2021

# The Efficacy of Interpersonal Skills on Sales Production Among Pharmaceutical Salespeople

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Walden University
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Abstract

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Psychology

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## Abstract

The pharmaceutical industry relies heavily on sales to stimulate growth, support research and development, and remain solvent. A review of the literature revealed there is limited insight on the impact of interpersonal skills on sales performance. This study addressed the role of interpersonal skills in a pharmaceutical salesperson's performance in terms of total sales income, which includes salary, bonuses, and commissions. Gardner's (1983) multiple intelligences theory, specifically interpersonal skills, served as the study's framework. The Conversational Skills Rating Scale (CSRS) was used to assess interpersonal skill level. Additionally, the relationship between salesperson tenure and the number of sales meetings attended were also used to predict total sales income. A sample of 107 pharmaceutical salespeople served as participants, completing the CSRS and a questionnaire capturing the other two predictors as well as their income sources. Interpersonal skills predicted increased sales income with an $R^2$ of .10, a beta value of .23, and an improved *t* value of 2.45. Tenure also predicted increased sales income with a positive correlation of .25, a *t* value of 2.91 and a beta of .30. There was no significant increase from the number of large group meetings held with a beta of -270.16. Through the findings of this study positive social change will be promoted by increasing the understanding of the role of interpersonal skills in a pharmaceutical salesperson's performance thereby improving the sales experience for both consumers and salespeople alike. Additionally, companies can use these findings to provide more targeted employee training and potentially identify more suitable job candidates, which could lead to greater organizational sales performance and an even better customer experience.

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# Chapter 1: Introduction to the Study

Sales efficiency was discussed as early as 1913 when Münsterberg outlined the importance of organizational efficiency in sales. Cougle (1975) recognized that interpersonal (IP) skills contribute to a salesperson's sales volume and argued that if employers focused on training IP skills, sales volume would increase. Cougle believed this practice would increase sales and serve to motivate employees more effectively than the current system of commissions and sales-based compensation.

The absence of IP skills training may be based on the difficulty of transference or retention of the skills rather than neglect (Laker & Powell, 2011). Laker and Powell (2011) reported that employees were much more likely to retain hard skills from training than soft skills, such as IP or intrapersonal skills. They went as far as to call soft-skill training "an extremely costly waste of time, energy, and money" based on the poor training transfer (Laker & Powell, 2011, p. 112). The authors suggested additional research was needed to discern how training transfer could become more operative.

Borg and Freytag (2012) offered a comprehensive approach to studying IP skills regarding how business personnel interact with others. They examined IP skills from four perspectives: (a) environment, (b) firm, (c) sales cycle, and (d) sales characteristics. The environment refers to the work environment that employees come from and the environment where they practice their sales skills (Borg & Freytag, 2012). For example, the pharmaceutical salesperson spends much less time behind a desk and more time in medical environments, such as hospitals or doctors' offices. The firm refers to the

organization's setup, how sales compensation is structured, and the general way that its employees do business (Borg & Freytag, 2012). Borg and Freytag incorporated sales cycle data based on whether the sales were seasonal, built around certain cycles dealing with increased demand from short-term advertising, or issues in trends. Last, sales characteristics involve the general nature of the sales. Pharmaceutical salespeople are compensated very differently than car salespeople (Borg & Freytag, 2012). Borg and Freytag cited the need to understand all four dimensions to carry out correct and conscientious IP communications. Additionally, they suggested that company managers should adopt their own sales perspective and train their employees to utilize a wide sales spectrum in their IP interactions.

## Background

The pharmaceutical industry is a multibillion-dollar industry boasting three companies on the Forbes 500 list at numbers 4, 8, and 13 (Solomon, 2013). Leaders of the massive organizations have relied heavily on pharmaceutical salespeople to endorse their products to individuals primarily responsible for their dissemination in the health care field (i.e., doctors, physicians assistants, nurse practitioners, and support staff members; Solomon, 2013). Solomon (2013) related that based on the unique position of pharmaceutical salespeople, current researchers have not aptly provided direction for their special niche of sales interactions (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Wisker & Poulis, 2015). The success of pharmaceutical salespeople has depended greatly on their interactions with others; therefore, their sales

volume has been largely dependent upon their ability to communicate, disseminate information about their products, and their proficiencies in relating to the wants and needs of the medical staff members whom they influence (Teven & Winters, 2007).

Pharmaceutical sales associates work with a large degree of autonomy in initiating and conducting sales meetings designed to promote the products (Michaelidis & Dracou, 2011). The salespeople's primary target group is physicians, a difficult body of individuals to influence (Milyavsky et al., 2017; van Zanten et al., 2007). Leaders of organizations, such as Merck, Johnson & Johnson, and Pfizer, depend upon pharmaceutical salespeople for a significant portion of their sales, employing more than 1.2 million pharmaceutical salespeople worldwide (Cegedim Strategic Data, 2014).

The current sales zeitgeist is an interesting interpretation of sales theories (Borg & Freytag, 2012; Corelli, 1999; Harris, 2010). Many salespeople are encouraged to be aggressive and tenacious, often leading to an abrasive encounter between the salesperson and the client (Harris, 2010). Other salespeople may take a more timid approach and wait for the customer to reach out (Borg & Freytag, 2012). These poor interactions can lead to an unpleasant relationship between the clients and the organization (Corelli, 1999). Corelli (1999) also observed that the poor relationship must be remedied before the individuals can proceed with their business transactions.

Pharmaceutical salespeople are among the most highly paid within the sales profession (MedReps, 2016). The organizational leaders who employ pharmaceutical salespeople usually utilize their own ranking systems and reward salespeople based upon

performance (Umar, 2010). Pharmaceutical salespeople encounter many different sales environments and associate with a large degree of variation among profiles and personalities (Michaelidis & Dracou, 2011). Whereas doctors are their primary contacts, who have become notorious for their lack of people skills in such instances, the salespeople must navigate the social arena tactfully (Cheraghi-Sohi & Bower, 2008; Milyavsky et al., 2017; van Zanten et al., 2007). So, the challenge for pharmaceutical companies becomes how to best equip their salespeople to improve their performance and use their IP skills to influence physicians to purchase their products.

## Problem Statement

An integral part of a company's success depends on acquiring, maintaining, and increasing sales (Kirchler & de Rosa, 1998). Understanding sales and the contributing factors are essential for the growth and solvency of an organization. Salespeople are responsible for educating consumers about their products, and they also represent their employers' reputations through their interactions and professional manners. As Kirchler and de Rosa (1998) found, an impolite, coarse, or confrontational exchange can leave a lasting impression.

Based on the vital role of sales, extensive research exists to determine the qualities that affect a salesperson's ability to complete a sales transaction, such as emotional intelligence (EI), adaptive selling, and interactional style (Clarke, 2010; Fischer et al., 2010; Russell et al., 2010; Scroggins et al., 2009; Weilbaker, 1991). Sebenius (2004) identified the following traits as the most overlooked in the business

field: (a) a person's ability to relate to a client's needs, (b) to help someone feel comfortable, and (c) to communicate effectively with the person. These abilities were recognized by Gardner (1983), who referred to them as IP skills. Traditional sales techniques hinge on catchy phrases, quick questioning, and often aggressive measures (Harris, 2010).

Company managers seeking talented salespeople often make assessments based on criteria, such as previous experience, personality, or outward appearance, neglecting a salesperson's most essential skills: IP skills (Goleman, 1998; Nicolas & Rodríguez Herrera, 2011; Yang et al., 2011). Authors of literature studies have failed to suitably research this vital skill (Bergeron et al., 2013; Deng et al., 2014; Ellingsen-Dalskau et al., 2016; Slof et al., 2016).

Many participant groups have been involved in studies regarding IP skills, including managers, doctors, and nurses (Deng et al., 2014; Dreyfus, 2008; Hekman et al., 2016; Hurrell, 2016; Shen et al., 2014). Kim and Hong (2005) studied pharmaceutical salespeople and focused on the characteristics of motivation, self-confidence, and job knowledge; however, they did not delve specifically into the aspects surrounding IP skills.

Timor and Tüzüner (2006) researched some of the aspects emulated in this research study by focusing on pharmaceutical companies. They reported that IP skills were included as one of the evaluation criteria when seeking and interviewing prospective employees. Kumar and Bhatnagar (2010) studied pharmaceutical sales and

customer service representatives in India, focusing on the turnover margin and identified "emotional dissonance" as one of the mediating factors (p. 409). Kumar and Bhatnagar described IP skills as an aspect of maintaining good relationships among fellow employees and members of management.

Teven and Winters (2007) studied social influence and communication related to sales performance among pharmaceutical salespeople using a self-evaluation of the 50-plus participants. The evaluation screened for "nonverbal immediacy, Machiavellianism, humor, physical attractiveness, responsiveness, caring, competence, motivation, and adaptive selling" (Teven & Winters, 2007, p. 465). These factors embody many of the characteristics Gardner (1983) described and that this current study used to assess IP skills in pharmaceutical salespeople (Spitzberg, 1995). The researchers found many correlations among these characteristics and enhanced performance in the total sales income and "adaptive selling" (Teven & Winters, 2007, p. 468).

Researchers have revealed a shortage of information regarding the possible correlation between IP skills and sales performance (Borg & Johnston, 2013; O'Reilly, 2015; Wihler et al., 2017). While other research has only lightly touched on this element of relating sales performance to IP skills adequacy, Wihler et al. (2017) suggested social skills should be studied when considering sales performance and the other more common elements of extraversion conscientiousness.

Sales performance has been studied in many ways. For example, research has looked past personal interaction and focused on marketing techniques, such as social

media (Rodríguez et al., 2016). Hill and Fouts (2005) studied the relationship between IP skills and work ethic, finding that the two shared a positive correlation. Finally, Hopkins and Duke (2004) examined the success of business school students and their IP skills. They cited IP skills as one of the most valued skillsets among students, showing a positive relationship to creativity, teamwork, and overall communication.

EI's perceived effect on sales performance has been studied frequently (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Wisker & Poulis, 2015). Chakrabarty et al. (2014) studied the effects of insurance salespeople who use a technique termed *interpersonal mentalizing*, described as "taking a bird's-eye view, shaping the interaction by creating a positive ambiance, detecting nonverbal cues, and rapport building" (p. 112). Chakrabarty et al.'s description contained aspects of Gardner's (1983) IP skills, but they failed to encapsulate exactly what I sought to understand in the current study, whether a relationship exists between a salesperson's ability to use these soft skills appropriately and the execution of a sales transaction. Wihler et al. (2017) identified a gap in the current research regarding the relationship between IP skills and sales performance.

An in-depth study needed to be conducted concerning the differences between EI and IP skills because in all the research I reviewed, the essential factors of IP skills were missing. Additionally, a study was needed to explore the relationship between IP skills and sales performance. By addressing the gap in the research, I attempted to use the findings of this study to illustrate the need for further training and programs designed to

implement IP skills in salespeople's approaches. This helps individuals seeking a career in sales to identify which characteristics help their performance and which ones need improvement. Additionally, pharmaceutical salespeople could use the findings of this study to be more adept at communicating with physicians to help them move toward a sales transaction. Overall, the results could be used to yield better-trained employees able to complete their duties more efficiently.

## Purpose Statement

In this study, I investigated the relationship between IP skills and sales production in terms of total sales income. These sales transactions are embodied by IP interactions; therefore, a correct understanding of this proficiency was of utmost importance. Understanding IP skills and the applications to sales could potentially have have a large impact in the sales field. The goal is to enable organizational leaders to allocate time and resources more effectively toward training sales personnel to increase sales volume.

## Research Questions and Hypotheses

I used the following research questions (RQ) and associated hypotheses (H) to address the identified gap in the literature:

RQ1: Does pharmaceutical salespeople's IP skills level, as measured by the Conversational Skills Relations Survey (CSRS), significantly predict their sales performance in terms of total sales income?

$H_a1$: Pharmaceutical salespeople's IP skills level predicts their sales performance.

$H_0$1: Pharmaceutical salespeople's IP skills level does not predict their sales performance.

RQ2: Does pharmaceutical salespeople's tenure predict their sales performance in terms of in terms of total sales income?

$H_a$2: Pharmaceutical salespeople's tenure predicts their sales prerformacne.

$H_0$2: Pharmaceutical salespeople's tenure does not predict their sales performance.

RQ3: Does the number of large group sales meetings pharmaceutical salespeople attend predict their sales performance in terms of in terms of total sales income?

$H_a$3: The number of large group sales meetings pharmaceutical salespeople attend significantly predicts their sales performance.

$H_0$3: The number of large group sales meetings pharmaceutical salespeople attend does predict their sales performance.

## Theoretical Framework

The idea of intelligence has been frequently discussed over many generations and from many different perspectives (Murdoch, 2007). Murdoch (2007) wrote at length about the long-accepted idea of assessing intelligence using the Stanford-Binet IQ test. Low intelligence has been linked to crime, poor socioeconomic status, and frequency of arrest (Becker et al., 2019; Schwartz & Beaver, 2019).

Howard Gardner (1983) proposed a different angle on intelligence with the theory of multiple intelligences (MI) in the book, *Frames of Mind*. Gardner was the first to be credited with the idea of MI. Frustrated by the narrow view of existing psychometric tools measuring IQ, Gardner and others developed the idea that there are many different intelligence types (Walters & Gardner, 1984). Walters and Gardner (1984) suggested that the intelligences could be psychometrically identified and used to facilitate learning.

According to MI theorists, students who were previously identified as being unintelligent were simply not being recognized for the intelligences they possessed (Gardner, 1983). Gardner (1983) identified eight different intelligences. First, musical intelligence was identified as individuals who have a natural ability to play musical instruments, internalize tone, and understand musical theory possess musical intelligence. Second, bodily-kinesthetic intelligence was identified as coordinating and controlling body movements with great skill, such as naturally athletic individuals. Third, individuals who can reason and quantify subjects possess logical/mathematical intelligence. According to Gardner, logical/mathematical intelligence was most closely identified with traditional IQ testing. Fourth, linguistic intelligence, which is often skillfully portrayed by poets, exemplifies an individual's ability to express themself and skillfully communicate knowledge. Fifth, spatial intelligence involves a firm understanding of an individual's surroundings and orienting, like that of a seasoned navigator's or a sculptor's proficiencies. Naturalistic intelligence identifies someone capable of understanding nature and its ecology. Interpersonal skills are the seventh intelligence exemplified by the

ability to relate, communicate, and interact well with others. Finally, intrapersonal intelligence was described by Gardner as an individual's ability to understand themself. This intelligence is often exemplified by problem-solvers who can see past personal biases and preferences to quickly find an issue's underlying cause (Gardner, 1983).

The theory of MI was used to develop the world of education and learning by asserting that many different personal strengths and intelligences could be harnessed to help people learn more efficiently and become more successful in the classroom (Walters & Gardner, 1984). Individuals who struggled with the traditional educational systems now understood how to adapt their learning in the most effective way to a larger degree. This learning style allows individuals to pursue more education and carry the skills forward into the workforce (Meers & Wiseman, 2002).

The ideology within MI theory has been used to encourage other research questions regarding applying these intelligences (e.g., interpersonal, musical, verbal-linguistic, logical-mathematical; Gardner, 2006; Gardner & Moran, 2006). If performance in the classroom is greatly improved, then research should be initiated to discern whether performance can be improved in the workplace and continue the research hypotheses of Meers and Wiseman (2002). Green et al. (2005) suggested that employees trained to understand their strengths and how to harness them would be much more likely to perform at a higher level, especially if the training helped employees understand how to improve their weaknesses.

While there are many MI theory proponents, some have identified faults in the theory (Visser et al., 2006; Williams et al., 2010). Some of the critics struggled with the notion of "Everybody is a genius," insinuating that the other intelligences do not carry as much weight as the original characteristics screened for in the traditional IQ tests, such as the prevalent Stanford-Binet intelligence scale (Williams et al., 2010, p. 1075). The critics believed everyone should develop the same learning style, so the same type of education could be administered to all (Williams et al., 2010). Gardner and Moran (2006) responded to the criticisms by stating that the opponents had oversimplified their findings and that the literature was not examined closely.

Other researchers, including Visser et al. (2006), opposed the theory superficially by citing the minor differences between Gardner's intelligences, such as IP and intrapersonal intelligences. Visser et al. incorporated a visual exam to test whether individuals exhibited spatial intelligence. Gardner (2006) noted the difference between visual acuity and spatial intelligence and also asserted that individuals who lacked vision entirely still had the capability for spatial intelligence. Furthermore, Visser et al. attacked the idea of intrapersonal intelligence collectively, stating that self-concept was more dynamic and formed by external circumstances rather than a developed matter of intelligence. Gardner rebutted by stating that self-concept was an aspect of personality, not intelligence. In each case, Gardner refuted Visser et al.'s points and found additional evidence to support MI theory.

The core of the struggle against MI theory seems to be in understanding the idea of intelligence. Gardner (1983) understood it as a developed capacity, while other researchers viewed it as a static attribute. Gardner encouraged development, while others focused more on discovering the characteristics (Williams et al., 2010). No expert in the literature argued the innate capability of some people to develop certain aspects easier than others; nevertheless, the attributes that embody the theory of MI are characteristically and naturally aspects of intelligence (Gardner, 1983).

MI theory has been used as a framework for additional research. Kornhaber et al. (1990) modified the theory of MI with their normative theory of intelligence (INT), in which they focused on society's role in developing the intelligences. The INT proponents stressed all the dynamics involved in developing the theory of MI in everyone. Kornhaber et al. compared the United States and Japan, concluding that experts in the United States placed too much emphasis on psychometrics instead of the factors that develop the intelligences in children. Additionally, Kornhaber et al. believed earlier testing could be valuable in providing a greater examination of a person's natural intelligences.

While an active participant in INT development, Gardner would likely be opposed to the idea that many aspects of MI theory are simply innate. This ideology citing natural instincts or abilities blurs the line between personality and intelligence (Kornhaber et al., 1990). Gardner seemed to identify with the idea that intelligence is an aspect of people's lives developed through hard work and discipline, where personality is simply a matter of people's inborn preferences and inclinations (Kornhaber et al., 1990).

The literature involved the principle termed *IP skills* in many different ways. In the current study, I defined IP skills as an individual's ability to communicate with others, feel and show empathy, and seek the other person's best interest (see Gardner, 1983). IP skills involve making a person feel comfortable in all situations, understanding how to deal with a person's emotions properly, and radiating respect and care for others (Gardner, 1983). The capability has many names. Some researchers who have investigated the ability have used terms such as *soft skills*, *people skills,* and *social intelligence* (Baumgartner, 2009; Dawes, 2003; Doğan & Çetın, 2009; Mitchell et al., 2010). In the current study, all the different terms were reconciled using Gardner's (1983) terminology of IP skills.

While Gardner (1983) was the first to identify IP skills as something tangible that could be identified and taught, IP skills have been a topic of training for leaders of many organizations (Hottel & Hardigan, 2005; Johnston, 2005). Researchers have frequently reported that the benefit of this training is felt on many different levels, such as general productivity, job satisfaction, and low employee turnover (Covert, 2007; Patton, 2010). Gu and Siu (2009) termed IP skills in the workforce "the major deficit affecting the labor force" (p. 561).

## Significance of the Study

Salespeople are required to facilitate a comfortable environment while showing understanding and empathy (Wisker & Poulis, 2015). The ability to communicate with a client effectively has been identified as vital to a salesperson's success (Sprowl & Senk,

1986). In this study, I examined IP skills among pharmaceutical salespeople. A positive relationship between IP skills and sales performance suggests that social change could be far-reaching. The findings could be used to influence how sales agents are recruited and trained to become more effective. Furthermore, the findings could be used to help individuals determine whether a career in sales is a suitable fit. Additionally, the findings could be used to refine existing programs and design specific platforms to train employees in IP skills. Millions of dollars have been spent annually training employees in various aspects of the job field, and IP skills training may potentially reap the greatest return on investment and yield the highest impact on sales (Gandolfi, 2009). Lastly, the overall consumer experience can be improved because sales representatives could use their increased understanding of IP skills to shift their focus to the consumers' needs and make the sales transaction a better experience for both parties.

The research literature showed a dearth of training concentrating solely on IP skills, with the majority of the current researchers focused on EI and performance indicators (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Wisker & Poulis, 2015). Additional research measuring sales performance exists, but the researchers failed to identify the correlation between sales performance and IP skills (Lee et al., 2015; Rodríguez et al., 2016; Teven & Winters, 2007; Wihler et al., 2017). IP skills have been measured against several variables, such as the performance of managers, students, and physicians (Bergeron et al., 2013; Deng et al., 2014; Ellingsen-Dalskau et

al., 2016; Slof et al., 2016). In this study, I sought to address the lack of research regarding the relationship between IP skills and sales performance.

## Nature of the Study

In this quantitative study, I assessed the salesperson's IP skills level using the CSRS (see Spitzberg, 1995). Although the instrument was not specifically designed for salespeople, it is an excellent measure of IP skills focusing on individuals' interactions during a conversation to ensure appropriate speech, conduct, and behavior. For this study, the predictor variables were IP skills, the number of large group meetings, and tenure. The criterion variable was total sales performance of the pharmaceutical salesperson in terms of the total sales income. The relationships among the predictor and criterion variables were examined using multiple regression analysis.

Pharmaceutical representatives currently working as salespeople were the subject group. They were a valuable option because of the nature of their sales position and the growth of the pharmaceutical industry (see Fischer et al., 2010). I sent the participants an email invitation from SurveyMonkey, inviting them to contribute to the study. Their participation was voluntary.

## Definition of Terms

Many different terms were essential to this research. In this section, I clarify the terms and definitions used in this study.

*Adaptive selling*: The ability to change one's selling techniques to match the consumer's social style. Implicit in this is the ability to perceive those different social styles and preferences (Teven & Winters, 2007).

*CSRS*: A psychometric tool developed by Spitzberg (1995) designed to determine which factors are key to success in social and conversational settings. The CSRS asks questions regarding specific behaviors that facilitate a comfortable, warm, and mutually beneficial conversation.

*Doctors and physicians*: Medical providers who can legally prescribe medications (Solomon, 2013). The primary audience for pharmaceutical salespeople is medical doctors. Their target audience could occasionally include psychologists, physician assistants, physical therapists, chiropractors, nurse practitioners, and rarely dentists.

*EI*: The ability to control one's own emotions to facilitate proper behavior in social situations (Carragher & Gormley, 2017).

*IP skills*: The ability to perceive others' needs, create an appropriate social environment, and communicate effectively and comfortably for all parties. The definition embodies the principles of empathy, compassion, and kindness (Gardner, 1983). Gardner (1983) noted that someone with strong IP skills might be a leader or a follower. Often, individuals seek careers such as managers, politicians, or salespeople.

*Large group sales meetings*: Any setting where the pharmaceutical salespeople address more than one or two doctors at a time (J. Birrell, personal communication,

August 17, 2015). It is a common practice of pharmaceutical salespeople and could potentially lead to more sales in a shorter amount of time.

*People skills, soft skills, social skills, social competence, social intelligence,* and *interpersonal intelligence*: These terms were used interchangeably in the literature to identify the characteristics identified by Gardner (1983) and were essentially considered to be the same as the term *IP skills* as previously defined.

*Pharmaceutical salespeople*: Sales representatives whose primary purpose is to disseminate knowledge to clinicians who are, in turn, responsible for prescribing those medications to patients who will then purchase the medications (Michaelidis & Dracou, 2011).

*Sales transaction volume*: The number of sales produced from a pharmaceutical salesperson's territory in terms of prescriptions placed from specific physicians (Solomon, 2013).

*Tenure*: The amount of time someone has been in a position or working for a company (Solomon, 2013). The assumption is that someone with more tenure may be paid on a higher scale.

## Assumptions

I made several assumptions related to this study. First, it was assumed that the current payment structure utilized by pharmaceutical companies is fair and equitable and provided accurate data for the purposes of this study. Consideration needed to be given to

the factors affecting compensation, such as the term of employment, large group meetings, company bonuses, or other factors.

Second, I assumed that certain factors may contribute to the success or failure of the employees who were not accounted for in this study. Elements, such as personal hygiene, grammar, and geographical area, may have had a major role in the results of this study, but it was assumed that salespeople in this industry were capable of appropriate levels of personal hygiene.

## Scope and Limitations

The scope of this study was limited to pharmaceutical salespeople. I chose this group because of the nature of their business interactions, working primarily with physicians who struggle to maintain a high level of IP skills (see Frey, 1999; Milyavsky et al., 2017). The CSRS is a self-report test, which carries with it several limitations. Bias can enter the scoring if participants seek to answer to increase their score. For this reason, the test was anonymous, hoping to encourage the participants to answer openly and honestly, as explained in the Privacy section of the Informed Consent document.

## Summary and Transition

Sales are a significant part of a company's success. In the large pharmaceutical industry, there is a heavy reliance on pharmaceutical salespeople. I conducted this study to examine the relationship between sales performance and IP skills among pharmaceutical salespeople and to identify the importance of IP skills in several venues.

There have been many studies concerning the measurements of sales performance, but the research has failed to identify whether a correlation exists between sales performance and IP skills (Borg & Johnston, 2013; O'Reilly, 2015; Wihler et al., 2017). In this study, I chose the participant group because of their considerable effect on their company's total sales income transactions and their presence in the sales industry. To predict the significance of IP skills on sales performance, I measured the relationship between tenure and the number of large group sales meetings on sales volume as well.

In Chapter 2, I will examine the literature on the topic extensively to review the existing research regarding IP skills and their many derivatives. This chapter also contains a description of the gap in the research that I sought to fill in this study.

In Chapter 3, I will cover the research design and methodology used to determine the relationship between IP skills and sales performance and how that relationship was mitigated by the number of large sales meetings and tenure of the employees. The chapter also includes a discussion of the CSRS's psychometric properties, the informed consent process, and the appropriate measures taken to ensure the highest ethical standards in the study.

Chapter 4 will contain a presentation of the results and data analysis along with pertinent charts and figures. In the descriptive statistics, I will analyze the results of the 107 participants, who were not required to submit demographic information. The assumptions of linearity, normality, homoscedasticity, and multicollinearity will be

explained. I will also provide the results of the multiple linear regression. The findings will be discussed regarding each research question with accompanying statistics.

Chapter 5 will be focused on the interpretations and implications of these findings. I will discuss the limitations of the study and the recommendations for further research as well as the theoretical and social implications. In this concluding chapter, I will also examine how to pursue further action in lieu of these findings and how to utilize these findings to promote positive social change.

# Chapter 2: Literature Review

In this chapter, I review the current literature on IP skills; the many terms used in conjunction with IP skills, such as social intelligence, IP competence, and people skills; IP skills relationship to sales performance, and the compensation of pharmaceutical salespeople. The review of the literature on this topic is framed by Gardner's (1983) theory of MI. Chapter 2 also contains an examination of the current literature to identify the areas where the research was lacking. I begin the chapter with a discussion of the literature search strategy.

## Literature Search Strategy

For this literature review, I examined the extant research on IP skills and their relationship to sales performance as well as Gardner's (1983) theory of MI. The primary focus was on research articles defining the concept of IP skills in the way Gardner originally defined it (i.e., a person's ability to understand another's social style and how to communicate with others effectively, discern how an individual may be feeling, and create the proper social atmosphere). This social intelligence allows others to show empathy, place others' needs first, and simply carry on a comfortable conversation. Arnold et al. (2012) provided their own definition of IP skills, describing characteristics of people "who are able to interact with others in such a way that their behavior has a maximum positive and minimum negative outcome for the interactional partners" (p. 1). The important skill of social competence (i.e., IP skills) has applications to every aspect

of life; however, the direct impact on the sales volume of pharmaceutical salespeople is unknown. Therefore, I focused on this relationship in the current study.

I primarily used EBSCO to search for research articles from databases, such as Academic Search Complete, Business Source Complete, Cochrane Methodology Register, ERIC, Health and Psychosocial Instruments, Mental Measurements Yearbook with Tests in Print, Opendissertations, PsycBOOKS, PsycEXTRA, PsycINFO, PsycTESTS, Regional Business News, Research Starters-Education, Social Work Abstracts, and SocINDEX with Full Text. The search terms used were *IP skills, social intelligence, sales and productivity, IP skills and EI, IP competence, people skills, social competence and IP skills, people skills, social competence and IP skills, people skills and sales, people skills and sales, people skills and productivity, interpersonal skills and sales volume,* and *pharmaceutical salespeople compensation.*

## Interpersonal Skills

The value of IP skills has been recognized by several organizations that have begun incorporating IP skills training (Johnston, 2005). Johnston (2005) cited the vast importance of IP skills with productivity, client relations, lawsuit avoidance, employee turnover, employee satisfaction, and retention. The author recognized that the effort starts with the management members but is vital for every organizational member, stating,

> The ability of one's managers to manage interpersonal risks—by creating a climate of fairness and trust, by consistently and quickly addressing employee problems, and by understanding and complying with legal and ethical

> responsibilities, is the single best predictor of how likely one's organization is to maximize its profits and minimize its costs. (p. 69)

A review of the literature showed that some researchers have begun to recognize the importance of IP skills in the business field. Williams and Stumpf (2008) found IP skills essential to training students in management classes at Cornell University who were given special scenarios that they may encounter as managers. The students were coached on how to deal with the scenarios appropriately using the proper IP skills. Additionally, Slof et al. (2016) found a positive correlation regarding the impact of IP skills on student performance with their peers in the Netherlands. The effects of IP skills were an especially strong indicator of performance in group work forums.

Litigation has become more prevalent in commerce in modern society (Lunseth, 2001; Malm & Krolikowski, 2017; Merten & Pezzello, 2011). As early as the mid-1980s, Bernzweig (1985) recognized the need for IP skills to avoid lawsuits. Currently, the same issues have been seen with poor IP skills being closely associated with litigation ("Order for counseling, social skills," 2014). Substantial evidence exists that an IP skills deficit impedes peoples' progress, leading to lawsuits and/or dismissal (Hirko, 2009; Teh, 2009).

The evidence for IP skills in improving employee turnover seems less substantial (Covert, 2007). Covert (2007) studied the effect of IP skills on certified nursing assistants at a nursing home to discerning whether an increase in IP skills would decrease turnover and the use of sick days. The researcher found no significant effect over the course of 4

weeks; consequently, a greater period may be necessary to make the assumption adequately.

Russell et al. (2010) furthered Covert's (2007) work by conducting a study regarding turnover rates among elementary teachers using a 360-degree approach to examine management, pay, and health care. The researchers found that managers' or colleagues' IP skills ranked very low among teachers who considered leaving their work location. However, in other studies, researchers have suggested a positive correlation between the practice of IP skills and employee job satisfaction (Hottel & Hardigan, 2005; Patton, 2010). Research regarding company trainers showed that IP skills were paramount in teaching new trainees (Ghosh et al., 2012; Monnier, 2015; Tews & Tracey, 2008). The trainees reported higher satisfaction and more desire to continue training and learning when proper IP skills were practiced (Ghosh et al., 2012).

As IP skills have gained more importance among researchers, such as Johnston (2005), leaders of several organizations have started training on IP skills more frequently. Tews and Tracey (2008) evaluated 75 managers from a large fast-food franchise to evaluate what type of IP skills training was most effective: classroom training or classroom training coupled with self-coaching that included feedback from supervisors. Tews and Tracey recognized that any type of attention to IP skills was important and improved workplace atmosphere; however, they failed to correlate IP skills directly to specific aspects of the atmosphere. Furthermore, the authors did not show any correlation between sales performance and IP skills.

Borg and Freytag (2012) researched IP skills in conjunction with EI in business-to-business sales. Borg and Johnston (2013) admitted, "the field's understanding of the concept [i.e., IP skills] is limited, sporadic, and seemingly conflicting" when discussing sales performance (p. 39). Mast and Latu (2016) discussed IP accuracy as a social skill and its impact on workplace tasks. They mentioned the ability to complete sales in passing in their study, but it was not focused on. Li et al. (2017) described political skill as a social skill that influences sales outcomes and job satisfaction. The focus was similar, but political skill, as Li et al. described it, lacks the personal approach and ability to discern another's mood and temperament as Gardner (1983) described with IP skills.

Therefore, current researchers have neglected to show the correlation between sales performance and IP skills among pharmaceutical salespeople. Many groups have been studied to show the impact IP skills carry for doctors and nurses, managers, students, and many other groups, but existing research lacks the description of IP skills as Gardner (1983) characterized them and has failed to show the correlation between sales performance and IP skills (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Li et al., 2017; Wisker & Poulis, 2015).

Bergeron et al. (2013) studied the effects of IP skills training on high school students identified as being "at-risk," according to test scores, dropout rates, attendance, and suspension rates. Their pre- and posttraining results showed a strong and significant change in the student behaviors and their likelihood of success beyond high school. The

authors asserted that the same results would be evident in organizations where leaders employed IP skills training.

Researchers have regarded IP skills as the most important and most poorly used asset of the workplace (Gu & Siu, 2009). While some experts have understood the importance of IP skills, others seemed unaware of the applications that IP skills have for an organization (Borg & Johnston, 2013; Gardner & Moran, 2006; O'Reilly, 2015; Wihler et al., 2017). Nearly every aspect of business involves personal communication and interaction among individuals (Naguib, 2007). The principles comprising IP skills are most crucial to leaders of a corporation; yet, in the existing studies, researchers suggested IP skills were being highly neglected by leaders of organizations that were largely dependent on sales, such as the pharmaceutical industry (Tews & Tracey, 2008; Wallach, 2009). IP relationships were also identified as one of Piotrowski's (2016) most neglected areas of scholarly research. Instead, topics such as personality testing, conflict management, or EI inventories were more commonly examined (Clarke, 2010; Jameson, 2001; Scroggins et al., 2009).

The same turbidity surrounding the precise definition of IP skills that confused many of Gardner's critics remains prevalent in modern research. According to the literature, IP skills have many different names (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Lee et al., 2015; Rodríguez et al., 2016; Teven & Winters, 2007; Wihler et al., 2017; Wisker & Poulis, 2015). People skills, social intelligence, soft skills, interactional skills, assertiveness, self-esteem, social or IP

competence, and many other terms have been used to describe what Gardner (1983) sought to label (Bayer et al., 2012; Dawes, 2003; Doğan & Çetın, 2009; Mitchell et al., 2010; Monnier, 2015). Bayer et al. (2012) argued that the researchers had not displayed any clear delineation between the terms. Furthermore, EI has occupied much of the research when reviewing comparisons to performance (Monnier, 2015). The differences between IP skills and EI are examined further in this literature review. The literature showed that IP skills have been studied among many different groups, such as managers, health care staff, students, and engineers. While these terms collectively embody Gardner's (1983) definition of IP skills, none of them encompasses the concept I was trying to discern in the current study, namely the correlation between IP skills and sales performance.

IP skills have been examined in many ways regarding their influence in the workplace. It seems logical that positive interactions between individuals with whom a person works and does business with would be paramount to an organization (Gu & Siu, 2009). The effect of IP skills on employee productivity is monumental (Hottel & Hardigan, 2005; Levin, 2012). IP intelligence has not been as highly regarded by some, who compared it to routine task-oriented items in terms of importance (Dyche, 2007). Other experts have regarded IP intelligence as the major deficit affecting the modern labor force (Gu & Siu, 2009; Wesley et al., 2017). In a workplace study, Yang (2010) showed IP skills ranked above technical skills, industry knowledge, and experience. Amid globalization, the importance of IP skills has increased exponentially because

technology allows people to communicate internationally (Blomkvist et al., 2017; Greenockle, 2010; Lee & Johnston, 2001).

A significant portion of the literature on IP skills has involved management. Managers have a significant role in organizational productivity and have commonly been studied to determine how their performance can be improved (Ellingsen-Dalskau et al., 2016; Greenockle, 2010; Johnston, 2005). Managers set the pace within most organizations and maintain a large role in determining the satisfaction of employees and clients. Managers also greatly affect the turnover and liability of an organization (Johnston, 2005). Therefore, high IP intelligence is vital to a manager and, consequently, to an organization's success (Riggio, 2014). Johnston (2005) determined that a manager's ability to interact effectively while resolving employees' concerns and thereby avoiding litigation is "the single best predictor of how likely one's organization is to maximize its profits and minimize its costs" (p. 69).

Interacting with employees and resolving concerns is only a small aspect of the IP skills principle (Gardner, 1983). IP sales has many useful applications in the workforce, as Ellingsen-Dalskau et al. (2016) pointed out. Every institutional manager would like to see fewer disputes and less litigation (Ellingsen-Dalskau et al., 2016; Malm & Krolikowski, 2017). Research has shown that IP skills are at the forefront of accomplishing the goal of fewer disputes. Understanding how to implement IP skills properly in any organization can be advantageous on many different levels; this has

become more important as litigation has increased over the years (Grundfest & Huang, 2006; Merten & Pezzello, 2011).

The idea of comparing performance to IP skills is not new. Hill (2015) worked closely with students seeking to ensure their success using several approaches. Among the attributes designated as significant aspects to improving and maintaining performance was IP skills. Trinka (2005) researched managerial productivity and organizational structure, revealing that the highest level of productivity was achieved when an organization could promote a performance-based approach where the supervisors acted as coaches rather than commanders. Trinka cited one essential element of the formula: IP skills. If the managers could incorporate the model with an adequate amount of IP skills training, the organization operated much more smoothly (Trinka, 2005). Substituting principles of autonomy for micromanagement principles has been proven to accelerate the efficiency of a business (Alpkan et al., 2010; Van Yperen et al., 2016). The proper implementation of such a policy requires substantial IP communication and dissemination of expectations and job requirements (Johnston, 2005).

Dreyfus (2008) conducted a long-term study of managers in large government institutions. They found that leadership skills and interpersonal sensitivity were the two primary characteristics contributing to a group's success. The study also found that strong IP skills in managers could be developed through training but were more likely to be developed early in life (Dreyfus, 2008). Dreyfus showed that individuals are trained most effectively according to their individual learning style. Based on the discovery, Dreyfus

magnified the fundamental philosophy of Gardner's MI theory. The author suggested that someone who has an inclination toward musical intelligence would most likely learn about IP intelligence by approaching it from a musical perspective rather than a logical/mathematical or spatial intelligence approach. Therefore, in this study I sought to discern the impact or relationship of potentially training employees, such as the participant group of pharmaceutical salespeople, while considering their existing intelligences (Dreyfus, 2008; Johnston, 2005). For example, if a pharmaceutical salesperson already possesses a strong physical intelligence, then the training could be formatted to train the representative to improve their IP intelligence in a way that associates the existing intelligence with the intelligence to be learned.

Rajan (2014) studied pharmaceutical salespeople and their sales effectiveness by examining several factors, including IP skills. Rajan also cited technical skills and salesmanship skills. Rajan proposed that IP skills' level is positively correlated to each associate's amount of sales experience. This research was compelling, and on the surface, seemed to occupy many of the same factors of this research. Further analysis shows that while IP skills were an aspect of this study, they were only a small part of several different factors studied here (Rajan, 2014). The author did not employ a psychometric tool to quantify IP skills. To measure effectiveness, the author examined "specific objective-based outcomes, skill sets controlling the salesperson's behavior, performance results in terms of sales units/volume, revenue generated, profitability, new accounts

created, etc" (Rajan, 2014, p. 1). Such a large spectrum of performance indicators made it more ambiguous to identify the effects of IP skills.

Islam et al. (2016) studied the performance of sales associates in a salon located in Bangladesh against soft skills that align with Gardner's definition, namely, "listening skill, optimism, empathy, buyer-seller relationship and skills regarding managing perceptions" (p. 77). Their study employed a multiple regression analysis and showed a positive correlation between the "IP relationship" of the salon representatives and the associated receipt of sales, concluding that if a sales representative wants to see an increase in sales, they should work on IP skills. Islam et al.'s study used a face-to-face interview to survey the salon employees concerning several items and used a Likert scale to quantify their responses.

IP skills were studied by Basir et al. (2010) alongside marketing, technical, and salesmanship skills in a Malaysian telecommunications company. Their study showed a positive correlation for IP skills, but none of the other variables impacted sales performance. Basir et al.'s research tried to identify the positive correlation and the need to study further and understand IP skills' implications on sales performance.

The science of IP intelligence comprises more than simply being nice and courteous to peers (Johnston, 2005; Patton, 2010). The key is to properly understand an individual's "social style" and create a proper social atmosphere (Patton, 2010, p. 46). A study of optometrists and their office staff members showed that productivity was greatly enhanced when the office staff members were trained on proper IP skills and interacting

appropriately with the clients and each other (Patton, 2010). The result was a better place to work and heightened productivity, according to Patton (2010). When the workplace was perceived as a conscientious and friendly atmosphere, the turnover rate decreased, and there was an increase in job satisfaction overall (Patton, 2010). Patton indicated IP communication in most organizations is often much higher among the employees than the clients. Thus, when employees become empowered by properly understanding IP skills, the workplace becomes more enjoyable (Patton, 2010). Hottel and Hardigan (2005) similarly concluded that a client-friendly atmosphere naturally occurs when employees understand and properly implement IP skills.

This example of the optometry office can also support the argument that IP skills can be trained, taught, and learned by employees to improve many workplace factors (Patton, 2010). IP skills are commonly found on the lists of researchers evaluating performance (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Wisker & Poulis, 2015). Hopkins and Duke (2004) have found IP skills to be among the success indicators for business school students. While their study was used to examine the students' general success in a business environment, it failed to look closely at IP skills and their impact on sales performance (Hopkins & Duke, 2004).

The need for IP skills among nurses was identified by Huynh et al. (2008). Among the many duties of a nurse, Huynh et al. focused on one characteristic termed *emotional labor* as one of the most important aspects of a nurse's job (p. 195). Huynh et al. described it as a nurse's ability to deal with difficult situations and how well nurses

could express themselves during these circumstances. While Huynh et al. did not delve deeply into the mechanics of IP skills, they did identify the need for a "work persona" where the nurses were able to find a way to express themselves and work through the social rigors associated with nursing (p. 195). Huynh et al. concluded that nurses need to find an outlet and need to be supported by their organizations in finding a healthy way to defuse their emotions. No mention was made about the training of IP skills or developing the proper work persona through training (Huynh et al., 2008).

The importance of a nurse's ability to maintain high levels of social-emotional intelligence has been studied globally (Carragher & Gormley, 2017). When nurses can accomplish this, it results in a higher standard of care and a better experience for patients and nurses alike. According to Carragher and Gormley (2017), the proper forum of IP relations was embodied most effectively when employed by the leadership. Further, Carragher and Gormley suggested that EI and social intelligence training should begin as early as undergraduate education.

Leaders in many organizations assign mentors to play a very valuable role in the productivity of organizations and individuals (Sambunjak et al., 2010). Mentors are commonly used to help decrease the learning curve and bring people up to speed in organizations. In the research conducted among academic clinicians, Sambunjak et al. (2010) found one key indicator underpinning these mentors' success: IP skills. Even among individuals who boasted decades of education and a profound level of experience, IP skills still manifested a very important presence (Febrianita & Hardjati, 2019;

Sambunjak et al., 2010). Sambunjak et al. stressed the importance of the organization's support in encouraging strong IP skills for the mentor and the mentee alike.

Many employers have considered work ethic the most important characteristic of an employee (Hill & Fouts, 2005; Robles, 2012). An employees' ability to persist until the job is complete is undoubtedly a valuable skill. Hill and Fouts (2005) showed that the impact of a strong work ethic was magnified when it was coupled with strong IP skills. Hill and Fouts cited a clear and vital association between the two. Hill and Fouts examined 373 individuals from all different age groups and different employment statuses (i.e., unemployed, part-time, and full-time employees). Hill and Fouts found that a large percentage of the employees who demonstrated a strong work ethic consistently showed good IP skills. On the surface, the two aspects would seem completely unrelated. Hill and Fouts suggested several more questions about how the individuals possessing both a strong work ethic and proficient IP skills acquired these principles.

Yoder (2015) also emphasized the importance of preparing the upcoming workforce with a strong work ethic but expressed his concern that social and emotional skills, which are much more vital, were being left behind. Yoder thought school district officials needed to greatly increase their focus on the skills and encourage changes in policies to accomplish that goal. Similar changes have already been made in more than six large school districts around the United States (Yoder, 2015).

IP skills embody many of the important characteristics of successful companies and diligent employees. Certainly, there is a close relationship to many important aspects

of a work environment. While many have contended the importance of work ethic, others have argued for the importance of maintaining a low turnover rate (Hill & Fouts, 2005; Taute, 2007). Officials at one of South Africa's largest hospitals reported turnover rates as high as 23%. When Taute (2007) researched the facility, he found that the hospital workers struggled to cope in the social environment. The workers had little satisfaction with life and were generally dissatisfied (Taute, 2007). Taute made the determination, "Developing your IP skills is not only beneficial in helping you satisfy the demands of the employer. It can also greatly reduce work stress, increase your productivity, and ultimately enhance your reputation, perhaps your position within the firm" (p. 97). Taute's findings were perhaps the most noteworthy. Taute focused on the employees' pursuit to find balance on an intrapersonal level and how this balance could translate into the improvement of IP relationships. According to Taute, individuals who gained this capability would find more satisfaction within the job, would appease their employer more easily, and would increase the possibility of promotion (Patton, 2010; Riggio, 2014; Russell et al., 2010).

Deeter-Schmelz and Sojka (2003) suggested a research model to examine EI and its impact on sales performance. Their quantitative study involved in-depth interviews designed to target factors consistent with strong IP skills. Several trends were identified that indicated a positive correlation between the two (Deeter-Schmelz & Sojka, 2003). When sales agents communicated more effectively with potential clients, they were more likely to complete a business transaction or sale. Furthermore, when the sales associates

were able to perceive and recognize the clients' feelings and desires, their performance was much improved. Deeter-Schmelz and Sojka regarded the research as preliminary because there was a dearth of psychometric tools that could determine the relationship with scientific significance.

The effect of IP skills on sales performance was studied by Singh and Venugopal (2015) in the context of customer orientation. Their study focused on sales agents in India and their interactions with prospective clients. Singh and Venugopal described these IP skills as salesmanship and the regulation of emotions. Their study showed a positive correlation with the salespeople's ability to exude strong IP skills. The authors suggested training to help sales agents understand and incorporate these skills.

IP skills increase productivity and decrease turnover (Gu & Siu, 2009; Salas & Weaver, 2016; Taute, 2007). They are vital for managers, nurses, and salespeople (Greenockle, 2010; Huynh et al., 2008; Johnston, 2005; Li et al., 2017; Manna & Smith, 2004; Mast & Latu, 2016). IP skills correlate with work ethic, loyalty, and demonstration of initiative (Hill & Fouts, 2005). The literature illustrated the importance of understanding and implementing IP skills training in the workforce to accomplish institutional managers' goals and desires (Hill & Fouts, 2005).

## Social Intelligence, Sales, and Productivity

In previous studies, the correlation between productivity and IP skills has been very clear and substantiated by much research (Deeter-Schmelz & Sojka, 2003; Golhar, 2016; Salas & Weaver, 2016). Recent researchers have suggested that perhaps the same

clarity lacks social intelligence (Suliman, 2010). Whereas IP intelligence was defined by Gardner (1983) as the ability to relate and communicate well with others, the literature surrounding social intelligence indicated a slightly different concept. Suliman outlined an individual's ability to discern and act appropriately in many different societal situations as social intelligence. Suliman's definition aligned with aspects of Gardner's definition of IP skills.

Salas and Weaver (2016) studied Google to learn more about the company's model of success and ever-increasing productivity. Among Google's many progressive concepts was an in-house, advanced educational facility that rivaled many universities. In the facility, employees are encouraged to continue their education in various technical fields. Employees are also encouraged to study soft skills, such as IP intelligence. The study of soft skills is used to facilitate the more technical aspects of the job, where Google employees are encouraged to work in teams and spend one day each week researching topics of personal interest (Salas & Weaver, 2016).

Nowrouzian and Farewell (2013) worked with biomedical and natural science students. They suggested an on-the-job or problem-based approach to learning IP skills. Nowrouzian and Farewell originally acknowledged the improved productivity and capabilities of group work environments. As they studied the groups, a need was identified for the teams to work well together using IP skills. This need was essential before any real progress could be made on their biomedical group studies.

Korean researchers established a research design targeting pharmaceutical salespeople (Kim & Hong, 2005). Kim and Hong (2005) studied competencies among 457 pharmaceutical representatives established in their careers and had proven track records. Kim and Hong found that when several key competencies increased, sales performance increased accordingly. While the authors did not explicitly study IP skills, they focused on several key aspects related to some of Gardner's MI, namely "motive and traits, self-concept, and knowledge and skills" (p. 261). Gardner's (1983) explanation of IP intelligence certainly aligns with Kim and Hong's description of self-concept and motive. In this research the authors examined forms of soft skills, but they only bear a likeness to what Gardner described as IP skills. In this research they failed to show how those skills could help others relate, show empathy, and pursue a comfortable conversation (Borg & Johnston, 2013; Li et al., 2017; Mast & Latu, 2016).

Cárdenas et al. (2010) proposed a model of integrating social intelligence into academic institutions that would serve many organizations. Cárdenas et al.'s projected model included resolutions that involved both the students and the educators adopting a model to incorporate a high level of social intelligence. Cárdenas et al. termed this the "social intelligence design paradigm" that would result in "collaborative learning" (p. 247). Cárdenas et al. found this type of environment encourages an open, warm interchange where maximum performance can be accomplished, and problems associated with a lack of diversity appreciation and workforce conflict could be avoided. The collaboration seems to be instrumental in determining the successful use of social

intelligence according to Cárdenas et al. Organizational leaders seeking a high level of IP intelligence should consider a similar framework where peers and managers "collaborate" to accomplish mutually beneficial success (Johnston, 2005). The design does require an understanding and implementation of social intelligence and the related skills to implement a successful training module (Cárdenas et al., 2010; Doo, 2006; Gundlach, Martinko & Douglas, 2003; O'Sullivan et al., 2008; Tews & Tracey, 2008).

Hughes et al. (2009) noted the profound influence of high social and EI in schools, businesses, and organizations. Their *Handbook for Developing Emotional and Social Intelligence: Best Practices, Case Studies, and Strategies* enumerated the advantages. Hughes et al. effectively described how to develop social intelligence principles personally, as supervisors, executive coaches, or other related venues. While Hughes et al. offered no scientific tests on validity, they cited the praise of the executives who utilized their techniques. Researchers proposed a similar model termed *conscious oversight* (CO; Roberts, 2002). CO is a suggested model designed to measure and identify the possible correlation between productivity and leadership styles (Roberts, 2002). The CO model has been used to identify correlations in performance and social intelligence like Hughes et al. (2009).

## Interpersonal Skills and Emotional Intelligence

The association between IP skills and EI has been long established in the fields of psychology and management (Bar-On, 1997, 2004; Bar-On & Parker, 2000; Borg & Johnston, 2013; Brown & Moshavi, 2005; O'Reilly, 2015; Riggio, 1986; Sheridan et al.,

2006; Weisinger, 1998; Wihler et al., 2017). In much of the current research, academics described them ambiguously, making it difficult to discern between the two (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Monnier, 2015; Wisker & Poulis, 2015).

Monnier (2015) examined the differences between EI and what he coined *social competence* a term used synonymously with IP skills. Boyatzis (2009), Makolandra et al. (2009), and Monnier defined EI as more of an intrapersonal pursuit describing a person who can control their inner-feelings, reactions, and thoughts. EI is ultimately measured by how the inner thoughts and feelings manifest themselves through interactions with others. Therefore, an intersection of EI and IP skills is seen. In this study I focused on the IP aspect, examining a salesperson's ability to interact with others looking further than beyond their self-control.

Much of the confusion may stem from how the research was conducted. Arnold et al. (2012) explained that three primary approaches exist when studying individuals to discern whether they embody the characteristics of EI or IP skills. First, a self-evaluation is used. Second, a peer-centered evaluation is used, such as a 360-degree evaluation. Last, a third-party observation is needed, as presented by Steedly et al. (2008). Steedly et al. argued that IP skills should be left to open evaluation and observation by a third party, where EI is an ability that is better handled by self-evaluation.

Many different assessments concerning EI and IP skills exist (Bar-On, 1997, 2004; Bar-On & Parker, 2000; Borg & Johnston, 2013; Brown & Moshavi, 2005;

O'Reilly, 2015; Riggio, 1986; Sheridan et al., 2006; Weisinger, 1998; Wihler et al., 2017). The possibility exists that the methodology and evaluation processes may have given rise to much of the confusion. For example, Boyatzis et al. (2013) chose to combine EI and social competence. In 2006, the Emotional Competency Inventory was changed to the Emotional and Social Competency Inventory, comprising both the emotional and social aspects of intelligence. Boyatzis (2009) cited the reason for the change describing how his numerous studies sought to measure the effects of EI on an individual's performance under many different scenarios. Most often, Boyatzis reported that their EI was manifested in how people acted socially toward others. This finding helped to discern the difference between IP skills and EI.

While there is a discernable relationship between emotional and social intelligence, the literature still has failed to delineate a clear difference between the two (Johnson, 2015). Johnson (2015) followed medical students and focused on how their EI levels affected their social interactions with patients. Johnson described the need for medical students to have high EI to act in an appropriate social manner and suggested EI training as an integral part of their medical training.

Golhar (2016) studied social intelligence under EI's banner and its effect on a salesperson's success. Golhar's advice for engendering the attributes of EI included being approachable, being sociable, communicating well, being empathetic, and being a good listener. Golhar cited these and other attributes as essential to improving productivity.

Again, many of the attributes described by Golhar characterized an individual with strong IP skills as defined by Gardner (1983).

Some experts favored merging the two ideas (Bar-On, 2010). However, the vast differences between the two and the importance of discerning between them cannot be ignored. Perhaps the ideology of EI aligns more closely with Gardner's earlier identified intelligence of intrapersonal skills, defined as a person's ability to understand oneself (Gardner, 1983). Zins et al. (2007) argued that the marriage of social skills and emotional competence would give individuals, such as students, the desired improvement in behaviors and the skill sets that assist in their success.

Borg and Johnston (2013) sought to discern the difference between IP skills and EI using a model they developed, the IP Skills-Emotional Intelligence Quotient Model. Their model was used to turn the tables by viewing EI as part of the larger set of IP skills instead of the more common alternative (Borg & Johnston, 2013). According to Borg and Johnston (2013), a salesperson operates on a high level if they have strong IP skills. However, if the salesperson couples the skills by bolstering their EI as well, they become an even stronger sales representative (Borg & Johnston, 2013).

Wisker and Poulis (2015) sought to discern whether a real correlation existed between sales performance and EI. They found that one of the moderating concepts was adaptive selling, referred to as relationship selling or customer-oriented selling. Wisker and Poulis' primary focus seemed to be more on how the salespeople interact and less on the IP relationship. According to Wisker and Poulis, a salesperson with the ability to

change their sales techniques will be more effective. Little was said concerning the conclusions that lead to such a judgment.

The ability to adapt to certain situations, even social situations, has shown a positive correlation in a salesperson's success (Anglin et al., 1990; Chen & Jaramillo, 2014; Wang et al., 2016). In congruence with other research work, Anglin et al. (1990) focused their research on the salesperson's ability to adapt but did not provide much detail about what the person was adapting to specifically. The underlying assumption was that salespeople were adapting to the client's social style, but no clear evidence was given (Anglin et al., 1990). Weilbaker (1991) described adaptive selling as the ability to communicate effectively to the client and seeking to understand their needs. The salesperson moves from being a conductor to a consultant. In other words, instead of setting the pace, they stand by and wait to facilitate the customer's needs (Weilbaker, 1991).

## Interpersonal Competence

The term *IP competence* was found in literature as early as 1967 by Clark and Gary (1967) to assess the ability of subjects in "perceiving which cues are relevant, inferring from these what is occurring, and determining what social responses would be most appropriate" (p. 21). IP competence still appears frequently in literature, often correlating with appropriate business practices (Garcia, 2018; Greenockle, 2010; Kivunja, 2014). Brundiers and Wiek (2017) explored IP competence in conjunction with professional skills and how to reinforce those principles over a sustained period.

Greenockle (2010) identified the need for leadership infused with the principles of IP competence to avoid “emotional havoc, social discord, and decreased productivity” (p. 260). Havoc can occur in any organization unless handled appropriately. Productivity decreases proportionally if the favorability of the managing director decreases, according to Greenockle.

New employees who had just recently graduated from college were examined for the necessary skills to compete in the global economy (Kivunja, 2014). IP competence was high on the list of necessary skills. Leaders of the business world are becoming increasingly diverse; therefore, leaders require their employees to have increased skill levels to embody the abilities to communicate and facilitate commerce in a comfortable, friendly environment. Kivunja (2014) specified IP competence or people skills are needed for these new graduates to grow and make a place for themselves in their new workplaces.

The need for professional evaluators to show IP competence was identified by Garcia (2018) who showed that the evaluators are involved in many different social situations. To maintain a bias-free, professional aptitude about their work, they needed to have the vital skill of IP competence. In combination with social awareness, the evaluators who projected a higher IP competence were better reputed to have greater expertise and knowledge in their career field. IP competence embodies the same principles as Gardner’s (1983) IP skills. The research on IP competence aligns with IP

skills research showing its importance in a professional environment and sales transactions.

## People Skills

Researchers often make no distinction between IP skills and people skills (Levasseur, 2009; Robles, 2012; Sabapathy & Vanderbilt, 2016). Indeed, people skills seem to be the colloquial term for what scientists refer to as IP skills. Many researchers have used the terminology in their studies when describing various IP skills components (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Wisker & Poulis, 2015). When organizational leaders seek development and/or change, they sometimes feel like "fuzzy people issues" stand in the way (Levasseur, 2009, p. 370). In earlier research, Levasseur (1991) cited difficulty in organizations obtaining and maintaining proper social interactions. Employees must first become aware of their own personal skills before the change can begin to occur. In later research, Levasseur (2009) discussed specific communication skills, perceptions of others' attitudes and feelings, and proper maintenance of professional borders. Levasseur (2009) cited a greater difficulty in obtaining the proper people skills among those who work in the technical field and conducted additional research along those lines. Levasseur (2009) identified specific characteristics as integral to IP skills. The importance of those skills has been reiterated many times (Ahmed, 2012; Gundlach, Martinko & Douglas, 2003; Li et al., 2017; Mast & Latu, 2016).

Gundlach, Martinko and Douglas (2003) discussed the effect of a corporate "lopsidedness" where managers are knowledgeable and adept at the technical part of their professions but are interpersonally incompetent when it comes to dealing with coworkers (p. 1). The author described the issue as the largest factor in determining company productivity and, consequently, sales success. Gundlach believed the skills could be learned and emphasized the even greater need for small businesses to employ them.

In the modern, unique, economic, global climate, a decrease in workforce size, and increased workforce diversity have occurred (Norris, 2009). When proper IP skills are implemented successfully, the results are astounding (Basir et al., 2010; Norris, 2009; Singh & Venugopal, 2015). Norris (2009) noted IP skills have been shown to improve leadership, workforce production, and job satisfaction among employees. Additionally, Norris cited the need for training modules concerned with increasing IP skills, just as others have done (Doo, 2006; Gundlach, Martinko & Douglas, 2003; O'Sullivan et al., 2008; Tews & Tracey, 2008).

Experts assume people skills have a natural connection with the profession someone chooses (Gardner, 1983). Individuals who work with computers do not utilize salespeople's IP skills just as certified public accountants do not use therapists' people skills. Regardless, research has been conducted to improve social interaction and IP communications among these groups (Ahmed, 2012; Naguib, 2007).

Ahmed (2012) evaluated the common employee characteristics of software engineers. In a rapidly growing technological society, soft skills can often be neglected in

the face of high demand for output and productivity. However, Ahmed described a need for greater emphasis on this skill that ranks low in importance among most companies. When employees have strong IP skills, it lends way to workplace activities that foster greater productivity, such as teamwork or group work, leading to a more balanced and successful job experience for the software engineers (Nowrouzian & Farewell, 2013; Slof et al., 2016).

Naguib (2007) focused his research on the interactions that take place between engineers. The research showed that training in proper people skills with an emphasis on EI improved workforce productivity and ensured a more sustainable career as an engineer (Naguib, 2007). The principles may be adopted and applied to other professionals. In this study I highlighted a trend that company managers seem to hire those they believe will fit into their organization's social realm and tend to promote individuals they would like to remain in the system (Dyche, 2007). When considering the principles, researchers need to adopt a method or manner of training customized to bring forth the best results. Gardner (1983) noted that the principles are universal, but all individuals learn differently. Specialized research, such as the study of engineers, shows that various learning styles are often grouped by profession (Naguib, 2007).

## Social Competence and Interpersonal Skills

The original definition of social intelligence dates to 1920, when Thorndike and Stein (1937) described it as "the ability to understand and manage men and women, boys and girls, to act wisely in human relations" (p. 278). Vernon (1933) defined it more

precisely as the "ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to stimuli, as well as insight into the temporary moods or underlying personality traits of strangers" (p. 178).

IP intelligence is currently more frequently referred to in terms of social competence. The Perceived Social Competence Scale was compared to other social skills tests by Anderson-Butcher et al. (2016), and validity was established. In much of the literature, the term was used synonymously with the other terms described with the fundamental idea aligning with Gardner's definition of IP skills (Leganés-Lavall & Pérez-Aldeguer, 2016; Spivak & Farran, 2016; Stichter et al., 2016). If any variation between social competence and the other terms exists, it is perhaps that *social competence* is often the term used when studying individuals who struggle behaviorally or who have difficulty in social environments. The psychometric tool identified for this study, the CSRS (Spitzberg, 1995), uses the term IP competence to describe the characteristics embodied by Gardner (1983) in their work on IP skills.

A further distinction was made by Warnes et al. (2005), who defined social skills as the ability to make a comfortable and open atmosphere and social competence as a person's ability to interact socially as perceived by a third party. AlDosiry et al. (2015) studied EI and sales performance among car salespeople in Kuwait. The research showed only a mild positive effect among those salespeople who embodied a higher level of IP skills on overall sales productivity (AlDosiry et al., 2015).

## People Skills and Sales

The relationship between salespeople and clients has been studied often (Borg & Johnston, 2013; O'Reilly, 2015; Wihler et al., 2017). Although performance and IP skills have been researched, a precise study focused on IP skills and sales performance has not been recorded (Borg & Johnston, 2013; O'Reilly, 2015; Wihler et al., 2017). Manna and Smith (2004) examined people skills in conjunction with EI for a possible correlation with sales success. The researchers targeted a group of 515 salespeople in the Pittsburgh, Pennsylvania area from well-established companies. The salespeople were then asked about different sales aspects and rated their performance. Their survey showed that salespeople recognized the crucial role of people skills in sales and the need for EI's closely related principle. Manna and Smith's research design was used to create a powerful argument for the importance of IP skills and sales performance. The large sample size made the results more efficacious. Their study was also directed specifically at salespeople who were well-established and well-versed in what it takes to succeed in their profession. Furthermore, the questioning was very direct and focused on the professionals' skills as important in their years of experience (Manna & Smith). In many ways, the research by Manna and Smith can be used to support the hypothesis of the current research study, based on the similarities between their subject group members and pharmaceutical salespeople, both of whom are required to be well-educated and proficient at explaining their complex products.

Much of the research today intermingles the terms people skills and IP skills (Borg & Johnston, 2013; Furnham, 2008; O'Reilly, 2015; Wihler et al., 2017). The current research used a quantitative analysis. Manna and Smith (2004) utilized a qualitative analysis based on self-reporting by the salespeople. This manner of research methodology can give way to bias by the participants and can skew the reports. Using a quantitative rather than a qualitative approach, the data can be clarified, and the findings should be less biased (Collier & Mahoney, 1996).

## People Skills and Productivity

People's major role in productivity has been recognized increasingly (Kivunja, 2014; Levasseur, 1991; Row, 2016). People skills have become more of a necessity as technology improves and society's urbanization continues to increase (Bacolod et al., 2009). Bacolod et al. (2009) examined workers' skills across many U.S. cities. The authors revealed that larger cities with considerable urbanization valued people skills more highly than technical skills. Furthermore, increased productivity was reported in conjunction with increased people skills, a common trend linking people skills and IP skills once again (Bacolod et al., 2009). Researchers seemed to be studying the same skills and characteristics using different names (i.e., people skills, soft skills, and IP skills).

Further, Bacolod et al. (2009) seemed to indicate strong people skills as an essential factor that sets people apart in many instances. It is common for company leaders to require a minimum skills requirement before hiring an individual. However,

company leaders rarely require that a certain level of IP skills be met for employment (Albanese, 2004). Using a minimum skills requirement is a substantial way for employees to set themselves apart in an organization (Naguib, 2007). Research has shown, IP skills make the likelihood of an individual being hired, maintaining employment, and being promoted much greater.

Dreyfus (2008) considered IP skills and people skills as interchangeable. When identifying the most effective managers' common characteristics, IP skills, and group management capabilities were considered most important (Dreyfus, 2008). Comparing the two factors showed that IP skills were deemed considerably more important to the managers' success (Dreyfus, 2008). Dreyfus noted several essential points: (a) IP skills can indeed be developed; (b) IP skills learning is influenced by learning style;(c) IP skills are learned in several ways, not solely through training.

## Interpersonal Skills and Sales Volume

The literature lacks research regarding IP skills and sales volume. Cuadra-Peralta et al. (2017) studied the effects of social skills training in a large national organization to determine management's effect. The study showed an improvement in the level of IP skills among managers and noted an increase in sales volume as an unanticipated result but did not focus on any significant relationship between the two factors. Blickle et al. (2012) conducted a two-part study designed to research the effect of "political skill" (p. 301). This skill was described as a type of conflict resolution and IP skill combination. The author cited that in positions where IP skills were not required, political skills had no

effect. Further, Blickle et al. showed an improvement in sales volume with insurance companies where higher political skill levels were employed. The IP skill and sales volume correlation was absent. These articles noted a connection but failed to directly study the relationship between the two (Blickle et al., 2012; Curada-Peralta et al., 2017).

## Pharmaceutical Salespeople Compensation

Reports have shown that compensation for employees of pharmaceutical companies can vary based on the size of the company, the title an individual holds, the length of time the sales representative has been with the company, and the amount of time an employee travels (Cegedim Strategic Data, 2014). The survey indicated an individual with the title of sales director would receive about 15% more in compensation than the next-lower-level sales management person (Cegedim Strategic Data). The decrease was even more significant for the next level down from sales management to business development, reporting an income of nearly 34% less. Similar trends were found among more experienced pharmaceutical salespeople (Payscale, 2017). A pharmaceutical representative employed for more than 20 years showed an average salary of $154,000, where a representative employed between 11 and 20 years showed an average of $20,000 less. The trend was mirrored when pharmaceutical salespeople were represented by their age (Medreps, 2016).

The company's size does not appear to matter when going from large to medium-sized companies (Medreps, 2016). However, a significant decrease occurred for smaller companies showing an income of approximately 17% less. The amount of travel of

pharmaceutical representatives did show a significant increase, with representatives who traveled 50% of the time, showing an income nearly 38% higher than those who did not travel. Many pharmaceutical sales representatives use large group sales functions, such as luncheons, to reach their clients and use the opportunities to inform their clients about the products they are selling (J. Birrell, personal communication, August 17, 2015). However, the activity seems to be a difficult area to define in terms of its impact on sales volume because no research articles or informative commentaries cited any relationship between income generated and the meeting or venue.

## Summary and Transition

The literature review showed that IP skills have been studied in several ways using many names, such as social intelligence, EI, IP competence, people skills, social intelligence, or social competence. Much of the research considered IP skills and these terms as though they exist synonymously (Bayer et al., 2012; Dawes, 2003; Doğan & Çetın, 2009; Mitchell et al., 2010; Monnier, 2015). Other researchers spoke of them as if they were only distantly related (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Lee et al., 2015; Rodríguez et al., 2016; Teven & Winters, 2007; Wihler et al., 2017; Wisker & Poulis, 2015). IP skills were defined by Gardner (1983) as the ability to understand other people, to relate empathetically to how they are feeling, and to have the ability to communicate while helping people feel comfortable in any given circumstance.

Many groups have been studied to show the impact IP skills carry for doctors and nurses, managers, students, and others (Ahmed, 2012; Cheraghi-Sohi & Bower, 2008; Deng et al., 2014; Dreyfus, 2008; Hekman et al., 2016; Hurrell, 2016; Naguib, 2007; Shen et al., 2014). The current research failed to correctly characterize IP skills as Gardner (1983) defined them and failed to show the correlation between sales performance and IP skills (Borg & Johnston, 2013; Li et al., 2017; Mast & Latu, 2016).

Much of the research is focused on EI. The literature revealed a lack of research on sales performance and EI (AlDosiry et al., 2015; Bar-On, 1997; Boyatzis et al., 2013). It also identified a gap in the studies that examined the relationship between emotional regulation and sales performance but were missing the impact of the sales experience on the client as well as information pertaining to sales volume (Bar-On, 1997, 2004; Bar-On & Parker, 2000; Blickle et al., 2012; Borg & Johnston, 2013; Brown & Moshavi, 2005; Curada-Peralta et al., 2017; O'Reilly, 2015; Riggio, 1986; Rodríguez et al., 2016; Sheridan et al., 2006; Weisinger, 1998; Wihler et al., 2017).

In Chapter 3, I will cover the research design and methodology used to determine the relationship between IP skills and sales performance and how that relationship was mitigated by the number of large sales meetings and tenure of the employees. The chapter also includes a discussion of the CSRS's psychometric properties, the informed consent process, and the appropriate measures taken to ensure the highest ethical standards in the study.

Chapter 4 will contain a presentation of the results and data analysis along with pertinent charts and figures. In the descriptive statistics, I will analyze the results of the 107 participants, who were not required to submit demographic information. The assumptions of linearity, normality, homoscedasticity, and multicollinearity will be explained. I will also provide the results of the multiple linear regression. The findings will be discussed regarding each research question with accompanying statistics.

Chapter 5 will be focused on the interpretations and implications of these findings. I will discuss the limitations of the study and the recommendations for further research as well as the theoretical and social implications. In this concluding chapter, I will also examine how to pursue further action in lieu of these findings and how to utilize these findings to promote positive social change.

# Chapter 3: Research Method

In Chapter 3, I describe the research design and methodology used to ensure that the research took place in an empirically sound and ethical manner that was comfortable for the research participants. Pharmaceutical salespeople were examined to determine their work scope and the need to exhibit IP skills in sales situations. Chapter 3 includes the procedures for sampling and accumulating the data. The CSRS was used to measure IP skills among the participant group, with their productivity quantified in total sales income. Multiple regression analysis was used to examine the relationship of tenure in pharmaceutical sales and the number of large group sales meetings attended with their total sales income. The limitations and threats to the validity of this study are also provided. I discuss the ethical procedures followed to ensure each participant took part in the study with their informed consent and understanding to uphold the highest ethical standards and protect their rights.

## Research Design and Rationale

Sales performance is measured differently among corporations. Often, the organizational leaders reward salespeople with commissions based upon the number of sales or the dollar value of the sales they produced (Borg & Freytag, 2012). Within most large pharmaceutical companies, the associates are compensated with a salary in addition to sales bonuses. The system provides an accurate depiction of their sales performance and is maintained in the company’s records.

Variations in compensation existed among employees. For example, a sales representative who has been with the company for a prolonged amount of time might accrue a higher commission than an employee who is early in their career regardless of sales proficiency, which inflates the compensation and might appear to inflate the representative's sales performance, if not properly considered.

For this study, I examined the tenure and quantity of large group sales meetings using multiple regression analysis to discern their effects on each pharmaceutical salesperson's sales performance. Each sale represents differing sizes; therefore, sales performance was quantified by the sale's monetary value. First, each participant was scored using the CSRS. I used this test to measure a salesperson's ability to communicate with the prospective client in an empathetic manner using IP skills. This score was the first and most highly esteemed variable, showing the direct correlation found between sales volume and IP skills level. Second, I factored in the employee's tenure to compensate for its effect on sales performance. The research participants were asked to indicate the number of years they had been employed as pharmaceutical salespeople by selecting from a series of ranges. The third variable I considered was the number of large group sales meetings held by each pharmaceutical representative. Large group sales meetings are frequently used as a sales tool in the pharmaceutical sales industry to recruit prospective clients to educate more clients at the same time; therefore, sales distribution might be affected by them. I designed the research method to account for that possible difference.

Many psychometric tools are designed to measure IP skills. For this research study, I used the CSRS to quantify IP skills among the salespeople (see Spitzberg, 1995). Quantification of IP skills was accomplished by administering the test to the body of pharmaceutical salespeople in an online format delivered to them via email. Although the test was not specifically designed for salespeople, it is an excellent indicator of IP competence.

Next, I obtained each salesperson's rank and sales volume through an online questionnaire based on the most recent 12 months of data. Then, the information and the other designated variables were compared to their relative total sales income, and the multiple regression analysis was performed. The findings could be used to determine whether IP skills sales training should be incorporated into company training.

## Research Questions and Hypotheses

I used the following research questions and associated hypotheses to address the identified gap in the literature:

RQ1: Does pharmaceutical salespeople IP skills level, as measured by the CSRS, significantly predict their sales performance in terms of total sales income?

$H_a1$: Pharmaceutical salespeople's IP skills level predicts their sales performance.

$H_01$: Pharmaceutical salespeople's IP skills level does not predict their sales performance.

RQ2: Does pharmaceutical salespeople's tenure predict their sales performance in terms of in terms of total sales income?

$H_a2$: Pharmaceutical salespeople's tenure predicts their sales prerformacne.

$H_0 2$: Pharmaceutical salespeople's tenure does not predict their sales performance.

RQ3: Does the number of large group sales meetings pharmaceutical salespeople attend predict their sales performance in terms of in terms of total sales income?

$H_a3$: The number of large group sales meetings pharmaceutical salespeople attend significantly predicts their sales performance.

$H_0 3$: The number of large group sales meetings pharmaceutical salespeople attend does predict their sales performance.

## Setting and Population

The participants of this study were pharmaceutical salespeople who were currently working in the industry in the United States. As of 2018, over 178,000 men and women were employed as pharmaceutical salespeople in the United States (Zippia, 2018). Pharmaceutical representatives carry the responsibility of disseminating information about the latest products and educating their clientele, primarily physicians, on the use of their pharmaceuticals (Fischer et al., 2010).

Driving the sales of one of the largest business industries and accounting for billions of dollars of revenue annually, pharmaceutical salespeople provided a diverse

sample for this study of IP skills. Furthermore, most of the sales transactions occurred in a precarious environment where the salespeople dealt with physicians widely known for poor IP skills and inflated self-images, making a high level of IP skills even more vital to success (Frey, 1999; Milyavsky et al., 2017).

## Sampling and Sampling Procedures

My primary focus in this study was to determine the level of the salespeople's IP skills and how this related to their total sales income. I administered an online survey generated by SurveyMonkey, where the participants were able to sign in and submit responses to the questionnaire and the CSRS quickly and efficiently over the internet. A link to the survey was delivered potential participants via email. For those subjects who chose to participate in the study, their consent was implied. This study had a sample size of 107 participants who were currently employed as pharmaceutical salespeople; this number exceeded the requirements for statistical significance of a sample size of at least 98 (see Cohen et al., 2003). The G*Power3 analysis indicated that a sample size of at least 100 was required for statistical significance (see Erdfelder et al., 1996). This calculation was based on an effect size of 0.15, a statistical power of 0.9, and a probability of 0.05.

## Data Collection

To conduct this study, it was necessary to recruit actively employed salespeople. I invited participants to join the study by sending them an email invitation via SurveyMonkey. Participants were informed that the research was designed to study

which attributes may contribute to successful sales performance. They were asked to read an online consent form with a data confidentiality statement provided before they were permitted to participate in the study. If they participated in the study and completed the survey, their consent was implied. In the email invitation, I also informed participants that their participation was voluntary, they would not be provided with any compensation for participating, and their participation would not affect their employment status in any way.

I achieved the necessary volume of participants within the space of 2 weeks. Participants were screened by specific wording in the informed consent document and questions concerning the total sales income achieved and the number of years they worked in the industry. I removed three participants from the study group because of impertinent responses to these questions. Overall, the survey was administered as planned without any adverse effects. The surveys reached the target audience and provided the necessary feedback in a timely fashion.

Over the 2-week period recruitment period, the sales agents were able to sign in and submit their answers confidentially. When participants signed into the survey, they were advised that the survey results were confidential, that they were submitted anonymously, and the results would not be published under their actual names. The answers were automatically organized and kept in a confidential, password-protected database.

In addition to answering questions from the CSRS, I also asked the participants to answer questions regarding their sales volume, tenure, and the number of large group sales meetings from a series of ranges provided in the survey. Participants were notified in the informed consent agreement that their performance information was necessary to compare the results to their score on the CSRS with consideration given to their tenure, the geographical region covered, and the number of large group sales meetings held (see Appendix A).

No incentives were offered to the participants by the researcher; however, SurveyMonkey may have offered an incentive for participation in the study. Participation was strictly voluntary. The CSRS survey did not impose any type of time limit. The surveys were taken at the participants' own pace. Data regarding their score and indicating their IP skills level were not changed or adjusted in any way.

There were only three discrepancies among participants in this study. Two participants were removed because they stated that they had 0 years of experience in the pharmaceutical field. One was removed because they stated they sold zero product when answering under the "other" category. There were no demographic requirements for this study other than the necessity to be working actively as a pharmaceutical salesperson. I asked for the length of time they had been working, and their responses ranged from 1 to 33 years. There were four other outliers whose data were examined to determine whether they should be omitted. I conducted the analyses without those other four participants and determined that their effect on the data was largely insignificant.

## Conversational Skills Rating Scale

In this research study, I focused on IP skills, one of the intelligences identified by Gardner (1983) in the theory of MI. Gardner described IP skills as the ability to relate to others and to perceive their needs. Strong IP skills are characterized by the expression of sensitivity to others' feelings, temperaments, and motivations. A person who can work toward a common goal is exhibiting strong IP skills.

Spitzberg (1995) developed the CSRS "to assess the conversational competence in IP settings" (p. 2). The CSRS is a proficient tool to assess the IP skills in salespeople by addressing four areas that are vital to a salesperson's success: (a) attentiveness, (b) composure, (c) expressiveness, and (d) coordination. The psychometric tool has been used frequently to assess an individual's soft skills. The aspects described in the CSRS are closely matched to Gardner's (1983) soft skills. Attentiveness concerns the salesperson's ability to look beyond themself and show empathy and concern for the person they engage in conversation (Spitzberg, 1995). Attentiveness is a measure of attention to, interest in, and concern for the conversational partner. Composure is used to describe the salesperson's ability to be relaxed yet directive in moving the conversation forward. Furthermore, composure is used to describe the ability to exude confidence without being overbearing. Expressiveness is described as the salesperson's ability to be engaged in the conversation by using animation in both body language and facial expressions appropriately. Coordination is the salesperson's ability to maintain a smooth

conversation by initiating, giving the subject an opportunity to speak, interjecting when appropriate, and concluding the conversation.

The CSRS has 25 questions, and it is estimated to only take 7 to 10 minutes (Spitzberg, 2001). The participants are rated based on a scale consisting of 1 = *inadequate* (use is awkward, disruptive, or results in a negative impression of communicative skills), 2 = *fair* (occasionally awkward or disruptive, occasionally adequate), 3 = *adequate* (use is sufficient but neither very noticeable nor excellent. Produces neither particularly positive nor negative impression), 4 = *good* (use was better than adequate, but not outstanding), and 5 = *excellent* (use is smooth, controlled, results in a positive impression of communicative skills; Spitzberg, 1995). The test can be given by an associate or self-administered. The CSRS's validity has been shown among different subject sizes and across varying populations and sample sizes (Spitzberg, 1995). The reliability was reported at an $\alpha > 0.85$ and frequently was > 0.90; the subscales have shown a reliability of $\alpha > 0.80$ (Dawson & Spitzberg, 1987).

The CSRS has been used in several different venues. Initially, the test was used as the primary psychometric tool to assess the efficacy of a course designed to improve the participants' IP skills (Dawson & Spitzberg, 1987). There were 12 experimental participants and 22 control participants. Curran et al.'s (1992) simulated social interaction test was used to compare the participants and as a validity comparison to the CSRS. The results showed a nonsignificant improvement in the course among the experimental students and a significant improvement using the simulated social interaction test. The

CSRS showed a positive correlation to simulated social interaction test ratings, further establishing its validity (Curran et al., 1992).

The CSRS tool has been adapted for use in various settings. Dawson and Spitzberg (1987) used it to assess IP competence among students. The scale was adapted to show how well students communicate with each other and how well they respond to teacher and school staff questions. Dawson and Spitzberg's study provided the CSRS additional validity and reliability. It was also used to identify core behavioral items and competent behavior. More than 4,000 high school students were assessed to determine IP competence stressing such characteristics as communication skills, motivation, social behavior, semantics, and predictive validity (Spitzberg, 2001). The test was administered as an online examination. A self-assessment was used with the students and repeated after a determined amount of time. Additionally, an assessment was developed for two peers to complete. The assessment was compared to the other participants, the differences in the two tests taken at different times, and the assessment completed by their peers. The CSRS showed excellent reliability and validity across all the parameters.

In addition to measuring desirable characteristics, the CSRS has been used to look for a dearth of these soft-skill characteristics outlined in the scale, such as empathy, consideration, and social awareness (Spitzberg, 2017). Spitzberg (2017) worked with 292 college students who rated their partners' IP competence who were considered normal and those who engaged in unwanted pursuits. The CSRS showed significant differences

between the two groups, thus showing the ability to use the test to identify strengths and weaknesses.

Milhouse (1993) used the conversational skills assessment to assess the IP communication competence among 300 military personnel from 5 different nations to test the tool's cross-cultural efficacy. Milhouse viewed the model holistically, examining the test's behavioral, attitudinal, and cognitive aspects throughout these cultures. The CSRS showed the same validity and reliability as other studies (Spitzberg, 1995).

The invitation to participate in the study was explained in a thorough email used to outline the study's purpose, the requested information, and the assurance that the study's findings would be made available. To effectively examine the pharmaceutical salespeople's performance, information was acquired from the employees regarding their tenure, number of large group meetings, and sales volume. The data were obtained from the questionnaire provided via email to the pharmaceutical salespeople.

I used the CSRS for a strong, reliable, and valid tool for this study. Sales transactions proceeded largely based on IP conversation; therefore, this tool was an excellent fit for the evaluation of a salesperson's abilities to initiate conversations and maintain comfortable communication while maintaining enough assertiveness to work toward the sales goal (Spitzberg, 1995). The CSRS was used to score the salespeople's IP competence. The scores were compared to the relative sales volume of the salespeople using the self-reported numbers from them (Permission to use the CSRS is presented in Appendix A).

## Data Analysis

For this research study, the predictor variables were IP skills, the number of large sales meetings, and tenure. The criterion variable was the sales performance measured by total sales income. This quantitative analysis compared IP skills and sales income with IP skills being quantified using the CSRS. The relationship of the criterion and predictor variables was analyzed using a multiple regression analysis with SPSS software. Scatterplots were conducted with each of the predictor variables including a P-P Plot of sales production. Tests of assumption were conducted to examine linearity, normality, multicollinearity, and homoscedasticity. Outliers were identified to determine their effect on the data including four which were examined to gauge their effect on the data. They were included after it was determined that they did not show a significant difference when omitted. Three other participants were removed when they indicated zero in the experience field. Statistical analyses were conducted on the breakout of the test population, the descriptive statistics of the CSRS as well as the subscale keys of the CSRS, a Pearson correlation between the variables, multicollinearity among the predictors, a multiple regression analysis, the change statistics, the coefficients of total sales production and an ANOVA of the total sales production.

## Threats to Validity

In an ideal research environment, the participants would be identical in terms of work style, coverage, and personality. However, as a society, individuals are different and therefore act differently. Many of the irregularities were addressed by using a large

sample group. This research study's premise was based on the idea that people perform their functions in different areas and different ways. This research study was designed to examine how a salesperson's IP skills affect their sales successes.

Several factors that can affect how the salespeople perform have been identified and include tenure and the number of large group sales meetings. Some factors potentially affecting the total sales income were not addressed in this research. For example, individual salespeople are often assigned to a particular geographical area, incorporating many factors that affect a salesperson's relative success. Time spent commuting, societal attitudes toward the sales associate's product, and socioeconomic status are all factors that can manipulate the sales performance of the associate. A sales associate who serves a busy downtown may have better opportunities than a sales associate who serves a rural area.

Another factor involving this research's validity involves how the sales staff were rewarded for time with the company. Most organizational leaders increased the compensation according to seniority. Company leaders may have chosen to award higher pay for pharmaceutical salespeople who sold a certain product or reach a certain sales number. Another consideration was the measures organizations took to buoy struggling salespeople or if they received special treatment. These determinations could be better understood by learning the compensatory techniques of pharmaceutical companies. Given the sample size, in this research I effectively eliminated many of the biases and nuances

that affect a salesperson's success by screening out fewer common circumstances that could adversely affect the results with a smaller sample.

## Ethical Procedures

The Walden IRB approval number for this research is # 05-26-20-0058640. During this research, the highest levels of ethics were upheld. Participants completed the CSRS to measure the level of their IP skills. They signed in and were assigned an anonymous number. Participants were notified that they were taking an inventory with no time limit for completion, and that was designed to identify factors that contributed to their sales performance.

## Protection of Participants' Rights

The participants in this study were asked to read an informed consent sheet provided prior to participation. Participation in the study implied their consent to the terms outlined in the informed consent form. The participants were asked to submit their data via the online survey, which anonymously submitted the results. In this research study I collected the data without showing any personal information, including names or other personal identifiers. Furthermore, the salaries were listed according to certain ranges to avoid becoming identifiers to the participants or individuals reading the study.

## Summary and Transition

In Chapter 3 I described the methodology and research design necessary to ethically execute the study on IP skills concerning the pharmaceutical salespeople's performance. The study was used to examine the relationship of the seniority of the

salespeople and the effect of large assemblages or luncheons held for pertinent guests and how this was related to their respective compensation. Pharmaceutical salespeople were used as the study group based on the pharmaceutical industry's prevalence worldwide and their important roles in their companies' success. The salespeople were invited to participate via email and received the appropriate consent and information forms in addition to the CSRS.

The predictor variables were IP skills, tenure, and the number of large sales meetings. The criterion variable was the sales performance, and the CSRS was used as the psychometric tool to measure the level of IP skills employed during sales transactions. The instrument included the salesperson's ability to perceive the prospective client's needs, make the clients feel comfortable, and deal with them empathetically. The moderator variable was IP skills training. Threats to validity were examined.

Salespeople were invited to participate in this study via email. Each participant's personal information was protected by assigning everyone a number. The CSRS was administered electronically to each participant on their own private device, allowing them the privacy and setting in which they were most comfortable. Salespeople were also asked to identify their sales volume, tenure, and the number of large group sales meetings held from a series of ranges provided in a questionnaire emailed to them directly.

Chapter 4 will contain a presentation of the results and data analysis along with pertinent charts and figures. In the descriptive statistics, I will analyze the results of the 107 participants, who were not required to submit demographic information. The

assumptions of linearity, normality, homoscedasticity, and multicollinearity will be explained. I will also provide the results of the multiple linear regression. The findings will be discussed regarding each research question with accompanying statistics.

Chapter 5 will be focused on the interpretations and implications of these findings. I will discuss the limitations of the study and the recommendations for further research as well as the theoretical and social implications. In this concluding chapter, I will also examine how to pursue further action in lieu of these findings and how to utilize these findings to promote positive social change.

# Chapter 4: Results

I conducted this study to develop an understanding of the relationship between pharmaceutical salespeople's IP skills level, as measured by the CSRS, and their performance in terms of sales income. The first RQ focused on pharmaceutical salespeople's IP skills level (as assessed by the CSRS) and whether it can predict their total sales income. The second RQ was used to investigate if tenure in pharmaceutical sales can predict the salesperson's total sales income. The third RQ determined if the number of large group meetings attended by pharmaceutical salespeople could predict their total sales income. Generally, the null hypotheses for the three RQs stated that no significant relationship existed between pharmaceutical salespeople's IP skills level, tenure, and large group meeting attendance with their respective total sales income. If the null hypotheses were accepted, then an emphasis on IP skills, experience, and its development through meetings would be unnecessary.

The overall goal of this research was to improve pharmaceutical salespeople performance and associated consumer sales experiences for their customers. By understanding this key relationship and its potential impact, social change could be achieved by developing and incorporating training programs for pharmaceutical salespeople. The results would be more amicable sales transactions, greater sales volume, and a higher opinion of salespeople and their pharmaceutical companies.

In Chapter 4, I provide the results of the study, starting with a breakout of the sample characteristics for the 107 pharmaceutical salespeople participants in terms of

their tenure in pharmaceutical sales, number of large group meetings attended, and their total sales related income. Next, the descriptive statistics for the individual CSRS items are presented. A correlation matrix is also presented that explores the relationships between demographic study predictors and a CSRS-derived percentage. I then discuss the assumptions for conducting the regression analyses to address the three RQs before presenting the respective results for each one. Finally, the chapter closes with a summary of the findings and an overview of Chapter 5.

## Sample Characteristics

The 107 pharmaceutical salespeople participants in the sample provided responses to a series of items allowing me to capture information regarding their experience in pharmaceutical sales, engagement in large sales meetings, and their total sales income. Table 1 shows the mean and standard deviation for the 107 participants who provided usable data as well as the skewness, kurtosis, minimum, and maximum for each demographic characteristic. Tenure, the number of years in pharmaceutical sales, was reported in ranges, with the midpoint used in the subsequent analysis (e.g., a participant response of 7–10 years had a value of 8.5 years). The mean tenure for participants was 8.0 years in pharmaceutical sales, with a standard deviation of 8.8. The average number of large group meetings (i.e., of at least 15 salespeople) attended annually by participants was 18.9, with a standard deviation of 26.8. The mean total sales income, which includes salary, commissions, and bonuses, was $92,757.03, with a standard deviation of $56,885.55. There were no demographic requirements for this study. The only inclusion

requirement was to be employed currently as a pharmaceutical salesperson. I removed three participants from the study from the 110 individuals who completed the survey because they indicated that they were not actively employed as pharmaceutical salespeople.

**Table 1**

*Participant Characteristics Breakout (*N = *107)*

| Characteristic | *M* | *SD* | Skewness | Kurtosis | Min | Max |
|---|---|---|---|---|---|---|
| Tenure | 8.0 | .9 | .14 | -.63 | 1 | 38 |
| # of large group sales meetings | 18.9 | 2.6 | 1.50 | 1.71 | 3 | 148 |
| Total sales income ($K) | $92.80 | 5.5 | 1.21 | 11.04 | $25.00 | $250.00 |

Table 2 presents the descriptive statistics for the CSRS items developed by Spitzberg (1995) to quantify IP skills. The CSRS items are intended to assess the ability of the communicator to balance factors associated with conversation.

**Table 2**

*CSRS Item Descriptive Statistics*

| # | Item | *M* | *SD* | Max | Min |
|---|---|---|---|---|---|
| 1 | Speaking rate (C) | 2.9 | 1.5 | 5 | 1 |
| 2 | Speaking fluency (Cm/Co) | 2.4 | 1.4 | 5 | 1 |
| 3 | Vocal confidence (Cm) | 2.7 | 1.5 | 5 | 1 |
| 4 | Articulation (E) | 2.6 | 1.2 | 5 | 1 |
| 5 | Vocal variety (E) | 3.0 | 1.5 | 5 | 1 |
| 6 | Volume (Cm) | 2.7 | 1.5 | 5 | 1 |
| 7 | Posture (Cm) | 3.1 | 1.3 | 5 | 1 |
| 8 | Lean toward partner (A) | 2.6 | 1.4 | 5 | 1 |
| 9 | Shaking or nervous twitches (Cm) | 3.2 | 1.8 | 5 | 1 |
| 10 | Unmotivated movements (Cm) | 2.8 | 1.6 | 5 | 1 |
| 11 | Facial expressiveness (E) | 2.9 | 1.5 | 5 | 1 |
| 12 | Nodding of head in response to partner statements (A) | 3.1 | 1.5 | 5 | 1 |
| 13 | Use of gestures to emphasize what is being said (E) | 3.1 | 1.4 | 5 | 1 |
| 14 | Use of humor and/or stories (E) | 2.3 | 1.5 | 5 | 1 |
| 15 | Smiling and/or laughing (E) | 3.1 | 1.7 | 5 | 1 |
| 16 | Use of eye contact (Cm/E) | 3.1 | 1.4 | 5 | 1 |
| 17 | Asking of questions (A/Co) | 2.8 | 1.3 | 5 | 1 |
| 18 | Speaking about partner (A) | 3.4 | 1.4 | 5 | 1 |
| 19 | Speaking about self (A) | 3.2 | 1.3 | 5 | 1 |
| 20 | Encouragements or agreements (A) | 3.0 | 1.5 | 5 | 1 |
| 21 | Personal opinion expression (A) | 2.8 | 1.3 | 5 | 1 |
| 22 | Initiation of new topics (Co) | 3.3 | 1.4 | 5 | 1 |
| 23 | Maintenance of topics and follow-up comments (Co) | 3.0 | 1.1 | 5 | 1 |
| 24 | Interruption of partner speaking turns (Co) | 2.3 | 1.3 | 5 | 1 |
| 25 | Use of time speaking relative to partner (Co) | 3.1 | 1.5 | 5 | 1 |

*Note.* Attentiveness (A), Composure (Cm), Expressiveness (E), Coordination (Co)

To understand how the scales work, an illustration would be a person's speaking rate should not be too fast or too slow for a max score. As touched upon earlier, the 25 items were rated using a normative scale of 1 = *inadequate*" to 5 = *excellent*. The mean participant scores across all 25 CSRS items ranged from 2.3 to 3.3 with a standard deviation spanning 1.1 to 1.7, with each item using the full scale of 1 through 5.

The CSRS items are aggregated into four Subscale Keys: Attentiveness (A), the sum of the ratings for Items 8, 12, 18, 19, 20, 21, and 17 divided by 7; Composure (Cm), the sum of the ratings for Items 2, 3, 6, 7, 9, 10, and 16 divided by 7; Expressiveness (E), the sum of ratings for Items 4, 5, 11, 13, 14, 15, and 16 divided by 7; and Coordination (Co), the sum of ratings for Items 1, 17, 22, 23, 24, 25, and 2 divided by 7. Table 3 presents the descriptive statistics for the four aggregated Subscale Keys. The means for the Subscale Keys had a narrow range of 2.8 to 3.0, with a standard deviation spanning .29 to .34.

**Table 3**

*CSRS Subscale Key Descriptive Statistics*

| # | Subscale Key | *M* | *SD* | Max | Min |
|---|---|---|---|---|---|
| 1 | Attentiveness (A) | 3.0 | .29 | 3.4 | 2.6 |
| 2 | Composure (Cm) | 2.8 | .29 | 3.2 | 2.4 |
| 3 | Expressiveness (E) | 2.9 | .30 | 3.1 | 2.3 |
| 4 | Coordination (Co) | 2.9 | .34 | 3.3 | 2.3 |

The total possible score on the CSRS was 125. The aggregated total of the item ratings for each participant was divided by 125 to produce an overall CSRS derived percentage, which I used in performing subsequent statistical analyses. Table 4 presents the descriptive statistics for the overall CSRS raw total ratings and the derived percentage for the sample of 107 participants. The mean CSRS derived percentage was 67.45; it had a wide range of from 25 to 114 and a standard deviation of 22.78. The skewness of .18 shows an even distribution, and the kurtosis of -.79 is mesokurtic and close to being a normalized distribution across the curve.

**Table 4**

*CSRS Descriptive Statistics (*N = *107)*

| | *M* | *SD* | Skewness | Kurtosis | Min | Max |
|---|---|---|---|---|---|---|
| Raw CSRS Total | 67.45 | 22.78 | .18 | -.79 | 25 | 114 |
| Derived CSRS % | 53.96 | 18.22 | .14 | -.63 | 20.00 | 91.20 |

## Correlations Among Study Variables

The Pearson correlation reflects a normalized relationship between the variables (see Table 5). The degrees of freedom for this sample was 106 and the reported *p* value was < .05. Derived CSRS percentage was positively correlated with total sales income with $r = .26$ ($p =< .05$). Tenure in terms of the number of years in pharmaceutical sales was also correlated with total sales income with $r = .25$ ($p =< .05$). Derived CSRS percentage was negatively correlated with the number of large group meetings attended, which was $r = -.16$ ($p < .05$). Pharmaceutical sales tenue was significantly related to large group meeting attendance with a correlation of $r = .42$ ($p =< .05$).

**Table 5**

*Pearson Correlations Between the Main Study Variables*

| | Tenure (# Years in Pharm. Sales) | # Large Group Sale Meetings | CSRS Derived % | Total Sales Income ($K) |
|---|---|---|---|---|
| Tenure (# of years in pharm. sales) | 1.00 | .42* | .04 | .25* |
| # of large group sales meetings | .42* | 1.00 | −.16* | .01 |
| CSRS derived % | .04 | −.16* | 1.00 | .26* |
| Total sales income ($K) | .25* | .01 | .26* | 1.00 |

*$p < .05$ level.

I ran Pearson correlations between the 25 individual CSRS items (see Table 12 in Appendix B) and the four CSRS Subscale Keys of Attentiveness, Composure, Expressiveness, and Coordination along with the Aggregate CSRS Score (see Table 13 in Appendix B). The 25 individual CSRS items were highly intercorrelated. The four individual CSRS subscale Keys were also highly intercorrelated, and they all were highly intercorrelated with the Aggregated CSRS score.

## Tests of Assumptions

I tested the assumptions for linearity, multicollinearity, normality, and homoscedasticity to ensure the data were suitable for subsequent statistical analysis using multiple regression.

### Linearity

To properly run the multiple regression analysis, several assumptions needed to be met. First, linearity was of particular importance. The scatterplots showed whether the predictor and criterion variables were approximately linearly related (see Figures 1, 2, and 3). These graphs also gave the first impression of potential extreme scores or outliers. The scatterplots showed that the relationship between the predictors and outcomes was reasonably linear.

**Figure 1**

*Scatterplot of Total Sales Income and the Number of Large Group Meetings*

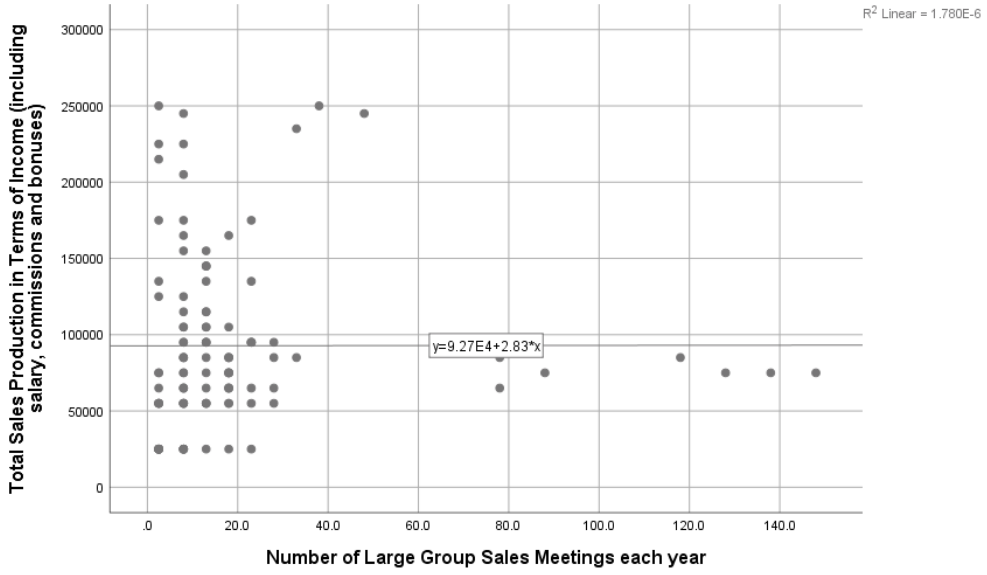



**Figure 2**

*Scatterplot of Total Sales Income and the CSRS Derived Percentage*

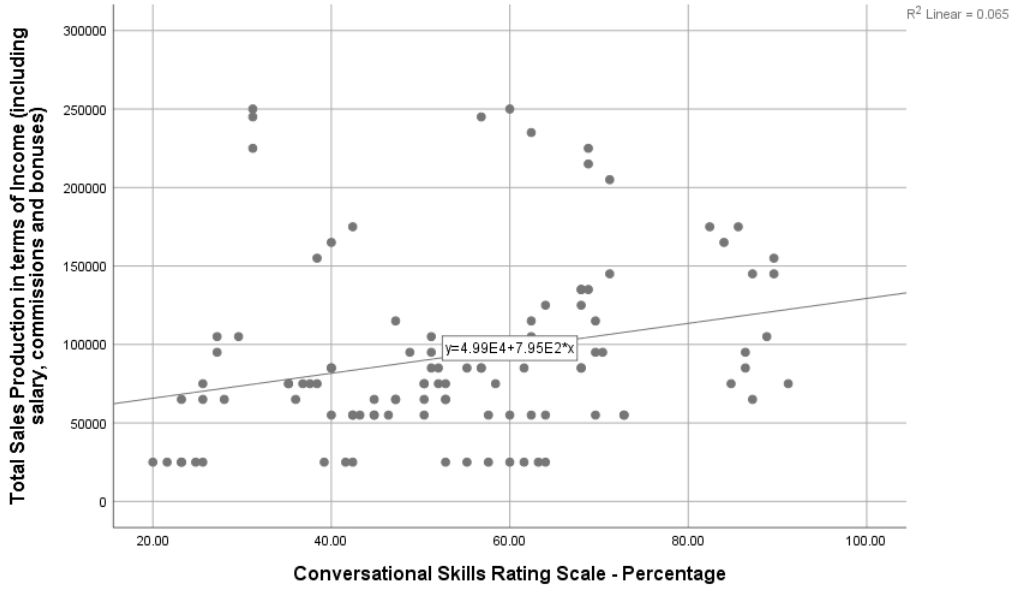


**Figure 3**

*Scatterplot of Total Sales Income and Tenure (Number of Years in Pharmaceutical Sales)*


The scatterplots established linearity except for the number of large group meetings, which had outliers (see Figure 1). The figures for the CSRS score and the tenure show a small degree of linearity with values at .065 and .062, respectively (see Figures 2 and 3).

**Multicollinearity**

I conducted analyses to examine collinearity among the variables by testing for tolerance and variance inflation factor (VIF) values. A tolerance level of .4 or lower is cause for concern as an indication of collinearity (Midi, Sarkar & Rana, 2010). Table 6 shows the beta and *t* values for the predictors of tenure and number of large group meetings. The larger the *t* value, the better the chances of rejecting the null hypothesis. The beta is the probability of falsely rejecting the null hypothesis. Tenure shows a

positive *t* value of 2.91 exhibiting good evidence against the null hypothesis. The significance of tenure came in at a meager .004. The beta is .30. The number of large group meetings has a negative beta and *t* value at -270.16 and -.127, respectively.

**Table 6**

*Multicollinearity Among Demographic Characteristic Predictor Variables*

| Unstandardized Coefficients | | | Standardized Coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| Predictors | *B* | SE | Beta | *t* | Sig. | Tolerance | VIF |
| (Constant) | 82,207.94 | 7,473.56 | | 11.00 | .000 | | |
| Tenure (# years in pharm. sales) | 1,959.04 | 673.12 | .30 | 2.91 | .004 | .82 | 1.22 |
| # of large group sales meetings | −270.16 | 220.98 | −.127 | −1.22 | .22 | .82 | 1.22 |

I added the CSRS results to the analysis of multicollinearity, which showed improved tolerance scores at .96 and the VIF score at 1.04, showing a very small degree of correlation (see Table 7). The scores show a lack of multicollinearity among the independent variables.

**Table 7**

*Multicollinearity Among All Predictor Variables*

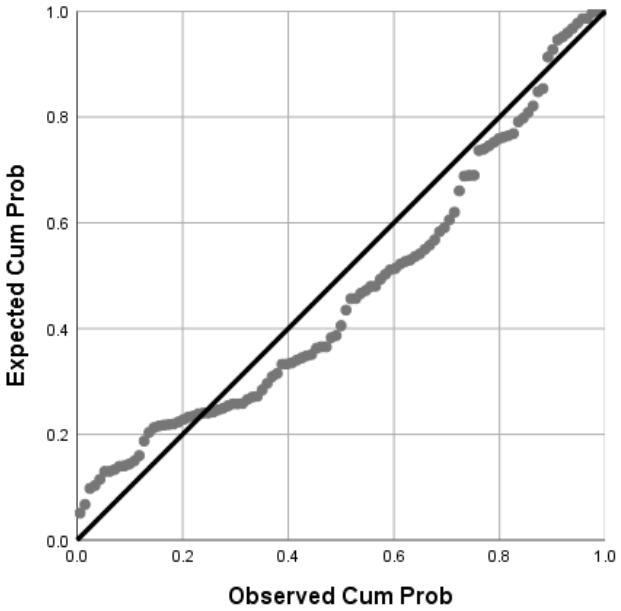
| Unstandardized Coefficients | | | Standardized Coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| Predictors | *B* | SE | Beta | *t* | Sig. | Tolerance | VIF |
| | 42935.47 | 17597.60 | | 2.44 | .016 | | |
| Tenure (# of years in pharm. sales) | 1757.22 | 220.21 | −.077 | 2.65 | .009 | .81 | 1.23 |
| # of large group sales meetings | −163.12 | 220.21 | −.077 | −.74 | .46 | .79 | 1.27 |
| CSRS-derived % | 720.17 | 293.63 | .23 | 2.45 | .016 | .96 | 1.04 |

## Normality

Analyses were conducted to determine whether the population curve was distributed normally. The P-P Plot shows a normal distribution (see Figure 4). The kurtosis values vary among the different variables (see Table 1). No demographics were required for this study therefore we cannot determine normality for the participating population. The total sales income is slightly platykurtic but lies within the normal values of a distribution curve at 1.04. Skewness is an additional measure of normality, and it was 1.21 for total sales income, indicating that the data is skewed to lower incomes. This finding was anticipated as pharmaceutical salespeople are started at a lower salary and gradually work up (see Table 1). The P-P plot showed a similar distribution with only small deviations for total sales income (see Figure 4).

**Figure 4**

*Normal P-P Plot of Regression Standardized Residual for Total Sales Income*




The variable for number of large group sales meetings held shows the most skewness at 1.50 and was the least normally distributed variable of this research. The kurtosis was 1.71 indicating a leptokurtic curve and non normal distribution. The distribution showed that the number of large group sales meetings did not impact overall sales performance.

**Homoscedasticity**

The P-P plot (see Figure 4) showed an equal distribution across the fit line. Figures 2 and 3 showed no coning or funneling along the fit line. In Figure 1 I described the distribution of the number of large group meetings. This variable showed many outliers and is not homoscedastic. There were several outliers among the participants.

Unfortunately, if removed the sample size would be too small to complete the planned analyses it is recognized as a limitation of the study.

## Research Question Findings

### Research Question 1

RQ1. Does pharmaceutical salespeople IP skills level, as measured by the CSRS, significantly predict their sales performance in terms of total sales income?

$H_a1$: Pharmaceutical salespeople's IP skills level predicts their sales performance.

$H_01$: Pharmaceutical salespeople's IP skills level does not predict their sales performance.

In the first RQ I examined the relationship between the predictor variable IP skills, as measured by the CSRS and reported as a derived percentage, and the criterion variable total sales income, which is a composite of salary, commissions, and bonuses. I then employed a scatterplot to test for linearity and it depicted a linear relationship between the two variables (see Figure 2). The VIF score was 1.04 showing little to no multicollinearity (see Table 7). The scatterplot examination tested for homoscedasticity. The distribution showed no coning or funneling with a similar distribution along the fit line (see Figure 2). The P-P plot for total sales income also showed homoscedasticity with equal distribution along the fit line (see Figure 4). The Pearson correlation showed a moderate relationship between IP skills and total sales income ($r$=.26, $p$<.05, see Table 5).

A multiple regression analysis was run with the predictors of tenure (# years in pharmaceutical sales), number of large group sale meetings attended per year (at least 15 participants), IP skills level (CSRS derived percentage) and the criterion of total sales performance ($K; see Table 8). For RQ 1, the focus was on pharmaceutical salespeople to determine if their IP skill level would significantly predict total sales income. The regression analysis showed a $p$ value of < .05 when CSRS was added to the other predictors of tenure and the number of large group meetings, a $\beta$ value of .23 was found (see Table 8).

**Table 8**

*Multiple Regression Analysis of Predictors of Total Sales Income Among Pharmaceutical Salespersons*

| | Step 1 | | | Step 2 | | |
|---|---|---|---|---|---|---|
| Predictors | *B* | SE *B* | $\beta$ | | SE *B* | $\beta$ |
| Tenure (# yrs in pharm. sales) | 1,959.04** | 673.12 | .30 | 1,757.22** | 662.59 | .27 |
| # Large group sales meetings | −270.16 | 220.98 | — | −163.12 | 220.21 | −.08 |
| CSRS derived % | — | — | .13 | 720.17* | 293.63 | .23 |
| $R^2$ | .08 | | | .13 | | |
| Adjusted $R^2$ | .06 | | | .10 | | |
| $\Delta R^2$ | .08* | | | .05* | | |

*Note*. $N$ = 107. * $p$ < .05, ** $p$ < .01, *** $p$ < .001.

Table 9 examined the relationship of the three predictor variables with the criterion value of total sales income. The adjusted $R^2$ value for the CSRS showed a 10% increase in total sales income when factoring for the predictors of large group meetings, tenure and CSRS score (see Table 9). When the model left out the predictor of the CSRS

score the adjusted $R^2$ drops to 6%. The respective F-Change were not significant for the $R^{2.}$

**Table 9**

*Change Statistics of the Predictor Variables*

| Model | $R$ | $R^2$ | Adj. $R^2$ | Std. Error of the Estimate | Change Statistics | | |
|---|---|---|---|---|---|---|---|
| | | | | | $R^2$ Change | F-Change | Sig. F-Change |
| 1 | .27[a] | .08 | .06 | 55,224.99 | .075 | 4.24 | .017 |
| 2 | .36[b] | .13 | .10 | 53,939.66 | .051 | 6.02 | .016 |

[a] Predictors: # Large Group Sales Meetings and Tenure.
[b] Predictors: # Large Group Sales Meetings, Tenure, and CSRS Derived %.

Table 10 examined the effect of the predictor variables on total sales production which compared the variables of tenure and number of large group meetings (Model 1) then added the predictor variable of CSRS to isolate its effect (Model 2). Under Model 2 the beta was 720.17 compared to -270.16 under Model 1. The *β was* reported at .23 in Model 2 and at .13 under Model 1 showing a negative effect on sales production when the CSRS is omitted. The *t* value shows a negative score for Model 1 as well at -1.22 and a score of 2.45 for Model 2.

**Table 10**

*Coefficients of Total Sales Production*

| | Unstandardized Coefficients | | Standardized Coefficients | |
|---|---|---|---|---|
| Model | *B* | Std. Error | *β* | *t* |
| 1 | 82207.94 | 7473.56 | | 11.00 |
| Tenure (# years in pharm. sales) | 1959.045 | 673.12 | .30 | 2.91 |
| # Large group sales meetings | −270.16 | 220.98 | −.13 | −1.22 |
| 2 | 42935.47 | 17597.60 | | 2.44 |
| Tenure (# years in pharm. sales) | 1757.22 | 662.59 | .27 | 2.65 |
| # Large group sales meetings | −163.12 | 220.21 | −.08 | −.74 |
| IP skills (CSRS derived %) | 720.17 | 293.63 | .23 | 2.45 |

Table 11 examined the ANOVA to determine the variance caused by the predictors. When all three variables are used the ANOVA reported a *p* value of .003 (Model 2). Without the CSRS the significance increased from .003 to .017. The *F*Value was reported at 4.97 for Model 2 indicating a larger effect or variance from the mean compared to Model 1 when the CSRS score was not included, as the score fell to 4.24. The Mean Square shows how well a model can predict an outcome. For this ANOVA the mean score under the residual Model 1 was 3.05 and at 2.91 under Model 2 when the CSRS score is included.

Using the data from this research I found that the effect of IP skills was significant and that the null hypothesis should be rejected. The IP skills level of salespeople did indeed significantly predict sales income. When a salesperson exhibited a higher level of IP skills then we could significantly predict a higher level of sales performance. The two had a positive linear relationship and a positive correlation. The effect of IP skills on sales performance was significant, accounted for greater variation

among the variables and changes the outcomes when it was included in the multiple regression analyses.

**Table 11**

*ANOVA for Total Sales Income ($K)*

| Model | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2.58 | 2 | 1.29 | 4.24 | .017[a] |
| | Residual | 3.17 | 104 | 3.05 | | |
| | Total | 3.43 | 106 | | | |
| 2 | Regression | 4.33 | 3 | 1.44 | 4.97 | .003[b] |
| | Residual | 2.99 | 103 | 2.91 | | |
| | Total | 3.43 | 106 | | | |

[a] predictors: # Large Group Sales Meetings and # Years in Pharmaceutical Sales.
[b] # Large Group Sales Meetings, # Years in Pharmaceutical Sales and CSRS Derived %.

**Research Question 2**

RQ2. Does pharmaceutical salespeople's tenure significantly predict their sales performance in terms of in terms of total sales income?

$H_a2$: Pharmaceutical salespeople's tenure predicts their sales prerformacne.

$H_02$: Pharmaceutical salespeople's tenure does not predict their sales performance.

The second RQ predicted the relationship between tenure and sales performance. A scatterplot was employed to test for the assumption of linearity. Figure 3 showed a linear relationship between the two with an $R^2$ of .065. The VIF score used to test for the assumption of multicollinearity was 1.23. The assumption of homoscedasticity was tested using the scatterplot which showed some outliers early in the dataset, but only a few data points that would indicate a lack of homoscedasticity.

Tenure had a positive and significant relationship with total sales. A positive correlation of .25 was reported showing only a slightly smaller effect than IP skills (Table 5). In Table 6 the multicollinearity of tenure was examined with the number of large group meetings. The *t* value came in at 2.91 and the significance was reported at .004. with a beta coefficient of .30. Table 7 examined the multicollinearity of the previous two variables and added the CSRS score. The *t* value fell to 2.65, the significance rose to .009 and the beta coefficient to -.077. Table 8 showed the effect of each predictor variable on total sales production. Tenure had a positive correlation with total sales showing a $\beta$ value of .30 (see Table 6).

The $R^2$ value showed a 6.0% increase in sales production with the predictor variables of tenure and the number of large groups held annually (see Table 8). This value increased to 10% when the CSRS was added. The multiple linear regression showed a $\beta$ value of 1959.04 (Table 8). Table 8 showed tenure to have a $\beta$ of .27. Given the statistical evidence, this RQ's null hypothesis was also rejected, stating that tenure has no significant effect on sales quantity. Although the effect was not as large as that of IP skills the effect was nonetheless significant. There may have been many reasons as to why tenure has a positive effect.

**Research Question 3**

RQ3. Does the number of large group sales meetings pharmaceutical salespeople attend significantly predict their sales performance in terms of in terms of total sales income?

$H_a3$: The number of large group sales meetings pharmaceutical salespeople attend significantly predicts their sales performance.

$H_0 3$: The number of large group sales meetings pharmaceutical salespeople attend does predict their sales performance.

The third RQ assessed the number of large group meetings held and its relationship to sales performance. The scatterplot showed many outliers (see Figure 3) evident in the kurtosis value of 11.73 (see Table 1). The linearity test of assumption showed a linear relationship on the scatterplot with the $R^2$ value of 1.78. The test of assumption for multicollinearity showed a reasonable score of 1.27, which was the largest of the moderator variables (see Table 7). The scatterplot is inconclusive when striving to identify trends for the homoscedasticity test of assumption. The correlation showed a small effect on sales performance at .01 (see Table 5). Table 8 reported a multiple regression analysis which showed a beta of −270.16 and a $\beta$ of −.08. The data suggested that the null hypothesis cannot be rejected and that the number of large group meetings does not significantly predict sales performance.

## Summary and Transition

The first RQ examined the relationship between IP skills and sales performance. The scatterplot verified linearity (Figure 1). The adjusted $R^2$ value showed a 10% increase in sales production with an increase in IP skills (see Table 9). The $\beta$ value at .23 showed IP skills as a good predictor of sales performance (see Table 8). The correlation coefficient was .26 when examining the relationship between IP skills and total sales

income (see Table 5). The ANOVA showed a significant *p* value of .003 for IP skills as quantified by the CSRS (see Table 11). The multiple linear regression showed significance with a *p* value of .05 and the coefficients table showed an effect of 720.17 when the CSRS was compared to the effect of tenure and the number of large group meetings with a beta value of .23 (see Table 8). Based on a thorough analysis the null hypothesis for RQ1 was rejected.

The second RQ showed that the effect of tenure and sales performance was a positive 6% with $\beta = .27$, a slightly lower predictor than IP skills with a correlation of .25 (see Table 5, 8 and 9). This was a significant increase but was not as impactful on sales performance as IP skills. The RQ 2 null hypothesis was rejected.

The third RQ concerned the number of large group meetings held and showed a statistically insignificant effect on the correlation of total sales income at .01 and a negative correlation with CSRS score (-.16; see Table 5). Under the multicollinearity the model produced a negative effect with $\beta = -.077$ (see Table 7). The null hypothesis was accepted for RQ 3.

Chapter 5 will be focused on the interpretations and implications of these findings. I will discuss the limitations of the study and the recommendations for further research as well as the theoretical and social implications. In this concluding chapter, I will also examine how to pursue further action in lieu of these findings and how to utilize these findings to promote positive social change.

# Chapter 5 Findings, Interpretations and Conclusions

Commerce is driven by sales, with thousands of sales transactions occurring daily (Kirchler & de Rosa, 1998). In this study, I sought to understand the relationship between IP skills and sales performance to help make the sales transaction more pleasant, affable, and efficient. Salespeople are often encouraged to be aggressive and to pursue sales without regard to the consumers' concerns (Harris, 2010).

Gardner (1983) published the theory of MI. IP skills, one of the eight intelligences in the theory of MI, were examined in this study to understand how they might impact a sales transaction. IP skills have been studied under many different names: soft skills, people skills, social competence, interactional skills, interpersonal intelligence, and social intelligence (Baumgartner, 2009; Dawes, 2003; Doğan & Çetın, 2009; Mitchell et al., 2010). Much of the research using this terminology aligned very well with Gardner's definition of IP skills intelligence, namely the ability to be empathetic and attentive to someone's needs in a way that facilitates an open, comfortable, and effectual conversation. Someone exuding Gardner's IP skills intelligence puts the needs of the consumer before closing the sale.

I used a quantitative methodology to determine the effect of IP skills on total sales performance in terms of total sales volume. The subject group was pharmaceutical salespeople. They were used as participants because of their impact on sales in a billion-dollar industry (see Solomon, 2013). Because most sales transactions occur in a conversation, I used the CSRS to determine the participants' levels of IP skills (see

Spitzberg, 1995). In the CSRS, Spitzberg (1995) effectively identified the traits described by Gardner (1983) that focused on strong IP skills and a conversational approach conscious of the consumer rather than one's own agenda. The CSRS is used to gauge a person's ability to communicate through attentiveness, composure, expressiveness, and coordination. These four areas comprise many specific factors that make a person an effective communicator. Each of them exemplifies the core value and meaning of Gardner's IP skills, making the CSRS an appropriate tool for assessing IP skill level among pharmaceutical salespeople.

I used a multiple regression analysis to determine the relationship between sales performance and aspects specific to pharmaceutical salespeople, namely tenure and large group meetings, which have been held frequently as a marketing tool. Therefore, the predictor variables were IP skills, the number of large group meetings, and tenure. The criterion variable was the sales performance of the pharmaceutical salesperson in terms of the total sales income. The moderator variable was IP skills training.

## Summary of Findings

### Research Question 1

The first RQ addressed the relationship of IP skills on total sales income. First, I examined the tests of assumption with a scatterplot to identify for linearity and homoscedasticity as well as tests for multicollinearity including VIF scores. The data were analyzed using a Pearson correlation, a multiple regression analysis, and an ANOVA. The change statistics and the coefficients were also examined. The data

suggested that the null hypothesis should be rejected and that IP skills have a significant effect on sales performance with a reported beta value of .23, an $R^2$ of .10, and an improved *t* value of 2.45 when the CSRS score is considered (see Tables 7 and 8).

**Research Question 2**

The second RQ assessed the relationship between tenure and sales performance. I conducted the tests of assumption and a Pearson correlation as well as measured the effect size through the tests of multicollinearity with measured *t* values and beta coefficients. The $R^2$ was found using a multiple regression analysis. The relationship of tenure on sales performance was shown to be statistically significant and led to the rejection of the null hypothesis. A positive correlation of .25 was reported, with a *t* value of 2.91 and the beta of .30 (see Tables 5 and 6).

**Research Question 3**

With the third RQ, I examined the relationship between the number of large group meetings held and sales performance. Large group meetings are often used as a sales tool to present education about a product to a greater number of people at the same time. The research question addressed whether the ability to take part in more meetings would in fact improve sales performance. Perhaps, this tactic is used differently among pharmaceutical companies because it is cost prohibitive or is less effective than a one-on-one meeting with physicians. It may also be possible that increasing time demands on physicians may be making it more difficult to schedule these large group meetings. In

any case, the data exhibited many outliers and made it difficult to identify any significant trends or relationships among the variables.

I also conducted the tests of assumption, which showed many visible outliers with kurtosis levels of 11.73 (see Figure 1 and Table 1). The Pearson correlation and multicollinearity tests were carried out to measure the statistical effect at .01 (see Table 5). I conducted a multiple regression analysis to determine the variance caused by this predictor variable, showing a negative beta of -270.16. I failed to reject the null hypothesis for this variable because of the negative statistical effect on sales performance.

## Interpretation of the Findings

The literature showed a lack of research on the relationship between IP skills and sales performance (Lee et al., 2015; Rodríguez et al., 2016; Teven & Winters, 2007; Wihler et al., 2017). Münsterberg (1913) and Cougle (1975) researched the impact of IP skills on sales performance and recognized IP skill training as a method to make the sales process work more efficiently. Other authors studied IP skills with related factors, such as managerial styles and employee turnover, but failed to focus in on the relationship between the two (Borg & Freytag, 2012; Corelli, 1999; Harris, 2010).

The current study showed a positive relationship between IP skills and sales performance, with an increase in sales performance of over 10%. Thus, exhibiting the efficacy of IP skills enhanced sales performance. A salesperson displaying high IP skills could earn more than a salesperson operating with an average IP skills level. On a greater

scale, the company that trains and embodies a culture of proficiency in IP skills may improve its sales bottom line.

Further research needs to be conducted to develop training programs designed to improve IP skills. As some researchers have cited, this could be difficult (Laker & Powell, 2011). Laker and Powell (2011) called striving to teach soft skills "an extremely costly waste of time, energy, and money" (p. 112). These findings contradict Gardner's (1983) theory of MI identifying IP skills as an intelligence that can be cultivated and developed. As suggested by Spitzberg's (1995) CSRS (1995), a training model with peer review and support may be a more effective way of assessing IP skills and applying training.

## Limitations of the Study

I designed this study with validity and reliability in mind. G*Power 3 analysis indicated that the sample size of 107 participants was sufficient to establish statistical significance. The effect size was 0.15, the statistical power level was 0.9, and the probability level was 0.05. The CSRS has strong validity across many different populations and population sizes (Spitzberg, 1995). The reliability has been shown to have $\alpha > 0.85$ and frequently > 0.90.

I conducted analyses to determine whether any participant's data exerted undue influence or showed any signs of bias. There were only four cases with outliers in two of the three predictor variables. The data were examined with and without these figures, but the trend remained the same: IP skills improved sales performance. This study would be

better served under a model where just one company's salespeople were examined to remove any inherent bias in the form of company culture, compensation programs, and organizational differences.

## Recommendations for Future Research

Through the findings of this study, I showed an increase in sales production with an increase in IP skills. This study should be reproduced to establish reliability. A larger sample size would provide greater validity (Dawson & Spitzberg, 1987). Additionally, this research should be conducted among many different sales groups to examine the effect of IP skills on different businesses. Research in sales positions that encourage high levels of aggression would also be of particular interest.

To better understand RQ1, specialized research should be employed to observe how different salespeople communicate with their prospective clients in order to identify trends and factors that lead to more successful sales outcomes. Additionally, the medical providers could be surveyed to determine which IP styles are most conducive to them and which ones lead them to make favorable sales decisions. Studies based around salespeople who may be less effective or who employ unique sales tactics would help to discern if those who are identified as outliers may find a unique, personal way to sell successfully without following many of the guidelines directed by Gardner (1983) and Spitzberg (1995). Furthermore, these individuals could be observed to see if they can employ the suggested attributes of high IP skills naturally and if they can convey those skills in a way that leads to a comfortable sales transaction. IP skills should also be

assessed to determine their relationship to compensation structure. Those who are more heavily compensated on commissions and bonuses may feel it necessary to employ different levels of IP skills than the representative who is paid a higher salary.

Another recommendation is that an IP skills training program be designed to help companies know how encourage and teach their employees the broader aspects of IP skills, namely empathy, attentiveness, and prioritizing the consumer's needs. A more specialized training program could establish the importance of IP skills and exemplify different approaches. Additionally, the training program could focus on the finer aspects of the CSRS, such as eye contact, appropriate laughing, and speaking volume (see Spitzberg, 1995). Future research should focus on which skills are most easily transitioned and explore different methods for disseminating IP skills principles as cited by Gardner (1983) and outlined by Spitzberg (1995).

RQ2 showed that a more seasoned, tenured salesperson is more effective than a newer employee. Future research should be designed to discern trends and the best sales behaviors of those salespeople. The salespeople could be surveyed to identify changes they have made within themselves and what behaviors have made them more successful. They should also be asked about the importance of forming relationships over a large time period and how that has impacted their sales. Furthermore, sales managers and leadership should be asked for their input on trends and what specific changes salespeople can make to improve their effectiveness over time.

In RQ3 I discussed the effect of the number of large group meetings on sales performance. A more in-depth study should be employed to determine which type of meetings are being held, how often buying decisions are made at these meetings, and how often companies are seeking to employ this type of sales tactic. RQ3 may have proven inconclusive because there was confusion from the participants on what constitutes a large group meeting. Most often these meetings are held at a physician's discretion and under their terms (Fischer et al., 2010). An appropriate study on this topic would look at how much one-on-one time was gained from these meetings, how well the physician was engaged, and what level of impact the large group meeting had. Perhaps the study could compare the different types of sales meetings (i.e., drop-by visits versus lunch meetings versus presentations at conventions) against each other to determine their effectiveness. This would allow for a more conclusive determination regarding the effect of large group meetings on sales performance.

The global pandemic has changed the nature of many meetings. Masks are commonly worn during in-person meetings, making the reading of social cues and nonverbal communication more difficult. Many meetings have been moved to a virtual environment that also requires a unique set of IP skills. Research designed to address this new sales environment and the requisite IP skills would shed light on these changes. Additional research is also needed into marketing methods that can bridge the COVID-19 divide and find people who would be more receptive to a virtual meeting. Virtual meetings may even serve to increase sales opportunities. Such research would also

identify future sales training to adapt to the effects of the COVID-19 pandemic and any future events that require similar precautions.

## Implications

### Theoretical Implications

In this study, I explored the relationship between IP skills and sales performance. Sales are an integral part of many businesses, and IP skills are a critical part of the sales process. However, discussion of IP skills and any semblance of IP skills training are almost completely absent from the research even though the correlation is significant and the data indisputable (AlDosiry et al., 2015; Deeter-Schmelz & Sojka, 2003; Huggins et al., 2016; Wisker & Poulis, 2015). Johnston (2005) envisioned companies using IP skills to create a pleasant company culture while improving job satisfaction and avoiding unnecessary lawsuits. Williams and Stumpf (2008) recognized the obligatory need to train those going into leadership positions early in their education.

In the practical setting, companies that rely largely on salespeople's performance could shift their focus to a more IP skills-centered environment and could begin to implement an IP skills training program. There are many tools available. The CSRS is a valuable tool when employees are ready to achieve high IP skills (Spitzberg, 1995). The CSRS is designed as both a self-survey and to be scored by an observer as well; therefore, companies could make it a regular part of their employee evaluation to assess their employees' IP skills levels and the skills suggested in the CSRS. Feedback on the elements of the CSRS from a supervisor or peer could help even those with the highest IP

skill levels to improve their sales experience for themselves and the consumer alike. Just as Walters and Gardner (1984) envisioned, the CSRS could be used to psychometrically identify IP skills levels, then proper education and training could be provided to employees to facilitate learning. Perhaps most importantly, making IP skills a focus of company culture would make for happier employees and a better opinion of the company for those with whom business is transacted (Covert, 2007; Hottel & Hardigan, 2005; Patton, 2010).

**Social Implications**

In this study I showed that sales transactions do not need to be coarse or awkward ending with one party admitting defeat. They could be a complimentary exchange for both the consumer and the salesperson resulting in a better consumer experience, a favorable opinion of the company, and a greater likelihood of repeat business or referrals from the customer (Covert, 2007; Hottel & Hardigan, 2005; Patton, 2010). Each sales situation can become a win-win for both parties. The sales experience could be focused around building long-term relationships that would yield more business than the short-term gains that sales representatives are apt to focus on. This type of sales transaction would give the company a better reputation, more favorable reviews and a better chance at achieving long-term success.

As salespeople come to understand the importance of IP skills they can recognize deficits within themselves and learn how to improve while increasing their sales profitability. Job satisfaction would increase when encountered with fewer arduous sales

transactions. Learning the appropriate way of communicating and interacting with groups in a confident, comfortable way will make it a better experience for everyone. Salespeople who can exhibit greater IP skills will have a larger income resulting in less turnover and greater job satisfaction (Hottel & Hardigan, 2005; Johnston, 2005; Patton, 2010).

Persons seeking employment in sales may assess their IP skills levels to determine their potential fit for a sales position. If IP skills deficits exist, then they can strive to train themselves on the principles described by Gardner and Spitzberg (1983, 1995). Those skills can be practiced and improved until they can be utilized in a comfortable, confident way. Based on the findings of this research, if they can improve their IP skills then they can improve their sales performance. This understanding of IP skills can help the potential salesperson to save time and effort by determining if sales is a good fit. They can improve their chances of success by striving to train themselves on the correct principles and behaviors of sales.

This renewed focus on IP skills could affect social change by allowing for a better overall purchasing experience, which consequently would lead to a higher sales volume. Instead of pursuing sales by aggressive, pushy methods, salespeople could be encouraged to pursue better avenues of communication and ways to understand the needs of the consumer more effectively. Such interactions could increase the number of sales transactions, improve customer experience, and elevate the reputation of the company. Salespeople working in such a manner will enjoy greater job satisfaction and companies

can minimize turnover. Potential candidates for sales positions can assess themselves and improve their chances of success through a better understanding of IP skills.

The sales landscape was dramatically changed by COVID-19. Many offices forbade unscheduled visits where a pharmaceutical salesperson may have been welcomed previously. Consequently, the number of sales opportunities have been decreased. More importance was added to scheduled virtual meetings. The need for an effective forum for virtual meetings and the ability to successfully communicate through those meetings has become so much more substantial. Further research is needed to determine how IP skills can be integrated into virtual meetings to pursue an efficacious sales transaction.

## Conclusion

This research has shown that IP skills significantly improve sales income. Tenure also improves sales income, but to a smaller degree. The number of large group sales meetings shows no significant effect on sales income. Therefore, incorporating IP skills training could raise the salesperson's income proportionally and the organization's overall profits. Further research is needed to confirm this assertion.

COVID-19 has impacted sales dramatically. Research is needed to understand how to continue sales in such a climate and how IP skills can be transferred and adapted to a virtual climate. Just as early researchers have recognized, incorporating IP skills into any sales process would make for a better, more effective experience for the consumer resulting in more favorable opinions of the company (Cougle, 1975; Johnston, 2005; Munsterberg, 1913; Tews & Tracey, 2008).

Further, salespeople would be happier in their employment and experience greater job satisfaction overall. IP skills has already made sales professionals more successful. The impact of IP skills needs to be better understood and disseminated. IP skills should be at the forefront in determining whether a career in sales is likely to yield success, identify successful prospective salespeople, and improve the most tenured sales professional's performance. Through the findings of this research, I have presented a win-win scenario for companies, customers, and salespeople. This will greatly impact social change with a better overall experience. Salespeople will have greater job satisfaction and consumers will have a smoother, more comfortable sales experience where their needs are communicated, understood, and met. The improved understanding of IP skills from this research can provide the framework for additional social change. IP skills can be impactful for engineers, teachers, doctors, students, colleagues, and anyone wishing to improve their communication and relationships.

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Appendix A: Permission to Use Conversational Skills Rating Scale

On Sat, May 18, 2019 at 8:46 AM John White <XXXXXXXX> wrote:

Hello Dr. Spitzberg,

I hope you are doing well! I am a PhD student at Walden University. I am writing my dissertation on the efficacy of interpersonal skills and sales performance among pharmaceutical salespeople. I would love to use your assessment the CSRS. It embodies the principles of interpersonal skills better than any of the other dozens of tests I have researched.

Please feel free to reach out to me at XXXXX if that is easier.

Thank you!

J. Todd White

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From: Brian Spitzberg < XXXXXXXX>

Sent: Saturday, May 18, 2019 11:39:06 AM

To: John White < XXXXXXXX>

Subject: Re: CSRS

Hi Todd,

You are very welcome to use my CSRS in your research, and to make whatever adaptations to it you might need, as long as you are not using it for profit purposes, in which case we would need further discussion. I'm attaching a couple of documents you might find useful.

Brian

# Appendix B: Correlation Matrices

## Table B1

*Pearson Correlation Conversational Skills Rating Scale Item Descriptive Statistics*

| | SR (C) | SF (Cm/Co) | VC (Cm) | Art, (E) | VV (E) | Vol (Cm) | Pos (Cm) | LTP (A) | SNT (Cm) | UM(Cm) | FE (E) | NHR (A) | UGE (E) | UHS (E) | SL € | UEC (Cm/E | AQ (A/Co) | SAP (A) | SAS (A) | EA (A) | POE (A) | INT (Co) | MTF (Co) | IPS (Co) | UTS (Co) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR (C) | 1 | 0.599 | 0.608 | 0.664 | 0.608 | 0.608 | 0.643 | 0.625 | 0.578 | 0.593 | 0.608 | 0.815 | 0.608 | 0.010 | 0.000 | 0.802 | -0.035 | 0.625 | -0.035 | 0.010 | -0.035 | -0.043 | -0.094 | -0.035 | 0.030 |
| SF (Cm/Co) | 0.599 | 1 | 1.000** | .996** | 1.000** | 1.000** | .998** | .999** | .999** | 1.000** | 1.000** | 0.806 | 1.000** | 0.806 | 0.800 | 0.814 | 0.778 | .999** | 0.778 | 0.806 | 0.778 | 0.774 | 0.740 | 0.778 | 0.815 |
| VC (Cm) | 0.608 | 1.000** | 1 | .997** | 1.000** | 1.000** | .999** | 1.000** | .998** | 1.000** | 1.000** | 0.801 | 1.000** | 0.800 | 0.793 | 0.808 | 0.772 | 1.000** | 0.772 | 0.800 | 0.772 | 0.767 | 0.733 | 0.772 | 0.810 |
| Art, (E) | 0.664 | .996** | .997** | 1 | .997** | .997** | 1.000** | .999** | .993** | .996** | .997** | 0.830 | .997** | 0.754 | 0.746 | 0.836 | 0.723 | .999** | 0.723 | 0.754 | 0.723 | 0.718 | 0.681 | 0.723 | 0.766 |
| VV (E) | 0.608 | 1.000** | 1.000** | .997** | 1 | 1.000** | .999** | 1.000** | .998** | 1.000** | 1.000** | 0.801 | 1.000** | 0.800 | 0.793 | 0.808 | 0.772 | 1.000** | 0.772 | 0.800 | 0.772 | 0.767 | 0.733 | 0.772 | 0.810 |
| Vol (Cm) | 0.608 | 1.000** | 1.000** | .997** | 1.000** | 1 | .999** | 1.000** | .998** | 1.000** | 1.000** | 0.801 | 1.000** | 0.800 | 0.793 | 0.808 | 0.772 | 1.000** | 0.772 | 0.800 | 0.772 | 0.767 | 0.733 | 0.772 | 0.810 |
| Pos (Cm) | 0.643 | .998** | .999** | 1.000** | .999** | .999** | 1 | 1.000** | .996** | .998** | .999** | 0.820 | .999** | 0.772 | 0.764 | 0.826 | 0.742 | 1.000** | 0.742 | 0.772 | 0.742 | 0.737 | 0.701 | 0.742 | 0.783 |
| LTP (A) | 0.625 | .999** | 1.000** | .999** | 1.000** | 1.000** | 1.000** | 1 | .997** | .999** | 1.000** | 0.810 | 1.000** | 0.787 | 0.780 | 0.817 | 0.758 | 1.000** | 0.758 | 0.787 | 0.758 | 0.753 | 0.718 | 0.758 | 0.798 |
| SNT (Cm) | 0.578 | .999** | .998** | .993** | .998** | .998** | .996** | .997** | 1 | .999** | .998** | 0.802 | .998** | 0.820 | 0.816 | 0.810 | 0.793 | .997** | 0.793 | 0.820 | 0.793 | 0.789 | 0.756 | 0.793 | 0.828 |
| UM(Cm) | 0.593 | 1.000** | 1.000** | .996** | 1.000** | 1.000** | .998** | .999** | .999** | 1 | 1.000** | 0.793 | 1.000** | 0.811 | 0.804 | 0.801 | 0.784 | .999** | 0.784 | 0.811 | 0.784 | 0.779 | 0.745 | 0.784 | 0.821 |
| FE (E) | 0.608 | 1.000** | 1.000** | .997** | 1.000** | 1.000** | .999** | 1.000** | .998** | 1.000** | 1 | 0.801 | 1.000** | 0.800 | 0.793 | 0.808 | 0.772 | 1.000** | 0.772 | 0.800 | 0.772 | 0.767 | 0.733 | 0.772 | 0.810 |
| NHR (A) | 0.815 | 0.806 | 0.801 | 0.830 | 0.801 | 0.801 | 0.820 | 0.810 | 0.802 | 0.793 | 0.801 | 1 | 0.801 | 0.386 | 0.404 | 1.000** | 0.348 | 0.810 | 0.348 | 0.386 | 0.348 | 0.352 | 0.298 | 0.348 | 0.383 |
| UGE (E) | 0.608 | 1.000** | 1.000** | .997** | 1.000** | 1.000** | .999** | 1.000** | .998** | 1.000** | 1.000** | 0.801 | 1 | 0.800 | 0.793 | 0.808 | 0.772 | 1.000** | 0.772 | 0.800 | 0.772 | 0.767 | 0.733 | 0.772 | 0.810 |
| UHS (E) | 0.010 | 0.806 | 0.800 | 0.754 | 0.800 | 0.800 | 0.772 | 0.787 | 0.820 | 0.811 | 0.800 | 0.386 | 0.800 | 1 | .998** | 0.404 | .999** | 0.787 | .999** | 1.000** | .999** | .998** | .995** | .999** | .999** |
| SL € | 0.000 | 0.800 | 0.793 | 0.746 | 0.793 | 0.793 | 0.764 | 0.780 | 0.816 | 0.804 | 0.793 | 0.404 | 0.793 | .998** | 1 | 0.423 | .997** | 0.780 | .997** | .998** | .997** | .998** | .993** | .997** | .994** |
| UEC (Cm/E) | 0.802 | 0.814 | 0.808 | 0.836 | 0.808 | 0.808 | 0.826 | 0.817 | 0.810 | 0.801 | 0.808 | 1.000** | 0.808 | 0.404 | 0.423 | 1 | 0.367 | 0.817 | 0.367 | 0.404 | 0.367 | 0.371 | 0.317 | 0.367 | 0.401 |
| AQ (A/Co) | -0.035 | 0.778 | 0.772 | 0.723 | 0.772 | 0.772 | 0.742 | 0.758 | 0.793 | 0.784 | 0.772 | 0.348 | 0.772 | .999** | .997** | 0.367 | 1 | 0.758 | 1.000** | .999** | 1.000** | 1.000** | .998** | 1.000** | .997** |
| SAP (A) | 0.625 | .999** | 1.000** | .999** | 1.000** | 1.000** | 1.000** | 1.000** | .997** | .999** | 1.000** | 0.810 | 1.000** | 0.787 | 0.780 | 0.817 | 0.758 | 1 | 0.758 | 0.787 | 0.758 | 0.753 | 0.718 | 0.758 | 0.798 |
| SAS (A) | -0.035 | 0.778 | 0.772 | 0.723 | 0.772 | 0.772 | 0.742 | 0.758 | 0.793 | 0.784 | 0.772 | 0.348 | 0.772 | .999** | .997** | 0.367 | 1.000** | 0.758 | 1 | .999** | 1.000** | 1.000** | .998** | 1.000** | .997** |
| EA (A) | 0.010 | 0.806 | 0.800 | 0.754 | 0.800 | 0.800 | 0.772 | 0.787 | 0.820 | 0.811 | 0.800 | 0.386 | 0.800 | 1.000** | .998** | 0.404 | .999** | 0.787 | .999** | 1 | .999** | .998** | .995** | .999** | .999** |
| POE (A) | -0.035 | 0.778 | 0.772 | 0.723 | 0.772 | 0.772 | 0.742 | 0.758 | 0.793 | 0.784 | 0.772 | 0.348 | 0.772 | .999** | .997** | 0.367 | 1.000** | 0.758 | 1.000** | .999** | 1 | 1.000** | .998** | 1.000** | .997** |
| INT (Co) | -0.043 | 0.774 | 0.767 | 0.718 | 0.767 | 0.767 | 0.737 | 0.753 | 0.789 | 0.779 | 0.767 | 0.352 | 0.767 | .998** | .998** | 0.371 | 1.000** | 0.753 | 1.000** | .998** | 1.000** | 1 | .998** | 1.000** | .995** |
| MTF (Co) | -0.094 | 0.740 | 0.733 | 0.681 | 0.733 | 0.733 | 0.701 | 0.718 | 0.756 | 0.745 | 0.733 | 0.298 | 0.733 | .995** | .993** | 0.317 | .998** | 0.718 | .998** | .995** | .998** | .998** | 1 | .998** | .991** |
| IPS (Co) | -0.035 | 0.778 | 0.772 | 0.723 | 0.772 | 0.772 | 0.742 | 0.758 | 0.793 | 0.784 | 0.772 | 0.348 | 0.772 | .999** | .997** | 0.367 | 1.000** | 0.758 | 1.000** | .999** | 1.000** | 1.000** | .998** | 1 | .997** |
| UTS (Co) | 0.030 | 0.815 | 0.810 | 0.766 | 0.810 | 0.810 | 0.783 | 0.798 | 0.828 | 0.821 | 0.810 | 0.383 | 0.810 | .999** | .994** | 0.401 | .997** | 0.798 | .997** | .999** | .997** | .995** | .991** | .997** | 1 |

**Table B2**

*Pearson Correlation of Conversational Skills Rating Scale Subscale Key Descriptive Statistics*

| | Attentiveness (A) | Composure (Cm) | Expressiveness (E) | Coordination (Co) | Aggregate CSRS Score |
|---|---|---|---|---|---|
| Attentiveness (A) | 1 | .986** | -1.000** | 1.000** | -.994** |
| Composure (Cm) | .986** | 1 | -.986** | .986** | -.963** |
| Expressiveness (E) | -1.000** | -.986** | 1 | -1.000** | .994** |
| Coordination (Co) | 1.000** | .986** | -1.000** | 1 | -.994** |
| Aggregate CSRS Score | -.994** | -.963** | .994** | -.994** | 1 |