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Customer Tolerance In Community Pharmacy

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CUSTOMER TOLERANCE IN COMMUNITY PHARMACY

A Dissertation
presented in partial fulfillment of requirements
for Doctor of Philosophy degree
in the Department of Pharmacy Administration
The University of Mississippi

by

PHILIP SCHWAB

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ABSTRACT

Customers can have an existing relationship with a service provider where they are not satisfied with the services they receive, yet they continue to patronize the service provider. Why does this happen? Why do these customers remain as patrons of service providers that do not meet expectations and that leave these customers with low satisfaction. This dissertation presents the concept of tolerance to explain the retention of customers who are not satisfied with a service provider. Specifically, this dissertation examined the concept of customer tolerance in community pharmacy. Tolerance is an important concept for consideration because regardless of good intentions and efforts to provide quality service, customers will be disappointed, mistakes will be made by service providers, and service failures will occur.

With a dearth of marketing literature focused on the concept of customer tolerance, other streams of literature were examined to inform this dissertation. Based on theoretical reasoning and evidence identified in the literature, hypotheses were generated to evaluate the concept of customer tolerance in community pharmacy.

**Hypothesis 1:** Service quality is positively associated with customer tolerance

**Hypothesis 2:** Customer tolerance is negatively associated with switching intentions

**Hypothesis 3:** Psychological switching costs (commitment) are positively associated with customer tolerance

**Hypothesis 4:** Economic switching costs are positively associated with customer tolerance
Before hypotheses about factors related to customer tolerance could be tested, a measurement of tolerance needed to be created because existing measures were not available. Two measures of tolerance were created for this dissertation; an indirect measure of tolerance that measured action-based tolerance and a direct measure of tolerance that measured trait-based tolerance. Action-based tolerance was operationalized as satisfaction and switching intentions, evaluated simultaneously. Trait-based tolerance was operationalized by a 4-item scale that was developed as part of this dissertation using methods introduced by Churchill (1979) which included interviews with customers to develop items, face validity evaluation to edit the list of items, a national consumer survey to analyze data and finalize the list of items before applying the items within a final survey where data could be analyzed to validate the 4-item scale.

Using the final survey data, analytical models were evaluated to test the study hypotheses. The model results indicated support for hypotheses 1 and 2 suggesting that perceptions of service quality are positively related to action-based customer tolerance and that trait-based customer tolerance is negatively related to switching intentions. The results also indicated partial support for hypothesis 4, but only that a farther distance to the nearest pharmacy was positively related to action-based tolerance. The model results did not indicate support for the other economic switching costs that were included for hypothesis 4, nor did the results indicate support for hypothesis 3 regarding the association between psychological switching costs and action-based tolerance.

This dissertation successfully introduced the concept customer tolerance in the retail,
community pharmacy setting. Customer tolerance was conceptualized as the endurance of hardship and the two types of tolerance were proposed; trait-based tolerance and action-based tolerance.

A measure for trait tolerance was successfully developed and partially validated for this dissertation. The measure of trait tolerance was related to action tolerance as expected and will be a useful tool for future studies of consumer behavior and relationship marketing. Using the measures of customer tolerance developed for this dissertation, evidence regarding the factors related to tolerance and those that may not be related to tolerance were presented.
DEDICATION

This work is dedicated to my family, my friends, and my mentors whom have all championed me and provided unwavering support for me during my academic journey.
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First and foremost, I would like to thank all of my academic colleagues and mentors for teaching, guidance, and support during my years of graduate study.

I specifically would like to thank and blame Dr. John Bentley for my advanced academic pursuits. Dr. Bentley is more responsible than any other individuals than myself and my wife, Heather Kolasinsky, for my entry into the doctoral program and completion of the doctoral program at the University of Mississippi. After completing my undergraduate education in Pharmaceutical Sciences with an emphasis in Pharmacy Administration at Ole Miss and after Heather finished law school at the University of Memphis, we moved to Tampa, Florida to start our adult lives. I always planned to complete post-graduate education, but was unsure exactly what type of pharmacy or healthcare program I would complete or where to enroll. As I investigated my options, I consistently compared programs to the Ole Miss Pharmacy Administration program and was left disappointed with each program I considered as an option. Eventually, I settled on the premise of completing my Doctor of Pharmacy degree while living in Florida. During my application process to a Doctor of Pharmacy program, Dr. Bentley asked that I consider coming back to Ole Miss for graduate school in the department of Pharmacy Administration. Almost as soon as Dr. Bentley asked that I come home to Ole Miss, I knew that it was inevitable that Heather and I would be moving to Mississippi. I would also like to thank Dr. Bentley for his continued teaching and support during my entire academic career. Dr. Bentley has been the consummate teacher during my years with him as a teacher and formal
mentor and I expect he will always play those roles to some degree. I appreciate everything Dr. Bentley has done for me both actively and passively and I’m not sure if I will ever respect anyone more than I respect John Bentley.

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CHAPTER I: INTRODUCTION

This dissertation attempts to provide a better understanding and explanation of the concept of tolerance in a marketing context by examining customer tolerance to service failures in community pharmacy. Tolerance is an important concept for consideration because regardless of good intentions and efforts to provide quality service, customers will be disappointed, mistakes will be made, and service failures will occur. For a variety of reasons, certain customers or customers in certain situations are more tolerant than others. Understanding customer tolerance and factors that influence customer tolerance can help service providers develop strategies and allocate resources more effectively and efficiently. Such an understanding might contribute to the improvement of relations between service providers and customers. A better understanding of the concept of consumer tolerance might also stimulate future research in marketing, management, or other social sciences.

Tolerance (definition)

Several definitions of tolerance are used in common vernacular (Tolerance, 2010). Tolerance can be defined as sympathy for the beliefs of others. In the life sciences, tolerance is defined as the capacity of an organism to become less responsive to a substance, as in tolerance to a drug or, in some cases, nerve tolerance to pain or temperature. All of the definitions describe an ability to withstand something that is possibly undesirable, at least initially. Similarly, for this research study, the working definition of tolerance is the capacity to endure hardship (Tolerance, 2010). Reworded for use in this marketing-based study, the definition of
tolerance is the capacity to endure a service failure or failures.

*Tolerance (concept)*

For this dissertation, tolerance was conceptualized in two distinct ways, as a trait and as an action. Trait-based tolerance describes an individual’s level of underlying tolerance which estimates the individual’s potential for tolerance to a specific stimulus. Action-based, or transactional, tolerance describes an individual’s actual response to an undesirable or painful stimulus. The two conceptualizations are not entirely independent of each other, much like the two conceptualizations of satisfaction; overall satisfaction and transactional satisfaction. Overall satisfaction influences transactional satisfaction and vice versa (Jones & Suh, 2000). Similarly, it is expected that trait tolerance influences tolerance to a specific stimulus and vice versa. This dissertation addressed tolerance in both the trait form and the transactional form. The study employed a direct measure of tolerance which relied on trait-based tolerance to estimate an individual’s propensity for tolerance if a service failure stimulus were to be introduced. The study also employed an indirect measure of tolerance which was transactional, or reactions-based. Both measures were used to estimate tolerance grounded in the customers’ current experiences and after being exposed to a hypothetical service failure stimulus.

**The role of sensitivity**

Sensitivity plays an important role in the study of tolerance. Sensitivity is the capacity to respond to a stimulus (Sensitivity, 2010). In diagnostics and measurement science, sensitivity is the ability to detect differences or to detect the condition of interest. A tolerant consumer must be able to detect the stimulus, experience hardship as a result, and then resist reacting in a manner to avoid the stimulus. A consumer who feels no dissatisfaction after experiencing a
service failure cannot be classified as tolerant. A consumer who is dissatisfied after a service failure and then switches service providers as a result is also not tolerant. A tolerant consumer is one who is dissatisfied yet continues to patronize the service provider. Research has mostly ignored sensitivity as a requirement for tolerance, but some of the research examining physical tolerance to pain has actually taken sensitivity into account. Chapman & Jones (1944) asked subjects to tolerate a pain stimulus as long as possible. The authors were able to verify that tolerant subjects were actually sensing pain because the subjects exhibited uncontrollable facial expressions. Prior research examining tolerance in marketing literature has largely ignored sensitivity entirely and has relied on different conceptualizations of tolerance than the one presented in this dissertation. The concept of the Zone of Tolerance, for example, is further discussed in Chapter II.

Service failures and tolerance

An underperforming service is thought to have a negative effect on customer satisfaction (McCollough, Berry & Yadav, 2000). A service is said to underperform when the customer perceives an error, or a failure to provide the service as expected. This situation is commonly called a service failure. Little if any research on service failures specific to community pharmacy has been published. Research examining the service encounter in health care has focused on the importance of service quality determinants but not focused on the outcomes of service failures nor focused on the concept of tolerance (Hensel & Baumgarten, 1988).

The concept of tolerance is important in the community pharmacy setting. Customers will experience service failures in the community pharmacy setting just as they will experience service failures in other service settings and managers will not always have the opportunity to
employ effective service failure recovery techniques. It is important for community pharmacy managers to understand that customers may be tolerant of service failures even without recovery efforts on the part of the pharmacy staff. It is also important for community pharmacy managers to understand if certain factors related to the pharmacy and competitor pharmacies influence a customer’s tolerance to service failures at the pharmacy.

Propositions from Colgate & Norris (2001) and findings by Weun, Beatty & Jones (2004) support the examination of switching costs and the inclusion of service failure severity when studying tolerance to service failures. Colgate & Norris (2001) argue that, while service recovery is an important factor affecting customers’ behavioral intentions after a service failure, switching costs and loyalty (or commitment) to the service provider may be just as important or more important. Weun, Beatty & Jones (2004) found a significant impact of service failure severity on service recovery evaluations and satisfaction after recovery. Service failure severity should, similarly have an impact on behavioral intentions, and should show that customers are less tolerant of more severe service failures.

Knowledge about other relationships, as identified in the non-marketing literature, may be transferable to understanding a consumer’s relationship with his or her service provider; service providers were community pharmacies for this dissertation. In non-marketing relationships, the abused are thought to exhibit tolerance as a function of dependencies which are causes for attachment to the current state. In marketing relationships, dependencies are better termed as switching costs. Pharmacy is a demanded service, meaning that consumers depend on pharmacies. In a situation of extreme switching costs (no local alternatives), a consumer is highly dependent on the pharmacy. In such a case, the consumer should be more tolerant than in
a situation of low switching costs. Two types of switching costs can be identified in romantic relationship abuse tolerance; psychological and economic (Strube & Barbour, 1983). The psychological switching costs in a relationship with a pharmacy can be defined as the consumer’s commitment to the pharmacy. The economic switching costs in a relationship with a pharmacy can be defined as the consumer’s awareness of alternatives and perceived financial and convenience costs were the consumer to switch to an alternative pharmacy.

**Reasons customers switch**

N’Goala (2007) found service failures to be among the most important reasons customers may consider switching service providers. Keaveney (1995) reported that a number of types of service failures caused switching including: price issues, inconvenience, core service failures, negative service encounters, poor response to a service failure, competition, and ethical problems. Keaveney (1995) asked consumers to explain why they had switched service providers and found that the top four reasons were: core service failure, service encounter failure, pricing, and response to a service failure. Avoiding service failures is obviously important, but they cannot always be avoided. More curiously, why do customers remain with a service provider even though they experience a service failure or a series of failures? Keaveney’s results provide further insight by identifying price as a possible reason for switching. Exploratory depth interviews with consumers performed as part of the current study similarly found pricing to be a reason for switching, but also found inconvenience and availability of alternatives to be reasons for switching.

This dissertation proposed that action-based or transactional tolerance is a function of economic and psychological switching costs. The dissertation also proposed that trait tolerance
is negatively related to switching. The dissertation adds to the marketing literature by specifically examining the concept of tolerance. The dissertation also contributes to the literature by introducing two new methods of measuring the concept of tolerance; an indirect, multivariate method to measure transactional tolerance and a direct method using reflective items to measure trait tolerance. Because mistakes and failures are inevitable, it is important to understand the factors contributing to tolerance so that resources used to maintain customer patronage relationships can be allocated effectively and efficiently.
CHAPTER II: LITERATURE REVIEW

Service failures

Studies examining service failures provide understanding of the effects of failures on consumer behavior. Service failures are related to switching service providers (Keaveney, 1995; N’Goala, 2007). Service failure frequency has been shown to be related to negative behavioral outcomes (Maxham & Netemeyer, 2002). Not surprisingly, service failure severity has also been shown to be related to negative behavioral outcomes (Weun, Beatty & Jones, 2004). Most research has focused on recovery efforts after a service failure, because a recovery effort represents the reflex action of a service provider after a failure is recognized. The argument for recovery attempts has even been illustrated in pharmacy-specific literature where service failures without adequate recovery are thought to result in behavioral intentions undesirable to the service provider (Tipton, 2000).

Including recovery efforts in service failure research is prudent for understanding, explaining, and predicting real phenomenon. However, service providers do not always have the opportunity to make a recovery attempt and service providers do not always take advantage of opportunities even when they are presented. Also, recovery efforts are interpreted differently by individuals and the effects of recovery efforts depend on each individual’s expectations for those recovery efforts. Because expectations and interpretations vary, recovery efforts can have a positive, negative, or even an overwhelming effect on customer evaluations of a failure scenario and the tolerance or intolerance for the failure. A recovery that is less than what is expected can
increase a customer’s negative attitude associated with the service provider beyond the negative attitude due to the service failure, whereas a recovery that is more than expected can decrease or even eliminate a customer’s negative attitude (Maxham & Netemeyer, 2002). If the service recovery effort is significant, evaluations of the service provider might be overwhelmed by the recovery effort, essentially blocking out the service failure if the recovery effort is considered as a new service encounter.

It is difficult to understand customer tolerance if the effects of a failure scenario are clouded by recovery scenarios and especially because poor service recovery efforts could be considered failures themselves (Bitner, Boons, & Tetreault, 1990). Understanding tolerance in the absence of recovery strategies is important because the opportunity for recovery is not always available and recovery strategies are not always warranted. This dissertation assumed that the more monopolistic advantage a service provider has, the less the provider needs to be concerned about investing in recovery efforts, unless fear of new competition is strong. McCollough, Berry & Yadav (2000) suggest from research findings that service providers are better off focusing on error-free service than investing in service recovery efforts. Altruistically, it would be best for service providers to avoid service failures altogether and have exceptional recovery systems in place if and when a failure actually did occur. Realistically, failures do occur either at the fault of the service provider or based on the perceptions of consumers, and adequate recovery efforts are not always possible or practical. A better understanding of consumers’ tolerance to service failures can help service providers make decisions concerning investments aimed at reducing service failures, investments aimed at identifying recovery opportunities, and investments aimed at providing acceptable recovery solutions.
Even though this research project focused on the outcomes related to service failures and not on consumer evaluations of service, it was important to consider service quality evaluations and to examine prior research related to service quality because baseline perceptions of service quality are assumed to affect a consumer’s capacity to withstand certain levels of service failure. The capacity to withstand service failure is, by definition, tolerance. Consumers are thought to evaluate services through a disconfirmation process, where expectations of a service are compared to the actual performance of that service (Parasuraman, Zeithaml & Berry, 1985). Bitner (1990) presented a model of a consumer service encounter, suggesting that service quality evaluations influence future behavioral intentions, including switching. In support, Venetis & Ghauri (2004) found a significant relationship between service quality and behavioral intentions. It has also been suggested that service failures can influence perceptions of service quality which, in turn, influence future behavioral intentions. Therefore an assessment of service quality evaluation was considered important when examining tolerance, because customers reporting greater service quality were expected to be more tolerant than customers reporting lesser service quality.

**Hypothesis 1:** Service quality is positively associated with customer tolerance

**Tolerance**

Although tolerance has been understudied and the definitions and measurement methods provided through prior research are vague, the idea of tolerance was discussed in a small number of publications in the marketing literature. Manjeshwar, Sternquist, and Good (2012) mentioned
that customers’ lack of tolerance for failures puts pressure on Chinese and Indian retail buyers, but the authors did not elaborate much further nor did the authors explore the concept of customer tolerance. Most publications addressed a concept known as the Zone of Tolerance rather than the general concept of customer tolerance (Parasuraman, Berry, & Zeithaml, 1991). The Zone of Tolerance (ZOT) describes the evaluation of a service as more than adequate, adequate, or less than adequate based on the expectations of the consumer. The customer has a zone of expectations for the service with the idea that the customer is tolerant to a certain level of variance in performance. If the performance is perceived within the zone, then the customer will be satisfied. According to the ZOT concept, if the performance of the service provider is perceived to be above the zone, then the customer will be delighted. If the performance is perceived below the zone, the customer will be dissatisfied (Parasuraman, Berry, & Zeithaml, 1991). Delight, satisfaction, and dissatisfaction affect a consumer’s future intentions and behaviors.

The ZOT might better be described as the zone of acceptance, since the zone encompasses adequate-to-desired service quality. The ZOT seems to parallel what is often, and possibly incorrectly, described as religious or political tolerance. Acceptance of alternative religious or political views is often termed tolerance, but according to the definition of tolerance as the capacity to endure hardship, acceptance is not necessarily tolerance. As explained in Chapter I, sensitivity is a requisite for tolerance. One must sense hardship due the presence of an alternate religious or political view in order to be tolerant of that view and one must sense hardship in the face of low service quality in order to tolerate low service quality. The ZOT essentially describes two points of sensitivity, one point where a consumer can sense service that
quality is above adequate and one point where a consumer can sense less-than-adequate service. The idea that there are levels of service that exist between more-than-adequate and less-than-adequate describes a lack of sensitivity for level of service by the consumer, but does not describe tolerance. Tolerance can actually only exist below the zone, in the area where a consumer feels a hardship associated with receiving less-than-adequate service. Tolerance cannot exist in the zone where consumers do not identify less-than-adequate service.

Even when service quality is less-than-adequate, tolerance only exists if the consumer endures that hardship by refraining from reacting negatively (e.g., switching to a new service provider). The notion is supported by Yap & Sweeney (2007) who found a significant increase in switching intentions for service quality evaluations existing below the Zone of Tolerance. Switching intentions were negatively associated with service quality evaluations within the zone and positively associated with service quality evaluations below the zone, meaning customers are more likely to switch when service quality evaluations dip below the Zone of Tolerance. In this case, the association between service quality below the Zone and switching intentions was not 1:1. Some of the consumers who described service quality below the Zone also reported low switching intentions. This dissertation describes those consumers as tolerant, where tolerance is defined as the capacity to endure hardship.

Chan, Wan, and Sin (2009) examined the concept of tolerance in a marketing context without using the concept of the ZOT. The authors attempted to tie cultural aspects of consumers to the concept of tolerance, but they did not actually measure tolerance. The authors operationalized tolerance as satisfaction instead. The operationalization assumed that, given equally poor service situations, a more satisfied consumer is more tolerant than a more
dissatisfied consumer. In this operational definition, the authors potentially introduced bias by assuming the level of satisfaction a consumer should have after experiencing a service failure rather than measuring the phenomenon of tolerance more objectively. According to the definition of tolerance as the capacity to endure a hardship, Chan, Wan, and Sin (2009) did not measure tolerance. The authors instead measured whether or not a hardship was experienced (dissatisfaction), but not whether or not a hardship was endured. For a hardship to be endured, it must first be experienced. Chan, Wan, and Sin (2009) essentially measured sensitivity to a service failure, not tolerance. The current study’s goal was to examine tolerance where a consumer experienced a hardship and endured the hardship.

Due to the dearth of prior research on tolerance, examining literature related to various types of relationship abuse provided ideas about tolerance. In the health care setting, a study found that most nurses (91%) had experienced verbal abuse in the past month (Sofield & Salmond, 2003). The physician was the most frequently reported source of verbal abuse, followed by patients, patient families, peers, supervisors, and subordinates. More than 50% of the sample did not feel competent in responding to verbal abuse. The nurses who did not feel competent may have absolutely tolerated the abuse, or the abuse resulted in another outcome. In terms of switching, the study found that the amount of abuse and intent to leave were significantly related, which supports the notion that consumers should be less tolerant of more severe service failures. For the present study, service failure severity was controlled and more tolerant consumers were expected to have lower switching intentions.

**Hypothesis 2:** Customer tolerance is negatively associated with switching intentions
Predictors of tolerance

Examining tolerance in abusive romantic relationships also provided insight. Tolerance of abusive spousal relationships is thought to be a factor of both economic dependence and psychological dependence (Strube & Barbour, 1983). Dependence describes a barrier (cost) or set of barriers (costs) that prevent the abused spouse from ending the relationship. Economic restraints include: spouse’s assets, spouse’s income, and spouse’s contributions to executing other important tasks such as home or automobile repairs, cooking, or cleaning. Psychological restraints include: commitment to the marriage, feeling of responsibility in the relationship, belief that the abuse is only temporary (defense mechanism), and social norms including a desire to fit the role of a “good wife”. In a spousal relationship there is also a state-issued legal contract that acts as a barrier to ending the relationship completely.

Dependency is a corollary in ongoing abusive spousal relationships and may also be related to ongoing buyer-seller relationships with poor service/product quality (Kalmus & Strauss, 1982; Strube & Barbour, 1983). Bornstein (2006) suggested that dependency is a factor in the initiation of abusive behaviors. He suggested that partners were more willing to exploit a scenario in which alternatives were limited. Similarly, service providers may be less concerned about the demands of consumers when fewer alternatives are available or when the costs of alternatives are high (switching costs).

Other research has suggested that perceived urgency may influence tolerance (Conway & Wilcock, 1997). Customers become more demanding in urgent and emergent situations resulting in lower tolerance than in less urgent situations, given an equivalent level of service. Similarly,
Webster & Sundaram (1998) provided evidence that service importance (criticality) has a negative effect on desired attitudes and behavioral intentions such as satisfaction and loyalty, respectively. In the current study, service context was limited to community pharmacy so service criticality mostly controlled, but satisfaction could be fairly high for most customers (Boehringer Ingelheim, 2013). A measure of satisfaction, grounded in customers’ real experiences, was used for study analysis, but due to concern about high, average satisfaction scores with low variability, a second measure of satisfaction was also used and the second measure was manipulated by presenting hypothetical service failure scenario descriptions to survey responders prior to the second satisfaction measurement. For the current study, two service failure scenarios, one lower-critical and one higher-critical, were presented randomly to responders of the final survey to manipulate satisfaction based on the methods and findings of Webster & Sundaram (1998). Rather than including only a lower-critical or higher-critical scenario, both were used so that results provided additional context relative to the results based on measurements that were grounded in current customers’ experiences and not manipulated by a scenario.

Understanding the association of switching costs and tolerance to service failures allows managers to decide how to balance investing resources toward improving service quality or toward increasing switching costs. If great barriers to switching (switching costs) exist, exceptional service quality is not as important. Managers have considerably greater control over service quality than switching costs because switching costs are largely a product of competitors’ efforts. However, switching barriers (costs) can be introduced, or costs can be reduced, a tactic that creates an advantage over competitors by increasing the relative switching costs.
Although romantic relationships and marketing relationships differ, evidence supports the notion that tolerance, in either relationship-type, is primarily a function of psychological and economic switching costs. The psychological barriers may be associated with tolerance for mistreatment (Kalmus & Strauss, 1982; Strube & Barbour, 1983). Loyalty, a psychological relationship construct, may be more important to consumer behavior than recovery efforts after a failure (Colgate & Norris, 2001). Another psychological relationship construct, commitment, is described as an enduring desire to maintain a valued relationship (Moorman, Zaltman, & Deshpande, 1992) or a force that binds an individual to continue to purchase services from a service provider (Bansal, Irving, & Taylor, 2004, p. 236). Empirical evidence supports the nature of commitment as a deterrent to switching, a driver for the hypothesis that commitment is related to tolerance (Bansal, Irving & Taylor, 2004; Gustafsson, Johnson & Roos, 2005).

**Hypothesis 3:** Psychological switching costs are positively associated with customer tolerance.

The economic barriers of switching may be associated with tolerance for mistreatment (Kalmus & Strauss, 1982; Strube & Barbour, 1983). A consumer’s decision to switch service providers depends on that consumer’s evaluation of the service provider relative to the competition (Dick & Basu, 1994). Knowledge of alternatives has been found to be positively associated with consumer defection (Capraro, Broniarczyk & Srivastava, 2003). Prior marketing studies have looked at the effects of consumer evaluations of service, but as Capraro, Broniarczyk & Srivastava (2003) state, “although dissatisfaction may tend to shift relative evaluation in a way that disfavors an incumbent, if a customer does not know enough about...
alternatives due to missing information, defection may not occur” (p. 171).

In any instance, evaluation of competitors or alternatives and possible switching behavior includes the consideration of switching costs (Fornell, 1992). Switching costs are related to actual switching behaviors and may be more important than satisfaction, for predicting switching intentions (Burnham, Frels & Mahajan, 2003). Switching costs may also be more important to consumer behavior than recovery efforts after a failure (Colgate & Norris, 2001).

Jamal & Anastasiadou (2009) identified that knowledge of the service and that knowledge of alternatives were associated with lower scores on loyalty measures. Capraro, Broniarczyk & Srivastava (2003) similarly found that knowledge of alternatives was positively associated with defection. The same association has been identified in non-marketing, romantic relationships, where a partner may be more willing to exploit another when fewer alternatives are available (Bornstein, 2006).

Perceived relative service quality is also important and in the medical setting, competence and expertise have been suggested to predict tolerance to unsatisfactory medical care (May & Stengel, 1990). Similarly, relative perceptions of service or product offerings and price were estimated to be important. For the current study, economic switching costs were considered an important component of consumer decisions and tolerance to service failures.

**Hypothesis 4:** Economic switching costs are positively associated with customer tolerance

H4a: Relationship duration is positively associated with customer tolerance

H4b: The presence of fewer alternatives is positively associated with customer tolerance

H4c: Relative distance to the nearest alternative is positively associated with customer tolerance
**H4d:** Perception of higher relative quality of the current service provider is positively associated with customer tolerance

**H4e:** Perception of greater relative offerings of the current service provider is positively associated with customer tolerance

**H4f:** Perception of lower relative prices for the current service provider is positively associated with customer tolerance
CHAPTER III: METHODS

Study hypotheses were tested using data from a national sample of regular retail, community pharmacy consumers who were surveyed about their experiences with their pharmacy and their reactions to service failures in the community pharmacy setting. The study entailed three independent data collection efforts as depicted in Figure 1.

The first was a qualitative data collection involving depth interviews with a set of 10 consumers with diverse backgrounds and diverse characteristics. The data from the depth interviews were evaluated to gain insights into the concept of customer tolerance and to inform the creation of the initial list of 20 items for a direct measure of trait-based tolerance.

The second data collection was an online survey of a national sample of regular retail, community pharmacy consumers recruited from an online panel that was managed by Consumer and Technology Marketing Group LLC. Quantitative data from the survey was analyzed to reduce the list of 20 items for the direct measure of trait tolerance down to a final list based on factor analysis and tests for reliability and validity. The finalized measure of trait tolerance included 4 items.

The third data collection was also an online survey of a national sample of regular retail, community pharmacy consumers but the responders were recruited from an online panel managed by Qualtrics®. Quantitative data from the survey was analyzed to confirm the structure, reliability, and validity of the 4-item trait tolerance measure and to test the study hypotheses.
Dependent variables

The dependent variable for the study was tolerance. A valid measurement for tolerance was not available for use, so measurement methods were devised.

Based on the definition of tolerance that requires endurance of hardship, customer tolerance was measured using two different methods, a direct method and an indirect method. The study employed a direct measure of tolerance which is assumed to rely on trait-based tolerance to estimate differential tolerance if a service failure stimulus were to be introduced. The study also employed an indirect measure of tolerance which was transactional, or reactions-
based. Both measures were used to estimate tolerance grounded in the customers’ current experiences and again after being exposed to a hypothetical service failure stimulus.

**Indirect measurement of tolerance**

The indirect method utilized available metrics that, when combined, were presumed valid for measuring tolerance based on the conceptual definition of tolerance as the capacity to endure hardship in a marketing relationship. The metrics used for the indirect measurement of tolerance were a 3-item satisfaction measure used by Sirdeshmukh, Singh, & Sabol (2002) and a single item measuring switching intentions that asked about the customer’s likelihood for switching to another pharmacy within the next 12 months. In a previous marketing study referred to in Chapter II, customer tolerance was measured as the level of dissatisfaction with a service failure (Chan, Wan, & Sin, 2009). As discussed previously, that method actually measured sensitivity to a service failure but not tolerance to a service failure. Because a measurement method was not identified in the marketing literature, indirect measures of tolerance were examined in other literature streams for insight. Measures used in prior studies have included psychographic measures, such as religious acceptance or cultural customs acceptance (McClosky, 1983). Indirect tolerance measures most useful for adapting to the current study included simple measures of a behavioral reaction to a stimulus. Slightly more complex measures included the level of exposure to the stimulus until the occurrence of a behavioral reaction. Interpersonal relationship studies have used measures such as leaving or staying in an abusive romantic or employment relationship or have simply used intentions to leave or stay in such an abusive relationship (Kalmus & Strauss, 1982; Sofield & Salmond, 2003). In pain literature, time exposed to a pain stimulus before reacting to withdraw from the stimulus has been used and the
amount of pressure (in mmHg) applied before reaction has been used (Nielsen, Straud, & Price, 2009). Most measurements of tolerance in prior studies assumed that subjects have experienced hardship, but the measurements failed to measure the hardship. Possibly the most valid measurement of tolerance in pain literature was used by Chapman & Jones (1944). The authors asked subjects to resist reacting to a pain stimulus, but were able to verify subjects who were tolerating the pain because the subjects could not hide facial expressions that are known to directly identify a pain experience. Tolerant subjects in the Chapman & Jones study (1944) were experiencing pain and enduring the pain.

For the current study, tolerance was defined as the capacity to endure hardship. For indirect measurement, hardship was operationally defined as dissatisfaction and enduring was defined as low intentions to switch to another service provider, where the most tolerant individuals were dissatisfied yet had low switching intentions. Based on those operational definitions the simplest method of measurement appeared to be in the use of a distance measure between satisfaction and switching intentions, but the use of a distance measure can be problematic.

**Distance measures**

Distance measures are often used in person-organization fit management literature as the difference between person scores and organization scores (Kristof, 1996). Distance measures have also been used in service quality marketing literature, in the form of expectations minus performance (Parasuraman, Zeithaml, & Berry, 1998). Multiple forms of distance measurement are available including: mathematic difference, absolute difference, squared difference, Euclidean distance, and Mahalanobis’s distance, among others. Combining two scores via
distance measure to create a single variable is useful because it takes both variables into account and is conceptually pleasing. However, combining variables this way is mathematically inappropriate and can lead to false interpretations (Edwards, 1995). Distance measures also result in a reduction in reliability as compared to keeping the original variables separate. Klein, Jiang & Cheney (2009) provide a thoughtful discussion of the use of distance scores in prior studies. The authors also critiqued the use of distance scores and provided reasons to avoid using distance scores in future studies. The authors recommended using polynomial regression as an alternative to distance scores, but that method is only useful when the variable(s) of interest is the independent variable. The variable(s) of interest in the current study (i.e. tolerance) was the dependent variable, so polynomial regression was not an option. Originally, a simple difference score between a satisfaction score and a switching intention score was considered, but was not considered further after a review of the issues. Using a difference score as a dependent variable actually creates a univariate model from an inherently multivariate model (Edwards, 1995). The mathematical issue with using a difference score as dependent variable is illustrated in Figure 2.
Since using multiple dependent variables is inherently multivariate, a multivariate regression model was selected for the current study. Such an approach follows the recommendations of Edwards (1995). The indirect measurement of tolerance that was used in the current study is illustrated pictorially in Figure 3.

Figure 3 – Illustration of indirect tolerance measure

As stated previously, two measurements of customer tolerance were taken. The first measurement was grounded in customers’ current experiences. That is, current satisfaction and current switching intentions were measured. The second measurement relied on satisfaction and switching intentions measurements taken after the survey respondent was presented with a
hypothetical service failure scenario. The use of a hypothetical service failure scenario was expected to magnify the effects and result in greater variance in the measurements of satisfaction and switching intentions, thus greater variance in the measurement of tolerance, in case there was little variance in the grounded measurements. Three iterations of the study analyses for the hypotheses were completed. First, study analyses were completed based on the grounded measurements and were then repeated for the group of subjects presented the lower-criticality service failure scenario and for the group of subjects presented the higher-criticality service failure scenario. The use of a hypothetical service failure scenario provided a richer illustration of transactional tolerance than the grounded approach, because recall of prior service failures might be poor when thinking about their shopping experiences or even with strong recall, service failure effects might be greatly diminished over time. For the final survey, responders were presented with a low-criticality service failure or a high-criticality service failure as developed by Bunniran (2010) and similar to the methods described by Webster & Sundaram (1998).

Direct measurement of tolerance

The direct measurement of tolerance used in the current study is illustrated pictorially in Figure 4.
The direct measure of tolerance was developed following the process described by Churchill (1979). First, an initial list of items was generated based on an analysis of exploratory depth interviews. Ten depth interviews were conducted. Convenient, snow-ball sampling was used to recruit general population consumers with diverse demographics who resided in the Memphis, TN geographic region. Individuals who were already familiar to the researcher aided in recruitment. The goals of recruitment included at least one interviewee representing each of the following demographics: (1) highest level of education = no college degree, college degree, and advanced degree, (2) residential density = urban, suburban, and rural, (3) ethnicity = caucasian, hispanic, african american and (4) age = 18-30, 31-45, 46-60, 60+. Income diversity was desired, but was ignored because of the difficulty in identifying recruits by income and because income could be considered a vulnerable variable. Recruits were paid $10 for participation. Nine of the interviews were recorded using a personal digital recorder. One interviewee did not allow recording. The recordings were transcribed for analysis to better understand the concept of tolerance and in order to create an initial list of items for the direct
measurement of tolerance.

Next, the items were reviewed by several professional colleagues to assess face validity. Face validity reviewers evaluated each item from a list and rated them from 1 to 5 where 5 indicated a measurement item that appeared to tap into customer tolerance. Reviewers also provided comments for items and recommended wording changes for some items. Based on the face validity evaluations, the item list was edited appropriately. The resulting list of items was distributed to an online panel of consumers as part of a survey data collection. Approximately 200 surveys were completed and the data were evaluated to create a final, valid measure for trait-based tolerance.

Because unidimensionality of customer tolerance was assumed, factor analysis was applied as recommended by Gerbing & Anderson (1988). Results of factor analysis of the data from the consumer panel were used to revise the list of items. Reliability of the revised list of items was examined and a Cronbach’s alpha of 0.7 was deemed acceptable \textit{a priori}. Validity of the direct measure of trait tolerance based on the revised list of items was examined by evaluating the relationship between the direct measure of trait-based tolerance with the indirect measure of action-based tolerance and by evaluating this relationship when considering other important relationship marketing measures as covariates.

\textbf{Independent variables}

The current study utilized multiple measures of switching costs to test the hypotheses. Lee, Lee & Feick (2001) measured switching costs with a single, self-reported, perceived switching difficulty measure and found a moderating effect of economic switching costs on the satisfaction $\rightarrow$ loyalty relationship in the cell phone service context for low and mid-level users,
but not for high-level users. The validity of the switching cost measurement used was possibly to blame for the inconsistent effect across groups, so the current study used a more comprehensive set of measurements for switching costs.

**Psychological switching costs**

Commitment to the pharmacy was measured using a 10-item measure published by Bansal, Irving, & Taylor (2004). The 10-item measure is the most updated and refined version of a popular commitment scale originally developed and updated by Meyer & Allen (1984; 1997) and used by Morgan & Hunt (1994) and Gruen, Summers & Acito (2000).

**Economic switching costs**

Existing measures of economic switching costs in community pharmacy were not available, so measures were created for the current study. Economic switching costs were assessed using five different, unequal measures: familiarity (search and time costs), convenience cost 1 (number of alternatives), convenience cost 2 (nearest alternative), convenience cost 3 (perceived relative product offerings), and monetary costs (perceived relative price of goods). Duration of relationship with the current pharmacy represented cost savings due to familiarity. A relative distance measure was used to measure convenience costs related to location. This measure was operationalized as the distance to a competitor pharmacy relative to the distance to the respondent’s current pharmacy. Monetary cost was assessed as the perceived price of goods at competitor pharmacies relative to the perceived price of goods at the respondent’s current pharmacy.

**Other measures**

A baseline measure of service quality was included in the model to account for the
buffering effects of previous service performance evaluations. Controlling for a baseline measure of service quality was considered necessary in order to account for the additive effects of multiple service encounter evaluations in each respondent’s past. Service quality was measured with the set of 22 items introduced by Parasuraman, Zeithaml, and Berry (1988). The items were summed for a single measure of service quality that was used for the study analyses.

Demographic measures were collected to test representativeness and for future exploratory analysis. The demographics collected included: age, household income, gender, and ethnicity.
<table>
<thead>
<tr>
<th>Measurement</th>
<th>Item</th>
<th>Scale</th>
<th>Endpoints</th>
<th>Item</th>
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</thead>
<tbody>
<tr>
<td>Tolerance</td>
<td></td>
<td>5 point</td>
<td>Strongly disagree, Strongly agree</td>
<td>I get mad if my prescription drug order is late (reverse code)</td>
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<td></td>
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<td>I get mad if my prescription drug order is late repeatedly (reverse code)</td>
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<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy (reverse code)</td>
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<td></td>
<td>When there is a problem at my pharmacy, I am quick to tell my peers (friends, family, or others) about it. (reverse code)</td>
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<td>CIS</td>
<td></td>
<td>7 point</td>
<td>Usually would describe me, Seldom would describe me</td>
<td>Impulsive</td>
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<td>Careless</td>
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<td>Self-controlled (rc)</td>
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<td>Extravagant</td>
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<td>Farsighted (rc)</td>
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<td>Responsible (rc)</td>
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<td>Restrained (rc)</td>
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<td>Easily tempted</td>
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<td>Rational (rc)</td>
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<td>Methodical (rc)</td>
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<td>Enjoy spending</td>
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<td></td>
<td>A planner (rc)</td>
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<tr>
<td>SERVQUAL</td>
<td></td>
<td>7 point</td>
<td>Strongly disagree, Strongly agree</td>
<td>My pharmacy has up-to-date equipment</td>
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<td>My pharmacy's physical facilities are visually appealing</td>
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<td>My pharmacy's employees are well dressed and appear neat</td>
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<td>The appearance of the physical facilities of my pharmacy is in keeping with the type of services provided</td>
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<td>When my pharmacy promises to do something by a certain time, it does</td>
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<td>When you have problems, my pharmacy is sympathetic and reassuring</td>
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<td>My pharmacy has up-to-date equipment</td>
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<td>My pharmacy is dependable</td>
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<td>My pharmacy provides services at the time it promises to do so</td>
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<td>My pharmacy keeps its records accurately</td>
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<td>My pharmacy does not tell customers exactly when services will be performed</td>
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<td>You do not receive prompt service from my pharmacy's employees</td>
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<td>Employees of my pharmacy are not always willing to help customers</td>
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<td></td>
<td>Employees of my pharmacy are too busy to respond to customers' requests promptly</td>
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<td></td>
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<td>You can trust employees of my pharmacy</td>
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<tr>
<td>Commitment</td>
<td>5 point</td>
<td>Strongly disagree, Strongly agree</td>
<td>Even if it were to my advantage, I do not feel it would be right to leave my pharmacy for another pharmacy now.</td>
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<td>My pharmacy deserves my loyalty.</td>
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<td>I would feel guilty if I left my pharmacy for another pharmacy now.</td>
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<td>I would not leave my pharmacy for another pharmacy right now, because I have a sense of obligation.</td>
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<td></td>
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<td>I do not feel emotionally attached to my pharmacy. (rc)</td>
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<td>I do not feel like part of the family with my pharmacy. (rc)</td>
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<td>I do not feel a sense of belonging with my pharmacy. (rc)</td>
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<td>It would be very difficult for me to leave my pharmacy for another pharmacy right now, even if I wanted to.</td>
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<td>Too much of my life would be disrupted if I left my pharmacy for another pharmacy right now.</td>
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<td>I feel that I have too few options of other pharmacies to leave my pharmacy.</td>
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<tr>
<td>Satisfaction</td>
<td>7 point</td>
<td>Very unsatisfactory, Very satisfactory</td>
<td>How was your last shopping experience at your pharmacy?</td>
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<tr>
<td></td>
<td></td>
<td>Very unpleasant, Very pleasant</td>
<td>How was your last shopping experience at your pharmacy?</td>
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<td></td>
<td></td>
<td>Terrible, Delightful</td>
<td>How was your last shopping experience at your pharmacy?</td>
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<tr>
<td>Switching</td>
<td>7 point</td>
<td>Unlikely, Likely</td>
<td>How likely are you to transfer your business to another pharmacy in the next 12 months?</td>
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<tr>
<td>intentions</td>
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<td>To your knowledge, how many other pharmacies are located near your current pharmacy?</td>
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<tr>
<td>Number of</td>
<td>10</td>
<td>1, 10+</td>
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<tr>
<td>alternatives</td>
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<tr>
<td>Nearest</td>
<td>10</td>
<td>ordered categories in sight,</td>
<td>How close to your primary pharmacy is the nearest competitor pharmacy?</td>
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<tr>
<td>alternative</td>
<td></td>
<td>20+ miles</td>
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<td></td>
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<tr>
<td>Relative</td>
<td>7 point</td>
<td>Much fewer products at my pharmacy, Many</td>
<td>How would you rate the number of product offerings at your pharmacy compared to others?</td>
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<tr>
<td>offerings</td>
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</tbody>
</table>
more products at my pharmacy

<table>
<thead>
<tr>
<th>Relative prices</th>
<th>7 point</th>
<th>Much lower prices at my pharmacy, Much higher prices at my pharmacy</th>
<th>How would you compare the prices at your pharmacy compared to others?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative quality</td>
<td>7 point</td>
<td>Much lower quality, Much higher quality</td>
<td>How would you compare the overall quality of your pharmacy compared to others?</td>
</tr>
</tbody>
</table>

**Survey data collection**

The practicality of a telephone recruitment sampling method was evaluated before the deciding to proceed with recruitment using a consumer panel. If the telephone recruitment method was successful, a mixed-mode of mail and online surveys would have been used to collect responses based on responder preferences for mail or online versions of the survey. The telephone recruitment with mixed-method survey distribution was expected to be more cumbersome and time-consuming than using an online consumer panel, but the monetary cost difference of the methods was expected to be negligible. It was believed that telephone recruitment would result in a more representative sample than an online consumer panel, which drove the choice to evaluate a telephone recruitment method first. Eventually, the telephone recruitment method was abandoned once it was determined to be impractical.

Two assistants were hired to assist with telephone recruitment. Each assistant completed human subjects research ethics training prior to initiating any contact with potential study recruits. During each recruitment phone call, individuals who answered the phone first heard a brief description of the source and purpose of the phone call. At this point, permission was requested to ask a few demographic questions and record results. The demographic information was intended for use in nonresponse bias estimation and screening. Only individuals 18 years or
older, who regularly patronized a community pharmacy or pharmacies (4 or more visits per year) during the past 12 months were asked to participate in the study. After introduction and screening, recruits had the option to participate further or refuse to participate. Refusals were marked as nonrespondents for nonresponse bias estimation and all recruitment data was managed in spreadsheet form using Microsoft Excel. After more than 4 weeks of recruitment and more than 2,000 numbers dialed, only 17 individuals agreed to participate so the telephone recruitment method was deemed impractical and a consumer panel managed by Qualtrics® was used for the final survey data collection instead.

At least 400 responses were desired for the final study data, but there were no clearly published indications for estimating effect size for these regression equations. Although the independent variables were not expected to estimate all of the variance associated with tolerance for service failures, an $R^2$ equal to or greater than 0.08 was expected. According to Gpower version 3.0, the required sample size for a multiple regression with 9 independent variables is 237 for a small effect size ($F^2 = 0.087$), a Type I error rate of 0.05, and a power of 0.9 (Faul, Erdfelder, Lang & Butler, 2007). The required sample size is 360 for a small effect size, a Type I error rate of 0.01, and a power of 0.95. A total of 400-500 responses were desired in order to handle possible underestimation of the effect size, while avoiding overpowering the analysis.

**Data Management**

Interviews were recorded for 9 of 10 interviews and the recordings were retained. Recordings were also transcribed and transcriptions were retained. Survey data for the scale refinement data collection and for the final data collection were downloaded as comma-separated value files (.csv) into Microsoft Excel and completely raw data sets were retained. Microsoft
Excel was used to review and clean each dataset. Responses were also reviewed for legitimacy. Responders with responses that were not considered legitimate would have been excluded from the each sample entirely, but no such cases were identified. The cleaned datasets were imported into SPSS for Windows for the scale refinement analysis and final analysis respectively.
Analytic Methods

Hypotheses restated:

**Hypothesis 1:** Service quality is positively associated with customer tolerance

**Hypothesis 2:** Customer tolerance is negatively associated with switching intentions

**Hypothesis 3:** Psychological switching costs (commitment) are positively associated with customer tolerance

**Hypothesis 4:** Economic switching costs are positively associated with customer tolerance

**H4a:** Relationship duration is positively associated with customer tolerance

**H4b:** The presence of fewer alternatives is positively associated with customer tolerance

**H4c:** Relative distance to the nearest alternative is positively associated with customer tolerance

**H4d:** Perception of higher relative quality of the current service provider is positively associated with customer tolerance

**H4e:** Perception of greater relative offerings of the current service provider is positively associated with customer tolerance

**H4f:** Perception of lower relative prices for the current service provider is positively associated with customer tolerance
Hypotheses 1, 3, and 4 were tested within a multivariate regression model with dependent variables satisfaction and switching intentions (indirect measurement). A univariate model was be used to test tolerance as a predictor of switching intentions for Hypothesis 2. In order to show that tolerance is an independent construct that is not simply synonymous with switching costs, a model with the switching cost variables and tolerance as predictors of switching intentions was evaluated.

The multivariate regression model to test hypotheses 1, 3, and 4 is depicted as:

\[ Y1, Y2 = \alpha + \beta x_1 + \beta x_2 + \beta x_3 + \beta x_4 + \beta x_5 + \beta x_6 + \beta x_7 + \beta x_8 + e, \]

where:

- \( Y1 \) = Satisfaction
- \( Y2 \) = Switching intentions
- \( \alpha \) = Intercept
- \( x_1 \) = Baseline service quality measure
- \( x_2 \) = Commitment
- \( x_3 \) = Duration of relationship (familiarity cost)
- \( x_4 \) = Number of alternatives (convenience cost 1)
- \( x_5 \) = Nearest alternative (convenience cost 2)
- \( x_6 \) = Offerings of alternatives (convenience cost 3)
- \( x_7 \) = Price of alternatives (monetary cost)
- \( x_8 \) = Quality of alternatives (utility cost)
- \( e \) = Error term

The regression model to test hypothesis 2 is depicted as:

\[ Y = \alpha + \beta x_1 + \beta x_2 + \beta x_3 + \beta x_4 + \beta x_5 + \beta x_6 + \beta x_7 + \beta x_8 + \beta x_9 + e, \]

where:

- \( Y \) = Switching intentions
- \( \alpha \) = Intercept
- \( x_1 \) = Baseline service quality measure
- \( x_2 \) = Tolerance
- \( x_3 \) = Commitment
- \( x_4 \) = Duration of relationship (familiarity cost)
- \( x_5 \) = Number of alternatives (convenience cost 1)
- \( x_6 \) = Nearest alternative (convenience cost 2)
- \( x_7 \) = Offerings of alternatives (convenience cost 3)
- \( x_8 \) = Price of alternatives (monetary cost)
- \( x_9 \) = Quality of alternatives (utility cost)
- \( e \) = Error term
Venetis & Ghauri (2004) found a significant relationship between service quality and commitment. There was *a priori* concern that correlation between service quality and commitment would result in issues with multicollinearity, but each variable was expected to provide enough unique explanation to warrant inclusion in the analytical model. As stated above, the measure for service quality used for this research study is very different than the one used by Venetis & Ghauri (2004).

There was *a priori* concern that psychological and economic switching costs would face multicollinearity issues as well because a relationship between continuance commitment and switching costs has been shown before (Bansal, Irving & Taylor, 2004). Variance Inflation Factor (VIF) was examined in order to identify potential multicollinearity issues. VIFs of 10 or less are generally considered as acceptable levels of multicollinearity (Hair *et al.*, 2006, p. 233). All VIFs were well below 10.
CHAPTER IV: RESULTS

Depth interviews

Depth interviews were completed with a diverse mix of consumers in the Memphis, Tennessee area. Convenient, snow-ball sampling was used to target diverse demographics. Individuals who were already familiar to the researcher aided in recruitment by recommending interviewees based on desired demographic characteristics and by providing contact information for potential interviewees. Other interviewees were recruited from a university student center and from a local coffee shop, both in Memphis, Tennessee, to meet the demographic goals that could not be obtained through convenient, snow-ball sampling. The count of demographic characteristics amongst the interviewees is illustrated in Table 1.

Table 1 – Characteristics of Interviewees

<table>
<thead>
<tr>
<th>10 interviews</th>
<th>Needed</th>
<th>Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Suburban</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rural</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>31-45</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>46-60</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>61+</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>African American</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No college degree</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>College degree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Advanced degree</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Interviews were recorded in all but one case. The recordings were transcribed and transcriptions were evaluated to understand the concept of tolerance and to inspire creation of the initial list of trait-based tolerance items.

Examples of tolerance and other important quotes from interviews are listed in Appendix B.

**Scale refinement by face validity**

A preliminary list of tolerance measurement items was developed after completion of qualitative interviews and review of the interview recordings and related transcripts. Next, the list was reviewed and scored by four qualified academic colleagues to assess face validity. Reviewers were asked to rate the relevance of each item on a scale from 1-5 where 1 = not at all relevant and 5 = very relevant for measuring tolerance. Three items included in the list were test items that were not intended to measure tolerance. The test items were included to provide additional context for individual reviewer ratings. Two of the test items were rated as “5” which was taken into account when evaluating the other ratings for the respective reviewer. In aggregate, the test items received low ratings as expected. Reviewers also had the opportunity to enter free text comments related to each measurement item so ratings could be justified or so additional considerations could be shared. Reviewer evaluation results are illustrated in Table 2.
<table>
<thead>
<tr>
<th>Item</th>
<th>Average Rating 1-5</th>
<th>Result</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mistakes are common in any pharmacy</td>
<td>3.6</td>
<td>Keep</td>
<td>change to “mistakes occur in any pharmacy”</td>
</tr>
<tr>
<td>When I am unhappy with the service at my pharmacy, I react</td>
<td>4</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>I am usually looking for alternative pharmacies (reverse code)</td>
<td>2.8</td>
<td>Remove</td>
<td></td>
</tr>
<tr>
<td>I am willing to deal with some inconvenience at my pharmacy</td>
<td>5</td>
<td>Keep</td>
<td>remove the word “some”</td>
</tr>
<tr>
<td>I don’t accept poor service at my pharmacy (reverse code)</td>
<td>4.8</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>Poor service at my pharmacy is understandable</td>
<td>4.6</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>The service at my pharmacy can’t be good every time</td>
<td>3.6</td>
<td>Keep</td>
<td>take caution, 1 reviewer rated 1, 2 rated 5</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late once (reverse code)</td>
<td>4.75</td>
<td>Keep</td>
<td>consider removing the word “once”</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late multiple times (reverse code)</td>
<td>4.6</td>
<td>Keep</td>
<td>consider changing “multiple times” to “repeatedly”</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to complain to staff or management (reverse code)</td>
<td>4.6</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to look for another pharmacy to do business with (reverse code)</td>
<td>4.2</td>
<td>Keep</td>
<td>consider rewording</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to tell my peers (friends, family, or others) about it. (reverse code)</td>
<td>4.2</td>
<td>Keep</td>
<td>consider rewording to make it more understandable b/c “problems” may be vague</td>
</tr>
<tr>
<td>I understand that problems occur at pharmacies</td>
<td>3.6</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>I would be happier with a different pharmacy</td>
<td>3.25</td>
<td>Remove</td>
<td>this was a test item, 1 reviewer rated it a 5</td>
</tr>
<tr>
<td>Other pharmacies are better than the one I use</td>
<td>3</td>
<td>Remove</td>
<td>this was a test item, 1 reviewer rated it a 5</td>
</tr>
<tr>
<td>I can put up with some problems at my pharmacy</td>
<td>4.8</td>
<td>Keep</td>
<td>interpretations of the severity of a “problem” or “mistake” may be an issue</td>
</tr>
<tr>
<td>I can’t accept any mistakes at my pharmacy (reverse code)</td>
<td>4.6</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>I feel that I put up with poor pharmacy service better than most people</td>
<td>4.8</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>I’m very thorough when choosing a pharmacy</td>
<td>2</td>
<td>Remove</td>
<td>this was a test item</td>
</tr>
<tr>
<td>I worry that other pharmacies are worse than mine</td>
<td>1.4</td>
<td>Remove</td>
<td>this was a test item</td>
</tr>
<tr>
<td>My pharmacy is probably better than others (reverse code)</td>
<td>2.2</td>
<td>Remove</td>
<td>this was a test item</td>
</tr>
</tbody>
</table>
In addition to the 19 items retained, an additional item was added so that responder consistency could be evaluated. The additional item used the statement, “I understand that mistakes occur at pharmacies” and the item was expected to be highly correlated with “Mistakes occur in any pharmacy” and “I understand that problems occur at pharmacies”. The 20 items included for data collection can be found in Table 3.
Table 3 – Initial List of Items for Tolerance Measurement

<table>
<thead>
<tr>
<th>Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Mistakes occur in any pharmacy</td>
</tr>
<tr>
<td>T2</td>
<td>When I am unhappy with the service at my pharmacy, I react</td>
</tr>
<tr>
<td>T3</td>
<td>I am willing to deal with inconvenience at my pharmacy</td>
</tr>
<tr>
<td>T4</td>
<td>I don’t accept poor service at my pharmacy (reverse code)</td>
</tr>
<tr>
<td>T5</td>
<td>I get mad if my prescription drug order is late (reverse code)</td>
</tr>
<tr>
<td>T6</td>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy (reverse code)</td>
</tr>
<tr>
<td>T7</td>
<td>Poor service at my pharmacy is understandable</td>
</tr>
<tr>
<td>T8</td>
<td>I can't accept any mistakes at my pharmacy (reverse code)</td>
</tr>
<tr>
<td>T9</td>
<td>I would have to be really upset to leave my pharmacy and go to another pharmacy</td>
</tr>
<tr>
<td>T10</td>
<td>I expect poor service at my pharmacy every once in a while</td>
</tr>
<tr>
<td>T11</td>
<td>I understand that mistakes occur at pharmacies</td>
</tr>
<tr>
<td>T12</td>
<td>When there is a problem at my pharmacy, I am quick to tell my peers (friends, family, or others) about it. (reverse code)</td>
</tr>
<tr>
<td>T13</td>
<td>I get mad if my prescription drug order is late repeatedly (reverse code)</td>
</tr>
<tr>
<td>T14</td>
<td>The service at my pharmacy can’t be good every time</td>
</tr>
<tr>
<td>T15</td>
<td>If I’m not happy with a pharmacy, I don’t use it anymore (reverse code)</td>
</tr>
<tr>
<td>T16</td>
<td>I understand that problems occur at pharmacies</td>
</tr>
<tr>
<td>T17</td>
<td>When there is a problem at my pharmacy, I am quick to complain to staff or management (reverse code)</td>
</tr>
<tr>
<td>T18</td>
<td>I feel that I put up with poor pharmacy service better than most people</td>
</tr>
<tr>
<td>T19</td>
<td>I don’t give my business to a pharmacy that doesn’t deserve it (reverse code)</td>
</tr>
<tr>
<td>T20</td>
<td>I can put up with some problems at my pharmacy</td>
</tr>
</tbody>
</table>
Scale refinement survey results

A total of 201 study subjects recruited from a national consumer panel, managed by Consumer and Technology Marketing Group LLC, completed an online self-report survey. The survey included the 20 items (measured on 5-point scales) for measuring trait-based tolerance. The survey also included measures of age, gender, ethnicity, and income. Additionally, measures of pharmacy-related shopping experience and attitudes were included as follows: pharmacy type, satisfaction, satisfaction with pharmacy services, commitment, recent purchasing behavior, repurchase intentions, switching intentions, and a general measure of consumer impulsiveness not specifically related to community pharmacy.

Scale refinement sample characteristics

The scale refinement sample was slightly older, more female, more white, and had a slightly higher income than was expected a priori, even though the sample was expected to be around middle age, more than 60% female, more white than the U.S. population, and middle income. The average age was middle age (mean 50.0 years), mostly female (71.1%), mostly white (86.6%), and the household income was middle income (mean $68,388). See Table 4 for the complete demographic results. Even though the sample demographics may differ from those of the U.S. population, the sample was similar to the 2013 Pharmacy Satisfaction PULSE survey sample that included responses from 34,401 pharmacy customers (Boehringer Ingelheim, 2013). The 2013 Pharmacy Satisfaction PULSE sample was middle age (mean 50 years), mostly female (68%), mostly white (89%), with a distribution of household income that appears to be slightly lower than the scale refinement sample in this dissertation. The PULSE survey sample is a better comparator for the current study sample than the U.S. population because the patrons of
community pharmacy made up the population of interest for the study.

Table 4 – Scale refinement sample demographic characteristics

<table>
<thead>
<tr>
<th></th>
<th>n (%)</th>
<th>Age</th>
<th>mean (SD)</th>
<th>Gender</th>
<th>n (%)</th>
<th>Ethnicity</th>
<th>n (%)</th>
<th>Income</th>
<th>mean (SD)</th>
<th>Income</th>
<th>mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>50.0 (13.6)</td>
<td>Male</td>
<td>58 (28.9%)</td>
<td>White/Caucasian</td>
<td>174 (86.6%)</td>
<td></td>
<td>$68,388 (59,602)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td>143 (71.1%)</td>
<td>Black/African American</td>
<td>16 (8.0%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>Asian</td>
<td>8 (4.0%)</td>
<td>Hispanic/latino</td>
<td>3 (1.5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td>&lt; $25k</td>
<td>29 (14.4%)</td>
<td>$25k - &lt; $45k</td>
<td>44 (21.9%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$45k - &lt; $75k</td>
<td>58 (28.9%)</td>
<td>$75k - &lt; $100k</td>
<td>33 (16.4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$100k +</td>
<td>36 (17.9%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SD = standard deviation

As expected, the most common type of primary pharmacy for the scale refinement sample was national chain (51.7%), followed by mass-merchandise store (13.4%), chain grocery store (10.9%), independently-owned pharmacy (10.0%), and local chain pharmacy (6.5%). Customers whose primary pharmacy was mail-order were excluded from the survey sample. Excluding mail-order users, the Pharmacy Satisfaction PULSE survey sample’s primary pharmacy distribution was somewhat similar to the scale refinement sample reported here. Excluding mail-order users, the Pharmacy Satisfaction PULSE survey sample’s most common type of pharmacy was chain pharmacy (44.0%), mass merchant (19.8%), food store (15.4%),
independent pharmacy (12.0%), and clinic (8.8%).

Table 5 – Descriptive statistics for type of community pharmacy primarily used by the customers in the pre-test sample

<table>
<thead>
<tr>
<th>Type of Community Pharmacy</th>
<th>n (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National chain</td>
<td>104 (51.7%)</td>
<td></td>
</tr>
<tr>
<td>Part of a mass-merchandise store</td>
<td>27 (13.4%)</td>
<td></td>
</tr>
<tr>
<td>Part of a chain grocery store</td>
<td>22 (10.9%)</td>
<td></td>
</tr>
<tr>
<td>Local, independently-owned</td>
<td>20 (10.0%)</td>
<td></td>
</tr>
<tr>
<td>Local chain</td>
<td>13 (6.5%)</td>
<td></td>
</tr>
<tr>
<td>Part of a local, independently-owned grocery</td>
<td>1 (0.5%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>14 (7.0%)</td>
<td></td>
</tr>
</tbody>
</table>

The main analytical use for the scale refinement sample data was for evaluation of the tolerance items with a goal of scale refinement. Factor analysis was completed using maximum likelihood extraction to identify the potential number of factors and factor loadings based on the initial 20 items. The number of factors extracted and factor loadings from factor analysis results are shown in Table 6.
Table 6 – Factor analysis using maximum likelihood extraction for 20 potential tolerance scale items T1-T20

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>21.95%</td>
<td>4.39</td>
</tr>
<tr>
<td>2</td>
<td>14.50%</td>
<td>2.90</td>
</tr>
<tr>
<td>3</td>
<td>10.55%</td>
<td>2.11</td>
</tr>
<tr>
<td>4</td>
<td>6.22%</td>
<td>1.24</td>
</tr>
<tr>
<td>5</td>
<td>5.61%</td>
<td>1.12</td>
</tr>
<tr>
<td>6</td>
<td>5.04%</td>
<td>1.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mistakes occur in any pharmacy</td>
<td>.321</td>
<td>-.346</td>
<td>-.078</td>
<td>-.080</td>
<td>.140</td>
<td>.126</td>
</tr>
<tr>
<td>When I am unhappy with the service at my pharmacy, I react</td>
<td>-.199</td>
<td>-.481</td>
<td>-.321</td>
<td>.282</td>
<td>.195</td>
<td>.244</td>
</tr>
<tr>
<td>I am willing to deal with inconvenience at my pharmacy</td>
<td>.544</td>
<td>-.004</td>
<td>.121</td>
<td>.378</td>
<td>.055</td>
<td>.123</td>
</tr>
<tr>
<td>I don't accept poor service at my pharmacy</td>
<td>.308</td>
<td>.311</td>
<td>.446</td>
<td>-.067</td>
<td>.102</td>
<td>.118</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.500</td>
<td>.476</td>
<td>-.240</td>
<td>.310</td>
<td>.276</td>
<td>-.078</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy</td>
<td>.374</td>
<td>.463</td>
<td>-.422</td>
<td>.093</td>
<td>-.148</td>
<td>.222</td>
</tr>
<tr>
<td>Poor service at my pharmacy is understandable</td>
<td>.354</td>
<td>-.192</td>
<td>.481</td>
<td>.125</td>
<td>-.042</td>
<td>-.082</td>
</tr>
<tr>
<td>I can't accept any mistakes at my pharmacy</td>
<td>.443</td>
<td>.187</td>
<td>-.035</td>
<td>.117</td>
<td>-.051</td>
<td>.065</td>
</tr>
<tr>
<td>I would have to be really upset to leave my pharmacy and go to another pharmacy</td>
<td>.151</td>
<td>.003</td>
<td>-.345</td>
<td>.160</td>
<td>-.222</td>
<td>.127</td>
</tr>
<tr>
<td>I expect poor service at my pharmacy every once in a while</td>
<td>.395</td>
<td>-.424</td>
<td>.488</td>
<td>.216</td>
<td>.044</td>
<td>.055</td>
</tr>
<tr>
<td>I understand that mistakes occur at pharmacies</td>
<td>.754</td>
<td>-.293</td>
<td>-.219</td>
<td>-.301</td>
<td>.096</td>
<td>-.080</td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others) about it</td>
<td>.388</td>
<td>.479</td>
<td>-.030</td>
<td>-.061</td>
<td>-.004</td>
<td>-.151</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>.321</td>
<td>.487</td>
<td>.060</td>
<td>.114</td>
<td>.242</td>
<td>-.221</td>
</tr>
<tr>
<td>The service at my pharmacy can't be good every time</td>
<td>.541</td>
<td>-.229</td>
<td>.351</td>
<td>.159</td>
<td>.036</td>
<td>-.085</td>
</tr>
<tr>
<td>If I'm not happy with a pharmacy, I don't use it anymore</td>
<td>.363</td>
<td>.359</td>
<td>.104</td>
<td>-.348</td>
<td>.059</td>
<td>.395</td>
</tr>
<tr>
<td>I understand that problems occur at pharmacies</td>
<td>.662</td>
<td>-.363</td>
<td>-.145</td>
<td>-.105</td>
<td>.044</td>
<td>-.091</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to complain to staff or management</td>
<td>.328</td>
<td>.553</td>
<td>.201</td>
<td>-.080</td>
<td>-.347</td>
<td>-.136</td>
</tr>
<tr>
<td>I feel that I put up with poor pharmacy service better than most people</td>
<td>.283</td>
<td>-.144</td>
<td>.168</td>
<td>.105</td>
<td>-.262</td>
<td>.010</td>
</tr>
<tr>
<td>I don't give my business to a pharmacy that doesn't deserve it</td>
<td>.160</td>
<td>.302</td>
<td>.485</td>
<td>-.180</td>
<td>.243</td>
<td>.250</td>
</tr>
<tr>
<td>I can put up with some problems at my pharmacy</td>
<td>.690</td>
<td>-.197</td>
<td>-.055</td>
<td>.145</td>
<td>-.355</td>
<td>.101</td>
</tr>
</tbody>
</table>

6 factors extracted. 8 iterations required
The first factor analysis identified 6 factors (Table 6) for tolerance assuming all 20 items are needed to measure tolerance. The tolerance concept was expected to be comprised of 1 or possibly 2 factors at most and although there was no expectation of including 20 items for the finalized measure of tolerance, the identification of 6 factors was perceived as a certain indicator of the need for significant reduction of items for measurement of tolerance.

A second factor analysis was completed to further explore the tolerance items. For the second factor analysis, T2, T9, and T18 were removed.

**T2:** When I am unhappy with the service at my pharmacy, I react

Item T2 was removed because it was deemed to be too ambiguous

**T9:** I would have to be really upset to leave my pharmacy and go to another pharmacy

Item T9 was removed because it appears to be too similar to items in the commitment scale

**T18:** I feel that I put up with poor pharmacy service better than most people

Item T18 was removed because it doesn’t seem to measure an individual’s tolerance, but rather appears to measure an individual’s perceptions of their tolerance relative to their perceptions of others’ tolerance.

Factor analysis was completed using maximum likelihood extraction to identify the potential number of factors and factor loadings based on the second list of 17 items. The number of factors extracted and factor loadings are shown in Table 7.
Table 7 – Factor analysis using maximum likelihood extraction for 17 potential tolerance scale items T1, T3-T8, T10-T17, T19-T20

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24.79%</td>
<td>4.21</td>
</tr>
<tr>
<td>2</td>
<td>15.57%</td>
<td>2.65</td>
</tr>
<tr>
<td>3</td>
<td>10.69%</td>
<td>1.82</td>
</tr>
<tr>
<td>4</td>
<td>6.84%</td>
<td>1.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mistakes occur in any pharmacy</td>
<td>.370 -.261 -.117 -.156</td>
</tr>
<tr>
<td>I am willing to deal with inconvenience at my pharmacy</td>
<td>.548 .073 .156 .281</td>
</tr>
<tr>
<td>I don't accept poor service at my pharmacy</td>
<td>.303 .304 .450 -.119</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.408 .531 -.119 .236</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy</td>
<td>.268 .551 -.315 .121</td>
</tr>
<tr>
<td>Poor service at my pharmacy is understandable</td>
<td>.410 -.211 .417 .125</td>
</tr>
<tr>
<td>I can't accept any mistakes at my pharmacy</td>
<td>.414 .258 -.025 .145</td>
</tr>
<tr>
<td>I expect poor service at my pharmacy every once in a while</td>
<td>.492 -.429 .445 .120</td>
</tr>
<tr>
<td>I understand that mistakes occur at pharmacies</td>
<td>.751 -.143 -.331 -.225</td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others) about it</td>
<td>.325 .518 -.015 .047</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>.259 .494 .102 .118</td>
</tr>
<tr>
<td>The service at my pharmacy can't be good every time</td>
<td>.600 -.200 .304 .129</td>
</tr>
<tr>
<td>If I'm not happy with a pharmacy, I don't use it anymore</td>
<td>.316 .425 .114 -.393</td>
</tr>
<tr>
<td>I understand that problems occur at pharmacies</td>
<td>.701 -.244 -.269 -.083</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to complain to staff or management</td>
<td>.239 .499 .144 .051</td>
</tr>
<tr>
<td>I don't give my business to a pharmacy that doesn't deserve it</td>
<td>.166 .297 .536 -.378</td>
</tr>
<tr>
<td>I can put up with some problems at my pharmacy</td>
<td>.669 -.086 -.119 .163</td>
</tr>
</tbody>
</table>

4 factors extracted. 6 iterations required
The identification of 4 factors from the second factor analysis instead of 6 from the first indicated progress for the item reduction effort, but it was still difficult to explain the factor loadings and the appropriate selection of additional items to remove or items to add back in was unclear. Another factor analysis including only 8 items identified fewer factors, but the results did not lead to a clearer understanding of the items that best factored into the tolerance measurement. The 8-item factor analysis results are shown in Table 8.

Table 8 – Factor analysis using maximum likelihood extraction for 8 potential tolerance scale items T1, T4, T5 T7, T14, T15, T17, T20

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28.04%</td>
<td>2.24</td>
</tr>
<tr>
<td>2</td>
<td>17.87%</td>
<td>1.43</td>
</tr>
<tr>
<td>3</td>
<td>13.02%</td>
<td>1.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mistakes occur in any pharmacy</td>
<td>.047 .081 .369</td>
</tr>
<tr>
<td>I don't accept poor service at my pharmacy</td>
<td>.279 .442 -.324</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>-.011 .465 -.012</td>
</tr>
<tr>
<td>Poor service at my pharmacy is understandable</td>
<td>.997 -.004 -.001</td>
</tr>
<tr>
<td>The service at my pharmacy can't be good every time</td>
<td>.446 .320 .362</td>
</tr>
<tr>
<td>If I'm not happy with a pharmacy, I don't use it anymore</td>
<td>.050 .465 -.197</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to complain to staff or management</td>
<td>.086 .540 -.194</td>
</tr>
<tr>
<td>I can put up with some problems at my pharmacy</td>
<td>.271 .424 .390</td>
</tr>
</tbody>
</table>

3 factors extraction attempted. Pre-set maximum of 25 iterations exceeded
A different approach was then applied for item reduction. The initial list of 20 items was reduced to only those that appeared to describe reactions because action tolerance involves some sort of reaction or actually a lack of an action. Factor analysis results for the 7 items that describe “reactions” are illustrated in Table 9.

Table 9 – Factor analysis using maximum likelihood extraction for 7 tolerance “reaction” items T2, T5, T6, T12, T13, T15, T17

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>41.72%</td>
<td>2.92</td>
</tr>
<tr>
<td>2</td>
<td>16.07%</td>
<td>1.13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I am unhappy with the service at my pharmacy, I react</td>
<td>.273</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.914</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy</td>
<td>.553</td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others) about it</td>
<td>.508</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>.581</td>
</tr>
<tr>
<td>If I'm not happy with a pharmacy, I don't use it anymore</td>
<td>.273</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to complain to staff or management</td>
<td>.914</td>
</tr>
</tbody>
</table>

2 factors extraction attempted. Pre-set maximum of 25 iterations exceeded

After consideration, item T2, “When I am unhappy with the service at my pharmacy, I react” was removed because of concerns that interpretations of the word “react” could vary greatly among respondents and factor analysis was re-examined. The re-examined factor analysis results for “reaction” items are shown in Table 10.
Table 10 – Factor analysis using maximum likelihood extraction for 6 tolerance “reaction” items T5, T6, T12, T13, T15, T17

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>44.75%</td>
<td>2.69</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.678</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking</td>
<td>.592</td>
</tr>
<tr>
<td>for a different pharmacy</td>
<td></td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers</td>
<td>.656</td>
</tr>
<tr>
<td>(family, friends, or others) about it</td>
<td></td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>.597</td>
</tr>
<tr>
<td>If I’m not happy with a pharmacy, I don’t use it anymore</td>
<td>.403</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to complain to</td>
<td>.539</td>
</tr>
<tr>
<td>staff or management</td>
<td></td>
</tr>
</tbody>
</table>

1 factor extracted. 3 iterations required

Even though tolerance was initially expected to be a single factor concept and the resulting list of 6 items that were reaction-related loaded on a single factor, uncertainty remained whether the right approach for trait tolerance involved focusing solely on reaction-related items. In light of the uncertainty, a different approach was pursued to refine the measure for trait tolerance. During expert review for face validity, concern for the potential for unintended measurement of expectations rather than tolerance was raised. With that concern in mind, the initial 20 items were re-examined to identify the items that might measure expectations rather than tolerance. The initial list was reduced to include only those items that appear to describe preconceptions but not expectations in hopes the items would be a better measure of trait tolerance. The factor analysis results for the 5 “preconception” items are illustrated in Table 11.
Table 11 – Factor analysis using maximum likelihood extraction for 5 tolerance “preconception”, non-expectation items T3, T4, T8, T18, T20

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39.53%</td>
<td>1.98</td>
</tr>
<tr>
<td>2</td>
<td>21.74%</td>
<td>1.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am willing to deal with inconvenience at my pharmacy</td>
<td>.634</td>
</tr>
<tr>
<td>I don't accept poor service at my pharmacy</td>
<td>.300</td>
</tr>
<tr>
<td>I can't accept any mistakes at my pharmacy</td>
<td>.454</td>
</tr>
<tr>
<td>I feel that I put up with poor pharmacy service better than most people</td>
<td>.366</td>
</tr>
<tr>
<td>I can put up with some problems at my pharmacy</td>
<td>.750</td>
</tr>
</tbody>
</table>

2 factors extracted. 5 iterations required

After some consideration, the “preconceptions” approach was abandoned. The difference between items representing preconception versus items representing expectation was not clear. It did not make sense to try to identify preconception-related items in an effort to avoid expectation-related items anyway, so the initial list of 20 items was reexamined and any items that appeared to measure an expectation-related attitude were removed. Tolerance is more of a reaction-based concept than an expectation-related concept. Satisfaction, as an example is based, in part, on expectations, but tolerance is not. This issue was brought up by one of the face validity reviewers who cautioned about the inclusion of items that might key in on expectations (See Table 2). Based on the conceptualization of tolerance for this dissertation, a more tolerant customer would be less likely to react to the hardship of low satisfaction than another customer who was not as tolerant. Even though satisfaction was the measure of choice to operationalize hardship for this study, satisfaction and tolerance were presumed to be independent concepts. The new approach where expectation-related items were eliminated was probably the best, first step for refinement and should have been the approach prior to examining any factor analyses.
results. The items that appear to measure expectations from the initial list of 20 items are listed in Table 12.

Table 12 – Tolerance Items from the Initial List that Might Measure Expectations

<table>
<thead>
<tr>
<th>Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Mistakes occur in any pharmacy</td>
</tr>
<tr>
<td>T7</td>
<td>Poor service at my pharmacy is understandable</td>
</tr>
<tr>
<td>T10</td>
<td>I expect poor service at my pharmacy every once in a while</td>
</tr>
<tr>
<td>T11</td>
<td>I understand that mistakes occur at pharmacies</td>
</tr>
<tr>
<td>T14</td>
<td>The service at my pharmacy can’t be good every time</td>
</tr>
<tr>
<td>T16</td>
<td>I understand that problems occur at pharmacies</td>
</tr>
</tbody>
</table>

Next, all items in the initial list were also evaluated in regards to their correlations with satisfaction and switching intentions. It was presumed that true tolerance measurement items would be positively correlated with satisfaction and negatively correlated with switching intentions. The items in Table 13 did not appear to measure expectations and were negatively correlated with switching intentions while positively correlated with satisfaction. It is worth noting that switching intentions and satisfaction were negatively correlated in the scale refinement data as expected (-0.40, p < 0.01).
Table 13 – Tolerance Items from the Initial List negatively correlated to switching intentions and positively correlated to satisfaction

<table>
<thead>
<tr>
<th>Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>T5</td>
<td>I get mad if my prescription drug order is late (reverse code)</td>
</tr>
<tr>
<td>T6</td>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy (reverse code)</td>
</tr>
<tr>
<td>T9</td>
<td>I would have to be really upset to leave my pharmacy and go to another pharmacy</td>
</tr>
<tr>
<td>T12</td>
<td>When there is a problem at my pharmacy, I am quick to tell my peers (friends, family, or others) about it. (reverse code)</td>
</tr>
<tr>
<td>T13</td>
<td>I get mad if my prescription drug order is late repeatedly (reverse code)</td>
</tr>
</tbody>
</table>

The refined list of 5 items in Table 13 was then subjected to factor analysis and the results are shown in Table 14.

Table 14 – Factor analysis using maximum likelihood extraction for the 5 items that were negatively correlated to switching intentions and positively correlated to satisfaction T5, T6, T9, T12, T13

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>44.89%</td>
<td>2.25</td>
</tr>
<tr>
<td>2</td>
<td>21.88%</td>
<td>1.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.631</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy</td>
<td>.445</td>
</tr>
<tr>
<td>I would have to be really upset to leave my pharmacy and go to another pharmacy</td>
<td>.076</td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others) about it.</td>
<td>.521</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>.914</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.631</td>
</tr>
</tbody>
</table>

2 factors extracted. 25 iterations required
Upon review of the 5 items, item T9, “I would have to be really upset to leave my pharmacy and go to another pharmacy”, appeared to be too similar to items measuring Commitment. Item T9 seems to capture an individual’s tolerance while considering the individual’s current relationship with his/her pharmacy. Item T9 might be highly correlated to action-based tolerance, but does not seem to key in on trait tolerance. Items for measuring trait-based tolerance should key in on the level of reaction in the face of a service failure regardless of the current customer-pharmacy relationship since trait tolerance is a characteristic that based on an individual’s potential for action-based tolerance in any scenario. The issues with item T9 might have driven the 2-factor extraction result. Item T9 was removed and a 4-item tolerance measure was finalized. The final 4 items for the trait tolerance measure are listed in Table 15.

Table 15–Final list of tolerance items

<table>
<thead>
<tr>
<th>Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>T5</td>
<td>I get mad if my prescription drug order is late (reverse code)</td>
</tr>
<tr>
<td>T6</td>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy (reverse code)</td>
</tr>
<tr>
<td>T12</td>
<td>When there is a problem at my pharmacy, I am quick to tell my peers (friends, family, or others) about it. (reverse code)</td>
</tr>
<tr>
<td>T13</td>
<td>I get mad if my prescription drug order is late repeatedly (reverse code)</td>
</tr>
</tbody>
</table>

Factor analysis of the final 4 item measure resulted in all items loading on a single factor which was desired a priori. The factor extraction and factor loadings are shown in Table 16.
Table 16 – Factor analysis using maximum likelihood extraction for the final 4 tolerance items T5, T6, T12, T13

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.91%</td>
<td>2.20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>.805</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking</td>
<td>.564</td>
</tr>
<tr>
<td>for a different pharmacy</td>
<td></td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers</td>
<td>.544</td>
</tr>
<tr>
<td>(family, friends, or others) abo…</td>
<td></td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>.611</td>
</tr>
</tbody>
</table>

1 factor extracted. 5 iterations required

With the final trait-based tolerance measurement items identified, the summated scale of tolerance needed to be validated. The first step was to evaluate the relationship between the summated scale that measures trait tolerance and action tolerance as measured indirectly with satisfaction and switching intentions. As described in Chapter III, the relationship between trait tolerance and action tolerance was evaluated based on results of a multivariate model of satisfaction and switching intentions. The model results are presented in Table 17. In this model, the satisfaction and switching intentions measures grounded in customers’ current experiences were used.
Table 17 – Multivariate and univariate model results for tolerance, using satisfaction and switching intentions based on customers’ current experiences, with trait-based tolerance as the independent variable

<table>
<thead>
<tr>
<th></th>
<th>Dependent variable</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multivariate</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Univariate</td>
<td>Satisfaction</td>
<td>0.329</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Univariate</td>
<td>Switching intentions</td>
<td>-0.225</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

The summated measure of tolerance (T5+T6+T12+T13) that should measure trait tolerance was related to satisfaction and switching intentions (action tolerance) in a multivariate model with satisfaction and switching intentions as the dependent variables and trait-based tolerance as the lone independent variable. Upon further examination of univariate model results (Table 17), the summated 4-item tolerance measure is positively correlated with satisfaction and negatively correlated with switching intentions as expected for a measure of tolerance.

Based on a multiple regression model with Switching Intentions as the response variable and CIS (Impulsiveness), Trust, Commitment, Satisfaction, and Tolerance as predictor variables, Tolerance has the largest negative coefficient where consumers with high tolerance may have a lower likelihood of switching even when accounting for impulsiveness, trust, commitment, and satisfaction. The multiple regression model of switching intentions is presented in Table 18.
Table 18 – Linear regression model results for examining the relationship of trait-based tolerance with switching intentions, measured based on current experiences, and controlling for impulsiveness, trust, commitment, and satisfaction

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance (trait)</td>
<td>-0.114</td>
<td>-0.256</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Impulsiveness (CIS)</td>
<td>-0.1</td>
<td>-0.057</td>
<td>t-test</td>
<td>0.367</td>
</tr>
<tr>
<td>Trust</td>
<td>-0.048</td>
<td>-0.165</td>
<td>t-test</td>
<td>0.098</td>
</tr>
<tr>
<td>Commitment</td>
<td>-0.032</td>
<td>-0.014</td>
<td>t-test</td>
<td>0.028</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>-0.071</td>
<td>-0.153</td>
<td>t-test</td>
<td>0.111</td>
</tr>
</tbody>
</table>

The multivariate model of satisfaction and switching intentions was evaluated after adding impulsiveness, trust, and commitment as covariates. Results of the expanded multivariate model and corresponding univariate model results are presented in Table 19.

Table 19 – Multivariate and univariate model results with trait-based tolerance as the independent variable along with impulsiveness, trust, and commitment as covariates

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable(s)</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance</td>
<td>Satisfaction</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>and switching</td>
<td>0.069</td>
<td>t-test</td>
<td>0.257</td>
</tr>
<tr>
<td></td>
<td>intentions</td>
<td>0.146</td>
<td>t-test</td>
<td>0.002</td>
</tr>
<tr>
<td>Impulsiveness (CIS)</td>
<td>Satisfaction</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.128</td>
</tr>
<tr>
<td></td>
<td>and switching</td>
<td>0.032</td>
<td>t-test</td>
<td>0.083</td>
</tr>
<tr>
<td></td>
<td>intentions</td>
<td>0.011</td>
<td>t-test</td>
<td>0.428</td>
</tr>
<tr>
<td>Trust</td>
<td>Satisfaction</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>and switching</td>
<td>0.46</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>intentions</td>
<td>-0.04</td>
<td>t-test</td>
<td>0.108</td>
</tr>
<tr>
<td>Commitment</td>
<td>Satisfaction</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.057</td>
</tr>
<tr>
<td></td>
<td>and switching</td>
<td>0.05</td>
<td>t-test</td>
<td>0.029</td>
</tr>
<tr>
<td></td>
<td>intentions</td>
<td>-0.023</td>
<td>t-test</td>
<td>0.186</td>
</tr>
</tbody>
</table>
After addition of the covariates, the relationship between tolerance and satisfaction diminished even though the relationship between tolerance and switching intentions remained. The average satisfaction score for the final study sample was 17 on a scale 3 through 21 and with 85.1% of the sample reporting satisfaction scores above 12, indicative of being at least somewhat satisfied. The lack of variability of satisfaction makes identifying tolerance more difficult, especially considering low satisfaction is necessary to identify hardship. Only 5.0% of the sample reported satisfaction scores below 12, indicative of low satisfaction. The final data collection survey included a second measure of satisfaction after presentation of a low- or high-critical service failure to manipulate satisfaction so that the lack of variability issue could be addressed.

**Final results**

The final sample included survey responses from 526 individuals that were recruited as part of a panel of general consumers managed by Qualtrics®, Inc.

**Sample characteristics**

The final sample demographic characteristics were about as expected *a priori*. The average age was middle age (mean 47.1 years), mostly female (64.1%), mostly white (82.9%), and the household income was middle income (mean $53,856). See Table 20 for the complete demographic results. The sample was similar to the sample used for the 2013 Pharmacy Satisfaction PULSE survey that included responses from 34,401 pharmacy customers (Boehringer Ingelheim, 2013). The 2013 Pharmacy Satisfaction PULSE sample was middle age (mean 50 years), mostly female (68%), mostly white (89%), with a distribution of household income that appears to be slightly lower than the scale refinement sample in this dissertation.
Table 20 – Study sample demographic characteristics

<table>
<thead>
<tr>
<th></th>
<th>n (%)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>mean (SD)</td>
<td>47.1 (13.4)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>n (%)</td>
<td>189 (35.9%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>n (%)</td>
<td>337 (64.1%)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>n (%)</td>
<td>436 (82.9%)</td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>n (%)</td>
<td>46 (8.7%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic/latino</td>
<td>n (%)</td>
<td>20 (3.8%)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>n (%)</td>
<td>15 (2.9%)</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>n (%)</td>
<td>5 (1.0%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>n (%)</td>
<td>4 (0.8%)</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>mean (SD)</td>
<td>$53,856 (39,087)</td>
<td></td>
</tr>
<tr>
<td>&lt; $25k</td>
<td>n (%)</td>
<td>116 (22.1%)</td>
<td></td>
</tr>
<tr>
<td>$25k - &lt; $45k</td>
<td>n (%)</td>
<td>132 (25.1%)</td>
<td></td>
</tr>
<tr>
<td>$45k - &lt; $75k</td>
<td>n (%)</td>
<td>146 (27.8%)</td>
<td></td>
</tr>
<tr>
<td>$75k - &lt; $100k</td>
<td>n (%)</td>
<td>77 (14.6%)</td>
<td></td>
</tr>
<tr>
<td>$100k +</td>
<td>n (%)</td>
<td>55 (10.5%)</td>
<td></td>
</tr>
</tbody>
</table>

SD = standard deviation

As expected, the most common type of primary pharmacy for the final sample was national chain (59.7%), followed by mass-merchandise store (12.7%), chain grocery store (9.9%), local chain pharmacy (7.6%), and independently-owned pharmacy (6.1%). See Table 21 for the complete breakdown of pharmacy type. Customers whose primary pharmacy was mail-order were excluded from the survey sample. Excluding mail-order users, the Pharmacy Satisfaction PULSE survey sample’s primary pharmacy distribution was somewhat similar to the
scale refinement sample reported here. Excluding mail-order users, the Pharmacy Satisfaction PULSE survey sample’s most common type of pharmacy was chain pharmacy (44.0%), mass merchant (19.8%), food store (15.4%), independent pharmacy (12.0%), and clinic (8.8%).

Table 21 – Descriptive statistics for type of community pharmacy primarily used by the customers in the study sample

<table>
<thead>
<tr>
<th>Type of Pharmacy</th>
<th>n (%)</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>National chain</td>
<td>314 (59.7%)</td>
<td>314</td>
</tr>
<tr>
<td>Part of a mass-merchandise store</td>
<td>67 (12.7%)</td>
<td>67</td>
</tr>
<tr>
<td>Part of a chain grocery store</td>
<td>52 (9.9%)</td>
<td>52</td>
</tr>
<tr>
<td>Local chain</td>
<td>40 (7.6%)</td>
<td>40</td>
</tr>
<tr>
<td>Local, independently-owned</td>
<td>32 (6.1%)</td>
<td>32</td>
</tr>
<tr>
<td>Part of a local, independently-owned grocery</td>
<td>7 (1.3%)</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>14 (2.7%)</td>
<td>14</td>
</tr>
</tbody>
</table>

As part of the final survey data collection, characteristics related to consumers’ primary pharmacies were measured to identify economic switching costs. The economic characteristics of consumers’ primary pharmacies are described in Table 22.
Table 22 – Descriptive statistics for primary pharmacy characteristics

<table>
<thead>
<tr>
<th></th>
<th>n = 526</th>
<th>mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of relationship with primary pharmacy (in months)</td>
<td></td>
<td>104.1 (89.3)</td>
</tr>
<tr>
<td>Number of alternative pharmacies near primary pharmacy</td>
<td></td>
<td>3.9 (2.1)</td>
</tr>
<tr>
<td>Closest alternative pharmacy to primary pharmacy (ordinal scale 1-10)</td>
<td></td>
<td>4.1 (2.3)</td>
</tr>
<tr>
<td>1 = in sight</td>
<td>n (%)</td>
<td>103 (19.6%)</td>
</tr>
<tr>
<td>2 = less than 0.25 miles</td>
<td>n (%)</td>
<td>101 (19.2%)</td>
</tr>
<tr>
<td>3 = 0.25 to 0.5 miles</td>
<td>n (%)</td>
<td>98 (18.6%)</td>
</tr>
<tr>
<td>4 = 0.51 to 1 mile</td>
<td>n (%)</td>
<td>93 (17.7%)</td>
</tr>
<tr>
<td>5 = 1.1 to 2 miles</td>
<td>n (%)</td>
<td>53 (10.1%)</td>
</tr>
<tr>
<td>6 = 2 to 5 miles</td>
<td>n (%)</td>
<td>47 (8.9%)</td>
</tr>
<tr>
<td>7 = 5 to 10 miles</td>
<td>n (%)</td>
<td>18 (3.4%)</td>
</tr>
<tr>
<td>8 = 10 to 15 miles</td>
<td>n (%)</td>
<td>6 (1.1%)</td>
</tr>
<tr>
<td>9 = 15 to 20 miles</td>
<td>n (%)</td>
<td>3 (0.6%)</td>
</tr>
<tr>
<td>10 = more than 20 miles</td>
<td>n (%)</td>
<td>4 (0.8%)</td>
</tr>
<tr>
<td>Quality of primary pharmacy relative to others (scale 1-7)</td>
<td>mean (SD)</td>
<td>5.2 (1.2)</td>
</tr>
<tr>
<td>Number of product offerings at primary pharmacy relative to others (scale 1-7)</td>
<td>mean (SD)</td>
<td>5.0 (1.4)</td>
</tr>
<tr>
<td>Prices at primary pharmacy relative to others (scale 1-7)</td>
<td>mean (SD)</td>
<td>3.5 (1.4)</td>
</tr>
</tbody>
</table>

SD = standard deviation
On average customers in the final sample had been using their primary pharmacy for about 8 years, 8 months (mean = 104.1 months). Customers were aware of about 4 pharmacies near their primary pharmacy on average. Customers perceived their pharmacy provided slightly higher quality than other pharmacies. Customers also perceived their pharmacy offered more products than other pharmacies. Customers were not so sure about the relative prices at their pharmacy. The results suggest that customers perceive prices could be lower at other pharmacies than at their pharmacy.

_Tolerance measure_

The 4-item measure of tolerance had a Cronbach’s alpha = 0.8 indicating acceptable internal consistency and was above the _a priori_ 0.7 that was stated as the acceptable Cronbach’s alpha for the set of measurement items.

Factor analysis was completed using maximum likelihood extraction for a single factor to confirm the factor structure. A total of 62.8% of the variance was explained by the factor (Eigen value = 2.51) and the factor loadings were all greater than 0.65 as illustrated in Table 23.

Table 23 – Factor analysis for tolerance measure using maximum likelihood extraction

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>0.812</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>0.705</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy</td>
<td>0.662</td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others)...</td>
<td>0.656</td>
</tr>
</tbody>
</table>

1 factor extracted. 5 iterations required
Factor analysis was also completed using principal axis factoring with for a single factor. A total of 62.8% of the variance was explained by the factor (Eigen value = 2.51) and the factor loadings were all greater than 0.66 as illustrated in Table 24.

Table 24 – Factor analysis for tolerance measure using principal axis factoring

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variance explained</th>
<th>Eigen value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>62.81%</td>
<td>2.51</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get mad if my prescription drug order is late</td>
<td>0.795</td>
</tr>
<tr>
<td>I get mad if my prescription drug order is late repeatedly</td>
<td>0.669</td>
</tr>
<tr>
<td>When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy</td>
<td>0.685</td>
</tr>
<tr>
<td>When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others)...</td>
<td>0.692</td>
</tr>
</tbody>
</table>

1 factor extracted. 8 iterations required

The direct measure of trait-based tolerance was presumed to be related to the indirect measure of action-based tolerance that includes satisfaction and switching intentions. Multivariate regression model results with trait-based tolerance as the independent variable and with satisfaction and switching intentions as the dependent variables were examined to evaluate the relationship between the two measures of tolerance. Three multivariate regression models were evaluated. The first model used satisfaction and switching intentions based on customers’ current experiences for tolerance. The other models used satisfaction and switching intentions as measured after the respective lower-criticality or higher-criticality hypothetical scenario was presented. Multivariate regression models do not produce coefficients or parameter estimates to explain the direction and magnitude of the relationship between an independent variable and the dependent variables. Multivariate regression models merely provide test results that describe whether the relationship between an independent variable and the dependent variables is
statistically significant or not. Simple or multiple regression models, or other methods are required to understand direction or magnitude of the relationships between an independent variable and each of the dependent variables.

The multivariate model results for the full sample are illustrated in Table 25.

Table 25 – Multivariate and univariate model results to evaluate the relationship between trait-based tolerance (independent variable) and action-based tolerance (dependent variable)

<table>
<thead>
<tr>
<th>Shopping experience</th>
<th>Dependent variable</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on real experiences n = 526</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.267</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>-0.149</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Based on scenario 1 n = 247</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.2</td>
<td>t-test</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>-0.237</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Based on scenario 2 n = 279</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.123</td>
<td>t-test</td>
<td>0.235</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>-0.192</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

Trait-based tolerance was the lone independent variable for each model.

Trait-based tolerance, as conceptualized for this dissertation, should be related to action-based tolerance if both measures are valid. A positive association between trait-based tolerance and action-based tolerance, although expected, is not required for a valid measure of tolerance.

As stated in Chapter I, sensitivity to a hardship is required for tolerance, but customers whom are more tolerant are not necessarily more or less sensitive to hardship. As illustrated in Table 25, trait-based tolerance was positively related to satisfaction when satisfaction was measured based on customers’ current experiences or after presentation of a lower-criticality service failure scenario, but the association between trait-based tolerance and satisfaction was not statistically significant when satisfaction was measured after presentation of a higher-criticality service failure scenario. The higher-criticality service failure scenario was expected to manipulate the
action-based tolerance measure (satisfaction and switching intentions) more so than the lower-criticality service failure scenario, so it is not entirely surprising to have results that suggest that the role of sensitivity to hardship is less important to the trait-based → action-based tolerance relationship. The results illustrated in Table 25 can be synthesized to support the premise that in the presence of higher-criticality service failures, trait-based tolerance is an important predictor of action-based tolerance even when feelings of hardship may be about the same across all customers, regardless of their level of trait-based tolerance.

**Hypotheses testing**

A multivariate regression model was completed to evaluate the relationships between the factors that were hypothesized to influence customer tolerance and satisfaction and switching intentions simultaneously. The multivariate model results for the full sample are illustrated in Table 26. Not all independent variables were statistically significantly related to the dependent variables. Only service quality, commitment, number of alternatives, and perceived relative pricing were statistically significant. Based on univariate models, service quality was positively related to satisfaction and negatively related to switching intentions. Commitment was positively related to satisfaction, but not related to switching intentions. Number of alternative pharmacies was not related to satisfaction but was related to switching intentions in that a greater number of known alternatives was related to higher switching intentions. Perceptions of higher prices at one’s pharmacy relative to perceptions of prices at other pharmacies was also related to higher switching intentions in univariate models.
Table 26 – Multivariate and univariate model results for factors that were hypothesized to influence action-based tolerance based on real shopping experiences

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable(s)</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality (SERVQUAL)</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.086</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>-0.031</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Commitment</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.098</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>0.005</td>
<td>t-test</td>
<td>0.606</td>
</tr>
<tr>
<td>Duration of relationship (in months)</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.087</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>-0.001</td>
<td>t-test</td>
<td>0.204</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>-0.001</td>
<td>t-test</td>
<td>0.063</td>
</tr>
<tr>
<td>Number of alternative pharmacies</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.054</td>
<td>t-test</td>
<td>0.268</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>0.094</td>
<td>t-test</td>
<td>0.001</td>
</tr>
<tr>
<td>Nearest alternative pharmacy</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.577</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.011</td>
<td>t-test</td>
<td>0.837</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>0.033</td>
<td>t-test</td>
<td>0.3</td>
</tr>
<tr>
<td>Relative offerings vs. alternative pharmacies</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.153</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.157</td>
<td>t-test</td>
<td>0.054</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>0.015</td>
<td>t-test</td>
<td>0.759</td>
</tr>
<tr>
<td>Relative pricing vs. alternative pharmacies</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.078</td>
<td>t-test</td>
<td>0.282</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>0.260</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Relative quality vs. alternative pharmacies</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.882</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>0.052</td>
<td>t-test</td>
<td>0.623</td>
</tr>
<tr>
<td></td>
<td>Switching intentions</td>
<td>0.007</td>
<td>t-test</td>
<td>0.908</td>
</tr>
</tbody>
</table>

Multivariate models were also completed based on satisfaction and switching intentions reported after exposure to each one of the two service failure scenarios, a lower-criticality failure and a higher-criticality failure, that were randomly presented to the survey responders. The use of hypothetical service failure scenarios was expected to in greater variance in the measurements.
of satisfaction and switching intentions, thus greater variance in the measurement of tolerance, in case there was little variance in the grounded measurements. Lower-criticality and higher-criticality scenarios were included to provide richer data that might allow for deeper understandings of the tolerance concepts. A total of 247 subjects were presented with the lower-criticality service failure (scenario 1) and 279 were presented with the higher-criticality service failure (scenario 2). The model results are presented in Tables 27 and Table 28.

The model based on satisfaction and switching intentions after the presentation of scenario 1 shows similarities to and differences from the model based on satisfaction and switching intentions grounded in recent and prior real-world experiences for the full sample. As in the full sample, service quality and commitment were statistically significant in the multivariate model of satisfaction and switching intentions. Number of alternatives and relative pricing were not statistically significant in the scenario 1 model, but perceived relative offerings was statistically significant. The univariate model results suggest that a greater number of product offerings is positively related to switching intentions.

Table 27 – Multivariate and univariate model results for factors that were hypothesized to influence action-based tolerance based on shopping scenario 1

<table>
<thead>
<tr>
<th>n = 247</th>
<th>Independent variable</th>
<th>Dependent variable(s)</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Service quality (SERVQUAL)</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.024</td>
<td>t-test</td>
<td>0.215</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>-0.048</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.183</td>
<td>t-test</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>0.001</td>
<td>t-test</td>
<td>0.967</td>
</tr>
<tr>
<td></td>
<td>Duration of relationship (in months)</td>
<td>Satisfaction and switching intentions</td>
<td>n/a</td>
<td>Pillai’s Trace</td>
<td>0.495</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>&lt; 0.001</td>
<td>t-test</td>
<td>0.243</td>
</tr>
</tbody>
</table>
The model based on satisfaction and switching intentions after the presentation of scenario 2 shows similarities to and differences from the model based on satisfaction and switching intentions grounded in recent and prior real-world experiences for the full sample. As in the full sample, service quality, commitment, and perceived relative pricing were statistically significant in the multivariate model of satisfaction and switching intentions. Number of alternatives was not statistically significant in the model based on satisfaction and switching intentions measured after scenario 2, but distance to the nearest alternative was statistically significant which was unique to the scenario 2-based model. Perceived relative offerings was not statistically significant in the scenario 2-based model unlike the scenario 1-based model.
Table 28 – Multivariate and univariate model results for factors that were hypothesized to influence action-based tolerance based on shopping scenario 2

<table>
<thead>
<tr>
<th>n = 279</th>
<th>Independent variable</th>
<th>Dependent variable(s)</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Service quality</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>(SERVQUAL)</td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>-0.01</td>
<td>t-test</td>
<td>0.640</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>-0.026</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.22</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>-0.052</td>
<td>t-test</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>Duration of relationship</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>0.091</td>
</tr>
<tr>
<td></td>
<td>(in months)</td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>-0.006</td>
<td>t-test</td>
<td>0.163</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>-0.001</td>
<td>t-test</td>
<td>0.278</td>
</tr>
<tr>
<td></td>
<td>Number of alternative pharmacies</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>0.307</td>
</tr>
<tr>
<td></td>
<td></td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.074</td>
<td>t-test</td>
<td>0.124</td>
</tr>
<tr>
<td></td>
<td>Nearest alternative pharmacy</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>0.047</td>
</tr>
<tr>
<td></td>
<td></td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.221</td>
<td>t-test</td>
<td>0.257</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>0.087</td>
<td>t-test</td>
<td>0.098</td>
</tr>
<tr>
<td></td>
<td>Relative offerings vs. alternative pharmacies</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>0.491</td>
</tr>
<tr>
<td></td>
<td></td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.363</td>
<td>t-test</td>
<td>0.241</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>-0.018</td>
<td>t-test</td>
<td>0.827</td>
</tr>
<tr>
<td></td>
<td>Relative pricing vs. alternative pharmacies</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.286</td>
<td>t-test</td>
<td>0.289</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>0.176</td>
<td>t-test</td>
<td>0.016</td>
</tr>
<tr>
<td></td>
<td>Relative quality vs. alternative pharmacies</td>
<td>Satisfaction and</td>
<td>n/a</td>
<td>Pillai’s</td>
<td>0.101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>switching intentions</td>
<td></td>
<td>Trace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction</td>
<td>0.194</td>
<td>t-test</td>
<td>0.620</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switching intentions</td>
<td>0.187</td>
<td>t-test</td>
<td>0.077</td>
</tr>
</tbody>
</table>

The models based on satisfaction and switching as measured after scenarios 1 and 2 utilized data from segments of 53% and 46% of the full sample, respectively.

The multivariate model results suggest possible support for hypothesis 1, hypothesis 3, hypothesis 4b, hypothesis 4c, hypothesis 4d, and hypothesis 4e. The multivariate model results suggest no support for hypothesis 4a.
Multivariate regression model results do not provide specific information regarding direction of effect for independent in relation to the dependent variables, so additional analyses were needed to evaluate the study hypotheses. As a reminder, tolerance was defined as the capacity to endure hardship for this study. Hardship was operationally defined as dissatisfaction and enduring was defined as low intentions to switch to another service provider, where the most tolerant individuals are highly dissatisfied yet have low switching intentions. Logistic regression analysis was chosen so that the direction of the effect of independent variables on a dichotomous tolerance variable. For the dichotomous tolerance variable, subjects with satisfaction scores lower than 12 and switching intentions scores lower than 4. Satisfaction was measured with a 3-item summed scale with a possible range of 3 through 21 where higher scores indicate greater satisfaction. Switching intentions were measured with a single-item scale with a possible range of 1 through 7 where higher scores indicate greater intentions to switch to another pharmacy. Using the cut-points of 12 for satisfaction and 4 for switching intentions, subjects exhibiting action-based tolerance were identified for the full sample based on the grounded experiences satisfaction and switching intentions measures. Subjects exhibiting action-based tolerance were also identified among the portion of the sample that were presented with service failure scenario 1 and the portion presented with service failure scenario 2 based on the post-scenario satisfaction and switching intentions measures.

From the satisfaction and switching intentions measures grounded in subjects’ real-world experiences, only 7 (1.3%) of the 526 subjects exhibited action-based tolerance. Of the subjects presented service failure scenario 1, a total of 44 (17.8%) of 247 exhibited action-based tolerance. Of the subjects presented service failure scenario 2, a total of 43 (15.4%) of 279
exhibited action-based tolerance. Logistic regression models for action-based tolerance as the dichotomous dependent variable with the same independent variables as used in the multivariate models were completed and evaluated. The trait-based tolerance measure was evaluated as a continuous measure and as a dichotomous measure using single variable logistic regression models to examine trait-based tolerance as a potential predictor of action-based tolerance that was exhibited by the study subjects. Logistic regression model results (6 total models) for the full sample, scenario 1 subsample, and scenario 2 subsample are presented in Table 29.

Table 29 – Logistic regression model results for factors that were hypothesized to influence action-based tolerance based on real shopping experiences

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1, n = 526</td>
<td>Tolerance (trait, continuous)</td>
<td>-0.368</td>
<td>Wald chi²</td>
<td>0.003</td>
<td>0.69</td>
</tr>
<tr>
<td>Model 2, n = 526</td>
<td>Tolerance (trait, dichotomous)</td>
<td>-2.173</td>
<td>Wald chi²</td>
<td>0.01</td>
<td>0.11</td>
</tr>
<tr>
<td>Model 3, n = 247</td>
<td>Tolerance (trait, continuous)</td>
<td>0.26</td>
<td>Wald chi²</td>
<td>0.618</td>
<td>1.03</td>
</tr>
<tr>
<td>Model 4, n = 247</td>
<td>Tolerance (trait, dichotomous)</td>
<td>0.377</td>
<td>Wald chi²</td>
<td>0.427</td>
<td>1.46</td>
</tr>
<tr>
<td>Model 5, n = 279</td>
<td>Tolerance (trait, continuous)</td>
<td>0.177</td>
<td>Wald chi²</td>
<td>&lt; 0.001</td>
<td>1.19</td>
</tr>
<tr>
<td>Model 6, n = 279</td>
<td>Tolerance (trait, dichotomous)</td>
<td>2.237</td>
<td>Wald chi²</td>
<td>0.002</td>
<td>9.36</td>
</tr>
</tbody>
</table>

Results from models 1 and 2 suggest a negative relationship between trait-based tolerance and action-based tolerance, but with only 1.3% of the sample exhibiting action-based tolerance, the results are questionable. Results from models 3 and 4 do not provide evidence of a relationship between trait-based tolerance and action based tolerance. For models 3 and 4, 17.8% of the sample exhibited action-based tolerance after a lower severity service failure.
scenario (scenario 1) was presented. Results from models 5 and 6 suggest a positive relationship between trait-based tolerance and action-based tolerance. For models 5 and 6, 15.4% of the sample exhibited action-based tolerance after a higher severity service failure scenario (scenario 2) was presented. The relationship between trait-based tolerance and action-based tolerance was only detected after satisfaction and switching intentions were manipulated by the presentation of the higher severity service failure scenario. Overall, these results suggest a positive relationship exists between trait-based tolerance, as measured by the 4-item scale developed for this study, and action-based tolerance, as measured by low scores on a 3-item satisfaction scale with corresponding low scores on a measure of switching intentions.

Logistic regression models were then evaluated where service quality and the psychological and economic switching costs were included as possible factors or covariates in the models. Results for the tolerance model including the full sample and based on satisfaction and switching intentions grounded in current shopping experiences are presented in Table 30. The results for the model of tolerance based on satisfaction and switching intentions measured after scenario 1 are presented in Table 31. The results for the model of tolerance based on satisfaction and switching intentions measured after scenario 2 are presented in Table 32.
For the logistic regression model of customers exhibiting action-based tolerance versus other customers, where tolerance was measured based on customers’ current experiences, service quality was identified as slightly, negatively associated with action-based tolerance. No other psychological or economic barriers were statistically significant in the model. It is important to note that only 1.3% of the sample exhibited action-based tolerance, so the model results might not be reliable.
Table 31 – Logistic regression model results for factors that were hypothesized to influence action-based tolerance based on scenario 1

<table>
<thead>
<tr>
<th>n = 247</th>
<th>Independent variable</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Service quality (SERVQUAL)</td>
<td>0.015</td>
<td>Wald</td>
<td>0.188</td>
<td>1.02</td>
<td>0.99, 1.04</td>
</tr>
<tr>
<td></td>
<td>Tolerance (trait)</td>
<td>-0.003</td>
<td>Wald</td>
<td>0.961</td>
<td>1.00</td>
<td>0.89, 1.12</td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td>-0.045</td>
<td>Wald</td>
<td>0.135</td>
<td>0.96</td>
<td>0.90, 1.01</td>
</tr>
<tr>
<td></td>
<td>Duration of relationship (in months)</td>
<td>-0.002</td>
<td>Wald</td>
<td>0.346</td>
<td>1.00</td>
<td>0.99, 1.00</td>
</tr>
<tr>
<td></td>
<td>Number of alternative pharmacies</td>
<td>-0.192</td>
<td>Wald</td>
<td>0.073</td>
<td>0.83</td>
<td>0.67, 1.02</td>
</tr>
<tr>
<td></td>
<td>Nearest alternative pharmacy</td>
<td>-0.062</td>
<td>Wald</td>
<td>0.511</td>
<td>0.94</td>
<td>0.78, 1.13</td>
</tr>
<tr>
<td></td>
<td>Relative offerings vs. alternative pharmacies</td>
<td>-0.17</td>
<td>Wald</td>
<td>0.226</td>
<td>0.84</td>
<td>0.64, 1.11</td>
</tr>
<tr>
<td></td>
<td>Relative pricing vs. alternative pharmacies</td>
<td>-0.19</td>
<td>Wald</td>
<td>0.172</td>
<td>0.83</td>
<td>0.63, 1.09</td>
</tr>
<tr>
<td></td>
<td>Relative quality vs. alternative pharmacies</td>
<td>0.226</td>
<td>Wald</td>
<td>0.268</td>
<td>1.25</td>
<td>0.84, 1.87</td>
</tr>
</tbody>
</table>

For the logistic regression model of customers exhibiting action-based tolerance versus other customers, where tolerance was measured based on customers’ responses following presentation of service failure scenario 1, none of the factors was statistically significant.
Table 32 – Logistic regression model results for factors that were hypothesized to influence action-based tolerance based on scenario 2

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Coefficient</th>
<th>Test</th>
<th>P value</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality (SERVQUAL)</td>
<td>0.043</td>
<td>Wald chi²</td>
<td>0.003</td>
<td>1.04</td>
<td>1.01, 1.08</td>
</tr>
<tr>
<td>Tolerance (trait)</td>
<td>0.103</td>
<td>Wald chi²</td>
<td>0.082</td>
<td>1.11</td>
<td>0.99, 1.24</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.032</td>
<td>Wald chi²</td>
<td>0.301</td>
<td>1.03</td>
<td>0.97, 1.10</td>
</tr>
<tr>
<td>Duration of relationship (in months)</td>
<td>0.002</td>
<td>Wald chi²</td>
<td>0.37</td>
<td>1.00</td>
<td>0.99, 1.01</td>
</tr>
<tr>
<td>Number of alternative pharmacies</td>
<td>0.007</td>
<td>Wald chi²</td>
<td>0.939</td>
<td>1.00</td>
<td>0.83, 1.22</td>
</tr>
<tr>
<td>Nearest alternative pharmacy</td>
<td>-0.280</td>
<td>Wald chi²</td>
<td>0.012</td>
<td>0.76</td>
<td>0.61, 0.94</td>
</tr>
<tr>
<td>Relative offerings vs. alternative pharmacies</td>
<td>-0.02</td>
<td>Wald chi²</td>
<td>0.889</td>
<td>0.98</td>
<td>0.74, 1.30</td>
</tr>
<tr>
<td>Relative pricing vs. alternative pharmacies</td>
<td>0.002</td>
<td>Wald chi²</td>
<td>0.987</td>
<td>1.00</td>
<td>0.77, 1.31</td>
</tr>
<tr>
<td>Relative quality vs. alternative pharmacies</td>
<td>-0.246</td>
<td>Wald chi²</td>
<td>0.195</td>
<td>0.78</td>
<td>0.54, 1.13</td>
</tr>
</tbody>
</table>

For the logistic regression model of customers exhibiting action-based tolerance versus other customers, where tolerance was measured based on customers’ responses following presentation of service failure scenario 2, service quality was identified as slightly positively associated with action-based tolerance and distance to the nearest alternative pharmacy was negatively associated with action-based tolerance. The results suggest that greater measures of service quality are associated with a greater likelihood of action-based tolerance. The results also suggest that the nearer the location of an alternative pharmacy, the less the likelihood of action-based tolerance. The logistic regression model results provide support for hypothesis 1 and hypothesis 4c only.
To evaluate hypothesis 2, linear regression models were used to examine the relationship between trait-based tolerance and switching intentions while controlling for the impact of other factors considered to be related to switching intentions. Three regression models were completed: one where switching intentions were based on customers’ current experiences (results presented in Table 33), one based on customers’ switching intentions following presentation of service failure scenario 1 (Table 34), and one based on customers’ switching intentions following presentation of service failure scenario 2 (Table 35).

Table 33 – Linear regression model results for examining the relationship of trait-based tolerance with switching intentions, measured based on current experiences, and controlling for other factors that could be related to switching intentions

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality (SERVQUAL)</td>
<td>-0.027</td>
<td>-0.354</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Tolerance (trait)</td>
<td>-0.074</td>
<td>-0.164</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.01</td>
<td>0.043</td>
<td>t-test</td>
<td>0.299</td>
</tr>
<tr>
<td>Duration of relationship (in months)</td>
<td>-0.001</td>
<td>-0.06</td>
<td>t-test</td>
<td>0.119</td>
</tr>
<tr>
<td>Number of alternative pharmacies</td>
<td>0.091</td>
<td>0.123</td>
<td>t-test</td>
<td>0.002</td>
</tr>
<tr>
<td>Nearest alternative pharmacy</td>
<td>0.039</td>
<td>0.049</td>
<td>t-test</td>
<td>0.211</td>
</tr>
<tr>
<td>Relative offerings vs. alternative pharmacies</td>
<td>0.008</td>
<td>0.008</td>
<td>t-test</td>
<td>0.861</td>
</tr>
<tr>
<td>Relative pricing vs. alternative pharmacies</td>
<td>0.238</td>
<td>0.216</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Relative quality vs. alternative pharmacies</td>
<td>-0.009</td>
<td>-0.007</td>
<td>t-test</td>
<td>0.886</td>
</tr>
</tbody>
</table>
Based on the linear regression model of switching intentions grounded in customers’ current experiences, tolerance was negatively related to switching intentions as hypothesized.

Table 34 – Linear regression model results for examining the relationship of trait-based tolerance with switching intentions, measured after service failure scenario 1, and controlling for other factors that could be related to switching intentions.

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality (SERVQUAL)</td>
<td>-0.04</td>
<td>-0.447</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Tolerance (trait)</td>
<td>-0.180</td>
<td>-0.334</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.008</td>
<td>0.028</td>
<td>t-test</td>
<td>0.632</td>
</tr>
<tr>
<td>Duration of relationship (in months)</td>
<td>&lt; 0.001</td>
<td>0.035</td>
<td>t-test</td>
<td>0.523</td>
</tr>
<tr>
<td>Number of alternative pharmacies</td>
<td>0.034</td>
<td>0.04</td>
<td>t-test</td>
<td>0.473</td>
</tr>
<tr>
<td>Nearest alternative pharmacy</td>
<td>0.003</td>
<td>0.004</td>
<td>t-test</td>
<td>0.948</td>
</tr>
<tr>
<td>Relative offerings vs. alternative pharmacies</td>
<td>0.14</td>
<td>0.114</td>
<td>t-test</td>
<td>0.068</td>
</tr>
<tr>
<td>Relative pricing vs. alternative pharmacies</td>
<td>0.093</td>
<td>0.075</td>
<td>t-test</td>
<td>0.177</td>
</tr>
<tr>
<td>Relative quality vs. alternative pharmacies</td>
<td>0.206</td>
<td>0.137</td>
<td>t-test</td>
<td>0.048</td>
</tr>
</tbody>
</table>

Based on the linear regression model of switching intentions measured after presentation of service failure scenario 1, tolerance was negatively related to switching intentions as hypothesized.
Table 35 – Linear regression model results for examining the relationship of trait-based tolerance with switching intentions, measured after service failure scenario 2, and controlling for other factors that could be related to switching intentions.

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>Test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality (SERVQUAL)</td>
<td>-0.019</td>
<td>-0.22</td>
<td>t-test</td>
<td>0.002</td>
</tr>
<tr>
<td>Tolerance (trait)</td>
<td>-0.113</td>
<td>-0.224</td>
<td>t-test</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Commitment</td>
<td>-0.042</td>
<td>-0.154</td>
<td>t-test</td>
<td>0.01</td>
</tr>
<tr>
<td>Duration of relationship (in months)</td>
<td>-0.001</td>
<td>-0.035</td>
<td>t-test</td>
<td>0.53</td>
</tr>
<tr>
<td>Number of alternative pharmacies</td>
<td>0.066</td>
<td>0.077</td>
<td>t-test</td>
<td>0.931</td>
</tr>
<tr>
<td>Nearest alternative pharmacy</td>
<td>0.098</td>
<td>0.105</td>
<td>t-test</td>
<td>0.057</td>
</tr>
<tr>
<td>Relative offerings vs. alternative pharmacies</td>
<td>-0.009</td>
<td>-0.007</td>
<td>t-test</td>
<td>0.914</td>
</tr>
<tr>
<td>Relative pricing vs. alternative pharmacies</td>
<td>0.137</td>
<td>0.107</td>
<td>t-test</td>
<td>0.057</td>
</tr>
<tr>
<td>Relative quality vs. alternative pharmacies</td>
<td>0.143</td>
<td>0.097</td>
<td>t-test</td>
<td>0.169</td>
</tr>
</tbody>
</table>

Based on the linear regression model of switching intentions measured after presentation of service failure scenario 1, tolerance was negatively related to switching intentions as hypothesized. The results of the three linear regression models of switching intentions suggest that trait-based tolerance is negatively related to switching intentions as hypothesized.

After consideration of all model results, support or lack of support for each study hypothesis was determined. See Table 36 for a summary. The model results indicate support for hypotheses 1 and 2 with partial support for hypothesis 4, specifically 4c. The model results did not indicate support for hypothesis 3. There was also no evidence to support sub-hypotheses 4a, 4b, 4d, 4e, and 4f.
### Table 36 – Evaluation of support for study hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Statement</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>customer tolerance is positively associated with current perceptions of service quality</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>customer tolerance is negatively associated with switching intentions</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>customer tolerance is positively associated with psychological switching costs (commitment)</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>customer tolerance is positively associated with economic switching costs</td>
<td>Partial (4c)</td>
</tr>
<tr>
<td>4a</td>
<td>customer tolerance is positively associated with relationship duration</td>
<td>No</td>
</tr>
<tr>
<td>4b</td>
<td>customer tolerance is positively associated with the number of alternatives</td>
<td>No</td>
</tr>
<tr>
<td>4c</td>
<td>customer tolerance is positively associated with the relative distance to the nearest alternative</td>
<td>Yes</td>
</tr>
<tr>
<td>4d</td>
<td>customer tolerance is positively associated with perceived relative offerings</td>
<td>No</td>
</tr>
<tr>
<td>4e</td>
<td>customer tolerance is positively associated with perceived relative prices</td>
<td>No</td>
</tr>
<tr>
<td>4f</td>
<td>customer tolerance is positively associated with perceived relative quality</td>
<td>No</td>
</tr>
</tbody>
</table>
CHAPTER V: DISCUSSION

Contributions

The multi-phased study presented in this dissertation makes several important contributions. The primary contribution is the introduction of the concept of customer tolerance within a marketing context and more specifically within context of consumer choice and evaluation of community pharmacy providers. Customer tolerance as presented in this dissertation relied on the definition of tolerance as the capacity to endure hardship, where hardship is equivalent to a service failure or failures (Tolerance, 2010). Customer tolerance is important to contemplate, because no matter a service provider’s well intended delivery of quality service, some customers will be disappointed, errors will be made, and service failures will occur. Awareness of customer tolerance can help service providers to develop strategies and allocate resources effectively.

This dissertation also presented two distinct types of tolerance: trait-based tolerance and action-based tolerance. Trait-based tolerance describes an individual’s level of underlying tolerance which should estimate the individual’s potential for actual tolerance to a specific stimulus. Action-based, or transactional, tolerance describes an individual’s actual response to an undesirable or painful stimulus. The two conceptualizations are not independent of each other. It was expected that trait tolerance influences tolerance to a specific stimulus and vice versa and the study results suggest this is true, because trait-based tolerance and action-based tolerance were related given the study data.
The dissertation further contributes by introducing measures of trait-based tolerance and action-based tolerance. Existing measures of tolerance were not identified for use in the study, so measures for trait-based and action-based tolerance were developed.

The 4-item measure of trait-based tolerance developed for this dissertation was a direct measure of one’s underlying propensity for enduring hardship and was developed based on methods first introduced by Churchill (1979). Interpretations of transcriptions from customer interviews were used to create an initial list of items. The list of items was reduced after review for face validity by a small panel of experts. Data was then collected for the reduced list of items from 201 members of a general consumer panel via online survey. Survey results were thoroughly analyzed resulting in a final 4-item measure of trait-tolerance. Each item was measured using a 5-point Likert-type scale and the items were summed to produce a linear trait-tolerance measure with a possible range of 4 through 20. The direct measure of trait-tolerance was further validated based on data collected via online survey from a final survey of 526 members of a general consumer panel. The 4-item measure can be used to measure trait-based tolerance for customers’ community pharmacies. It is assumed that the items could be adapted for contexts other than community pharmacy, but any adaptation would need to be validated.

The measure of action-based tolerance was developed as an indirect measure of one’s actual, transactional, tolerance as identified through measures of satisfaction and switching intentions. Based on the indirect measure, tolerance exists when switching intentions are low (enduring) while satisfaction is low (hardship). This dissertation also presented a unique method for analyzing the relationships of factors presumed to be related to tolerance and the action-based tolerance measure. In order to retain the linear nature of satisfaction and switching intentions
measures, multivariate modeling was applied so that satisfaction and switching intentions could be included as dependent variables in the model. The multivariate approach allowed for identification of linear relationships with a linear measure of action-based tolerance, but was limited to identification of statistically significant relationships. The multivariate model results did not provide information regarding the directions of relationships between independent variables and the action-based tolerance dependent variables. In order to understand the directions of relationships, univariate models of satisfaction and univariate models of switching intentions were examined. Additionally, a dichotomous classification of action-based tolerance was developed and evaluated within a logistic regression model. The dichotomous classification was implemented by grouping customers with satisfaction scores below the scale’s midpoint and with switching intentions below the scale’s midpoint into a group of those exhibiting action-based tolerance. All other customers were classified into the other group. The logistic regression model of customers exhibiting tolerance compared to other customers allowed for the evaluation of direction of the relationships of factors of tolerance and action-based tolerance. It is assumed that the indirect measure of action-based tolerance, operationalized as low satisfaction and low switching intentions, could be applied to contexts other than community pharmacy and even outside of marketing relationships altogether. Application of the indirect, action-based tolerance measure in another context would require adaptation of the measures of satisfaction and switching intentions for validity within the context of interest.

After tolerance measures were developed for this dissertation, a measure of customer tolerance to crowds in the retail shopping context was identified in the literature. Machleit, Eroglu, and Mantel (2000) developed a 4-item scale of tolerance for crowds and Eroglu,
Machleit, and Barr (2005) used a 3-item version of the scale. The 4 items created by Machleit, Eroglu, and Mantel (2000) were: "I avoid crowded stores whenever possible"; "A crowded store doesn't really bother me" (reverse coded); "If I see a store that is crowded, I won't even go inside"; "It's worth having to deal with a crowded store if I can save money on the things I buy" (reverse coded). The 3-item version excluded the third item that states, “If I see a store that is crowded, I won’t even go inside.” Confirmatory factor analysis of the 4-item measure indicated that all four items loaded on one factor, and coefficient alpha was 0.79 (Machleit, Eroglu, and Mantel, 2000). The scale appears to measure a customer’s level of dislike of crowds rather than tolerance especially considering the authors mentioned the existence of customers who like crowds and customers who dislike crowds. Customers who are bothered by crowded stores yet do not avoid crowded stores, will go into crowded stores, and will deal with the crowds in order to save money might be tolerant customers. Customers who are not bothered by crowds should not be considered as tolerant to crowds even if they do not avoid crowded stores, will go into crowded stores, and will deal with the crowds in order to save money. The trait-based tolerance measure developed for this dissertation appears to be a more valid measure of tolerance than the Machleit, Eroglu, and Mantel (2000) or Eroglu, Machleit, and Barr (2005) versions of tolerance scales, but future research would be necessary for empirical comparisons.

With reasonable and partially-validated measures of customer tolerance, the current study examined the potential factors related to customer tolerance. The a priori hypotheses stated that customer tolerance is positively related to perceptions of service quality, psychological switching costs, and economic switching costs. Based on analytical results, there was clear support that current perceptions of service quality were positively related to customer tolerance,
customers who perceive higher service quality from their community pharmacy are more likely to exhibit action-based tolerance even when considering psychological and economic switching costs. Psychological switching costs, operationalized as commitment, were not related to action-based tolerance. The economic costs included in the study analyses were not all related to action-based tolerance as hypothesized. Distance to the nearest alternative pharmacy was the only economic cost that was related to action-based tolerance when also considering service quality and commitment. Distance to the nearest alternative pharmacy was positively related to action-based tolerance where a greater distance to the nearest pharmacy was related to greater action-based tolerance. Stated in the opposite, presence of a nearer alternative was related to less action-based tolerance. The remaining economic switching cost measures were not statistically significantly related to action-based tolerance and those economic costs included: duration of the customer’s relationship with the pharmacy, number of alternative pharmacies, perceived relative prices, and perceived relative quality.

While the relationship between trait-based tolerance and action-based tolerance was assumed and tested as a validity check, the relationship between trait-based tolerance and switching intentions was unknown but was hypothesized to be a positive relationship. The study’s analytical results provide support for the hypothesized negative relationship between trait-based tolerance and switching intentions. Lower trait-based tolerance was related to higher switching intentions and higher trait-based tolerance was related to lower switching intentions even after controlling for relationship marketing measures thought to be related to switching intentions, including: service quality evaluations, commitment, and impulsiveness.

Academicians with interests in person-to-organization relationships and maybe those
with interests in person-to-person relationships should take from this dissertation that the concept of customer tolerance exists and that the concept is measureable. Tolerance is a concept that likely influences the existence and sustainability of any relationship even though this dissertation merely examined the concept within the context of customers’ relationships with their community pharmacies. The measurements of tolerance developed for the study were also specific to community pharmacy. The measurements would need to be adapted and validated for use within a different context or new measures would need to be created and validated altogether.

Service providers, especially community pharmacy owners, operators and others should also take into account the existence of the concept of customer tolerance. They should be aware that customers will, at some point, be dissatisfied (low satisfaction) or upset for some reason. In the face of low satisfaction, some less tolerant customers will be more likely switch to another pharmacy than more tolerant customers. Community pharmacy owners and operators should probably also consider that the only customers’ perceptions of service quality and the distance to an alternative pharmacy were the important factors related to action-based tolerance where customers have high switching intentions in the presence of low satisfaction. According to these results, pharmacy owners and operators should be most concerned with their customers’ perceptions of service quality and with the location of alternative pharmacies with less concern about perceptions of price, perceptions of offerings, general perceptions of quality, and feelings of commitment that their customers’ might harbor. Based on the data and results for this study, the length of time a customer has patronized a pharmacy is not necessarily important in terms of that person’s tolerance. It is important to note that the duration of time a customer has
patronized the pharmacy was measured in linear months. An examination of newer customers versus customers with a lengthier patronage relationship, based on some threshold of time, might produce different results.

**Limitations**

With the use of consumer panels and online surveys to collect data for the pre-test scale-development and for the final study analyses, there is a potential for concerns with generalizability of the results. Consumer panels are typically more female and more white than the general U.S. population and the panels are typically over-represented by middle-income households as compared to the general U.S. population. The population of interest for the study results is actually the general U.S. pharmacy customer population, not the entire U.S. population. According to the sample of 34,401 pharmacy customers surveyed for Boehringer Ingelheim’s Pharmacy Satisfaction PULSE survey, pharmacy customers are more female and more white than the general U.S. population (Boehringer Ingelheim, 2013). The distribution of household incomes reported in the Pharmacy Satisfaction PULSE survey are also similar to the incomes reported in the current study sample. Given the similarities between the study sample used for this dissertation and the study sample used for the Pharmacy Satisfaction PULSE survey, the results reported in this dissertation should be considered generalizable to the respective population.

The crux of this study was the measurement customer tolerance. If the trait-based and action-based measurements truly represented trait tolerance and actual tolerance, respectively, then the results can be interpreted as described and the interpretations are very informative. If the measurements of tolerance developed for and analyzed within this study are not truly
representative of trait tolerance and actual tolerance, then the study results and interpretations could be misleading or even entirely incorrect. There is little reason to believe the measurements of tolerance were developed in error. The indirect, action-based tolerance measurement as a collection of satisfaction and switching intentions is intuitive given the action-based tolerance definition as “enduring hardship”. The direct, trait-based tolerance measurement was developed based on accepted methodology as described by Churchill (1979) and validated using data collected from two separate consumer panels at two different times.

Even though the measurements of tolerance should not be a concern when interpreting the results of the study, the nature of customers’ relationships with their community pharmacies could have resulted in anomalies that would not be found in all other marketing relationships or non-marketing relationships, making evaluations of the concept of tolerance more difficult in the context of community pharmacy. For one, customers tend to report high levels of satisfaction with their pharmacies on average. The average satisfaction score for the final study sample was 18 on a scale 3 through 21 and with 94.7% of the sample reporting satisfaction scores above 12, indicative of being at least somewhat satisfied. The lack of variability of satisfaction makes identifying tolerance more difficult, especially considering low satisfaction is necessary to identify hardship. The issue of high satisfaction with pharmacies was considered prior to the final survey data collection which drove the decision to utilize a service failure scenario where customers reported satisfaction a second time after imagining the service failure actually happened. The imaginary service failure scenarios resulted in lower satisfaction scores as intended. Other than the issues with satisfaction, including switching intentions as part of the measure of tolerance can also be problematic, because switching intentions are not equivalent to
actual switching. In reality, actual switching should be less likely than intended switching. Customers with low satisfaction may have high switching intentions, but may not actually switch. Based on the study, that type of customer would not have exhibited action-based tolerance based on the operational study definition of action-based tolerance, but in reality he/she would have exhibited action-based tolerance. The action-based tolerance measure used in the study likely underestimated the actual action-based tolerance.

The other lesson learned from this dissertation was related to study sample recruitment. Originally, the final survey sample was to be recruited via telephone contact using randomly-generated telephone numbers. A few weeks into the telephone recruitment method, it was obvious that the method was going to be too costly to continue, so the recruitment was stopped and the decision to move forward with recruitment by way of a consumer panel was made. During telephone recruitment, the greatest challenge encountered was making initial contact. Many of the randomly generated numbers were not active phone numbers and when active phone numbers were dialed, most failed to reach a live person. Based on the results presented in this dissertation and after discovering that the sample obtained by way of the Qualtrics® consumer panel was very similar to the Boehringer Ingelheim Pharmacy Satisfaction PULSE survey sample, use of a consumer panel for surveys of general community pharmacy customers might be the superior method of recruitment and should be considered for future studies. Other methods of recruitment may be necessary to reach samples of special populations.

Conclusions

This dissertation successfully introduced the concept customer tolerance in the retail, community pharmacy setting. Customer tolerance was conceptualized as the endurance of
hardship and the two types of tolerance were proposed; trait tolerance and action tolerance. Trait tolerance was conceptualized as a personality characteristic that indicates likelihood of actual, transactional tolerance behaviors. Action tolerance was conceptualized as the actual action of transactional tolerance where a customer suppresses reaction to hardship or endures the hardship if tolerant and reacts to the hardship if not tolerant. Action-based tolerance was further operationalized as low switching intentions in the presence of low satisfaction so that tolerance could be quantified and evaluated through statistical analyses. A measure for trait tolerance was successfully developed and partially validated for this dissertation. The measure of trait tolerance was related to action tolerance as expected and will be a useful tool for future studies of consumer behavior and relationship marketing. Evaluation of the possible factors related to customer tolerance with community pharmacy indicated that current evaluations of service quality at one’s pharmacy is an important factor that could predict actual, transactional tolerance to service failures in community pharmacy. A customer’s trait tolerance was also an important factor for transactional tolerance. Of the switching costs that were hypothesized as important factors for transactional tolerance, only distance to the nearest alternative was identified as an important factor. Duration of the customer’s relationship with their pharmacy, psychological commitment to the pharmacy, the number of known alternative pharmacies, perceived relative product offerings, perceived relative quality, and perceived relative prices were not important factors for transactional tolerance.
LIST OF REFERENCES


LIST OF APPENDICES
APPENDIX A: INTERVIEW GUIDE
Interview Guide – understanding tolerance to service failures

<___> denotes interviewer instructions

<turn on recording device>

<Identify subject by number, education level, residential density, ethnicity>

I want you to think about some of the services or stores you use most often.

<list>

<select 2 that are not pharmacy (pharmacy will be the 3rd)>

<Service #1>

What do you like about the service/store?

<probe for attributes if necessary>

Have you ever received poor service there or has a mistake been made?

Please describe the poor service (or mistake). <there will likely be multiple>

What are the reasons you continue to use the service/store?

<Repeat for Service #2>

<Repeat for pharmacy service>

When was the last time you switched to a new service/store? (choose type from the original list)

Was there a particular reason for the switch?

<probe for possible reasons if necessary>

When was the last time you switched to a new pharmacy?

<probe for possible reasons if necessary>

For what reason might someone else switch to a new pharmacy?

<ask for more reasons>

Thank you for your time. Your input will be very helpful.

<turn off recording device>
APPENDIX B: QUOTES FROM DEPTH INTERVIEWS
Selected quotes from depth interviews

I = Interviewer
R = Responder

Interview 1

I: So, you never went back to them. Is there a place you don’t like but you still go back to them?

R: Wal-Mart.

I: Okay. What bothers you about Wal-Mart? What makes you unhappy?

R: I think the checkout process is always painful. It’s not the shopping experience. I think I know what I’m looking for when I go to Wal-Mart, so I don’t just roam around the store trying to find a deal. I know if I’m going there to say buy dog food, then I just go to the dog food section. There’s always a big line. I may save some $0.60-1.00, but I’m going to spend 5 minutes that feel like 20 minutes.

I: How often would you say you use Wal-Mart?

R: maybe once a month.

I: What are some of the reasons you use Wal-Mart in those instances instead of Target or Walgreens or some other store?

R: I guess sometimes it depends on what my budget looks like and what I need to get. If I’m going to have to get a lot of dog food. Basically, I go to Wal-Mart to get dog food because I can get a larger sack for $5 less than at Target. So, if I can get other things without going to another store, then I’ll get them there. It’s just based on what I need to buy. For the most part, I will go to Target or SuperLo. If I really need to get something I can’t get at those 2 places, then yeah, I’ll go to Wal-Mart.

I: So, if Wal-Mart has product you can’t get at the others, you’ll go there, or if you know it’s
substantially cheaper, you’ll go there?

R: yes.

Interview 2

I: Are there any guitar or music shops you’ve been to that you don’t like?

R: Strings-n-Things of Memphis. And they’re closed as far as I know.

I: What was your experience like?

R: Strings-n-Things, they were very good at product selection and everything. Their downfall was the people that they hire. They hired a lot of musicians who could never realize that they’re not professional musicians yet. And so, they bring their preferences and egos and all that into work. And when I come to the store, it’s not about you salesperson, it’s about me. Okay. I’m a lawyer. I’ve got money to spend. You’re some dropout who’s trying to get his band a beer. And you know if they didn’t think much of your playing or of your perspective of music, then they could be a bit condescending and a bit rude and a bit short. And it rubbed a lot of people the wrong way. And the cumulative effect over the years is one of the things that led to their demise.

I: How many times do you think you went into String-n-Things?

R: Over the years probably 20 over a 5 year period.

I: How does that compare to how many times you’ve been to Guitar Center or to the local place?

R: I’d say probably triple for each one of them.

I: And when was the last time you went into Strings-n-Things?

R: They’re closed, I think. There’s a little one on Madison I think. So, probably 3 years ago.
I: Is there anything that was the final straw with them?
R: No, I just realized… yeah when Guitar Center opened. When Guitar Center opened and I had another choice.

I: Did you ever buy anything at Strings-n-Things?
R: yes. I think I bought an effects pedal, pedal board, and strings and picks. That type of thing.

I: You’ve bought things at Guitar Center?
R: yeah, I bought a guitar there.

**Interview 3**

I: How about any other service providers or stores – think about a mistake someone has made.
R: today. I made an appointment Friday for a leaky vent for my air conditioning system. I was trying to make an appointment for early in the morning so the guy wouldn’t get too hot. I was thinking if I called Friday morning and tried to schedule for Monday morning maybe he could come in the morning before it gets too hot since our system is in the attic. Well, I called and made the appointment. He was supposed to come between 11am-2pm. I asked the lady to let the technician know if he wanted to come as early as 8am, I’d be here because I knew it was going to be hot and I felt kind of bad and did I need to also double-check on Monday and she said, “oh no, no, he’ll call when he’s coming.” So, I sat here all day with my kids and nobody has come and I can’t get in touch with them on the phone. I’ve used them before and not had a problem. This is a crazy busy time, it’s Monday, people’s air conditioners are exploding or not working at all. Mine’s not like that but I’d still appreciate someone calling and saying, “hey can we come on Tuesday since yours isn’t an emergency?” and I would say, “fine”. But I don’t want to sit here
all day and wait for you when I can be taking these kids out and doing something.

I: So, if they don’t show up today, what are you going to do?

R: Unless I ever hear from them, probably won’t use them again even though they’ve been sufficient in the past, I wasn’t blown away by the work. I don’t really know anybody. I’d probably ask for recommendations from other people instead of trying them again. I think that’s inexcusable actually to not contact your customer at all. I understand that things come up, but don’t act like people have indisposposable time.

I: So, if they do show up today?

R: I’ll see what the problem was and let them know I wasn’t happy and I would have appreciated a call letting me know they weren’t going to make it. I would do that if it were me. I would do that for someone else. Always keep them in the know.

I: If they do show up today and get the job done, do you think you’ll use them next time?

R: I might try one more time and if it happened again, I might do it (switch).

AND

I: Do you remember the last time that you were upset enough to find someone else, that you did stop using a service or a store?

R: It does seem like something happened recently.

I: How about if you weren’t necessarily upset, but you just changed?

R: Oh, it was actually Midas. I always went to the Brookhaven Midas. I don’t prefer the big chain mechanics. But when we first moved here, I didn’t know where to go, I didn’t really know anybody to ask in the area. I used Midas for oil changes before and they were fine. So I went to the Brookhaven one and they were great. They were above and beyond what I expected. So I
kept going back there, then at some point about a year ago, I saw there was a Midas closer to us on Summer. I thought they would be good and I’d go there – not the same Midas. Apparently, they are not even affiliated, which I didn’t realize. I’d have my 2 kids in the waiting room. I’d go there first thing in the morning so I could get it done real fast. I would see them standing around talking and not working on my car. I’d be thinking, this isn’t the most fun thing in the world sitting here, with my 2 kids. At least don’t let me see you doing it. Stuff like that had happened. It didn’t seem like they had quite fixed what they had done. The last time was like a week and a half ago. I went to get the air conditioning in my car fixed because they had looked at it and fixed it, but the Freon had all leaked out within 3 weeks. They said, “your whole system needs to be replaced. It’s old, there’s cracks in the hoses, we have to order this kit.” Brad (husband) took the car in and asked, “do I get a copy of this?” They said, “No, we’re going to order this kit and call you in a few days.” Well, a few days rolled by and then it was a week. Then I called them. Nobody knew what I was talking about. They didn’t have record of the order or anything. And the guy said, “sorry, you’re going to have to bring it in again.” I took it up there with the 2 kids, early in the morning, and the guy was just making me wait and wait and wait. I thought they might expedite it since it was something I had been in for 2 times before. The least they could do is try to make it fast for me. So, I was in there for about an hour with 2 cranky kids, then the guy said, “it’s going to be about a half an hour before we can look at your car.” I couldn’t stay, I just left. It was that guy that was at the front desk (before) and had taken the order and acted like he didn’t know what was going on. That made me very upset. So, I went to the other Midas. It’s still Midas, but they are a whole different organization. They said the Freon wasn’t leaking… at all. So, I’m supposed to take it back in a couple of days and they
will put some dye on it or something. They said, “we’ll see if we find anything with that, but we
don’t see a leak.” That was pretty disappointing.

I: So, how many times did you go back to the Summer location?

R: I guess a total of 5 times.

I: Was there any reason that kept you going back?

R: It’s just closer. You know it’s just location.

I: And then eventually is was just…

R: That’s not enough to keep me going there. The one is just down on Popular.

I: Yeah, it’s just a pain, because of traffic…

R: Yeah the traffic, but they’re always fast and they always fix it. It’s done. I’ve taken it there
probably about 5 times.

I: So they fixed it? It’s working?

R: Well, I have to take it back in a couple of days to double check it.

I: But it is working.

R: They’ve even (over on Brookhaven) changed, before I went on a trip, they looked at my car,
changed the oil, gave me a discount on the oil change, topped off all my fluids, checked the
whole car over, and only charged me for the oil change. And that at a discount that I didn’t even
have a discount for. They said, “we have a discount going right now.” So, that was pretty cool.

I: So, if you found some place closer you thought might be good, would you try them out?

R: Ha, probably, but I am very skeptical. If someone I know were to say there’s this guy close
who does great work, or they’re cheap and upstanding, I might try it out. It depends on what was
going on. I guess I’m semi-loyal.
Interview 4

I: I guess I’ll ask you about your phone service. What are some things you like about your phone service, about AT&T?

R: For AT&T. I guess I don’t like them at all. I’ve got them for home and I don’t like them at all.

I: About your AT&T home service, you said you cancelled it or you’re going to cancel it?

R: If we can figure it out, you know you use your number for so much. We have to figure out whose cell number gets it. But yeah

I: About how long have you not liked it?

R: probably the last 5 to 6 years have been awful. We actually had to turn our long distance off with them because they were idiots

I: What do you mean they were idiots?

R: Sorry it’s probably not the right thing to say.

I: No, it’s the right thing to say, I’m just curious about it. I might agree with you.

R: Well, they would charge long-distance charges and we could clearly identify and I realize I had teenagers at home and what do they really do, but I didn’t know anybody in Utah and the number would be some business that wasn’t. You know, you think about it with teenagers, but it would be some off the wall store that we never heard of and they wouldn’t take it off the bill. Finally, we had to say, “you know what, we don’t want long-distance service, turn it off.”

I: How long did you go, or when did you turn off the long-distance service?

R: It was probably about 5 years ago.
I: So they started pissing you off about 5 years ago, then you turned it off, the long-distance pretty quickly.

R: Well it took us about a year. We were wondering what’s going on. We kept fighting it and fighting it, then it got to be who cares, let’s just turn it off. We can call long-distance on our cell phones – probably cheaper.

I: So, what point did you get cell phones?

R: We’ve had our cell phones since ’96 or ’97.

I: So you had cell phones already.

R: Yeah we went from Suncom to AT&T to whatever the other one was to back to AT&T

I: uh, Cingular

R: Yeah Cingular

I: So, you put up it for about a year, then you realized not anymore, but you stayed with the home phone. Do you know some of the reasons you were staying with the home phone for the last 5 years.

R: We had the whole conversation. We’ve taken about 3 years to get to the conversation of It has to go away. Now it’s more of an issue of who gets the number. How do you decide who gets it. The doctor’s office is easy. It’s whoever’s number. But then you get to the bills. Do you want his on it, do you want mine on it? So that’s the trouble.

AND

I: Now I want you to think about the last time you changed to a new service provider or a store from someone previous.

R: I changed to a new hair stylist.
I: That’s good, that’s perfect. When was that?

R: About 12 months ago

I: Okay, that’s pretty recent. And how long were you with the previous hair stylist?

R: About 3 years

I: What kind of made you decide to change?

R: Hair stylists are a little flaky and especially the really good ones. If they’re really good they’re a bit out-there. She kept disappearing on me and changing shops. I’d call and make an appointment and they would say she’s left but she didn’t call me. I’d have to have someone else do my hair that time and then she’d call me and I would have to find that shop. And the last time, she just disappeared off the face of the Earth and nobody knew where she went, so I had to find somebody.

I: If you could have found her, would you have stayed with her?

R: After that time, I don’t think so. I was almost kind of glad. I followed her all around the city. Of course I found somebody really good. If it had been a bad experience, I might have tried to…

I: If the new one had been a bad experience? If so, would you have tried to seek her out again or would you try to find another place?

R: I probably would have looked for her for a little bit because it’s hard to find someone who can do my hair right.

Interview 5

I: Do you know of any other cell phone companies?

R: I’ve been with so many – Verizon, AT&T, Sprint. Verizon, they’re just expensive and their
quality is not that good to be at such a high rate. It’s not worth the money.

I: How long were you with them?

R: I was with Verizon for 2 years. As soon as I turned 18, I bought my first cell phone and it was with Verizon. I kept them the whole 2 years, but there were so many problems and disputes because they charge for everything. Literally, if you go over 1 minute, they charge you $1.25. Not only that, but data. If you accidently touch the button for the internet, they charge you even if it wasn’t on purpose. So, it wasn’t worth it. And then, the minutes they gave you didn’t seem to last long. And they didn’t give you a call log. You didn’t see all the calls that had been placed so sometimes the charges you were always questioning. You ask, why did I get this charge and they couldn’t tell you.

I: So, why did you stay with them for 2 years?

R: I was under contract and I couldn’t afford to break it. The termination fee was too high and I didn’t want to risk losing my number and missing out on an interview or whatever may come, so I just stayed for the whole 2 years.

**Interview 6**

R: Well I had service with Sprint and now I’m with AT&T.

I: For your cell phone service?

R: Yes. That was a long time ago and the reason I changed… the service was good and all, but the variety of cell phones was better at AT&T. And I was trying to buy my own phone and use the SIM card, but Sprint doesn’t use a SIM card. So AT&T had the option of getting your own cell phone and setting it up. So that was the main reason.
I: So you were happy with Sprint actually?

R: Yes, it wasn’t that. I just wanted to see. The phones that I liked, they didn’t have over there, but they had at AT&T.

I: And you said you are mostly happy with AT&T?

R: Yes. I mean right now they have a lot of problems because the iphone just came out, sometimes I see the service is not that good, but I know in Memphis they had a problem with 3G towers last week and it was down for a couple of days.

I: Does that make you think that you might try a different cell phone service next time?

R: Well actually my contract is about to end and I was trying to get the new iphone with them. Now, I see these problems and I don’t know. I’m still searching, see.

I: I see, you’re doing some research now.

R: I’m doing some research to see if I can get the iphone with another company or something like that.

I: so, you want iphone?

R: Yes, that’s what I’m looking for.

I: So, if they’re the only company with the iphone, will you stay with AT&T?

R: Yeah, probably. I’m not thinking about changing for now, but I know they might have a contract with Verizon.

I: If Verizon gets the iphone, you might?

R: Yeah actually I might. I’m thinking about it because I would think that a lot people stayed with AT&T because they had the iphone and they want the new one so they’re probably going to. I don’t see how AT&T can handle all these customers. I’m reading a lot of news about it and
I’m not happy with it.

I: So, how do you think Verizon would compare to AT&T as far as service, price, customer service?

R: Some of my friends had it and they really didn’t have a problem with it. Is it Verizon that did the Blackberry? My friend had the Blackberry and didn’t have a problem with it, but I haven’t experienced it yet so I really don’t know, but I’d say if they’re going to get a contract, they’re probably going to be smart and do something over AT&T, so I can be smart and take advantage of that as a customer.

**Interview 7**

I: Did you ever consider, after the time you were left in the room and really upset, did you consider changing doctors at all or were you definitely going to stay with him?

R: I was definitely staying with him

She turned around and left me sitting in the room and didn’t even bother to show me to the door. You talk about stress and mad. That made me mad. I got to the door and before you get to the outside door, you have to go through a magnetic door or something where you have to hit a button. I never had to do that because they always escort you through that. I thought, if there’s any way could pull the door off the hinges it was coming off. I shook that door. I was there myself. Janie had gone shopping. It was right before Christmas. That just totally wore me out. I didn’t say nothin’ about it. I went ahead through with the Social Security interview. They said you’ve got to be off work for at least 6 months. They asked if I’d been off any. I said no. I said, “Are you going to guarantee me that I get my back pay?” They said no. I said, “well forget it,
I’ll just work til I die.” So, a year later, I went back to the doctor because there was a little question about high blood pressure. She escorted me back there and I told him, “I can tell you what’s wrong with my blood pressure. I don’t have a blood pressure problem. That nurse that escorted me in here, that’s my problem, that’s my blood pressure problem.”

**Interview 8**

I: I wasn’t all that happy with Service Merchandise, but the joke is I closed it since it’s no longer around.

R: So, when Service Merchandise was open, you weren’t happy with it?

I: Well the problem is they would, you know at that time, you would pick an item, then they would go to their warehouse and get it, but they wouldn’t have it.

R: okay. Did this happen more than once?

I: Yes. Or they would advertise items and you would go and they wouldn’t have them. I told them, “You’re going to close.” And they did.

R: Yes they did.

I: So what are some of the reasons you might have kept going to Service Merchandise instead of moving your business?

R: Because they had all items that other businesses didn’t have. They had a better selection of lawn furniture and things like that. You know, household items.

I: I want to go back, you were talking about the Service Merchandise issues. At what time did you stop using Service Merchandise? Was it when they closed literally or did you stop before?

R: It was so long ago, I can’t remember. I was just so upset about the service I’d gotten. Oh I would go back. They had great stuff.
I: So if Service Merchandise were to open back up, you might run the risk of them not having something, but…

R: I’d still take a chance. They had quality.
**Interview 9**

R: In Memphis, I’ve had pretty good experiences. I don’t love this Kroger particularly. I like the Kroger that’s farther east.

I: Over by Mendenhall? No that’s a Schnucks

R: There’s one over by Sanderlin.

I: Oh yeah

R: They both irritate me a little

I: What are some of the things that irritate you?

R: In both cases and they’re both very different ethnic/racial bases but well I don’t want to say that.

I: You can say whatever, you are not going to offend me.

R: I’m not prejudice, but in the Kroger here, there are a lot of mothers yelling at children.

I: So, some of the environment and other customers even?

R: Yes. It has more to do with social class than anything. At the Kroger farther up, I’m Jewish so I can say this, there are a lot of Jewish products there.

I: Oh sure, you can see it in all of the grocery stores around there.

R: And it’s fairly clique-y; The grocery store shoppers. But that’s a stereotype.

I: It has nothing to do with the stores though.

R: Well I think they carry somewhat different, because they have a different clientele. For example, they’re not going to carry pork rinds.

I: So does it bother you what they’re carrying or the environment it creates?

R: both. Here, you see mothers slapping their children and you don’t see that in the east Kroger.
There you see a sense of entitlement.

I: Do you think you would find a different environment at a different grocery store?

R: Yeah probably.

I: What are some of the reasons you keep going back to Kroger?

R: Because the prices are better

I: price. What about selection?

R: Yes, for what I need the selection is good.

I: Is Kroger the closest grocery store to where you live or work?

R: This Kroger is the closest.

I: This one is the closest? And you said you shop Whole Foods and Fresh Market. What are some of the reasons you shop at Whole Foods and Fresh Market?

R: I like their muffins and their fish department is really good. In Fresh Market, I think they’re overpriced, but I like their chicken salad and their fruit cups if they’re not overpriced, just a few things.

I: So there’s certain things that bring you in? I’m guessing you’d never consider moving your primary grocery shopping there.

R: Oh no, it’s too expensive.
Interview 10

Interviewee 10 did not allow recording of the interview.

- Kroger
  - Doesn’t like Kroger, yet still shops there
  - Location drives the respondent’s decision to use Kroger
  - Parking is good
  - Price guarantee = product is free if the marked price is incorrect at the POS register
    - Schnucks and Whole Foods have problems with incorrect pricing, but do not have a price guarantee according to the responder
APPENDIX C: SCALE REFINEMENT SURVEY
The following survey asks a series of questions about your experiences with your pharmacy. The survey should take about 10 minutes to complete and the information you provide is anonymous. Some of the questions might seem repetitive, but they are not, so please respond to each question as best you can. This study has been approved by The University of Mississippi's Institutional Review Board (IRB) and it has been determined that this study provides appropriate human subject protections as required by state law, federal law, and University policies. Your participation in this study is voluntary. If you have any questions, concerns, or reports regarding your rights as a research participant, please contact the University of Mississippi IRB at 662.915.7482. By clicking the button to continue you agree to participate in this research project.

Please enter your 5 digit zip code

In what year were you born?
☑ 2010
☑ ...
☑ 1911

Your gender
☑ Male
☑ Female

Which of the following best describes your ethnicity?
☑ white/caucasian
☑ black/african american
☑ hispanic/latino
☑ native american
☑ asian
☑ pacific islander
☑ other

What was your estimated household income for 2010 (in whole dollars)?
For each of the following 12 words/phrases, think about how each word describes you.

**Impulsive**
- Usually would describe me
- Seldom would describe me

**Careless**
- Usually would describe me
- Seldom would describe me

**Self-controlled**
- Usually would describe me
- Seldom would describe me

**Extravagant**
- Usually would describe me
- Seldom would describe me
Farsighted (looks to the future)
- Usually would describe me
- Seldom would describe me

Responsible
- Usually would describe me
- Seldom would describe me

Restrained
- Usually would describe me
- Seldom would describe me

Easily tempted
- Usually would describe me
- Seldom would describe me
Rational
○ Usually would describe me
○
○
○
○
○
○
○ Seldom would describe me

Methodical
○ Usually would describe me
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○
○ Seldom would describe me

Enjoy spending money
○ Usually would describe me
○
○
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○
○ Seldom would describe me

A planner
○ Usually would describe me
○
○
○
○
○
○
○ Seldom would describe me
For the remainder of the survey, please think about your pharmacy or store where your pharmacy is located. Some of the questions might seem repetitive, but they are each important, so please answer to the best of your ability. Thank you.

Your primary pharmacy (or store where your pharmacy is located) would best be described as which of the following?

- national chain
- local chain
- local, independently owned
- part of a chain grocery store
- part of a local, independently owned grocery
- part of a large, mass-merchandise store
- other

Over the past 12 months, how many times have you purchased a PRESCRIPTION MEDICATION at your pharmacy?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15+

122
Over the past 12 months, about how many times have you made a purchase of ANY TYPE at your pharmacy?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30+
Over the past 30 days, about how many times have you mad a purchase of ANY TYPE at your pharmacy?
☐ 0
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10
☐ 11
☐ 12
☐ 13
☐ 14
☐ 15+

How likely are you to make a purchase of ANY TYPE at your pharmacy in the next 30 days?
☐ Very Unlikely
☐ Unlikely
☐ Somewhat Unlikely
☐ Undecided
☐ Somewhat Likely
☐ Likely
☐ Very Likely

How likely are you to make a purchase of ANY TYPE at your pharmacy in the next 12 months?
☐ Very Unlikely
☐ Unlikely
☐ Somewhat Unlikely
☐ Undecided
☐ Somewhat Likely
☐ Likely
☐ Very Likely
How likely are you to transfer your business to another pharmacy in the next 30 days?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

How likely are you to transfer your business to another pharmacy in the next 12 months?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely
I feel that my pharmacy is...
○ Very Undependable
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I feel that my pharmacy is...
○ Very Dependable

I feel that my pharmacy is...
○ Very Incompetent
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I feel that my pharmacy is...
○ Very Competent
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I feel that my pharmacy is...
○ Of Very Low Integrity
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I feel that my pharmacy is...
○ Of Very High Integrity
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I feel that my pharmacy is...
○ Very Unresponsive to Customers
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I feel that my pharmacy is...
○ Very Responsive to Customers
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126
Mistakes occur in any pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

When I am unhappy with the service at my pharmacy, I react
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I am willing to deal with inconvenience at my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I don't accept poor service at my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I get mad if my prescription drug order is late
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree
Poor service at my pharmacy is understandable
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I can't accept any mistakes at my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I would have to be really upset to leave my pharmacy and go to another pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I expect poor service at my pharmacy every once in a while
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I understand that mistakes occur at pharmacies
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others) about it
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree
I get mad if my prescription drug order is late repeatedly
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

The service at my pharmacy can't be good every time
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

If I'm not happy with a pharmacy, I don't use it anymore
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I understand that problems occur at pharmacies
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

When there is a problem at my pharmacy, I am quick to complain to staff or management
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I feel that I put up with poor pharmacy service better than most people
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree
I don't give my business to a pharmacy that doesn't deserve it
☐ Strongly Disagree
☐ Disagree
☐ Neither Agree nor Disagree
☐ Agree
☐ Strongly Agree

I can put up with some problems at my pharmacy
☐ Strongly Disagree
☐ Disagree
☐ Neither Agree nor Disagree
☐ Agree
☐ Strongly Agree
Please continue to think about your pharmacy or store where your pharmacy is located when answering the following:

Even if it were to my advantage, I do not feel it would be right to leave my pharmacy for another pharmacy right now

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

My pharmacy deserves my loyalty

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I would feel guilty if I left my pharmacy right now

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I would not leave my pharmacy for another pharmacy because I have a sense of obligation

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I do not feel emotionally attached to my pharmacy

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
I do not feel like part of the family with my pharmacy
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I do not feel a sense of belonging with my pharmacy
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

It would be difficult for me to leave my pharmacy for another pharmacy right now, even if I wanted to
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Too much of my life would be disrupted if I left my pharmacy for another pharmacy right now
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I feel that I have too few options of other pharmacies to leave my pharmacy
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

At my pharmacy, the services that I've received are just about perfect
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
There are things about the services I receive at my pharmacy that could be better

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I have some complaints about the services I receive at my pharmacy

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
For the next 3 word choices, think only about the most recent experience at your pharmacy

How was your last shopping experience at your pharmacy?
☐ Very Unsatisfactory
☐
☐
☐
☐
☐
☐
☐ Very Satisfactory

How was your last shopping experience at your pharmacy?
☐ Terrible
☐
☐
☐
☐
☐
☐ Delightful

How was your last shopping experience at your pharmacy?
☐ Very Unpleasant
☐
☐
☐
☐
☐
☐ Very Pleasant
Now, imagine that you need to purchase a prescription medication next week. You submit the prescription to your pharmacy and you are informed it will be ready at a certain day and time. You go to the pharmacy when the prescription is ready and after waiting behind two other customers, it is your turn. You are then informed that your prescription is not ready. When you ask why, the pharmacy person answers, "we have been very busy". After you plead your case, the pharmacy person tells you, "we can have it ready in 30 minutes", then turns around and goes back to work hurriedly, leaving you no opportunity but to wait or come back later.

After that encounter, how likely are you to make a purchase of ANY TYPE at your pharmacy in the next 30 days?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

After that encounter, how likely are you to make a purchase of ANY TYPE at your pharmacy in the next 12 months?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

After that encounter, how likely are you to transfer your business to another pharmacy in the next 30 days?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

After that encounter, how likely are you to transfer your business to another pharmacy in the next 12 months?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely
Thank you. You must click the >> button to complete the survey and receive your incentive.
APPENDIX D: FINAL SURVEY
Shopping at your pharmacy

The following survey asks a series of questions about your experiences with your pharmacy. The survey should take about 10 minutes to complete and the information you provide is anonymous. Please answer each question as best you can. This study has been approved by The University of Mississippi’s Institutional Review Board (IRB) and it has been determined that this study provides appropriate human subject protections as required by state law, federal law, and University policies. Your participation in this study is voluntary. If you have any questions, concerns, or reports regarding your rights as a research participant, please contact the University of Mississippi IRB at 662.915.7482. By clicking the Next Page button to continue you agree to participate in this research project.

Are you 18 years of age or older?
- Yes
- No
*Those who answer “No” should be excluded

Think about the pharmacy you go to when you need to purchase a prescription medication. Within the last 6 months, have you made a purchase of any kind at this pharmacy or store where this pharmacy is located?
- Yes
- No
- I only use mail order for prescription medications
*Those who answer “No” or “I only use mail order for prescription medications” should be excluded

Please enter your 5 digit zip code

In what year were you born?
- 2010
- …
- 1911

Your gender
- Male
- Female

Which of the following best describes your ethnicity?
- white/caucasian
- black/african american
- hispanic/latino
- native american
- asian
- pacific islander
- other

What was your estimated household income for 2010 (in whole dollars)?
For each of the following 12 words/phrases, think about how each word describes you.

**Impulsive**
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me

**Careless**
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me

**Self-controlled**
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me

**Extravagant**
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me
Farsighted (looks to the future)
- Usually would describe

- Seldom would describe me

Responsible
- Usually would describe

- Seldom would describe me

Restrainted
- Usually would describe

- Seldom would describe me

Easily tempted
- Usually would describe

- Seldom would describe me
Rational
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me

Methodical
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me

Enjoy spending
○ Usually would describe
○
○
○
○
○
○
○ Seldom would describe me

A planner
○ Usually would describe
○
○
○
○
○
○ Seldom would describe me
Now, record your level of disagreement or agreement with each of the following 10 statements.

On the whole, I am satisfied with myself
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree

At times I think I am no good at all.
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree

I feel that I have a number of good qualities.
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree

I am able to do things as well as most other people.
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree

I feel I do not have much to be proud of.
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree

I certainly feel useless at times.
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree

I feel that I'm a person of worth, at least on an equal plane with others.
○ Strongly Disagree
○ Disagree
○ Agree
○ Strongly Agree
I wish I could have more respect for myself.
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

All in all, I am inclined to feel that I am a failure.
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

I take a positive attitude toward myself.
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree
For the remainder of the survey, please think about your pharmacy or the store where your pharmacy is located. Some of the questions might seem repetitive, but they are each important, so please answer to the best of your ability. Thank you.

Your primary pharmacy (or store where your pharmacy is located) would best be described as which of the following?
- national chain
- local chain
- local, independently owned
- part of a chain grocery store
- part of a local, independently owned grocery
- part of a large, mass-merchandise store
- other

Over the past 12 months, how many times have you purchased a PRESCRIPTION MEDICATION at your pharmacy?
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15+

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Over the past 12 months, about how many times have you made a purchase of ANY TYPE at your pharmacy?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30+
Over the past 30 days, about how many times have you made a purchase of ANY TYPE at your pharmacy?

- [ ] 0
- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6
- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10
- [ ] 11
- [ ] 12
- [ ] 13
- [ ] 14
- [ ] 15+

About how long have you been a customer at your current pharmacy?

- [ ] years
- [ ] months

To your knowledge, how many other pharmacies are located near your current pharmacy?

- [ ] 0
- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6
- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10+
To your knowledge, how many other pharmacies are located near your place of residence?
○ 0
○ 1
○ 2
○ 3
○ 4
○ 5
○ 6
○ 7
○ 8
○ 9
○ 10+

To your knowledge, how many other pharmacies are located near your workplace?
○ I don't have a workplace
○ 0
○ 1
○ 2
○ 3
○ 4
○ 5
○ 6
○ 7
○ 8
○ 9
○ 10+

How close to your pharmacy is the nearest competitor pharmacy?
○ in sight
○ < 0.25 mile
○ 0.25 to 0.5 mile
○ 0.51 to 1 mile
○ 1.1 to 2 miles
○ 2 to 5 miles
○ 5 to 10 miles
○ 10 to 15 miles
○ 15 to 20 miles
○ 20+ miles
How would you rate the number of product offerings at your pharmacy compared to others?
○ Much fewer products at my pharmacy
○
○
○
○
○
○ Many more products at my pharmacy

How would you compare the prices at your pharmacy compared to others?
○ Much lower prices at my pharmacy
○
○
○
○
○
○ Much higher prices at my pharmacy

How would you compare the overall quality of your pharmacy compared to others?
○ Much lower quality
○
○
○
○
○
○ Much higher quality

How likely are you to make a purchase of ANY TYPE at your pharmacy in the next 30 days?
○ Very Unlikely
○ Unlikely
○ Somewhat Unlikely
○ Undecided
○ Somewhat Likely
○ Likely
○ Very Likely
How likely are you to make a purchase of ANY TYPE at your pharmacy in the next 12 months?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

How likely are you to transfer your business to another pharmacy in the next 30 days?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

How likely are you to transfer your business to another pharmacy in the next 12 months?
- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely
My pharmacy has up-to-date equipment
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

My pharmacy's physical facilities are visually appealing
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

My pharmacy's employees are well dressed and appear neat
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

The appearance of the physical facilities of my pharmacy is in keeping with the type of services provided
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree
When my pharmacy promises to do something by a certain time, it does
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

When you have problems, my pharmacy is sympathetic and reassuring
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

My pharmacy has up-to-date equipment
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

My pharmacy is dependable
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree
My pharmacy provides services at the time it promises to do so
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

My pharmacy keeps its records accurately
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

My pharmacy does not tell customers exactly when services will be performed
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree

You do not receive prompt service from my pharmacy's employees
○ Strongly Disagree
○ Disagree
○ Somewhat Disagree
○ Neither Agree nor Disagree
○ Somewhat Agree
○ Agree
○ Strongly Agree
Employees of my pharmacy are not always willing to help customers
  ○ Strongly Disagree
  ○ Disagree
  ○ Somewhat Disagree
  ○ Neither Agree nor Disagree
  ○ Somewhat Agree
  ○ Agree
  ○ Strongly Agree

Employees of my pharmacy are too busy to respond to customers’ requests promptly
  ○ Strongly Disagree
  ○ Disagree
  ○ Somewhat Disagree
  ○ Neither Agree nor Disagree
  ○ Somewhat Agree
  ○ Agree
  ○ Strongly Agree

You can trust employees of my pharmacy
  ○ Strongly Disagree
  ○ Disagree
  ○ Somewhat Disagree
  ○ Neither Agree nor Disagree
  ○ Somewhat Agree
  ○ Agree
  ○ Strongly Agree

You feel safe in your transactions with my pharmacy's employees
  ○ Strongly Disagree
  ○ Disagree
  ○ Somewhat Disagree
  ○ Neither Agree nor Disagree
  ○ Somewhat Agree
  ○ Agree
  ○ Strongly Agree
Employees of my pharmacy are polite
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

Employees get adequate support from my pharmacy to do their jobs well
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

My pharmacy does not give you individual attention
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

Employees of my pharmacy do not give you individual attention
- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree
Employees of my pharmacy do not know your needs
☑️ Strongly Disagree
☑️ Disagree
☑️ Somewhat Disagree
☑️ Neither Agree nor Disagree
☑️ Somewhat Agree
☑️ Agree
☑️ Strongly Agree

My pharmacy does not have your best interests at heart
☑️ Strongly Disagree
☑️ Disagree
☑️ Somewhat Disagree
☑️ Neither Agree nor Disagree
☑️ Somewhat Agree
☑️ Agree
☑️ Strongly Agree

My pharmacy does not have operating hours convenient to all their customers
☑️ Strongly Disagree
☑️ Disagree
☑️ Somewhat Disagree
☑️ Neither Agree nor Disagree
☑️ Somewhat Agree
☑️ Agree
☑️ Strongly Agree
I feel that my pharmacy is...
○ Very Undependable

I feel that my pharmacy is...
○ Very Incompetent

I feel that my pharmacy is...
○ Very Competent

I feel that my pharmacy is...
○ Of Very Low Integrity

I feel that my pharmacy is...
○ Very Unresponsive to Customers

I feel that my pharmacy is...
○ Very Responsive to Customers
I get mad if my prescription drug order is late

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I get mad if my prescription drug order is late repeatedly

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

When there is a problem at my pharmacy, I am quick to start looking for a different pharmacy

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

When there is a mistake at my pharmacy, I am quick to tell my peers (family, friends, or others) about it

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
Please continue to think about your pharmacy or store where your pharmacy is located when answering the following

Even if it were to my advantage, I do not feel it would be right to leave my pharmacy for another pharmacy right now

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

My pharmacy deserves my loyalty

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I would feel guilty if I left my pharmacy right now

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I would not leave my pharmacy for another pharmacy because I have a sense of obligation

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I do not feel emotionally attached to my pharmacy

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
I do not feel like part of the family with my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I do not feel a sense of belonging with my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

It would be difficult for me to leave my pharmacy for another pharmacy right now, even if I wanted to
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

Too much of my life would be disrupted if I left my pharmacy for another pharmacy right now
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I feel that I have too few options of other pharmacies to leave my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

At my pharmacy, the services that I've received are just about perfect
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree
There are things about the services I receive at my pharmacy that could be better
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree

I have some complaints about the services I receive at my pharmacy
○ Strongly Disagree
○ Disagree
○ Neither Agree nor Disagree
○ Agree
○ Strongly Agree
For the next 3 word choices, think only about the most recent experience at your pharmacy

How was your last shopping experience at your pharmacy?

- Very Unsatisfactory

How was your last shopping experience at your pharmacy?

- Terrible

How was your last shopping experience at your pharmacy?

- Very Unpleasant

How was your last shopping experience at your pharmacy?

- Very Satisfactory

How was your last shopping experience at your pharmacy?

- Delightful

How was your last shopping experience at your pharmacy?

- Very Pleasant
Now, imagine that you need to purchase a prescription medication this week. You submit the prescription to the pharmacy to have it filled. Later, you go to the pharmacy, pay for the prescription and return home. Upon arriving home, you take your medication out of the bag and review the directions for taking it. You look at the medication and realize the number of pills does not match the directions on the label. The number of pills in your bottle is less than what was prescribed. You call the pharmacy and ask for the pharmacist. The pharmacist speaks to you over the phone and apologizes for the inconvenience. The pharmacist instructs you to return to the pharmacy so the mistake can be corrected, which requires you to return to the store.

Now, imagine that you need to purchase a prescription medication this week. You submit the prescription to the pharmacy to have it filled. Later, you go to the pharmacy, pay for the prescription and return home. Upon arriving home, you take your medication out of the bag and review the directions for taking it. You look at the medication and realize it looks like the wrong drug because it does not match the picture on the attached pamphlet and it looks different than the medication you had last time.

How would you describe that shopping experience at your pharmacy?
○ Very Unsatisfactory
○
○
○
○
○
○
○ Very Satisfactory

How would you describe that shopping experience at your pharmacy?
○ Terrible
○
○
○
○
○
○ Delightful

How would you describe that shopping experience at your pharmacy?
○ Very Unpleasant
○
○
○
○
○
○ Very Pleasant
After that encounter, how likely are you to make a purchase of ANY TYPE at your pharmacy in the next 30 days?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

After that encounter, how likely are you to make a purchase of ANY TYPE at your pharmacy in the next 12 months?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

After that encounter, how likely are you to transfer your business to another pharmacy in the next 30 days?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

After that encounter, how likely are you to transfer your business to another pharmacy in the next 12 months?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

Thank you for your contributions and time.
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   Overview of health professionals, Intro to the Health Care System
   Long-term Care, Intro to the Health Care System
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   The Drug Development Process, Pharmacy Law
   Fidelity in Pharmacy, Ethics for Pharmacy
   The Pharmaceutical Industry: Drug Delivery and Ethical Considerations, Ethics for Pharmacy

Invited Lectures, Sullivan University College of Pharmacy
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PUBLICATIONS and PRESENTATIONS


