their sales quota. While the findings of this study need further substantiation given the small size of the sample, the initial results presented here indicate CA does not directly correspond to a sales representative's level of performance. In other words, simply because an individual is not apprehensive to get out and speak with others,

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be more assertive on a sales call, have the tenacity to speak up in what many would consider uncomfortable situations, and present extremely well during the interview process does not necessarily reveal any indication of ability to close the sale or meet the company's performance standards. This study begins to hint that there is more to being an effective sales representative than simply being outgoing and unafraid of speaking out.

On the surface, the absence of connection between CA and performance is unexpected, yet it is not as surprising when one considers the construct of performance as multi-faceted where an individual's ability (or in accordance with this study his or her level of CA) is only one component affecting performance. Further, the idea of ability can be divided out into several subcategories where aptitude (or one's inherent, born-in ability) is only a small portion of the overall formula for performance (Whetton, 2002, p. 300).

### **Limitations in the Research**

The limitations in this research study include, but are not limited to, the way the company's plan numbers are set, the sample size, the diversity of respondents, and the diversity of organizations. Other factors that were not measured but may have influenced the results include the economy, experience level, personal circumstances, and varying leadership styles.

It is important to recognize the research presented here includes examination of only one organization, and the way the organization sets the sales plan numbers, in this case, is arbitrary. One individual may have more opportunity than others to attain the goal given by the organization. This factor could easily skew the results, as performance is a key measure. Also, in testing just one sales organization, it limits the research. Other



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organizations may offer a better and broader results base enhancing the validity of the study. In general, if the size of the study were larger, it would yield a more reliable outcome.

Finally, each individual has additional factors that must be better identified and accounted for in order to produce higher confidence in the results. For instance, if one individual was going through a divorce or suffering from an illness, it would more than likely affect performance. Likewise, if a region had a better leader or economic situation, it may also affect its performance. Lastly, another measure that would benefit the study would be to include the individual's experience level. A new sales professional may not have the ability to perform to the same level as another who had been in the position for an extended period of time.

### **Opportunities for Future Research**

The limitations of this study lend recognition to several areas where future studies could add further substantiation or correction to the findings reported here. Future research in the area of CA's effect on career performance would require investigation on a larger scale including a larger sample of individuals, organizations, and industries nationwide. Examining CA through a larger scale study may produce better insight as to the affect that CA can have on each individual in his or her role. Also, it would be interesting to see research on the relationship between CA and performance conducted outside of the sales discipline. Including multiple departments/roles across an organization would allow for a broader application of CA and performance. Better understanding the effects of CA and its relationship to one's success in various careers could assist individuals across the globe as they select a career path. Another area that

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would be interesting to examine is a cross-cultural study. Individuals in different cultures may have different results when it comes to CA and its effect on their job performance in varying roles.

One aspect of this study that seems somewhat arbitrary is the performance measure. It would be interesting to create a measure of performance that is consistent across multiple levels of the organization and across varying organization types. It would be a complex variable that would consist of considerably more than work accomplishments and CA.

The opportunities for furthering the knowledge base on the relationship between CA and performance are endless and also overwhelming. However, attention to this area of study is greatly needed as CA's impact on individuals' personal and professional well-being is immense. CA has tentacles that reach into every aspect of life, and while much has been done on its impact on the personal side of life, culture's focus today is on success and performance, and subsequently individuals glean happiness, satisfaction, and identity from their success. While CA may not be directly related to one's performance, it likely does impact the situations, namely careers, that individuals enter. In essence, CA limits peoples opportunities and potential. It would be well worth the effort of academics and industry professionals to collaborate and further the understanding and application of CA in the workplace. It not only would provide individual benefit but organizational and economic advantage.

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