

Handle With Care: Examining the Relationship Between Empathy and Customer Satisfaction In  
Retail Clinics

by:

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**Abstract**

Since the turn of the 21<sup>st</sup> century, retail clinics (or colloquially, “quick clinics,”) have become an increasingly popular alternative to primary health care providers. However, there is limited quantitative research on factors that affect retail clinics and their operations. The well-known SERVQUAL model is a generally accepted framework in determining the elements of service quality that lead to customer satisfaction, and consists of a set of five different traits, one of them being empathy, or individualized attention (Parasuraman, et al., 1988). This thesis analyzes whether or not empathy has a significant impact on retail clinics’ perceived ability to provide quality care to its patients, as determined by a scenario-based role-playing experiment focusing on these areas. The findings from this research determined that while empathy impacts customer satisfaction from the patient perspective, it has a more complicated effect on the managerial perspective.

Key Words: retail clinics, quick clinics, empathy, service management, managerial empathy, customer satisfaction

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## **Section 1. Introduction**

With the passage of the Affordable Care Act (ACA), retail clinics (or “quick clinics”) have been examined as an alternative option to primary health care providers, who are projected to experience increases in demand and limited resources. Many professionals and patients see retail clinics, despite their claims to quick and high quality care, as a dubious option to primary care, and many questions have been raised as to how retail clinics can provide equally reliable care with a limited scope of service. While there has been increasing amounts of research on this topic (Mehrotra, et al. 2008; Arthur, et al. 2015), very little quantitative analysis has been done on retail clinics and how different factors influence how they operate.

Concurrently, over the past several years, there has been significant attention—academic or practitioner—paid to service management and cracking the code surrounding “what customers want” or “what customers value.” More importantly, however, is the increasing importance of “the human element” in the service sector, as it’s become a bit of a buzzword to gaining customer satisfaction. With regard to both of these aphorisms, many conflicting answers and abstract opinions arise.

In the late 1980s, Parasuraman, Zeithaml, and Berry (1988), researchers from Duke and Texas A&M, developed a model known as the SERVQUAL, or the RATER model, that determined five dimensions of service quality that lead to customer satisfaction. These dimensions included Reliability, Assurance, Tangibility, Empathy, and Responsiveness, and contain highly specific definitions for each factor. For example, researchers defined empathy as “caring, individualized attention the firm provides its customers” (Parasuraman, et. al., 1988, p. 149). However, although SERVQUAL was groundbreaking in its heyday, it has been

continuously analyzed and broken down to determine which factors within SERVQUAL mattered more than others, if any of those factors mattered at all.

Paying attention to the supposed importance of “the human element” in service management, and as a means of providing initial quantitative insight into the retail clinic industry, this thesis aspires to determine whether or not empathy has a significant relationship on retail clinics’ perceived ability to provide quality care to its patients. In order to gain a comprehensive answer to this question, this thesis examines empathy’s potential relationship with retail clinic operations from both the customer and managerial perspectives, as well as whether or not previous use of retail clinics influence empathetic behavior.

This thesis approaches these questions through a scenario-based behavioral experiment in order to obtain primary-source insight. Furthermore, the conducted experiment uses a Qualtrics survey as a tool to examine different situations in which empathy could relate to retail clinic operations. Lastly, this thesis uses statistical analysis in order to properly quantify these relationships.

## **Section 2. Literature Review**

This section analyzes prior academic research in order to discuss numerous factors—both interpersonal and non-interpersonal—that influence service management, and to determine what relationship has been found between empathetic behavior and customer satisfaction in the service industry. More specifically, this section will delve into tenets of relationship management and other emotionally-driven influences in service management; related, but non-relationship-oriented, explanatory factors in service management; and recent findings pertaining to empathy in a managerial context. These sections will also address gaps within the given academic research.

## **Section 2.1 Relationship Management and Interpersonal Traits**

Research on the relationship between service providers and their customers originally looked to see if interpersonal relationships between service providers and customers were related to positive financial results, and if so, which traits were responsible for those positive financial results. Not only did this initial research conclude that such a relationship existed, but that different interpersonal traits were necessary for both creating opportunities for sales, as well as converting those opportunities into actual sales. To create opportunities for sales, service providers needed to create trust and ability to fulfill customer needs; to convert said opportunities into sales, however, service providers needed to demonstrate subject-matter expertise. (Crosby, Evans & Cowles, 1990, p. 75-6).

Conversely, later research became more sophisticated with regard to data collection techniques and explanatory factors analyzed, and became more focused on specific relationship-oriented traits, specific services, and specific countries. For example, one of the more nuanced traits studied involved affective commitment—also known as psychological identification and psychological attachment with a given service provider—and its relationship to customer satisfaction (and in turn, customer loyalty) in Hong Kong’s “tea restaurant” industry (Lai, 2015, p. 118-38). In this particular study, Lai determined that affective commitment was key in turning customer satisfaction into customer loyalty.

While these studies have done some exemplary work in determining the traits that influence relationships between service providers and customers, two main issues are apparent. The first issue is that many of the articles analyzed appear to focus on very intricate services that by their very nature involve stronger interpersonal relationships with customers. Second, more recent research appeared to focus on emerging markets due to their relevancy in the global economy.

These emerging markets, like other countries, have cultural values that impact their preferences in service management. Yet, some of these values may deviate drastically from Western values, and may have influenced the results of the research. Lastly, these studies that focused on more interpersonal traits did not explicitly analyze empathy as defined by Parasuraman et al. (1988) as a potential factor in relationship management.

### **Section 2.2 Relationship Management and Non-Interpersonal Traits**

In addition to relationship management centered around interpersonal factors, many academic sources looked at a wide array of other variables—broadly defined here as “non-interpersonal” variables—that relate to customer satisfaction and the provider-customer relationship. In some cases, these studies were more focused on how information can influence the provider-customer relationship and create a better customer experience. Glushko and Nomorosa (2013), for example, created a conceptual framework that consisted of a potential technological operating system to better fulfill customer preferences. This included a system that kept track of customer preferences, how they searched for their preferences, potential service offerings that could be adapted at any given time, previous service encounters, and service delivery (p. 29-34). In other cases, however, experimenters isolated more physical traits, rather than distinctly information-oriented ones. The work of Panda & Das (2014) went so far as to say that service tangibility—or in layman’s terms, the physical layout and facilitating goods used to execute the service—was more significant in determining customer satisfaction than empathy (p. 63).

However, there are limitations. The conceptual framework is difficult to prove and difficult to determine the strongest models for driving high service quality. Such a conceptual framework needs to go through experimentation or surveying to single out those models. Moreover, an information-based system can only tell what a customer values from a technical standpoint, not

an emotional one. In addition, the locations Panda & Das (2014) chose to collect information from—four highly-populated cities in India, and only large hospitals and more reputable hotels (p. 58)—could be a major limitation in their findings by ignoring possible sources of differences, which may indicate that more interpersonal traits such as empathy could be of bigger importance.

### **Section 2.3 Empathy, Managerial Preferences, and Self-Referential Bias**

In recent years, researchers have been investigating the effects of managerial empathy—defined in this case as the ability for a manager to put themselves in customers' shoes in order to understand their needs—on construing customer preferences (Parasuraman, et al., 1988). Initial studies determine that managerial empathy, rather than helping managers understand what customers want, actually enabled managers to allow their personal preferences as individuals to cloud their decisions as managers, or in other words, create a self-referential bias (Hattula, et. al., 2012, p. 1013-4). Later experiments took further steps into related topics, focusing on how different levels of managerial empathy increase self-referential bias; whether or not managerial empathy impacted their consideration of objective information (such as market research); and whether or not there were any specific tactics that could be implemented in order to reign in self-referential bias. Here, experimenters determined that the more empathetic a manager behaved, the more likely they were to create self-referential bias in their decision making and ignore objective information. However, if managers were given explicit instructions to not be empathetic, they were more likely to suppress their consumer identity when making product development and promotion decisions. (Hattula, et al., 2015, p. 235-252).

While these studies provided strong and comprehensive analysis into how managerial empathy can affect one's ability to accurately predict consumer preferences, there are some

limitations to this research. First, the managerial implications for much of the research in this topic emphasized that marketing managers were the most likely to benefit from the findings of these studies, as the studies predominantly focused on managerial empathy's impact on marketing functions such as pricing and promotion. This ultimately inhibits the applicability of the findings, as it is not explicitly clear if other business functions—such as operations managers—could benefit from recognizing self-referential bias. Second, all of the experiments that the research conducted focused on analyzing customer preferences for goods (cars, Rolex watches, coffee, and so on) rather than services. This may not be reflective of most developed countries, whose economies are service-oriented.

#### **Section 2.4 Possible Contributions of New Research**

Overall, based on the aforementioned previous research, it is evident that there are numerous factors that have been shown to affect customer satisfaction, but it is unclear which factors have more significant effects than others. More specifically, it is unclear what role empathy has in service management, and whether or not it is a positive role. This thesis rectifies these gaps by trying to address both explanatory and dependent factors from previous studies, provide an accurate depiction of Western values, and strive for a controlled, experimental setting. With regard to the general notion of empathy, this thesis focuses on interpersonal traits within service provisions, while acknowledging the potential impact of non-interpersonal traits. In addition, this research examines how previous findings on managerial empathy could affect service provisions—in this case, within retail clinics—with the goal of determining how other business functions could benefit from similar findings.

#### **Section 3: Background on Retail Clinics**

When investigating the possible relationship between empathy and perceived customer satisfaction, it was clear that a specific industry needed to be investigated more thoroughly. Based on their inherently “high touch” nature, coupled with little quantitative research conducted on this industry, retail clinics provided an ample opportunity to explore how empathy influences different areas of operations. To clarify what retail clinics are, how they operate, and what current research exists, this thesis provides a background section below.

The definition of retail clinics (or colloquially, “quick clinics”) is generally consistent across various sources. For example, a 2009 definition provided by the Convenient Care Association (CCA), a trade association for retail clinics and other healthcare companies that specialize in accessible and affordable healthcare, defined retail clinics as healthcare clinics that have “flexible hours, transparent pricing, and a limited number of health services in a convenient setting.” (Arthur, et al. 2015, p. 431). Similarly, The Robert Wood Johnson Foundation defined retail clinics as “ambulatory care sites typically located in and associated with brand-name retailers...” (Bachrach, et al. 2015, p. 6).

Retail clinics, as their name suggests, are located in various retailers--which include drugstores, “big-box” retailers, and grocery stores—and are predominantly staffed by physicians assistants (PAs) and nurse practitioners (NPs) (Zamosky, 2014, p. 22; Mehrotra, et al. 2008, Bachrach, et al. 2015, p. 6). As a result of their location, the majority of retail clinics are owned, staffed, and operated by retailers, usually in partnership with regional health systems (Bachrach, et al. 2015, p. 6). Generally, retail clinics provide acute care, focusing on a limited scope of services, such as treatment of minor wounds and illnesses; administering vaccinations; and performing basic physical examinations (Zamosky, 2014, p. 22; Mehrotra, et al. 2008, p. 1272; Arthur, et al. 2015 p. 430; Pines, et al. 2013, p. 2158). However, at least two major retail clinic

providers—CVS and Walgreens—have been expanding into disease management and chronic care, to the opposition of major medical academies (Bachrach, et al. 2015, p. 9-10; Zamosky, 2014, p. 29, Lorenzetti, 2015, p. 22).

There are varying reasons as to why consumers are using retail clinics, with convenience of time and location being a dominant factor in retail clinic use. Other factors include the lack of needing to schedule an appointment, low cost, compared to other sources of care, and having no usual source of care (*Drug Store News* 2015, p. 72; Zamosky, 2014, p. 23). Additionally, an earlier comparative study between retail clinics, primary care physicians, and emergency departments found that 60% of retail clinic users did not have a primary care physician (Mehrotra, et al. 2008, p. 1279). Despite this, only 3% of the United States population is seeking retail clinic care; this is due to location concentration in larger metropolitan areas, limited scope of care, and questions regarding care quality (Zamosky, 2014, p.22-23). Efforts to help combat the latter concern have predominantly involved partnering with regional health systems as a means of increasing the retail clinic's perception as a trusted healthcare provider. (Bachrach, et al. 2015, p. 9).

With increased retail clinic usage, research on this topic has also increased. However, this research predominantly consists of qualitative studies, comparative studies, or research-based opinion articles in academic journals. (Pines, et al. 2013, p. 2157-2165; Mehrotra, et al. 2008, p. 1272-1282; Arthur, et al. 2015, p. 429-441). Consequentially, no quantitative studies were found during literature searches. More specifically, research on the operations of retail clinics predominantly focused on cost reduction strategies and recommendations for collaboration with public health systems (Pines, et al. 2013, p.2160-4 ; Arthur, et al. 2015 p. 436-9). In contrast, no academic articles were found on the process of receiving care at a retail clinic, or on retail clinic

service management. With that said, this thesis plans on addressing this gap in academic research by shedding light on a relatively new topic through a different research format.

#### **Section 4: Methodology**

##### **Section 4.1: Hypothesis Statements and Justifications**

One of the major implications from Panda & Das (2014) regarding the SERVQUAL model was that streamlining or modifying services to make them more relatable to customers would lead to a more favorable perceptual reaction from the customer (p. 63). Moreover, trade publications and white papers note that the appeal of retail clinics include factors that directly benefit the customer, such as convenience and flexibility (Zamosky, 2014; Bachrach et al. 2015, p. 6-7).

*Hypothesis 1 (H1): Empathy is related to customer satisfaction in retail (“quick”) clinics.*

Previous studies have shown that there is self-referential bias in managers predicting consumer preferences (Hattula, et al., 2012, p. 1013-4). In other words, managers have a tendency to reflect and insert their own personal preferences as a consumer when determining what customers value. However, this particular experiment focused on goods, with no evidence indicating that the same result is shown in managers that provide services. Based on this lack of evidence, it may be possible that self-referential biases may not occur in a service setting, especially in a highly interpersonal industry such as the retail clinic industry.

*Hypothesis 2 (H2): Participants who have used retail clinics for medical care will be more empathetic in terms of considering customer preferences when placed in a managerial setting than those who have not.*

Researchers recently conducted a study on managerial empathy in the luxury goods industry, which determined that managerial empathy levels can backfire when predicting consumer preferences, and that managers who try to put themselves into customers' perspectives tend to rely less on given market research. (Hattula, et al., 2015, p. 240). In this case, those who do not normally use retail clinics as a primary source of health care may work harder to take a consumer perspective, and thus are more likely to ignore market research when determining consumer preferences.

*Hypothesis 3 (H3): Participants who do not use retail clinics will be more likely to forgo customer preferences in favor of personal preferences when placed in a managerial setting than those who do.*

Lastly, despite the increase in number of retail clinics, only 3% of the American population setting uses retail clinics regularly. This is due to a wide array of factors, including clinic location, scope of services provided, and ability of customers to trust the services provided. (Zamosky, 2014, p. 22-3). This lack of use is crucial in determining whether or not participants will be able to empathize with customers in a retail clinic setting, as those who use do not use clinics often may have difficulty empathizing.

*Hypothesis 4: Participants' combined recent retail clinic use and frequency of use predict a manager's ability to empathize with customers in a service setting.*

#### **Section 4.2: Measures and Variables**

For all hypotheses, participant data was collected from a behavioral experiment using a Qualtrics survey containing different sets of questions tailored to test each individual hypothesis. The Qualtrics survey itself can be found in Appendix B.

##### *Hypothesis 1:*

To test H1, participants were given a questionnaire containing two different hypothetical situations involving the retail clinic service experience from a customer perspective. The two situations were similar in context, but contained different information indicating two different retail clinic experiences. After reading each situation, participants were given a series of Likert scale questions pertaining to each individual aspect of the retail clinic service process (i.e. checking in, wait time, examination, etc.) as well as Likert scale questions pertaining to the retail clinic experience as a whole.

The independent variable for H1 is represented as the type of information provided in the hypothetical situations. Each situation was worded in a way to indicate high and low levels of empathy, as well as to indicate different steps in the treatment process. For example, the high-empathy situation involved being “greeted with a smile” upon check in, while the low-empathy situation involved being “asked what symptoms [one] had” upon check-in.

The dependent variable for H1 is customer satisfaction, represented as CSAT. CSAT is determined by averaging participant data on their respective Likert scale responses into an

overall index. To confirm the reliability of this measurement, pairwise correlations were conducted on 7 different Likert scale items for both the high and low empathy conditions.

*Hypothesis 2 and Hypothesis 3:*

To test H2 and H3, participants were given another set of situations in the same questionnaire, this time focusing on a managerial perspective. Participants were given the task of prioritizing five different aspects of retail clinic service—check in, waiting time, examination, diagnosis, and treatment—by allocating 100 points between all five areas. In one scenario, participants are required to allocate points at their own disposal. In the second scenario, participants were given results a “patient survey” with given point values for the same five areas. Like the first question, participants were asked again to allocate points while considering the values given in the “survey.”

Additionally, both H2 and H3 have the same independent variables. The first independent variable is represented qualitatively as whether or not a given question on the main questionnaire contained the patient survey. Quantitatively, this is represented by the following dummy variable: No = 0; Yes = 1. The second independent variable is represented by the participant’s response to another questionnaire item, namely, whether or not they received retail clinic care in the past. This is also represented by a dummy variable: No = 0, Yes = 1.

*Dependent Variable for Hypothesis 2:*

The dependent variable for H2 is the difference between participants’ rankings for each area. This is represented by the change (delta, symbolized as  $\Delta$ ) from the value given in the second question—which contained the “patient survey—to the value given in the first question, which contained no “patient survey.” This was done for all five areas. For example, the

difference  $\Delta$  for the Friendly Check In factor is determined by the following expression: Friendly Check In (2) – Friendly Check In (1).

*Dependent Variable for Hypothesis 3:*

The dependent variable for H3 is the difference between participants' rankings for each area compared to the values given in the "patient survey." This is also represented by the change (delta, symbolized as  $\Delta$ ) from the value given in the second question—which contained the "patient survey—to the value given in the "patient survey" for a given area. As in the test for H2, this measurement was also conducted for all five areas. For example, the difference  $\Delta$  for Friendly Check In is determined by the following expression: Friendly Check In (2) – Friendly Check In (Survey).

*Hypothesis 4:*

To test H4, participants were given another set of questionnaire items. These items consisted of three Likert Scale questions that followed the point allocation questions. The nature of these questions involved the participant's ability to put themselves into a customer perspective. Participants were then given another set of questions that focused on their personal retail clinic use, including whether or not they had received retail clinic care in the past, and the frequency of their retail clinic use.

The independent variable for H4 is the participant's overall retail clinic use, which is expected to vary between each participant. Overall retail clinic use can be determined by the aggregation of dummy variables from several different factors: whether or not a participant had received retail clinic care in the past (No = 0, Yes = 1); and the frequency of their retail clinic use (Never = 1; Rarely = 2; Sometimes = 3; Often = 4; Always = 5).

The dependent variable for H4 is the participant's level of empathy, represented as EMP. EMP is determined by averaging participant data on their respective Likert scale responses into an overall index. To confirm the reliability of this measurement, pairwise correlations were conducted on 3 different Likert scale items.

### **Section 4.3: Sample Selection**

The target sample selected for this study consisted of college students, specifically students from the University of Minnesota, Twin Cities. Sample selection was primarily conducted through social media sites (Facebook, GroupMe) and classroom discussion forums (Moodle). All participants were allowed to opt in or opt out of the study through consent forms presented at the beginning of the questionnaire. A total of 76 responses were recorded, but only 53 responses were deemed useable due to incomplete responses and other responses with missing values.

### **Section 4.4: Analysis**

#### *Hypothesis 1:*

Since CSAT scores are being compared based on empathy condition (high or low), a two-tailed, two-sample t-test was the appropriate method for analysis. Here, the null hypothesis would indicate no difference between customer satisfaction scores within the two empathy condition, and thus indicate no relationship between these two factors. Conversely, the alternate hypothesis would indicate that there *is* a difference between CSAT scores within both conditions, thus indicating a relationship between empathy and customer satisfaction. The respective hypotheses can be represented as follows:

$$H_0: \text{CSAT } \mu (1) = \text{CSAT } \mu (0)$$

$$H_a: \text{CSAT } \mu (1) \neq \text{CSAT } \mu (0)$$

*Hypothesis 2:*

For H2, participants' responses are analyzed in two groups: those who have received retail clinic in the past and those who haven't. With that in mind, a two-sample T test was used to conduct an appropriate analysis. Here, the null hypothesis indicates that prior retail clinic use does not create a difference in absolute point allocation change between the first and second point allocation questions, while the alternate hypothesis suggests that those who have used a retail clinic before will have a higher increase in point change, and thus demonstrating higher empathetic behavior by incorporating data from the patient survey into their answers in the second point allocation question. The hypothesis can be represented as follows:

$$H_0: |\Delta\mu| (1) = |\Delta\mu| (0)$$

$$H_a: |\Delta\mu| (1) > |\Delta\mu| (0)$$

*Hypothesis 3:*

For H3, participants' responses is examined in the same format as in H2, and similarly uses a two-sample T test to conduct an appropriate analysis. In this case, the null hypothesis indicates that prior retail clinic use does not create a difference in absolute point allocation change between the second point allocation question and the "patient survey," while the alternate hypothesis suggests that those who have *not* used a retail clinic before will have a higher increase in point change, and thus demonstrating lower empathetic behavior by ignoring the values indicated in the "patient survey." The hypothesis can be represented as follows:

$$H_0: |\Delta\mu| (0) = |\Delta\mu| (1)$$

$$H_a: |\Delta\mu| (0) > |\Delta\mu| (1)$$

*Hypothesis 4:*

H4 will be measured in two ways to account for two different indicators of overall retail clinic use. First, in order to accurately analyze overall retail clinic use's potential influence on participants' EMP scores, a two-tailed, two-sample t-test was used. The null hypothesis will indicate that there is no difference in EMP score between those who had prior retail clinic use and those who hadn't, while the alternate hypothesis will suggest a difference. Second, in order to account for different frequencies in retail clinic use, a one way ANOVA test was used. The null hypothesis indicated means that are not significantly different between different frequency levels, while the alternate hypothesis indicated statistically significant unequal means. Both tests can be represented in the following formats:

For Prior Use:

$$H_0: EMP \mu (1) = EMP \mu (0)$$

$$H_a: EMP \mu (1) \neq EMP \mu (0)$$

For Frequency:

$$H_0: EMP \mu (1) = EMP \mu (2) = EMP \mu (3) = EMP \mu (4) = EMP \mu (5)$$

$$H_a: EMP \mu (1) \neq EMP \mu (2) \neq EMP \mu (3) \neq EMP \mu (4) \neq EMP \mu (5)$$

### **Section 3.5: Strengths, Assumptions, and Limitations**

The methodology for this study contains some notable strengths. First, this study strived to provide insight into an emerging industry that has been seldom studied in a quantitative manner, and did so in a Western cultural setting. Second, this study examined a logical and appropriate sample for the industry of focus (college students, or more generally, millennials) as they ultimately will become future retail clinic patients as the retail clinic industry grows. Finally, the study appropriately isolates different variables.

For this experiment to be conducted, one had to make several assumptions. All participants were assumed to be current undergraduate students at the University of Minnesota, Twin Cities who were able to complete the survey to the best of their ability, as well as understand all questions that were asked. Moreover, several of the questions in the Qualtrics survey were manipulated in a very subtle manner, and it was assumed that all participants paid a high enough level of attention in order observe this change and understand what the survey was trying to measure.

This methodology also contains some limitations. First, the sample selection method provided the opportunity for non-response bias and/or dropped surveys, as requests for participants were made on public forums—i.e. social media—where all participants were given the ability to opt in if they so chose. The decision to not provide economic incentives for participation could have also reinforced this non-response bias. Lastly, the assumption that all participants in the study were University of Minnesota students limits the scope of the experiment and does not allow for accurate representation of all possible retail clinic users.

#### *A Note on Methodological Editing*

In order to preserve the integrity of this thesis, it must be noted that the researcher detected a methodological error early in the data collection process. More specifically, the original format of the point allocation questions used in H2 and H3 was originally formatted as a sliding scale, which led to misinterpretation by the first 15 respondents of the survey. Once this error was detected, the point allocation question was reformatted to a manner that the participants could understand, and the results of the initial respondents were re-proportioned to a 100-point scale, so as to not discard pertinent data. To determine whether or not this error affected the results of the tests for H2 and H3, two-tailed two sample t-tests were conducted to

compare responses before and after the question formats were modified. With the exception of the Thorough Examination and Accurate Diagnosis categories in H3— $p = 0.033$  and  $p = 0.036$  respectively—there were no statistically significant differences at the 5% level between the responses captured in the erroneous format and those captured in the accurate format. Despite this information, the editing itself is considered to be a limitation of this research.

## **Section 5: Results**

This section details the findings of this research in order to assess support for my hypotheses.

### **Section 5.1: Findings of Hypothesis 1**

Before determining the results for H1, pairwise correlations were conducted to confirm the reliability of the high and low empathy conditions across the 7 different Likert scale items that would create the customer satisfaction (CSAT) index. All correlations were statistically significant, confirming that both sets of pairwise correlations are reliable. Table 5.1 and Table 5.2 detail these pairwise correlations:

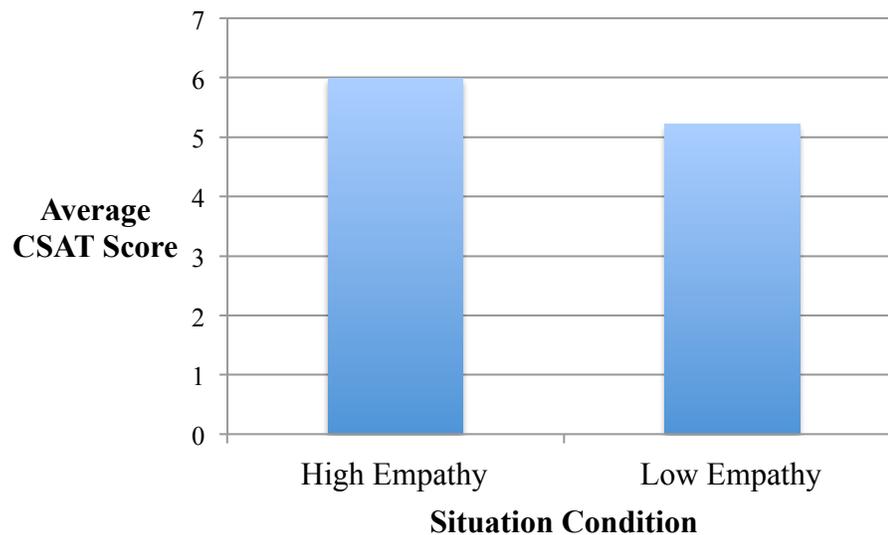




As mentioned above, H1 was testing whether or not empathy was an indicator of customer satisfaction in a retail clinic setting. A two-sample t-test compared all participants' CSAT scores in both the high and low empathy conditions. This t-test had a critical value of  $p < 0.05$ , and was homoscedastic—or, assumed equal variances between both conditions—due to respondents' exposure to both empathy conditions, resulting in an equal sample size ( $N=53$ ).

Below is a graph (Graph 5.1) displaying the CSAT score for both the high and low empathy conditions:

**Graph 5.1: Empathy and Customer Satisfaction - Customer Perspective**



Next is a table (Table 5.3) indicating the means and standard deviations for both the high and low empathy conditions, as well as the two-tailed p-value from the two-sample t-test:

**Table 5.3: Empathy and Customer Satisfaction – Customer Perspective**

Condition	Mean CSAT Score	Standard Deviation	Two-tailed P-Value
High Empathy	5.988	1.146	<b>0.006</b>
Low Empathy	5.213	1.103	

Note: N = 53; homoscedastic t-test; p-value < 0.05 deemed statistically significant

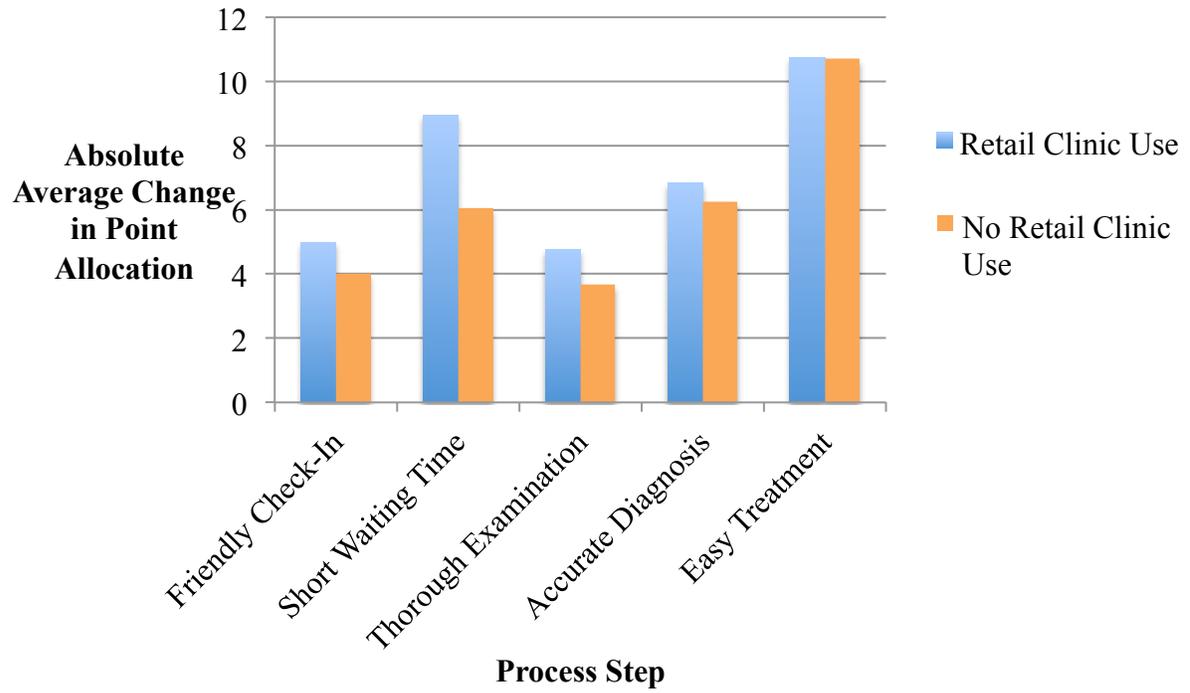
Both Graph 5.1 and Table 5.3 indicate that the high empathy condition had an average CSAT score of 5.988, while the low empathy condition had an average CSAT score of 5.213. Table 5.3 also shows that the high empathy condition had a standard deviation of 1.146 points, while the low empathy condition had a standard deviation of 1.103 points. These differences turned out to be statistically significant, with a p-value of 0.006, thus supporting H1.

### **Section 5.2: Findings for H2**

For H2, another two-sample t-test was conducted to test whether or not those with experience in retail clinic were more empathetic than those who did not, based on their ability to consider consumer preferences when placed in a managerial setting. Unlike H1, this t-test had a critical value of  $p < 0.10$  and was heteroscedastic—or, assumed *unequal* variances between both conditions—due to an unequal sample size between retail clinic users and nonusers (N for retail clinic use = 35, N for no retail clinic use = 17). Graph 5.2 indicates the absolute average point allocation changes for both retail clinic users and nonusers across five different process steps, while Table 5.4 indicates the absolute mean change in point allocation for both retail clinic users and nonusers across five process steps, as well as the respective one-tailed p-values for each process steps.

**Graph 5.2: Managerial Empathy – Changes in Point Allocations With and Without Patient**

**Data**



**Table 5.4: Managerial Empathy – Changes in Point Allocations With and Without Patient****Data**

<b>Process Step</b>	<b>Absolute Mean Change in Point Allocation (Retail Clinic Use)</b>	<b>Absolute Mean Change in Point Allocation (No Retail Clinic Use)</b>	<b>P-Value (One-Tailed)</b>
Friendly Check-In	4.994	4.006	0.273
<b>Short Waiting Time</b>	<b>8.949</b>	<b>6.059</b>	<b>0.064*</b>
Thorough Examination	4.769	3.671	0.258
Accurate Diagnosis	6.829	6.259	0.407
Easy Treatment	10.74	10.7	0.492

Note: N – Retail Clinic Use = 35; N – No Retail Clinic Use = 17; heteroscedastic t-test; p-value < 0.10 deemed statistically significant

In both Graph 5.2 and Table 5.4, we see that prior retail clinic users had larger absolute mean changes in point allocations between the first and second point allocation questions compared to those who had no prior retail clinic use, the exception being the Easy Treatment process step having nearly equal means between both groups of participants. However, none of these results were statistically significant at the 5% level; Short Waiting Time, which had a p-

value of 0.064, is statistically significant at the 10% level. Therefore, H2 is only partially supported.

### Section 5.3: Findings of Hypothesis 3

Since testing for H3 involved working with a similar set of data as H2, H3 also used a one-tailed, heteroscedastic t-test, and used the same sample size as H2 (N for retail clinic use = 35, N for no retail clinic use = 17). The only difference for H3 was the critical value used to determine statistical significance ( $p < 0.05$ ). Below is Graph 5.3, which indicates the absolute average point differences from patient data for both retail clinic users and nonusers across five different process steps:

**Graph 5.3: Managerial Empathy – Differences Between Point Allocation Responses and**

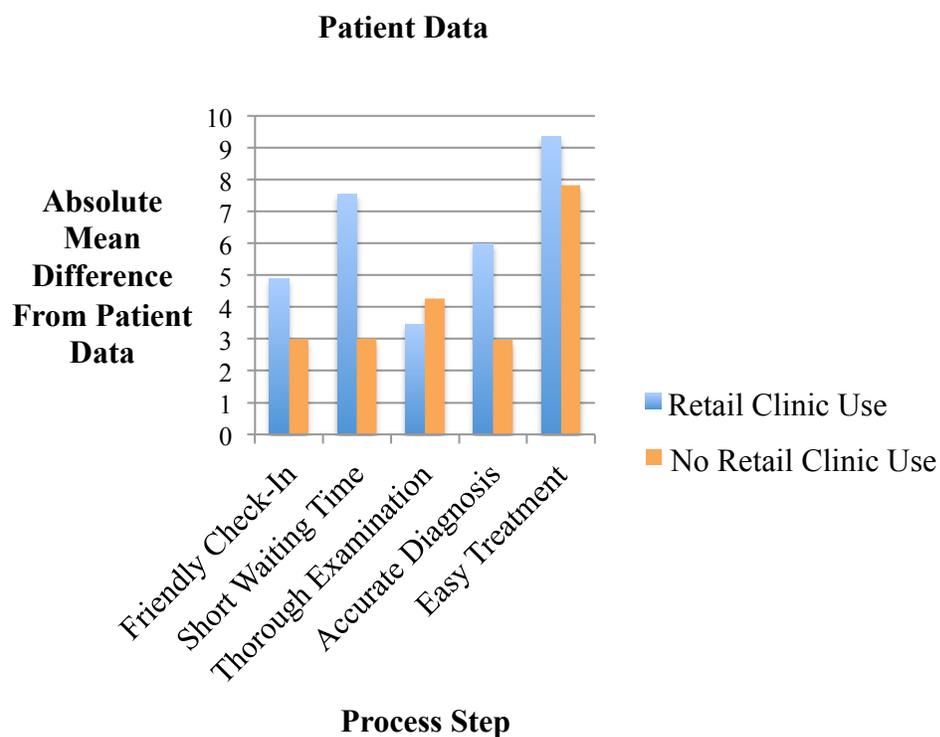


Table 5.5 indicates the same information as in Graph 5.3, as well as the respective one-tailed p-values for each process step.

**Table 5.5: Managerial Empathy – Differences Between Point Allocation Responses and Patient Data**

<b>Process Step</b>	<b>Absolute Mean</b>		
	<b>Absolute Mean Difference in Patient Data (Retail Clinic Use)</b>	<b>Difference in Patient Data (No Retail Clinic Use)</b>	<b>P-Value (One-Tailed)</b>
<b>Friendly Check-In</b>	<b>4.889</b>	<b>2.994</b>	<b>.961</b>
<b>Short Waiting Time</b>	<b>7.546</b>	<b>3</b>	<b>0.998</b>
Thorough Examination	3.466	4.259	0.303
<b>Accurate Diagnosis</b>	<b>5.997</b>	<b>2.965</b>	<b>0.986</b>
Easy Treatment	9.354	7.818	0.735

Note: N – Retail Clinic Use = 35; N – No Retail Clinic Use = 17; heteroscedastic t-test; p-value < 0.05 deemed statistically significant

For H3, at first glance, there appears to be no statistical significance for all of the data presented in Table 5.5, as exemplified by both the higher means for retail clinic users compared to nonusers, and by the high p-values across all process steps (excluding Thorough Examination). However, the one-tailed t-test indicated statistical significance in favor of a

mismatch between customer preferences and points allocated by retail clinic *users*, not nonusers, for Friendly Check-In, Short Waiting Time, and Accurate Diagnosis. This statistical significance is expressed by calculating  $(1-p)$ , which indicates the p-value for the original hypothesis. So, although H3 does not have support for retail clinic non-users, it does show support for previous research. This connection will be detailed more thoroughly in the Discussion section.

#### Section 5.4: Findings for Hypothesis 4

As mentioned above, H4 wanted to determine whether or not overall retail clinic use (both in terms of prior use and in terms of frequency of use) was an indicator of a manager's ability to empathize in a given service setting. Like H1, H4 also required pairwise correlations to determine the reliability of the three Likert scale items that composed an empathy (EMP) index. Table 5.6 shows those correlations and confirms their reliability based on their statistical significance.

**Table 5.6: Pairwise Correlation for H4**

		<b>Attempt to Empathize</b>	<b>Ease of Empathy</b>	<b>Usefulness of Task</b>
<b>Attempt to Empathize</b>	<b>R</b> <i>R Standard Error</i> <i>t</i> <i>p-value</i> <i>H0 (5%)</i>	<b>1.</b>		
<b>Ease of Empathy</b>	<b>R</b> <i>R Standard Error</i> <i>t</i> <i>p-value</i> <i>H0 (5%)</i>	<b>0.64998</b> 0.01132 6.10807 1.38842E-7 <i>rejected</i>	<b>1.</b>	
<b>Usefulness of Task</b>	<b>R</b> <i>R Standard Error</i> <i>t</i> <i>p-value</i> <i>H0 (5%)</i>	<b>0.60209</b> 0.0125 5.38526 1.84952E-6 <i>rejected</i>	<b>0.73131</b> 0.00912 7.65728 5.00604E-10 <i>rejected</i>	<b>1.</b>

The first part of the test for H4 examined prior retail clinic use as an indicator of a manager's ability to demonstrate empathy in a service setting. Since there were two categories of

prior retail clinic use (those who had and those who hadn't), a two-sample t-test was conducted to compare the mean EMP scores between retail clinic users and nonusers. Table 5.7 displays these means, along with their respective standard deviations and the two-tailed p-value of the t-test.

**Table 5.7: Retail Clinic Use and EMP Scores**

<b>Retail Clinic Use</b>	<b>Mean EMP Score</b>	<b>Standard Deviation</b>	<b>Two-tailed P-Value</b>
Use	4.81	1.353	0.6979
No Use	4.98	1.53	

Note: N – Retail Clinic Use = 35; N – No Retail Clinic Use = 17; heteroscedastic t-test; p-value < 0.05 deemed statistically significant

Based on prior retail clinic use, it is clear that both users and nonusers have similar means, with users maintaining an average EMP score of 4.81 and a standard deviation of 1.353 points. In contrast, nonusers maintain an average EMP score of 4.98, with a standard deviation of 1.53. The difference between these means is not statistically significant, and we fail to reject the null hypothesis assuming equal means.

The second part of the test for H4 focused on frequency of retail clinic use. Based on collected data, a one-way ANOVA was conducted between participants who had frequencies of “Never” (N=12), “Rarely” (N=27), “Sometimes,” and “Often,” with participants indicating “Sometimes” and “Often” being pooled together into one group (N=13). Below is Table 5.8, which displays the mean EMP score of each frequency group, their means, and the overall p-value.

**Table 5.8: Retail Clinic Frequency and EMP Scores**

<b>Retail Clinic Frequency</b>	<b>Mean EMP Score</b>	<b>P-Value</b>
Never	4.833	0.951
Rarely	4.827	
Sometimes/Often	4.974	

As Table 5.8 indicates, all three frequency groups have nearly identical means, and a p-value of 0.951 indicates that there is no statistical significance, and that we fail to reject the null hypothesis of equal means. Based on the results indicated in this table and in Table 5.7, H4 cannot be supported.

### **Section 6: Discussion**

There are a few key takeaways as a result of this research. First, as exemplified by the support surrounding H1, empathy matters to customers in a retail clinic setting. More specifically, it is still something important enough to patients to affect perceived quality of care, and will thus be crucial to remember as retail clinic continue to expand throughout the country.

However, when the focus shifts to the managerial perspective and managerial empathy, things can get a little complicated. The partial support from H2 initially suggests that those who have been to a retail clinic before have some understanding as to what elements of the service provision are valued most; if a retail clinic prides itself on being a “quick clinic,” it would make sense for those who had visited a retail clinic to understand that customers value a shorter wait time to see a PA. Yet, the findings for H3 indicate that the participants who had been to a retail clinic may have implemented the self-referential bias determined in the research of Hattula, et al.

(2015, p. 240). In turn, these participants may have ignored the hypothetical “patient survey” in favor of trusting their own experiences as indicating of what customers wanted. Meanwhile, the lack of support for H4 indicates that overall retail clinic use—exemplified here by prior retail clinic use and frequency of retail clinic use—was not an indicator of whether or not someone was able to express empathy in a given service setting, thus leaving additional opportunities to explore what elements *do* affect a manager’s ability to demonstrate empathy in a service setting.

Moreover, people who focus on retail clinic operations—namely clinic managers, PAs and NPs—can use the implications from this research as a means of building, improving, and maintaining clinic operations. H3 highlights some specific areas within the retail clinic service provision (check-in, wait time, and diagnosis) that may be more susceptible to self-referential bias on behalf of clinic staff. This provides managers the ability to determine whether or not these are areas that require improvement with regard to acknowledging customer needs, analyze areas of each process step that could be clouded by managerial preferences, and re-tailor those areas so as to better center on customer needs.

Lastly, as acknowledged within the Methodology section of this thesis, this research was a first step, and thus there are some possible improvements that could be implemented in order to improve upon this research. This could include more complex surveys that ask further questions beyond satisfaction, or incorporate a different sample of individuals to determine any differences in results between demographics.

### **Section 7: Conclusion**

Overall, this initial quantitative look into the retail clinic industry came away with some interesting findings. While it is clear that empathy still matters to retail clinic patients, a manager’s previous experience with a retail clinic may affect their ability to best determine and

accommodate customer preferences in specific areas of the retail clinic process. This opens the door for clinic managers to better understand how certain factors of service quality ultimately interact with the retail clinic business. Moreover, it may not be clear whether or not experience is the most appropriate indicator of empathy, which leaves ample opportunity to explore indicators that *are* appropriate.

Despite this, the methods for coming to these findings were imperfect and may not have captured all possible users of retail clinics in an unbiased, error-free way. Fortunately, since this is one of the first looks into quantitative research in this field, this thesis provides an important first step into examining the retail clinic industry and the factors that influence it. As more research on this industry is published, there will be more opportunities to get a more accurate picture of this industry, and more information to determine how to best optimize retail clinic operations.

## Reference List

- Arthur, B. C., Fisher, A. K., Shoemaker, S. J., Pozniak, A., & Stokley, S. (2015). Business Models, Vaccination Services, and Public Health Relationships of Retail Clinics: A Qualitative Study. *Journal Of Healthcare Management, 60*(6), 429-441.
- Bachrach, Deborah, Jonah Frohlich, Allison Garcimonde, and Keith Nevitt. "Building a Culture of Health: The Value Proposition of Retail Clinics." (n.d.): n. pag. Building a Culture of Health: The Value Proposition of Retail Clinics. Manatt Health and The Robert Wood Johnson Foundation, Apr. 2015. Web.
- Consumers visit retail clinics for convenience. (2015). *Drug Store News, 37*(8), 72.
- Crosby, L. A., Evans, K. A., & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. *Journal Of Marketing, 54*(3), 68.
- Dougherty, Dave, and Ajay Murthy. "What Service Customers Really Want." Harvard Business Review. Harvard Business School, 01 Sept. 2009. Web. 09 Mar. 2016.
- Glushko, R. J., & Nomorosa, K. J. (2013). Substituting information for interaction: A framework for personalization in service encounters and service systems. *Journal Of Service Research, 16*(1), 21-38. doi:10.1177/1094670512463967
- Lai, I. W. (2015). The roles of value, satisfaction, and commitment in the effect of service quality on customer loyalty in Hong Kong–style tea restaurants. *Cornell Hospitality Quarterly, 56*(1), 118-138. doi:10.1177/1938965514556149
- Lorenzetti, L. (2015). Betting Big on Health. *Fortune, 171*(6), 22.
- Mehrotra, A., Wang, M. C., Lave, J. R., Adams, J. L., & McGlynn, E. A. (2008). Retail Clinics, Primary Care Physicians, And Emergency Departments: A Comparison Of Patients' Visits. *Health Affairs, 27*(5), 1272-1282. doi:10.1377/hlthaff.27.5.1272
- Panda, T. K., & Das, S. (2014). The role of tangibility in service quality and its impact on external customer satisfaction: A comparative study of hospital and hospitality sectors. *IUP Journal Of Marketing Management, 13*(4), 53-69.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-Item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40. Retrieved May 3, 2014.
- Pines, J. M., Newman, D., Pilgrim, R., & Schuur, J. D. (2013). Strategies For Integrating Cost-Consciousness Into Acute Care Should Focus On Rewarding High-Value Care. *Health Affairs, 32*(12), 2157-2165. doi:10.1377/hlthaff.2013.0685

ZAMOSKY, L. (2014). What retail clinic growth can teach us about patient demand. *Medical Economics*, 91(1), 22-30.

***Appendix A: Consent Form for Qualtrics Survey:***

**Consent Form:**

Handle With Care: Examining the Relationship Between Empathy and Customer Satisfaction In “Quick Clinics”

You are invited to be in a research study of customer satisfaction in medical “quick clinics”. You were selected as a possible participant because you are a full-time student at the University of Minnesota. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Samantha Wagner, an Honors student at the University of Minnesota.

*Background Information*

The purpose of this study is: understand customer satisfaction within medical “quick clinics,” as well as the relationship between customer and managerial perceptions.

**Procedures:**

If you agree to be in this study, we would ask you to do the following things:  
Read each question and situation carefully in order to best understand the questions. Follow the instructions on each question carefully. Answer all questions to the best of your ability

*Risks and Benefits of being in the Study*

The study has one risk: you will be asked to read about hypothetical situations that are about one paragraph long. If you are not interested in taking the time to read the situations, you can terminate the survey at any time.

The major benefit to participation is learning more about a subset of a particular industry (quick clinics) and providing an angle as to how the customer and managerial perceptions are interrelated.

**Confidentiality:**

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. Study data will be encrypted according to current University policy for protection of confidentiality.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

### **Contacts and Questions:**

The researchers conducting this study are: Samantha Wagner. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at wagne890@umn.edu (or her advisor, Susan Meyer Goldstein, at meyer033@umn.edu).

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

*You will be given a copy of this information to keep for your records.*

### **Statement of Consent:**

I have read the above information. I have asked questions, if I have any, and have received answers. I consent to participate in the study and agree to move to the next screen of this survey

### ***Appendix B: Qualtrics Survey Format***

1. Please select your gender
  - a. Male
  - b. Female
  - c. Other
  - d. Prefer not to respond
2. Please select your year in school
  - a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior
  - e. 5th Year/Other
  - f. Prefer not to respond
3. Please select your race/ethnicity
  - a. White (Non-Hispanic)
  - b. Hispanic
  - c. Black/African-American
  - d. American Indian/Alaska Native

- e. Asian
  - f. Hawaiian Native/Pacific Islander
  - g. Other/2+ races
  - h. Prefer not to respond
4. Consider the following situation before answering the questions below:
- a. You wake up one morning not feeling well and think that you may have a cold. You head to the local quick clinic, a medical clinic that promises highly attentive care in ten minutes or less. The receptionist greets you with a smile and asks what symptoms you have. You tell her that you have a stuffy nose. You are led into the waiting room, where you wait for two minutes before being escorted into an examination room. Addressing you by your first name, a physician arrives, checks your vitals and runs a test to confirm that you, in fact, have a cold. The doctor then informs you of different medications you can use, then sends you on your way.
  - b. The scale below is ranked from 1 to 7 (1 = Strongly Against; 7 = Strongly in Favor)
    - i. Would you be satisfied with the check-in process?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
    - ii. Would you be satisfied with the waiting process?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
    - iii. Would you be satisfied with the examination process?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
    - iv. Would you be satisfied with your diagnosis?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
    - v. Would you be satisfied with your treatment plan?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
    - vi. Would you be satisfied with your overall experience?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
    - vii. Would you go back to this quick clinic for future needs?
      - 1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
5. Consider the following situation before answering the questions below:
- i. You wake up one morning not feeling well and think that you may have a cold. You head to the local quick clinic, a medical clinic that promises highly attentive care in ten minutes or less. The receptionist asks what symptoms you have. You tell the receptionist that you have a stuffy nose. You are directed into the waiting room, where you wait for five minutes before being called into an examination room. A physician arrives after another five minutes, checks your vitals and runs a test to confirm that you, in fact, have a cold. The doctor redirects you to your local drugstore, then sends you on your way.

- b. The scale below is ranked from 1 to 7 (1 = Strongly Against; 7 = Strongly in Favor)
- i. Would you be satisfied with the check-in process?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
  - ii. Would you be satisfied with the waiting process?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
  - iii. Would you be satisfied with the examination process?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
  - iv. Would you be satisfied with your diagnosis?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
  - v. Would you be satisfied with your treatment plan?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
  - vi. Would you be satisfied with your overall experience?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
  - vii. Would you go back to this quick clinic for future needs?
    1. Likert 1-7 (1 = Strongly Against, 7 = Strongly in Favor)
6. Consider the following situation before answering the questions below:
- a. Imagine that you are a manager of the Gopher Quick Clinic at Boynton Health Services. You are tasked with assessing attributes of the general quick clinic process--check in, wait time, examination, diagnosis, and treatment--in order to best determine what patients value most based on what you, the manager, think is valued most. Given the set of criteria below, allocate 100 points among the following areas:
    - i. Friendly check-in: (Enter 0-100)
    - ii. Short waiting-time: (Enter 0-100)
    - iii. Thorough examination (Enter 0-100)
    - iv. Accurate diagnosis: (Enter 0-100)
    - v. Easy treatment: (Enter 0-100)
7. Consider the following situation before answering the questions below:
- a. Now, as manager, assume that Boynton Health Services recently conducted a patient survey indicating patient preferences in the same five attributes as above. The results were as follows:
    1. Friendly Check In - 15,
    2. Short Waiting Time - 10;
    3. Thorough Examination – 20;
    4. Accurate Diagnosis - 25;
    5. Easy Treatment - 30.
    - ii. Allocate 100 points between those same five areas at your own discretion, but consider patient perspectives:
      1. Friendly check-in: (Enter 0-100)

2. Short waiting-time: (Enter 0-100)
  3. Thorough examination (Enter 0-100)
  4. Accurate diagnosis: (Enter 0-100)
  5. Easy treatment: (Enter 0-100)
8. Please indicate your agreement with the following statements regarding this exercise. The scale below is ranked from 1 to 7 (1 = Strongly Disagree, 7 = Strongly Agree)
- a. I tried to take the perspective of the average quick clinic patient
  - b. It was easy for me to take the perspective of the average quick clinic patient
  - c. I found the survey information valuable
9. Have you ever visited a quick clinic for medical care?
- a. Yes
  - b. No
  - c. Prefer not to respond
10. How often do you visit a quick clinic for medical care?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Always
  - f. Prefer not to respond
11. Is a quick clinic your primary choice in medical care?
- a. Yes
  - b. No
  - c. Prefer not to respond
12. Do you plan on using a quick clinic for your next medical need?
- a. Yes
  - b. No
  - c. Unsure
  - d. Prefer not to respond
13. Please enter your x500 below.