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## Antecedents to Customer Satisfaction for U. S. Health Insurance Customers

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# Walden University

College of Management and Technology

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Vivian Phillips Husband

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Walden University

2020

Abstract

Antecedents to Customer Satisfaction for U. S. Health Insurance Customers

by

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MS, Antioch University, 2008

BA, California State Polytechnic University, 1989

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

August 2020

## Abstract

Customer satisfaction in the health insurance industry remains low compared to other industries, resulting in financial losses for health insurers. Increasing customer satisfaction has a positive effect on financial performance in other industries, indicating that the health insurance industry may also benefit from increasing customer satisfaction. The theoretical foundation for this study was relationship-marketing, a principle of the social exchange theory. The purpose of this quantitative correlational study was to test the effects of health insurance literacy, customer engagement, and relationship-marketing as independent variables on customer satisfaction as the dependent variable. The research question examined the influence of the factors on customer satisfaction among consumers engaging in health insurance decisions. A correlational design was employed using the Antecedents to Customer Satisfaction Survey, data from 99 parishioners and community health fair participants in Southern California who purchased health insurance through the Covered California marketplace, and multiple linear regression. The key finding was that a model of three predictor variables (relationship-marketing, age, associate's degree as the highest level of education) and one two-factor interaction (relationship-marketing and age) explained 49% of the variation in customer satisfaction. This study may contribute to positive social change by informing insurers in their strategic planning, communication, and change efforts in promoting effective use of health insurance plans among customers, leading to increased wellness outcomes for U.S. society.

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## Chapter 1: Introduction to the Study

Customer satisfaction is paramount for sustained organizational success.

Researchers have identified a link between customer satisfaction and market share (for example, Lee & How, 2018; Plewa, Sweeney, & Michayluk, 2015; Stock, & Bednarek, 2014) for achieving this success. Consequently, many industries began operationalizing unique customer experiences centered on improving customer satisfaction (McKinsey & Company, 2016). Further, the Affordable Care Act (ACA) made it necessary for health insurance executives to understand how to create unique experiences for improved market share (Frazier, 2016). The health insurance industry, however, continued to lag behind other industries in improved customer satisfaction (ASCI, 2015).

The ACA not only increased access to health care for all Americans, but also introduced another layer of complexity within service interactions, which was that customers had a lead role in deciding the quality of their health care (Frazier, 2016). Health insurers became concerned that customers who failed to make an informed selection could exacerbate already declining satisfaction ratings (Hirschfeld, 2015). Consequently, executives had to attend to this new layer of complexity that enabled customers to make choices about purchasing and utilizing the benefits of their health insurance coverage.

Although the relationship between customer satisfaction and service qualities has been researched in other industries (An Sheng, 2014; Eisenbiess, 2014; Joung, Choi, & Wang, 2016; Pizam, Shapoval, & Ellis, 2016), there remains a gap in the literature regarding testing antecedents of customer satisfaction (CS) in health insurance



interactions (Abdelfattah, Rahman, & Osman, 2015). As health insurance utilization emerges as a priority for leaders in the health insurance industry (Frazier, 2016), understanding the effects of customer engagement (CE) and health insurance literacy (HIL) levels, and the customer's orientation to relationship-marketing within the insurance interaction is important.

Chapter 1 provides a discussion about the background on the persistence of low customer satisfaction in the health insurance industry compared to other service industries (ACSI, 2015). This chapter also includes the rationale for grounding this research in the social exchange theory (SET) and an underlying principle, relationship-marketing (RMP). Also provided is the research question, the nature of the study, definitions of terminology, assumptions, and scope and limitations of the study. The overall significance of the study concludes this chapter.

### **Background of the Study**

The service industry remains vibrant in the U.S., but the effects of poor customer service have resulted in billions of dollars in losses for U.S. companies (Greengard, 2015). This high cost is of concern because the service industry contributes to approximately 80% of the U.S. gross domestic product (GDP; Birkenmeier & Sanséau, 2016). According to the Federal Insurance Office (2018), the U.S. insurance industry contributed approximately one trillion dollars in capital and surplus to the service sector industry, of which 17% represented the health insurance industry. The economic contribution of the health insurance service sector to the U.S. economy provides

sufficient cause for examining and understanding the benefits and corresponding costs of increasing CS in this industry.

Poor CS remains a challenge for the health insurance industry. The American Customer Satisfaction Index (2015) reported that poor service became an intractable business challenge for the health insurance industry. This business challenge suggested a need for understanding CS within health insurance interactions. Custer (2017) intimated that the need for understanding is particularly apparent in the health insurance marketplace through the ACA, where the insurer has to compete for market share at the consumer level.

The enactment of the ACA required changes in the ways health insurance organizations delivered services to health insurance customers, intending that consumers took a leading role when deciding healthcare quality (Frazier, 2016). Schansberg (2014) argued that in the past, interactions with health insurance companies were unidirectional and limited, wherein insurers led the conversation. Since customers were novices at leading discussions about their health insurance needs, improving overall CS made it necessary for insurers to increase their understanding of satisfaction within the context of CE and customer literacy.

Researchers have found that engaging customers increased CS in multiple industries. For instance, Gronroos and Voima (2013) asserted that in the travel industry, improving the effectiveness of CE involved an understanding of relationships wherein the customers were willing participants in the relationship. In the information technology industry, Dotzel, Shankar, and Berry (2013) found that CE improved satisfaction. Also,

in the healthcare industry, Sweeney, Danaher, and McColl-Kennedy (2015) found that patient engagement increased patient satisfaction during healthcare treatments. These studies demonstrated the effectiveness of CE for increasing CS.

The complexity of health insurance products makes it especially challenging for executives to articulate the benefits of health insurance. Researchers have found that consumer literacy levels affect CS. For instance, An-Sheng (2014) found that customer literacy about products had the effect of improving CS in the retail industry. Clemente, Dolansky, Mantonalis, and White (2014) asserted that customers' beliefs about and expectations of a product were determinants of actual product literacy and that individuals used extrinsic and intrinsic cues differently for evaluating satisfaction. An-Shen (2014) and Clemente et al. (2014) both asserted that there is a need to understand the effects of customer HIL about complex health insurance products and services for increasing CS within health insurance interactions.

Product complexity and the need for CE make health insurance interactions dependent on the establishment, development, and maintenance of relationships (Mishra, 2016). The RMP, a component of the SET, provides a basis for understanding the quality inadequacy of such relationships within health insurance interactions (Barry & Graca, 2019). Yoganathan, Jebarajakirthy, and Thaichon (2015) demonstrated the utility of the RMP in understanding the relationship between brand image and loyalty, establishing the utility of understanding RMP for improving CS in health insurance interactions.

Extrapolating results of prior research on CE, literacy, and RMP from other industries into the health insurance industry, however, is not effective. Pollitz, Cox,

Lucia, and Keith (2014) contended that health insurance service interactions are unique because of the financial, health, and mortality implications people endure when making health care decisions. Health insurance products are different from other insurance products through their connection to economic security and quality of life. While automobile, home, business, and life insurance are necessary, these types of insurance do not apply to every citizen. Not everyone owns an automobile; however, every person, at some time in life, needs health care. Not having adequate health insurance coverage at the time of need is often a source of personal debt, bankruptcy, reduction in one's standard of living, or even death for many (Pollitz et al., 2014). Studying the behavior of health insurance customers is of value because of financial, health, and mortality implications. Paying greater attention to the factors that influence CS with health insurance contributes to an improved quality of life (Schansberg, 2014), and is thus a catalyst for social change.

Prior research has indicated the effectiveness of using CE, literacy, and RMP individually for increasing CS in other industries (see, for example, An-Sheng, 2014; Sweeney et al., 2015; Yoganathan et al., 2015). There is, however, limited research available that demonstrates the effectiveness of these factors as a model for increasing CS among ACA health insurance customers. Therefore, there is a need for research on effective models specific to increasing CS for those who purchase health insurance using Covered California.

### **Problem Statement**

Poor customer service costs U.S. companies \$130 billion annually (Greengard, 2015). Infrequent service interactions between customers and service professionals, lack

of product knowledge, and failure to meet consumer needs are all service antecedents of poor CS (D'Alessandro, Johnson, Gray, & Carter, 2015; Sajtos, Kreis, & Brodie, 2015). Additionally, elevated customer expectations for unique service experiences place competitive market pressures on insurers (Kirby & Cameron, 2016). Rust and Huang (2014) contended that past studies have overlooked the contribution customers brought to the insurance interaction as a measure of satisfaction, focusing instead on operational effectiveness measures. The link between poor CS and market share highlights the critical nature of the general management problem in my research, which was a failure of insurance executives to adequately address health insurance customers' unique service expectations in a competitive marketplace.

The specific problem I addressed in this research was a lack of knowledge and understanding about the effects of RMP, HIL, and CE on CS in the health insurance industry. Filling this gap in research, knowledge, and understanding was needed to inform executives' actions in terms of reversing the trend of poor CS ratings in the health insurance industry.

### **Purpose of the Study**

The purpose of this quantitative correlational study was to use the SET's underlying principle, the RMP, to test the influence of RMP, HIL, and CE on CS, controlling for Ed Level, Age, and Gender for adults between the ages of 18 and 64 living in the state of California. The target population in this study were consumers who have utilized Covered California, now or in the past, for purchasing health insurance in Southern California. The sampling frame for this study consisted of residents affiliated

with community churches associated with the First Ladies Health Initiative in Southern California.

The three independent variables were the extent to which RMP was applied, HIL, and CE. RMP was measured by adapting Mohr and Spekman's Characteristics of Partnership Success – Partnership Attribute Scale to focus on the attributes of partnership and communication behaviors. HIL was measured by adapting the Health Insurance Literacy Measure (HILM) for assessing consumers' ability to select and use health insurance. CE was measured by adapting the engagement dimension from the Customer Value Co-Creation Behavior Scale. The demographic variables were education Ed Level, Age, and Gender. The dependent variable was CS and was measured by using the Customer Satisfaction with Service Scale.

### **Research Question and Hypotheses**

*RQ:* Do RMP, HIL, and CE, and demographic variables Ed Level, Age, and Gender influence CS while engaging in health insurance decisions?

*H<sub>0</sub>:* No independent variables influence CS.

*H<sub>a</sub>:* At least one independent variable influences CS.

### **Theoretical Foundation**

The theoretical foundation for this study was the RMP, a principle of the SET. Homans (1958) created the SET to explain human behavior in sociology and further developed the theory for understanding organizational behavior. Berry (1995) further augmented the SET by developing the RMP that went beyond the creation of relationships to understand the rules and norms within the social domain that created

quality within existing relationships. Hidayanti, Herman, and Farida (2018) explained that Berry used the marketing discipline and expanded the SET through a distinct focus on interactions between consumers and organizations, known as the RMP. O'Malley (2014) asserted that the expansion of SET became necessary because using the SET alone did not completely address customers' contemporary expectations of sustaining relationships between individuals and organizations in the marketplace.

Health insurance interactions are unique in that the economic exchange of value involves sharing personal information found in the social domain. RMP provides a frame for understanding what Temerak, Winklhofer, and Hibbert (2018) described as social interaction indicators such as feelings of trust and caring and the appropriate service response needed to create value. Madison (2014) used RMP to explain the influence of customer awareness, customer attitude, customer association, customer attachment, and customer experience on relationship orientation.

RMP has been used to further explain the benefit that co-creation of value within service interactions has on relationship orientation, and how each successive service interaction increases value for both the customer and the organization. For example, Guzman (2015) used RMP to explain how institutional commitment, satisfaction, and customer service relate to student enrollment retention. Similarly, using RMP as the theoretical foundation for my research was essential for exploring the effects of CE and HIL on CS within unique health insurance interactions.

### **Nature of the Study**

The purpose of this quantitative correlational research was to test the influence of RMP, HIL, CE, and demographic variables (independent variables) on CS (dependent variable). Quantitative methodologies involve testing theories, using close-ended questionnaire instruments and collecting numerical data (Starnes, 2016). A correlational design using multiple linear regression analysis (MLR) was appropriate for examining the influence of RMP, HIL, CE, and demographics on CS.

Using MLR provides many benefits, such as understanding how each independent variable influences the dependent variable. In addition, Snoddy (2014) demonstrated that statistically significant relationships are used to build a predictive model of the dependent variable. This methodology and design were suitable for studying health insurance data from a sample to make inferences about a broader population regarding factors that affect CS. The methodology was especially expedient when studying CS of adult populations using Covered California to obtain health insurance who were dispersed over a large geographical area.

Applying a qualitative or mixed methodology was not suitable for conducting this study. The qualitative methodology is better suited when implementing philosophical approaches such as advocacy or participatory knowledge claims (Barnham, 2015). Using philosophical approaches such as advocacy or participatory knowledge claims was not part of this study, thus making the use of a qualitative methodology ineffective. The mixed methodology approach is ineffectual because of the qualitative aspects associated with using this methodology.



The strategies of inquiry appropriate for qualitative methodology include case studies, phenomenology, and grounded theories, which are not suitable for determining the influence of multiple independent variables on a dependent variable, as was the case with this research. Therefore, the correlational design using MLR applied in this study was most suitable for facilitating health insurance executives' understanding of how multiple independent variables influence CS in the health insurance industry.

### **Definitions**

*Affordable Care Act (ACA)*: A law in the United States that mandates access and affordability of health insurance for all American citizens (Patel & West, 2014). The primary objective of ACA was reforming the U.S. healthcare system by availing affordable and quality health insurance to all American citizens, thereby reducing the number of Americans without health insurance (Frazier, 2016). Before the ACA, barriers to health insurance included insufficient consumer information about health insurance, restrictions due to preexisting health conditions, and high and unpredictable premium rates (Short, Graefe, Swartz, & Uberoi, 2012).

*Co-creation*: The process by which customers and organizations interact to generate value for both the customer and organization (Lusch & Vargo, 2014). Organizations express value as a return on investment and through optimized shareholder value (Magretta, 2012). Customers determine the existence of value during their interactions with frontline employees, self-service technologies, and marketing channel experiences (Poenaru & Halliburton, 2011). For this study, co-creation was a system of interactions between customers and organizations that worked together and sought out

ways of producing value for both customers and the organizations (Wieland, Polese, Vargo, & Lusch, 2012).

*Customer Engagement (CE)*: A cultural practice of involving customers in during the co-creation of their desired service experiences (Kronenfeld, Parmet, & Zezza, 2012). CE is the act of sharing information about status, goals, and risk tolerance between a customer and organizations (Claffey & Brady, 2017). CE occurs when customers demonstrate a willingness to investigate and select appropriate health care insurance plans during service interactions (Jaakkola & Alexander, 2014).

*Customer Satisfaction (CS)*: A measure of how well service delivery or product matches customer expectations (Cho, Aribarg, & Manchanda, 2015). Lee, Tsao, and Chang (2015) defined CS as the emotional impression of an entire experience and Strickland (2014) defined it as measure of attitudes during service interactions. For this study, CS was the customer's overall emotional response to interactions with call center service professionals when purchasing or using health insurance products.

*Health Insurance Customers*: People who purchase insurance policies from a health insurance service provider (Shane, Ayyagari, & Wehby, 2015). These customers are people responsible for selecting appropriate policies that align with healthcare needs. In addition, Politi et al. (2014) defined health insurance customers as those who pay insurance premiums for coverage. For my study, health insurance customers were people who selected, purchased, and used health insurance policies for themselves or their families.

*Health Insurance Literacy (HIL)*: Knowledge about the processes, obligations, and benefits of health insurance products and services (Paez et al., 2014). Custer (2013) indicated that HIL is present when consumers know the critical underpinnings of the ACA when purchasing insurance in the insurance marketplace. For my study, I used Shane et al.'s (2015) definition of HIL as occurring when customers increase their understanding of the health insurance process and understand their roles during service interactions.

*Health Insurance Marketplace Exchange*: A marketplace, referred to as the Exchange, to which Americans have access when purchasing private health insurance from private health insurance companies. Regulations of the Exchange are under U.S. federal government through the ACA and local state governments. The Exchange allows competition among health insurers under one authority when competing for consumers' health insurance business. The Exchange may be accessed via the web site, mail, call centers, or brokers. Covered California is the name of the marketplace for qualifying California residents (Custer, 2014).

### **Assumptions**

The first assumption was that participants provided the true nature of their insurance purchasing experiences. Another assumption was that participants possessed sufficient literacy skills for reading and understanding the survey questions. Additionally, there was an assumption that participants had access to the survey instrument during the entire data collection process. Finally, there was an assumption that access to participants of the study remained open until the entire data collection process was complete. To

mitigate conflicts, I used a large enough sample size to overcome other factors that may have affected the outcome of the study.

### **Scope and Delimitations**

My study sampled participants between the ages of 18 and 64 who resided in the state of California and participated in the Covered California marketplace exchange. Participants for the study included both males and females who were employed or unemployed, representing all levels of education. Participants for the study also included people who were healthy as well as those currently undergoing treatment for illness. The study included people who bought all coverage types and plan options. All participants had service interactions with health insurance service professionals.

My study did not include people who received their insurance coverage through their jobs, who were enrolled in Medicare or Medicaid insurance programs, or who purchased insurance privately without using the ACA marketplace. Consequently, this study did not include children and elderly California residents. Additionally, participants for the study did not include people outside the state of California. This study did not examine CS experiences outside interactions between call center service professionals and customers. For example, satisfaction questions did not include an analysis of product or pricing. Finally, conducting this study did not address measures of socioeconomic status (SES).

### **Limitations**

A limitation of this study was that participants may have experienced different degrees of illness during the time of the data collection process, which may have affected

their responses in a positive or negative way. In addition, participants may have experienced different degrees of illness during insurance interactions that affected their responses in a positive or negative way. Another limitation was the education and language levels of the Covered California population. Time and costs are often limitations for completing a study. There was, however, sufficient time available for conducting and concluding this study, and no costs arose that prevented the completion of this study. Using a sufficiently large sample size (computed by power analysis) likely mitigated any effects due to illness, education, or lack of English proficiency. No other known limitations affected the completion of this study.

### **Significance of the Study**

At the time of the study, there was a lack of available research and therefore a gap in health insurance executives' knowledge and understanding of the influence of the RMP, HIL, and CE on CS. Therefore, this research will fill a gap in the literature regarding contributions customers bring to health insurance interactions in terms of their orientation for relationships, levels of literacy in terms of the health insurance process, and willingness to actively participate in meeting health insurance needs.

### **Significance to Practice**

My research may increase the awareness of leaders in diverse service industries about barriers to increasing CS when customers were selecting and using health coverage plans. The results of this study may also provide utility for business leaders in terms of understanding the link between increasing CS and improving financial performance. The results will likely inform insurance executives' actions in response to customers'

expectations within insurance service interactions, thereby informing insurance business practices and procedures for increasing customer loyalty and business growth. Finally, the results of this study may provide benefits to governmental agencies and advocacy groups by creating educational programs for customers regarding the advantages of active engagement in the health insurance process, as well as benefits of increasing HIL when making choices about purchasing insurance coverage that aligns with health care needs.

### **Significance to Social Change**

Positive social change may occur as a result of this study by demonstrating the effectiveness of increasing customer literacy about insurance coverage and processes and actively engaging in the selection of health insurance. Consumers who utilize their health care policies effectively may enjoy better overall health care, thereby leading to healthier individuals. Healthier people demonstrate greater productivity in the workplace (Grossmeier et al., 2016), are better at providing for families, and are better contributors to social programs through taxpayer participation (Office of Disease Prevention and Health Promotion, 2018). These results suggest that healthier citizens enjoy higher qualities of life and family time, and remain contributing members of society.

### **Summary and Transition**

The RMP is relevant as customers demand unique and individualized interactions with service providers. Low levels of CS within the health insurance industry provide a motive for furthering health insurance leaders' understanding of CS as this industry

manages the shifting landscape of ACA. The RMP provides a framework for analyzing relationships between CS and HIL and engagement.

In this chapter, I described the background of the problem and its importance to the health insurance industry and service research. I described the general and specific problem of my study and research method and research design appropriate for the specific problem. I identified the nature of the study, describing the specific population group and geographic boundary of my study which was Southern California. I outlined the significance of the study, as well as assumptions, scope and limitations, and delimitations.

In Chapter 2, I provide a deeper review of the RMP and CS literature. An examination of the literature was essential for understanding this study's phenomenon, which was low CS in the health care insurance industry. The goal was to review literature which explained the contributions customers brought to service interactions for increasing CS.

## Chapter 2: Literature Review

CS is a term that is best understood when it is unsatisfactory. Infrequent service interactions, customer's lack of product knowledge, and organizations' failure in meeting consumer needs are all service antecedents of poor CS (D'Alessandro et al., 2015; Sajtos et al., 2015). These unsatisfactory service experiences continue to challenge business leaders, costing U.S. companies \$130 billion annually (Greengard, 2015). Previous studies have overlooked the contributions customers bring to the insurance interaction as a measure of satisfaction (see, for example, Anderson et al., 2013; Andrews, Cordina, & Kumar, 2016; Guzman, 2016), focusing instead on operational effectiveness measures (Rust & Huang, 2014) to improve unsatisfactory CS. An understanding of antecedents to high levels of CS was necessary for helping insurance leaders to address management challenge involving low CS.

The general management problem in my research was a failure to adequately address insurance customers' amplified service expectations in a competitive marketplace. While many industries have begun operationalizing experiences centered on the customer, the health insurance industry continues to wrestle with this key performance indicator (ACSI, 2015). The specific management problem in my research was that legacy product enhancement strategies focused on improving the diversity of insurance plan options, pricing options, and provider networks have not had material effects on improving CS (Haeder & Weimer, 2015). Improving CS requires insurance leaders understanding and operationalizing unique service expectations held by health insurance customers (Berry & Mate, 2016).



This literature review begins with the literature search strategy and plan for finding, organizing, and synthesizing empirical studies for all variables in the study. I first discuss the SET and its underlying principle, RMP, that was the foundation of this study. A detailed discussion of the dependent variable follows, showing potential gaps in the literature. I continue with investigations focused on independent variables and their relationships with the dependent variable along with any influence the theory has on those relationships in empirical studies. The critical analysis of literature in this chapter also covers the influence of education level, age, and gender on relationships between dependent and independent variables.

### **Literature Search Strategy**

The scope of this literature review involved the search, review, analysis, and synthesis of relevant literature from diverse sources, including scholarly books, peer-reviewed journal articles of empirical studies, and systematic reviews through online and local library databases. The majority of the literature used in this literature review was published within the last 5 years, with minimal studies outside this period. Search databases used were Business Source Complete, Business and Management, Industrial Management, Marketing Management, Service Marketing, and Emerald Management databases, EBSCOHost, ProQuest, ABI/INFORM Complete, ProQuest Central, SAGE Encyclopedia, and Google Scholar.

Search terms used for finding suitable and relevant subject matter scholarly articles were *health insurance, Affordable Care Act, customer satisfaction, customer-oriented behavior, relationship-marketing, social exchange theory, cooperation and*

*participation, co-creation, satisfaction, trust, loyalty, delight, service science, innovation, consumer wellbeing, healthcare, marketing, customer relations, customer service, management, call center, service quality, service value, quality of life, and service expectation.* The initial literature review identified over 200 seminal and scholarly titles themed into distinct bodies of knowledge, such as (a) service, (b) customer satisfaction, (c) relationship-marketing, (d) marketing, and (e) insurance.

The result of the literature search demonstrated a lack of literature regarding CS for health insurance within call center environments. Consequently, this literature review relied heavily on the synthesis of CS literature in the retail, hospitality, and healthcare industries. The literature on CS in these industries provided valuable information related to the focus of this study.

### **Theoretical Foundation**

The theoretical foundation for this study was rooted in the RMP, an underlying principle of the SET. Hossain, Jahan, Fang, Hoque, and Hossain (2019) found that using the SET provided a framework for understanding factors motivating the creation of relationships between customers and organizations, and subsequent expectations of cost for value. The RMP, however, provided a basis for understanding factors that increased the quality of created relationship when the goal was improving CS. Some research (see, for example, Gulas, 2013; Guzmán, 2015; O'Reilly & Eckert, 2014; McKeage & Madison, 2014; and Weber, 2015) has demonstrated the benefits of applying RMP for understanding the effects of HIL and CE on CS among health insurance customers. In

this section, the SET and RMP are analyzed to provide the rationale for applying RMP as one of the independent variables in this study.

### **Social Exchange Theory**

Homans (1958) developed the SET to explain factors contributing to the creation of relationships between two or more parties. Hung, Yu, and Chiu (2017) asserted that while the SET originally was for explaining human behavioral relationships between people, recent developments used SET to understand social interactions between consumers and organizations. Yoganathan et al. (2015) argued that a social relationship exists between customers and sellers wherein factors beyond goods and services are meaningful to the buyer and seller. Factors such as trust are meaningful in health insurance interactions because of the inherent reliance on customers' willingness to share personal information. Dai, Chen, and Wu (2014) argued that the need to create relationships exists in situations where customer participation in service interactions is essential. Moreover, Yoganathan et al. found that customers and sellers have expectations of reciprocity for non-commoditized factors within service exchanges, demonstrating a principle of SET. The SET, therefore, provides a solid framework for understanding motivating factors for creating relationships between consumers and organizations, such as those found in the health insurance interaction.

Researchers have used SET to examine elements of relationship for understanding satisfaction. For example, Shetty and Basri (2018) used the SET to understand how customers define the existence of a relationship and how an intangible output of a relationship results in loyalty and commitment to the brand. Hung et al. (2017) used the

SET for investigating how consumers' attitudes about trust in social networking influence consumers' intention to engage in social commerce. Dai et al. (2014) used the SET to explain that customer's voluntary participation in the hospitality industry evokes enduring relationships between customers and organizations.

The SET is useful for understanding how relationships between customers and organizations become valuable through successive iterations of exchange. Lee, Capella, Taylor, and Gabler (2014) used the SET for predicting the financial determinants of loyalty programs in the hospitality industry. Lee et al. (2014) demonstrated a predictive relationship between loyalty and positive financial impact by examining the process of forming relationships.

When using the SET, researchers assume the existence of rules that give rise to expectations, leveraging the principles of economic exchange. For example, Lee et al. (2014) asserted that the principles of exchange determines customers' expectations that regulate customers' satisfaction. However, O'Malley (2014) found the SET inadequate when addressing the contemporary expectations for a sustaining relationship between individuals and organizations in the marketplace.

Researchers created other philosophies associated with SET which include transformation service research (Anderson et al., 2016), service-dominant logic (Lusch & Vargo, 2014), and the RMP. These philosophies provide empirical evidence for understanding complex social interactions within industries such as the health insurance marketplace. Following is a discussion on transformation service research, service-dominant logic, and the RMP.

## **Transformation Service Research**

The foundation of transformative service research is to promote interactions that improve the well-being of individuals within and outside a service interaction. Anderson and Ostrom (2015) conceptualized transformative service research as a framework for examining the well-being of customers as an outcome of a service interaction. Anderson et al. (2013) argued that interactions between customers and service organizations present an opportunity to influence the well-being of customers. The transformative service research principle differs from SET because transformative service principle is for focusing on consumer well-being manifested in physical health, mental health, financial steadiness, and social equality. For example, Tan, Guo, and Gopinath (2016) used transformative service research to examine interactions with a credit counseling organization and found organizational strategies influence customer's social-cognitive and goal pursuit which contributed to well-being. Transformation service research is, therefore, relevant for understanding the antecedents to CS; however, the unit of analysis is the broader well-being of the community.

## **Service-Dominant Logic**

Service-dominant logic is another philosophy of SET for understanding the contemporary expectations for sustaining relationships between individuals and organizations in the marketplace. Service-dominant logic, introduced by Vargo and Lusch (2004), is an alternative model of exchange in which services, and not goods, are the fundamental basis for economic exchange. Lusch and Vargo (2014) defined service as a process for using skill and competencies for helping another, which is the

mechanism for understanding the endogenous nature of the market wherein all entities engage in collaborative economic exchange. Similar to social exchange, service-dominant logic provides a frame for understanding the exchange of value for value. Service-dominant logic differs from SET by asserting that all stakeholders are integrators within an economic interaction for co-creating value.

Lusch and Vargo (2014) explained that service-dominant logic has ten foundational premises:

- Skills and knowledge are the fundamental basis of exchange.
- Service is not readily apparent in economic exchanges.
- Goods hold value because of the embedded service component.
- The ability to influence change determines advantage.
- Service is the only economy.
- Customers co-create value.
- Only organizations present value.
- A service-centered perspective is always customer-centered.
- All actors within an economic system are integrators.
- Consumers determine value.

Service-dominant logic is relevant for understanding markets as a systemic structure that requires the inclusion of customers in the creation of customer's desired experiences. Lüftenegger, Comuzzi, and Grefen (2015) argued that those desired experiences influence CS because customers cocreate their well-being through collaborations with organizations, friends, family, communities, and governments. Moller

and Halinen (2000) asserted that service-dominant logic is for understanding the dynamics presented in the service exchange, with a distinct focus on exchange characteristics and exchange context, thereby making the unit of analysis the systemic structure that facilitates value creation, not the customer-service professional interaction.

Researchers on customer relationships have offered theories not connected to SET for explaining why customers and firms enter into relationships and the various approaches for measuring the relationship. For example, expectation confirmation theory (Oliver, 1980), motivation-need theory (Maslow, 1943), and theory of reasoned action (Fishbein & Ajzen, 1967) are for explaining individual customer relationships from the perspective of entering and exiting service interactions. These theories, however, do not provide a framework to examine the influencing factors that the quality of the relationship has on perceptions of CS.

The RMP, a principle of SET, is promising for understanding how improving the quality of the relationship with organizations affects the quality of CS. Conducting this study required understanding the effects of the RMP when testing the relationship between independent variables and the dependent variable. The SET explains the need to create a relationship between customers and organizations, and RMP explains how the quality of that relationship is affected when organizations interact with customers.

### **Relationship-Marketing**

The RMP emerged from the marketing discipline and expanded SET with a distinct focus on the quality of the interaction between consumers and organizations. Berry (1995) introduced RMP in response to discussions about the centrality of

consumers in commercial interactions. Berry highlighted the importance of creating and fostering long-term relationships with customers instead of focusing only on organizational profitability. Kumar (2015) indicated that making consumers central to commercial interactions was a new paradigm resulting from analysis of data from databases and CRM technology. These analyses highlighted the profitability of customers and demonstrated that customer-centricity with a focus on building long-term relationships is key to increasing organizational profitability.

Similar to SET, RMP is for identifying and understanding the formation of relationships. Moreover, Payne & Frow (2017) confirmed that RMP was for understanding the elements for maintaining relationships, and all the influencing factors within a relationship needed to create value for customers, suppliers, and organizations. RMP also explains the reciprocal association between stakeholders within interactions and the emergence of newly constructed relationships as an outcome of perceived satisfaction. Aziz (2015) asserted that the elements of RMP included trust, interdependence, and commitment. The basic goals of RMP are to understand how the nature of relationships influences relationship outcomes in a business context. Yoganathan et al. (2015) conducted a study on the influence of RMP on brand equity ( $N = 902$ ) revealing ( $\beta = .86$ ) an influence on brand management practices such as loyalty and image. These results indicate that managers of organizations could utilize the RMP for unearthing factors influencing perceptions of quality within the consumer-organization dyadic.



Managers can also use service encounters involving the consumer and organization to explain and transform perceived quality into value expressed as business outcomes such as CS, within the consumer-organization dyad. Mohr and Spekman (1994) introduced a model for understanding the business-to-business partnership between distributors and suppliers in the personal computer industry. The model presented antecedents for satisfying partnership which involved three domains. Those domains are the attributes of the partnership, communication behavior, and conflict resolution techniques. Mohr and Spekman's model became a bedrock among researchers for understanding customer relations. Conducting this study is for examining the influence attributes of partnerships (commitment, coordination, and trust) and communication behavior (communication quality) have on CS within the health insurance interaction.

**Commitment.** Mohr and Spekman (1994) defined commitment as an orientation toward the future success of a relationship. Payne and Frow (2017) asserted that organizations characterize commitment through loyalty programs, which involves CRM systems for recognizing and engaging customer's interests and respective life stages. Gijsenberg, Van Heerde, and Verhoef (2015) found that customers also manifest commitment through word of mouth marketing about the organization, referrals, and defense of the organization's brand intentions. Ha, Lee, and Janda (2016) suggested that commitment is the output of engagement, and a willingness to invest in the longevity of relationships.

Researchers have found that commitment contributes to satisfaction. For example, Parish, Lampo, and Landua (2015) posited commitment involves customers having

ownership of the relationship, which is a demonstration of high levels of loyalty to an organization. Kim, Vogt, and Knutson (2015) found a relationship between CS and loyalty wherein successive service encounters influence commitment to an organization. Studies have shown (O'Reilly & Eckert, 2014; Ruiz-Molina, Gil-Saura, & Moliner-Velázquez, 2015; Yoganathan et al., 2015) that the presence of RMP in business practices results in loyalty behavior where individuals actively engage in creating their desired experiences. These studies suggest a willingness of individuals to invest in the longevity of relationships but to also alter their behavior for influencing their CS experiences.

**Coordination.** Coordination is clarity about what all parties within a service encounter expect from each other. Jaaron and Backhouse (2018) argued that expectation clarity came from a systemic view of the service experience and required an openness to expanding and contracting role boundaries when delivering heightened service experience. The permeation of internal and external boundaries is necessary when developing customer-service provider relationships. Sleep and Lam (2015) asserted that partnership involves extending role boundaries across top management, cross-functional teams, within-team, and customer role expectations. The results of Sleep and Lam's study ( $N = 167$ ) showed that boundary spanning had a positive effect ( $r = 0.42$ ,  $p < 0.01$ ) on CS, thus explaining 18% of CS. The results of these studies suggest that while role clarity is essential, it is equally valuable when one party extends beyond role expectation to seek out opportunities for enhancing service to the other, in a thoughtful, focused, and succinct manner.

Coordination of services and products which enable customer's abilities to make informed purchase choices involves innovation in service delivery. Weber (2015) reinforced the necessity of a coordinated partnership in the service encounter. Weber argued that customers interpret empathy and concern when employees demonstrate the ability and willingness to think innovatively about meeting customer's needs. However, Palo and See (2016) cautioned that higher risk decisions lower the customer's tolerance for novel or innovative solutions. It is therefore necessary for, as Frow, McColl-Kennedy, and Payne (2016) asserted, service professionals to no longer rely on responses confined by legacy operating practices. The complexity of navigating the health insurance process makes the health insurance interaction between customers and service professionals unquestionably interdependent where both customers and service professionals must partner for improved CS.

**Trust.** Trust is essential for creating relationships. Hansen (2012) defined trust as a belief held by consumers about the service provider's ability to deliver on promises made to the consumer. Xu and Cenfetelli (2016) found ( $N = 170$ ) that trust had three dimensions, which are integrity, benevolence, and competence. Integrity is related to the service provider's willingness to keep promises made. Benevolence is related to the provider's intention when making promises in the best interest of the consumer. Competence is related to the provider's ability to keep a promise. In the health insurance interaction, it is necessary for consumers to trust that service professionals can and will do as promised, and more importantly, that service professionals acts in the best interest of the consumer. Sajtos et al. (2015) demonstrated ( $N = 1939$ ) the necessity of trust in

their study involving retail banking, internet service, insurance, and hairdressing industries. The results indicated that for insurance interactions, trust is highly influential, and that brand loyalty depends heavily on the perception of the employee's trustworthiness ( $r = 0.49, p < .05$ ). Results such as these further support the importance of trust in relationships, and that the essence of service encounters is encapsulated in trusting interactions.

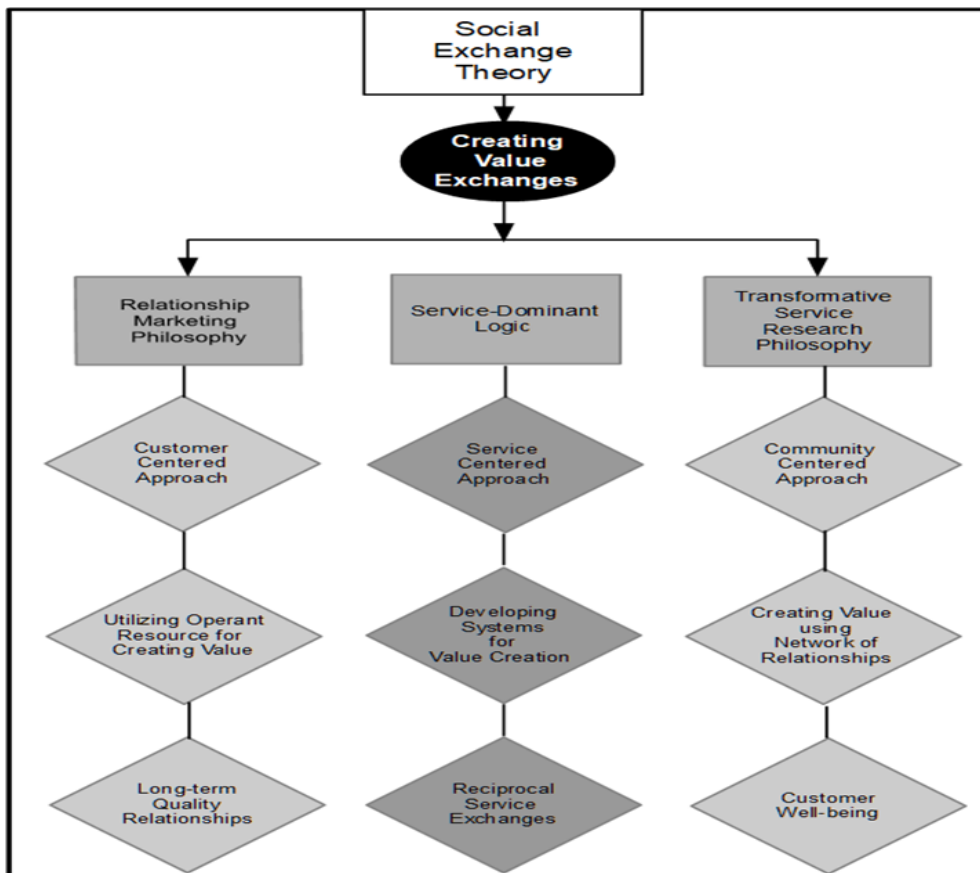
**Communication quality.** Communication quality is also a necessary component in fostering relationships. Mohr and Spekman (1994) asserted that communication quality involves an assessment of how the service professional conveys information, accuracy, and timeliness of information and the adequacy and credibility of information exchanged. Understandably, the complexity of the health insurance process makes communication quality of utmost importance in influencing enduring relationships. Frow et al. (2016) asserted that the health insurance interaction between customers and service professionals is decidedly interdependent, and consequently requires communication quality from both customers and service professionals for improving CS, and the well-being of the customer.

Past experiences influence customer's information needs. Chen et al. (2017) asserted that customers with positive past experiences are less likely to need additional information when deciding about the relationship. Berry and Mate (2016) posited that poor communication compounds an already stressful medical conversation, and the effort to recover from an experience of poor communication becomes challenging. Chen et al.

(2017) demonstrated that when organizations lagged in maintaining relationships, improving the quality of communication was exceedingly more difficult.

The seriousness of the health insurance issue determines the channel of communication. Palo and See (2016) asserted that when customers perceive a risk in making the wrong decision, these customers prefer communicating face-to-face for advice on minimizing potential liabilities. All of which suggest a need for active participation from both customers and service professionals where service professionals are not anchored to a script, and customers are forthcoming with personal information.

The RMP provided an appropriate frame for understanding the health insurance interaction where the need for forming enduring relationships is necessary for creating value for the organization and consumer. As depicted in Figure 1, SET offers a model for understanding how exchanges occur between customers and organizations, thus resulting in value creation. Transformation service research provides a view of exchanges for creating value through customer wellness, service-dominant logic provides a systemic view of exchanges for creating value through reciprocal services exchanges, and RMP provides a view of exchanges through enduring social relationships. This study used RMP to explain the influence of factors on CS and to examine RMP as an effective way for health insurance leaders to improve CS for clients during the health insurance servicing process.



*Figure 1.* Model explaining the origins of the relationship-marketing principle as part of the SET.

### **Customer Satisfaction**

CS, in its simplest form, involves measuring the gap between expectation and experience. Customers have expectations about service experiences. Schirmer, Ringle, Gudergan, and Feistel (2016) asserted that customers herald CS as an essential element when making decisions to patronize a company. Operational leaders make assumptions based on their understanding of customer expectations. Plewa et al. (2015) indicated that business leaders include CS among key organizational strategies. Furthermore, stakeholders expect positive financial returns from investments in service experiences.

Pizam et al. (2015) demonstrated an association between CS and operational performance. However, Politi et al. (2014) pointed out that in the health insurance industry, not all factors contributing to CS have been studied. Understanding the customer experience contextually enables better opportunities for identifying customer expectations and effectively instituting strategies for improving CS. Therefore, the next discussion includes a review of CS, its origins, contextual settings, and the influencing effect of demographics on CS.

### **Customer Satisfaction Origins**

Economic theories on CS emerged in response to the need for understanding the value of consumer behavior at the macro level, such as trade behaviors between countries as early as 1936 (Kumar, 2015). Verhoef and Lemon (2016) explained that CS, however, gained prominence as a marketing concept in the 1950s and by the early 1970s, became a significant field of inquiry. Pfaff (1972) argued that traditional measures of economic performance such as gross national product and labor/workforce activity did not address critical social questions such as whether the goods produced, and services offered were what customers wanted. Additionally, Pfaff challenged the absence of an answer to questions about whether customers were satisfied with the goods and services offered. Pfaff's study offered economists an alternative method for measuring economic performance to address these critical social questions and became the genesis for measuring CS with social indicators as a measure of market performance within the United States.

Advancements in understanding CS were marked in the late 1980s when assessing and evaluating customer perception of a service experience emerged as a significant data point. The origins of testing CS began with Parasuraman, Zeithaml, and Berry (1988), who tested measurable perceptions of service quality using the five-point SERVQUAL instrument through service quality factors. Claes Fornell expanded upon the SERVQUAL instrument by creating the Swedish CS Barometer in 1989, and after that, the ACSI in 1994 (Hue Minh, Thu Ha, Chi Anh, & Matsui, 2015). Researchers now use the ACSI as the standard for measuring CS by measuring factors influencing quality, value, loyalty, and service complaints about products or services specific to CS.

Knowledge of CS expanded with research on the importance of examining CS with a systemic view. Kranzbühler, Kleijnen, Morgan, and Teerling (2018) asserted that the awareness to the need for mapping the components of customer experience and identifying moments of truth that significantly influenced satisfaction. Building understanding upon studies (for example, Verhoef & Lemon, 2015) regarding moments of truth, examinations began in earnest by looking for opportunities when extracting value in the acquisition, marketing campaign, customer service, and multi-channel processes. These opportunities later cumulated into the development of CRM applications. Verhoef, Kooge, and Walk (2016) stated that leaders began determining value through the analysis of data and using that information for optimizing the value of their respective customer base. These sophisticated CRM applications promulgated in the 2000s and served as a mechanism for organizations when linking disparate elements of



customer experiences into opportunities for improving satisfaction with overall experiences (Shah, Kumar, & Kim, 2014).

Recent developments in CS literature include consumer centrality. Mau, Pletikosa, and Wagner (2018) described consumer centrality as the intentional organizational effort for aligning organizational practices and structure for improving CS for specific customers. Research in consumer centrality (see for example Beckers, Risselada, & Verhoeff, 2014; Kusnitz, 2014; Vivek, Beatty, & Morgan, 2012) created opportunities for investing efforts centered on satisfaction from the perspective of the customer. CS, therefore, has evolved over the past 67 years into a relevant field of inquiry and proliferated as a key driver of organizational performance.

CS exists in several sectors of business, such as in the manufactured goods sector, goods and services sector, and services-only sector of business. Researchers and business leaders have examined factors such as loyalty and experience mapping for anticipating customer sentiment and impression of a brand in nearly every sector of the American economy. The impact of CS, however, is not the same in all industries. Larivière et al. (2016) suggested that business leaders must anticipate differences in perceptions of satisfaction where service delivery models involve the production of tangibles compared to offerings of intangible promises.

Forcing complex interactions such as those found in the health insurance industry into a monolithic product-oriented paradigm cause more complexity and obscures the assessment of CS. McColl-Kennedy et al. (2015) supported the importance of examining CS within distinct service settings. Bowen (2016) offered three such service settings for

CS that are (a) manufactured goods settings, (b) good and services settings, and (c) services-only settings. The following is a discussion on how organizations adapt CS to each of these business sectors in the United States.

### **Manufactured Goods Settings**

The manufactured goods setting represents 19.4% of the American economy (Central Intelligence Agency, n.d.). When measuring CS, leaders in the manufacturing setting focus on the quality of products. An example of industries within this setting is automobile manufacturing, where the product-centric setting focuses on CS improvements through product enhancements (Bowen, 2002). Lan, Zhang, Zhong, and Huang (2016) established that leaders in this manufactured goods setting focus on improving CS through business activities such as production quality, using the product or best use practices, information on maintenance, and speed to market strategies. These strategies, however, do not provide high levels of CS in non-manufacturing settings. Using the goods-dominant orientation for improving CS within the services-only setting is not efficacious because of the focus on managing efficiencies in the production of goods.

### **Good and Services Settings**

The goods and services setting is unique in that customers conceptually bind goods and service as one product, and therefore organizations face challenges when measuring perceptions of CS in goods and services offerings. The restaurant industry is an example where inextricably tethered to satisfaction in the production of food are servicing elements such as the ambiance of the restaurant and the service provided by the

waiter. Pizam et al. (2016) described the goods and services setting as a composition of (1) the tangible product; (2) the behavior and attitudes of employees delivering the tangible product; and (3) the environment within which the customer experienced the product. Customers therefore, derive their perception of satisfaction from many components of an experience in this setting.

Similar to the manufactured goods setting, the good and service setting approach is also product-centered. While difficulties exist in separating goods from services in this setting, the product remains the primary business focus. For instance, Ramanathan, Di, and Ramanathan (2016) demonstrated that in a restaurant setting, the food, service quality, ambiance, and price collectively contributed to CS. The quality of the food, however, had the strongest relationship to CS.

The characteristics for measuring CS in a manufactured goods approach are tangible; whereas, characteristics of the services-only setting are intangible such as trustworthiness, responsiveness, and advocacy. Lemon and Verhoef (2016) asserted that these characteristics used for evaluating the service experience are within in the customer's cognitive evaluation of the service experience, making the services-only setting uniquely different.

### **Services-Only Settings**

Unlike the manufactured goods settings and the goods and services settings, the basis of exchange in the services-only setting is a relationship. The services-only setting is 79.4% of U.S. GDP (Central Intelligence Agency, n.d.) and includes industries such as education, financial, and insurance. Shetty and Basri (2018) demonstrated that there are

few tangible markers for confirming satisfaction in these industries; furthermore, Plewa et al. (2015) posited that in these industries, deriving CS perceptions developed from the service offerings. For instance, in the education industry, Guzman (2015) demonstrated that for college students ( $N = 2094$ ), embedded relational markers for CS are in various processes such as recruitment and tuition processes.

The services-only orientation is crucial for CS within the health insurance interaction because, as asserted by Anderson (2013), perceptions of satisfaction within the insurance interaction are highly personal constructs. Mason (2001) identified such interactions as complex because the operant resources used when constructing these perceptions of satisfaction interacted in a manner that create systems of complex behaviors. Berry, Davis, Wilmet, and Broden (2015) asserted that customers have elevated emotional needs during certain service interactions involving major life events such as illness. Berry et al. indicated that the reasons for the elevated emotions included unfamiliar situations, lack of control, adverse consequences for errors, and multiple events comprising an overarching event. The results demonstrated that it is for these reasons customers seek relationships to dissipate heightened emotions during insurance interactions.

Even still, Plewa et al. (2015) asserted that leaders find it challenging when managing CS in this service setting because many contributing factors outside of the organization's control make presumptions of linear connections ineffectual. For instance, Makarem and Al-Amin (2014) found that during a health care interaction, patients attributed satisfaction to non-clinical aspects of the health care experience. Sweeney et al.

(2015) found in the health care services setting, satisfaction improved when patients and providers actively engaged in creating desired health outcomes. These results suggested that relational factors internal and external to the health care interaction contribute to perceptions of satisfaction.

Efforts to improve CS by focusing on product enhancement, plan options, and provider networks are ineffectual in the services-only setting. Therefore, a focus on intangible markers such as an orientation toward the RMP in the health insurance interaction is appropriate when examining CS. Hence, this study examined CS within a services-only setting.

### **Customer Satisfaction and Relationship-Marketing**

Payne and Frow (2017) asserted that RMP allows for identifying and understanding the formation, maintenance, and influencing factors within a relationship when creating value for customers, suppliers, and organizations. Leaders successful in improving CS utilize practices that appeal, on some level, to consumer's preference for a relationship. Managers of the United Services Automobile Association (USAA) insurance company, for example, used non-traditional approaches for successfully operationalizing the tenets of RMP such as coordination, trust, interdependence, and commitment (Mocker, Ross, & Hopkins, 2015). These approaches were for improving CS and customer loyalty in the auto insurance industry

The RMP is useful for understanding health insurance interaction as a behavioral exchange where the complexity is attributable to what customers bring to the interaction and is what Lusch and Vargo (2014) identified as operant resources. Utilizing RMP

offers a non-traditional approach to service offerings, which considers business as an exchange of competencies where the customer's skill and knowledge are integral components of service experience (Vargo & Lusch, 2004). This level of customer inclusion is especially critical for health insurance customers because of an inherent reliance on the customer's willingness to share information for improving the quality of the health insurance decisions.

RMP has utility when explaining the mutual relationship between the health insurance service professionals and health insurance customers. Shetty and Basri (2018) indicated that these relationships result from the emergence of newly constructed value as an outcome of perceived CS. Palmatier (2008) indicated that RMP is effective for consumers within a context of uncertainty and interdependence found in the health insurance interaction. Jones et al. (2014) conducted a study on U.S. consumers ( $N = 417$ ), which revealed that RMP predicted consumers' willingness to share personal information ( $\beta = .32, p < 0.01$ ) and engage in a relationship with service professionals ( $\beta = .20, p < 0.01$ ). These results indicated that RMP is, therefore, useful in providing leaders an understanding of CS in sectors such as the health insurance interaction. This understanding is necessary where levels of uncertainty are high, and the quality of health care decisions are reliant on the interdependence between service professionals and customers. Certainly, understanding the influencing effects of demographics such as age, gender, and education level is also important.

## **Customer Satisfaction and Demographics**

Understanding the influence of demographics is necessary for leaders in efforts to improve CS. Anderson et al. (2013) asserted that socioeconomic factors are especially meaningful, pointing out that certain demographics are disadvantaged with traditional means of delivering services. Clifton, Diaz-Fuentes, and Fernandez-Gutierrez (2014) asserted that knowing the influence of demographics on CS enables leaders to identify potentially vulnerable groups resistant to improvement efforts. Schirmer et al. (2016) affirmed that demographic insights allow leaders to target improvement initiatives for demographics such as age, education level, and gender in mind. In this section, therefore, I review the literature on the moderating effects of demographics (such as age, gender, and education level) on variables related to CS

### **Customer Satisfaction and Education Level**

The customer's level of formal education may influence their perception of services and facilitate the customer's ability for engagement. Schirmer et al. (2016) demonstrated that retail customers' education levels moderated the relationship between loyalty and CS ( $p < .05$ ). Deshwal (2016) found ( $N = 2568$ ) that the customer's education level influenced the customer's peace of mind while in a retail setting ( $p < 0.01$ ). Akin, Aysan, Ozelik, and Yildiran (2012) found a difference in satisfaction related to education level for credit card customers. Akin et al. (2012) revealed that customers who were university graduates had higher levels of satisfaction, and customers with less than high school education had the lowest levels of satisfaction.

CS related to education levels presents differently for some service sectors. For example, Aljazzazi and Sultan (2017) found ( $N = 1196$ ) no difference in perception of banking service related to customer's education level. Conversely, Ali Jadoo, Aljunid, Sulku, and Nur (2014) found a significant relationship between education level and customer's expectation level, which presents a challenge for organizations in fulfilling those expectations in the health care sector. Jadoo et al.'s (2014) study of health insurance customers ( $N = 482$ ) reinforced this assertion by revealing an association between education status and level of satisfaction with health insurance plans ( $p < 0.001$ ). Although not demonstrated by Aljazzazi and Sultan (2017), these studies suggest that knowledge acquired through formal education enables one's ability to recognize and respond to service experiences in a manner that influence perceptions of satisfaction.

### **Customer Satisfaction and Age**

Age is an identifier of life experiences. Bilgihan (2016) asserted that shared life experiences and social context influence beliefs and consequently behaviors. Grossman and Ellsworth (2017) asserted that age provides a perspective that influences desired experiences. Pointing to socioemotional selectivity theory, Grossman and Ellsworth (2017) suggested having an older age indicated a preference for more meaningful interactions. Beauchamp and Barnes (2015) asserted that older age customers responded to experiences that were relational, and consequentially customers with older ages were more loyal than their younger aged counterparts. The age of a customer influences one's orientation of time. Customers who perceived time as finite sought emotion-based service outcomes. Beauchamp and Barnes (2015) further asserted that customers who perceived



time as expansive sought knowledge-based service outcomes. Customers with older age also displayed more positive emotions during service interactions.

Age also places people within the generational assignments of Baby Boomer, Generation X (Gen X), and Millennials who share similar beliefs and preferences as that generational assignment. For example, Lazarevic (2012) asserted Millennials resist marketing efforts, do not readily extend loyalty, and link their identity to consumption choices, whereas Gen X consumers respond deeply to marketing effort and are brand loyalists. Beauchamp and Barnes (2015) found a significant relationship between people's age and delight ( $p < 0.02$ ). Moreover, the results were significant for delight across gender assignment ( $p < 0.01$ ). In Beauchamp and Barnes' (2015) study, female baby boomers prefer interactions with employees characterized as caring, highly skillful, and responsive to service recovery. Female millennials, however, are delighted with interactions with employees characterized as friendly, attentive, and efficient. Therefore, as executives endeavor to reverse the trend of poor CS, an understanding of the influences that age has on CS is necessary to adequately address health insurance customers' unique service expectations.

### **Customer Satisfaction and Gender**

Gender refers to a set of characteristics that differentiate males from females. Kwok, Jusoh, and Khalifah (2016) asserted that beyond biological differences, males and females also differ in attitudes and responses toward service experiences. Jadoo, Puteh, Ahmed, and Jawdat's (2014) study of satisfaction levels with health insurance revealed a significant association between gender and levels of satisfaction and that gender is a

predictor of satisfaction ( $p < 0.001$ ). Anderson et al. (2013) asserted that gender influences perceptions of CS for services that benefit from high CE levels. Kwok et al. (2016) posited that women's level of engagement in activities such as gathering and reviewing information more meticulously for making informed decisions account for higher satisfaction levels than males.

Men and women experience service interactions differently. Beauchamp and Barnes (2015) asserted that women respond more favorably to the relational elements of service interactions. This assertion is especially useful for the generational assignment influenced by emotional forms of communication. Kwok et al. (2016) found that female's perception of quality in the service interaction influences CS. Joung et al. (2016) found that value and quality present differently on gender groups where price or perception of value is more influential for male customers, and the quality of food influences female customer's perception of quality.

Demographic factors such as education level, age, and gender influence CS in different ways in various service sectors. The literature, however, is silent on the effect demographics has on CS when analyzing RMP, CE and HIL on CS during the health insurance interaction between service professional and customers. The following section includes a review of the literature on HIL.

### **Health Insurance Literacy**

Many Americans are challenged when optimizing the benefits of health insurance. The complexity of the product is a reason for the overall lack of understanding (Paez et al., 2014). An expressed purpose of the ACA legislation is to reduce the complexity of

health insurance so that consumers engage in the process with ease. Rich and O'Malley (2015) asserted that understanding the vital elements of an insurance policy required consumer education to mitigate lackluster participation. Paez et al. (2014) argued that improving health care decisions required increasing HIL. Suggesting that, without specific improvements in HIL, consumer's ignorance affects the selection of insurance products, which resulted in poor satisfaction ratings.

Paez et al. (2014) defined HIL as the knowledge, confidence, and ability to gather and weigh information needed for making decisions. The definition suggests that HIL includes and extends beyond health literacy. As such, HIL includes making insurance decisions in the best interest of one's self and family. Additionally, HIL is an understanding of the insurance process for utilizing the insurance benefit to optimize health outcomes. Although the ACA legislation provides provisions that address factors contributing to complexity such as plan benefits and support when selecting and using insurance plans (Frazier, 2016), the legislation does not address an all-inclusive HIL requirement.

Researchers have found that consumers are ineffective when judging their HIL level. For example, Tipirneni et al. (2018) demonstrated this in an insurance consumer self-report, wherein consumers over-represented their actual understanding of health plans. Further, Newport (2014) found that although consumers reported high satisfaction with exchanges during the 2014 enrollment process, consumers were not adequately informed about their coverage needs when using their health coverage, nor were they clear about the process for using their health coverage. Given this lack of insurance

literacy, customers are not likely to attribute dissatisfaction with plan coverage to failings in their awareness, but rather to perceptions of plan inadequacies. Consequently, leaders need to become informed about the effects of HIL on CS.

### **Customer Engagement**

Customers are not just consumers of and responders to organizations' offerings. Jaakkola and Alexander (2014) described CE as an awareness of the responsibility to create value, and then an acceptance of taking on that responsibility. As demonstrated in Sweeney et al.'s (2015) study, consumers were involved at varying levels in the creation of their satisfaction. However, Wieland et al. (2012) asserted that the prevailing paradigm was that consumers were passive participants in the marketplace. This view is insufficient for satisfying the required level of engagement for selecting health insurance. Jaakkola and Alexander (2014) posited that viewing customers as passive also sources health insurance leader's lack of understanding of how engagement affects business results.

Some operational leaders construe CE as a predetermined role the customer unknowingly played, within established internal processes. However, Lusch and Vargo (2014) asserted that customers come to the interaction with their agenda and expectations of value creation, suggesting a position external to the service process. Jaakkola and Alexander (2014) confirmed the customer's autonomous nature by asserting that the customer's willingness to engage has the potential of being both beneficial and unbeneficial to the organization. One such benefit affects the efficiency of the health insurance marketplace where customer's active engagement in Covered California's health insurance marketplace is required for optimal market competition.

Researchers have used CE for describing customer's level of awareness and involvement in creating value. For example, McColl-Kennedy et al. (2015) asserted that as customers participate in product and service delivery, their engagement significantly shapes leadership decisions. Sweeney et al. (2015) found a direct effect on CS when the health care process includes patients as stakeholders. Eisingerich, Auh, and Merlo (2014) also demonstrated that customer participation is a chief source of value creation and CS. Eisenbeiss, Corneliben, Backhaus, and Hoyer (2014) demonstrated that highly involved customers react to extreme changes in CS and more willingly contribute disproportionate value to the firm. These studies suggest that the more involved customers are with the firm, the more likely customers contribute to the firm's success.

Some researchers have indicated that elevated levels of emotion during a service interaction create challenges for providing a satisfying service experience. For example, Claffey and Brady (2017) asserted that emotions resulting from high levels of uncertainty and risk obstruct levels of participation. Further, researchers have found that during the health provider interaction, where there were high levels of patient benefit for engaging, only 33% of the patients actively engaged (Sweeney et al., 2015). This suggests a need for leadership awareness and an understanding of opportunities for intervening and increasing engagement levels.

As CS evolves, many industries continue tackling and solving the challenges associated with closing the gap between customer expectation and service fulfillment. Jaakkola and Alexander (2014), McColl-Kennedy et al. (2015), and Sweeney et al. (2015) showed from different viewpoints that including efforts beyond product-centric

tactics for improving CS remains challenging in the health insurance industry. There is, therefore, a benefit for increasing leader's understanding of the contextual influence the services-only setting has on CS for the health insurance interaction. Doing so allows for the creation of appropriate internal structures for leveraging operant resources through HIL and CE, accounting for demographic variables.

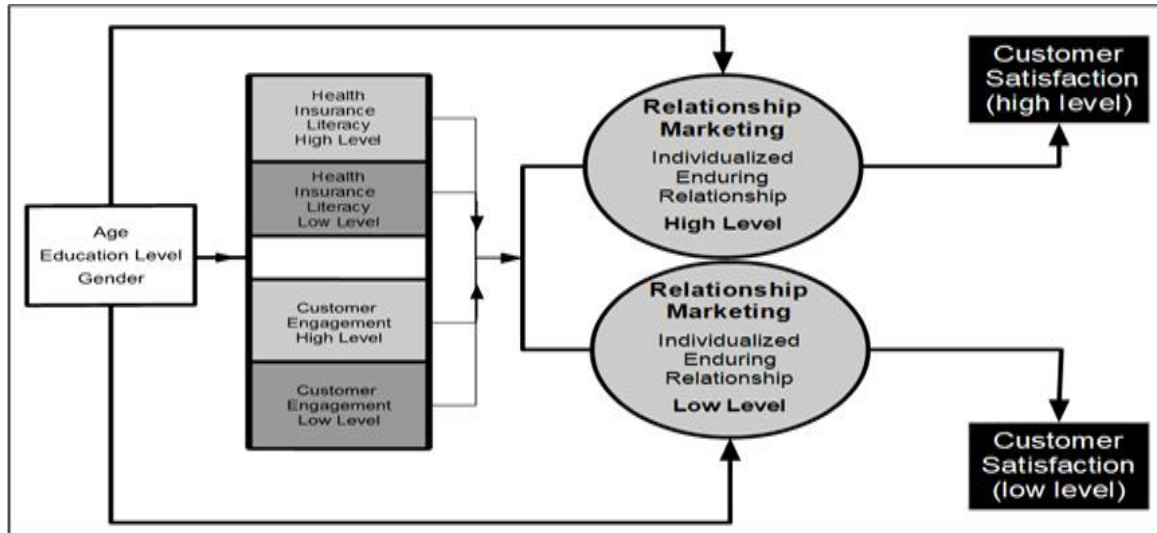
### **Summary and Conclusions**

This chapter reviewed the theoretical framework supporting RMP, and its appropriateness for explaining the relationship between HIL and CE on CS. Other principles, such as transformation service research, and service-dominant logic, were discussed for highlighting the utility of RMP in understanding the research problem of low CS in the health insurance industry.

A thorough review of the literature on CS included a brief history of the origins of CS. A review of CS within the context of sector types was necessary for clarifying CS within the health insurance industry. The literature on the independent variables was examined, along with the moderating variables, for associations with CS within the health insurance industry.

A thorough review of the literature revealed an abundance of expository and empirical analysis on CS within the retail, hospitality, banking and health care industries. There was, however, limited research on CS within health insurance interactions. Further, while ample literature existed for health literacy and CE, scant research existed on the association with CS during the health insurance interaction.

My research, therefore, was intended to fill this gap in the literature. Figure 2 is a depiction of the research objective, which explains CS as a function of RMP, HIL, CE, and demographic variables (Age, Ed Level, and Gender).



*Figure 2.* Effects of relationship-marketing on CS in an antecedent model.

In Chapter 3, I discuss the rationale for the research design and the methodology of my study. A detailed description of the research method and design strategy is presented which focuses on the population, sampling procedures, procedures for recruitment, instrumentation, and data analysis plan used for this study.

### Chapter 3: Research Method

The purpose of this quantitative correlational study was to use the SET's underlying principle, RMP, to test the influence of RMP, HIL, and CE on CS, controlling for Ed Level, Age, and Gender for adults between the ages of 18 and 64 living in the state of California. The sample included adults enrolled in Covered California's health insurance exchange currently or in the past. In this chapter, I describe the research design and rationale, population for the study, sampling process, data collection plan, and data analysis plan. This chapter concludes with a discussion of threats to validity and ethical procedures.

#### **Research Design and Rationale**

The quantitative methodology includes three designs, which are the true experimental design, the quasi-experimental design, and the correlational design (Jann & Hinz, 2016). My study used a correlational design to examine the relationship between the independent variables of RMP, HIL, CE, and the dependent variable of CS, controlling for the demographic variables of Ed Level, Age, and Gender. Alsulaiman, Forbes, Dean, and Cohen (2015) demonstrated that a correlational design is an appropriate strategy for examining relationships among variables, such as those found in my study, to explain behaviors based on those relationships and to test the effects of theories on relationships.

#### **Experimental Designs**

A true experimental design is used to explain the effects of a stimulus on a dependent variable by observing the response of participants randomly assigned to



different conditions in the experiment (Shin, Ellinger, Mothersbaugh, & Reynolds, 2017). The experimental design was not appropriate for my study because there was no stimulus or intention to control different conditions or manipulate participation. Further, there was no intention to draw conclusions about causation, identify time order data when testing existing relationships, or explain the non-spuriousness of a third variable.

### **Quasi-Experimental Design**

A quasi-experimental design is similar to the true experimental design but is less rigorous because of the absence of randomness of group assignment when introducing a stimulus to a variable (Jann & Hinz, 2016). Consequently, the quasi-experimental design was not useful for answering the research question in this study because there was no stimulus or intention to assign participants to different conditions.

### **Correlational Design**

The correlational design was used to examine relationships between HIL, CE, RMP, demographics (independent variables), and CS (dependent variable). Other researchers have studied people's attitudes and behavior about a phenomenon by testing hypotheses using statistical models. For instance, Alsulaiman et al. (2015) tested a relationship using a Pearson's correlation test statistical model ( $N = 294$ ). These researchers tested a relationship between consumer's perception of value and word of mouth activities ( $r = 0.49, p < .000$ ). The correlational design was therefore appropriate for my study because the design allowed for statistical analysis to test relationships between customers' perceived satisfaction and levels of HIL, CE, and RMP.

Wong and Malone (2016) used a correlational design ( $N = 291$ ) to test the relationship between the effects of vanity attributes (independent variable) and receptiveness towards short message service (SMS) messaging (dependent variable). Regression analysis was employed to understand predictive relationships among vanity attributes and receptiveness to SMS marketing messages. The correlational design is also appropriate when testing the relevance of a theory in terms of relationships between variables. For example, Alleyne (2012) demonstrated the effectiveness of a theory by testing the effects of increasing technological self-efficacy on professional's ability to overcome stress from technology on higher levels of job satisfaction. Similarly, using the correlational design for my study to test the application of theory for understanding the relationships among the RMP, HIL, CE, and CS was an appropriate strategy.

Understanding relationships between independent and dependent variables in this study enabled a further understanding of CS. Specifically, this was accomplished through hypothesis tests to evaluate conjectured relationships, thus providing empirical evidence related to the research question. This study advanced knowledge in the health insurance industry by using a correlational design for understanding the antecedents to CS when making health insurance choices.

### **Instrumentation and Operationalization of Constructs**

The independent variables in the study were RMP, HIL, and CE. The demographic variables were Ed Level, Age, and Gender. The dependent variable was CS. Permission to use the instruments in this study is in Appendices A, B, C, and D. The variables were measured using an amalgam of the following four existing scales:

- Customer Satisfaction with Service Scale (Susskind, Kacmar & Borchgrevink, 2003).
- Characteristics of Partnership Success – Partnership Attributes Scale (Mohr & Spekman, 1994)
- Health Insurance Literacy Measure (Paez et al., 2014).
- Customer Value Co-creation Behavior Scale (Yi & Gong, 2013).

### **Measuring the Customer Satisfaction Variable**

CS was defined as the emotional impression of an entire experience (Lee et al., 2015) and was determined by measuring attitudes about an experience during the service interaction. The customer satisfaction scale used in this study was created by Susskind et al. (2003) and used for measuring frontline service workers' orientation in terms of delivering satisfaction. Ison (2016) also used the scale in the hospitality industry population and reported high reliability of .96. The strong reliability (Cronbach's  $\alpha = .96$ ) indicated that the scale was suitable for measuring CS in other populations such as customers who purchased health insurance through the Covered California marketplace. The CS scale was a Likert scale with six items ranging from 1 = strongly disagree to 5 = strongly agree. A one indicated the lowest level of CS, and a five indicated the highest level of CS among customers. One item in this scale was reverse-scored.

I took the average of the multiple responses which yielded a continuous random variable, and therefore, the CS variable was on a continuous scale. The measures associated with the scale were, therefore, suitable for analysis using descriptive statistics such as measures of central tendency and variation. For instance, the mean indicated the

average CS response, and the median indicated the middle response. Using the CS scale in its original form was, therefore, beneficial when measuring CS for this study's population.

### **Measuring the Relationship-Marketing Variable**

The RMP is useful for understanding elements needed to maintain relationships as well as the influencing factors within a relationship needed to create value for customers and organizations (Payne & Frow, (2017). The three domains of partnership in Mohr and Spekman's (1994) instrument are attributes of the partnership (four scales), communication behavior (three scales), and conflict resolution techniques (six scales). Strauss et al. (2016) showed that using independent domains of scales for taking measures in social science is a common practice among researchers. This is because each domain within the instrument carries its own reliability measures, rendering all other domains independent. The reliability of each domain used in my study was therefore independent and suitable for use as part of the study.

For my study, RMP was measured using two of three domains (the attributes of the partnership and communication behavior dimensions) using a Likert scale. The third domain (conflict resolution techniques) was not suitable for my research without making substantial changes. In its present form, the unit of analysis for the conflict resolution technique domain focused on the unique business to business (B2B) relationship between manufacturers and distributors. There was no such relationship tested in my study.

I utilized three of the four scales within the attributes of the partnership domain, which were commitment, coordination, and trust. Modifying the items within these scales

was necessary for this study. For example, I added the item *my activities with the insurance company were well coordinated with (a) claims, (b) enrollment and billing, and (c) membership to the coordination* scale. Further, items that had statements referring to manufacturer were replaced with the word, insurance professional. Finally, the fourth scale of interdependence with an exceptionally low Cronbach's  $\alpha$  was removed. Vaske, Beaman, and Sponarski (2017) showed that because of modifications such as these, re-testing these three scales within the attributes of partnership domain during a pilot study is appropriate.

I used one of the three scales within the communication behavior domain, which was communication quality. Communication quality had a scale reliability measured by Cronbach's  $\alpha = .91$  and provided an additional means for measuring elements of RMP. Modifying this scale was necessary to revise items that had references to manufacturer with service professional. Revalidating this scale was necessary because of substantial changes made to align items in the scale with the health insurance population. The original intention of the scale was to measure communication behavior in the manufacturing industry for B2B relationships. Retesting the reliability was intended to understand the communication behavior domain when analyzing relationships between health insurance companies and their customers.

The RMP instrument had 21 items using a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. A one indicated the lowest level of RMP, and a five indicated the highest level of RMP among customers. Three items in this instrument were reversed scored. The single score for the RMP variable was obtained by calculating a

mean value of the responses to the 21 items in the instrument using the commitment, coordination, trust, and communication quality scales.

### **Measuring the Health Insurance Literacy Variable**

HIL occurs when customers increase their understanding of the health insurance processes and recognize their role in the service interaction (Shane et al., 2015). Paez et al. (2014) created the HIL Measure (HILM) for assessing consumers' ability to select and use health insurance. The HILM is a 20-item instrument that identifies two domains, which are choosing insurance and using insurance. The instrument uses a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. A one indicates the lowest level of HIL, and a five indicates the highest level of HIL among customers. The two scales in the choosing insurance domain are confidence choosing (Cronbach's  $\alpha = .93$ ) and comparing plans (Cronbach's  $\alpha = .96$ ). The two scales in the using insurance domain are confidence using (Cronbach's  $\alpha = .93$ ) and being proactive (Cronbach's  $\alpha = .80$ ).

Bartholomae, Russell, Braun, and McCoy (2016) used the HILM to investigate HIL when making decisions about health insurance programs, further demonstrating the reliability of the scale. Using this instrument in its original form was, therefore, beneficial for measuring HIL for the study population. The customer HIL variable was measured by calculating a mean value of the responses to the 20 items in the instrument using the confidence choosing, comparing plans, confidence using, and being proactive scales.

### **Measuring the Customer Engagement Variable**

CE occurs when there is a demonstrated willingness to investigate and select appropriate health care insurance plans during the service interaction (Jaakkola &

Alexander, 2014). The customer value co-creation behavior instrument (CVCB) is the tool used for measuring scores for the CE variable. Yi and Gong (2013) created the CVCB instrument for measuring engagement behaviors of customers during service interaction in multiple industries.

The CVCB instrument has eight scales (information seeking, information sharing, responsible behavior, personal interaction, feedback, advocacy, helping, and tolerance). I used four of the eight scales for the 12 items used in my study. The 12 items in the CVCB utilize a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. A one indicates the lowest level of CE, and a five indicates the highest level of CE among customers. The CE variable was measured by calculating a mean value of the responses to the 12 items in the instrument using the information sharing, personal interaction, feedback, and tolerance scales. The original instrument has a reliability of Cronbach's  $\alpha = .92$  for all eight scales.

Vega-Vazquez, Ángeles Revilla-Camacho, and Cossío-Silva (2013) used the CVCB instrument to measure engagement levels for hairstylists and personal trainer's customers in a business to customer (B2C) setting, similar to the strategy in my study. Although the strong reliability showed that the instrument was suitable for measuring CE, revalidating the instrument was necessary because of utilizing only four of the eight original scales.

### **Measuring Demographic Variables**

Deshwal (2016) identified demographic factors like educational level, age, and gender that affect CS and that were useful data for my study. The demographic variables

were informed by three questions that pertain to the participant's current personal information such as educational background (categorical variable), age (continuous variable), and gender (categorical variable). The two categorical independent variables, Ed Level and Gender, were converted to an appropriate number of dummy (numerical) variables.

### **Antecedents of Customer Satisfaction Survey (ACSS)**

Although the four instruments (customer satisfaction with service scale, characteristics of partnership success – partnership attributes scale, HIL measure, and customer value co-creation behavior scale) were useful for the study, not all of the items from each instrument pertained to the research question in this study. Consequentially, I combined the relevant items from each instrument into one instrument, the ACSS (Appendix E) with a 5-point Likert scale to eliminate wasted time collecting data not relevant for this study (Hylton, 2016). The ACSS instrument included 59 questions from the four instruments and three demographic questions. The ACSS consisted of five sections, which were RMP (21 items), CS (6 items), CE (12 items), HIL (20 items), and demographics (3 items), for measuring the variables in my study. Although not included as a variable in my study, there was one question about the type of insurance currently held. Therefore, the ACSS consisted of 63 items.

### **Pilot Study**

Researchers, for example Alleyne (2012), have used pilot studies to test the feasibility of a study before launching the major study and for validating an instrument for use in a full-scale study. Shukla and Srivastava (2016) found conducting a pilot study



useful when combining survey items and revalidating an instrument for standards of reliability and validity. Al-Hakim and Lu (2017) also used a pilot study to validate the reliability of survey questions when investigating the effects of collaboration on business performance. Therefore, a pilot was used to test the reliability and validity of the ACSS instrument in this study. Although researchers (for example, Mohr & Spekman, 1994; Paez et al., 2014; Susskind et al., 2003; and Yi & Gong, 2013) have demonstrated the validity and reliability of the four instruments used for creating the ACSS instrument, slight modifications to the four instruments required checking the validity of the ACSS instrument.

There are few studies that expound or agree on the determination of pilot sample size. According to Viechtbauer et al. (2015), there are various guidelines for determining the sample size needed in a pilot study to detect a problem in a study instrument, such as 9% of the main study's sample size or 50 participants. Hazzi and Maldaon (2015) found a sample size of 10-20% of the main study sample size reasonable for validating an instrument. Therefore, for my study, the pilot used 34 participants from one of the selected study sites within the sample frame to complete the survey in person at the site facility. Utilizing participants in the sample frame for the pilot study allowed for validating the instrument and informing the data collection process.

As with the main study participants, the pilot study participants were recruited during the Sunday worship service. Each pilot participant received instructions on completing the survey, reviewed the survey for clarity of instruction, the flow of the survey, the complexity of completing the survey, and potential areas of confusion. The

pilot participants were asked three additional questions about their thoughts on the survey (Appendix E). When completed, the pilot participants returned their surveys to me. A confirmatory factor analysis (CFA) was used to test that the measured variable continued to represent the constructs within this study. Also, I calculated Cronbach's  $\alpha$  to ensure maintenance of scale integrity following the blending of the items. Finally, the results from the pilot study ultimately informed revision needed to the ACSS used in the full-scale study.

## **Methodology**

### **Population**

The population for this study was residents of the state of California who acquired health insurance coverage through the Covered California state-based market exchange from January 2014 through January 2018 while a resident in Los Angeles County. Of the 39,259,000 residents living in California, approximately 25% reside in Los Angeles County. According to the U.S. Census Bureau (2017), Los Angeles County is the most populous county in California with a diverse representation by education level, age, and gender among those without health insurance. According to Covered California (2017), of 1,385,920 enrolled in membership plans in 2017 through Covered California, 27.4% resided in Los Angeles County. Individuals who qualify for Covered California were residents with household incomes 138% to 400% of the federal poverty level. Eligibility for Covered California was contingent on ineligibility for public health coverage such as Medi-cal for those with income 0% to 138% of the federal poverty level, or Medicare for those aged above 65 years, or TRICARE for veterans.

People ineligible to participate in Covered California include residents with health insurance that is affordable through an employer, or the employer's health insurance coverage affords minimum value. Participants in Covered California include residents aged 18-64 and who are either self-employed; employed for small businesses with less than 25 full-time employees; employed part-time or earning less than the federal poverty level; or unemployed due to a reduction in force action, elimination of industry, or market conditions (Covered California, 2017).

### **Sampling Frame**

The sampling frame allows the study sample to represent the target population, which in this study were consumers who have utilized Covered California, now or in the past, for purchasing health insurance in Southern California. The sampling frame for this study consisted of residents affiliated with community churches associated with the First Ladies Health Initiative in Southern California. Researchers have used churches as sampling frames for understanding social behavior. For example, Timmermans, Orrico, and Smith (2014) used participants from a community church to understand the spillover effect on organizations when citizens are uninsured ( $N = 46$ ). Blocker and Barrios (2015) used the church community to explore the role of service providers in creating transformative value ( $N = 50$ ). Both studies indicated that faith-based communities were appropriate sampling frames for understanding a target population. The churches selected were located in communities with household incomes and demographic makeup that represent the population for this study. Selection of churches and parishioners used the sampling method and procedures discussed next.

## **Sampling and Sampling Procedures**

The purpose of sampling is to represent the population when access to the entire population is not feasible. There are two sampling methods for recruiting study participants, which are probability and nonprobability. According to Lucas (2014), probability sampling is grounded in the theory that every participant has an equal chance of being selected to participate in a study. Although the probability sampling is the preferred method when conducting social science research (Doherty, 1994), using this method requires that researchers have access to the entire population. However, direct access was not available for this study, consequently requiring the use of a nonprobability sampling strategy.

The sampling strategies for nonprobability samples are convenience sampling, purposive sampling, snowball sampling, and quota sampling. Feehan and Salganik (2016) showed that the nonprobability sampling method is useful for choosing participants for a study when direct access to the population is not available such as in probability sampling. Baker et al. (2013) asserted that some recruitment strategies for the nonprobability method include canvassing targeted areas such as malls, community outreach efforts, and churches when there are available participants for self-selecting into the study.

Lucas (2014) stated that challenges with nonprobability samples are that recruitment strategies often yield low participation, low representation of the target population, and increase in the likelihood that all characteristics are not evenly distributed in the sample. Baker et al. (2013) showed that overcoming this challenge requires a

sufficiently large enough sample size to ensure adequate representation of all the population characteristics. For my study, ensuring a sufficiently large sample size involved the utilization of power analysis, inclusion of additional churches within the study population, and extending the data collection timeframe.

Convenience sampling was appropriate for this study. Convenience sampling is used predominately by social scientists, primarily because the method is opportunistic and inexpensive compared to probabilistic sampling. Feehan and Salganik (2016) asserted that this sampling method was also for gaining access to hard-to-access study participants, such as those found in the population for this study. Researchers have successfully used convenience sampling to examine relationships and construct theories. For example, Abdelfattah et al. (2015) leveraged the ease and cost-effectiveness of the convenience sampling method for examining the influence of service quality on loyalty for health insurance products. Also, Kamra, Singh, and Kumar (2015) used convenience sampling to formulate theories about key factors affecting patient satisfaction with health care services and whether those factors differed with health insurance.

The other sampling strategies not appropriate were purposive, snowballing, and quota sampling. Purposive sampling was considered and involved intentionally targeting participants with unique or specialized knowledge for answering the research questions. Roy, van der Weijden, and de Vries (2017) used purposive sampling when collecting data for studying the effects of patient satisfaction on future intention to utilize provider services. The recruitment strategy for the researcher's study was targeting participants with specific socio-demographic characteristics residing within the country's rural

setting. This sampling method, however, was not appropriate for my study because answering the research question did not require targeting participants with unique knowledge or expertise.

Snowball sampling was another type of convenience sampling method considered that involved using existing study participants to gain access to additional study participants. Vidya and Nandakumar (2017) used the snowball method when gathering data for gaining insight into patient experiences. The researchers ask participants for contact information of others willing to potentially participate in the study. This sampling method was not appropriate for my study because the likelihood of casual awareness of others participating in Covered California was slight.

Quota sampling was also considered to ensure certain characteristics found in the population existed in the sample by intentionally selecting participants with characteristics proportional to their existence in the population (Górny & Napierała, 2015). However, there was no need, beyond ensuring sample representation of the population, for intentionally designing for certain sampling characteristics within the target population.

The convenience sampling method was appropriate for this study because direct access to participants was not an option. This sampling strategy was opportunistic and inexpensive, allowing access to hard-to-access study participants, and by using self-determination selection. Ensuring representation of the target population was enhanced by using a large sample size from the population. Discussion of determining an appropriate sample size for the study follows.

## Sample Size

The power analysis to determine sample size was necessary for minimizing the probability of Type I or Type II errors. According to Vann (2017), a Type I error is rejecting a null hypothesis when the null hypothesis is true (false positive), and a Type II error is failing to reject a null hypothesis when the null hypothesis is false (false negative). The probability of a Type I error is  $\alpha$ , also called the level of significance. The probability of a Type II error is  $\beta$ . Statistical power is  $1 - \beta$ . Vann asserted that having a large enough sample size provides study robustness and lowers the probability of the occurrence of a Type I or Type II error when assessing hypotheses.

Determining a sample size using power analysis is based on the type of statistical test required for analyzing research questions and hypotheses. I used the G\*Power 3.1.9.2 application to calculate the minimum sample size (Faul, Erdfelder, Lang, & Buchner, 2007). The parameters for conducting a power analysis for MLR fixed model  $r^2$  test included a 0.15 (medium) effect size, a .05 level of significance, a power of .80 (Miller & Ulrich, 2016), and six predictors (CE, HIL, RMP, Age, Gender, and Ed Level). The resulting minimum sample size was  $N = 98$  participants.

Holston-Okae (2017) used a medium effect size, an alpha level of .05, and a power of .80 to calculate a sample size of  $N = 139$  when conducting comparable studies for analyzing CS. Vann (2017) also used a medium effect size, an alpha level of .05, and a power of .80 to determine the minimum sample size  $N = 68$  when conducting a study on the predictive relationship between job satisfaction and employee perception (independent variables) and profitability (dependent variable). To minimize the

probability of a Type II error (failure to detect a significant relationship when a relationship exists), Vann (2017) increased the power to .99 resulting in an increased sample size ( $N = 146$ ). Martinez (2016), however, utilized a power of .80 with three predictors to analyze the relationship between employee engagement, trust, and intrinsic motivation. Additionally, while larger samples could solve the representation challenge, raising the power for the proposed study to achieve a larger sample size would increase the cost and time of the study. Therefore, a minimum sample size of  $N = 98$  with a power of .80 provided sufficient probability of rejecting a false null hypothesis.

### **Participation**

Determining response rate is a challenge when using the convenience sampling strategy and when a finite number within the sample frame is unknown. Some studies provide a clear response rate based on the number of participants invited to participate in the study compared to those who responded and those who successfully completed the study. Since there is no list of participants invited to take part in the study, and participants must self-select into the study at their convenience, determining a response rate is less precise. Nonetheless, determining the likelihood of obtaining the required minimum sample size was prudent.

Participants for this study came from parishioners of churches with a First Ladies Health Initiative. The membership for these churches ranged from small community churches (>100) to mega churches (<30,000). Since Bradley (2016) stated that regular church attendance was estimated at 29% of all church members, the strategy for ensuring a minimum sample size included targeting churches with a collective membership of



51,000, resulting in 14,790 available church members to survey. Also, of consideration was Covered California's (2016) reported statistic that approximately 380,520 (27%) plan members resided in Los Angeles County. Since the church was a part of most communities, 27% ( $N = 3,993$ ) of the targeted church membership was likely to be eligible to participate in the purposed study.

Achieving the minimum sample size ( $N = 98$ ) of participants required providing 295 qualified participants access to the study with an expected 33% response rate. Determining the response rate was informed by studies (Hawes-Dawson et al., 2016; Park, Jang, Nam, Grey, & Whittemore, 2017; Whitt-Glover, Borden, Alexander, Kennedy, & Goldmon, 2015) that utilized a church setting for collecting data. For these studies, introducing incentives increased response rates as high as 71% and as low as 20%, where there were no incentives for participation. There were no incentives planned for my study.

Canvassing Los Angeles County churches participating in the First Ladies Health Initiative provided a reasonable likelihood of obtaining the minimum sample size ( $N = 98$ ) among church goers eligible to participate in the proposed study. However, had this strategy failed, Romero (2015) confirmed it was feasible to expand the targeted churches within Los Angeles County environs or extend the data collection period. The following summarizes my procedures for recruiting these ( $N = 98$ ) study participants, procedures for participation in the study, and the process for collecting data.

## **Procedures for Recruitment, Participation, and Data Collection**

### **Recruitment**

After making any necessary revisions revealed during the pilot study, recruitment for the main study participants took place at churches identified from a list of participating churches involved with the First Ladies Health Initiative in Los Angeles, CA. The first part of the recruitment plan was obtaining authorization to collect data at churches, which involved contacting the First Ladies (pastor's wives) of each church by phone for verbal approval, followed by an email request for written approval. A copy of the request to collect data from the churches is located in Appendix F. After obtaining approval to use the research site, the next step involved using the First Ladies to provide an awareness of the study to their parishioners and make an appeal for participating in the study. In addition, awareness of the study included placing information about the study in church bulletins and placing signage in a designated area of the church, inviting parishioners who qualified to participate in the study. During the reading of weekly announcements, as part of the Sunday worship program, the First Ladies verbally introduced the research and shared with parishioners the reason for the research, and the value in conducting this type of study. The announcement about the study included participation criterion, its voluntary nature, and specifics about where to go after Sunday worship service to take part in the study. A table, specifically designated for information about the questionnaire, was identified during the announcements at the beginning and end of Sunday worship service. Parishioners received a package where the first page was

the invitation to participate in the study (Appendix G) and the qualifications for participation. The next steps involved actual participation in the study.

### **Participation and Data Collection**

Participation in the study began when parishioners came to the designated area of the church and obtained the information packet that included an introduction letter, the informed consent form, and the survey (Appendix E). Participants read the requirements for taking the study for self-validating their qualification to be in the study. These qualifications were that participants had obtained their health insurance plan through the Covered California marketplace in the past or presently. Once participants confirmed qualification for being in the study, the next section in the packet was for providing informed consent. Participants read the informed consent form, indicating their agreement to participate by checking the box at the end of the form.

Self-qualification occurred when participants answered yes to obtaining their health care insurance plan using the Covered California marketplace in the past or for their existing policies. Those who indicated a no response were set aside as not qualified to be in the study.

Participants provided informed consent in an implied form. Implied consent was provided when participants read the informed consent page and continued volunteering to participate in the study. Some participants read the consent form and refused to volunteer to participate in the study.

The next step involved taking the survey, which began with the instruction for completing the paper survey. Participants were also reminded that their responses were

anonymous and confidential and that participating in the study in no way affected or was connected to their health insurance policy or affected their ability to use their policies. In the directions, participants were asked to read each question in the survey and check an option from 1 to 5 indicating their response. Participants were also asked to provide one answer per question. Participants were encouraged to answer questions honestly and advised that there were no right or wrong answers. Participants had an option to take the survey off-premise for completion or opt to complete the survey at the church in a room designated for study participants only. If the participant elected to complete the paper questionnaire on-site at the church, a designated room was set aside for completion of the survey. The questionnaire and information packet had the researcher's number for addressing any questions about the questionnaire or study.

Participants were to respond to each section of the survey. The first question involved self-qualifying for the study. Next were questions on RMP, CS, CE, HIL, and demographics. Although the desire was to have participants complete their survey, some participants may have felt stress or anxiety when taking the survey; therefore, participants were reminded that they could stop taking the survey at any time without any adverse effect to them, and should they opt to stop answering the questions on the survey, to return the uncompleted survey. There was a thank you for participating in the study note on the last page of the survey, which marked the end of the study. Participants who completed the survey on-site returned the completed questionnaires to me. Those who completed the 63-item paper survey off-site were provided a self-addressed postage-paid envelope to return the completed questionnaires via the U.S. Postal service.

Data collection occurred during the approved data collection period and ended when obtaining the minimum sample size. The U.S. Postal Service mailbox was checked and cleared daily. Counting and visually examining the surveys for completeness allowed for determination of the frequency of reminders, whether to adjust the time frame for collection or expand the collection to include additional churches.

### **Data Analysis Plan**

This section reviews the processes within the data analysis plan that included screening and cleaning the data, and the statistical analysis required to answer the research question. For this study, the SPSS application for data analysis enabled efficient analysis, presentation, and interpretation of data as it pertained to the research question.

### **Data Entry**

Once data collection was completed, the next step was manually entering the data into an electronic format. As such, placing data into variables became necessary. Each variable question had a corresponding alpha numeric code name that included three to four digits. The first digit identified the variable name, and the second digit represented the questionnaire number. For example, RMP was the first section of the questionnaire and included 21 questions, and therefore coded as RM1 to RM21. CS was the second section of the questionnaire and included six questions, and therefore coded as CS1, CS2, and so on. All variables were coded similarly.

SPSS was used to record the scored response to each question using the three to four-digit alphanumeric codes. I reversed scored three questions for the RMP variable, and one questions for the CS variable. Each demographic variable had a single-name

code: Ed Level, Age, and Gender. Dummy variables were used to convert the categorical variables, Ed Level and Gender, to numerical variables.

### **Data Screening and Cleaning**

The first step in data analysis involved screening collected surveys for completeness and self-qualification to participate in the study. A completed survey was any survey where participants completed at least 85% of the questionnaire. Any questionnaire where participants did not answer more than 15% of the questions on the survey was, therefore, incomplete and not used as part of the survey responses. Researchers such as Curley, Krause, Feiock, and Hawkins (2017) accepted data where participants completed at least 80% of a survey. The rest of the survey data were completed by mean imputation for missing data.

The screening process involved reviewing surveys to confirm qualification to participate in the study. For this study, a qualified survey meant that participants had used Covered California in the past or were currently using Covered California for their health insurance coverage. Also, a qualified survey meant the participant signified informed consent by checking the box on the Informed Consent Form.

### **Research Question and Hypotheses**

The central research question sought to understand to what degree did CE, HIL, RMP, and demographic variables predict CS for participants when engaged in health insurance decisions.

*RQ:* Do RMP, HIL, and CE, and demographic variables Ed Level, Age, and Gender influence CS while engaging in health insurance decisions?

$H_0$ : No independent variables influence CS.

$H_a$ : At least one independent variable influences CS.

### **Descriptive Statistics and Graphical Analysis**

Descriptive statistics and graphical analysis provided an aggregation of participants' responses that revealed central tendencies and variation, including graphs and tables for supporting and summarizing results so that the general behavior of participants was clear. I used descriptive statistics and graphical analysis to analyze and present demographic information, including participants' age, gender, and education level. The following are discussions about using MLR for analyzing the research question.

### **MLR Analysis**

MLR is used for examining the predictive relationship between multiple variables and a dependent variable (Pereira, 2015). For my study, the research question was addressed by using MLR to examine the predictive effect of CE, HIL, RMP, and demographic variables on CS collectively. Using this type of analysis provided many benefits, such as understanding how each variable contributed to the outcome condition. Further, statistically significant relationships were then used to build a predictive model of the dependent variable composed of the significant main effects (independent variables) and factor interactions (Ramanathan et al., 2016). The results of the analysis were used to create an equation for predicting point estimates of the dependent variable.

**Assumptions.** MLR is sensitive to violation of assumptions: normal distribution of residuals, homogeneity, independence, and linearity. The first assumption is that the

residuals are normally distributed. The next assumption is that the variance of the dependent variable is the same for all values of the independent variables. A further assumption is that all responses are independent among participants. Finally, before using independent variables in a statistical model, each variable must show a linear relationship using graphical analysis. These assumptions were checked as part of the data analysis phase.

**Regression model.** The general form of the regression equation is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$

where

$Y$  = the dependent variable (*CS*)

$\beta_0$  = the  $Y$  intercept for the population

$\beta_i$  = the slope for the population (the coefficient for the independent variable  $X_i$ )

$X$  = each independent variable ( $X_1$  customer engagement,  $X_2$  health insurance literacy,  $X_3$  relationship-marketing,  $X_4$  *EL1*,  $X_5$  *EL2*,  $X_6$  *EL3*,  $X_7$  *EL4*,  $X_8$  *EL5*,  $X_9$  *Age*,  $X_{10}$  *Gender*)

$\varepsilon$  = random error in  $Y$  for observation  $i$

The following is the mathematical expression of the hypothesis for the overall model:

$H_0$ :  $\beta_1 = \beta_2 = \dots = \beta_k = 0$  (there is no linear relationship between the dependent variable and the independent variables).

$H_1$ : at least one  $\beta_j \neq 0$  (there is a linear relationship between the dependent variable and at least one independent variable).



The results of the MLR analysis are significant if the  $F$ -statistic  $>$  critical value of  $F$  or if the  $p$ -value  $\leq .05$ . This reveals that at least one  $\beta$  is significantly different from zero. Then, utilizing the  $t$ -test and its associated  $p$ -values, the significance of any individual independent variable is evaluated. Additionally, two-factor interactions are evaluated to determine if the relationship between one independent variable and the dependent variable is dependent upon the value of another independent variable. These potential interactions have implications when interpreting the statistical model.

I used a combination of stepwise and best-subsets regression to identify the best model in which the independent variables were significant. The highest adjusted coefficient of determination, adjusted  $R^2$ , signified the best model, the model which accounted for the most variation in the dependent variable. The final model is useful for making predictions and understanding the extent to which the individual independent variables explain variation in the CS phenomenon in the health insurance industry.

Previous research demonstrated this type of analysis for empirical studies. For example, Pereira (2015) used MLR to understand how functional and technical quality, participation, and positivity predicted CS for medical patients. Similarly, Ramanathan et al. (2016) used MLR to determine the predictive relationship between food, service, ambiance, and price with overall satisfaction with a restaurant experience.

### **Threats to Validity**

#### **External Validity**

The external threats to validity are content validity, selection bias, and hypothesis guessing. Frankfort-Nachmias and Nachmias (2008) indicated that external threats to

validity adversely affect the ability to generalize study results to other groups. Face validity is a common type of content validity used when evaluating the extent to which the survey questionnaire appeared to others as measuring what was intended. Also, comparing the questionnaire with other surveys measuring the predictors is more expedient.

Wolbring and Treischl (2016) asserted that the convenience sampling strategy was vulnerable to selection bias because participants self-selected to participate for unknown reasons that may influence their responses to the survey questions. The selection bias reduces homogeneity of characteristics between the sample and population and threatens the ability to generalize study results to the population. A large sample size helps minimize the threat of selection bias. Also, reporting the demographics of the sample enables the reader to understand the study's level of generalizability.

Hypothesis guessing occurs when participants anticipate the desired outcome of the study and attempt to align responses to the believed outcome rather than answering the questions truthfully. My cover letter and informed consent form served to mitigate this threat by clearly disclosing the intentions of the study.

### **Internal Validity**

Bairati, Turcotte, Doray, Belleau, and Grégoire (2014) posited that internal validity threatens the ability to confidently assert a relationship exists between the independent and dependent variables. My study included survey questions relevant to the independent and dependent variables for responding to the research question. I also used

closed questions as suggested by Madison (2014) to reduce ambiguity and improve the validity of the responses.

Of concern for this study was the history effect. Vann (2017) described the history effect as the influence events within the environment have on the conditions of a study. The ongoing national narrative regarding the Affordable Care Act introduced a non-spurious variable for explaining how participants perceive CS through Covered California. I mitigated these threats by using a valid instrument with survey questions specific to the research question and hypothesis. Other internal threats (including maturation, or experimental mortality) were not relevant threats to this study since it was not an experimental study involving treatment and was conducted at a single point in time.

### **Construct Validity**

The variables in this study had broad and layered meanings, which presented a threat to construct validity. Bairati et al. (2014) described construct validity as a demonstration that the instrument measures what it claims to measure by relating the measuring instrument to the theoretical framework. For example, CS is viewed from numerous perspectives depending on the service model. The thorough literature review in my study informed the boundaries and operational definitions of each of the variables, including CS.

### **Ethical Procedures**

I gained access to the participants by obtaining permission from the First Ladies of the participating churches (Appendix A). The first page of the survey packet includes

the invitation for participating in the study (Appendix G) that included the purpose of the study, the contribution made by participants, the time investment for completing the study, and the expectation for participating. Page two includes the informed consent process. The informed consent process includes background information, procedures for completing the survey, voluntary nature of the study, risk, and benefits, the disclosure of non-compensation, privacy practices, contact information for questions or concerns, and verification of understanding about the study. Completion and submittal of the survey served as consent for participation in this study.

Protecting the participants involved a process for ensuring anonymity and confidentiality. No conflict of interest was expected because there was no known connection with potential participants in the study. No information was collected identifying the name of the insurer or contact center. The data analysis plan maintained the anonymity of the participants by ensuring there were no data points connecting the participants to the survey. Participant identities remained unknown. There was no personal identifying information on the survey that identified a specific response to the person responding. Confidentiality was assured by not disclosing any information obtained from collecting, analyzing, and reporting data. Securing all data was by way of a locked cabinet for paper surveys, and password-protected system for data transferred from paper to electronic form. No one, other than the research committee, had access to the data. Data will be kept secured for 5 years after collection before destruction.

## Summary

This chapter contained an outline of the research design and the rationale for using the design for examining the research question and hypotheses. The experimental and quasi-experimental designs are appropriate when introducing a stimulus for understanding cause and effect. The correlational design was more appropriate since answering the research question of this study did not require an examination of causal relationships between CE, HIL, and RMP with CS.

The discussion on methodology detailed the population and sampling frame, which included churches in Southern California. In this chapter, I also explained the selection of the convenience sampling method for gaining access to a hard to reach population where access to individual participant information was not available. The sample size was determined by using SPSS, and the recruitment, participation, and data collection processes were outlined.

The final sections of this chapter reviewed the data analysis plan for addressing the hypothesis and research question. The summary of the internal and external threats to validity was identified, and action to mitigate the identified threats provided. Acknowledgment of ethical concerns and the procedures for alleviation concluded the chapter.

## Chapter 4: Results

The purpose of this quantitative study was to test the influence of RMP, HIL, and CE on CS, controlling for Ed Level, Age, and Gender for adults eligible for Covered California. The three independent variables were RMP, HIL, and CE plus three demographic variables (Ed Level, Age, and Gender). The dependent variable was CS. The research question addressed the influence these variables have on CS ratings among customers engaged in health insurance decisions. I hypothesized that, at a minimum, one of these variables influences CS ratings during the health insurance decision-making process.

In Chapter 4, I present statistical results in five sections: (a) instrumentation construct and reliability, which included pilot study results and implications for the main study, (b) data collection, recruitment process, and response rates, (c) demographic characteristics of participants, including how well participants represented the total population, (d) an investigation of assumptions as they related to the regression analysis, and (e) a test of the hypothesis. Chapter 4 concludes with a summary that answers the research question and responds to the hypotheses.

### **Pilot Study**

I performed a pilot study to conduct internal consistency estimates of reliability of the ACSS instrument used in this study. The purpose was to compute Cronbach's  $\alpha$  (reliability) for items on the ACSS instrument among participants who acquired health insurance coverage through Covered California, and to identify and correct any questions that were confusing. The scales included in the ACSS instrument are the Customer

Satisfaction with Service Scale, adaptations of Mohr and Spekman's model for partnership success, Yi and Gong's Customer Value Co-Creation Behavior Scale for assessing engagement, and Paez et al.'s HILM for assessing consumers' ability to select and use health insurance. Although previous research (for example, Mohr & Spekman, 1994; Paez et al., 2014; Susskind et al., 2003; and Yi & Gong, 2013) tested these scales in other studies among other populations, and the scales were found to have suitable levels of reliability, slight modifications I made to items in the scales required checking the validity for this study's population.

### **Customer Satisfaction**

I conducted a reliability analysis on the six-item CS section of the ACSS. This section consisted of a single scale and had one item that was reverse-scored. The results of the pilot test ( $N = 34$ ) showed strong reliability (Cronbach's  $\alpha = .87$ ), though lower compared to its original use (Cronbach's  $\alpha = .96$ ), among service-based organizations ( $N = 269$ ). Using the scale in the full study showed strong reliability, with Cronbach's  $\alpha = .86$ , indicating that the CS scale maintained sufficient reliability for my study (Table 1).

### **Relationship-Marketing**

I conducted a reliability item analysis on the RMP section of the ACSS instrument. This section of the instrument consisted of four scales and included three items that were reverse-scored. The results of the pilot test ( $N = 34$ ) showed strong reliability (Cronbach's  $\alpha = .76$ ), though again lower compared to its original use (Cronbach's  $\alpha = .79$ ) among a sample of computer dealers ( $N = 124$ ). Following the pilot, I revised the commitment (Cronbach's  $\alpha = .56$ ) and trust (Cronbach's  $\alpha = .69$ ) scales

among the 21 items and four scales for this section of the instrument to strengthen its overall reliability. The full study, including three items with reversed scores, yielded Cronbach's  $\alpha = .84$ . Although scales such as coordination (Cronbach's  $\alpha = .90$ ) and communication quality (Cronbach's  $\alpha = .95$ ) were highly reliable, commitment and trust scales were not highly reliable in this population (Table 1).

### **Customer Engagement**

The CE section of the ACSS consisted of 12 items and four scales. I conducted a reliability analysis on items in this section of the instrument. The analysis for the pilot ( $N = 34$ ) yielded suitable reliability (Cronbach's  $\alpha = .83$ ), lower when compared to its original use (Cronbach's  $\alpha = .92$ ) among college students ( $N = 296$ ). Following the pilot study, I adjusted the feedback (Cronbach's  $\alpha = .73$ ) and tolerance (Cronbach's  $\alpha = .77$ ) scales to further strengthen overall reliability. After conducting the full study, the reliability among the study population was reduced sharply (Cronbach's  $\alpha = .63$ ). The only dimension that maintained strong reliability among the study population was the information-seeking scale. This reliability indicated that not all items in this section of the instrument were highly suitable for a full-scale study among health insurance customers.

### **Health Insurance Literacy**

I conducted the last reliability analysis on the HIL section of the ACSS instrument used to assess consumers' ability to select and use health insurance benefits. This section of the instrument consisted of 20 items, and four scales. The analysis for the pilot ( $N = 34$ ) yielded reliability (Cronbach's  $\alpha = .96$ ) higher than its original use (Cronbach's  $\alpha = .91$ ) among Medicaid, uninsured, and private patients ( $N = 828$ ), signaling the



appropriateness of the instrument in the full study. The reliability found in the full study was also strong (Cronbach's  $\alpha = .93$ ), indicating that this section of the ACSS was highly suitable for measuring consumers' ability to select and use health insurance benefits.

Table 1

*Summary of the Pilot and Full Study Reliability Results*

Named Scales and Dimensions	Original Source Alpha	Pilot Study Alpha (N =34)	Full Study Alpha (N=99)
Customer Satisfaction	<i>N</i> = 269 Service-based Organizations		
Overall Customer Satisfaction	.96	.87	.86
Relationship-Marketing	<i>N</i> = 124 Computer Dealers		
Commitment	.81	.56	.02
Coordination	.68	.85	.90
Trust	.75	.68	.51
Communication Quality	.91	.96	.95
Overall Relationship-marketing	.79	.76	.84
Customer Engagement	<i>N</i> = 296 College Students		
Information Seeking	.91	.84	.85
Personal Interaction	.95	.98	.32
Feedback	.93	.73	.63
Tolerance	.90	.77	.69
Overall Customer Engagement	.92	.83	.63
Health Insurance Literacy	<i>N</i> = 828 (Medicaid, uninsured, private)		
Choosing Insurance	.93	.95	.92
Comparing Insurance	.96	.98	.97
Proactive	.80	.94	.88
Confidence Utilizing	.93	.96	.93
Overall Health Insurance Literacy	.91	.96	.93

**Data Collection**

The original sample frame for this study consisted of residents affiliated with community churches associated with the First Ladies Health Initiative within Los Angeles County. However, because of low participation among these churches, I expanded the data collection to include churches and community health fairs in Southern

California. I used a nonprobability convenience sampling strategy for this study that enabled access to hard-to-access study participants and allowed for self-determination selection. The duration of the survey collection period was 12 months.

### **Recruitment and Response Rate**

Achieving the minimum sample size ( $N = 98$ ) of participants required providing an estimated 297 qualified participants access to the study with an expected 33% response rate. I invited 26 churches in Southern California to participate in the study. Five of the 26 churches agreed to grant access to their parishioners, and one community health fair event in Los Angeles extended access to community attendees. The estimated membership in the five churches and estimated attendees at the community fair combined provided access to 4,400 potential study participants. I received 111 returned surveys. Three surveys were removed where the participants indicated an age outside the boundaries of the study. I also removed surveys that were less than 85% complete. I obtained 99 valid surveys from parishioners and health fair attendees. The resulting response rate of 23% was below the expected response rate but met the minimum sample size (98) calculated in Chapter 3.

### **Collection Process**

The 63-item survey instrument required approximately 10 to 15 minutes to complete. The survey consisted of 21 items measuring RMP, six items measuring CS, 12 items measuring CE, and 20 items measuring HIL. The survey also included three demographic items for characterizing the pool of participants. The demographic questions asked respondents to indicate their age, gender, and the highest level of

education. Although not intended to be a demographic variable, I also asked the type of medical insurance currently held.

Participation in the study began when participants obtained the information packet that included an introduction letter, the informed consent form, and the survey (Appendix E). Participants read the requirements for taking the study for self-validating their qualifications to be in the study, which was that participants had obtained their health insurance plan through the Covered California marketplace in the past or presently. Participants provided implied consent by taking the study voluntarily. Participants who completed the survey on-site returned the completed questionnaires to me. Those who completed the paper survey off-site were provided a self-addressed postage-paid envelope to return the completed questionnaires via the US Postal service.

### **Descriptive Statistics**

I provide a summary of all variables in this descriptive information section. The summary reports measures of central tendency and variances, frequencies, and percentages where applicable. These results were beneficial when estimating relationships among variables within the population and were a vital part of the results of this study. The first discussion involves the Gender and Ed Level variables.

#### **Gender and Education Variables**

Females made up the largest proportion of participants in the study ( $n = 83$ ) and were 83.8% of all participants which indicates that men, less than 1 in 5, were not proportionally represented in the study. However, according to Pew Research (2014) men are consistently underrepresented in church attendance (60% female, 40% males) for the

state of California. A chi-square test of proportions indicated that my sample was significantly different from what was expected based on the Pew Research ( $\chi^2 = 13.9, p < .000$ ). However, it was likely that females would outnumber males in my research.

Additionally, results showed that participants were highly educated. There were five levels of education assessed across the sample, ranging from *less than high school* to *graduate degree*. No one reported having a *less than high school* education. Twenty five percent reported having completed high school. Seventy five percent of the respondents reported having an associate's to a graduate degree. Most males in the study completed an associate's or a high school degree. Females in the study completed education approximately even across all education groups.

Table 2

*Summary Results of Highest Education Level Achieved and Gender*

Demographic	Frequency	Percent
<u>Education</u>		
High School	25	25.3
Associate's degree	29	29.3
Bachelor's degree	20	20.2
Master's degree	18	18.2
Graduate degree past master's	7	7.0
Total (N)	99	100
<u>Gender</u>		
Males	16	16.2
Females	83	83.8
Total (N)	99	100.0

### **Age Variable**

The age of participants was assessed among the sample who have used Covered California for their insurance coverage needs, now or in the past. The participants who used Covered California in the past may have been older at the time of the survey than the Covered California age criteria. The age eligibility for Covered California is 18 to 64. Since the ACA went into effect 2010, anyone up to the age of 74 could have utilized Covered California for purchasing health insurance.

The youngest age in the study was 20 years old, and the oldest in the study was 74 years of age. The average age of the participants in this research was 49.93 ( $SD = 13.88$ ). All generations eligible for my study were represented in the sample. Baby Boomers aged 55 to 74 ( $n = 40$ ) and Gen X aged 40 to 54 ( $n = 30$ ) represented 70% of the participants. The median age was 51 years, which was higher than the mean age, indicating a negative skewness existed; however, the small difference between the median and mean ages suggested no outliers in the distribution.

The histogram in Figure 3 shows the distribution of age in the sample, indicating visually that the values were from a roughly normal distribution. I also examined the Age variable based on Gender. The mean age of males ( $n = 16$ ) was 47.25 ( $SD = 13.14$ ) and the mean age of females ( $n = 83$ ) was 50.44 ( $SD = 14.04$ ). An independent samples  $t$ -test ( $t = -0.88$ ) confirmed that the mean age between males and females were not significantly different ( $p = 0.81$ ) from each other. A boxplot shows a graphical representation of the difference in ages between males and females in the study (Figure 4).

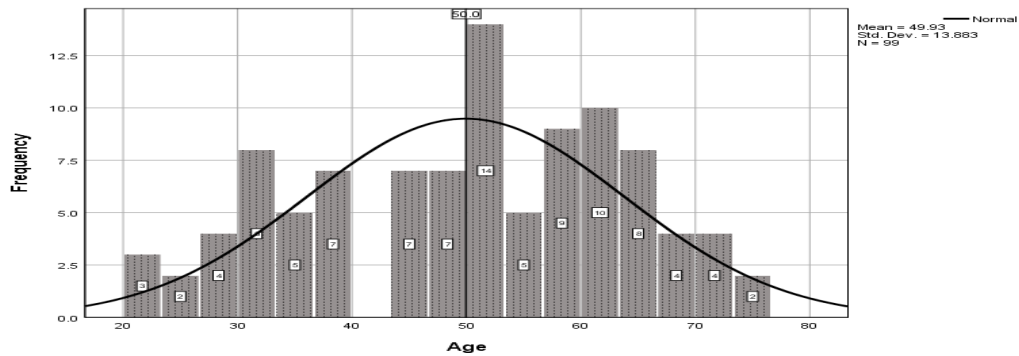


Figure 3. Histogram showing the distribution of the Age variable.

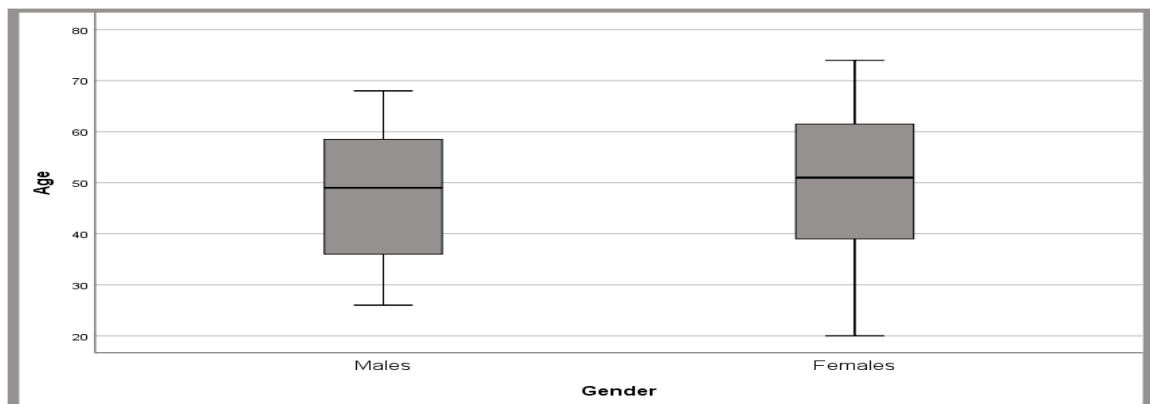


Figure 4. Boxplot showing the difference in age between males and females.

### Customer Satisfaction

I conducted a descriptive analysis on the CS dependent variable among study participants. The customer satisfaction section included six items and was a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. A one indicated the lowest level of CS, and a five indicated the highest level of CS among customers. I computed the average of the six responses which yielded a continuous random variable. One item in this scale was reverse-scored.

Table 3 shows the mean score for CS was 3.74 ( $SD = 0.82$ ). The lowest score reported was a 1.5, and the highest was a 5, indicating a range of 3.5. The 95% confidence interval for the mean of CS was 3.58 to 3.91, whereas 32% of the modal scores fell between 3.67 and 4.00. The histogram in Figure 5 shows the distribution of CS responses.

Table 3

*Summary Descriptive Analysis Results of CS and Gender*

Gender	N	M	SD	Std. Error	95% Confidence Interval for Mean		Min	Max
					LB	UB		
Female	83	3.74	0.85	0.09	3.56	3.92	1.50	5.00
Male	16	3.76	0.67	0.17	3.40	4.12	1.67	4.67
Total	99	3.74	0.82	0.08	3.58	3.91	1.50	5.00

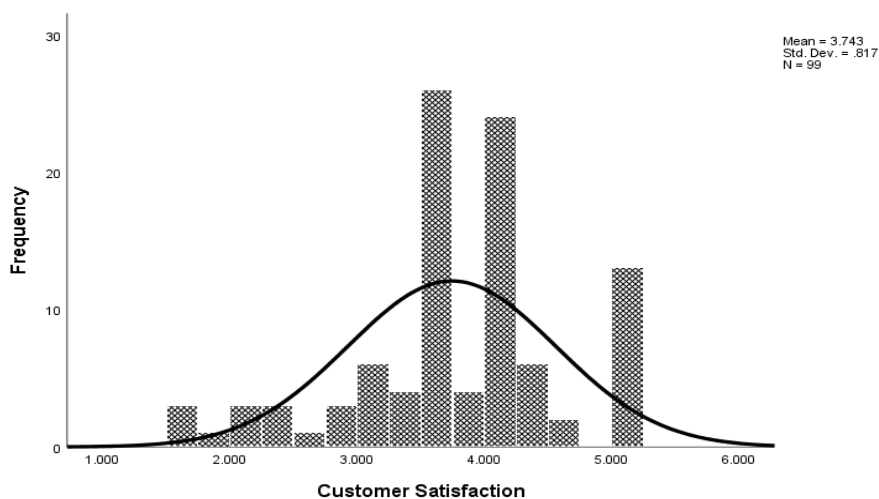


Figure 5. Histogram showing the distribution of CS.

### Customer Satisfaction and Gender

I conducted a descriptive analysis on CS based on Gender. An ANOVA test showed that there was no difference in CS based on Gender ( $F[1,97] = 0.01, p = 0.93$ ),

indicating that males' and females' experience with customer service during interactions with their health insurance company were similar. Noteworthy was that females expressed the lowest and the highest levels of CS experiences.

### **Customer Satisfaction and Education Levels**

I conducted a descriptive analysis on CS based on education levels of participants. Five levels of education were assessed since no one reported having the lowest level of education, which was *less than high school* education. Table 4 indicates that participants with an associate's degree as the highest level of education had a significantly different CS experience ( $F[1,97] = 6.57, p < 0.01$ ) from participants who did not report an associate's degree as their highest level of education. The ANOVA in Table 4 shows that the mean of CS for those with the highest level of education at high school, bachelor's, master's, or doctorate was not significantly different from the overall CS experience based on their  $p$  value of greater than 0.05.



Table 4

*Summary Descriptive Analysis Results of CS and Gender*

Highest Grade Completed			<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
High School	Between Groups	(Combined)	0.33	1	0.33	0.50	0.48
	Within Groups		65.06	97	0.67		
	Total		65.39	98			
Associate's	Between Groups	(Combined)	4.15	1	4.15	6.57	0.01
	Within Groups		61.25	97	0.63		
	Total		65.39	98			
Bachelor's	Between Groups	(Combined)	0.62	1	0.62	0.92	0.34
	Within Groups		64.78	97	0.67		
	Total		65.39	98			
Master's	Between Groups	(Combined)	1.67	1	1.67	2.54	0.11
	Within Groups		63.73	97	0.66		
	Total		65.39	98			
Doctorate	Between Groups	(Combined)	0.29	1	0.29	0.43	0.51
	Within Groups		65.10	97	0.67		
	Total		65.39	98			

**Customer Satisfaction and Age**

I conducted a descriptive analysis of CS based on age (Figure 6 and Table 5). There is a significant correlation ( $p = 0.02$ ) and linear relationship between age and CS ( $F[1,97] = 5.61, p = 0.02$ ). However, an ANOVA test showed that there was no significant difference in CS among the age groups ( $F[3,96] = 2.30, p = 0.11$ ). Each age group listed in Table 5 included participants who reported as highly dissatisfied and participants who reported as highly satisfied.

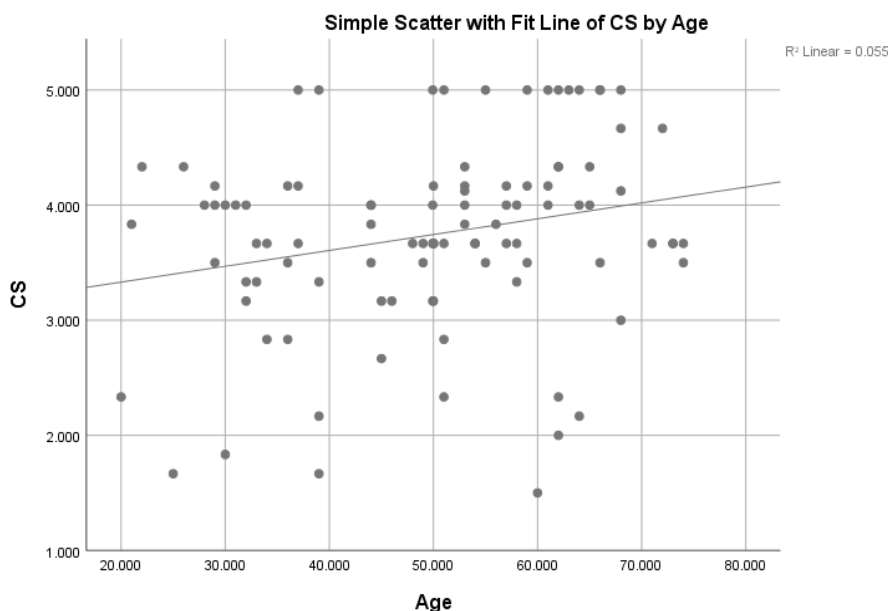


Figure 6. Scatterplot showing customer satisfaction by age.

Table 5

*Summary Descriptive Analysis of CS and Age Group*

Age Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					LB	UB		
20-38	25	3.57	0.79	0.16	3.25	3.90	1.67	5.00
39-54	34	3.62	0.73	0.13	3.36	3.88	1.67	5.00
55-74	40	3.95	0.87	0.14	3.67	4.23	1.50	5.00
Total	99	3.74	0.82	0.08	3.58	3.91	1.50	5.00

### Customer Engagement

I assessed the sample's level of engagement (Table 6) during their interaction when purchasing and using their health insurance coverage. Participants indicated a high level of engagement with their service providers ( $M = 3.84$ ,  $SD = 0.54$ ). The 95% confidence interval for the mean of CE was 3.74 to 3.95. The median value of 3.83 was very close to the mean value (Figure 7). These statistics indicated the appearance of normal distribution in responses, as indicated by the histogram found in Figure 7.

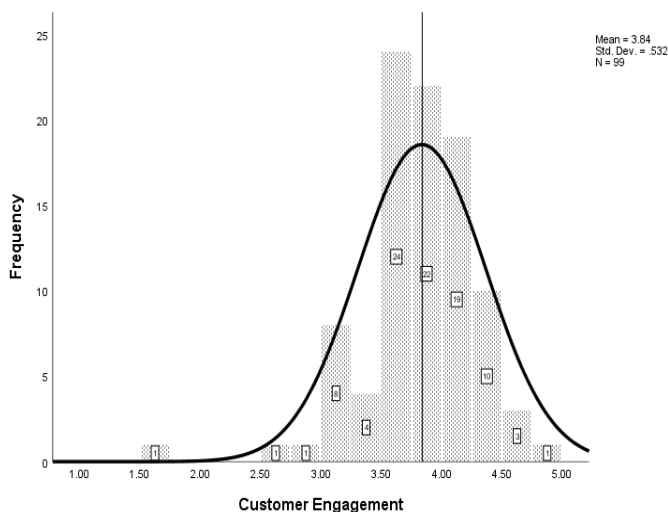


Figure 7. Histogram showing the distribution of CE.

Table 6

*Summary of Responses for Continuously Measured Variables*

Variables	Descriptive Statistics								
	<i>N</i>	Range	Min	Max	<i>M</i>	<i>SD</i>	Median	Skew	Kurtosis
Age	99	54.00	20.00	74.00	49.93	13.88	51	-0.28	-0.85
Customer Satisfaction	99	3.50	1.50	5.00	3.74	0.82	3.67	-0.64	0.53
Customer Engagement	99	3.50	1.50	5.00	3.84	0.54	3.83	-0.53	3.31
Health Insurance Literacy	99	4.00	1.00	5.00	3.13	1.12	3.10	-0.02	-1.06
Relationship-Marketing	99	2.35	2.33	4.68	3.65	0.51	3.65	-0.29	-0.08

### Health Insurance Literacy

I conducted descriptive analysis (Table 6) to determine participants' level of literacy when purchasing and using their health care plans. Participant responses ( $N = 99$ ) showed a mean of 3.13 ( $SD = 1.12$ ). The variance of 1.25 indicated a wide range of

reported HIL levels where 26% of the participants had scores at or above 4, and 21% reported scores at or below 2 (Figure 8).

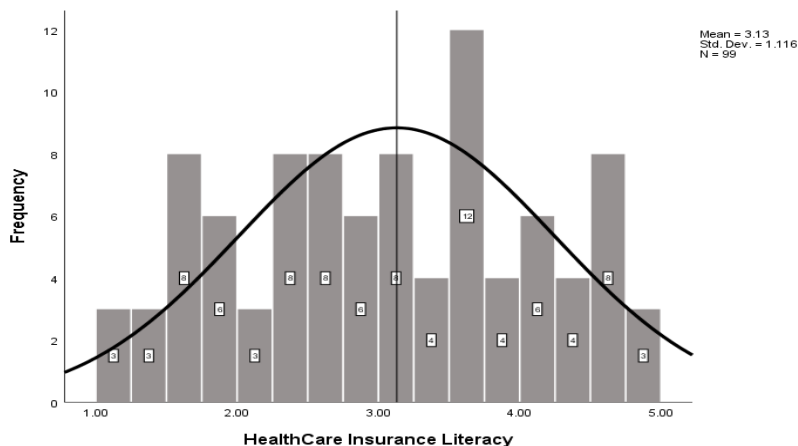


Figure 8. Histogram showing the distribution of HIL.

### Relationship-Marketing

I conducted descriptive analysis to understand participants' overall experience when interacting with their insurance company professionals. Participants indicated the presence of RMP scored higher than the mid-point of the scale ( $M = 3.65$ ,  $SD = 0.51$ ). No participant reported the lowest score possible or the highest score possible, and 80% of the responses were between 3 and 4. The histogram found in Figure 9 shows the distribution of responses for the RMP variable. Table 6 provides a summary of each continuous numerical variable. Next, I discuss the detailed analysis of the research question and hypothesis for this study.

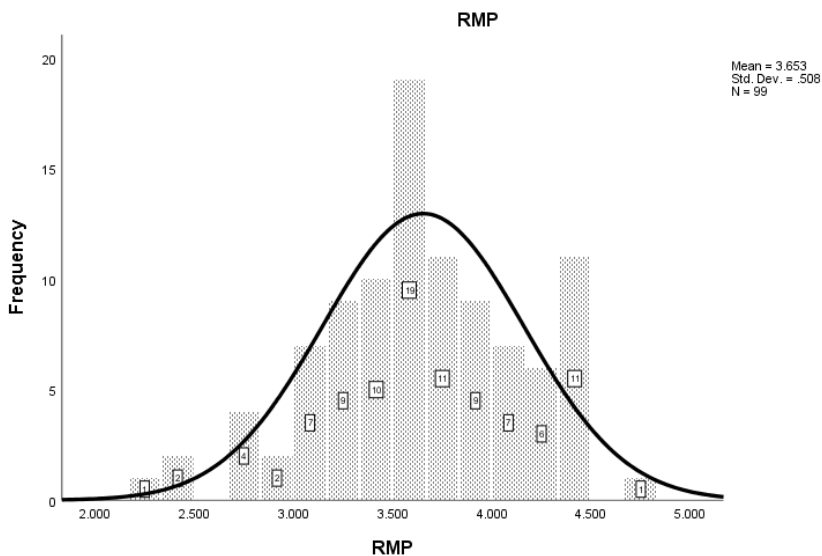


Figure 9. Histogram of the distribution of RMP.

### Detailed Analysis

#### Research Question and Hypotheses

The research question for this study was, do RMP, HIL, and CE, and demographic variables Ed Level, Age, and Gender influence CS while engaging in health insurance decisions?

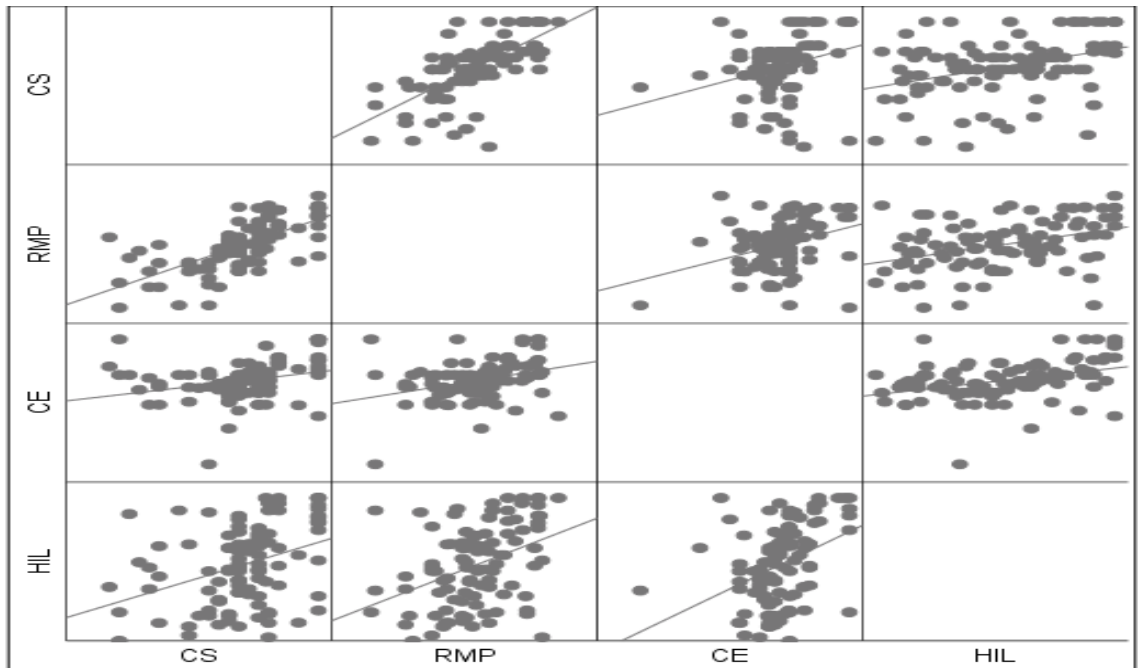
$H_0$ : No independent variables influence CS.

$H_a$ : At least one independent variable influences CS.

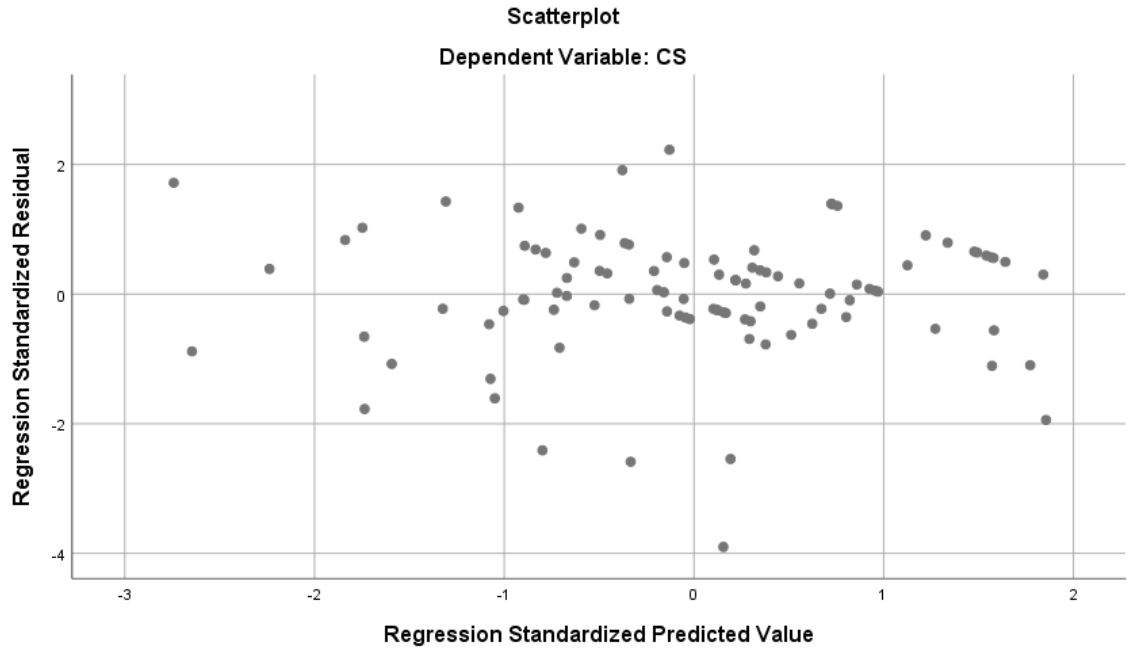
#### Assumptions

I began my analysis by first addressing the underlying assumptions for MLR which are linearity, homoscedasticity, absence of multicollinearity, and normality of the residuals. Figure 10 is a series of scatterplots showing the relationship of all independent variables with each other and with the dependent variable, CS. No nonlinear relationships

are apparent from the scatterplots between the predictors and CS. The scatterplot in Figure 11 illustrates the residuals of CS and the predictor variables demonstrating homoscedasticity by the absence of funneling.



*Figure 10.* Scatterplot showing relationship of all independent variables with each other and CS.



*Figure 11.* Scatterplot of standardized residuals against the standardized predicted value.

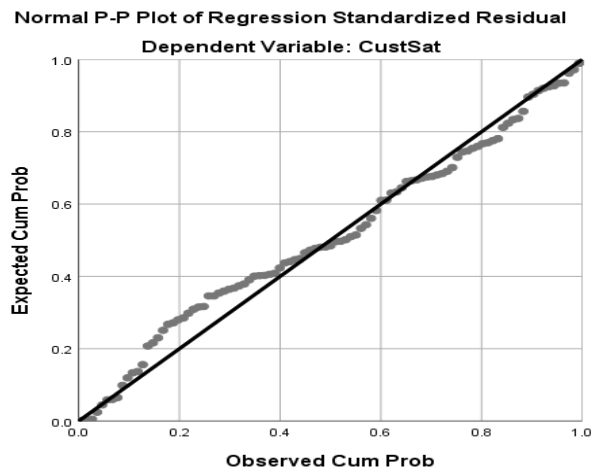
Table 7 illustrates the absence of multicollinearity using the analysis of the variance inflation factors (VIFs) and the tolerance statistic to confirm the independent variables were not highly correlated with each other. A VIF substantially greater than 1 may suggest multicollinearity is influencing the model, and a VIF greater than 10 is cause for concern. A tolerance statistic lower than 0.2 requires a critical review.

Table 7

*Collinearity Statistics*

Independent Variables	Tolerance	VIF
<i>CE</i>	0.77	1.31
<i>HIL</i>	0.69	1.46
<i>RMP</i>	0.77	1.30
<i>Age</i>	0.92	1.09
<i>EL<sub>1</sub></i>	0.70	1.42
<i>EL<sub>2</sub></i>	0.65	1.53
<i>EL<sub>3</sub></i>	0.68	1.47
<i>EL<sub>4</sub></i>	0.68	1.47
<i>EL<sub>5</sub></i>	0.84	1.19
<i>Gender</i>	0.95	1.05

The assumption that the residuals are normally distributed with minimal deviations was confirmed in Figure 12 for all independent variables. This assumption was assessed using the normal P-P plot of regression standardized residual to demonstrate minimal deviations from normality.



*Figure 12.* Normal P-P plot of the initial model to assess the relationship between the predictor independent and the dependent variable.



## Regression Analysis

I used MLR to determine if a model that included CE, HIL, RMP, Age, Ed Level, and Gender significantly predicted CS. I used a combination of the Minitab best-subsets regression tool; the SPSS enter method, where I entered all independent variables to reveal the significant contribution to the predictive strength of the model; and various SPSS stepwise methods (stepwise, backward, and forward).

The categorical variables Ed Level and Gender were converted to dummy variables. Gender was a zero for female and a one for male participants. The dummy variables for highest educational level were coded according to the dummy coding scheme in Table 8. The dummy variables enabled me to compute coefficients which represented the change in CS for each of the education levels from the baseline level (less than a HS education). The matrix in Table 9 provides the initial correlations matrix for variables entered into the model.

Table 8

### *Dummy Variables for Education Level*

	EL1	EL2	EL3	EL4	EL5
Less than HS Education	0	0	0	0	0
Completed HS	1	0	0	0	0
Associate's degree	0	1	0	0	0
Bachelor's degree	0	0	1	0	0
Master's degree	0	0	0	1	0
Doctoral degree	0	0	0	0	1

Table 9

*Correlations Matrix for Initial Model*

		CS	RMP	CE	HIL	Age	EL <sub>1</sub>	EL <sub>2</sub>	EL <sub>3</sub>	EL <sub>4</sub>	EL <sub>5</sub>	Gender
Pearson Correlation	CS	1.00	0.68	0.29	0.37	0.23	0.07	-0.25	0.10	0.16	-0.07	0.01
	RMP	0.68	1.00	0.34	0.39	0.15	0.00	-0.20	0.13	0.13	-0.03	0.01
	CE	0.29	0.34	1.00	0.39	0.02	0.06	-0.01	-0.01	-0.03	-0.03	0.08
	HIL	0.37	0.39	0.39	1.00	0.21	-0.05	-0.22	0.15	0.16	-0.01	-0.14
	Age	0.23	0.15	0.02	0.21	1.00	-0.01	-0.14	-0.01	0.11	0.11	-0.09
	EL <sub>1</sub>	0.07	0.00	0.06	-0.05	-0.01	1.00	-0.37	-0.29	-0.27	-0.16	0.00
	EL <sub>2</sub>	-0.25	-0.20	-0.01	-0.22	-0.14	-0.37	1.00	-0.32	-0.30	-0.18	0.08
	EL <sub>3</sub>	0.10	0.13	-0.01	0.15	-0.01	-0.29	-0.32	1.00	-0.24	-0.14	-0.02
	EL <sub>4</sub>	0.16	0.13	-0.03	0.16	0.11	-0.27	-0.30	-0.24	1.00	-0.13	-0.06
	EL <sub>5</sub>	-0.07	-0.03	-0.03	-0.01	0.11	-0.16	-0.18	-0.14	-0.13	1.00	-0.01
	Gender	0.01	0.01	0.08	-0.14	-0.09	0.00	0.08	-0.02	-0.06	-0.01	1.00
	Sig. (1-tailed)	CS		0.00	0.00	0.00	0.01	0.24	0.01	0.17	0.06	0.26
RMP		0.00		0.00	0.00	0.07	0.49	0.02	0.10	0.10	0.38	0.45
CE		0.00	0.00		0.00	0.43	0.28	0.48	0.47	0.38	0.38	0.23
HIL		0.00	0.00	0.00		0.02	0.32	0.02	0.07	0.06	0.47	0.08
Age		0.01	0.07	0.43	0.02		0.45	0.09	0.47	0.13	0.15	0.20
EL <sub>1</sub>		0.24	0.49	0.28	0.32	0.45		0.00	0.00	0.00	0.06	0.49
EL <sub>2</sub>		0.01	0.02	0.48	0.02	0.09	0.00		0.00	0.00	0.04	0.22
EL <sub>3</sub>		0.17	0.10	0.47	0.07	0.47	0.00	0.00		0.01	0.09	0.44
EL <sub>4</sub>		0.06	0.10	0.38	0.06	0.13	0.00	0.00	0.01		0.10	0.26
EL <sub>5</sub>		0.26	0.38	0.38	0.47	0.15	0.06	0.04	0.09	0.10		0.45
Gender		0.46	0.45	0.23	0.08	0.20	0.49	0.22	0.44	0.26	0.45	

**Model-Building Using Minitab Best-Subsets Regression**

First, I considered all possible models simultaneously using Minitab Statistical Software (2010). The best-subsets regression provided evidence to inform my assessment and selection of variables in the final model, based on adjusted  $R^2$  and Mallows'  $C_P$ . Adjusted  $R^2$  is a measure of fit. The percentage of variation in the dependent variable that is attributed to the model, account for the number of predictors. Mallows'  $C_P$  “measures the difference between a fitted regression model and a true model” (Levine, Stephan,



### Model-Building Using SPSS Regression

Next, I conducted a MLR analysis using the SPSS enter method. Based on a correlation matrix (Table 9) some predictors showed low correlation with CS and were therefore removed from consideration: Gender, EL<sub>1</sub>, EL<sub>3</sub>, EL<sub>4</sub>, and EL<sub>5</sub>. There were, however five independent variables that showed a significant correlation with CS, and those variables were evaluated using the enter method. The results of the initial MLR analysis shown in Tables 11 to 13 confirmed that a model composed of the independent variables RMP, CE, HIL, Age, and EL<sub>2</sub> was a significant predictor of CS,  $F(5, 93) = 18.95$ , adjusted  $R^2 = 0.48$ ,  $p < 0.00$ . In this model, only RMP showed a significant contribution to the model ( $t = 7.08$ ,  $p = 0.00$ ).

Table 11

#### *Initial Model Summary*

Model	R	R <sup>2</sup>	Adj R <sup>2</sup>	SE	R <sup>2</sup> Chg	F Chg	Change Statistics			
							df1	df2	P	Durbin-Watson
1	.710 <sup>a</sup>	0.51	0.48	0.59	0.51	18.95	5	93	0.000	2.27

a. Predictors: (Constant), EL<sub>2</sub>, CE, Age, RMP, HIL

b. Dependent Variable: CS

Table 12

#### *Initial ANOVA Table of Results*

Model		SS	df	MS	F	p
1	Regression	33.00	5	6.60	18.95	.000 <sup>b</sup>
	Residual	32.40	93	0.35		
	Total	65.39	98			

a. Dependent Variable: CS

b. Predictors: (Constant), EL<sub>2</sub>, CE, Age, RMP, HIL

Table 13

*Initial Summary of Coefficients*

		B	SE	$\beta$	$t$	$p$	LB	UB	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-0.59	0.57		-1.03	0.31	-1.73	0.55					
	RMP	0.97	0.13	0.60	7.29	0.00	0.70	1.23	0.68	0.60	0.53	0.78	1.28
	CE	0.10	0.12	0.06	0.79	0.43	-0.15	0.35	0.29	0.08	0.06	0.79	1.26
	HIL	0.04	0.06	0.06	0.69	0.49	-0.08	0.17	0.37	0.07	0.05	0.73	1.37
	Age	0.01	0.00	0.12	1.54	0.13	0.00	0.02	0.23	0.16	0.11	0.94	1.07
	EL <sub>2</sub>	-0.18	0.14	-0.10	-1.33	0.19	-0.45	0.09	-0.25	-0.14	-0.10	0.92	1.09

a. Dependent Variable: CS

I conducted another regression utilizing the SPSS stepwise method utilizing the same five predictors (Table 14). The stepwise approach resulted in a model of only RMP, which did not improve the adjusted  $R^2$  (0.46).

Table 14

*Model Summary Using the Stepwise Method*

Model	$R$	$R^2$	Adj $R^2$	SE	$R^2$ Chg	Change Statistics				Durbin-Watson
						$F$ Chg	df1	df2	$P$	
1	.684 <sup>a</sup>	0.47	0.46	0.60	0.47	85.44	1	97	0.00	2.17

a. Predictors: (Constant), RMP

b. Dependent Variable: CS

I conducted another regression utilizing the SPSS backward method (Tables 15 to 17). The backward approach resulted in a model of only two significant predictors, RMP and Age, with adjusted  $R^2 = 0.48$ ,  $p < 0.00$ .

Table 15

*Model Summary Using the Backward Method*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adj <i>R</i> <sup>2</sup>	SE	<i>R</i> <sup>2</sup> Chg	<i>F</i> Chg	Change Statistics			Durbin-Watson
							df1	df2	<i>P</i>	
1	.710 <sup>a</sup>	0.50	0.48	0.59	0.50	18.95	5	93	0.00	
2	.709 <sup>b</sup>	0.50	0.48	0.59	0.00	0.48	1	93	0.49	
3	.704 <sup>c</sup>	0.50	0.48	0.59	-0.01	1.13	1	94	0.29	
4	.697 <sup>d</sup>	0.49	0.48	0.59	-0.01	1.95	1	95	0.17	2.254

a. Predictors: (Constant), EL<sub>2</sub>, CE, Age, RMP, HIL

b. Predictors: (Constant), EL<sub>2</sub>, CE, Age, RMP

c. Predictors: (Constant), EL<sub>2</sub>, Age, RMP

d. Predictors: (Constant), Age, RMP

e. Dependent Variable: CS

Table 16

*ANOVA Table of Results for the Backward Method*

Model		SS	df	<i>MS</i>	<i>F</i>	<i>P</i>
1	Regression	33.00	5	6.60	18.95	.000 <sup>b</sup>
	Residual	32.39	93	0.35		
	Total	65.39	98			
2	Regression	32.83	4	8.21	23.70	.000 <sup>c</sup>
	Residual	32.56	94	0.35		
	Total	65.39	98			
3	Regression	32.44	3	10.81	31.18	.000 <sup>d</sup>
	Residual	32.95	95	0.35		
	Total	65.39	98			
4	Regression	31.76	2	15.88	45.34	.000 <sup>e</sup>
	Residual	33.63	96	0.35		
	Total	65.39	98			

a. Dependent Variable: CS

b. Predictors: (Constant), EL<sub>2</sub>, CE, Age, RMP, HIL

c. Predictors: (Constant), EL<sub>2</sub>, CE, Age, RMP

d. Predictors: (Constant), EL<sub>2</sub>, Age, RMP

e. Predictors: (Constant), Age, RMP

Table 17

*Summary of Coefficients for Backward Method*

		B	SE	$\beta$	t	p	LB	UB	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-0.59	0.57		-1.03	0.31	-1.73	0.55					
	RMP	0.97	0.13	0.60	7.29	0.00	0.70	1.23	0.68	0.60	0.53	0.78	1.28
	CE	0.10	0.12	0.06	0.79	0.43	-0.15	0.35	0.29	0.08	0.06	0.79	1.26
	HIL	0.04	0.06	0.06	0.69	0.49	-0.08	0.17	0.37	0.07	0.05	0.73	1.37
	Age	0.01	0.00	0.12	1.54	0.13	0.00	0.02	0.23	0.16	0.11	0.94	1.07
	EL <sub>2</sub>	-0.18	0.14	-0.10	-1.33	0.19	-0.45	0.09	-0.25	-0.14	-0.10	0.92	1.09
2	(Constant)	-0.66	0.56		-1.18	0.24	-1.78	0.45					
	RMP	0.99	0.13	0.62	7.72	0.00	0.74	1.24	0.68	0.62	0.56	0.83	1.20
	CE	0.13	0.12	0.08	1.06	0.29	-0.11	0.36	0.29	0.11	0.08	0.88	1.13
	Age	0.01	0.00	0.12	1.68	0.10	0.00	0.02	0.23	0.17	0.12	0.97	1.04
	EL <sub>2</sub>	-0.20	0.13	-0.11	-1.46	0.15	-0.46	0.07	-0.25	-0.15	-0.11	0.94	1.06
3	(Constant)	-0.35	0.48		-0.73	0.47	-1.30	0.60					
	RMP	1.04	0.12	0.64	8.60	0.00	0.80	1.28	0.68	0.66	0.63	0.94	1.06
	Age	0.01	0.00	0.12	1.65	0.10	0.00	0.02	0.23	0.17	0.12	0.97	1.04
	EL <sub>2</sub>	-0.19	0.13	-0.10	-1.40	0.17	-0.45	0.08	-0.25	-0.14	-0.10	0.95	1.06
4	(Constant)	-0.55	0.46		-1.20	0.23	-1.47	0.36					
	RMP	1.07	0.12	0.66	8.97	0.00	0.83	1.30	0.68	0.68	0.66	0.98	1.02
	Age	0.01	0.00	0.13	1.80	0.07	0.00	0.02	0.23	0.18	0.13	0.98	1.02

a. Dependent Variable: CS

I conducted another regression utilizing the SPSS forward method (Table 18). The forward approach resulted in a model of only RMP, which did not improve the adjusted  $R^2$ .

Table 18

*Model Summary Using the Forward Method*

Model	R	R <sup>2</sup>	Adj R <sup>2</sup>	SE	R <sup>2</sup> Chg	F Chg	Change Statistics			Durbin- Watson
							df1	df2	p	
1	.684 <sup>a</sup>	0.47	0.46	0.60	0.47	85.44	1.00	97.00	0.00	2.17

a. Predictors: (Constant), RMP

b. Dependent Variable: CS

At this point in the analysis, I concluded based on all of the evidence, that it was likely that RMP, Age, and EL<sub>2</sub> were significant predictors of the dependent variable. The

variables CE, HIL, and Gender consistently demonstrated no significance (based on the  $t$  test and associated  $p$  value), and consequentially were no longer considered for continued analysis. EL<sub>1</sub>, EL<sub>3</sub>, EL<sub>4</sub>, and EL<sub>5</sub> were also removed.

### Model-Building Considering Two-Factor Interactions

Next, I evaluated the significance of two-factor interactions between pairs of the remaining independent variables (RMP, EL<sub>2</sub>, and Age). This was done to determine if the relationship between any one of the independent variables and the dependent variable, CS, was dependent upon the value of another independent variable.

I used the SPSS enter method (Tables 19 to 21) with the variables RMP, EL<sub>2</sub>, Age, and three two-factor interactions (RMP\*Age, EL<sub>2</sub>\*Age, and RMP\*EL<sub>2</sub>) to analyze contributions to the predictive strength of the model. The regression results showed  $F(6, 92) = 16.32$ , adjusted  $R^2 = 0.48$ ,  $p < .00$  (Table 19). Table 20 provides the ANOVA results, and Table 21 shows the summary of coefficients. Similar to the initial model, RMP showed a significant contribution to the model ( $t = 7.81$ ,  $p = 0.00$ ).

Table 19

#### *Model Summary with 2-Factor Interactions*

Model	$R$	$R^2$	Adj $R^2$	$SE$	Change Statistics				Durbin-Watson	
					$R^2$ Chg	$F$ Chg	df1	df2		$p$
1	.718 <sup>a</sup>	0.52	0.48	0.59	0.52	16.32	6.00	92.00	0.00	2.31

a. Predictors: (Constant), EL<sub>2</sub>\*Age, RMP, Age, EL<sub>2</sub>, RMP\*EL<sub>2</sub>, RMP\*Age

b. Dependent Variable: CS



Table 20

*ANOVA Table Model with 2-Factor Interactions*

Model		SS	df	MS	F	p
1	Regression	33.71	6.00	5.62	16.32	.000 <sup>b</sup>
	Residual	31.68	92.00	0.34		
	Total	65.39	98.00			

a. Dependent Variable: CS

b. Predictors: (Constant), EL<sub>2</sub>\*Age, RMP, Age, EL<sub>2</sub>, RMP\*EL<sub>2</sub>, RMP\*Age

Table 21

*Summary of Coefficient for Model with 2-Factor Interactions*

	B	SE	$\beta$	t	p	LB	UB	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-0.19	0.49		-0.38	0.71	-1.16	0.79					
RMP	0.98	0.13	0.61	7.81	0.00	0.73	1.23	0.68	0.63	0.57	0.86	1.17
Age	0.01	0.00	0.14	1.86	0.07	0.00	0.02	0.23	0.19	0.13	0.94	1.07
EL <sub>2</sub>	-0.23	0.14	-0.13	-1.70	0.09	-0.50	0.04	-0.25	-0.17	-0.12	0.90	1.12
RMP*Age	-0.02	0.01	-0.14	-1.73	0.09	-0.04	0.00	-0.21	-0.18	-0.13	0.84	1.19
RMP*EL <sub>2</sub>	-0.05	0.25	-0.02	-0.19	0.85	-0.55	0.46	0.18	-0.02	-0.01	0.85	1.18
EL <sub>2</sub> *Age	-0.01	0.01	-0.09	-1.18	0.24	-0.03	0.01	-0.07	-0.12	-0.09	0.92	1.09

a. Dependent Variable: CS

Based on the analysis to this point, there was insufficient evidence to eliminate from consideration any of the remaining independent variables. Instead, I sequentially removed the non-significant two-factor interactions. The two-factor interaction RMP\*EL<sub>2</sub> had the highest  $p$  value in the model. ( $t = -0.19$ ,  $p = 0.85$ ), and was removed first. I ran another regression analysis utilizing the SPSS enter method for the variables RMP, Age, EL<sub>2</sub>, RMP\*Age, and EL<sub>2</sub>\*Age. This resulted in an improved adjusted  $R^2$  (Table 22). Table 23 shows the summary of coefficients.

Table 22

*Model Summary Removing a 2-Factor Interaction*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adj <i>R</i> <sup>2</sup>	SE	Change Statistics					Durbin-Watson
					<i>R</i> <sup>2</sup> Chg	<i>F</i> Chg	df1	df2	<i>p</i>	
1	.718 <sup>a</sup>	0.52	0.49	0.58	0.52	19.78	5	93	0.00	2.32

a. Predictors: (Constant), EL<sub>2</sub>\*Age, RMP, Age, EL<sub>2</sub>, RMP\*Age  
b. Dependent Variable: CS

Table 23

*Summary of Coefficient Removing a 2-Factor Interaction*

		B	SE	$\beta$	<i>t</i>	<i>p</i>	LB	UB	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-0.17	0.49		-0.36	0.72	-	0.79					
	RMP	0.98	0.12	0.61	7.95	0.00	0.73	1.22	0.68	0.64	0.57	0.89	1.13
	Age	0.01	0.00	0.14	1.89	0.06	0.00	0.02	0.23	0.19	0.14	0.95	1.06
	EL <sub>2</sub>	-0.23	0.13	-0.13	-1.70	0.09	-	0.04	-0.25	-0.17	-0.12	0.92	1.09
	RMP*Age	-0.02	0.01	-0.13	-1.75	0.08	-	0.00	-0.21	-0.18	-0.13	0.91	1.10
	EL <sub>2</sub> *Age	-0.01	0.01	-0.09	-1.18	0.24	-	0.01	-0.07	-0.12	-0.09	0.92	1.09

a. Dependent Variable: CS

Another regression analysis removing the two-factor interaction EL<sub>2</sub>\*Age resulted in a model that included RMP, Age, EL<sub>2</sub>, and RMP\*Age (Tables 24, 25, and 26). This model was significant ( $F = 24.27$ ,  $p = .00$ ), and the adjusted  $R^2$  remained at 0.49.

Table 24

*Model Summary for Final Model*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adj <i>R</i> <sup>2</sup>	SE	Change Statistics					Durbin-Watson
					<i>R</i> <sup>2</sup> Chg	<i>F</i> Chg	df1	df2	<i>p</i>	
1	.71 <sup>a</sup>	0.51	0.49	0.59	0.51	24.27	4	94	0.00	2.34

a. Predictors: (Constant), RMP\*Age, Age, EL<sub>2</sub>, RMP  
b. Dependent Variable: CS

Table 25

*ANOVA Table for Final Model*

Model		SS	Df	MS	F	P
1	Regression	33.22	4	8.31	24.27	.000 <sup>b</sup>
	Residual	32.17	94	0.34		
	Total	65.39	98			

a. Dependent Variable: CS

b. Predictors: (Constant), RMP\*Age, Age, EL<sub>2</sub>, RMP

Table 26

*Summary of Coefficients for Final Model*

		B	SE	$\beta$	t	p
1	(Constant)	-2.71	1.63		-1.66	0.66
	RMP	1.68	0.44	1.05	3.79	0.00
	Age	0.06	0.03	0.98	1.71	0.09
	EL <sub>2</sub>	-0.21	0.13	-0.12	-1.54	0.13
	RMP*Age	-0.01	0.01	-1.01	-1.51	0.13

**Final Predictive Model**

The final predictive model, consisting of RMP, Age, EL<sub>2</sub>, and the two-factor interaction RMP\*Age, was a significant predictor of CS,  $F(4, 94) = 24.27$ , with the highest adjusted  $R^2 = 0.49$ ,  $p < .00$  (Table 24) among all models considered. A summary of the coefficient results is in Table 26. The regression model equation predicting CS is as follows:

$$CS = -2.71 + 1.68 (RMP) + 0.06 (Age) + -0.21 (EL_2) + -0.01 (RMP*Age)$$

### **Two-Factor Interaction**

There are two depictions of the same two-factor interaction. Figure 13 shows graphically the effect of the two-factor interaction RMP\*Age where the relationship between CS and RMP changes with age. The figure shows that CS increases more steeply as a function of RMP when age is at its lowest, and less steeply as age increases. That is, CS is more responsive or sensitive to changes in RMP as age decreases which suggest that for younger customers, RMP is more influential on satisfaction. However, as one increases in age and presumably experiences with the health insurance process, RMP is less impactful on satisfaction levels. Certainly, consistently low satisfaction over one's life cycle with their health insurance professional could result in a persistence of low satisfaction, even with the presence of RMP.

Figure 14 shows that for low levels of RMP, CS increases as age increases. When RMP is highest, CS actually decreases slightly as age increases. These results suggest that the more RMP is involved in the service interaction between the service professional and a customer, the less age is an influence on CS, even to the point that it is a negligible or negative influence when RMP is high.

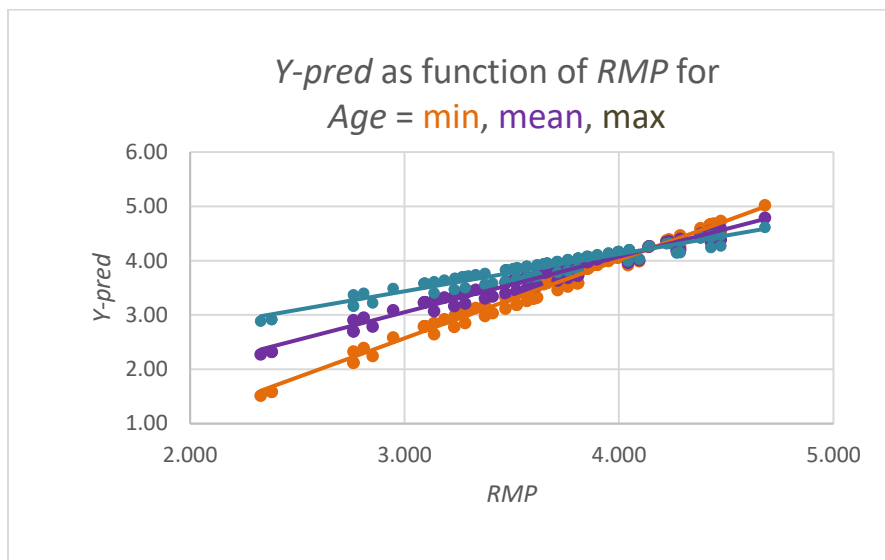


Figure 13. Scatterplot of CS ( $Y\text{-pred}$ ) versus RMP.

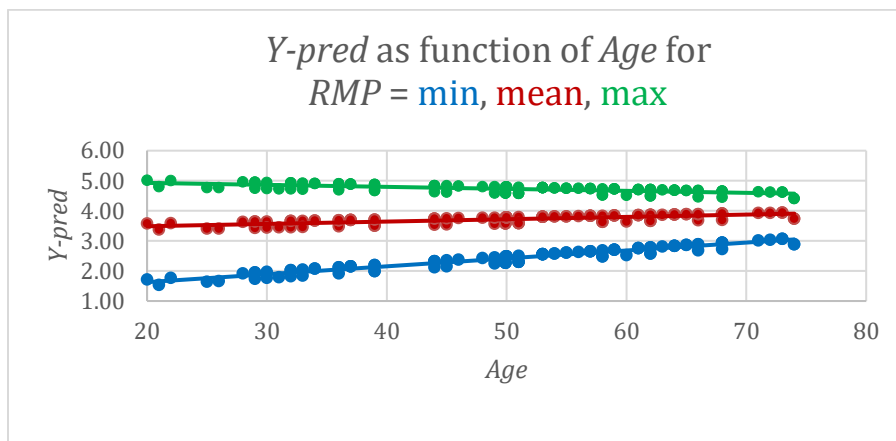
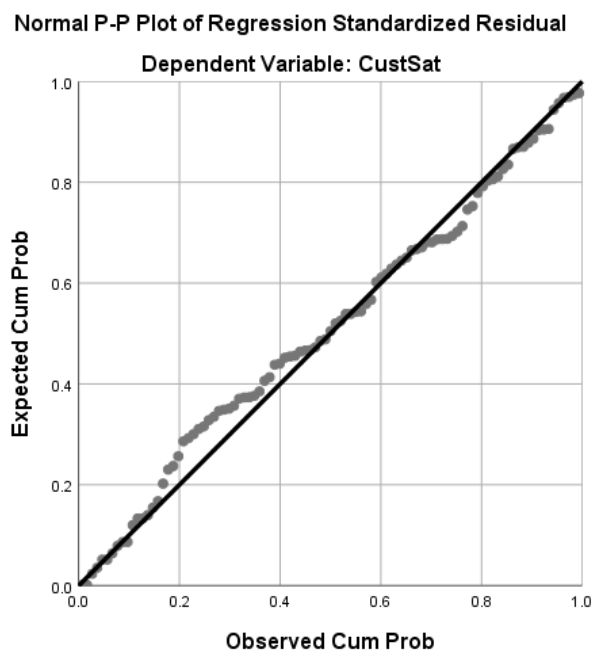


Figure 14. Scatterplot of CS versus Age with RMP.

### Final Model Assumptions

I revisited the underlying assumptions for MLR, which are linearity, homoscedasticity, and normality of the residuals. All assumptions previously checked remain valid, except for the need to check the normality of the residuals for the final,

predictive, regression model (Figure 15). Figure 15 shows no significant departure from normality.



*Figure 15.* Normal P-P plot for the final model to assess the relationship between the predictor independent and dependent variable.

### Research Question

The research question for this study was as follows:

*RQ:* Do RMP, HIL, and CE, and demographic variables Ed Level, Age, and Gender influence CS while engaging in health insurance decisions?

*H<sub>0</sub>:* No independent variables influence CS.

*H<sub>a</sub>:* At least one independent variable influences CS.

The null hypothesis was rejected, and there was sufficient evidence to indicate that the alternative hypothesis is true; that at least one  $\beta_i$  is not equal to zero. Among the original candidate predictors, only RMP was proven to be a significant influence on CS

in the final model. The demographic variables, Age and Ed Level, and the interaction between RMP and Age were not individually significant; however their inclusion in the model improved the model fit and predictability.

The best model found through the series of regression analyses was a model consisting of RMP, Age, EL<sub>2</sub>, and RMP\*Age. The adjusted  $R^2$  of this model was 0.49 indicating that 49% of the variance in CS is explained by this predictive model.

### **Summary and Transition**

The purpose of this study was to examine the influence of RMP, HIL, and CE on CS, controlling for Age, Ed Level, and Gender. The instrument used in this study was the ACSS, which I adapted from the customer satisfaction with service scale, characteristics of partnership success - attributes of partnership scale, customer value co-creation behavior scale, and the HIL measure. Conducting a pilot study was necessary for revalidating these scales with the population in this study. While many of the scales showed a high level of reliability, the RMP scale and the CE scale showed a lower than desired reliability for the Covered California health insurance population.

I used a nonprobability sampling strategy for this study to gain access to study participants, and I allowed for self-determination selection. I collected data over 12 months from expanded data collection sites and community health fairs in Southern California. In all cases, the data collection remained within the sample frame for those eligible to purchase their health insurance through the Covered California marketplace.

I collected 111 survey responses and used only 90% qualified surveys in the analysis ( $N = 99$ ). There were two discrepancies realized in the data collection process.

The first was the need to expand data collection outside of the proposed area, but this discrepancy did not affect the outcome of the study. The other discrepancy was the reliability of some scales in the present study.

I considered seven variables; six were independent variables with one dependent variable. Using primarily the SPSS enter and the Minitab best-subsets regression methods, I evaluated the independent variables in addition to two-factor interactions. A model consisting of three of the independent variables (RMP, Age,  $EL_2$ ), and one two-factor interactions (RMP\*Age) explained 49% of the variance in CS  $F(4, 94) = 24.27, p < .00$ .

The research question involved understanding the effects of the independent variables on the dependent variable. The null hypothesis was that none of the independent variables influenced CS (all coefficients equal zero). The alternative hypothesis was that at least one of the independent variables influenced CS (coefficient not equal to zero). I rejected the null hypothesis, concluding that there is sufficient evidence that the predictor, RMP, had a significant effect on participants' level of CS. While Age, Ed Level, and the interaction between RMP and Age were not significant, their presence in the model improved model fit and predictability. I interpret these findings in Chapter 5 which includes study limitations, the generalizability of the study results, recommendations for utilizing the model to predict CS, recommendations for further research, and implications for professional practice and social change. I interpret these findings in Chapter 5 which includes study limitations, the generalizability of the study results, recommendations for



utilizing the model to predict CS, recommendations for further research, and implications for professional practice and social change.

## Chapter 5: Discussion, Conclusions, and Recommendations

This chapter includes a summary of key findings, interpretation of findings, and new knowledge regarding the service research discipline. I describe limitations of the study and offer recommendations for future research. I conclude with implications for positive social change and recommendations for practice.

The purpose of this quantitative correlational research was to test the influence of the RMP, HIL CE, and demographic variables on CS. The demographic variables were Ed Level, Gender, and Age for adults living in the state of California.

The correlational design was useful for testing predictive relationships between CS and independent and demographic variables, for those who used the Covered California marketplace to purchase health insurance in the state of California. The study results may be useful in terms of health insurance executives' understanding of CS when contemplating actions for reversing the trend of lagging CS ratings prevalent in the health insurance industry as measured by the ACSI.

The key finding was that a model consisting of three predictor variables (RMP, Age, Ed Level) and one two-factor interaction (RMP\*Age) explained 49% of the variation in CS. Other findings of interest were that individual variables such as CE, HIL, Gender, and specific education levels (EL<sub>1</sub>, EL<sub>3</sub>, EL<sub>4</sub>, EL<sub>5</sub>) were not significant predictors and did not contribute significantly to the best predictive model for CS. Following is an interpretation of findings.

## Interpretation of Findings

### Customer Satisfaction

My findings showed CS results that were similar to a national health insurance industry index (ACSI, 2019). ACSI's recent CS index showed out of a possible index score of 100, the health insurance industry has averaged 71% for the past 5 years. On a Likert scale of 1 to 5, the average satisfaction score for my study ( $M = 3.74$ ,  $SD = 0.82$ ), determined by taking the average of multiple responses to the survey, demonstrated similar CS levels for health insurance interactions compared to ACSI. The lowest score reported was a 1.5, and the highest was a 5, indicating a range of 3.5. Thirteen percent of the participants reported 5 in terms of CS, while 68% reported a CS level above 3.5. One participant reported a 1.5 level of CS, while 32% of participants reported CS at or less than 3.5. The wide range of satisfaction levels revealed in my study confirmed the inconsistent level of satisfaction among customers, and the chronic nature of lagging CS and inconsistent nature of customers' perceptions of insurance interactions reflected in CS ratings for the health insurance industry.

According to the ACSI (2019), other related areas of insurance showed increased satisfaction levels over the past 5 years. For instance, in 2019 there was a 1.3% increase in the property and casualty insurance sector over 2018 in CS with an overall rating of 81% in 2019. The life insurance sector showed a 2.6% increase over the 2018 with an overall rating of 80% in 2019. Similar service industries such as financial institutes showed no improvement over 2018 but had an overall rating of 80% in 2019. The health

insurance industry, however, remained flat at 71% with no improvements over 2018, and dropping as low as 69% within the last 5 years.

Lack of improvement in the health insurance industry's satisfaction results as measured by ACSI, demonstrates a need for improvement in the industry. Understanding variables such as the RMP that show a positive effect on CS in my study provides health insurance executives the rationale and motivation to create programs that can improve CS in the health insurance industry. Following are discussions regarding the effect of the RMP on CS in the health insurance industry.

### **Relationship-Marketing and Customer Satisfaction**

The RMP explains relationship complexities and the influencing factors within a relationship needed to create value for customers and organizations. The RMP includes attributes of partnership (commitment, coordination, and trust), and communication behavior (communication quality). Similar to the studies conducted by Jebarajakirthy and Thaichon (2015), Sajtos et al. (2015), and Sleep and Lam (2015), the participants in my study had preferences for interactions that involved the attributes of partnership and communication quality. The RMP's substantial contribution to the predictability of the regression model in my study suggests that health insurance customers are receptive to creating and fostering long-term relationships with their health insurance professionals, and, tend to be more satisfied when they do. Further, the dominance of RMP in the final regression model suggests there is tremendous utility in leveraging this principle as a gateway to understanding customer's service expectations and customizing service interactions for improved satisfaction levels during health insurance interactions.

Some of the complexity, however, surfaces when individual consumers are unaware of their role in co-creating value through the relationship. The desire for relationship is not always overtly apparent in service interactions. For example, a request for an explanation about health plan coverage may appear to be simply a request for information outside the theoretical frame of the RMP. For participants in employer-based health insurance plans or business owners, the relationship component which is B2B is contracted into business performance guarantee. However, for the individual Covered California consumer, the service delivery expectations can be unclear for both health insurance professionals and consumers. The results of my study indicate that RMP could be associated with changes in CS for this B2C relationship.

These results support the assertions of Mocker et al. (2015) that there is an opportunity to expand the utility of RMP into the B2C setting for improving CS where previously the principle had primarily been used in the B2B setting for the same purpose. My research confirmed the appropriateness of using RMP to understand influencing factors that shape expectations customers have during health insurance interactions where there is an inherent reliance on their willingness to engage in the relationship. Following are discussions regarding the effects of CE on CS in the health insurance industry.

### **Customer Engagement and Customer Satisfaction**

CE involves awareness of the responsibility to create value, and then an acceptance of taking on that responsibility (Jaakkola & Alexander, 2014). My study assessed customers' engagement levels in terms of their willingness to create value through the investigation and selection of appropriate health insurance plans during

service interactions. Although in my study, CE was moderately correlated ( $r = 0.29$ ) with CS, evidence from regression analysis did not show CE to be a significant predictor of CS. Therefore, CE was not included in the final predictive model for CS.

Researchers (for example, Sweeney et al., 2015) have shown that patient engagement in the medical process contributes to individual wellness and ultimately satisfaction. However, my study demonstrated that CE in the health insurance process was not a predictor of CS. Engagement requires an awareness of responsibility to create value (Jaakkola & Alexander, 2014). If customers do not take on the responsibility of creating value because of a lack of awareness, they are not likely to reap benefits of value creation or CS that follows such engagement.

Instead of taking on the responsibility of value creation through engagement, health insurance customers may decide to utilize relationship as the gateway to optimizing the benefits of their health plan. My study results suggest that fully optimizing one's health insurance benefits by engaging in the health insurance process is not a predictor of satisfaction. My study does suggest that CS follows the quality of relationship created with the insurance professional while engaged in the health insurance process. Therefore, reliance on the relationship with the health insurance professional becomes a proxy for engagement and therefore attributes their source of satisfaction to the relationship with the health insurance professional. The need for further research regarding CE is discussed later in the chapter.

## **Health Insurance Literacy and Customer Satisfaction**

For my study, HIL was present when participants reported an understanding of the health insurance process and their role in the health insurance interaction. A lack of HIL is a barrier to consumers optimizing the benefits legislated by the ACA through Covered California. The results from my study did not show HIL to be a significant predictor of CS. Although, HIL was correlated with CS ( $r = 0.37$ ), HIL was not a significant predictor and was not included in the final predictive model for CS.

My results aligned with Newport's (2014) findings that although consumers reported high satisfaction with exchanges during the 2014 enrollment process, consumers were not adequately informed about their coverage needs when using their health coverage, nor were they clear about the process for using their health coverage. Newport suggested that one's ability to optimize the benefits of their health insurance plan is not predictive of CS.

In my study, CS was present for high and low levels of HIL, but not correlated overall. This difference in satisfaction levels may explain the disparity in satisfaction noted by the ACA exchanges and the national insurance index. Consumers who have purchased health insurance through Covered California are relatively new at purchasing health insurance, and often do not have the decision-making support extended to consumers with health insurance through their employer, for example. Additionally, the presence of CS for high and low levels of HIL calls into questions one's ability to assess their understanding of the insurance process. Bartholomae et al. (2016) found that consumers have a high level of confidence about their health insurance knowledge where

in practice their knowledge is at a low level of understanding. However, my study did not control for perceptions of health insurance knowledge and demonstrated health insurance knowledge which should be studied by future researchers.

Although HIL was not included in the final predictive model, HIL was correlated with CS which supports the value of literacy programs that are responsive to the varying levels of understanding. Next is a discussion on the effect of demographics on CS in the health insurance industry.

### **Demographics and Customer Satisfaction**

Demographic factors such as age, education level, and gender influence the likelihood of having insurance and the types of health insurance held (Bartholomae et al., 2016). My study explored the effect demographics had on the CS within the health insurance interaction. The results did not reveal a significant relationship between Gender and CS. Age and education level, while not significant, did contribute to the best predictive model for CS within the health insurance interaction.

Research by Ali Jadoo, Puteh, Ahmed, and Jawdat (2012) (health care); Joung et al. (2016) (food industry); and Kwok et al. (2016) (travel) found that different genders experience service interactions differently. My study, however, did not reveal a significant relationship between Gender and CS. It is noteworthy that 75% of the participants in my study reported as female, compared to a report of 52% female for participants enrolled in Covered California in Southern California. Although gender was not a factor included in the final predictive model, the dominant presence of females suggests a limitation of my study.



My study confirmed existing research (for example, Beauchamp & Barnes, 2015; Bilgihan, 2016; and Ellsworth, 2017) that age is correlated with CS for health insurance customers. Additionally, age was a contributing factor in the best predictive model for CS among health insurance customers. However, my study found no significant difference in CS between the age groups.

Similar to Ali Jadoo et al. (2014), who found a significant relationship between education level and patient satisfaction, my study provided evidence that CS may vary as a function of education level, specifically for those whose highest level of education is an associate's degree. Similar to Ali Jadoo et al's (2012) study which found a relationship between CS and those with post-secondary education, my study revealed a relationship with CS for those with an associate's degrees, but not higher levels of completion (bachelor's, master's, and doctorates). For participants with higher levels of college degrees, my study supported Aljazzazi and Sultan (2017) who found no perceptions of elevated banking service levels influenced by education at the post-secondary education level. While previous research (for example, Bartholome et al., 2016; Majerol et al., 2014) confirmed that those with only a high school degree were less likely to have health insurance and were unfamiliar with how to interact with a health insurance professional regarding decisions related to health insurance, my study showed no significant correlation between CS and those participants having high school as the highest level of education completed.

### **Interaction Between Relationship Marketing and Age**

My research showed that a two-factor interaction between RMP and age contributes to the goodness of fit and the predictability of CS. CS is more sensitive to RMP when age is at its lowest, and less sensitive as age increases. This suggests that for younger customers, RMP is more influential on their level of satisfaction. However, as one increases in age and experience with the health insurance process, RMP is less impactful on satisfaction levels. Certainly, consistent low satisfaction over one's life cycle with their health insurance professional could result in a persistence of low satisfaction, even with the presence of a strong relationship marketing effort.

Younger customers who have little to no experience with the health insurance interaction seem to prefer service experiences where the tenets of RMP have been successfully operationalized. It seems intuitive that relational handholding from their health insurance company would be preferred for those with less years navigating the complexity of the health insurance system. However, it seems counter-intuitive that as one ages and begins to experience the complexity of the health insurance system that presence of RMP would decrease satisfaction. The decrease in satisfaction may suggest that RMP tactics employed to influence satisfaction levels for those at lower ages are not likely to have the same amplifying effect on satisfaction levels for those with higher ages.

### **Limitations of the Study**

#### **Generalizability and Trustworthiness**

The results of this study are potentially generalizable to the California population who have interactions with their health insurance professionals. There was no reason to

believe that participants did not answer the questions honestly or that anyone filled out more than one complete survey. Some participants were reluctant to disclose publicly the type of insurance held and preferred to complete the survey not at the data collection site. Nonetheless, I executed the study as outlined in the proposal, and therefore, it is reasonable to trust the results of the study.

The population of this study was made of 75% female which suggests an underrepresentation of males. Women have been shown to take the lead role in managing wellness issues of their families (Bartholomae et al., 2016); and, therefore, it is not surprising that more women than men were willing to participate in this study. However, generalizations of this study regarding CS within the health insurance interaction for Covered California participants must consider the underrepresentation of men in this study.

The population for this study was highly educated where 75% reported having an associate's degree or higher and no participants reported having less than a high school education. According to the U.S. Census Bureau (2017), 78.2% of Southern California residents hold a high school degree or higher which suggests an underrepresentation of 21.8% of the population. Therefore, generalizations of this study regarding CS within the health insurance interaction for Covered California participants must consider this limitation.

### **Validity and Reliability**

I used only validated instruments. However, the instruments used to measure the RMP and CE variables did not have strong Cronbach's  $\alpha$ 's for this study. The instrument

for RMP was adapted from a study whose population consisted of computer brokers in a B2B relationship. The attributes of RMP were commitment, coordination, trust, and communication quality within the health insurance interaction. Although a strong relationship existed between RMP and CS, the instrument used to measure the attributes revealed lower reliability for the commitment and trust attributes. While adjustments to the instrument were made to assess a C2B relationship, the lower Cronbach's  $\alpha$  (.84) signals limitations to reliability.

The instrument for CE was adapted from a study whose population consisted of college students. Similarly, while adjustment to the instrument were made to assess a broader demographic, the low Cronbach's  $\alpha$  (.63) suggested limitations to reliability. Information seeking was the only dimension of the four dimensions used in the instrument to measure CE that maintained reliability.

### **Recommendations**

Results of this study suggest that a model composed of the predictors RMP, Age, Ed Level (associate's degree as the highest level of education), and RMP\*Age was a predictor of CS. However, future researchers should further refine the attributes of partnership scale to assess commitment, coordination, trust, and communication quality for interactions that aligns closely with the intricacies of the health insurance interaction.

In my study, there was a correlation between CE and HIL. Future researchers should examine that relationship to understand the ways of engagement that relate to literacy about the health insurance process, and whether a predictive relationship exists between the two variables. Additionally, elevated levels of satisfaction also existed where

engagement levels were low, suggesting that the varied types of interactions with one's health insurance professional had different service expectations, and a deeper examination is warranted.

My study also showed a relationship between HIL and age. Researchers may find it useful to understand whether the function of age is a proxy for experience within health insurance interactions, where those who have higher quantities of medical or policy issues are more inclined to know more about the health insurance process, thereby impacting their CS level.

## **Implications**

### **Positive Social Change Implications**

Social change resulting from this study includes helping policy-makers development awareness campaigns that appeal to consumers' openness to a relationship characterized as trusting, well-coordinated, having a high degree of loyalty and communication. As a result, barriers for those new to the health insurance interaction can be minimized; allowing consumers to fully engage in the benefits of ACA without trepidation.

Also, my study increases policymakers' understanding that customers fully utilizing the benefits of their health plan require an understanding that while RMP is essential to increasing CS, Ed Levels prescribe the contextual personalization of the interaction within the health insurance interaction. Additionally, this study informs policy-maker's understanding that the age of the customers influences expectations for service delivery within the health insurance interaction.

### **Methodological, Theoretical, and Empirical Implication**

RMP has been used to explain CS in various industries. This study confirmed the usefulness of the RMP in a B2C setting. Further, this study confirmed that RMP can be utilized as a frame for understanding the health insurance interaction, where a significant variance in CS reported by this population was attributed to the RMP variable.

### **Implications for Practice**

CS is a strategic economic indicator for all markets and industries. This strategic indicator is reliant on customer's assessment of quality within the service interaction. This study provided a model for understanding CS within the health insurance interaction where the customer is an active participant in creating their desired value. Improving business outcomes dependent on customer assessment must involve practices that consider the influence of education levels, and application of RMP for all age groups. This is exceptionally true for those who have completed a community college or trade school program. However, these initiatives should be built with an understanding of the unique relationship found in the health insurance interaction.

This study has broad implications for improved business practice that include relationship-centered employee training, organizational structures that enable the development and maintenance of relationships, and a service strategy that considers the demographics of customers. Specifically, health insurers could use the final regression equation to predict CS based on the extent of RMP, and the age and education level of actual or prospective customers. Understanding the customer's service expectations from this lens may enable insurers to improve the health insurance service experience offered

in the health insurance marketplace, and in turn improve utilization and satisfaction among consumers.

### **Conclusions**

The ACA has made great strides in extending health insurance to many who have not had access to health insurance, essentially creating a new market for the health insurance industry. The legislation of this health insurance product has given those without access a voice about their expectations for service of these health insurance products through a competitive marketplace such as Covered California. While the national narrative around health care for all continues to be passionately debated, many Americans are not fully utilizing their benefits for optimal wellness outcomes.

Consequently, the health insurance industry has an opportunity to leverage the ACA legislation for improving operational practices and legacy structures for this new market as well as traditional markets outside of ACA. Although many health insurers have made advancements in health insurance offerings through product design improvements, and operational effectiveness, there remains a persistence of low CS compared to other service industries (ACSI, 2019) which signals a failing in responding to the expectations of this new market's unique service expectations. While there is an understandable focus on internal measures to contain cost, my study presents compelling evidence that a model that includes relationship will allow health insurers to be responsive to the expectations of ACA consumers which will increase satisfaction, market share, and ultimately better wellness outcomes for Americans.

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## Appendix A: Request to Participate – Site Location

### Request to Utilize Church for Research

This is to request permission to use your church facility for collecting research data. The research study examines the relationship between customer engagement, health insurance literacy, and customer satisfaction.

I am conducting research on “The Antecedents to Customer Satisfaction for U. S. Health Insurance Customers,” to fulfill the requirements of earning a Doctor of Philosophy degree at Walden University. The data collected at your church could potentially assist health insurance leaders in formulating appropriate policies and strategies for improving overall customer satisfaction within the health insurance industry.

I respectfully request access to your facility for 8 weeks where surveys will be distributed, completed by your parishioners, and collected by me on a weekly basis. Participation in this study is voluntary and not required. There are minimal risks associated with participating in this survey and you will not receive any monetary compensation for the use of the facility.

Study research result will be presented as aggregate, summary data only. Should you have desire to have a copy of the research study results, please email me at

Sincerely,



## Appendix B: Invitation to Participants

### Invitation to Participate in a Research

You are invited to participate in a study examining the relationship between customer engagement, health insurance literacy, and customer satisfaction.

I am conducting research on “The Antecedents to Customer Satisfaction for U. S. Health Insurance Customers,” to fulfill the requirements of earning a Doctor of Philosophy degree at Walden University. I invite you to take part in this research study because your experience with health insurance service professionals could potentially assist health insurance leaders in formulating appropriate policies and strategies for improving overall customer satisfaction within the health insurance industry.

I respectfully request 15 minutes of your time to complete the survey enclosed. The questions seek your honest opinion regarding your experience with the health insurance professional in relation to customer satisfaction. There are no right or wrong answers. The information you provided will remain confidential. All data will be stored in a password protected electronic format to insure your confidentiality. The results of this study will be used solely for scholarly purposes only, and therefore shared with Walden University representatives.

Your participation in this study is voluntary and not required. There are minimal risks associated with participating in this survey and you will not receive any monetary compensation for participation. You may choose not to participate. Additionally, if you decide to participate in this study, you have the opportunity to discontinue participation at any time.

Study research result will be presented as aggregate, summary data only. Should you have desire to have a copy of the research study results, please email me at

Sincerely,

### Appendix C: Permission for Access to Participants

I am conducting research on “The Antecedents to Customer Satisfaction for U. S. Health Insurance Customers,” to fulfill the requirements of earning a Doctor of Philosophy degree at Walden University.

I am requesting permission to survey your parishioners for this research study because their self-identified experience with health insurance service professionals could potentially assist health insurance leaders in formulating appropriate policies and strategies for improving overall customer satisfaction within the health insurance industry.

The survey will take approximately 15 minutes, and can be completed at your facility or the parishioners’ home. The questions seek honest opinion regarding experiences with the health insurance professional in relation to customer satisfaction. There are no right or wrong answers. The information provided will remain confidential. The results of this study will be used solely for scholarly purposes only.

Participation in this study is voluntary and not required. There are minimal risks associated with participating in this survey and no monetary compensation for participation will be offered.

Study research result will be presented as aggregate, summary data only. Should you have desire to have a copy of the research study results, please email me at [Vivian.phillipshusband@waldenu.edu](mailto:Vivian.phillipshusband@waldenu.edu)

Sincerely,  
Vivian Phillips Husband  
Ph.D. Candidate at Walden University