Walden University

School of Health and Human Services

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2015

Abstract

Direct-To-Consumer Advertisements and Medical Services Utilization Among Adult Dermatology Patients in the United States

by

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Sciences

Walden University

February 2016

Abstract

Pharmaceutical product claim and help-seeking advertisements have prompted the types and purposes of medical dermatology service(s) that patients have used in the United States. Indeed, researchers have demonstrated that 94% of working nurse practitioners affirmed receiving from their patients a request for a cancer drug advertised. However, adult dermatology patients members of Saint Nicholas Catholic Church or/and patients at MedStar Clinic in Houston, Texas, have not been of interest for any study so far. The purpose of this quantitative study was to assess the relationship between product claim, help-seeking, types, and purposes of medical dermatology services used amongst males and females aged at least18 years. Prospect theory (PT) was the theoretical framework used to analyze the purpose of this study. A cross-sectional survey approach permitted to collect primary data from 120 participants who were members of Saint Nicholas Catholic Church or/and patients at MedStar Clinic. The results, based on a forced entry multiple regression analysis at 95% confidence interval, indicated that product claim and help-seeking significantly explained ($p \leq .05$) the variances of certain types and purposes of medical dermatology services used. Thus, product claim and help-seeking predicted the types and purposes of medical services used by the study population. Pharmaceutical announcers may benefit from the results of this study by using the study results to create new direct-to-consumers advertisements for the dermatology health promotion. The study population may benefit healthy skin, hairs, and nails by using medical dermatology services after exposure to the new pharmaceutical direct-to-consumer advertisements.

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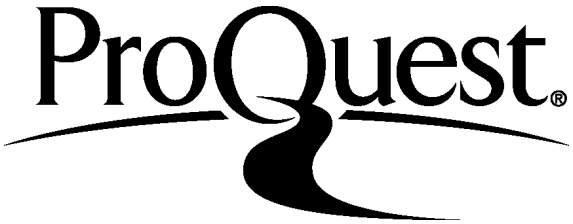

Dedication

I dedicate this achievement to the following people:

To my daughter, mademoiselle Aaliyah Chris Zouetchou, for her constant presence, love, wisdom, and the sharp interest in education through her dedication to her current Preschool program.

To my father, Tagni Joseph Ngandji, the Ngandji's family teacher, and role model of the academic perseverance.

To my mother, Magni Marie Yanou Ngandji, for the values of rigor, Catholic faith, education, honesty, discipline, and leadership conveyed, with her loving husband, to us, their loving 10 children. Those values have been so critical to my success in the past and in this Ph.D. journey.

To my late spiritual father, Fr David Kamani, lovingly known as Père Roi, who joined the holy kingdom of God on November 1st, 2011 in Cameroon. His multiple supports and prayers, since my childhood, prepared me to access today to this terminal level of education.

To my adopted daughter Lysa Celeste Nkemgna Nganji who just honored the family by completing her Bachelor Degree successfully in Biochemistry in Cameroon.

Finally, to my younger sister, Inés-Aimée Feuba Ngondji, who honored the family with her graduation from her program of Bachelor of Sciences of Nursing in Cameroon on September 30th, 2015.

Acknowledgments

My gratitude goes to my dissertation committee members. Dr. Mountasser Kadrie, committee chair, demonstrated long patience, guidance, and constant scrutiny of the drafts and finals of this dissertation. Dr. Raj Singh, the methodology expert, showed constant methodology scrutiny. The University Research Reviewer, Dr. Scott McDoniel, kept this work in alignment with Walden University academic standards.

I would like to thank the two community partners. I am thankful to the Saint Nicholas Church of Houston, Texas, through the reverend (Rv.) father (Fr.) Desmond Ohankwere and Rev. Fr. Gorge Okeahiahalan who were pastors at that parish. My sincere gratitude goes to the second community partner, the MedStar Primary Care Clinic, through doctor (Dr.) Rachel Kientcha-Tita. As the medical director of the Clinic, Dr. Rachel approved the use of the clinic as the study site. She provided pieces of advice and words of encouragement during the data collection.

I do acknowledge Mimi Brooks and MD Anderson of Houston, Texas' support.

I do acknowledge my 10 siblings' constant supports and encouragements, mostly the eldest son, Raymond Kouetchou. Raymond has been there for years supporting our academic progress or education.

I extend my gratitude to my wife, Stephanie Bangoup Zouetchou, for her proper way of support and love in this journey, since she joined me in the United States in 2010.

Many friends, peers at Walden University, and Fr. Martial Oya, pastor at Saint Matthews the Evangelist Catholic Church in Houston, Texas; constantly have been close and helpful to me during this academic journey.

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Chapter 1: Introduction to the Study

Introduction

This section addresses the concepts of Direct-To-Consumer Advertisements (DTCAs) and the utilization (use) of medical services as the variables of the study.

Analysis of the Concept of DTCA

The pharmaceutical DTCAs are device, drug, and disease information that pharmaceutical companies and distributors convey directly to consumers, without any health professional mediation. The DTCAs are marketing or promotion efforts in the United States of America. According to the United States Food and Drug Administration (FDA) (2012c), doctors and pharmacists were the information link between drug manufacturers and consumers until 1980. Indeed, they received drug information from the manufacturers, and if convenient, passed the information over to the consumers. However, in the mid-1980s, a sudden change occurred: Some manufacturers started passing the drug related information via advertising directly to consumers without any health professional intervention (FDA, 2012c). That was the beginning of the DTCAs of prescription drug. The phenomenon continued from year to year (FDA, 2012c). Then, in 1997, the development of DTCAs became significant after the FDA (2012a), the regulatory authority, revised its policy concerning drug firms (Frosch, Grande, Tarn, & Kravitz, 2010). In addition, the FDA published the federal food, drug, and cosmetic act in 1999, where sections 502 and 503 set the setting to advertise prescription medicines (FDA, 2012a). The act established that prescription drug advertisement has to be accurate and avoid misleading the public (FDA, 2012a).

According to Arney, Street Jr., and Naik (2013), Al-Dmour, Al-Zu'bi, and Fahmawi (2013), and Van de Pol and De Bakker (2010), the DTCAs reached target consumers via television, radios, newspapers, magazines, the Internet, and outdoors media to promote prescription drug and devices and to inform patients about conditions. The supporting marketing tool of the DTCAs spread was advertising or direct-to-consumer advertising of prescription drug, diseases, and devices (Arney et al., 2013; Limbu, Huhmann, & Peterson, 2012).

In addition, pharmaceutical research and manufacturers of America (PhRMA) is the consortium of pharmaceutical companies, leading new drug and biotechnology research in the United States of America. The group initiated the DTCAs in the 1980s, passing drug and disease information directly to consumers. That was a breakthrough given that before the 1980s, pharmaceutical companies were passing drug information to the physicians and pharmacists who were responsible for determining the necessity of passing that information to the patients and costumers or not (Dieringer, Kukkamma, Somes, & Shorr, 2011; Faerber & Kreling, 2012; FDA, 2012c; Van de Pol & De Bakker, 2010). Indeed, PhRMA (2011) claimed that the DTCAs created a medical environment where patients and care providers did have an informed conversation regarding drug, diseases, new treatment options, or a particular health concern. Furthermore, PhRMA thought that the DTCAs of prescription drug and diseases informed people concerning conditions, provided training to patients on the various treatments available, prompted patients to discuss health issues with the providers, and prompted patients to stick to the

drug therapy plan. However, The DTCAs' roles encounter divergent appreciations in the public opinion.

A diversified opinion on DTCAs roles. The general opinion about the DTCAs' role is very divergent. Those who are in favor of the DTCAs think that DTCAs have an educational value for the target audience. The DTCAs inform patients about prescription drug, diseases, and possible treatments in a practical way (Arney et al., 2013; Van de Pol & De Bakker, 2010). The DTCAs empower patients to have a sound medical discussion with the provider, bring drug prices down through competition stimulation, help patients better follow their treatment, and enable a better physician-patient relationship in the process of care delivery (Arney et al., 2013; Van de Pol & De Bakker, 2010).

Conversely, the opponents think that the DTCAs are partial in terms of the product's risk and benefits disclosure (more detailed benefits appear in the advertisement). In addition, the DTCAs costs are part of and increase drug price and lead to unnecessary prescriptions and test requests as well as the wrong autodiagnosis by costumers (Arney et al., 2013; Van de Pol & De Bakker, 2010). Moreover, the DTCAs communicate more curative than preventive medicines and can provoke an unnecessary prescription of a more expensive new drug compare to an existing cheap one (Arney et al., 2013; Van de Pol & De Bakker, 2010). The preceding advantages and disadvantages of the DTCAs continue to nourish the debates whether to ban the practice of the DTCAs in the United States of America (Lee-Wingate & Xie, 2010; Wellington, 2010). The practice of the DTCAs is legal in only two countries around the world: the United States

and New Zealand (Dave & Saffer, 2012; Faerber & Kreling, 2012; Taylor, Bell, & Kravitz, 2011).

The DTCAs generated spending from the marketers in the United States of America. In fact, from 2003 through 2006, marketers increased the DTCAs spending. In 2003, pharmaceutical companies invested 3.8 billion dollars in the DTCAs in the United States of America. The same marketers, increasing the 2003 spending (around 111% increase), paid 4.2 billion U.S. dollars to support the DTCAs activities in 2005 and 5.6 billion in 2006 (133% increase from 2005; Dave & Saffer, 2012; Lee-Wingate & Xie, 2010; Limbu et al., 2012). In 2009, the DTCAs through all media were $4.6 billion (Limbu et al., 2012) versus $4,371,000 in 2010 (Kornfield, Donohue, Berndt, & Alexander, 2013). Some scholars and practitioners correlated the health care cost increase to the DTCAs spending increase regarding the three types of the DTCAs.

Brief presentation of types of DTCAs and regulation. The three types of DTCAs that the United States' FDA recognizes are the focus of this analysis. The FDA has distinguished three types of DTCAs and has partially regulated the practice of DTCAs in the United States since 1962 (FDA, 2012a, 2012b; Lee-Wingate & Xie, 2010; Mulligan, 2011). According to the FDA (2012b) and Lee-Wingate and Xie (2010), the three forms of DTCAs are product claim, help-seeking, and reminder. Product claim refers to the advertisement that contains a drug name and the use, the treated condition, and the associated risks and benefits of the drug use. Help-seeking focuses only on the

disease without any drug recommendation for treatment. Reminder communicates the drug name and does not discuss the drug use (FDA, 2012b; Lee-Wingate and Xie, 2010).

In terms of regulation, the FDA is the legal regulatory agency of the DTCAs (product claim) in the United States. The authority to regulate the DTCAs since 1962 has been the food, drug, and cosmetic act (FDCA) of 1938 (FD A, 2012e) and its amendment, namely the food and drug administration amendments act (FDAAA) of 2007 (Abrams, 2011; S. Res. 110-85, 2007). Product claim is the only type of the DTCAs under FDA regulation (FDA, 2012b; La Barbera, 2012; Rollins, King, Zinkhan, & Perri, 2010). Help-seeking is under Federal Trade Commission regulation. When a help-seeking advertisement mentions a drug name, it becomes a product claim and consequently falls under FDA regulations. Reminder advertisement is not under any regulation and is for experienced patients (FDA, 2012b; La Barbera, 2012).

Product claim and help-seeking advertisements are the two independent variables of this study. The regulation of the DTCAs in the United States limits the risk of the consumer being misled by the advertisement. In addition, putting the regulations in place is not enough. The FDA has to use measures to gain compliance from advertisers or pharmaceutical companies. At this point, the utilization of medical services as the dependent variable of this study deserves an attention.

Analysis of the Concept of Utilization of Medical Services

The utilization of medical services is one of the variables of the access to health services. Health services refer to what a human being undertakes to affect human health

in terms of keeping a healthy life or condition, shifting from poor to excellent health, or curing a disease completely (Barton, 2010; Shi & Singh, 2008). The examples of medical care services are to go to the emergency room, to stay in a hospital, or to use an injury care in a medical facility (French, Fang, & Balsa, 2011).

The utilization of health services belongs to the types of access to medical care (Aday & Anderson, 1974; Shi & Singh, 2008). Amongst the different types of access, the utilization of medical care services is the realization of the access to care. The realization can encompass four variants: type, site, purpose, and frequency of utilization (Aday & Anderson, 1974; Shi & Singh, 2008). The type of health care services is the particular care service and the care provider that can be a hospital, surgeon, nurse, or a physical therapist (Aday & Anderson, 1974; Shi & Singh, 2008). Then, the site is the venue or physical place where patient uses or receives medical care services. Moreover, the purpose represents the reason why the care seeker uses medical care: to prevent, to treat, to monitor, to stay well, to protect, or to alleviate (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008). Finally, the frequency of the utilization refers to the number of times the care seeker uses the medical care services during certain time, the quantity of medical services used in a time frame, and the returning aspect of the patient to use more medical care services in accordance with influencing factors (Aday & Anderson, 1974). The medical services utilization occurs when a patient receives medical treatment or services. The service received varies depending on the place, the outcome, the regularity of the reception, and the influencing factors.

Factors influencing the utilization of medical services. Many factors impact the utilization of medical services. The personal characteristics that influence health services utilization are age, gender, race, education, religion, ethnic groups, and the number of family members (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008). The social factors that determine the use or not of medical care services are the revenue, the price, the employment status, the mean of payment, and the patient's job type (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008).

Conclusion of the Section and Contents of Chapter 1

The FDA differentiates three types of the DTCAs: product claim, help-seeking, and reminder. Product claim is the only one under FDA's regulations. Public opinions are conflicting about the value of the DTCAs. The DTCAs facilitate a sound conversation between care provider and seeker. Additionally, the DTCAs contribute to the increase in the costs of the care. The utilization of medical services is the realization of the access to health care. This realization has four dimensions: types, site, purpose, and frequency of the utilization. The gender, age, race, education, revenue, price, and job are some factors that prompt the utilization of medical services.

The analysis of the DTCAs and the utilization of medical care services has led to the question of a statistically significant relationship between the two concepts. The answer of this question will follow in the next section in order to identify the gap in the literature that represents the source of this study. Chapter 1, in addition to the background, contains the problem statement, purpose of the study, research question(s)

and hypotheses, theoretical framework, the nature of the study, the operational definitions, assumptions, scope and delimitations, limitations, significance, and a summary of the chapter.

Background of the Study

Past researchers have claimed there is a relationship between the pharmaceutical DTCAs and the utilization of medical services amongst the American population in general. In the background of the study, I summarize the key literature on the topic, underline the gap, and justify the need of undertaking this study.

PhRMA Influence

PhRMA has impacted the progress of the DTCAs in the United States of America. On March 2, 2009, PhRMA published the revised version of personal rules governing the practice of the DTCAs of prescription drug. PhRMA's members committed, through the publication of the principles, to convey plausible and true information to both providers and patients. According to PhRMA's members, the information from the DTCAs supported the delivery and utilization of care by the two parties. The principles aimed to educate patients more about drug, diseases, and treatment options (PhRMA, 2011). The principles also enabled PhRMA's members to follow the DTCAs laws and regulations from the FDA. In fact, the FDA law requires each DTCA to be true, fair in terms of drug's risks and benefits presentation, and not to mislead the public. In addition, the DTCAs should provide information exactly as the information is in the labeling approved by the FDA (FDA, 2012a; Phrma, 2011). According to PhRMA and Limbu and Torres

(2009), the DTCAs information did not seek to persuade the consumer to purchase any drug or products/services after exposure. However, evidence exists and proves that the DTCAs prompt the utilization of medical services by patients after exposure.

Evidence in Favor of the Correlation Between DTCAs and the Utilization of Medical Services

There is evidence supporting that exposure to the DTCAs leads to the utilization of medical services. In that regard, 69.6% of advanced practice nurses (APNs) have experienced patients specifying the drug they wanted as the result of their exposure to DTCA (Mackert, Eastin, & Ball, 2010). Furthermore, 57.8% of the APNs claimed witnessing patients shifting from an usual prescription drug under use to a new one because of the effect of the DTCAs (Mackert et al., 2010). Also, 63.8% of the APNs believed that the DTCAs enabled the patients to play more an active role during the utilization of medical care services while 57.7% recognized that the DTCAs prompted patient to ask for wrong and avoidable treatments (Mackert et al., 2010). In the same context, 63.5% of the APNs affirmed having seeing patients exposed to the DTCAs asking reasonable and logical questions during a medical conversation regarding diseases or treatments (Mackert et al., 2010). Finally, around 26% of the APNs agreed having seen patients sticking to the treatment plan under the influence of the DTCAs (Mackert et al., 2010).

Limbu and Torres (2009) provided other evidence on the impact of the DTCAs on the utilization of medical care services by Americans in general. Thirty-one percent of

Americans recognized in 1999 having visited their doctors and having a discussion with the doctors regarding a prescription drug that they had seen in an advertisement. Moreover, in 1999, around 25% of a group of Americans surveyed claimed having visited their doctors to ask more about a condition or illness after an exposure to a help-seeking advertisement (Limbu &Torres, 2009). In the meantime, 44% of another 1999 survey respondents affirmed talking with their doctors about the prescription drug they saw in a product claim advertisement (Limbu &Torres, 2009). In 2003, a survey discovered that 2 out of 5 Americans agreed having a high propensity to meet with their doctors to ask more about a prescription drug after being in contact with a product claim advertisement (Limbu & Torres, 2009). Another 2003 survey claimed 35% of respondents agreed that a product claim advertisement prompted them to seek and to gain more information from their physicians regarding the prescription medicine they saw in the pharmaceutical advertisement (Limbu & Torres, 2009).

Gap From the Literature and the Need of This Study

The data above showed a sufficient relationship between the DTCAs and the utilization of medical services by Americans in general. However, none of the data addressed the question of the relationship between the DTCAs and the utilization of medical care services amongst the specific group of adult dermatology patients attending church services at Saint Nicholas Catholic Church or/and receiving primary care services at MedStar Primary Care clinic in Houston, Texas. MedStar and Saint Nicholas are both multicultural and multiethnic group communities as described with more details in the

study sites section of the Chapter 3. Therefore, there is a need to address this gap found in the literature.

Dermatology disease is frequently listed as the motivation of a visit to a doctor. Additionally, many of the 10 leading dermatology conditions by prevalence are curable. Those 10 diseases are herpes simplex and zoster (188.61 million), effects of sun exposure (123.15 million), contact dermatitis (77.29 million), hair and nail disorders (70.46 million), juman papillomavirus (58.49 million), actinic keratosis(58.08 million), acne (50.18 million), cutaneous fungal infections (29.37 million), benign neoplasms (29.37 million), and atopic dermatitis (15.17 million) (American Academy of Dermatology [AAD], 2011). Indeed, herpes simplex's sores usually disappear without patient receiving any treatment (AAD, 2014a). Contact dermatitis's rashes clear simply by the patient avoiding what has caused them or by following the rash treatment recommended by a dermatologist (AAD, 2014a). Nonmelanoma skin cancer, one of the conditions caused by the sun exposure (basal and squamous cell carcinomas), is the most common and curable type of cancers (American Cancer Society, 2013a, 2013b; Baghianimoghadam, Noorbala, & Mahmoodabad, 2011; Skin Cancer Foundation, 2013a). Consequently, undertaking this study is a healthy and lifesaving enterprise through prevention and treatment promotion of dermatology diseases. Patients will use more medical dermatology services under the influence of the DTCAs. Moreover, patients will avoid dermatology diseases or have their disease cured. The DTCAs serve as an informative and educational tool for dermatology patients seeking medical care

services. DTCA are also informative and educational for the population at risk of dermatology diseases as it appears in the problem statement of the study.

Problem Statement

The above analysis of the recent literature showed that there is a relationship between the DTCAs and the utilization of medical services amongst Americans in general. However, that relationship is not analyzed specifically amongst adult dermatology patients in the United States. Therefore, the empirical research problem under investigation is the likely relationship between the DTCAs and the utilization of medical services amongst adult dermatology patients. The study's independent variables of interest are product claim and help-seeking advertisements. They have a probable relationship with the dependent variables, which are the types and purposes of medical services utilization by the target population.

A cross-sectional survey method was the methodological support for this study as described in more detail in Chapter 3 (Creswell, 2009; Frankfort-Nachmia & Nachmias, 2008; Rudestam & Newton, 2007). The study population was all English speaking men and women with permanent resident or citizen status. The participants had lived continuously for at least 6 months in Houston, Texas. They were also at least 18 years old, had seen, heard, or read (exposure) a pharmaceutical DTCA in the past 12 months at the time of the questionnaire completion, and had used medical dermatology service as the consequence of that exposure. Moreover, the participants attended church services at Saint Nicholas Catholic and/or were receiving primary care services at MedStar Primary

Care Clinic, both in Houston, Texas. The method consisted of asking a nonprobability sample of 120 dermatology patients to express their attitudes and views about the phenomenon under investigation. The selection of the sample was according to my personal judgment. I used the eligibility questions contained in the questionnaire to support the judgment and to select only qualified respondents. The respondents expressed their attitudes and views by responding to a series of questions on a scale of 5 points using their personal past experiences and backgrounds in the context of medical dermatology services utilization due to the exposure to the pharmaceutical DTCAs. The descriptive (frequency and means score) and advance (multiple regression) data analysis techniques using SPSS 21.0 version helped to organize data, to test the research hypotheses, and to respond to the research questions and purpose of the study.

Purpose of the Study

The purpose of this quantitative correlation research was to describe the relationship between the pharmaceutical DTCAs and the utilization of medical services amongst adult dermatology patients in the United States of America. In other words, I sought to describe the relationship between dermatology product claim, help-seeking advertisements, and types and purposes of the utilization of medical dermatology service(s) amongst adult patients aged 18 years and over. The set of the independent variables was the DTCAs. The DTCAs of selection were product claim and help-seeking. The measurement items of product claim and help-seeking were the characteristics from FDA. In that regard, product claim advertisement specified the name of the drug, stated

the treated disease, and disclosed the product risks and benefits (FDA, 2012b, 2012d; La Barbera, 2012). Help-seeking advertisement discussed only the condition or disease of interest without any drug recommendation for treatment (FDA, 2012b, 2012d; La Barbera, 2012).

Conversely, the set of the dependent variables were the types and purposes of the utilization. The type of utilization was the specific medical service(s) that the medical care seeker has received at a certain point in time and at an identified place (Aday & Anderson, 1974; Shi & Singh, 2008). The purpose of the utilization referred to the reason(s) why the medical care seeker has received the medical services (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008). The measurement items for the types of medical services used were the medical services found in the literature reviewed on the utilization of medical services. In terms of the purposes of utilization of the medical services, the items for the observation also came from the literature reviewed in Chapter 2. The operational definitions section of this chapter offers a clear landscape of the different measurement items of each set of variable.

The research approach was a cross-sectional survey for the primary data collection via the administration of questionnaires to the selected sample from the target population. The research results enabled me to add new knowledge to the existing knowledge in the field of interest of this study. PT was the theoretical framework or basis of this study from the literature. PT was the analysis of the individuals' behavior while making a decision in a risky situation or condition. An example of a risky condition was

to decide to seek for treatment or not when dealing with a dermatology disease. The research approach facilitated the answers of the research questions of this study.

Research Questions and Hypotheses

Main Research Question and Hypothesis

In this quantitative research, I sought to answer the following main research question: Is there a statistically significant relationship between product claim, help-seeking advertisements, and types and purposes of medical service utilization amongst adult dermatology patients in the United States of America?

The related hypothesis to this main research question was the following:

Hypothesis 1 (H_0): Product claim and help-seeking advertisements do not significantly prompt the utilization of the types and purposes of medical services amongst adult dermatology patients in the United States.

Hypothesis 1 (H_1): Product claim and help-seeking advertisements significantly prompt the utilization of the types and purposes of the medical services amongst adult dermatology patients in the United States.

Secondary Research Questions and Hypotheses

The secondary research questions proceeding from the central question were as follows:

Is product claim advertisement a predictor of the types of medical services used amongst adult dermatology patients in the United States?

Hypothesis 2.1 (H_0): Product claim advertisement does not significantly prompt the utilization of the types of medical services amongst adult dermatology patients in the United Stated.

Hypothesis 2.1 (H_1): Product claim advertisement significantly prompts the utilization of the types of the medical services amongst adult dermatology patients in the United States.

Is product claim advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in the United States?

Hypothesis 2.2 (H_0): Product claim advertisement does not significantly prompt the purposes of medical services utilization amongst adult dermatology patients in the United States.

Hypothesis 2.2 (H_1): Product claim advertisement significantly prompts the purposes of the medical services utilization amongst adult dermatology patients in the United States.

Is help-seeking advertisement a predictor of the types of medical services utilized amongst adult dermatology patients in the United States?

Hypothesis 2.3 (H_0): Help-seeking advertisement does not significantly prompt the types of medical services utilized amongst adult dermatology patients in the United States.

Hypothesis 2.3 (H_1): Help-seeking advertisement significantly prompts the types of the medical services utilized amongst adult dermatology patients in the United States.

Is help-seeking advertisement a predictor of the purposes of medical services utilization amongst skin cancer adult patients in the United States?

Hypothesis 2.4 (H_0): Help-seeking advertisement does not significantly prompt the purposes of medical services utilization amongst adult dermatology patients in the United States.

Hypothesis 2.4 (H_1): Help-seeking advertisement significantly prompts the purposes of the medical services utilization amongst adult dermatology patients in the United States.

Theoretical Framework for the Study

Theory Identity and Origin: Prospect Theory (PT)

PT is the theoretical framework of this study. PT emerged in 1979 in the context of decision making in a risky situation. PT focused on individuals' behavior while making a decision in a risky situation (Kahneman & Tversky, 1979). Expected utility theory (EUT), before the PT emergence, was the reference theory in terms of the analysis of the individual behavior and economic situations when making a decision or choice in a risky condition (Alghalith, 2010; Kahneman & Tversky, 1979; O'Connell, 2011). EUT's foundation was that individuals know most of the time what would be the consequence of their choice in the context of uncertainty. In other words, individuals made rational choices frequently. Human beings evaluate the different consequences of the choice facing uncertainty and opt for only the best options (Kahneman & Tversky, 1979; Kothiyal, Spinu, & Wakker, 2011; O'Connell, 2011). Kahneman and Tversky (1979), the

founders of PT, contradicted this well established theory of rational choice and economic behavior with the results of their experiments study. They claimed that in a situation of uncertainty, people were not looking for the options that offered the maximum satisfaction (Kahneman & Tversky, 1979; O'Connell, 2011). People analyzed the results of their decision as what to gain or to lose compared to the starting condition considered as the reference point (Kahneman & Tversky, 1979; O'Connell, 2011).

PT Theoretical Foundations/Assumptions

The value and weighting functions are the two assumptions of the PT as analyzed in Chapter 2. According to the value assumption, individuals create values through the change that they bring to their assets when deciding under uncertainty (Alghalith, 2010; Kahneman & Tversky, 1979; Kuo & Chen, 2012). The value creation comes from the combination of the change and its size. The evaluation of the change is in reference to the situation of the asset before the change (status quo). When the outcome of the decision under uncertainty is perceived as a loss, the individual will accept to take the risk to make the change happen or to create the value. The individual behaved differently when the outcome is a gain by refusing to take any risk (Alghalith, 2010; Kahneman & Tversky, 1979; Kuo & Chen, 2012; Pfiffelmann, 2011).

The weighting assumption states that each value assigned to each outcome should be multiplied by the same criterion used to select each prospect. However, the criterion should not be a probability or a measurement instrument (Kahneman, & Tversky, 1979).

PT Connection to This Study

PT analyzes the individuals' behavior when making a decision during uncertainty. The outcomes of the decision are introduced to the individuals as what to gain or to lose in reference to an initial point (reference point). The research hypotheses related the pharmaceutical DTCAs to the types and purposes of the utilization of medical services amongst adult dermatology patients in the United States. The decision to use the medical dermatology services or not after an exposure to a DTCA was an uncertainty condition. The outcomes of the decision to use or not represented a gain or a loss. The gain in case of the utilization was the dermatology patient recovering from the disease. The loss was to die because of the dermatology condition in case of nonutilization. The reference point, in the context of dermatology disease, was the stage of the disease before the use of the medical services or not due to the exposure to a DTCA. Consequently, PT was in alignment with this study and helped to place this study in its social context. Chapter 2 provides more details on PT. Before then, I am going to examine the nature of this study.

Nature of the Study

The units or elements of analysis here are the study method, variables, and methodology. This research was a quantitative correlational design due to the quantitative nature of the research question and the statement of five hypotheses. The study method was the cross-sectional survey. The reasons of the selection of the cross-sectional survey were (a) the quantitative research question, (b) the need of generating numbers to describe attitudes and views, (c) the random sample, (d) the rapid data collection, (e) the

statistical analysis and generalization of the results when possible, and (f) the test of the theory based on hypotheses testing (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). In addition, others researches on the prediction of the utilization of medical services used the cross-sectional survey method (French, Fang, & Balsa, 2011).

The study variables were DTCAs and utilization of medical services. DTCAs represented the predictor or independent variable through product claim and help-seeking advertisements. The dependent variable was the utilization of medical services observed through the types and purposes of the utilization. The empirical research problem (Creswell, 2009) under investigation was the analysis of the impact of the pharmaceutical DTCAs on the utilization of medical services amongst adult dermatology patients.

The study followed a specific methodology. The study population was all men and women adult dermatology patients living in Houston, Texas. They had all seen, read, or heard (exposure) a DTCA in the past 12 months from the date of the completion of the questionnaire and had used medical dermatology services as the consequence of that exposure. The members of the population were Saint Nicholas Catholic Church community members and/or MedStar Primary Care Clinic's patients. G*Power 3.1.2. software permitted me to determine the nonrandom sample size of 82 individuals (rounded up to 120 in the final sample) drawn from the study population. The input parameters for the sample size computerization were two-tailed hypotheses testing, a Cohen's *d* medium conventional effect size = .30, $\alpha = .05$, and power = .80%. The

selection of the respondent followed the nonrandom purposive sample scheme rule (Collins, Onwuegbuzie, & Jiao, 2006; Frankfort-Nachmias & Nachmias, 2008). Thus, my personal judgment and the screening questions from the questionnaire guided the selection of the representative statistical unit for the completion of the questionnaire. Each participant/respondent who accepted voluntarily to participate in the study provided informed consent using the form duly approved by the Walden University's Institutional Review Board (IRB.) office. The primary data collection was from 120 structured questionnaires completed by the respondents. I developed a structured questionnaire for the purpose of this study. The questionnaire went through a pilot study for validation before being used for the final study. The questionnaire has the Likert interval scale of 5 points as the rating instrument. The completion was the face-to-face. All completions took place at the two study sites: Saint Nicholas Catholic Church and MedStar Primary Care Clinic both in Houston, Texas. The population size was unknown. A code book development followed after the completion and approval of the 120 questionnaires. Then, SPSS 21.0 was the software for the data analysis. Data analysis tools were the descriptive statistics (frequency and mean scores) used to organize the data. In addition, multiple regressions analysis was used to test the hypotheses of the study. More detail on the nature of this study appears in Chapter 3.

Definitions (Operational)

In this section, I define the key terms or concepts of the topic under investigation: DTCAs, utilization of medical services, medical service, and dermatology disease. Then,

I define the variables that measure DTCAs and the utilization of medical services that are respectively the independent and dependent variables of the study. The DTCAs set of measurement variables are product claim and help-seeking advertisements. The utilization of medical services set of measurement variables are types and purposes of utilization. Finally, I provide definitions of each item that permits empirical observation (the operational definitions) of the variables product claim, help-seeking advertisements, types, and purposes of the medical services utilization. Those items come from the literature reviewed in Chapter 2.

Concepts Definitions

Dermatology disease/condition: Disease(s) that attacks skin, hair, and nails (AAD, 2014b).

DTCAs: Announcements or information about dermatology drug, disease, treatment options, and devices passed directly to the dermatology patients by pharmaceutical companies and distributors through the television, radio, newspapers, telephone, brochures, magazines, or online without any medical professional mediation (Hall, Jones, & Hoek, 2010; Lee-Wingate & Xie, 2010).

Help-seeking advertisement: Announcement that talks only about the dermatology disease or condition without any reference to a drug that can treat the condition (FDA, 2012d, 2012f; La Barbera, 2012).

Medical services/physician services: Dermatology healthcare services or supplies delivered or whose delivery is coordinated by a physician or medical doctor who has a

medical license to practice medicine or osteopathy (Healthcare Government [Healthcare.gov], 2013; U.S. Government Printing Office [GPO], 2013).

Product claim advertisement: Announcement that states the dermatology drug name, the treated condition, and the risks and benefits related to the use of the advertised drug (FDA, 2012b, 2012f; La Barbera, 2012).

Purpose of medical services utilization: Reason why the dermatology care seeker uses medical care services. The reason can be disease prevention, treatment of disease, monitoring, seeking well-being, protection, or alleviating a condition (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008).

Dermatology disease/condition: Disease(s) that attacks skin, hair, and nails (AAD, 2014b).

Type of medical services utilization: A particular medical service or care provider that can be a nurse, hospital, surgeon, or a physical therapist used by a dermatology care seeker (Aday & Anderson, 1974; Shi & Singh, 2008).

Utilization of medical services: Reception of dermatology services provided by or under the supervision of a state's licensed dermatologist at a physical place, for an identified medical reason, and based on a frequency of utilization (Aday & Anderson, 1974; Shi & Singh, 2008).

Operational Definitions

The following is the operationalization of the study variables or presentation of the measurement items. This study has a total of four set of variables. Product claim and

help-seeking advertisements are the two sets of independent variables. The types and purposes of the medical dermatology services utilization after an exposure to a dermatology pharmaceutical DTCA are the two sets of dependent variables. The measurement variables of each set of independent and dependent variables are as follows.

Dermatology help-seeking/disease advertisement (characteristics). *Description of the type of dermatology disease without any recommendation of a specific dermatology drug for treatment:* The advertisement presents to the public the disease and its symptoms without telling what drug can treat the condition (FDA, 2012f).

Encouraging people with the symptoms of the described type of dermatology disease to talk to their doctor: Recommendation to the public to consult the dermatologist if the person notices on the skin, hair, or nails any indication/sign of the advertised disease (FDA, 2012f).

Inclusion of the company's name of the advertised dermatology drug: Designation of the drug's manufacturer (FDA, 2012f).

Provision of a telephone number/website to call or to visit for more information about the advertised dermatology disease (described condition): Communication to the public of the available telephone number or website to use to collect extra information regarding the particular advertised dermatology disease if necessary (FDA, 2012f).

Dermatology product claim or prescription drug advertisement (characteristics). *Equal statement of the advantages and possible negative effects of the dermatology drug use:* Presentation to the patients, in a balanced way, of what the

benefits and potential negative consequences are of using the advertised drug (FDA, 2012d, 2012f).

Equal statement of the benefits and risks associated with the dermatology drug use: Equitable presentation of the advantages and dangers related to the use of the advertised drug (FDA, 2012f).

Inclusion in the dermatology print product claim advertisement of the statement "You are encouraged to report negative side effects of prescription drug to the FDA Visit MedWatch5 or call 1-800-FDA-1088.": Clear statement of how the patient can communicate to the FDA office any not desired secondary consequences of the drug advertised (FDA, 2012f).

Statement by the dermatology broadcast product claim of different sources where to find the FDA approved prescribing information of the advertised drug (*adequate provision): S*tatement of where the patient can get additional product information approved by the FDA.

Statement by the dermatology audio broadcast product claim of the most important risks of the dermatology drug (major statement): Presentation of the most serious dangers that the dermatology drug user may encounter.

Statement by the dermatology print product claim of all the drug risks approved by FDA as prescribing information (brief summary): Presentation of the dangerous aspects of the drug approved by the FDA and contained in the drug information or label.

Statement of the most significant dermatology drug's risks: Presentation of the very important dangers that the patient may face taking the advertised drug (FDA, 2012f).

Statement of the name of the dermatology drug: Statement of the vulgar designation of the drug approved by the U.S. government (brand) and the U.S. government nonapproved drug designation used (generic) to advertise the drug (FDA, 2012f).

Statement of a minimum of one type of dermatology disease (the condition[s]) treated by the advertised dermatology disease drug (approved drug use by the FDA): Presentation of the form of dermatology disease treated by the advertised drug (FDA, 2012f).

Purposes of medical services utilization after exposure to dermatology help-seeking/disease advertisement. *Dermatology disease symptom management:* Preventive measures taken, self-examination of the skin to detect any change that may indicate a dermatology disease type, identification of the surrounding possible causes for more prevention and control, and screening test when necessary (Kontos & Viswanath, 2011).

Early detection of the dermatology disease: Diagnosis of the condition at its very first stage (Kontos & Viswanath, 2011; The University of Texas MD Anderson Cancer Center [MDACC.], 2013a).

Dermatology disease symptom management: Preventive measures taken, self-examination of the skin to detect any change that may indicate a dermatology disease

type, identification of the surrounding possible causes for more prevention and control, and screening test when necessary (Kontos & Viswanath, 2011).

Tumor/disease clearance: Complete cure of the disease (Samarasinghe et al., 2011).

Tumor/disease lesion excision: Use of instruments to remove the abnormal part of the cell or tissue and its surrounding normal cell in order to cure the dermatology condition (Medical Doctors Guidelines [MDGuidelines], 2013; Samarasinghe et al., 2011).

Purposes of medical dermatology services utilization after exposure to a dermatology product claim/drug advertisement. *Mohs defect repair using a rhombic transposition:* Rebuilding of the part of the body damaged by the dermatology disease using Mohs surgery and the rhombic transposition method (Samarasinghe et al., 2011).

Treatment/cure of the dermatology disease looking for well-being: Complete destruction or removal of the dermatology disease so that the patient will become healthy (MDACC, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

Tumor/disease clearance: Complete elimination of the dermatology tumor (Samarasinghe et al., 2011).

Tumor/disease lesion excision: Removal of the abnormal part of the cell and its surrounding normal tissue (MDGuidelines, 2013; Samarasinghe et al., 2011).

Types of medical dermatology services utilized after exposure to dermatology help-seeking/disease advertisement. *Clinical trial/experimental:* Participation in a

research study that seeks to know how well a dermatology disease treatment approach or technique works on individuals (American Cancer Society, 2013b; MDACC, 2013a; NCI, 2013e; The Skin Cancer Foundation, 2013b).

*Consulting dermatologist regarding any symptom related to dermatology disease for early detection: D*iscussion with the dermatologist about the possible symptoms of the dermatology disease that the patient has (Kontos & Viswanath, 2011).

Cryotherapy/Cryosurgery: Use of liquid nitrogen to freeze and eliminate skin tissues affected by the disease (MDACC, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

Curettage and cautery/Curettage and electrodessiccation/Electrodessiccation and curettage: Use of an instrument called a curette to scrap off the skin tumor followed by the destruction of any remaining tumor with the heat generated by the electrocautery needle (AAD, 2013; American Cancer Society, 2013b; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

*Dermatology disease screening test: C*heckup to diagnose a dermatology disease before any symptom appears *(*Kontos & Viswanath, 2011; National Cancer Institute [NCI], 2013e).

Gene therapy/biological therapy: Destruction of the dermatology disease by including genes into the patient's cells affected by the cancer (NCI, 2013a; The Skin Cancer Foundation, 2013d).

Clinical trial/experimental. Participation to a research study that seeks to know how well a dermatology disease treatment approach or technique works on individuals (American Cancer Society, 2013b; MDACC, 2013a; NCI, 2013e; The Skin Cancer Foundation, 2013b).

Cryotherapy/Cryosurgery. Use of the liquid nitrogen to freeze and eliminate skin tissues affected by the disease (Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b; MDACC, 2013a).

Curettage and cautery/Curettage and electrodessiccation/Electrodessiccation and curettage. Use of instruments called curette to scrap off the skin tumor followed by the destruction of any remaining tumor with the heat generated by the electrocautery needle (AAD, 2013; American Cancer Society, 2013b; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

Laser surgery: Removal of the external layers of the cell (epidermis) and the tissues of the skin affected by the tumor using a laser strong beam light, erbium YAG laser, or carbon dioxide (MDACC, 2013a; NCI, 2013a ,2013d; The Skin Cancer Foundation, 2013b).

Lymph node surgery: Operation of the lymph nodes for biopsy to look for cancerous tumors or for the removal of the lymph nodes in case of the presence of a skin cancer tumor (American Cancer Society, 2013b).

Mohs micrographic surgery: Excision of a malignant tumor with the help of staged, intraoperative frozen sections processed in the Mohs technique. Sections excised

are histologically clear of malignancy (American Cancer Society, 2013b; MDACC, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b)

Radiotherapy/Radiation: Destruction or treatment of the tumor in the tissue of the patient using X-ray beams (NCI, 2013d; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

*Skin grafting and reconstructive surgery: R*emoval of the skin cancer tumor followed by the collection of a skin free of tumor from the patient's body to graft the skin on the wound. The grafting helps the wounded part to recover completely (American Cancer Society, 2013b).

Standard surgical excision/resection: Use of anesthesia to paralyze the area of the skin with tumor for a short time. Then, removal of the tumor surrounded with a certain normal skin followed by the tumor examination under microscope to make sure the entire tumor has been removed. Stitches are used to repair the surgical area to end the procedure (AAD, 2013; American Cancer Society, 2013b; NCI, 2013d; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

To search for additional health information outside disease advertisement (company's website): Other sources of information are consulted to complete the information received from the advertisement and to be able to make an informed health decision *(*Kontos & Viswanath, 2011).

Types of medical dermatology services utilized after exposure to a dermatology product claim/prescription drug advertisement. *Adherence to the*

dermatology disease treatment regimen: Normal participation to the treatment plan prescribed by the dermatologist (Frosch, Grande, Tarn, & Kravitz, 2010; Wellington, 2010).

Chemotherapy: Treatment of the patient using the dermatology advertised prescription drug following the patient's request (American Cancer Society, 2013b; NCI, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b)

Dermatology prescription drug refill: Obtainment of another quantity of the same drug from the pharmacist after running out of the drug (Frosch et al., 2010; Wellington, 2010).

Physician/dermatologist office visit: Meeting with a dermatologist/doctor in his/her office for medical dermatology reasons (Gray & Abel, 2012).

Request and obtainment of a medical prescription of the dermatology drug advertised: Meeting with the dermatologist to request and obtain from him/her the prescription of the advertised dermatology drug (Gray & Abel, 2012).

Chemotherapy: Treatment of the patient using the dermatology advertised prescription drug following the patient's request (American Cancer Society, 2013b; NCI, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b)

Adherence to the dermatology disease treatment regimen: Normal participation to the treatment plan prescribed by the dermatologist (Frosch et al., 2010; Wellington, 2010).

Dermatology prescription drug refill: Obtainment of another quantity of the same drug from the pharmacist after running out of the drug (Frosch et al., 2010; Wellington, 2010).

Skin, hair, and nails health maintenance: Treating the patient to improve his/her appearance instead of taking care of a specific dermatology disease (AAD, 2014b).

To talk to dermatologist/doctor about dermatology advertised medication: Meeting with the dermatologist/doctor to discuss the dermatology medicine presented in the advertisement (Gray & Abel, 2012).

Physician/dermatologist office visit: Meeting with a dermatologist/doctor in his/her office for medical dermatology reasons (Gray & Abel, 2012).

Skin, hair, and nails health maintenance: Treat the patient to improve his/her appearance not to take care of a specific dermatology disease (AAD, 2014b).

Assumptions

The achievement of this study required the consideration of three assumptions. The first assumption was the goodwill of the respondents. It was assumed that the respondents filled out the questionnaire with true information that represented their experience with product claim and help-seeking advertisements in the context of the medical dermatology service utilization. If the answers from the respondents were not accurate, then the research results would not be accurate and would not represent the reality from the field. In that case, any decision made using the results of this study would be wrong.

The second assumption was that the Likert scale of attitude was appropriate to measure the attitude and views of adult dermatology patients regarding the impact of product claim and help-seeking advertisements on the types and purposes of medical dermatology services used. The Likert scale of attitude was not the only scale in social sciences research. For instance, there was the Guttman scale that has existed since 1940 as the result of Guttman's research (Frankfort-Nachmias & Nachmias, 2008). The Guttman scale is also used for an empirical test of a group of items. However, I assumed that the Likert scale of attitude would be more appropriate for this study due to the scale's validity and effectiveness in past research measuring peoples' attitudes and views.

The third assumption was the validity of the measurement instrument or questionnaire. I developed this study's questionnaire. I used this questionnaire for the first time in this study after the pilot phase. Consequently, I assumed that the questionnaire was able to measure the concept under investigation in this study. A bias from the instrument would affect negatively the research results.

Scope and Delimitations

This research has scope as well as delimitations. The scope of the study was the description of the relationship between product claim, help-seeking, and the types and purposes of medical dermatology care services utilization amongst adult dermatology patients aged 18 years and over and members of Saint Nicholas Catholic Church and/or patients at MedStar Primary Care Clinic both in Houston, Texas. U.S. dermatology

patients aged 40 years and above represented 68% of the market in terms of aged (Harris Williams & Cooperation [Harris Williams & Co.], 2013).

The results of the study identified the FDA's product claim and help-seeking characteristics that influenced more than others a type and purpose of the medical dermatology services used by the target population. Furthermore, for each identified characteristic, I identified the respective type and purpose of utilization that the identified characteristic predicted more. The selection of the above scope had multiple motivations. Indeed, past researchers have claimed that the dermatology DTCAs of prescription drug and diseases are a reality in the United States. Patients who have seen, read, or heard a dermatology DTCA have learned about diseases treated by the advertised drug, the diseases treatment options and symptom control, prevention, adherence to the treatment regimen, and early detection (Kontos & Viswanath, 2011). Product claim and help-seeking advertisements derived from this study's results may empower dermatology patients and the population at risk in general, particularly in Houston, Texas, to know more about symptoms, treatment options, and purposes.

The study has delimitations. The age bracket of the target population was 18 years and over. The population was the skin, hair, and nail adult patients (dermatology) who have used medical services within 1year as the consequence of having seen, heard, or read (exposure) dermatology DTCAs of prescription drug or disease. The adult dermatology patient was an American citizen or a legal permanent resident alien living for at least 6 months in Houston, Texas. While living in Houston, Texas, the patient

received primary care services at MedStar Primary Care Clinic or attended church services at Saint Nicholas Catholic Church. Both organizations were the study sites. In addition, reminder advertisement, which was the third type of the DTCAs according to the FDA, was not part of this study. Finally, the site and time interval of the utilization of dermatology health services from the framework of access (Adey & Anderson, 1974) were not subject to this investigation. Future researchers may consider focusing on those variables and populations excluded from this study.

Limitations

This study contained weaknesses or limitations. The limitation of the cross-sectional method resided in the difficulty to control the factors that could affect the internal and external validity of the research. A cross-sectional survey method led to the use of sophisticated instruments of questionnaire and computer software SPSS 21.0 for data collection and analysis. A cross-sectional survey permitted data collection only one time and not continuously as described in Chapter 4 (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The first threat to validity was the environment and the time of completion of the questionnaire. The settings of completion were not completely free of any source of noise or distraction. The parishioners were holding meetings during the questionnaire completion around the parish hall, which was the completion setting at Saint Nicholas Catholic Church. The participants heard some noises from time to time from the meeting attendees. The participants completing the questionnaire at the MedStar Primary Care Clinic's meeting rooms heard some noise from the television located in the

lobby area or from the clinic personal and other patients' conversations. The doors were constantly kept closed at the two sites during completion to limit the effect of the noise on the participant. The questionnaire completion time may have not been appropriate for the respondent to avoid any bias in the answers (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The time of completion was after church service or meeting with a doctor. The participants at that time were possibly thinking about going home. However, they all agreed on the completion time during recruitment and did not express any rush until the end of the completion.

The second threat was the construct validity: the use of a new questionnaire. I designed the questionnaire. It was not sure if the new questionnaire would be capable exactly of measuring the concepts under investigation. The pilot study results validated the questionnaire and verified the capability of the questionnaire to measure the concepts of the DTCAs and the utilization of medical dermatology services. Experts' opinions of dermatologists in Houston, Texas, and the DTCAs professionals at the FDA's Office of Prescription Drug Promotion (OPDP) validated the questionnaire before the pilot study. The final study results were consistent with the pilot study.

The last limitation was the sampling bias that could occur during this study due to the lack of a sample frame and could affect the external validity of the study results. In that regard, all the final respondents met the study's inclusion criteria. The inclusion criteria used in the questionnaire permitted me to filter the respondents during the

recruitment of each respondent in order to avoid a sampling bias. This study used a convenient sample not a random sample.

Significance

The study closed the gap and added knowledge to the area of the dermatology DTCAs and medical utilization. I sought to know if dermatology product claim and help-seeing advertisements prompted the utilization of the types and purposes of medical services amongst adult dermatology patients in the United States with the application in Houston, Texas. Therefore, the study results added new knowledge to the DTCAs influencing the utilization of medical dermatology services in America. The research showed, in the specific era of dermatology, the FDA's characteristics of product claim and help-seeking advertisements that predicted more a type and purpose of medical services used by the study population. I identified a specific type and purpose of utilization predicted more by the considered characteristic. Finally, future researchers will use these results as the source of secondary data for their research.

The study has practice and policy implications. As stated earlier, this study results provide the DTCAs characteristics that predicted more than other characteristics a specific type and purpose of utilization of medical dermatology services amongst the target population. Those characteristics could be the communication axes for new DTCAs of pharmaceutical companies exclusively targeting the population under investigation. Indeed, the DTCAs inform and educate patients about drug, diseases, and treatment options. DTCAs prompt patients to adhere to the drug treatment plan (Phrma,

2011).Therefore, the statistically significant relationship between the DTCAs and the utilization of medical dermatology service(s) could lead to the new dermatology product claim and help-seeking advertisements directed directly to the adult dermatology patients in Houston, Texas. The target population could benefit from the following values of the advertisements: education, information, and informed conversation with dermatologists (PhRMA, 2011). As far as policy is concerned, the FDA as well as Phrma could use the results of this study to develop new DTCAs regulations, policies, principles, and laws or to revise the existing one.

The study also has social change impacts. The social change implication is the health promotion amongst adult dermatology patients in Houston, Texas. In that regard, help-seeking advertisements from these results will educate and create awareness amongst patients about dermatology disease, early detection due to screening test, and skin, hair, and/or nails health maintenance treatment. Conversely, product claim advertisement created based on these results could promote dermatology prescription drug requests, educate and inform patients about prescription drug, and prompt doctor visits amongst the target population. Skin cancer is the driving force of the dermatology service demand in the United States (Harris Williams & Co., 2013). Health promotion in the context of skin cancer has various motivations. Early detection and early treatment can lead to the cure of the skin cancer. From 1992 through 2006, the nonmelanoma skin cancer treatment increased almost up to 77% (American Cancer Society, 2013a; NCI, 2013a; Skin Cancer Foundation, 2013b).

Summary

Previous researchers have addressed the relationship between the pharmaceutical DTCAs and the utilization of medical services. In 1999, 44% of Americans discussed the prescription drug they saw in a product claim advertisement with their doctors. However, there was no evidence of the impact of the dermatology DTCAs on the utilization of medical dermatology services amongst adult patients who live in Houston, Texas and who receive primary care services at MedStar Primary Care Clinic or attend the church services at Saint Nicholas Catholic Church. This study filled the gap.

The quantitative correlation design using a cross-sectional survey method was the research design. The intent of the research was to describe the relationship between the dermatology pharmaceutical DTCAs and the utilization of medical dermatology care services amongst skin, hair, and nails adult patients. The independent variables were the dermatology product claim and help-seeking. The dependent variables were the types and purposes of the utilization of medical dermatology services. The study has five hypotheses. PT was the theoretical framework of this study.

Furthermore, I defined the variables of the study in this chapter: product claim and help-seeking advertisements (independent variables) and types and purposes of medical services utilization (dependent variables). I also identified and defined the items used for the empirical observation of the variables. The study has three assumptions: the respondents' goodwill to provide with true answers, the validity of the Likert scale of

attitude to measure adult dermatology patients' attitudes and views, and the validity of the questionnaire to be used for the data collection.

The research scope was the description of the relationship between product claim, help-seeking, and the types and purposes of medical services used exclusively amongst adult dermatology patients in Houston, Texas. The limitations of the study were the cross-sectional survey method, the use of a new questionnaire as measurement instrument, and the possible bias from the sampling procedure. The key social change value of this study was the health promotion amongst the target population: awareness and education.

Chapter 2 that follows addresses the literature on the variables of the study in order to learn about what has been said so far regarding the problem under investigation. Then, the literature reviewed permits the identification of the gap that justifies the essence of this research study. Furthermore, Chapter 2 covers PT as the theoretical framework of the study, the literature search strategy, and the study's model of the impact of product claim and help-seeking advertisements on the types and purposes of the utilization of medical dermatology services. Finally, in Chapter 2, I present the study model that I elaborated, tested empirically and statistically through hypotheses testing.

Chapter 2: Literature Review

Introduction

This chapter contains a background, literature review method, approach to the resources identification used in this literature review, and the theoretical framework (PT) of the study. In this chapter, I also analyze the independent and dependent variables of the study and present the explicative model found in the literature of the impact of DTCA of prescription drug on the utilization of medical services after being exposed to a DTCA. Finally, Chapter 2 contains the study's model of the relationship between the dermatology DTCAs and the utilization of medical dermatology services amongst adult patients after an exposure to a DTCA.

Background, Problem and Gap

In this section, I describe the evolution of the pharmaceutical DTCAs. The phenomenon of the DTCAs in the United States goes back up to 1980 as described in Chapter 1 (Dieringer et al., 2011; FDA, 2012c). The FDA (2012a) revised in 1997 the policy about the DTCAs and authorized the drug manufacturers to broadcast the branded products' advertising (Bradford & Kleit, 2011; Dieringer et al., 2011; Frosch et al., 2010). This progress of the DTCAs increased in 1999. The FDA required, at that time, that the marketers provided true information and the right direction to costumers in marketers advertising (Dieringer et al., 2011; FDA, 2012a).

The pharmaceutical DTCAs represent the information about prescription drug or diseases mostly that pharmaceutical companies are passing directly to the consumers via

advertising and not through the pharmacists and physicians (Hall et al., 2010; Lee-Wingate & Xie, 2010). The expansion of the DTCAs of prescription drug has led to the recurrent question of the impact on the consumer in terms of the utilization of medical services after an exposure (Limbu & Torres, 2009). In that regard, researchers have claimed more than 53 million consumers have talked to their physicians about a particular prescription drug following their exposure to the drug advertising in the United of America (Limbu & Torres, 2009). Additionally, approximately 21.2 million consumers talked to their doctors about an illness because of a drug advertisement (Limbu & Torres, 2009). In the same logic, children consumed more prescription drug between 2007 and 2008. Indeed, amongst five children surveyed, at least one used a minimum of one drug prescribed by a physician **(**Gu, Dillon, & Burt, 2010; La Barbera, 2012). These multiple figures point to the relationship between the DTCAs of prescription drug and disease and the utilization of medical services in general in the United States (Kim & Park, 2010; Macias, Lewis, & Baek, 2010). However, little is known about the relationship between the DTCAs of prescription drug and disease and the utilization of medical services amongst adult dermatology patients who live in Houston, Texas, and are receiving the primary care services at MedStar Primary Care Clinic, or attending the church services at Saint Nicholas Catholic Church. Consequently, this study seeks to address that gap. The literature review that follows aims to analyze, in relation with the identified gap, the current publications on the relationship between the DTCAs and the utilization of medical services to justify the relevance of this etude.

Literature Review Method and Chapter's Content

Creswell's (2009) literature review method (pp. 25-26) guides the present chapter. According to Creswell, a quantitative literature review has two steps that are:

1. The researcher creates a thorough outline of the themes of interest and the gathers the related literature.
2. The researcher analyzes of the topics in the chapter consecrated to the literature review.

When analyzing the literature review's possible approaches, Creswell stated, "Another approach is to develop a detailed outline of the topics and potential references that will later be developed into an entire chapter, usually the second, titled "Literature review", which runs from 20 to 60 pages or so" (p.26).

Resource Identification Method

The identification of the resources started with the creation of the identifiers or search terms. The identifiers were *prospect theory, Direct-To-Consumer Advertisements, prescription drug advertising, product-claim advertisement, help-seeking advertisement, utilization of medical services, medical services, types of medical services, purposes of the utilization of medical services, dermatology services, dermatology diseases and treatments,* and *Direct-To-Consumer Advertisements and dermatology diseases treatments*. The keywords permitted me to search for peer-reviewed articles to identify the original and current publications about the theoretical framework, and the independent and dependents variables of the study. The searches were through multiple

databases at Walden's virtual library: "Academic Search Complete/Premier", "ProQuest Central", and "Google Scholar". Primary searches took place on the website of the United States FDA (2011b) to identify the characteristics of the pharmaceutical DTCAs of prescription drug and diseases used as independents variables of the study. The American Cancer Society (2013a) and American Academy of Dermatology's websites, and Shi and Singh (2008) provided the dependent variables and operational definitions.

The search for peer-reviewed articles at the Walden library combined three search modes called "Boolean/Phrase", "find all my search terms", and "find any of my search terms". The selection of the "Scholarly (Peer-Reviewed) Journals" option during the search assured the retrieval of only the articles from the peer-reviewed journals. "Ulrich's Periodicals Directory" at Walden library permitted me to assure the peer-reviewed nature of the journal. The "publication date from" option enabled the specification of the desired 5 years to which the retrieved articles should belong. This literature review used only the relevant articles considering the different topics of interest. These search efforts covered the period of Summer 2011 through Summer 2014. From January through June 2013, the review of the retrieved articles permitted to delete and replace the articles older than 5 years with more recent ones.

Theoretical Framework of the Study: PT

Origin

The origin of PT goes back to the year 1979. In fact, PT was a decision making theory model that permitted an individual to describe how to make a choice when facing

a risky situation or uncertainty (Kahneman & Tversky, 1979; Kothiyal et al., 2011; Mello & Cajueiro, 2010; O'Connell, 2011). This theory was the main idea of Kahneman and Tversky's works achieved in 1979. It was in reaction to the expected utility theory's (EUT) failure (Alghalith, 2010; Kahneman & Tversky, 1979). EUT was the most used model by researchers and economists during those years to describe individuals' behaviors and economic phenomena in the risky conditions (Alghalith, 2010; Kahneman & Tversky, 1979; O'Connell, 2011). EUT's assumption stated that the probability associated with the outcome of a possible choice was always known. The reason was that the subject always compare different outcomes and selected only those that offered a maximum benefit, satisfaction, or welfare (Kahneman & Tversky, 1979; Kothiyal et al., 2011; O'Connell, 2011). Conversely, Kahneman & Tversky conducted experiments study. The study results were a breakthrough because they contradicted the well-established EUT (Kahneman & Tversky, 1979; Kothiyal et al., 2011; O'Connell, 2011). Kahneman & Tversky's experiments' results corroborated the idea that people made their choices in a risky condition after analyzing the different outcomes as what to gain or to loose based on a referent point of the asset or the condition (Kahneman & Tversky, 1979; O'Connell, 2011). In other words, agents evaluated the outcomes of their decision as gains and losses compared to the status quo of the situation or asset (Kothiyal et al, 2011; O'Connell, 2011).

Characteristics

PT was a descriptive model initially for a noncomplex prospect. The prospect had money as outcomes with known probability associated with the results. However, PT was applied to the multiple choices games with financial results or not (Kahneman & Tversky, 1979). The following analysis is in the context of noncomplex prospects/opportunities.

PT has two main assumptions: the value and weighting functions (Alghalith, 2010; Kahneman & Tversky, 1979; Kuo & Chen, 2012). The first assumption or value stated that the modifications that happened to the subject's asset/good were the creation of value for the decision making under uncertainty. Thus, this value should be attributed both to the change and size of the value. The analysis of the value was about the status quo of the subject's good (Kahneman & Tversky, 1979). The value function was near or concave to the gains and far or convex from the losses as outcomes of the decision made under uncertainty (Alghalith, 2010; Kahneman & Tversky, 1979; Kuo & Chen, 2012; Pfiffelmann, 2011). In other words, the subject took or accepted risk when he/she perceived the outcome of the decision regarding a prospect as losses. Conversely, when the agent perceived the outcome as gains, he/she would not take any risk (Alghalith, 2010; Kahneman & Tversky, 1979; Kuo & Chen, 2012; Pfiffelmann, 2011). Finally, the curve of the value function inclined more toward gains than the losses (steeper) (Kahneman & Tversky, 1979; Pfiffelmann, 2011).

The second assumption of PT was the weighting. PT weighting referred to the multiplication of the value attributed to each outcome by the criterion applied to the selection of each selected opportunity. According to PT, the criterion was neither probabilities nor measurement instrument for the subject's belief during the choice. However, when the agent considered the low probability, the agent always over weighted the small probability during the choice (Kahneman & Tversky, 1979). There were the steps applicable to the decision making under uncertainty.

In addition to the assumptions, PT had two key steps applied to a questionable choice to facilitate the decision making by the subject: the "editing" and the "evaluation" (Kahneman & Tversky, 1979, p. 274). A subject started making a choice under risk by trying to comprehend or differentiate the prospects in presence ("editing"). Firstly, the "editing" efforts of the subject consisted of building a perception of the offers or prospects regarding what could be the gains or the losses (outcomes) of the decision (Kahneman & Tversky, 1979; Kothiyal et al, 2011; O'Connell, 2011). The perception of the decision's outcomes as gains (quantity or amount to receive) and losses (what to release) depended on the subject's current state or condition: he or she had not gained or lost anything yet. This was the "neutral reference point" in the PT (Kahneman & Tversky, 1979; Kothiyal et al., 2011; O'Connell, 2011). Secondly, the perception in the "editing" step led to the reduction phase of the prospect. This reduction consisted of adding together the probabilities associated with the same opportunity. The addition yields the new probability (the double of the two added) added to the opportunity

(Kahneman & Tversky, 1979). Finally, the "editing" continued with the separation of the part of the prospect that had a risk from the one that did not have any (Kahneman & Tversky, 1979).

The profiles of the opportunities obtained from the "editing" process enabled the subject to compare the prospects/opportunities and to opt for the one or those with first value: "evaluation". The "evaluation" focused on the overall edited prospect's global value (Kahneman & Tversky, 1979).

Two scales permitted to conduct the "evaluation". The first scale measured the impact of the prospect's associated probability on the global value of the considered prospect. The second scale measured the subjective value of the opportunity based on a number assigned subjectively to the prospect's outcomes (Kahneman & Tversky, 1979). PT has limitations.

Limitations

Regarding the limitations, PT did not integrate the preference variable amongst the assumptions. Sometimes the agent made a choice when making a decision under uncertainty because he or she preferred a particular prospect. In other words, the preference was enough for the agent to select an opportunity without any other consideration (Kothiyal et al, 2011; Pfiffelmann, 2011). This drawback generated an evolution of the PT that became cumulative prospect theory (CPT) in 1992. In 1992, Daniel Kahneman and Amos Tversky added this feature to their original PT model and created a new model called CPT (Pfiffelmann, 2011). Besides, PT was created to describe

behavior when dealing with simple prospects and only in the risky conditions (Kothiyal et al., 2011; Kahneman & Tversky, 1979). PT is applied in the concrete social problems nowadays.

Contemporary Applications of P T

PT application has occurred in many fields to describe social phenomena. Morrissette (2010) used PT to facilitate a clearer understanding of Russian President Boris Yeltsin's political and international behavior in 1994 under uncertainty. In 1994, President Yeltsin decided and launched an invasion of the Republic of Chechnya. Morrissette used PT to analyze Yeltsin's behavior due to the theory ability to describe decision taken subjectively under uncertainty. Moreover, PT analyzed the decision outcomes as gains or losses (Morrissette, 2010). The research question was why did President Yeltsin launch the military invasion of the Republic of Chechnya in 1994? The review of the literature was the research method applied to answer the research question. The study reached the conclusion that President Yeltsin attack or use of force was a risk as supported by the PT. The attack was risky because of an improper preparation, the timing was not necessary at that time, and the invasion could not rebuild the Yeltsin's domestic tarnished popularity (Morrissette, 2010). Future research will find here an example of the implementation of the PT to describe contemporary issues. However, the study lacks empirical results of the application of the PT to the Yeltsin case.

Kuo and Chen (2012) applied PT to the investment phenomenon. Indeed, when the price of a good or asset changes positively, investors have the high propensity to sell

them while purchasing those with deteriorated values. Kuo & Chen used the Taiwan investors' disposition patterns survey date to answer the research question. The research question was about the appropriate time for the investors to sell assets with deteriorated price, and the length of time to keep the assets that have gained value. As the results, the researchers found that at least 50% respondents have disposition patterns instead of disposition effect to sell assets that have gained value and to buy goods whose price has fallen (Kuo & Chen, 2012). This example will inspire future researchers. The research results shed light on the fact that investors had disposition patterns that were different from disposition effects in a risky situation of buying deteriorated assets (Kuo & Chen, 2012). However, the reason of that difference was still unclear at the end of the study.

O'Connell (2011) used the lens of PT to analyze and describe the strategies that presidential candidates used to manage their campaign during primary elections. The candidates of interest were the following United States presidential candidates: Edward Kennedy, Jimmy Carter, Ronald Reagan, and Georges H W Bush in the 1980s (O'Connell, 2011). The researcher discovered that PT's risk averse and acceptance impact the management of political campaign by candidates. The study method was the in-depth interview (O'Connell, 2011). The research question was why each candidate wanted to become president? The author answered this question by analyzing each candidate's strategic options during the campaign regarding riskiness. Therefore, Kennedy in 1979, Reagan in 1980, and Carter in 1980 were in a situation of loss while choosing options for their campaign. Carter in 1979/1980, Bush in 1980, and Kennedy in march-april 1980

perceived the outcomes of their campaign options as gains domain (O'Connell, 2011). This research has a credit of a successful application of PT to the electoral campaign management of the candidates. However, the studies failed to tell if the phenomena considered as losses or gains were due to the nature of the political party and the personality of the candidate, or were independent of the two variables. This said PT corresponds with this study.

Matching With This Study

There are many reasons why PT was a match to the present study. The study's target population was adult dermatology patients of both sexes, who lived in Houston, Texas, received primary care services at the MedStar Primary Care Clinic or/and attended to the church service at the Saint Nicholas Catholic Church. Then, he or she was living continuously for at least six months in Houston, Texas. They were adults aged 18 years and over who had seen, heard, or read a dermatology product claim or help-seeking advertisement (exposure) in the past 12 months and had utilized medical dermatology service(s) as the consequence of that exposure.

PT, as analyzed earlier, was the analysis of the human behavior when making a decision in a risky situation. The agent perceived the outcomes of the decision as gains or losses in relation to a reference point or status quo of the condition. The subject was risk acceptant when he/she saw the outcomes as benefits. He/she was a risk adverse when the consequences of the decision were losses (Kahneman & Tversky, 1979; Kothiyal et al, 2011; O'Connell, 2011).

The condition or reference point for the dermatology patient is his/her health status: the presence of the dermatology disease. The prospect or risky situation is to recover/stay alive due to medical dermatology services use after an exposure to the DTCAs or to lose the life/decease in the case of nonutilization. The decision to make by the dermatology patient is to use medical services or not after an exposure to a dermatology product claim or help-seeking advertisement. The dermatology patient who decides not to use medical dermatology services after an exposure to a product claim or help-seeking advertisement because he/she perceives the outcome of this decision as a loss or death is a risk adverse. Conversely, the dermatology patient who decides to utilize medical services after an exposure to a product claim or help-seeking advertisement because he/she perceives the outcome of the decision as a gain is a risk acceptant. Thus, to decide to use medical dermatology services or not is a risky situation. The patient obtains the restoration of his/her health by seeking medical dermatology services or lost his/her life by not seeking medical services (Kahneman & Tversky, 1979). The preceding analysis showed the alignment between PT and this study. Product claim and help-seeking advertisements as are the independent variables.

Analysis of the Independent Variables: Product Claim and Help-Seeking Advertisements

Product Claim Advertisement's Regulatory Agency

The United States FDA is the regulatory agency of product claim advertisement. The FDA is the regulator of the product claim advertisement since 1962 (Dave & Saffer,

2012; FD A, 2012a, 2012c; Mulligan, 2011). Product claim is the only pharmaceutical DTCA under the FDA's regulations (FDA, 2012b; La Barbera, 2012; Rollins et al., 2010). Conversely, help-seeking and reminder are not under FDA's regulations giving that they are not mentioning any drug or device name as required by the law (FDA, 2012b; La Barbera, 2012; Rollins et al., 2010).

In the same context of regulations, Abrams (2011), Dave & Saffer (2012), Eby (2012), FDA (2012a, 2012c) and senate resolution(S R) 110-85 (2007) addressed the legal setting. In that regard, The FDA regulates product claim advertisement due to the law named federal food, drug, and cosmetic act (F DCA) of 1938 (FDA, 2012e), and its amendment of 2007. Indeed, federal trade commission (FTC) played this role until 1962. Then, Kefauver-Harris brought modifications to the federal food, drug, and cosmetic act in 1962 (Dave & Saffer, 2012; FDA, 2012e; Mulligan, 2011). According to the 1962 modifications, each marketer had to prove and support with evidence the fact that the advertised drug did not represent any danger to the public. Then, the advertised drug was capable of keeping the manufacturing promises. Moreover, the marketer had to provide in print advertisements the risks and benefits of using the advertised drug. Finally, the modifications placed product claim or prescription drug advertising under the FDA's regulatory power. In one word, Kefauver-Harris' modifications of 1962 recognized and accepted that prescription drug advertising was essential to pharmaceutical companies (Dave & Saffer, 2012; Mulligan, 2011). However, the FDA amended this law in 2007. The 2007 amendment gave birth to a new law: food and drug administration amendments

act (FDAAA) of 2007 (Abrams, 2011; S. Res. 110-85, 2007). The FDCA's section 502(n) on prescription drug advertisements was amended by adding to the content the FDAAA's section 901(d)(3)(A) entitled provision on DTCAs (Abrams, 2011; S. Res. 110-85, 2007). Therefore, the FDA's oversight of the DTCA of prescription drug activities followed the FDAAA's section 901(d)(3)(A) (Abrams, 2011; S. Res. 110-85, 2007).

The office of prescription drug promotion (OPDP) within the center for drug evaluation and research (CDER) at the FDA implements the supervision strategies of the drug advertisement activities (Eby, 2012; FDA, 2011c). The OPDP ensures that each advertisement complies with the law in place or applies sanctions in case of the violation (FDA, 2011c). Then, the OPDP provides drug advertisers with training opportunities to get familiar with the law and regulations. Finally, OPDP exhorts drug advertisers to improve the quality of the communication of the drug selling information to stakeholders regularly (FDA, 2011c). The office regulates broadcast and printed advertisements such as mailing, booklets, brochures, posters, and presentations (Eby, 2012).

I clarified in this subsection the regulatory authority (FDA) and the legal setting of the product claim advertisement as the independent variable of this study (Dave & Saffer, 2012; FD A, 2011a, 2011c; Mulligan, 2011). However, I did not address the issue of relationship or not between product claim and the types, and purposes of utilization of medical dermatology services amongst adult patients in the United States.

Product Claim Advertisement's Legal Content

Product claim advertisement's content is stated by a particular United States public law. The above referred FDCA law requires in its section 502(n) that the statement should contain (a) the popular name of the drug, (b) the list of the drug's ingredients and their quantity (formula) in conformity with this act, and (c) a quick note on its contraindications, effectiveness, and side effects (FDA, 2012a). Conversely, other authors argued that the product claim should have a brief summary (print advertisement), a major statement, the drug side effects, and contraindications (broadcast advertisement) of the advertised drug (Dave & Saffer, 2012; FDA, 2012b; Flood, 2010; La Barbera, 2012; Mendonca et al., 2011). In addition to FDCA's section 502(n), the FDAAA's provision 901(d) (3) (A) stipulates that the major statement has to be "clear", "conspicuous" and "neutral" (Abrams, 2011; S. Res. 110-85, 2007, p. 940).

Meanwhile, the FDA (2012b), La Barbera (2012), Phrma (2011) shed light on a different component of printed product claim: a statement motivating the readers to report to the FDA via MedWatch5 or 1-800-FDA-1088 any drug's negative side effect. The statement was the provision 906(a) of FDAAA (S. Res. 110-85, 2007). However, the FDA and Frosch et al. (2010) argued that the broadcast product claim has to communicate to the viewers the source of risk related information about the drug advertised. The sources could be a care provider, a free of charge phone line, a magazine, or a website. Finally, all product claim announcement most be correct and should not lose the consumer (FDA, 2011a; 2011c; Phrma, 2011).

I have identified in this subsection the basic legal components of product claim as the independent variable of the study: brand name, formula, and quick note (FDA, 2011a).

However, I am still silent on the possible relationship between product claim and the types and purposes of utilization of medical dermatology services by an adult patient. There are different types of DTCAs.

DTCAs Typology

There are different types of DTCAs. The FDA distinguishes three kinds of the DTCAs: (a) product claim, (b) reminder, and (c) help-seeking (FDA, 2012b, 2012d; La Barbera, 2012; Mendonca, McCaffrey III, Banahan III, Bentle & Yang, 2011). The product claim announcement has three key features that are (a) drug's name, (b) the disease/condition that the drug can treat, and (c) the benefits and risks associated with the drug use (FDA, 2012d, f; La Barbera, 2012; Mendonca et al., 2011). Al contrary, other authors claim that reminder advertisement contains only the drug name, while help-seeking advertisement details the disease/condition without any reference to a drug for the treatment (FDA, 2012d, 2012f; La Barbera, 2012; Mendonca et al., 2011).

The two types of DTCAs are the focuses of this study: product claim and help-seeking that are the sets of independent variables. Product claim and help-seeking were the two familiar and frequent types in the DTCAs landscape (La Barbera, 2012; Mendonca et al., 2011). Product claim had an awareness rate of about 80% amongst Americans (Mendonca et al., 2011). The resources for the analysis of those two types

were available, and the contents had many features for analysis (FDA, 2012b; La Barbera, 2012). Conversely, reminder announcement was rare in the practice, and limited concerning the content (just product name) (FDA, 2012d; La Barbera, 2012). Indeed, reminder announcement was subject to critiques or calls for banishment because of the content limitation and lack of accuracy (FDA, 2012d; La Barbera, 2012). Moreover, reminder announcement did not provide information regarding the advertised drug. Consequently, reminder announcement could not help the patient to make an informed medical choice (FDA, 2012b; La Barbera, 2012).

The outcome of this analysis is the three types of DTCAs and their characteristics: product claim, help-seeking, and reminder. The two independent variables that are product claim and help-seeking are clear and identified. But, the question of the possible relationship between product claim and help-seeking, and the types and purposes of the utilization of medical dermatology services by the adult patient is still without an answer. At this point, I am going to analyze the current state of cons and pros debate about the product claim and help-seeking advertisements.

Product Claim and Help-Seeking Advertisements Cons Debate

Product claim advertisement. The authors have condemned product claim advertisement for many reasons. Dave and Saffer (2012), Frosch et al. (2010), La Barbera (2012), and Lee and Begley (2010) reproached product claim announcement to unnecessarily generate an overutilization of medical services. According to the authors, advertisers seem to have underestimated or ignored the product claim's capability of

prompting the consumers' medical options after exposure (Dave & Saffer, 2012; Frosch et al., 2010; La Barbera, 2012; Lee & Begley, 2010). Then, Chaar and Lee (2012) and La Barbera claimed that product claim violates the patient right to make personal medical decisions: patients sometimes decide about their health based on the influence of the product claim and not on a personal initiative. The violation could lead to a harmful choice for the consumer.

Moreover, La Barbera (2012), Kontos and Viswanath (2011), and Willington (2010) thought that product claim information was capable of empowering the patient to interpret and to understand the drug's chemical components and effect side statements. Indeed, the exposed patient was not knowledgeable enough to manipulate the message of advertising for proper health decision making (La Barbera, 2012; Kontos & Viswanath, 2011; Willington, 2010). Therefore, the patient still needed the physician's help for the utilization of the drug despite the education provided by the product claim announcement (Kontos & Viswanath, 2011; La Barbera, 2012).

In the same logic of cons debate, Mendonca et al. (2011) conducted experimental research about new information search after being exposed to the product claim announcement. They found that product claim had a small capacity of persuading the exposed patient to seek for additional information about the availability of new medicine outside of the announcement. Then, the two group posttest experimental design of Mendonca et al. (2011) concluded that product claim as well as help-seeking

announcement did not decide asthma patients to gather new information regarding the possible new drug.

Conversely, Brody and Light (2011) and Willington (2010), in the context of cons debate analysis, took the discussion to the arena of the patient protection. According to those two authors, certain approved and advertised drug were risky, unsafe, and inefficacious for the patient health. They were capable of developing a new condition or disease to the patient going through a drug therapy for another illness (Brody & Light, 2011). This limitation was evident through the annual consequences of drug therapy in the United States regarding adverse reactions (46 million), hospitalizations (2.2 millions), and deaths (111,000). The patient is still not safe from such harms (Brody & Light, 2011).

La Barbera (2012), Kornfield et al. (2013), and Willington (2010) opposed to the preceding critiques the modification of the physician prescription habit by the product claim. Indeed, the authors claimed that product claim provoked a change in the familiar doctor practice of prescribing the drug to patients (La Barbera, 2012; Kornfield et al., 2013; Willington, 2010). Physician, usually, selected the drug to prescribe to the patient. Now, the patient requested and obtained from his/her physician an advertised drug. The patient, by doing so, changed the usual course of medical prescribing (La Barbera, 2012; Kornfield et al., 2013; Willington, 2010). The physician could create overprescribing by honoring the patient's request for the advertised drug (Kontos & Viswanath, 2011).

Contrarily to La Barbera (2012) and Willington (2010), Hall et al. (2010) and Lee & Begley (2010) criticized product claim to be a threat to the patient-physician relationship stability mostly amongst minority groups. In fact, a disagreement between both parties when the exposed patient would be requesting from the physician the prescription of a particular advertised drug could break the relationship (Hall et al., 2010; Lee & Begley, 2010). Patient reacted to the physician's refusal to prescribe the advertised drug by selecting a new doctor (Lee & Begley, 2010)

However, Frosch et al. (2010) considered product claim announcement as a health inequity driver amongst cardiovascular disease patients. According to the authors, product claim rarely contained African American's values, beliefs, and cultural elements when centered on the preventive drug for cardiovascular disease. Moreover, marketers published less cardiovascular product claim announcement in the magazines accessible to African Americans.

Lee and Begley (2010) found health disparity due to product claim amongst Hispanics, African Americans, and Whites after exposure. When exposed to product claim announcement, the three ethnic groups reacted differently (Lee and Begley, 2010). Hispanics requested for health care services more than Whites and African Americans. African Americans met their doctors to discuss a drug seen in product claim announcement more than other ethnic groups. Whites requested and obtained an advertised prescription drug from their doctors while the minorities Hispanics and African Americans saw their request denied by their physicians (Lee & Begley, 2010).

The preceding authors have the common merit of stating the weaknesses of the practice of product claim announcement. However, none of those authors has clarified the characteristics of product claim that decided more the adult dermatology patients to utilize medical services.

Help-seeking announcement. They were many critiques again help-seeking announcement. Help-seeking announcement lacked the name of the medicine for the benefit of the manufacturer's name (Rollins et al., 2010; FDA, 2012b). Frosch et al. (2010) and Hall et al. (2010) argued that help-seeking announcement encouraged drug therapy or medicalization instead of lifestyle change (Frosch et al., 2010; Hall et al., 2010; O'hara, 2010). Consequently, help-seeking announcement ended up creating a massive dependence of the people on the medication or drug therapy (Frosch et al., 2010; Hall et al., 2010; O'hara, 2010).

The above contrasting reflexion again both product claim and help-seeking helped to shed light on the demerits of the two types of DTCAs. However, I did not answer the research question of this study presented in Chapter 1. Product claim and help-seeking announcements did have supports from the literature.

Product Claim and Help-Seeking Advertisements Pros Debate

Product claim advertisement. Many writers supported the product claim announcement. The product claim advertisement represented an essential source of information about the drug, treatable conditions, and new treatment options for the consumers (Chaar & Lee, 2012; Frosch et al., 2010; Hall et al., 2010; La Barbera, 2012;

O'hara, 2010). According to Frosch et al. (2010); Hall et al. (2010), La Barbera (2012), and O'hara (2010) product claim announcement helped to build the mental strength of the consumer through education. The consumer easily adhered to a medical prescription due to the mental power (Frosch et al., 2010; Hall et al., 2010; La Barbera, 2012; Limbu & Torres, 2009; O'hara, 2010; Phrma, 2011).

However, the FDA (2012b) and La Barbera (2012) found that product claim length gave enough time to the announcement to disclose to the patient how the drug worked, what the drug cured, the dangers of taking the drug, and the potential side effects. Then, with the product claim, the patient has the choice to meet with his/her doctor to discuss the appropriateness of the advertised drug to the patient condition. The discussion permitted to eradicate any possible risk of harm to the patient due to the use of an advertised drug (FDA, 2012b; La Barbera, 2012).

Willington (2010) thought differently. In fact, product claim restored the natural health rights of the human being. According to Willington, a human being should have access to medical care and the related information. The related information is about how and where to get the right medicine and the possible consequences of using that medicine. Furthermore, the product claim health information enabled the patient to exercise his/her right to decide about the right care and best way of taking care of the personal health (Willington, 2010). In the same logic, Willington recognized that product claim had the virtue of increasing the number of people aware of a drug as well as those following their treatment plan rigorously. Finally, Willington claimed that product claim

lowers the treatment cost through the appropriate and proper form of drug therapy. The hospitalization cost in some cases was null with the drug therapy (Willington, 2010).

There are multiple strengths for the product claim such as informing patients, facilitating patients' access to health care, and educating patients about drug use and conditions treated. However, the authors did not state why adult dermatology patients utilize medical services after an exposure to a product claim and help-seeking advertisements.

Help-seeking advertisement. The authors have identified various help-seeking strengths. Help-seeking had the reputation of educating patient about diseases and possible treatments as well as helping the patient to comply with the medication use (Chaar & Lee, 2012), Dave and Saffer, 2012; Frosch et al., 2010; Kontos and Viswanath, 2011; Mendonca et al., 2011; O'hara, 2010; Rollins et al., 2010). In the same view with Frosch et al. (2010) and Mendonca et al. (2011), Rollins et al. (2010) asserted that help-seeking announcement did decide patients to seek for additional information about their condition. Furthermore, help-seeking empowered consumer to initiate a discussion with their care provider about not yet diagnosed disease, symptoms, and treatment options of an existing illness (Dave & Saffer, 2012; Frosch et al., 2010; Mendonca et al., 2011; Rollins et al., 2010).

However, Hall et al. (2010) found the help-seeking strength in the earlier diagnosis of a condition sometimes ignored by the patient before an exposure to the announcement. Help-seeking recommended to the viewers to contact their care provider

for diagnosis in case of any symptom mentioned in the announcement (Hall et al., 2010; FDA, 2012d). Frosch et al. (2010) and Hall et al. (2010), contrarily to Mendonca et al. (2011) and Rollins et al. (2010), identified the help-seeking merit in the patient education, mainly those with a low level of health literacy. Thus, the exposure to a help-seeking announcement provided health information to people less educated that enabled them to utilize medical care as well as those with a high level of health education (Frosch et al., 2010; Hall et al., 2010). Help-seeking had the positive impact of reducing the health care utilization disparity between those two groups.

The authors analyzed product claim and help-seeking announcement mostly concerning the characteristics and capability of motivating exposed patients to seek for more information about the condition and new drug. However, they did not analyze the possible relationship between DTCAs and the utilization of medical services amongst the adult dermatology patients.

Product Claim and Help-Seeking Advertisements' Regulatory Debate

Product claim advertisement regulatory trend. The regulation of product claim by United States federal government has been a long and continuing process. In that regard, Mulligan (2011) focused the attention on the trend analysis of the regulation. According to Mulligan, the regulatory trend of product claim by FAD went back up to 1969. Indeed, the birth and progress of the product claim regulations had four key periods: 1969, 1997 through 1999, 2004, and 2007 (Mulligan, 2011).

The 1969 regulations were four constraints applicable to product claim announcements (Mulligan, 2011). The first was the truthfulness of the information conveyed to the population. The communicated information should tell the true about the product and give the right advice and direction to the target public (Mulligan, 2011). The second was the constraint of the balanced presentation of what the product represented as risks and benefits for the consumer (Mulligan, 2011). In other words, the positive and negative consequences of using the advertised product should have the same weight in the announcement (Mulligan, 2011). The third principle was about the other utilization of the product. The regulations required each advertiser to state clearly in the announcement the essential information for a comfortable and safe use of the drug by the consumer (Mulligan, 2011). The fourth requirement was about all risk statement that the consumer incurred during or after the utilization of the product. These risks should appear clearly in the announcement (Mulligan, 2011).

The second period of 1997 through 1999 was the FDA's response to the growth of the broadcast DTCAs in general and product claim in particular (Frosch et al., 2010; Mulligan, 2011). In fact, stating all or "every risk" (FDA, 2012b) related to the use of the product of interest in a broadcast announcement, in compliance with the 1969 regulations' principle number four, was very challenging. This because the advertisers have to face the time constraint related to the media (Frosch et al., 2010; Mulligan, 2011). Consequently, the FDA issued new regulations to modify the 1969's number 4 principle. In that regard, the FDA gave two choices to the advertisers. The first choice was the

objective and proper introduction in the announcement of the "major statement". The "major statement" referred to the very relevant risk associated with the use of the product (FDA, 2012b). Furthermore, the advertisers in lieu of the "major statement" could list all the risks of the product use, or could tell the consumer the additional sources where to obtain other risks of using the advertised product (Dave & Saffer, 2012; FDA, 2012b; Flood, 2010; Frosch et al., 2010; Mulligan, 2011).

The third period was 2004 (Frosch et al., 2010; Mulligan, 2011). FAD's product claim print announcement was the target. Print advertisers did not satisfy the FDA's requirement for the clear communication of the risks information to the public. According to the FDA, advertisers were using a language not familiar or not accessible to the readers. Therefore, to reverse this tendency, the 2004's amendments imposed to the print advertisers the obligation of communicating product's risks to the readers using a popular language known by the public (Frosch et al., 2010; Mulligan, 2011). Moreover, the announcement should communicate clearly the following to the public: (a) at least three moderate adverse side effects, (b) warnings, (c) contraindications, and (d) the necessary precaution related to the product (FDA, 2012b; Mulligan, 2011).

The fourth period was 2007/2008. It was an Act or Public Law named Food and Drug Administration Amendments Act (FDAAA) of 2007 (FDA, 2012b; Mulligan, 2011). The legislators introduced some changes in the law. The changes aimed to reinforce the FDA's control power on the product claim announcement of prescription drug. The changes were (a) the FDA can ask to review an announcement prior to the

release to the media by the advertiser (pre-market review); (b) the creation of an ad hoc program to motivate TV advertisers to participate freely in the FDA's review prior to the release (advisory review program), and (c) the requirement of a fee for those willing to participate to pre-review program (FDA, 2012b; Mulligan, 2011).

The above product claim regulatory efforts were about both broadcast and print announcements. The 1997 regulation increased the product claim broadcast announcements. The law makers did not predict how to keep under the Federal Government's scrutiny the high and increasing number of the broadcast product claim. Moreover, the regulatory efforts did not state why product claim influence consumers, mostly adult dermatology patients, to seek medical care after exposure. Finally, there is a connection between the preceding product claim regulatory efforts and the pharmaceutical industry's efforts for self-regulation.

Pharmaceutical industry's regulation initiative for product claim and help-seeking. The pharmaceutical companies gathered within PhRMA have undertaken many regulatory initiatives regarding the DTCAs. Indeed, contrarily to other contributors who focused on the trend of the regulation of the DTCAs, PhRMA's members and Marcias et al. (2010) analyzed the pharmaceutical industry's efforts for self-regulation. PhRMA is the group of companies that lead pharmaceutical research and biotechnology aimed to develop new drug and devices in the United States of America (Marcias et al., 2010; Phrma, 2011). PhRMA undertook in 2008 the revision of the existing guidelines put in place by the industry to govern the practice of the DTCAs. The objective of developing

those principles was to comply with the FDA requirements regarding DTCA of prescription medicine. Moreover, the aim was to provide the consumers with communication that was a value added to the public health field (Limbu & Torres, 2009; Phrma, 2011). In other words, the principles did not seek to influence the consumers' purchase behavior (Limbu & Torres, 2009). The revised policies became mandatory within the industry as from March 2, 2009.

The self-regulation effort was a set of 18 principles. The first guiding principle presented what PhRMA organization believed to be the DTCAs contributions to the public health field. Those contributions are (a) to make more people to know a disease by, (b) to make patients be knowledgeable about possible options of treatment for a condition, (c) to promote meeting between patient and doctor about patient health problem, (d) to improve the under diagnosed and under treated conditions amongst patients, (e) and to promote the adherence to drug therapy schedule amongst patients (Phrma, 2011). The second principle stated the regulatory characteristics of all drug information conveyed directly to the consumer. Those are (a) accuracy and rightness, (b) evidence-based claim, (c) balanced presentation of drug risks and benefits, and (d) use of information from the label approved by the FDA (Phrma, 2011). The principle number eighteen was an exhortation to the DTCAs advertisers to tell uninsured and underinsured in the announcements how and where they can obtain help if needed (Phrma, 2011).
I described in the regulatory discussion the different mutations that occurred over time within the United States' legal context of the DTCAs. Then, I presented how those

mutations have impacted the independent variables of the study that were product claim and help-seeking announcements. Moreover, I shed light on the self-regulatory efforts that members of the US pharmaceutical industry undertook to facilitate the members' compliance with the FDA's laws and regulations of the DTCAs. However, I did not answer the research question of the possible relationship or not between product claim, help-seeking, and types and purposes of the utilization of medical dermatology services by adult patients. Moreover, it is not clear so far how the FDA agents enforced those regulations to avoid violations or to punish violators.

Product claim regulations: Enforcement.

Enforcement goals and objectives. The FDA's authorities have assigned clear and distinctive goals and objectives to the enforcement measures put in place to force marketers to comply with the product claim announcement law. Thus, conversely to the above PhRMA organization analysis, Abrams (2010, 2011) and Nguyen, Seoane-Vazquez, Rodriguez-Monguio, and Montagne (2013) analyzed the product claim regulations under the enforcement corner. Enforcement options were possible actions that the FDA could take against the DTCAs advertisers to ensure compliance with the FDAAA. The FDA's authorities measured the enforcement options to prevent and to punish any violation of the FDAAA law and related regulation (Abrams, 2010, 2011; Nguyen et al., 2013). The FDA pursued the goal of the protection and promotion of public health through enforcement. Public health was safe if the medicines for public use had proven safety and effectiveness (Abrams, 2010; Nguyen et al., 2013). According to

Abrams (2010) enforcement had multiple objectives that were (a) to assure accurate drug promotion that did not mislead patients, (b) to assure that the statement in the announcement of risk and benefit of drug use was fairly balanced, (c) and to contribute to the dissemination of helpful information to American citizens.

Product claim common violations and enforcement options. There were certain numbers of violation usually committed by marketers in the context of product claim announcement. The FDA defined some enforcement strategies to contain and to limit those violations. In that logic, Abrams (2010, 2011) enumerated the violations that frequently occur in the DTCAs practice: (a) the risk information were not provided or were presented in small proportion, (b) lack of the drug efficacy and safety in the announcement, (c) the announcement did not contain a comparative analysis of claims, and (d) the advertiser communicated on the drug uses unauthorized by the FDA.

The FDA's authorities had the following enforcement options when a violation occurred: (a) untitled letter, (b) warning letters, (c) injections or consent decrees, (d) seizures, (e) collaborative work with Department of Justice and States Attorney General, (f) disqualification of the researchers' clinical trials or studies, (g) recall requests, (h) market withdrawals, (i) license revocation and suspension, (j) debarment of firm and individual, and (k) civil penalties in money (Abrams, 2010, 2011; FDA, 2011; Nguyen et al., 2013).

Civil financial penalties after a product claim law violation. There were civil financial penalties dictated by the law for marketers who violated the product claim

law. Indeed, contrarily to Abrams (2010, 2011), FDA (2011), Nguyen et al. (2013), Senate Resolution 110-85 (2007) analyzed the civil penalties regarding money applicable when product claim was not right and misled the consumers in any manner. In that regard, Senate Resolution 110-85 (2007)'s section 901(d)(4) stated that, within a 3-year period, the first dissemination of a DTCA of a prescription drug that was false and misleading was liable to a civil monetary penalty of $250,000 maximum. This amount increased not more than $500,000 in the case of new violations by the same violator for a 3-year period. The Secretary of Health and Human Services started this process by notifying in written the violator (S. Res. 110-85, 2007). Then, the violator must go through a hearing process before the Secretary could assess the applicable civil monetary penalty. The violator should not face any other penalty from FDAAA (S. Res. 110-85, 2007).

This section clarified the legal measures and financial penalties that the regulatory agency usually used to prevent or to punish cases of false and misleading product claim announcements. However, the section was silent about the study's research question and the DTCAs spending debate.

Product Claim and Help-seeking Advertisements Spending Debate

The marketers using product claim and help-seeking generated diverse types of spending within the health care system. In one hand, product claim of a new drug was a cost driver for medical care. Indeed, new drug were still expensive. Manufacturers invested enormous amount of money increasingly (Chaar & Lee, 2012; Hall et al., 2010)

to promote and to sell new drug. The number of patients requesting for a new drug for a treatment increased over time due to the effect of product claim announcement (Hall et al., 2010; Willington, 2010). In fact, product claim made patients believe that new drug were more efficient and safe than existing one (Howard, 2011; Willington, 2010).

In another hand, Dave and Saffer (2012) analyzed the product claim's cost regarding the demands and prices of a prescription drug. According to Dave and Saffer, product claim's spending growth was due to multiple factors. Marketers were doing more product claim announcement. The utilization of medical service was frequent. The drug prices increased regularly. The FDA adjusted the guidelines regarding the broadcast of the DTCAs through television after 1997. Finally, the components of the drug advertised changed over time (Dave & Saffer, 2012). Concretely, all DTCAs represented a value of $150 million for the year 1993 versus $4.24 billion for 2005 (Dave & Saffer, 2012). Moreover, the sales of the advertised drug in general within the therapeutic classes of the drug increased due to the effect of the product claim announcement. Thus, Dave and Saffer (2012) claimed that product claim did create migration of costumers from another drug to the advertised drug. The movement led to the advertised drug's market share increase. Finally, the authors found that the rise of the DTCAs generated 11.8% increase of the cost per unit of a prescription drug (Dave & Saffer, 2012).

Conversely to Dave and Saffer (2012), Kornfield et al. (2013) conducted a DTCA spending trend analysis from 2001 through 2010. The DTCAs of interest were both to consumers and physicians. The data came from IMS Health Integrated Promotional

Service (all DTCAs, all promotion to care providers, and all sales) and the SDI (*E*-promotion, meetings, and conferences data). Focusing only on the direct-to-consumer advertisings to consumers, Kornfield et al. stated that marketers spent UD$46,759,000 over 10 years to promote drug and other pharmaceutical products directly to consumers through television, print, internet, radio, and outdoor media. 2006 was the year of the highest spending or the peak period with an amount of $5,891,000 which represented 12, 59% of the overall amount spent in 10 years. In addition, a constant increase of those direct-to-consumer advertisings to consumers' spending marked the periods of 2003($4,124,000), and 2004 ($5,151,000), and 2005 ($5,231,000) (Kornfield et al., 2013). But, after 2006, the spending entered a fluctuating period until 2010. 2001 represented the year of the lowest spending ($3,500,000) in 10 year period (Kornfield et al., 2013).

Dieringer et al. (2011) differed from Hall et al. (2010), Kornfield et al. (2013), and Dave and Saffer (2012) by analyzing the reasons why and when DTC Advertising spending started increasing faster. According to the authors, the FDA issued project guidelines on broadcast advertisings after 1997 (Bradford & Kleit, 2011; Dieringer et al., 2011). The guidelines specified the ways marketers should present information regarding drug and other vital products to the target audience through television and radio. Those guidelines stimulated more DTCAs and marked the starting point of the fast spending increase of pharmaceutical advertisings in general (Dieringer et al., 2011).

I described in this analysis a proven relationship between the DTCAs and the increase in the cost of care as well as the rise in the drug consumption and price. However, as the preceding analysis, I did not answer the research question of this study. Bearing this is mind; I am going to focus now on the state of the debate surrounding the types and purposes of medical services utilized as the consequence of an exposure to a product claim or help-seeking announcements.

Analysis of the Dependent Variables: Types and Purposes of Utilization of Medical Services

The dependent variables of this study were the types and purposes of medical services utilization.

Types of Medical Services Utilization After Exposure to a Product Claim Advertisement

The exposure to a product claim advertisement can lead to the use of medical services. In that regard, Chaar and Lee (2012), Frosch et al. (2010), Kornfield et al. (2013), and Macias et al. (2010) claimed the patients exposed to a product claim announcement may request prescriptions of the advertised drug from their health care provider. Moreover, Frosch et al. (2010) and Wellington (2010) found an exposure to a product claim created better adherence to the treatment plan and medicalization.

Moreover, the exposure to a product claim prompted a reception of a timely follow-up care. Then, product claim exposure helped the patient to remember to refill his/her prescription (Frosch et al., 2010; Wellington, 2010). Chaar and Lee (2012), Flood

(2010), Limbu and Torres (2010), and Macias et al. (2010), compared to Frosch et al. (2010) and Wellington (2010), identified to consult/ask/talk with their doctors about a particular prescription drug advertised as other medical services used after an exposure to a product claim. The different authors shed light on the operational variables used to measure the dependent variable of types of medical services utilized. The limitation of the analysis was the lack of an answer the research question under investigation.

Types of Medical Services Utilization After Exposure to Help-Seeking Advertisement

A variety of medical services used after exposure to help-seeking announcement existed in the literature. Help-seeking exposure persuaded a patient to believe in a medical solution to his/her condition. Moreover, help-seeking exposure helped the patient to remember his/her disease (Frosch et al., 2010). In the same logic, Dave and Saffer (2012), Hall, Jones, and Iverson (2011a, b), Flood (2010), Kornfield et al. (2013), Limbu and Torres (2010) and Wellington (2010) identified new services. The identified services were (a) to visit/consult the doctor about symptoms, (b) to talk with the doctor regarding a condition or illness, (c) to discuss new medical conditions with their physicians, and (d) to visit more the doctor and talk about the condition treated by the drug advertised.

On the contrary, Bradford and Kleit (2011) and Dave and Saffer (2012) found that help-seeking advertisement prompted patients to obtain a new diagnosis from their physicians of a medical condition so far ignored and helped to treat the conditions undertreated before completely. Hall et al. (2011a), compared to Bradford and Kleit

(2011) and Dave and Saffer, conducted a survey study of mock advertisements of two diseases (Fibromyalgia and Osteopenia) amongst 241 women of 48 through 85 years old. The study identified the following medical services that the women were intending to search as the consequence of their exposure to the announcement: (a) to ask their doctor for a referral (49%), (b) to ask their physicians about the tests regarding the condition advertised, (c) to look for information according to the advertisement orientation, (d) and to search for information from outside of the announcement (Hall et al., 201b).

These authors identified other operational variables for the measurement of the dependent variable: types of medical services. However, they did not provide a response to the research question of this study.

Purposes of Medical Services Utilization After Exposure to a Product Claim Advertisement

French et al. (2011) stated that patients sought recovery from illness when utilizing medical services after exposure to a product claim.

Purposes of Medical Services Utilization After Exposure to Help-Seeking Advertisement

According to French et al. (2011) and Wellington (2010) patients exposed to help-seeking announcement utilized medical services for wellness and wellbeing purposes.

Analysis of the Dependent Variables: the Dermatology Services Context

The dermatology diseases are conditions that attack the human skin, hair, and nails. Consequently, the medical dermatology services are the services rendered by a

dermatologist to diagnose, treat, or prevent conditions that affect the skin, hair, and nails (AAD, 2014b). The effective treatment of the skin conditions requires the use of updated therapy (Stevens, 2013). Then, the dermatologist should be comfortable applying the current therapy and should keep the treatment of the chronic skin conditions constant or continuing (Stevens, 2013). The signs of healthy hair are the length, brilliancy, smoothness, high quantity, and no loss of hair. Hair treatment using cosmetics aims to make the hair look beautiful, solid, to grow more, or to maintain the hair. There is a variety of cosmetics used to treat hairs such as shampoos, detergents, conditioners, foaming agents, thickeners and opacifiers, gels, and waxes (Madmani, 2013).

According to AAD (2014c), there are different types of nails conditions such as color change, vertical lines located under nails, white spots, and nails infection due to bacteria. The nails problems are sometimes the sign of different health issues like liver, kidney, heart, anemia, and lung diseases. The nails disease(s) treatment(s) varies as well as conditions (AAD, 2014c). There is a variety of dermatology treatments or medical services used for different purposes due to the DTCAs exposure as analyzed in the following subsections.

Types of Medical Services Utilized After Exposure to Dermatology Product Claim Advertisement

Product claim exposure prompted the utilization of a variety of medical services amongst dermatology patients. Thus, Gray and Abel (2012) found that 94% of nurse practitioners working in the cancer field affirmed having received from the patients a

request of the cancer drug advertised. Patients who were in contact with a cancer announcement talked/asked their doctor about the medication featured in the advertisement, or visit a dermatologist office. Besides, the patients requested and obtained from their physician the prescription of the featured medicine.

However, AAD (2013), American Cancer Society (2013b), NCI, (2013a), Samarasinghe et al. (2011), and The Skin Cancer Foundation (2013d) compare to Gray and Abel (2012), identified other drug therapies use after exposure: chemotherapy, immunotherapies/bio-chemotherapy, chemical peeling, medicated creams and solution/topical medication, photodynamic therapy, and Imiquimod.

In conclusion, multiple medical dermatology services are available to dermatology patients who have seen, heard, or read a dermatology product claim announcement: prescription request, a visit to a dermatologist office, chemical peeling, and chemotherapy for instance. The services are different from those used due to the help-seeking advertisement exposure.

Types of Medical Services Utilized After Exposure to Dermatology Help-Seeking Advertisement

Help-seeking advertisement exposure prompted the utilization of various medical services. According to Kontos and Viswanath (2011), a patient exposure to a help-seeking cancer advertisement led to consulting a dermatologist regarding any symptom that could be a sign of the skin cancer. In addition, Kontos and Viswanath added that help-seeking advertisement helped the skin cancer patients to utilize preventive services

(chemoprevention medicine), screening/testing services for early detection of the disease (whole-body imaging and genetic testing), and the search for additional health information outside of the DTCAs (drug's company website/online). In the same view, Narang et al. (2013) found that 59% of American adults searched additional health information via the internet after exposure to a dermatology help-seeking announcement.

Contrarily to Kontos and Viswanath (2011), Samarasinghe et al. (2011) analyzed different nondrug therapies in the context of the treatment options for skin cancer named basal cell carcinoma. In that regard, the authors identified the following surgical and nonsurgical treatment options available for basal cell carcinoma: (a) surgical excision/resection, (b) Mohs micrographic surgery, (c) radiotherapy/radiation, (d) curettage and cautery, and (e) cryotherapy. The Skin Cancer Foundation (2013a) and MDACC (2013) listed the same treatment options plus laser surgery and electrodesiccation for the treatment of basal cell carcinoma. Furthermore, American Cancer Society (2013b), National Cancer Institute [NCI], 2013b, MDACC (2013), and The Skin Cancer Foundation (2013d) identified the following treatments options available for skin cancer and another dermatology patients: lymph node surgery, skin grafting and reconstructive surgery, electrodesiccation, gene therapy/ biological therapy, clinical trial/experimental.

The value of this section is the obvious relationship between help-seeking announcement and the medical services utilization in the context of skin cancer and dermatology care globally. However, the question regarding the same relationship

amongst study's target population suffering from dermatology diseases is still without any answer.

Purposes of Medical Services Utilization After Exposure to Dermatology Product Claim Announcement

According to Samarasinghe et al. (2011), the exposure to dermatology product claim led to receiving medical treatment for the tumor clearance and tumor lesion excision. However, Kontos and Viswanath (2011) found patients utilized medical dermatology services after an exposure to a dermatology product claim announcement to detect a skin cancer or other dermatology conditions early.

Purposes of Medical Services Utilization After Exposure to Dermatology Help-Seeking Advertisement

Adult dermatology patients who have seen, heard, or read a dermatology help-seeking announcement received medical dermatology services to treat the condition or to manage the diseases symptom (MD Anderson Cancer Center, 2013; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013a). Moreover, they received medical dermatology services to detect the disease early (Kontos & Viswanath, 2011). I have presented in the preceding analysis the correlation between the DTCAs and utilization of medical dermatology services by adult patients, in general, however not amongst this study's target population. The following model found in the literature and adopted for this study describes and explained the correlation between the drug DTCA and the utilization of medical services as the result of the exposure.

Model of Impact of DTCAs on the Consumer's Participation in the Medical Decision Making After Exposure

The following model from the literature was the result, and key summary of the literature reviewed regarding this research study question. Indeed, patients did play and continue to play nowadays an important role in the clinical decisions making with the providers due to the pharmaceutical DTCA of prescription drug exposure. Frosch et al. (2010) developed the below explicative model (Figure 1.) of the impacts of prescription drug advertising on the consumer's participation in the healthcare decision making. The model was the results of Frosch et al. (2010) research on the policy and practice of drug advertising in the United States of America.

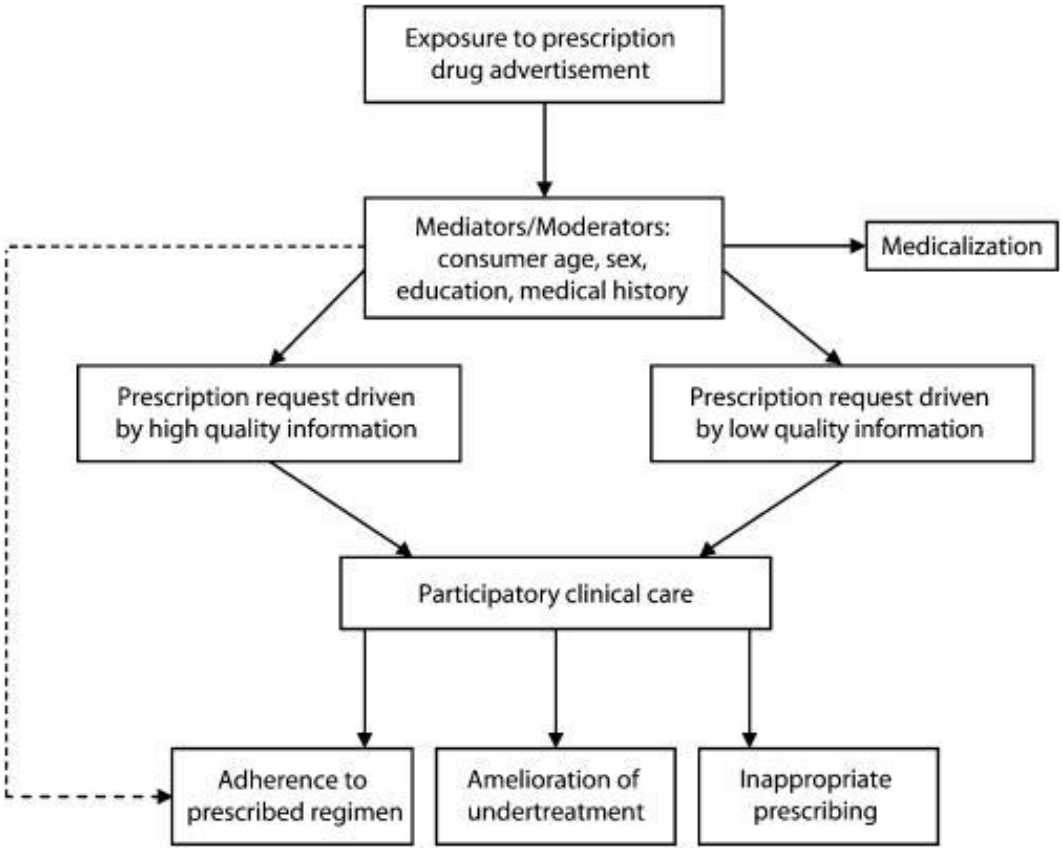

Figure 1. Conceptual model of the effects of prescription drug advertising. Reproduced with copyright official written permission (Appendix Q) from "A Decade of Controversy: Balancing Policy with Evidence in the Regulation of Prescription Drug Advertising", by D.L. Frosch, D. Grande, D.M. Tarn, and R.L. Kravitz, 2010, *American Journal of Public Health, 100*, p. 25. Copyright 2010 by American Public Health Association.

Model Presentation

The model's underlying principle was that both medical care seekers and providers make medical decision in a participative way. The physician did listen and could consider the patient's opinion/request concerning the possible options for addressing the clinical situation. Medical care seekers started by being in contact with the DTCA of a prescription drug. Then, moderating or mediating factors such as patients' age, sex, education, or medical history influenced the two effects of the exposure to the patients. The two effects were to request a prescription from the care providers, or to believe that the condition or behavior could have a medical solution (medicalization).

The information of poor (low) or excellent (high) quality received from the announcement determined the prescription request effect on the patients. The patients participated in the clinical care by requiring from the care provider a prescription of the drug advertised in the DTCA. If the information that drove the patients' participation was of poor quality, the outcome of prescription request effect could be a risky medicine to the patient by the care provider (inappropriate prescribing). The doctor, in this case, could prevent this dangerous outcome by denying the patient's prescription request. However, the physician should be knowledgeable and have a good will to identify and to correct the patient request deemed medically nonconvenient. When information of excellent quality determined the prescription request effect, the effect's outcomes could be sticking to the advised course of treatment (prescribed regimen) and the obtainment of more medical

prescriptions from the physician to improve undertreatment. This model has weaknesses and strengths that are necessary for a review.

Model Critique

The conceptual model has strengths and weaknesses. The model has the merit of explaining the mechanism of participatory clinical care as the effects of prescription drug advertising exposure. Indeed, the elements of the participatory clinical care system were the drug announcement exposure as the starting point. Then, some mediators or moderators factors were patients' sex, age, education, and medical history. Other elements were the information of poor or excellent quality of conveyed by the announcement, the effects of the patient's exposure to the drug advertising that are prescription request and medicalization. Finally, the outcomes in the prescription request effect could be (a) adherence to the treatment plan, (b) an improvement of the quality of treatment received so far, (c) or an inappropriateness of the prescribed drug. Those outcomes depended on the driving types of the quality of the information. All those components interacted to produce a participatory care between care provider and the patient who was in contact with As far as this study is concerned, the model has the merit of demonstrating and confirming the influence of the DTCA (product claim) on the utilization of medical services amongst the patients in general after exposure.

Conversely, the model's weakness is the lack of a test and the test results not presented in the article for the readers' information and use. In other words, the authors seem to have not stated in the article if they have tested or not the model empirically and

statistically before the publication of this article. A test and test results would give more reliability and validity to the model for future use. Also, medicalization effect has gotten less attention in the analysis or the development of the model than the prescription request effect. The model analyzed only one type of the DTCAs: product claim, ignoring the two others that were help-seeking and reminder announcements. Finally, the model was silent regarding the drug announcement effect on the utilization of medical services amongst adult dermatology patients.

The study model that follows (Figure 2.) is an attempt to explain the relationship between the dermatology DTCAs and the utilization of medical services amongst adult dermatology patients in the United States. I did create and propose this model after the literature reviewed. I did empirically and statistically test and validate the model in Chapter 4.

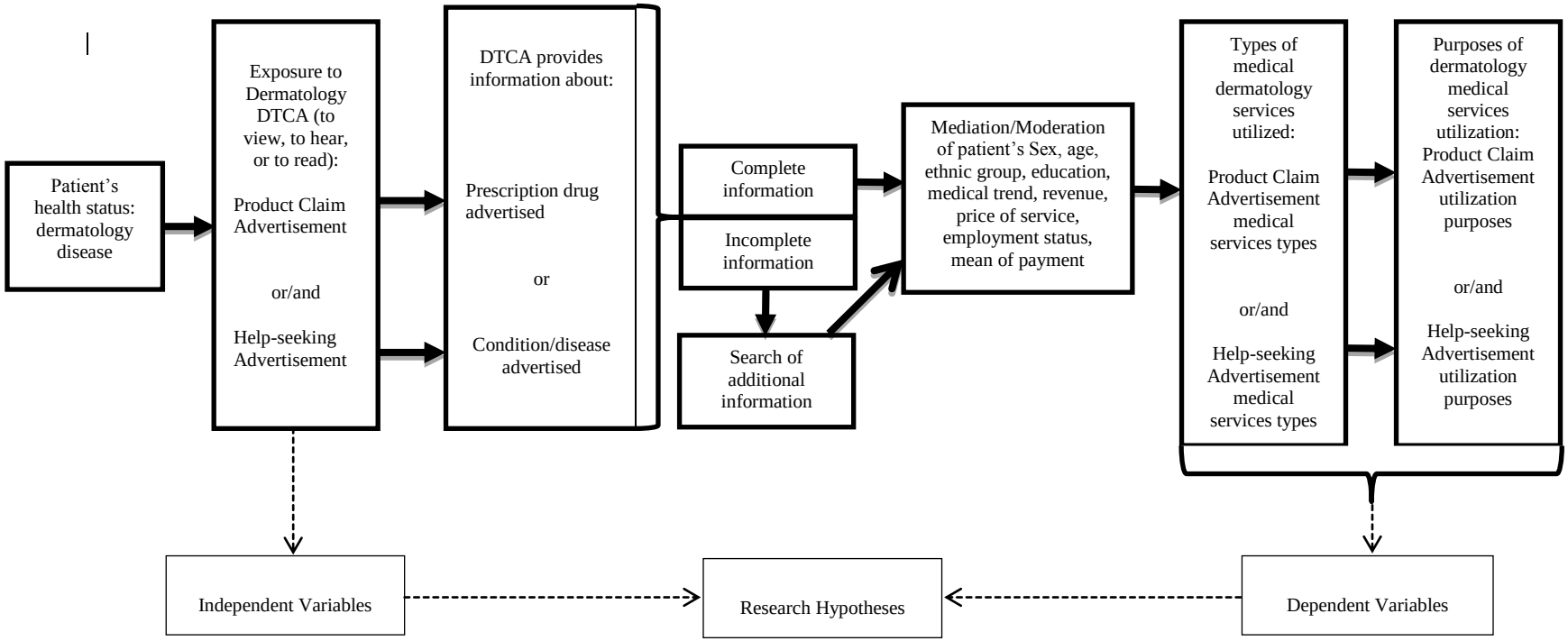

Figure 2. Conceptual model of the relationship between dermatology DTCAs and utilization of medical services by adult dermatology adult patients after exposure to DTCAs, by H. Zouetchou, 2015, "Direct-to-consumer advertisements and medical services utilization amongst adult dermatology patients in the United States", dissertation submitted as partial requirements for the degree of Doctor of Philosophy, Health Services, p. 87, unpublished. Copyright 2015 by Walden University.

Model Background

The background consists of detailing how this model came to the existence. The review of the literature in Chapter 2 provided evidence of the relationship between DTCAs and the use of medical services amongst Americans in general. The existing evidence from the literature, as well as the model in figure 1, inspired this study's model (Figure 2). The study's model aimed to explain the sequences of the exposure to the dermatology DTCAs and the utilization of medical dermatology services by the patients as the consequence of the exposure. The model's foundation is that an exposure to the dermatology DTCAs leads to the utilization of the medical dermatology services in the United States of America. I, empirically tested the model in figure 2 amongst adult dermatology patients who lived in Houston, Texas, and were receiving primary care services at MedStar Primary Care Clinic, or/and attending to the church service at Saint Nicholas Catholic Church. The empirical testing of the study model through the questionnaire completion enabled to verify that the relationship between the DTCAs and the utilization of medical services was valid amongst the study's target population. Then, the statistical test of the model in figure 2 permitted to examine also the P T, which was the theoretical framework of this research study. The figure 2 statistical test was through the research hypotheses statistical testing in the course of the data analysis in Chapter 4. In fact, the independent (DTCAs exposure) and dependent (types and purposes of the utilization) variables of the study are the principal components of the model in figure 2.

Model Presentation

The presentation of the model in figure 2 consists of explaining how an adult dermatology patients utilized medical services as the consequence of the exposure to the dermatology product claim, or/and help-seeking announcements. Indeed, an adult dermatology patient (health status) viewed, heard, or read the dermatology DTCAs (exposure) that could be product claim, or help-seeking. Product claim and help-seeking provided the adult dermatology patient with information that had educational values. Product claim provided information about the advertised drug and the condition treated. Help-seeking conveyed information on the dermatology condition or disease and the available treatment options. The information could be complete or incomplete (sufficient or not to seek and to use medical dermatology services). The adult dermatology patient, after exposure, uses the full information to seek and to utilize the medical dermatology service(s). The use of the full information for the medical dermatology services utilization depends on the mediation or moderation of the patient's individual factors or backgrounds such as sex, age, level of education, medical history, and ethnic group. The medical services utilized vary according to the types of the DTCAs exposure. In that regard, the dermatology patient in contact with the product claim announcement uses for example one or more of the following services: (a) to request prescriptions for the advertised drug from their health care provider, (b) better adherence to the treatment plan and medicalization/to take medication on a regular basis, (d) to remember to fill his/her prescription, and (e) to consult/ask/talk with their doctors about a particular prescription drug advertised. Meanwhile the patient in contact with help-seeking advertisement uses

one or more of these services: (a) to persuade a patient to believe that his/her disease can have a medical solution , (b) to remember his/her condition, (c) to visit/consult the doctor about symptoms, (d) to talk with the physician regarding a condition or illness, (e) to discuss new medical conditions with their physicians, (f) to visit the doctor and to talk about the personal disease, (g) to obtain new diagnosis from their doctors of a medical condition so far ignored, (h) to treat completely conditions undertreated before, (i) to search additional medical information outside of the announcement, (j) to ask the doctor for a referral, (k) to ask the physicians about the tests regarding the condition advertised, and (l) to look for information according to the announcement orientation. When the information is incomplete, the patient will search for additional information outside of the dermatology product claim or help-seeking announcements. Then, he/she uses the complete information to utilize the medical services under the mediation or moderation of the individual factors and for a particular or many reasons.

Dermatology patients exposed to a DTCA utilize medical services for one or multiple purposes. The utilization of medical services after an exposure to a product claim announcement could be for the purpose (s) of (a) to seek recovery from an illness/tumor clearance, (b) for tumor lesion excision, and (c) to check if the person has contacted or not dermatology disease/screening test. Contrarily, patient's exposure to a help-seeking announcement leads to the utilization of medical services for the purpose (s) of wellness and wellbeing.

Finally, product claim and help-seeking are the sets of the independent variables of the study. The types and purposes of utilization of medical dermatology services are

the sets of the dependent variables. Both independent and dependent variables generated the hypotheses of this research study.

Model Critique

The model has strengths. In fact, the study's model explains the possible process of the exposure to product claim, help-seeking, and the consequent utilization of the medical dermatology services by the adult patients. In addition, the study's model presents the elements of the process, when and how they interact during the process of exposure-utilization-purpose. Those elements are the health status, product claim, help-seeking, information, mediators, moderators, types, and purposes of medical dermatology services utilization.

However, the model has weaknesses. Indeed, the study's model does not tell which of the dermatology product claim or help-seeking advertisements could prompt more than others the utilization of the medical services for a purpose by the target population after exposure. Moreover, the model is silent on which characteristic(s) of the product claim, and help-seeking advertisements could prompt more the utilization of which particular medical service and/or purpose. These weaknesses have the solutions in Chapter 4.

Summary and Conclusion

There are evidence from the analysis in this Chapter 2 that product claim and health-seeking advertisements prompt the utilization of the medical services for a purpose or reason amongst Americans in general and specifically the adult dermatology patients. In that regard, an exposure to a product claim advertisement prompted the request for a

prescription of the drug advertised to treat a condition. Moreover, an exposure to a product claim advertisement decided the patients to follow regularly the treatment plans and to believe that medicine was the solution to the conditions. The dermatology patients talked about or requested from the physician a drug that treated skin cancer/condition due to the contact with the advertisement of that drug. The reason for this request was to cure the tumor/disease through drug therapy. Conversely, help-seeking advertisement exposure led (a) to a doctor visit about a symptom, (b) to talk to the doctor about the condition advertised, or (c) to obtain a new diagnosis from the dermatologist. The patients who utilized the medical services sought wellness and wellbeing. The dermatology/skin cancer help-seeking advertisements prompted the use of (a) chemotherapy, (b) preventive services, (c) surgery therapy, (d) screening/testing, and (e) to consult a dermatologist about new symptoms. Multiple reasons justified the utilization of those services: (a) tumor clearance, (b) tumor lesion excision, (c) to avoid dermatology disease, and (d) to check the presence or not of the dermatology disease in the skin.

The relationship between product claim, help-seeking advertisements, and the utilization of medical services for medical reason sought to increase drug therapy and disease awareness amongst patients in general and adult dermatology patients in particular. Indeed, some dermatology diseases were the most curable in the United States. The exposure to the product claim and help-seeking advertisements prompted the utilization of the multiple medical dermatology services for medical reason(s). In doing so, patients could survive from the dermatology disease and could continue to live a healthy and productive life. However, the question of the prediction between product

claim, help-seeking advertisements, and the utilization of medical dermatology services amongst adult patients who lived in Houston, Texas, and were MedStar Primary Care Clinic's patients, or/and members of Saint Nicholas Catholic Church was still without any answer. Therefore, undertaking this study to answer that question was still necessary and required a precise research method definition.

Chapter 3: Research Method

Introduction

The purpose of this study was to describe the relationship between dermatology product claim, help-seeking advertisements, and the types and purposes of the utilization of the medical dermatology services amongst the adult dermatology patients in the United States. The adult dermatology patients sampled were those who lived in Houston, Texas, and were receiving primary care services at MedStar Primary Care Clinic, or/and attending church services at Saint Nicholas Catholic Church.

Past researchers have claimed the relationship between the DTCAs and the utilization of medical services in the United States, in general, but not amongst the specific adult dermatology patient population in Houston, Texas (Limbu & Torres, 2009; Mackert et al., 2010). Chapter 1 was the introduction of the study with the analysis of the concepts of the pharmaceutical DTCAs and the utilization of medical services. In Chapter 1, I addressed the background and the gap in the existing literature on the topic, the problem statement, the purpose of the study, the research questions and hypotheses. Also, I addressed the theoretical framework (PT), the nature of the study, the operational definitions of the study variables, the assumptions, the scope and delimitations, the limitations, and significance of the study. Then, Chapter 2 followed, and I focused on the review of the publications on the relationship between the independent and dependent variables and the theoretical framework of the study. In the review, I aimed to clarify and to understand the state of the problem introduced in Chapter 1. Moreover, I presented the model from the literature that described the relationship between the independent and

dependent variables of the study. Finally, I presented in Chapter 2 this study's model of the relationship between the dermatology DTCAs and the utilization of the medical dermatology services amongst this study population. In Chapter 3, I expand on the Chapters 1 and 2 by analyzing a new component of the study: the methodology used to investigate the research problem stated in Chapter 1 and clarified in Chapter 2. The key contents of this chapter are the research design and rationale of the selection, the methodology focusing on the population, the sampling and sampling procedure, the data collection procedure and instrument, and the pilot study. Besides, in Chapter 3, I analyze the threats to the research validity, the ethical procedure, and do the summary and transition to Chapter 4.

Research Design and Rationale

The Study's Variables

The study's independent and dependent variables are the focus of this section. In this correlation research study, I sought to describe the relationship between dermatology product claim, help seeking advertisements, and types and purposes of medical dermatology services utilization amongst the adult patients living in Houston, Texas. The adult patients were Saint Nicholas Catholic Church members and/or patients at MedStar Primary Care Clinic. In that regard, the set of independent variables were the dermatology product claim and help- seeking advertisements that may prompt the utilization of the medical dermatology services amongst the target population. The items for the observation of the product claim and help-seeking were the characteristics of each as defined in general by the FDA (FDA, 2012f). The sets of dependent variables were the

types and purposes of medical dermatology services used after exposure to the dermatology product claim or/and help seeking advertisements. The observation of the types and purposes of the medical dermatology services utilization were the variables from the current literature reviewed on the topic in Chapter 2. The section of this chapter entitled operationalization of the variables provides readers with the definition of each observation item.

Research Design and Connection With the Research Question

The design and rationale. This research study followed the quantitative design. Social science researchers have the option amongst three complementary types of design, which are qualitative, mixed method, and quantitative (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The qualitative design uses an exploratory method aimed to understand the senses that human beings in a group or individually assign to the problems in society. Data are words (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The qualitative design is inductive or generates general ideas from those individuals. The data collection occurs in a setting. This study is about the relationship between variables and not about the meaning given to the DTCAs and the utilization of medical services in the context of dermatology care.

The mixed method research design is another research design. The mixed method makes the use of both quantitative and qualitative strategies to answer the research question. The combination of the strengths of the two designs leads to a higher strength for the mixed method. This study has existing literature and a testable theory. Therefore,

the combination of both quantitative and qualitative designs was not necessary to answer the research study question.

The quantitative design is the third design available for the social science research. The quantitative design seeks to test theories based on the description of the relationship amongst the variables of interest. The observation of the variables is through the use of instruments that facilitate the generation of numbers for statistical test purposes. The quantitative design is a deductive approach with the key issues being the statistical inference and the replication of the research results (Creswell, 2009). This study falls within the quantitative design given that the purpose is to test the PT by describing the relationship amongst dermatology product claim and help-seeking advertisements (independent variables) and the types and purposes of medical dermatology services utilization (dependent variables). Multiple research methods are available for the implementation of the quantitative design.

The selected quantitative research method and rationale. A cross-sectional survey was the quantitative method of selection for this study. The selection of the cross-sectional survey approach was due to the quantitative nature of the research question (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The cross-sectional survey was not the only quantitative approach. Therefore, other applicable quantitative methods were subject to a comparative analysis to justify the final selection of the cross-section survey for this study. In that regard, the classic experimental method was an applicable quantitative method. The classic experimental method uses two identical groups to conduct the inquiry: the experimental and control groups.

The classic experimental allows the assessment of treatment or independent variable. The researcher randomly assigned the cases to the groups (Frankfort-Nachmias & Nachmias, 2008). A pretest takes place with the experimental group before the administration of the treatment. Then, a posttest follows after the same group has gone through the treatment. The control group does not go through the treatment (Frankfort-Nachmias & Nachmias, 2008). The experimenter compares the results of the tests between the two groups. The aim is to see if there are any significant difference between the two groups that are attributable to the effect of the treatment (Frankfort-Nachmias & Nachmias, 2008).The strength of this method consists of allowing the establishment of the cause-en-effect relationship between variables, the manipulation of variables, the comparison amongst control and experimental groups, and the random assignment of the cases to each of the groups. The risk of internal invalidity is very limited (Frankfort-Nachmias & Nachmias, 2008). The limitation is that the generalization of the research results to the nontested population is impossible (Frankfort-Nachmias & Nachmias, 2008). The classic experimental always rhymes with biological and physical sciences rather than the social sciences. The structure is rigid and classic experiments cannot easily fit to study a social phenomenon (Frankfort-Nachmias & Nachmias, 2008). This research study did not use this method because the aim was not to assess treatment.

The panel was another applicable quantitative method for this study. The panel is a quasi-experimental method. The panel method is necessary when the researcher wants to observe changes in the dependent variables over a long period (Frankfort-Nachmias & Nachmias, 2008). The researcher assesses the same panel on a regular frequency and time

intervals. In that condition, the researcher has the most accurate assessment of the situation under investigation before and after the assessment (Frankfort-Nachmias & Nachmias, 2008). The panel facilitates the identification of the variable that has an effect on other variables, and the collection of data from the same person is over time (Frankfort-Nachmias & Nachmias, 2008). The limitation of the panel research is the difficulty constituting a representative sample of respondents at the beginning of the research. Then, it is difficult to have the respondents' approval to participate the research regularly and for a long time (Frankfort-Nachmias & Nachmias, 2008). The panel is not appropriate for this research giving that the research question can be answered using data collected once and not many times.

One-short case study was part of the quantitative methods that could be the methodological support. The preexperimental one-short case study method refers to the observation of only one event or a group at a specific moment in time (Frankfort-Nachmias & Nachmias, 2008). The one-short case study, as another preexperimental method, does not randomly assign cases to the experimental groups. The one-short case study does not permit the comparison of both control and experimental groups. Moreover, the sample is not randomly drawn from the general population. No statistical technique helps to control the threats to internal validity of the research (Frankfort-Nachmias & Nachmias, 2008). One-short case study helps in pretesting hypotheses and conducting exploratory research as the base of future research (Frankfort-Nachmias & Nachmias, 2008). However, the lack of a random sample does not give equal chance to all members of the population to appear in the sample. Besides, the lack of random

assignment of the participants to the groups cannot lead to a representative sample. The aim of this research is not to test treatment: One-short case study is not appropriate.

The cross-sectional survey was another quantitative method. Cross-sectional survey research method consists of asking a sample selected randomly or not from the general population to express the attitude and views about the phenomenon under investigation. The sample does so by responding to a series of questions related to the past experiences and backgrounds. The researcher, when appropriate, will infer the results from the representative sample of the general population (Frankfort-Nachmias & Nachmias, 2008; Creswell, 2009). Cross-sectional method allows the researcher to establish a cause-and-effect relationship amongst variables, or to describe the type of relationship amongst the variables (Frankfort-Nachmias & Nachmias, 2008). The survey offers a rapid data collection, the economy of time, and the identification of the characteristics of the general population only in the sample (Creswell, 2009). The limitation of the cross-sectional method resides in the difficulty to control the factors that affect the research internal validity and the use of sophisticated instruments like a questionnaire and computer software (Frankfort-Nachmias & Nachmias, 2008). The strength of the approach is the rapid data collection and analysis, the statistical inference, the random sample when possible and the use of statistical analysis to reduce the risk of internal invalidity (Frankfort-Nachmias & Nachmias, 2008; Creswell, 2009). The cross-sectional survey adheres to this study whose purpose is to describe the relationship amongst the quantitative variables.

The above review of the applicable quantitative methods led to the conclusion that cross-sectional research design was appropriate to address this research question. In fact, the cross-sectional research design allows rapid data collection and analysis, the statistical analysis and inference when appropriate, the random sample and the test of theory via hypotheses that establish the relationship amongst independent and dependent variables (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). This study's question is about a statistically significant relationship between the independent and dependent variables. This study's question is in alignment with the cross-sectional design purpose.

Furthermore, this study tested PT via four hypotheses to describe the relationship between product claim, help-seeking advertisements, and types and purposes of medical services utilization in the context of dermatology care (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). Also, the cross-sectional survey uses instruments to measure the variables and generate quantitative data or numbers for statistical analysis to answer the research question (Creswell, 2009). The measurement instrument for this study was a structured questionnaire. The questionnaire enabled the collection of quantitative data and the use of statistical tools to analyze data and to answer the research question.

Cross-Sectional Survey Design's Constraints

The cross-sectional survey has multiple constraints. The limited time is one of the constraints: data collection occurs at a specific moment in time. In other words, the

researcher collects data once not over time and at a specific period (Creswell, 2009). The researcher collected primary data from respondents during one month and 10 days.

Another constraint is the resources necessary to conduct the cross-sectional survey fully: material and finance. In fact, primary data collection requires instrument or questionnaire. The researcher can develop one or use an existing one, if possible, with the written permission of the copyright (Creswell, 2009). The development or the written permission has a cost. Furthermore, online primary data collection requires a creation or use of a website to host the survey and for respondents to take the survey. The secondary data or the use of the existing primary data has a fee. Also, the researcher and other data collection team person do travel for the data collection. The respondents may have financial compensations for the participation in the study as well as the research team. The accommodation and feeding costs for the research team do exist. Then, data analysis and interpretation both need a computer and statistical software like SPSS (Frankfort-Nachmias & Nachmias, 2008). Some of those constraints affected this study: use questionnaire, computer, and SPSS software.

Consistency of the Cross-section Survey Selection With the Designs in Health Sciences

Health sciences are part of social science. Three designs are dominant in social sciences for the inquiry as developed earlier. The three designs are quantitative, qualitative, and mix methods (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The first tests theories to describe the relationship between variables. The second is the exploration of the understanding of the meanings assigned to problems by individuals or

groups. The third combines the quantitative and qualitative designs' strength to respond to the research question (Creswell, 2009). Cross-sectional survey belongs to the quantitative design and has the reputation of being the most common method in social sciences (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The cross-sectional survey follows a specific methodology for data collection, analysis, interpretation, and reporting.

Methodology

Population and Disease of Interest

The Walden University's Institutional Review Board (IRB) approval number for this study was # 12-09-14-0177813. The study's target population was American residents male and female aged 18 years and over who had skin, hair, and/or nail disease. He/she was living in Houston, Texas currently receiving primary care treatments at the MedStar Primary Care Clinic or attending to the church services at Saint Nicholas Catholic Church. The individual did speak, read, and understand the English language. The individual resided in Houston, Texas for at least six months continuously. Then, the person should have seen, viewed, or read a pharmaceutical dermatology advertisement directed directly to the consumer about a dermatology drug or disease in the past 12 months. The individual should have utilized a medical dermatology service/treatment for a medical reason as the consequence of having seen, viewed, or read (exposure) a pharmaceutical advertisement directed to the dermatology patients. The 12 month period started from the questionnaire completion day. The population size was unknown and could not be estimated at the time of the study.

The diseases of interest were skin, hair, and nails diseases (dermatology diseases). According to the AAD (2014a), dermatology diseases represented the most popular motivation amongst people who visited a physician's office in America. Dermatology diseases are multiple such as Acne, head lice, below-the-belt dermatology conditions, hair loss, melanoma, psoriasis, eczema, imiquimod, rosacea, scabies, vitiligo, and skin cancer (AAD, 2014a; University of Texas Medical Branch [UTMB Health], 2014).

Sampling, Sampling Procedures, and Sites of the Study

Sampling and procedures. The study's sampling strategy was the nonprobability. The complete list (sampling frame) of the study's population was not available for the use of the random sampling method. Consequently, the type of sampling was a nonprobability sample. The lack of a sampling frame made impossible to select randomly or to determine the probability of each member of the population to appear in the sample (Collins et al., 2006; Frankfort-Nachmias & Nachmias, 2008).

The nonrandom purposive sample scheme helped to select from the population the members of the sample. In fact, the selection of the sample for the study was based on the use of the pre-determined inclusion criteria (eligibility section of the questionnaire). The selected respondents were available and willing to participate in the study (Collins et al., 2006; Frankfort-Nachmias & Nachmias, 2008). The questionnaire contained eligibility or screening section. The eligibility sections aimed to filter the respondents and to assure that only those who bore the key characteristics of the population participated in the study. The screening section was the support to my personal judgment. The selection or recruitment of the sample took place in the face-to-face encounters with the adult

dermatology patients at the study sites during their medical appointment and church service occasions.

Study sites. There were two study's sites: MedStar Primary Care Clinic and Saint Nicholas Catholic Church both in Houston, Texas. Houston city had a population of 2,097,217 people in 2010. The Houston's diversified race make-up was White (50.5%), Black or African American (23, 7%), American Indian and Alaska Native (0.7%), Asian (6.0%), Native Hawaiian and Other Pacific Islander (0.1%), Two or More Races (3.3%), Hispanic or Latino (43.8), and White alone, not Hispanic or Latino (25.6%). Houston city had three counties: Fort Bend, Harris, and Montgomery (United States Census Bureau, 2014). Houston occupied the fourth position as the largest city in population in the United States after New York, Los Angeles, and Chicago (The City of Houston, 2014).

The first study's site was MedStar Primary Care Clinic in Houston, Texas. The study's target population received primary care medical services. The selection of this site was due to the diversity through multicultural and multiethnic groups that characterized MedStar Primary Care Clinic's community. Then, MedStar offered diversified types of community services to a diversified target population. Indeed, MedStar Primary Care Clinic is a for-profit organization established since 2008 in Houston, Texas (MedStar Primary Care Clinic [MedStar], 2014). The community members were African-American, African immigrants, Hispanics, and Whites of all ages and level of education (MedStar, 2014). The members of the community had different dermatology services utilization experiences. Indeed, MedStar, in addition to check-ups, cancer screening, and treatment of chronic diseases (diabetes), offered hypertension,

weight loss program, smoking cessation, travel medicine, women health, and hypercholesterolemia treatment/medical services to patients (MedStar, 2014). Some of those patients were without insurance, had limited insurance, and/or had a full coverage health insurance plan (MedStar, 2014).

The second study's group was Saint Nicholas Catholic Church in Houston, Texas. The target population attended the church services at Saint Nicholas parish. Saint Nicholas is a multicultural and multi ethnics' group community. Then, Saint Nicholas had multiple types of community service rendered to the community. Indeed, Saint Nicholas Catholics Church was a nonprofit religious organization. Saint Nicholas was the oldest church for Blacks in Houston area (Saint Nicholas Catholic Church, 2014). The community members were African-American, African immigrants, and Whites of different ages and levels of education (Saint Nicholas Catholic Church, 2014). The members of the community had a variety of experiences regarding dermatology services utilization. Saint Nicholas Catholic Church offered multiples services to the Houston community: education, professional skills and financial training, occasional accommodation in case of disasters, and parenthood teaching (Saint Nicholas Catholic Church, 2014). The population served was unemployed, sick, and other people going through any change in their life (Saint Nicholas Catholic Church, 2014).

Eligibility criteria. The selection of the sample followed some criteria. The eligibility criteria for the inclusion of a member of the population to the sample were (a) to attend church services at Saint Nicholas Catholic Church or/and to receive primary care services at MedStar Primary Care Clinic in Houston, Texas, (b) to have been

diagnosed with a dermatology disease in the past 12 months starting from the questionnaire completion date, (c) to be at least 18 years old, (d) to have seen, read, or heard (exposure) a dermatology advertisement about a dermatology prescription drug, or/and disease directed directly to the dermatology patients, and have received a treatment for a medical reason because of the exposure to the advertisement within one year, (e) to speak, read, and understand English language, (f) to be receiving dermatology treatment at a dermatology facility in Houston, Texas, and (g) to be living in Houston, Texas for at least six months continuously.

Sample size determination. The power analysis method permitted to determine the sample size of the study. G*Power 3.1.2 computer software helped to determine the sample size of 82 individuals for this research study. The test family selected was t-tests. The statistical test used was Correlation: point biserial model. The type of power analysis was A priori compute required sample size-given α, power, and effect size. The input parameters were two-tailed hypotheses testing, a Cohen's d medium conventional effect size = .30, α = .05 and the power = .80%. The output parameters were a critical value = 1.99, the degree of freedom = 80 and actual power = .80%. However, by rounding off 82, 120 people were the final sample size. I equally surveyed this sample size within the two settings: 60 respondents at MedStar (with 50% males and 50% female), and 60 respondents at Saint Nicholas (with 50% males and 50% female). There were no data available to breakdown proportionally the sample size. I am going to analyze the recruitment strategy used to form the sample.

Procedures for Recruitment, Participation, and Data Collection

Respondents' recruitment, informed consent provision, and participation. The recruitment of the sample took place at the study's sites. I was the recruiter of the sample. I obtained from the authorities of the study's sites the written permissions to conduct the study within the facility (see Appendices R and S).Then, each target patient that I met face-to-face in the lobby of the church or patient waiting area of the clinic received an A5 format flyer. The A5 flyer introduced the study to the potential respondent (see Appendix F). Moreover, A3 format flyers were posted in the church's lobby and the clinic's patient waiting areas to create the study awareness amongst the community (see Appendix D). The patient who accepted to participate in the study provided the informed consent and participated in the study as described below.

The informed consent provision and participation followed multiple steps. This study's informed consent provision started with my completion of the online training course about protecting human research participants at http://phrp.nihtraining.com/users/login.php on December 7, 2013. The National Institutes of Health issued the certificate of completion (See Appendix A) to me as the recognition of the qualification and ability to conduct research on human participants (National Institutes of Health, 2011). Then, I prepared and submitted the Informed Consent and other survey materials to the Walden's Internal Reviewed Board (IRB) for approval (Office of Research Integrity and Compliance, 2011).

The participant provided the informed consent and participated in the study as followed after Walden's IRB approval and authorization of the study:

1. After reading the A5 flyer during the recruitment described above, the patient, who was interested and accepted voluntarily to participate in the study, received from me the Informed Consent Form (Appendix C). Then, I specified to the patient the place where to meet for the completion after the church service or meeting with the physician. The recruit gave the informed consent before the completion of the questionnaire after he/she attended to the church service or met with the primary care physician. The recruit had adequate time to review study information, ask questions if any, before giving an informed consent, and participate in the study.

2. The patient provided an implied informed consent through the completion of the questionnaire. The participant did not provide a physical signature on the Consent Form because of the participant's privacy protection. Moreover, to respect the participant's privacy during the completion, the questionnaire completion took place at the parish hall behind the closed doors, a different building within the parish's perimeter. Besides, the questionnaire completion with individual participant took place at the clinic meeting room (with the doors closed) different from the patient waiting area. The recruitment, Informed Consent provision, and the completion of the questionnaire happened the same day at the study site during each survey day.

3. The participant answered to the eligibility questions of the questionnaire (Appendix G), and I recorded the answers to reduce the risk of bias. The

eligibility questions answer determined if the participant was eligible or not for the study before the completion of the main questionnaire.

4. The eligible participant answered to the main questionnaire, with me recording the answers.

5. With a noneligible patient, I terminated the completion, thanked the participant, and attempted to recruit a new participant or attended to the next scheduled participant.

6. During the eligibility section completion for recruitment, the participant who could not continue for any reason merely terminated the completion. I continued with another recruitment attempt or attended to a next scheduled participant.

7. The participant who could not continue the main questionnaire completion for any reason merely terminated the completion. I, in that case, attended to the next scheduled participant.

8. I reviewed, with the participant, the completed questionnaire for validation using the questionnaire completion guide (Appendix H) and terminated the specific completion.

9. Finally, at the end of each survey day, I conducted the last review of the entire completed questionnaire to check the accuracy and the consistency of the responses. If any mistake or inconsistency noted at that time, I merely eliminated that questionnaire.

The informed consent form was the summarized information about the nature and purpose of the study, how to take part to the study, the emphasis on the voluntary

participation in the study, the risks and what to gain taking part into the study. Also, the informed consent described the confidentiality measures and the ethical considerations of the study.

The specific demographics data were necessary to collect during the survey. Indeed, dermatology disease is of all age, race, ethnic groups, gender, and locations in the United States (Memorial Sloan-Kettering Cancer Center [MSKCC], 2013; Skin Cancer Foundation, 2013e). Consequently, the demographic data collected during the survey as part of the study questionnaire (see Appendix G) were the age, race, ethnic groups, gender, level of education, yearly income, type of dermatology disease, state, city, and type of mean of payment of the medical dermatology services received.

Data collection. I used, for the data collection, the face-to-face technique to survey the target individuals eligible for the study (Creswell 2009; Frankfort-Nachmias & Nachmias, 2008). According to the literature, the response rate for the face-to-face survey turns around 95% versus 20 to 40% for the mail survey (Frankfort-Nachmias & Nachmias, 2008). The projected response rate for this study was 85%. The data collection following the procedure described earlier lasted a month and 10 days. I coded all the completed and approved surveys and used SPSS 21.0 to computerize the surveys and to conduct the data analysis. Then, I did the results interpretation and reporting. The survey package was (a) a copy of the informed consent (see Appendix C), (b) a copy of the questionnaire, (c) a questionnaire completion guide for respondent (see Appendix H), (d) a pencil, and an eraser (Creswell 2009; Frankfort-Nachmias & Nachmias, 2008).

Survey exit and follow-up. The respondent exited the survey after the joint review and approval of all the answers by both the respondent and I. No follow-up was necessary during this study. However, a pilot study was necessary to test, correct, and to validate the questionnaire before the use for the final study.

Pilot Study for Instrument Validation

Instrument development. The research instrument was a structured questionnaire. I developed the study questionnaire by the year 2013 end with the assistance of the dissertation committee members at Walden University (Dr. Kadrie, Chair and Dr Raj, Methodology Expert), and Dr. Patricia Ann Parker, Associate Professor at MDACC of Houston, Texas, department of behavioral science. All parties reviewed the first and second drafts of the questionnaire from me. I used validated health services research samples questionnaires from Dr. Parker (quality of life survey 2010 in adult cancer survivors) and Dr. Raj (chronic diseases questionnaire 2007) for inspiration. Then, Dr. Parker, Dr. Raj, and Dr. Kadrie made recommendations for improvement after the review of the drafts. I corrected the second draft consequently and resubmitted the amended copy to the three for final approval. The current study questionnaire was the final version approved by Dr. Parker (see Appendix N & L), Dr. Raj (see Appendix I) and Dr. Kadrie (see Appendix J).

This last version of the study questionnaire was first validated using professional or expert opinions approach as followed. Indeed, the experts took part to the questionnaire design focusing on the professional accuracy of the study's variables used in the questionnaire. In fact, Dr. Mays, dermatologist at MDACC, validated the

questionnaire after multiple reviews and three sessions of clinical observations (24 hours) with me at the MDACC's melanoma and skin center (See Appendix T). He focused on the dependent variables (types and purposes of treatment). In the same logic, Dr. Valencia Thomas, Associate Professor at the MDACC, edited the Mohs section (dependent variables) (see Appendix K). Dr. Thomas recommendations for improvement were included in the questionnaire.

Regarding the DTCAs, Thomas Abrams, Masters of Business Administration (MBA) from the Food and Drug Administration's Office of Prescription Drug Promotion in Maryland validated the product-claim and help-seeking advertisements characteristics from the FDA's website used in this questionnaire (see Appendix O). The product-claim and help-seeking advertisements characteristics were the independent variables of the study.

Instrument validation plan. The version of the questionnaire validated through expert opinion as described above (see Appendix G) went through the pilot study and reliability test for the second and final validation. The pilot study established the reliability of the study's instrument based on the Cronbach's Alpha α test results. The final data collection used the validated questionnaire from the pilot study. Indeed, the questionnaire was new and used for the first time in this study. Consequently, it was necessary to pilot the instrument before the final data collection (Field, 2009). A reliable instrument or questionnaire measures most likely the construct under investigation during each use in the same conditions (Al-Dmour et al., 2013; Creswell, 2009). The objective of the reliability test was to confirm or not that the study's findings would be the same

every time that the researchers repeat the study keeping every condition unchanged (Field, 2009; Frankfort-Nachmias & Nachmias, 2008; Thatcher, 2010). The reliability test method was the split-half reliability. This method, using SPSS computer program, divided into two the data randomly. Then, a high computered correlation between the two halves of the data indicated the reliability of the questionnaire. In that regard, a Cronbach's Alpha α value of .7 through .8 (Field, 2009) or 0 through 1(Al-Dmour et al., 2013; Green & Salkind, 2011) was valid to establish the internal consistency or reliability of the scale and consequently, the questionnaire validity (Dedeli & Fadiloglu, 2011; Green & Salkind, 2011).

The planned and achieved pilot sample size was twelve participants. The pilot sample was selected identically (six from each study site) from the study sites following the selection method presented earlier. The twelve pilot study's respondents were not part of the final sample. The pilot study was planned to help to identify and correct any mistake or malfunctioning from the questionnaire regarding questions, format, and scales before the final study.

The Likert scale of attitude permitted to measure the attitude and views of the patients regarding the DTCAs of dermatology drug or disease prompting the utilization of the medical dermatology services for medical reason(s). The questionnaire had six scales: (a) dermatology product claim advertisement exposure scale (DPCAES), (b) dermatology help-seeking advertisement exposure scale (DHSAES), (c) types of medical dermatology treatments utilized after exposure to the dermatology DTCA of prescription drug scale (TDMTUEPDAS) , (d) types of medical dermatology treatments utilized after exposure

to the dermatology disease DTCA scale (TDMTUEDDAS), (e) purposes of the utilization of medical dermatology treatments after exposure to dermatology DTCA of prescription drug scale (PUDMTEDDAS), and (f) purposes of the utilization of medical dermatology treatment after exposure to dermatology DTCA of disease scale (PUDMTEDAS). The scales (a) had 10 items, (b) five items, (c) seven items, (d) 14 items, (e) four items, and (f) four items.

Instrumentation and Operationalization of Constructs

Identifying instrument and literature supporting the development. I have identified in this paragraph the instrument, mostly the measurement scales, and presented the publications that shed light on the instrument development. The quantification of a concept is the primary purpose of the measurement (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008; Likert & Hayes, 1957; Rothmann et al., 2009). Therefore, the study's measuring tool was the Likert interval scale of five points included in the questionnaire which was the main research instrument. This scale existed since 1920 due to Renis Likert's work (Likert & Hayes, 1957; Hartleya & Betts, 2010). The scale aimed to measure the individual's attitude toward a phenomenon under investigation. In that regard, the researcher created a list of positive verbal statements to which people provided their answers to each individual item on a scale (Carifio & Perla, 2007; Frankfort-Nachmias& Nachmias, 2008; Jamieson, 2004; Likert & Hayes, 1957). The scale usually was a five-point scale with equal interval. The point five was always assigned to the positive end and one to the negative end of the scale (Chomeya, 2010; Hartleya & Betts, 2010; Jamieson, 2004; Likert & Hayes, 1957).

The Likert interval scale of five points (where one mean Not agree at all, two means Not agree, three means Agree/Not agree, four means Agree, and five means Totally agree) served to measure the variables in the questionnaire. Each value from one through five was the weight and the direction of the respondent's answer the item depending on how favorable or not he/she was regarding the item (Frankfort-Nachmias & Nachmias, 2008). This allowed the generation of the numbered data for the statistical tests and analysis using SPSS 21.0 computer software (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008; Likert & Hayes). The questionnaire had six scales as described in the pilot section above. Each had a certain number of items or positive verbal statements on which the respondent expressed his/her attitude about the problem under investigation.

The questionnaire was a set of 38 questions with 24 closed-ended, six matrix question/rating, and height open-ended (Frankfort-Nachmias & Nachmias, 2008). The questions provided information about the following aspects of the research: (a) eligibility criteria, (b) demographics/background, (c) exposure to the dermatology pharmaceutical DTCA of prescription drug, (d) exposure to the dermatology pharmaceutical DTCA of disease, (e) utilization of medical dermatology service(s)/treatment(s) after exposure to a dermatology pharmaceutical drug announcement, (f) utilization of medical dermatology service(s)/treatment(s) after exposure to a dermatology pharmaceutical disease announcement, (g) purpose of the utilization medical dermatology service(s)/treatment(s) after exposure to a dermatology pharmaceutical drug announcement, and (h) purpose of the utilization of medical dermatology service(s)/treatment(s) after exposure to a

dermatology pharmaceutical disease announcement. The length of the questionnaire was around 30 minutes.

Likert scale reliability and validity critiques. The section addresses the limits of this study instrument's reliability and validity method. The reliability and validity of the questionnaire took place during the pilot study as described earlier. Cronbach's Alpha α method allowed in the previous studies to establish the Likert scale's reliability and construct validity. In fact, Dedeli and Fadiloglu (2011) in their study on obesity used test-retest method to verify the reliability and the content validity of the Likert scale. As stated in the pilot section above, a reliable and valid instrument permits to obtain the same findings over time (Frankfort-Nachmias & Nachmias, 2008). However, the Likert scale's validity depends on how the researcher creates the positive statement for measurement. Moreover, the Likert scale's validity depends on the identification and control by the researcher of the specific threats to the study validity (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). Finally, the spilt-half reliability or the way the data set is divided into two determines the results of the test in certain cases (Field, 2009) independently of the variable measured in the study.

The variables to measure to address the research question. The variables measured on the interval scale for hypotheses testing were the characteristics of the pharmaceutical product claim and help-seeking DTCAs as defined in general by the FDA (independent variables). The other variables for the measurement were the types and purposes of the medical dermatology services utilized as the consequence of the target population exposure to a dermatology product claim and help-seeking (dependent

variables). The complete list of the independent and dependent variables of the study were in the Chapters 1 and 2, operational definitions sections.

The data to assess these variables in order to answer the research questions were the primary data collected from the respondents during the face-to-face questionnaire completions. The measurement instrument was a structure questionnaire with five-point Likert scale as presented above. The respondents rated on the product claim or help-seeking scales the DTCAs' characteristics and the medical dermatology services utilized after an exposure to dermatology DTCA.

The variables measurement required the use of different levels of measurement that were necessary for this study. The first level was the nominal (use of numbers to assign modalities or answers to each categorical variable and demographics). The race, ethnic groups, gender, level of education, type of dermatology disease, state, city, and type of mean of payment which were categorical variable used this level of measurement (Frankfort-Nachmias & Nachmias, 2008). The second level was the interval (to measure the continuous variables respecting the same exact and constant distance between them) appropriate for the incomes and ages as quantitative variables (Frankfort-Nachmias & Nachmias, 2008).

The third was the ratio level of measurement (to describe variables with absolute and fixed natural zero point, or have identical distance between them). This level helped to calculate the mean age of the respondents (Frankfort-Nachmias & Nachmias, 2008).

Operationalization of the Variables of the Study

Terminology. *DTCAs:* Announcements or information about dermatology drug, disease, treatment options, and devices passed directly to the dermatology patients by pharmaceutical companies and distributors through the television, radio, newspapers, telephone, brochures, magazines or online without any medical professional mediation (Hall, Jones, & Hoek, 2010; Lee-Wingate & Xie, 2010).

Help-seeking advertisement: Announcement that talks only about the dermatology disease or condition without any reference to a drug that can treat the condition (FDA, 2012d, 2012f; La Barbera, 2012).

Medical services/physician services: Dermatology healthcare services or supplies delivered or whose delivery is coordinated by a physician or medical doctor who has a medical license to practice medicine or osteopathy (Healthcare.gov, 2013; GPO, 2013).

Product claim advertisement: Announcement that states the dermatology drug name, the treated condition, and the risks and benefits related to the use of the advertised drug (FDA, 2012b, 2012f; La Barbera, 2012).

Purpose of medical services utilization: Reason why the dermatology care seeker utilizes medical care services. The reason can be the disease prevention, the treatment of disease, the monitoring, to seek the well-being, the protection or to alleviate a condition (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008).

Dermatology disease/condition: Disease(s) that attacks skin, hair, and nails (AAD, 2014b).

Type of medical services utilization: A particular medical service or care provider that can be a nurse, hospital, surgeon, or a physical therapist used by a dermatology care seeker (Aday & Anderson, 1974; Shi & Singh, 2008).

Utilization of medical services: Reception of dermatology services provided by or under the supervision of a State's licensed dermatologist at a physical place, for an identified medical reason, and based on a frequency of utilization (Aday & Anderson, 1974; Shi & Singh, 2008).

Operational definitions. The following were the operationalization of the study variables.

Dermatology help-seeking/disease advertisement. *Description of the type of dermatology disease without any recommendation of a specific dermatology drug for treatment:* The advertisement presents to the public the disease and its symptoms without telling what drug can treat the condition (FDA, 2012f).

Encouraging people with the symptoms of the described type of dermatology disease to talk to their doctor: Recommendation to the public to consult the dermatologist if the person notices on the skin, hair, or nails any indication/sign of the advertised disease (FDA, 2012f).

Inclusion of the company's name of the advertised dermatology drug: Designation of the drug's manufacturer (FDA, 2012f).

Provision of a telephone number/website to call or to visit for more information about the advertised dermatology disease (described condition): Communication to the

public of the available telephone number or website to use to collect extra information regarding the particular advertised dermatology disease if necessary (FDA, 2012f).

Dermatology product claim or prescription drug advertisement (characteristics). *Equal statement of the advantages and possible negative effects of the dermatology drug use:* Presentation to the patients, in a balanced way, of what are the benefits and potential negative consequences of using the advertised drug (FDA, 2012d, 2012f).

Equal statement of the benefits and risks associated with the dermatology drug use: Equitable presentation of the advantages and dangers related to the use of the advertised drug (FDA, 2012f).

Inclusion in the dermatology print product claim advertisement of the statement. "You are encouraged to report negative side effects of prescription drug to the FDA Visit MedWatch5 or call 1-800-FDA-1088.": Clear statement of how the patient can communicate to the FDA office any not desired secondary consequences of the drug advertised (FDA, 2012f).

*Statement by the dermatology broadcast product claim of different sources where to find the FDA approved prescribing information of the advertised drug (*adequate provision)*: S*tatement of where the patient can get additional product information approved by the FDA

Statement by the dermatology audio broadcast product claim of the most important risks of the dermatology drug (major statement): Presentation of the most serious dangers that may encounter the dermatology drug user.

Statement by the dermatology print product claim of all the drug risks approved by FDA as prescribing information (brief summary): Presentation of the dangerous aspects of the drug approved by the FDA and contained in the drug information or label.

Statement of the most significant dermatology drug's risks: Presentation of the very important dangers that the patient may face taking the advertised drug (FDA, 2012f).

Statement of the name of the dermatology drug: Statement of the vulgar designation of the drug approved by the US government (brand) and the US government non-approved drug designation used (generic) to advertise the drug (FDA, 2012f).

Statement of a minimum of one type of dermatology disease (the condition[s]) treated by the advertised dermatology disease drug (approved drug use by the FDA): Presentation of the form of dermatology disease treated by the advertised drug (FDA, 2012f).

Purposes of medical services utilization after exposure to dermatology help-seeking/disease advertisement. *Early detection of the dermatology disease:* Diagnosis of the condition at its very first stage (MDACC, 2013a; Kontos & Viswanath, 2011).

Dermatology disease symptom management: Preventive measures taken, self-examination of the skin to detect any change that may indicate a dermatology disease

type, identification of the surrounding possible causes for more prevention and control, and screening test when necessary (Kontos & Viswanath, 2011).

Tumor/disease clearance: Complete cure of the disease (Samarasinghe et al., 2011).

Tumor/disease lesion excision: Use of instruments to remove the abnormal part of the cell or tissue and its surrounding normal cell in order to cure the dermatology condition (MDGuidelines, 2013; Samarasinghe et al., 2011).

Purposes of medical dermatology services utilization after exposure to a dermatology product claim/drug advertisement. *Mohs defect repair using a rhombic transposition:* Rebuilding of the part of the body damaged by the dermatology disease using Mohs surgery and the rhombic transposition method (Samarasinghe et al., 2011).

Treatment/cure of the dermatology disease looking for well-being: Complete destruction or removal of the dermatology disease so that the patient will become healthy (MDACC, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

Tumor/disease clearance: Complete elimination of the dermatology tumor (Samarasinghe et al., 2011).

Tumor/disease lesion excision: Removal of the abnormal part of the cell and its surrounding normal tissue (MDGuidelines, 2013; Samarasinghe et al., 2011).

Types of medical dermatology services utilized after exposure to dermatology help-seeking/disease advertisement. *Consulting dermatologist regarding any symptom related to dermatology disease for early detection: D*iscussion with the dermatologist

about the possible symptoms of the dermatology disease that the patient has (Kontos & Viswanath, 2011).

*Dermatology disease screening test: C*heckup to diagnose a dermatology disease before any symptom appears *(*Kontos & Viswanath, 2011; National Cancer Institute [NCI], 2013e).

Gene therapy/biological therapy: Destruction of the dermatology disease by including genes into the patient's cells affected by the cancer (NCI, 2013a; The Skin Cancer Foundation, 2013d).

Clinical trial/experimental: Participation to a research study that seeks to know how well a dermatology disease treatment approach or technique works on individuals (American Cancer Society, 2013b; MDACC, 2013a; NCI, 2013e; The Skin Cancer Foundation, 2013b).

Cryotherapy/Cryosurgery: Use of the liquid nitrogen to freeze and eliminate skin tissues affected by the disease *(*Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b; MDACC, 2013a).

Curettage and cautery/Curettage and electrodessiccation/Electrodessiccation and curettage: Use of instruments called curette to scrap off the skin tumor followed by the destruction of any remaining tumor with the heat generated by the electrocautery needle (AAD, 2013; American Cancer Society, 2013b; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

Laser surgery: Removal of the external layers of the cell (epidermis) and the tissues of the skin affected by the tumor using the laser strong beam light, the erbium

YAG laser or the carbon dioxide (, 2013a; NCI, 2013d; The Skin Cancer Foundation, 2013b).

Lymph node surgery: Operation of the lymph nodes for biopsy to look for cancerous tumor or for the removal of the lymph nodes in case of the presence of the skin cancer tumor (American Cancer Society, 2013b).

Mohs micrographic surgery: Excision of a malignant tumor with the help of staged, intraoperative frozen sections processed in the Mohs technique. Sections excised are histologically clear of malignancy *(*American Cancer Society, 2013b; MDACC, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b)

Radiotherapy/Radiation: Destruction or treatment of the tumor in the tissue of the patient utilizing X-ray beams (NCI, 2013d; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

*Skin grafting and reconstructive surgery: R*emoval of the skin cancer tumor followed by the collection a skin free of tumor from the patient body to graft it on the wound. The grafting helps the wounded part to recover completely (American Cancer Society, 2013b).

Standard surgical excision/resection: Use of the anesthesia to paralyze for a short time the area of the skin with tumor. Then, removal of the tumor surrounded with a certain normal skin followed by its examination under microscope to make sure the entire tumor has been removed. Stitches are used to repair the surgical area to end the procedure (AAD, 2013; American Cancer Society, 2013b; NCI, 2013d; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b).

To search for additional health information outside disease advertisement (company's website): Other sources of information are consulted to complete the information received from the advertisement and to be able to make an informed health decision *(*Kontos & Viswanath, 2011).

Types of medical dermatology services utilized after exposure to a dermatology product claim/prescription drug advertisement. *Request and obtainment of a medical prescription of the dermatology drug advertised:* Meeting with the dermatologist to request and obtain from him/her the prescription of the advertised dermatology drug (Gray & Abel, 2012).

Chemotherapy: Treatment of the patient using the dermatology advertised prescription drug following the patient's request (American Cancer Society, 2013b; NCI, 2013a; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013b)

Adherence to the dermatology disease treatment regimen: Normal participation to the treatment plan prescribed by the dermatologist (Frosch, Grande, Tarn, & Kravitz, 2010; Wellington, 2010).

Dermatology prescription drug refill: Obtainment of another quantity of the same drug from the pharmacist after running out of the drug (Frosch et al., 2010; Wellington, 2010).

To talk to dermatologist/doctor about dermatology advertised medication: Meeting with the dermatologist/doctor to discussion about the dermatology medicine presented in the advertisement (Gray & Abel, 2012).

Physician/dermatologist office visit: Meeting with a dermatologist/doctor in his/her office for medical dermatology reasons (Gray & Abel, 2012).

Skin, hair, and nails health maintenance: Treat the patient to improve his/her appearance not to take care of a specific dermatology disease (AAD, 2014b).

Scores and interpretation. The calculated scale scores (Likert scale) were the mean scores. SPSS software helped to calculate the mean scores by adding all the values in the distribution or all observations and dividing the result by the total number of the observations (Frankfort-Nachmias & Nachmias, 2008; Green & Salkind, 2011). Each means score indicated the level of the Likert scale with the higher distribution or responses for the variable from the respondents. The identified level on the Likert scale (from one through five) was the respondents' opinion about the variable (Field, 2009; Frankfort-Nachmias & Nachmias, 2008; Green & Salkind, 2011).

Data Analysis Strategy

Data analysis software: statistical package for social sciences (spss) 21.0. The statistical package for the social sciences (SPSS) software version 21.0 was the data analysis software selected for this study. Windows 7 helped to run SPSS version 21.0 on a computer. SPSS software served to analyze social sciences data. Furthermore, SPSS software helped to draw reliable conclusions that helped to solve daily life problems in the context of medical or health research, market research, pharmaceuticals and manufacturing (Frankfort-Nachmias & Nachmias 2008; Green & Salkind, 2011; International Business Machines [I.B.M.], 2011). This research belongs to the health research category in social sciences.

Data cleaning and screening procedures. The data cleaning consisted of multiples tasks before the analysis. The first task was the coding of the data. The coding was the attribution of number or numeric codes to each observation or variable category. Then, the numbers enabled the use of the computer and SPSS 21.0 program to computerize, to edit, to retrieve, and to analyze data (Frankfort-Nachmias & Nachmias, 2008; Green & Salkind, 2011; IBM, 2011). The codebook constituted the coding outcome (Frankfort-Nachmias & Nachmias, 2008; Laureate Education, 2009). The data editing during the creation of the codebook was to check and to make sure that each question had an appropriate answer according to the completion guide for the respondents, and the appropriate assigned numeric codes for each modality. Then, I verified that all answers were consistent one another when necessary. I conducted this task by reviewing all the completed surveys. The development of a codebook took place after the data collection via questionnaire completion (data preparation). The higher category of each interval-level of variable had the higher score and vice versa. The nominal-level variable code assignment followed no rule, but was consistent with all cases in the study (Frankfort-Nachmias & Nachmias, 2008).

The second task was the data cleaning by me after coded data were in SPSS format. Thus, I used the codebook to check, to identify, and to correct manually incorrect and inconsistent codes in the data view windows of the SPSS file. Then, I used the SPSS data to run the frequency table for each variable in order to track and to replace the code that did not exist in the codebook (wild codes) (Frankfort-Nachmias & Nachmias, 2008).

The third cleaning task consisted of tracking and correcting outliers from the SPSS data before running the multiple regression's assumptions test. The assumption test aimed to verify if the assumptions were met or not before any statistical test of hypotheses (Field, 2009; Laureate Education, 2009). A variable was an outlier if the score was higher or lower than any other score of the same variable. In other word, each value that did have a standardized score above the absolute value /3.29/ for the variable was considered outlier (its standard deviation is more than 3 from the mean score) (Field, 2009; Laureate Education, 2009). I created the standardized scores or z-scores for each variable using the descriptive table of the SPSS. The frequencies were considered the new standardized scores. A standardized score with a value higher than the absolute value of /3.29/ was considered outlier (Laureate Education, 2009). The plan to correct any outlier found was to make the outlier higher by one unit from the extreme score of the variable. The new or modified value coming from the correction of the outlier (s) was to replace the outlier (s) of the variable before any statistical test. I did not plan to delete outliers, if any found, to avoid reducing the sample size of the study (Laureate Education, 2009). The data analysis did not detect any outlier for this study.

The fourth task was the Multiple Regression's assumption test. The multiple regression analysis' assumptions were the (a) normality**,** (b) normality of error variances distribution, (c) independence, (d) linearity, (e) homoscedasticity, (f) independent errors, (g) predictor variables are quantitative or categorical non-zero variance, (h) no perfect multicollinearity, and (h) predictors are uncorrelated with external variables (Field, 2009; Green & Salkind, 2011; Laureate Education, 2009). The testable assumptions were the

(a) normality of the distribution, (b) normality of error variances distribution, (c) independence of errors, (d) homoscedasticity and (e) no perfect multicollinearity (Field, 2009). The bottom line of the assumption test was to verify if the assumption was met or to provide an alternative in case the assumption was not met before any hypothesis test. Moreover, parameters of the regression model would be free of bias and the external validity (generalization) would be possible if the assumptions were met. Linear multiple regression assumption stated that the predictor variables (independent) can be quantitative or categorical (with two categories codes zero and one) and the outcome variable (dependent) can be quantitative, continuous and unbounded (Field, 2009; Green & Salkind, 2011). In addition, more than one predictor would be considered separately as predicting the type or purpose of medical service utilized.

Research questions and hypotheses.

Main research question and hypothesis. This quantitative research sought to answer the following main research question: Is there a statistically significant relationship between product claim, help-seeking advertisements, and types and purposes of medical service utilization amongst adult dermatology patients in the United States?

The related hypothesis to this main research question was:

Hypothesis 1 (H_0): Product claim and help-seeking advertisements does not significantly prompt the utilization of the types and purposes of medical services amongst adult dermatology patients in the United States.

Hypothesis 1 (H_1): Product claim and help-seeking advertisements significantly prompt the utilization of the types and purposes of the medical services amongst adult dermatology patients in the United States.

Secondary research questions and hypotheses. The secondary research questions proceeding from the central question were:

Is product claim advertisement a predictor of the types of medical services utilized amongst adult dermatology patients in the United States?

Hypothesis 2.1 (H_0): Product claim advertisement does not significantly prompt the utilization of the types of medical services amongst adult dermatology patients in the United States.

Hypothesis 2.1 (H_1): Product claim advertisement significantly prompts the utilization of the types of the medical services amongst adult dermatology patients in the United States.

Is product claim advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in the United States?

Hypothesis 2.2 (H_0): Product claim advertisement does not significantly prompt the purposes of medical services utilization amongst adult dermatology patients in the United States.

Hypothesis 2.2 (H_1): Product claim advertisement significantly prompts the purposes of the medical services utilization amongst adult dermatology patients in the United States.

Is help-seeking advertisement a predictor of the types of medical services utilized amongst adult dermatology patients in the United States?

Hypothesis 2.3 (H_0): Help-seeking advertisement does not significantly prompt the types of medical services utilized amongst adult dermatology patients in the United States.

Hypothesis 2.3 (H_1): Help-seeking advertisement significantly prompts the types of the medical services utilized amongst adult dermatology patients in the United States.

Is help-seeking advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in the United States?

Hypothesis 2.4 (H_0): Help-seeking advertisement does not significantly prompt the purposes of medical services utilization amongst adult dermatology patients in the United States.

Hypothesis 2.4 (H_1): Help-seeking advertisement significantly prompts the purposes of the medical services utilization amongst adult dermatology patients in the United States.

Data analysis plan.

Descriptive and inferential statistics. The first group of analytical tools was the descriptive statistics. In fact, the descriptive statistics of interest were the mean scores, standard deviations, and frequencies. The three parameters allowed to organize and to summarize data. The standard deviation permitted to describe and to measure the dispersion of the variable distributions from the mean. The frequencies helped to compute the total number of distribution in favor of each categorical variable that were the characteristics of each type of advertisements, the types and purposes of medical services utilization, and the demographics. The mean scores helped to determine the mean of the interval-level variable exact age (Frankfort-Nachmias & Nachmias, 2008; Green & Salkind, 2011). Furthermore, the mean score permitted to identify the level of the Likert scale that had the higher distribution for the variable. The identified level on the Likert scale (from 1-5) enabled me to read the attitude and views of the respondents on the scale for the particular item (Field, 2009; Frankfort-Nachmias & Nachmias, 2008; Green & Salkind, 2011).

The second group of tools was the inferential statistical that enabled to test the hypotheses: the linear multiple regressions. Linear multiple regression aims to describe the strength of a linear relationship between one dependent variable and multiple independent or control variables (Field, 2009; Frankfort-Nachmias & Nachmias, 2008;

Green & Salkind, 2011). As stated earlier, the research question was about the linear relationship between product claim and help-seeking advertisements (independent variables) and the type and purpose (dependent variables) of the utilization of the medical services amongst dermatology patients aged 18 and older. The dependent and independent variables were observed on the Likert scale of five points. Consequently, they were continuous or quantitative. The selection of the predictors to enter into the model was based on the current literature reviewed and the results of the pilot study (Field, 2009; Frankfort-Nachmias & Nachmias, 2008). This test was appropriate for the hypotheses testing of this study.

The parameters for the interpretation of the test of the hypotheses, using linear multiple regression, were the multiple *R* or multiple correlation coefficient and the sum of square R^2 or effect size (Field, 2009). The multiple correlation *R* represented the strength index of the degree of the correlation between the dependent and independent variables for the sample (Green & Salkind, 2011). A large multiple *R* indicated the large correlation between the product claim and help-seeking advertisements and type sand purpose of medical services utilization in the sample. Concretely, a multiple *R* equal to 1 meant that the predictors affected perfectly the outcome or dependent variable: the overall test or model was positive (Field, 2009). The H0 of the main hypothesis was rejected to the benefit of H1. Then, the Adjusted R^2 was the amount of the variance in the dependent variable attributed to the set of predictors. In other words, Adjusted R^2 was the level of the overall variance in the outcome explained by a set of the predictors in the model or equation. The Adjusted R^2 represented the amount of variance in a type or

purpose of the medical dermatology services utilized explained by the set help-seeking or product claim advertisements variables (Field, 2009). The index of effect size (R^2) or Adjusted R^2 ranged in value from -1 to +1 (Frankfort-Nachmias & Nachmias, 2008; Green & Salkind, 2011).

Confidence level and margin of error for the hypotheses test. The conventional 95% was the confidence level, and 5% the margin of error or level of significant ($\alpha = .05$) for the hypotheses test. Moreover, the test was a two-tailed hypothesis testing**.** In that regard, the null hypothesis was rejected if the sample outcome was among the results that would have occurred by chance not more than 5% time (Frankfort-Nachmias & Nachmias, 2008). In other words, the null hypothesis was rejected when the *p*-value was less or equal to than .05. *P*-value or probability indicated how confident I was to say that the observation from the sample was the same in the population (inference).

Threats to Validity

The paragraph addresses the external validity threats and the solutions for this research study. The external validity of a research refers to how accurate or until which degree the researcher can generalize the results from the sample to the entire population, or can apply those results in a separate context (Frankfort-Nachmias & Nachmias, 2008). The first threat to the external validity of this research study was the representativeness of the sample. Indeed, the sample most has the key characteristics of the population for the statistical inference to be possible. Consequently, the eligibility criteria stated previously for the statistical unit inclusion to the sample, the demographics, my personal judgment

in selecting the final respondents, and the Walden University's IRB approval of the questionnaire after reviews permitted to address this study's threat to external validity. In addition, the results of this study will not be inferred to any population or setting that was not part of the study.

The second threat to the external validity was the technical nature of the independent and dependent variables as well as the items selected for the observation of the variables. Product claim, help-seeking advertisements, types and purposes of medical dermatology services utilization, and the observation items described in Chapters 1 and 3 were the language proper to the specific professions. Therefore, the respondent has to understand the clear meanings of the variables and items to be able to provide with accurate answers in the questionnaire. In doing so, the items would measure effectively the intended content or construct (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). Indeed, the construct validity is the effectiveness of the items to measure the concepts stated in the hypotheses (Creswell, 2009). The construct validity threat to this study can be the selection by me of the inappropriate items for the observation of the independent and dependent variable of the study. The experts' opinions about the DTCAs and the medical dermatology services approved the items and operational definitions used for the final data collection. The pilot study enabled the test of the target population's understanding and familiarity with the constructs or concepts. Then, I used the pilot study results consequently before the final data collection.

The internal validity threats and solutions are the focus of this paragraph. The internal validity of a research is the fact that independent variable, not a different factor,

affect or bring change to the dependent variables effectively (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The threat to internal validity represents those factors, different from the independent variable, which can provoke the change in the dependent variable. This if they are not identified and addressed properly before or during the study. The threat to the internal validity of this study was the patient's moral and psychological conditions due to his/her dermatology condition. Indeed, dermatology diseases such as skin cancer are a deadly disease if not diagnosed and cured early (Skin Cancer Foundation, 2013c). The dermatology disease patient participant to this study was morally and psychologically uncomfortable due to the possible death that he/she could be a victim (Skin Cancer Foundation, 2013c). Therefore, the information provided during a completion may not be accurate. In that case, the observed relationship between dermatology product claim, help-seeking advertisements and types and purposes of medical dermatology services utilization may not reflect the reality of the field. Two solutions were used to overcome this threat: the participation and withdrawal at any time of the patient from the study were free and voluntary.

Ethical Procedures

Access to Data and Research Authorization from the Study Sites and Walden University

This section provides the answer how I proceeded to obtain primary data from MedStar and Saint Nicholas Catholic Church communities, the authorization to survey dermatology patients at those two study sites without harm, and to obtain the Walden University IRB's approval to collect data for this study. The two study sites issued to me

the written permissions to conduct research on the sites (See Appendices R & S). I completed successfully the US National Institutes of Health's online training on the protection of human subject in research on December 7th, 2013 (See Appendix A) (National Institutes of Health, 2011).

In the same logic, I requested and obtained the study approval from the Walden University IRB before starting any pilot study and primary data collection. Indeed, I prepared and submitted to the Walden IRB, after the approval of the committee chair, the following documents: the Walden IRB application form version 2010A and the supporting materials. The supporting materials were all the appendixes listed in this dissertation.

Concerns Regarding Recruitment Materials and Process

The respondents' recruitment materials that were the flyers A5 and A3 formats and the screening section of the questionnaire had certain concerns. The concerns regarding the flyers and the questionnaire were the length, the color, the typography, the quality of the paper, and the illustrations or images on the flyers (Frankfort-Nachmias & Nachmias, 2008). The solutions to these concerns were to write short texts for the flyers and to use a high quality paper and printing selected by the infographic and/or printing's professionals, Leeland Designs Company. The questionnaire text was double space, times news roman, 12 front size for easy and fast readability.

In terms of process, the concern was the level of the dermatology patient's receptiveness and corporation during the recruitment at the study sites (to allow me to talk to him/her or to read the flyers personally about the study). The patient was there to

honor a medical appointment or to attend a church service. Therefore, it was not easy to know if the participant would be receptive and corporative in that condition to accept to have a conversation with me, to read the flyers, and to participate in the study. The written approval of the study by the study sites' authorities solved the receptiveness and corporation concerns. Besides, I made sure that the personal introduction or the first contact with the potential respondent established a climate of confidence, interest, and trust between both parties. Furthermore, I told the respondent how the study would be useful for the dermatology patients. Moreover, I explained to the respondent the aim of the study, the respondent selection method, and the guarantee of the confidentiality of the collected information (Frankfort-Nachmias & Nachmias, 2008).

Management of Data Collected

The data collected had no identifier such as name, medical record number, date of birth, social security number, account number, email address, and home address. The same code or numerical number identified the answers to the same question. The respect of confidentiality and respondent privacy was via the no requirement of his/her signature on the informed consent form. The respondent signed the informed consent form by completing the survey. I clarified that to the respondent at the beginning of the eligibility section. Other measures to provide confidentiality of data and respect for the respondent privacy were an anonymous analysis of the data collected and the study's results (Frankfort-Nachmias & Nachmias, 2008).

Furthermore, I stored for five years the data collected on his laptop hard disk, USB drive, and CD-Rooms with the access protected by a passed word at my discretion. I

am the only one to have access to the data. The data will be destroyed five years after the defense and dissemination of the dissertation. In fact, the data will not be current anymore after five years. I keep the questionnaires, USB drive, and CD-Rooms for the same number of year in an iron locker secured with a lock and key in my office at home.

Summary and Transition

The quantitative nature of the research question led to the selection of the quantitative design for this study. The research method was the cross-sectional survey. The research aim was to describe the relationship between product claim, help-seeking advertisements, and the types and purposes of medical dermatology service utilization amongst the target population at a certain point in time. The survey population was American residents male and female aged 18 years and over, dermatology patients living in Houston, Texas, receiving primary care services at MedStar and/or attending to church service at Saint Nicholas Catholic Church. The selection of this population was due to the diversity of the communities. There was no sampling frame for this study. Consequently, the nonprobability was the sampling strategy. The constitution of the sample was through the nonrandom purposive sample scheme. The MedStar and Saint Nicholas Catholic Church in Houston, Texas were the two sites of the study. The sample size was 82 individuals. G*Power 3.1.2 computer software generated this sample size. The recruitment of the sample took place at the study sites during their visit to meet with the primary care physician or to attend to a church service. The respondents received the informed consent approved by the Walden University's IRB at the site of the study. Each participant provided informed consent face-to-face using the Informed Consent Form

before answering to the eligibility questions. The respondent signed the informed consent form by completing the survey completely. The pilot study enabled the test of the reliability and validity of the study instrument before the use of the instrument for the final study. Twelve individuals from the target population were the pilot sample. They were excluded from the final sample of the study.

The research instrument was a structured questionnaire of 38 questions with the Likert scale as the rating scale. The research independent variables were dermatology product claim and help-seeking advertisements as defined by the FDA. The dependent variables were the types and purposes of the medical dermatology services utilization amongst the target population. The data analysis used the Statistical Package for the Social Sciences (SPSS) software version 21.0. The two groups of analytical tools were respectively the descriptive statistics for the data organization and the linear multiple regression for hypotheses testing. The interpretation of the results of the hypotheses test will be the main focus of the next Chapter 4.

Chapter 4: Results

Introduction

The intent of this research study was to assess the relationship between dermatology product claim, help-seeking advertisements, and types and purposes of the use of medical dermatology service amongst adult patients in the United States. Product claim and health-seeking advertisements were the two sets of independent variables (FDA, 2012b, 2012d; La Barbera, 2012). The types and purposes of the medical dermatology services utilization were the two sets of dependent variables of the study (Aday & Anderson, 1974; Barton, 2010; Shi & Singh, 2008).

The main research question of this study was to determine if there was a statistically significant relationship between product claim, help-seeking advertisements, and types and purposes of medical service utilization amongst adult dermatology patients in the United States of America. This question led to the following main hypothesis:

Hypothesis 1 (H_0): Product claim and help-seeking advertisements do not significantly prompt the utilization of the types and purposes of medical services amongst adult dermatology patients in the United States.

Hypothesis 1 (H_1): Product claim and help-seeking advertisements significantly prompt the utilization of the types and purposes of the medical services amongst adult dermatology patients in the United States.

In Chapter 1, I introduced this study, analyzing the study's background, problem statement, purpose, research question(s) and hypotheses, theoretical framework, the nature of the study, and the operational definitions. Then, in Chapter 2, I examined the

literature on the study variables and identified the gap as the origin of this research study. Besides, Chapter 3 was the methodology supporting the investigation of the research problem. Finally, Chapter 4 aims to present the results of the study. The components of Chapter 4 are the pilot study, the data collection, the results, and the summary and transition to Chapter 5. The pilot study results are the object of the following section.

Pilot Study

The research study instrument went through a pilot study as outlined in Chapter 3. The aim was the final validation of the study instrument before the completion of the main study. Indeed, as stated in Chapter 3, the research study instrument was a structured questionnaire with 38 questions. I developed this questionnaire, and by end of the year 2013, I validated the questionnaire using the experts opinion approach presented in Chapter 3.

The pilot study validated the version of the questionnaire approved by the research committee. In that regard, Cronbach's Alpha α statistics allowed me to establish the questionnaire's reliability after the pilot study data analysis (Al-Dmour et al., 2013; Creswell, 2009). The reliability test method was the split-half reliability. This method, using SPSS computer program, consisted of randomly splitting the data into two. The Cronbach's Alpha α test showed a computerized correlation between the two halves of the data and demonstrated, therefore, the reliability of the questionnaire (Table 2). Indeed, as stated in Chapter 3, all the Cronbach's Alpha α value were between zero through one (Al-Dmour et al., 2013; Green & Salkind, 2011), establishing the internal

consistency or reliability of the scales and the questionnaire validity (Dedeli & Fadiloglu, 2011; Green & Salkind, 2011).

The pilot study took place from January 12 through 27, 2015 within the two study's sites: MedStar Primary care clinic and Saint Nicholas Catholic Church in Houston, Texas. The pilot sample size was 12 participants, shared equitably in number and by gender between the study sites (six from each study site with three males and females) as outlined in Table 1.

Table 1

Summary of Pilot Respondents by Place of Questionnaire Completion and Sex (*N* = 12)

		Sex	
	n	Male	Female
Place of questionnaire completion			
MedStar Primary Care Clinic	6	3	3
Saint Nicholas Catholic Church	6	3	3
Total	12	6	6

The pilot study followed the study research method described in Chapter 3. The 12 pilot study respondents were not part of the main study or final sample. The first completed and validated 12 questionnaires enabled the pilot study data analysis and validation of the research instrument. The pilot study results were as follows.

The Pilot Study's Results

The pilot study generated consistent results that enabled the final validation of the study instrument. Six scales permitted me to calculate the reliability statistics for the

validation of the instrument using the split-half reliability method. The six reliability statistics of the six scales (detailed in Chapter 3) ranged from 0.01 to 0.68, which are between the Cronbach's Alpha and acceptable range of zero through one (Al-Dmour et al., 2013; Green & Salkind, 2011). Table 2 shows the reliability statistics of each scale ranging from 0.01 to 0.68.

Table 2

Instrument's Cronbach's & Reliability Statistics per Scale

Scale	*n*	*N* of Items	Cronbach's Alpha &	Cronbach's Alpha & acceptable range
DPCAES	12	10	0.01	0-1
DHSAES	12	5	0.27	0-1
TDMTUEPDAS	12	7	0.62	0-1
TDMTUEDDAS	12	14	0.68	0-1
PUDMTEDDAS	12	2	0.14	0-1
PUDMTEDAS	12	4	0.31	0-1

Note. DPCAES = dermatology product claim advertisement exposure Scale; DHSAES = dermatology help-seeking advertisement exposure Scale; TDMTUEPDAS = types of medical dermatology treatments utilized after exposure to dermatology DTCA of prescription drug scale; TDMTUEDDAS = types of medical dermatology treatments utilized after exposure to the dermatology Disease DTCA Scale; PUDMTEDDAS = purposes of the utilization of medical dermatology treatments after exposure to dermatology DTCA of prescription drug scale; PUDMTEDAS = purposes of the utilization of medical dermatology treatment after exposure to dermatology DTCA of disease scale.

The DPCAES, DHSAES, TDMTUEPDAS, TDMTUEDDAS, PUDMTEDDAS, and PUDMTEDAS have a Cronbach's Alpha value between 0 through 1. However, the

third and fourth scales that are respectively TDMTUEPDAS and TDMTUEDDAS have the highest Cronbach's Alpha values of respectively 0.62 and 0.68. Consequently, those two scales have the high reliabilities while the other four scales have the low reliabilities. In conclusion and as stated earlier, all six Cronbach's Alpha α values fell in the region of zero to one indicated by Al-Dmour et al. (2013) and Green and Salkind (2011) as the indicator of a good reliability. The pilot study results did not generate any change in the main study in general, and particularly in the data collection.

Data Collection

Data Collection Time Frame, Recruitment, and Response Rate

The survey or questionnaire completion lasted one month and 10 days, from January 12 through February 22, 2015. The survey covered the two study sites located in Houston, Texas, MedStar Primary Care Clinic and Saint Nicholas Catholic Church. The questionnaire completion took place after the respondent had met with a physician and from Monday through Friday at MedStar Primary Care Clinic during the clinic's business hours from 09:00 AM to 05:30 PM (United States Central Standard Time). The questionnaire completion at Saint Nicholas took place after church services that started at 09:00 AM or 11:00 AM on Sundays. Each survey day ended approximately until 03:00 PM at Saint Nicholas Catholic Church (United States Central Standard Time). The mean of the total length of a questionnaire completion for both study sites was 12.03 minutes.

The recruitment strategy applied for the data collection remained the one described in Chapter 3. Indeed, the data collection tool was a structured questionnaire with 38 questions. The recruitment and questionnaire completion were face-to-face at

each study site. I conducted the recruitment and recorded all the respondents' answers in the questionnaire to reduce the risk of bias. I selected the sample using the pre-determined inclusion criteria (eligibility section of the questionnaire), two recruiting flyers (A5 or Appendix F and A3 or Appendix D), and the Consent Form (see Appendix C) as detailed in Chapter 3. The respondent recruitment occurred at the lobby of each study site before the church services on Sunday at Saint Nicholas, and before the respondent's meeting with the primary care physician during a medical visit. The questionnaire completion occurred at the parish hall or at the clinic meeting rooms. I reviewed with each participant the completed questionnaire and validated the questionnaire using the questionnaire completion guide (Appendix H) before terminating the particular completion. There was no discrepancy noted during the data collection compared to the strategy stated in Chapter 3.

The study's projected response rate and the final response rate were different at the end of data collection. In fact, the study projected response rate based on the literature was 85%. An existing literature claimed the response rate for the face-to-face survey turned around 95% versus 20 to 40% for the mail survey (Frankfort-Nachmias & Nachmias, 2008). I did 335 contacts or attempts to recruit the main or final study's respondents at the two study sites. The 335 contacts led to the completion of 120 questionnaires which represented the final sample of this study. The ratio 120 completed questionnaires and 335 total numbers of contact/attempt gave the study's response rate of 35.82 %. This response rate represented 42.14 % achievement rate of the projected response rate (85%). The discrepancy was most likely due to the respondent profile

detailed through the pre-determined inclusion criteria of the study (See Appendix G). Indeed, the use of the pre-determined inclusion criteria to select a final respondent for the completion of the questionnaire limited the possibility of meeting the eligible respondent during the first contact or recruitment attempt. The final sample has diversified characteristics.

Sample Characteristics

The final sample has multiple characteristics. I used the G*Power 3.1.2 computer software, as stated in Chapter 3, to determine the sample size of 82 respondents. However, by rounding off 82, 100 people were the target final sample size. The final sample size achieved at the end of the survey was 120 respondents. The 120 respondents were attending church services at Saint Nicholas Catholic Church or/and receiving primary care services at MedStar Primary Care Clinic. In addition, the respondents have received medical dermatology services for a medical reason as the consequence of having seen, read, or heard a dermatology DTCA of prescription drug or/and disease in the past 12 months starting from the questionnaire completion date. Three hundred and thirty-five contacts or attempts to recruit a respondent permitted to achieve the 120 final samples. 215 out of 335 contacts were not eligible to complete a questionnaire at the time of the survey because of one or more of the following reasons: (a) they were not dermatology patients, (b) have poor English language skills, (c) were concerned about the reason of their medical visit to the doctor office, (d) did not willing to participate in the study, (e) were not MedStar's patients, and (f) did not want to wait after the church service.

Fifty percent of the 120 respondents were from MedStar clinic (60) and 50% from Saint Nicholas (60). Moreover, 50% of the sample per study site were male (30) and 50% were female (30). Seventy-one percent of the 120 respondents had skin disease, 24% had hair disease, and 5% had nails disease. The largest proportion of the sample was skin disease patients. Table 3 shows the achieved sample breakdown by place of questionnaire completion. Table 4 shows the achieved sample breakdown by sex. Table 5 shows the achieved sample breakdown by type of dermatology diseases.

Table 3

Frequency Distribution of Participant Place of Questionnaire Completion (N = 120)

	Place of questionnaire completion	Frequency	%	Valid %	Cumulative %
Valid	MedStar Primary Care Clinic	60	50	50	50
	Saint Nicholas Catholic Church	60	50	50	100
	Total	120	100	100	

Table 4

Frequency Distribution of Participant Sex (N = 120)

	Sex	Frequency	%	Valid %	Cumulative %
Valid	Male	60	50	50	50
	Female	60	50	50	100
	Total	120	100	100	

Table 5

Frequency Distribution of Participant Types of Dermatology Disease (N = 120)

	Type of dermatology disease	Frequency	%	Valid %	Cumulative %
Valid	Skin disease	86	71	71	71
	Hair disease	29	24	24	95
	Nails disease	5	5	5	100
	Total	120	100	100	

The sample of 120 respondents had 50% male and 50% female. The sample is mostly adults with 44.2% who were 35 to 51 years old while 8.3% were 65 years old and over. The sample's mean age was 42 years old with a *S D* of 13.63. The sample had a multiracial or ethnic characteristic with the largest portion of 72.5% Black, African American, or Negro, 14.2% Hispanic, 11.7% white, and the smallest portion of 1.7% Vietnamese. In terms of highest level of education completed, 25.8% had graduate degrees while 0.8% completed Less than 9th grade. Sixty percent had an annual household income of $40, 000 and over, and 0.8% had between $15,000 to $19,999. Finally, 57.5% of the samples were married and 3.3% separated. Table 6 shows the descriptive statistics for demographics of the study sample.

Table 6

Descriptive Statistics for Demographics (N = 120)

Demographics	Frequency (Valid %)	Mean score	Standard deviation
Sex			
Male (= 1)	60 (50%)		
Female (= 2)	60 (50%)		
Age			
18 to 34 years (= 1)	31 (25.8%)		
35 to 51 years (= 2)	53 (44.2%)		
52 to 64 years (= 3)	26 (21.7%)		
65 and over (= 4)	10 (8.3 %)		
Exact age		42	13.63
Race/Ethnicity			
White (= 1)	14 (11.7%)		
Black, African American, or Negro (= 2)	87 (72.5%)		
Vietnamese (= 13)	2 (1.7%)		
Some other race: Hispanic (= 14)	17 (14.2%)		
Highest grade of school completed			
Less than 9th grade **(= 1)**	1 (.8%)		
9th to 12th grade, without diploma (= 2)	6 (5%)		
High school graduate (= 3)	11 (9.2%)		
Some college, without degree (= 4)	25 (20.8%)		
Associate's degree (= 5)	19 (15.8 %)		
Bachelor's degree (= 6)	27 (22.5%)		
Graduate degree (= 7)	31 (25.8 %)		
Marital status			
Married (= 1)	69 (57.5%)		
Divorced (= 2)	7 (5.8%)		
Widowed (= 3)	8(6.7%)		
Separated (= 4)	4 (3.3%)		
Never got married (= 5)	27 (22.5%)		
Unmarried in couple (= 6)	5 (4.2 %)		

(*table continues*)

Demographics	Frequency (Valid %)	Mean score	Standard deviation
Annual household income			
Less than $10,000 (= 1)	3 (2.5 %)		
$10,000 to $14,999 (= 2)	4 (3.3%)		
$15,000 to $19,999 (= 3)	1 (.8 %)		
$20,000 to $24,999 (= 4)	7 (5.8%)		
$25,000 to $29,999 (= 5)	12 (10 %)		
$30,000 to $34,999 (= 6)	10 (8%)		
$35,000 to $39,999 (= 7)	11 (9.2%)		
$40, 000 and over (= 8)	72 (60%)		

In terms of sources of exposure to dermatology pharmaceutical prescription drug(s) announcement, TV channels were the main source (85% of the respondents) followed by online/websites (56.7%). Then, very few patients heard about drug announcement from dermatologists giving the lowest percentage of 1.7%. These results were consistent with dermatology pharmaceutical disease(s) announcement exposure: 90.8% for TV channels, 62.5% for online/websites, and 2.5% as lowest percentage for both dermatologists and social media.

Sample and Population

The target population size was unknown and a sample frame was not available. Therefore, the use of a random sample or a proportional sample approach was not appropriate. In that regards, I used the nonrandom purposive sample scheme to select from the population the members of the sample based on the pre-determined inclusion criteria (eligibility section of the questionnaire or Appendix G) as described in Chapter 3. The selected respondents were available and willing to participate in the study (Collins et al., 2006; Frankfort-Nachmias & Nachmias, 2008). The predetermined inclusion criteria

aimed to assure the selection of the individuals who had the key characteristics of the target population only. In addition, the G*Power 3.1.2 computer software enabled the determination of this study minimum sample size of 82 respondents capable to provide with consistent statistical tests or analyses. Furthermore, according to Laureate Education (2009b) and Andy (2009), a high sample size increases the chance of obtaining an accurate multiple regression equation. A multiple regression requires a minimum sample size N of 104 plus M. M represents the number of predictors of the regression (Laureate Education, 2009b). This study has two sets of predictors for a total of 15 predictors: dermatology product claim advertisement exposure scale (DPCAES) with 10 predictors or items, and dermatology help-seeking advertisement exposure scale (DHSAES) with 5 predictors. The final sample achieved of 120 participants met the Laureate Education's multiple regression sample size requirement of 104 plus M (Laureate Education, 2009b).

Results

Outliers

The normal box plots of the normality of error variances distribution assumption (Figures 12 to 20) in the assumptions section below show only suspected outliers (small empty circles or unfilled). Consequently, this study was free of outliers for the considered nine criteria (Field, 2009).

Assumptions Evaluation

Multiple Regression has assumptions that require a test before any hypothesis testing takes place. The testable assumptions listed in Chapter 3 were (a) the normality of the distribution, (b) normality of error variances distribution, (c) independence of errors,

(d) homoscedasticity, and (e) no perfect multicollinearity (Field, 2009). The assumption, when met, ensures the external validity of the research findings, regression model, and a regression model free of bias. The assumptions test is based on the dependent variables or criteria of the study.

Selection of the criteria or dependent variables. They were four sets of dependent variables for a total of 29 criteria for this research study. The predictors were quantitative and the criteria or outcome variable were quantitative, continuous, and unbounded (Field, 2009). The first set was TDMTUEPDAS which had seven items. The second containing 14 items was TDMTUEDDAS. The third was PUDMTEDDAS and had four items. The fourth was PUDMTEDAS which had four items. A multiple regression test run between each set of independent variables and each particular dependent variable showed some nonsignificant test results statistically at 95% confidence level and 5% margin of error from the model summary tables. Consequently, the dependent variables retained and used for the assumptions and hypotheses tests were those with a test result statistically significant ($p \leq .05$). The dependent variable retained from TDMTUEPDAS set were (a) to request and obtain a medical prescription of the dermatology drug advertised, (b) to receive the advertised drug therapy/chemotherapy, (c) to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug, (d) to visit a physician/dermatologist office, and (e) to receive skin, hair, and/or nails health maintenance treatment. Then, the only one from TDMTUEDDAS set was to go for dermatology disease screening test. PUDMTEDDAS set had to receive treatment/cure of the dermatology disease in order to excise the tumor lesion. Finally,

PUDMTEDAS set had (a) to receive dermatology treatment/service to detect/diagnose early the dermatology disease and (b) to receive treatment/cure of the dermatology disease in order to clear the tumor/disease. Nine out of 29 criteria are the object of the following assumptions evaluation.

Normality of the distribution assumption. The result of the normality test run for the criteria (a) to request and obtain a medical prescription of the dermatology drug advertised, (b) to receive the advertised drug therapy/chemotherapy, (c) to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug, (d) to visit a physician/dermatologist office, (e) to receive skin, hair, and/or nails health maintenance treatment, (f) to go for dermatology disease screening test, (g) to receive treatment/cure of the dermatology disease in order to excise the tumor lesion, (h) to receive dermatology treatment/service to detect/diagnose early the dermatology disease, and (i) to receive treatment/cure of the dermatology disease in order to clear the tumor/disease in SPSS showed that this assumption was met.

The histograms below show bell shaped curves that indicate the normality of distribution of each of the criterion listed above: Figure 3 for the criterion (a), Figure 4 for the criterion (b), Figure 5 for the criterion (c), Figure 6 for the criterion (d), Figure 7 for the criterion (e), Figure 8 for the criterion (f), Figure 9 for the criterion (g), Figure 10 for the criterion (h), and Figure 11 for the criterion (i) (Field, 2009; Laureate Education, 2009a).

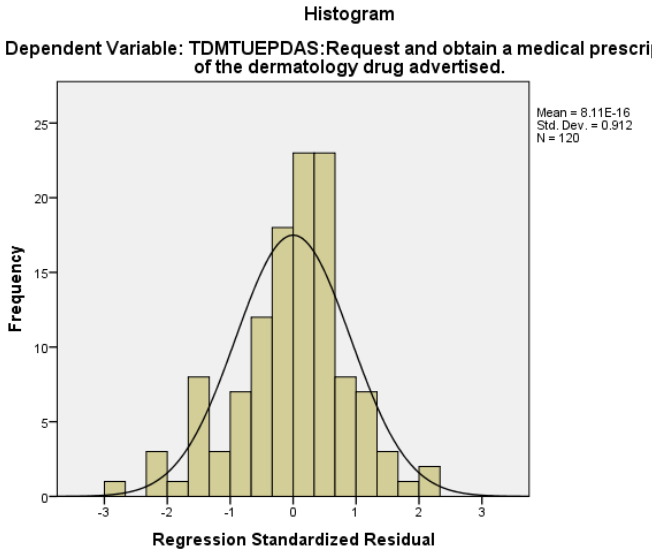

Figure 3. Bell shaped curve of the criterion to request and obtain a medical prescription of the dermatology drug advertised

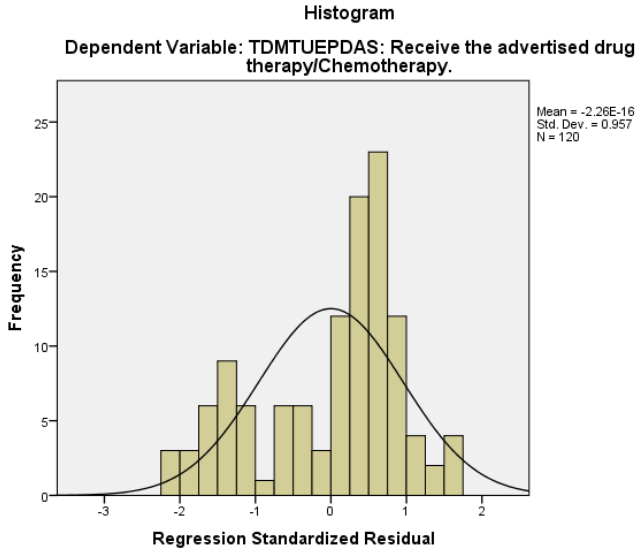

Figure 4. Bell shaped curve f of the criterion to receive the advertised drug therapy/chemotherapy

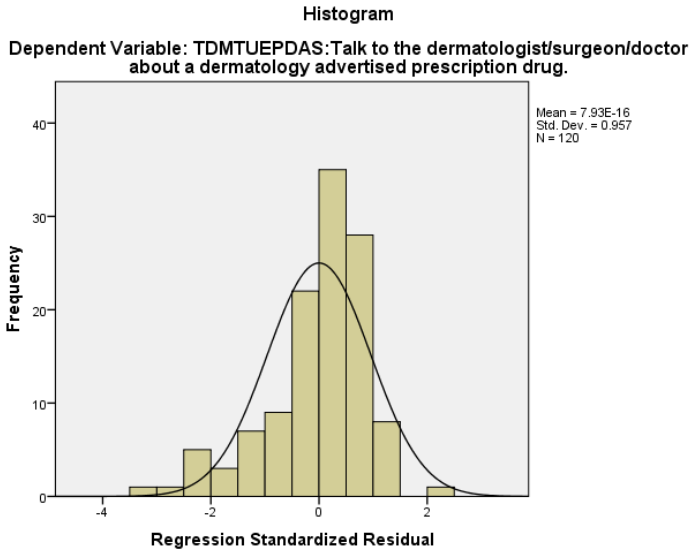

Figure 5. Bell shaped curve f of the criterion to talk to the dermatologist/surgeon/doctor about a dermatology advertised prescription drug

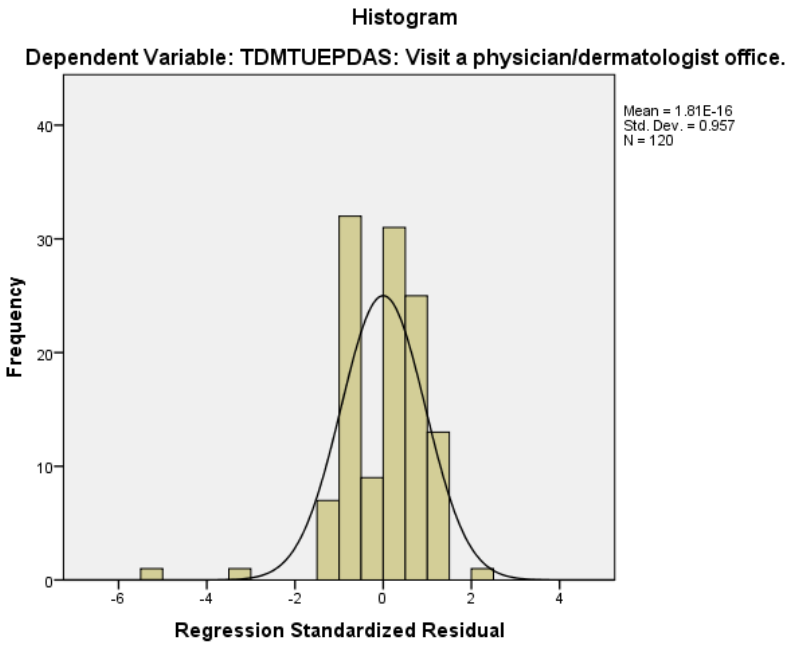

Figure 6. Bell shaped curve of the criterion to visit a physician/dermatologist office

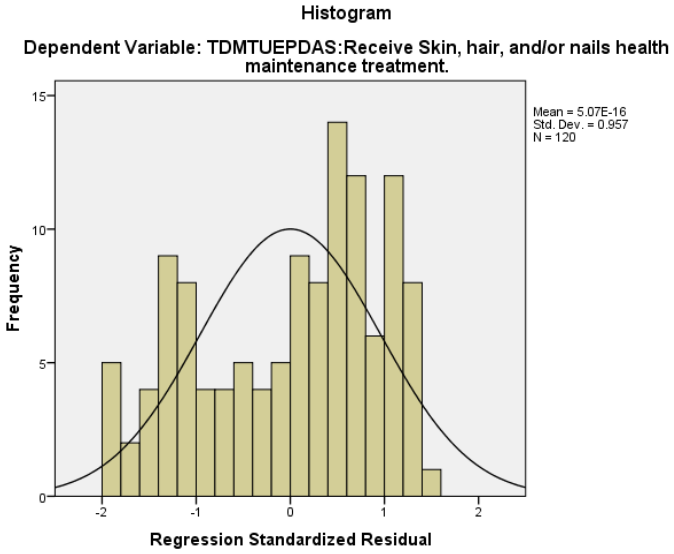

Figure 7. Bell shaped curve of the criterion to receive skin, hair, and/or nails health maintenance treatment

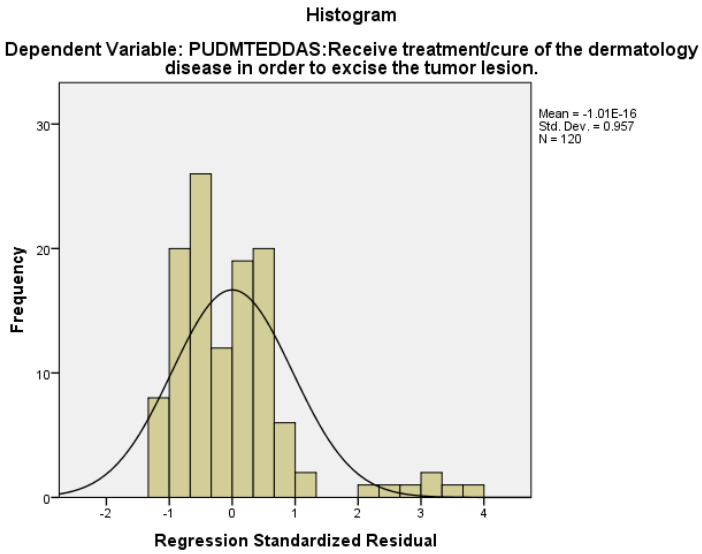

Figure 8. Bell shaped curve of the criterion to receive treatment/cure of the dermatology disease in order to excise the tumor lesion

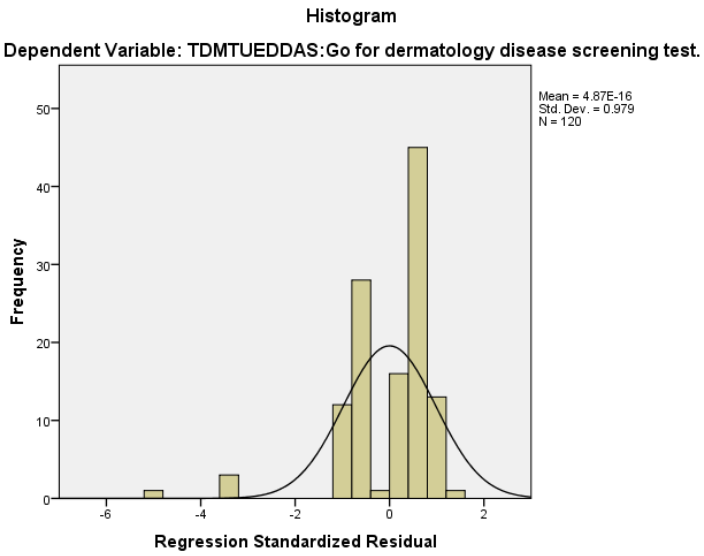

Figure 9. Bell shaped curve of the criterion to go for dermatology disease screening test

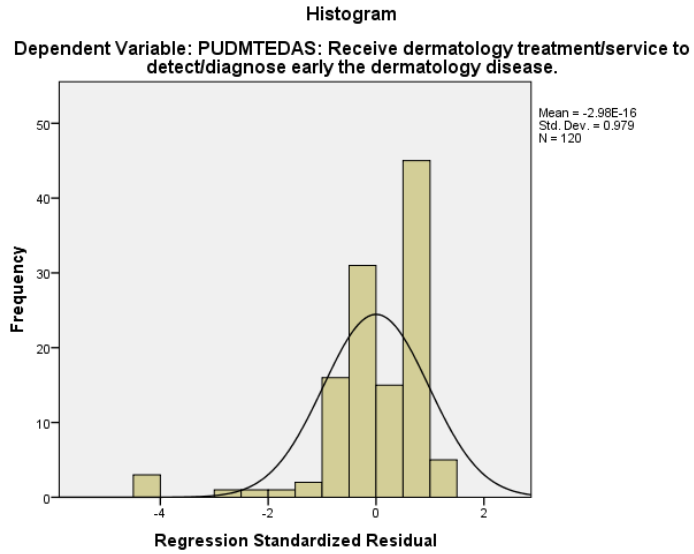

Figure 10. Bell shaped curve of the criterion to dermatology treatment/service to detect/diagnose early the dermatology disease

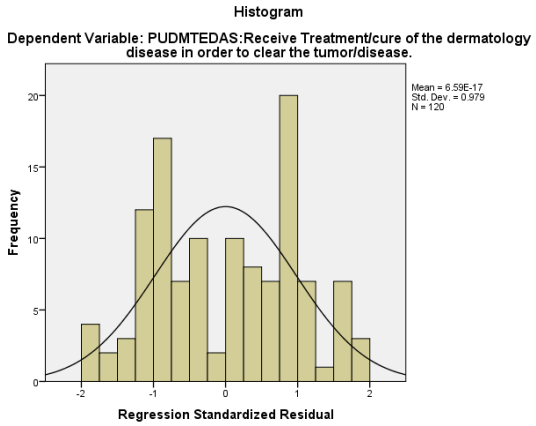

Figure 11. Bell shaped curve of the criterion to receive treatment/cure of the dermatology disease in order to clear the tumor/disease

Normality of error variances distribution. Multiple regression is convenient for large sample. The appearance of each box plot of the standardized residual below (Figures 12 to 20) permitted to observe how the error variances was normally distributed for each of the nine criteria (Field, 2009).

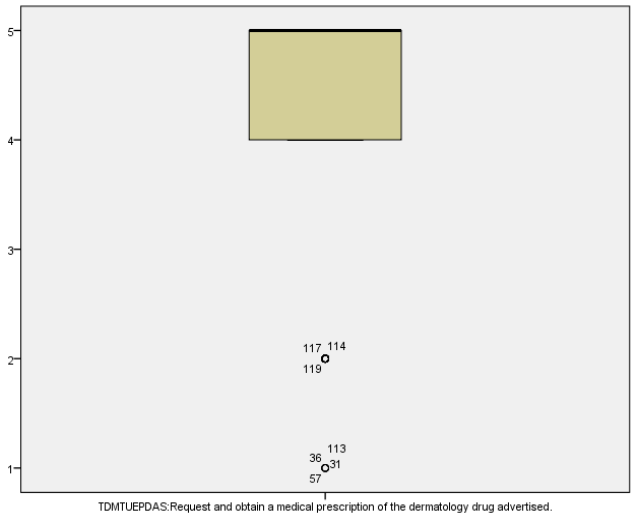

*Figure 12.*Normal box plot of the criterion to request and obtain a medical prescription of the dermatology drug advertised

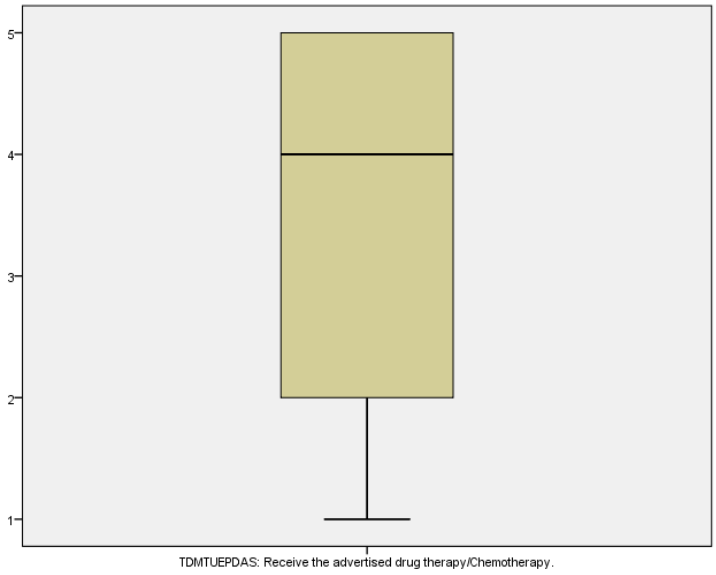

Figure 13. Normal box plot of the criterion to receive the advertised drug therapy/chemotherapy

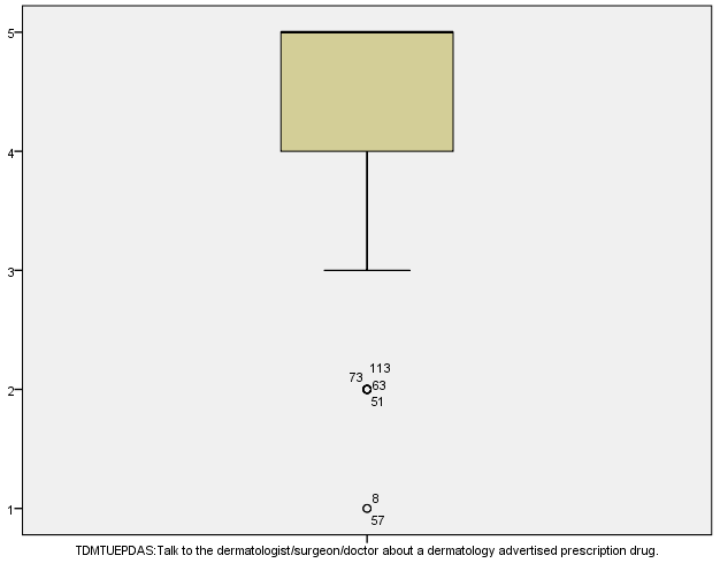

Figure 14. Normal box plot of the criterion to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug

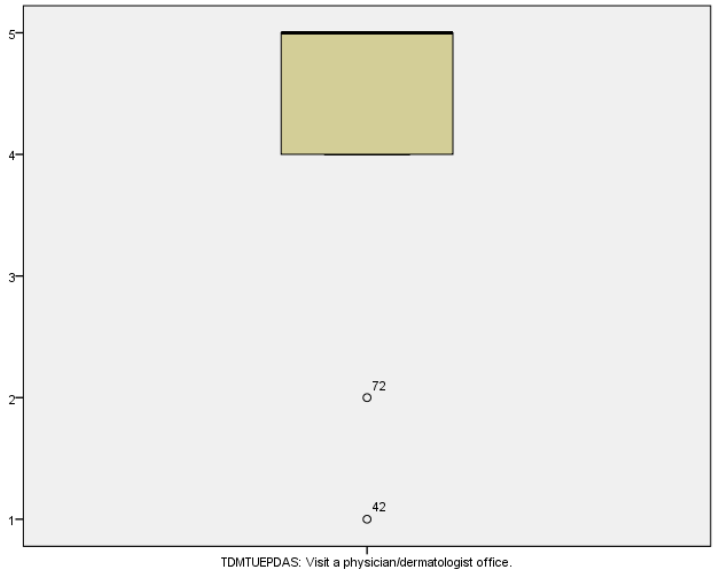

Figure 15. Normal box plot of the criterion to visit a physician/dermatologist office

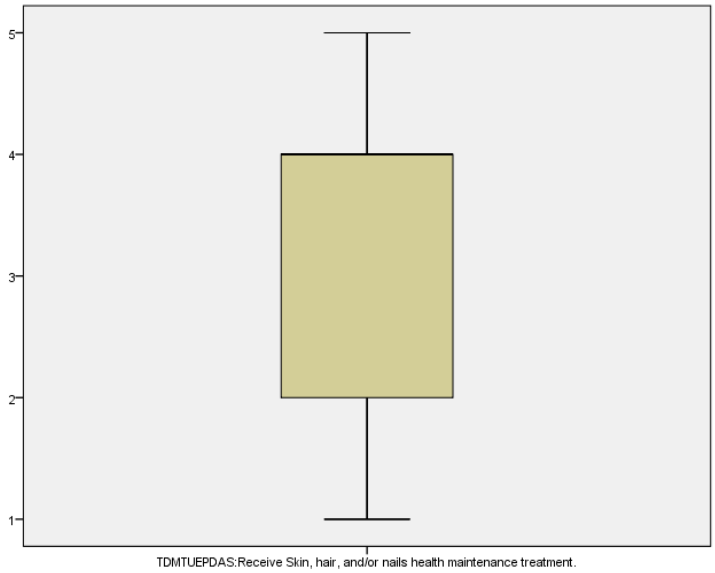

Figure 16. Normal box plot of the criterion to receive skin, hair, and/or nails health maintenance treatment

Figure 17. Normal box Plot of the criterion to go for dermatology disease screening test

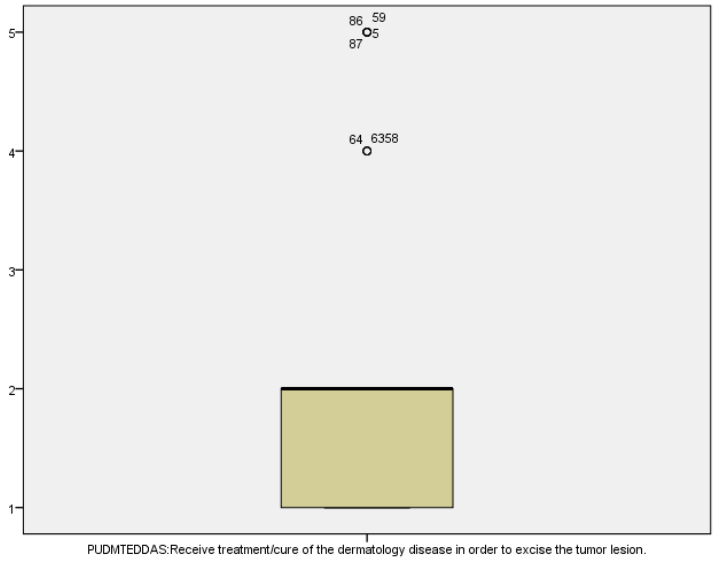

Figure 18. Normal box plot of the criterion to receive treatment/cure of the dermatology disease in order to excise the tumor/lesion

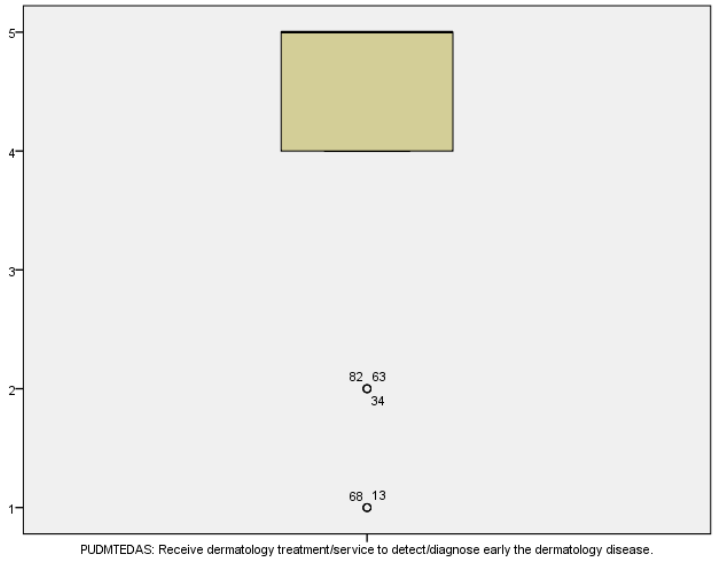

Figure 19. Normal box plot of the criterion to receive dermatology treatment/service to detect/diagnose early the dermatology disease

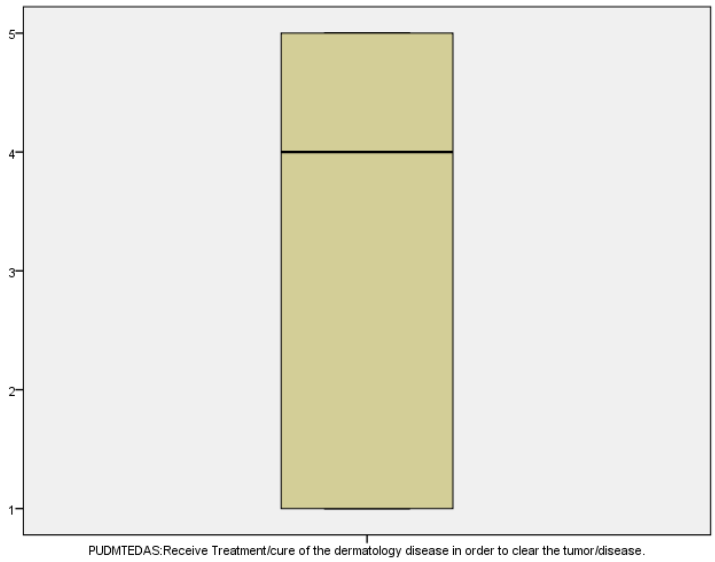

Figure 20. Normal box plot of the criterion to receive treatment/cure of the dermatology disease in order to clear the tumor/disease

Independence of errors and homoscedasticity. The evaluation of these two assumptions for the nine criteria is through the scatterplots observation. The normal p-p

plots show no variation in the variance of the residual terms regarding the predictors. The no variation indicates that the homoscedasticity assumption is met (Field, 2009; Green & Salkind, 2011). Moreover, the scatterplots show no correlation of residual terms for the observations. Consequently, the independent of error assumption is met (Field, 2009; Green & Salkind, 2011). The normal p-p plots for the two assumptions and each criterion are in Figure 21 for the criterion (a), Figure 22 for the criterion (b), Figure 23 for the criterion (c), Figure 24 for the criterion (d), Figure 25 for the criterion (e), Figure 26 for the criterion (f), Figure 27 for the criterion (g), Figure 28 for the criterion (h), and Figure 29 for the criterion (i) (Field, 2009; Green & Salkind, 2011).

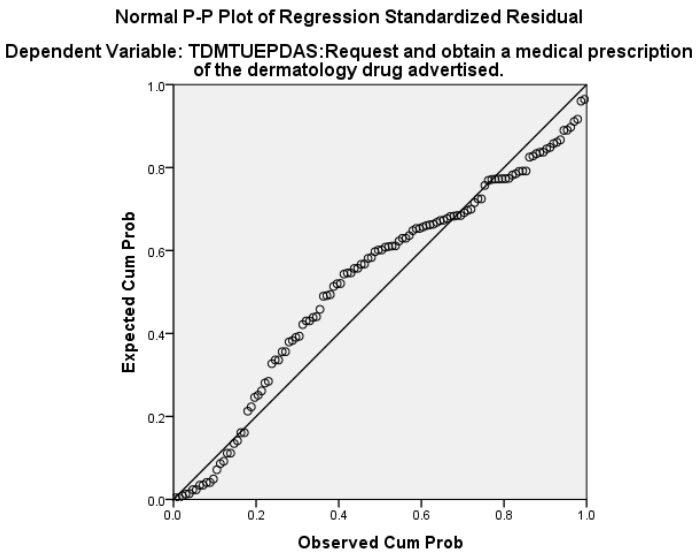

Figure 21. Normal p-p plots of regression of the criterion to request and obtain a medical prescription of the dermatology drug advertised

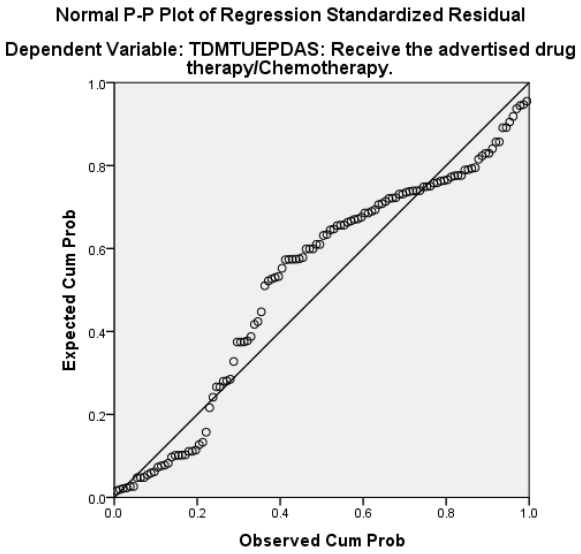

Figure 22. Normal p-p plots of regression of the criterion to receive the advertised drug therapy/chemotherapy

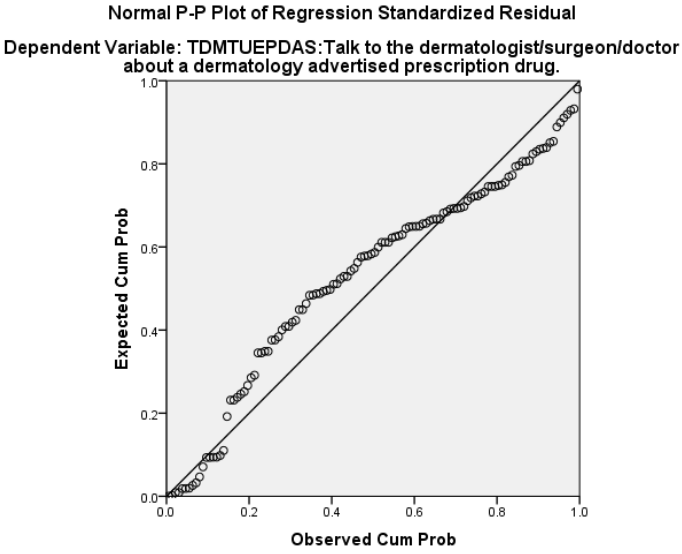

Figure 23. Normal p-p plots of regression of the criterion to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug

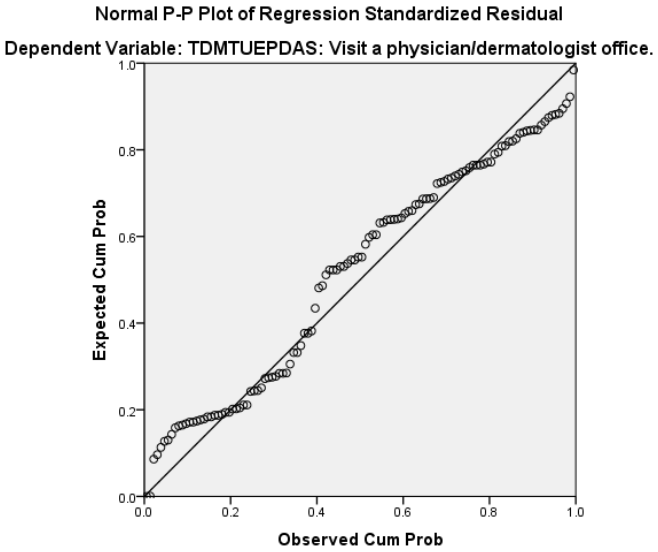

Figure 24. Normal p-p plots of regression of the criterion to visit a physician/dermatologist office

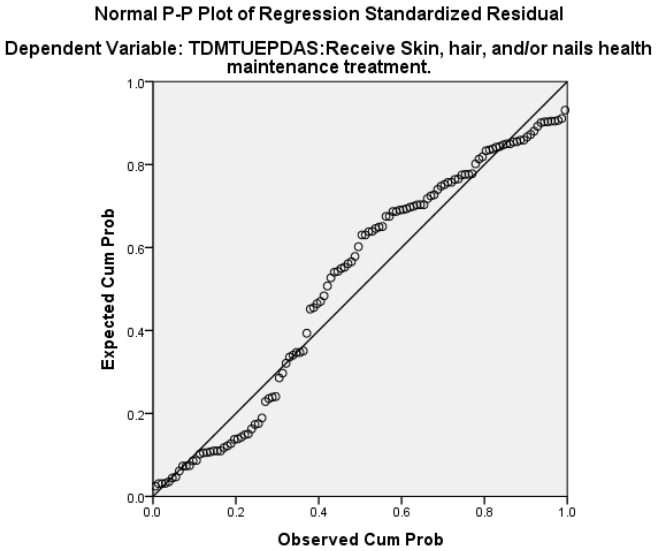

Figure 25. Normal p-p plots of regression of the criterion to receive skin, hair, and/or nails health maintenance treatment

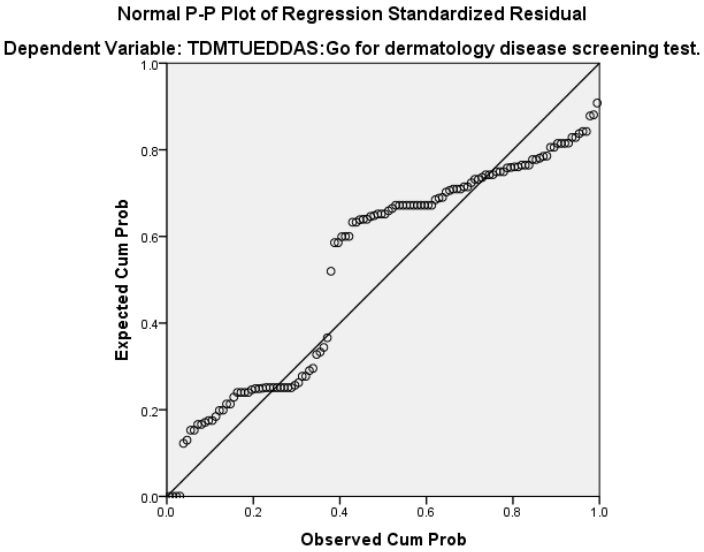

Figure 26. Normal p-p plots of regression of the criterion to go for dermatology disease screening test

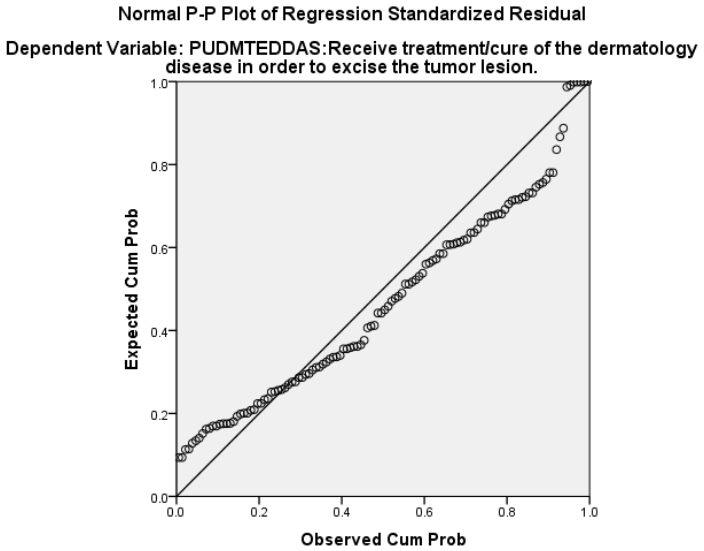

Figure 27. Normal p-p plots of regression of the criterion to receive treatment/cure of the dermatology disease to excise the tumor/lesion

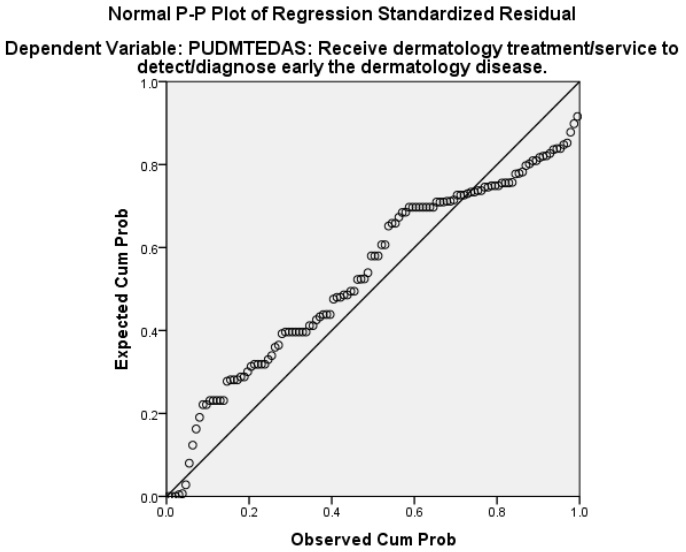

Figure 28. Normal p-p plots of regression of the criterion to receive dermatology treatment/service to detect/diagnose early the dermatology disease

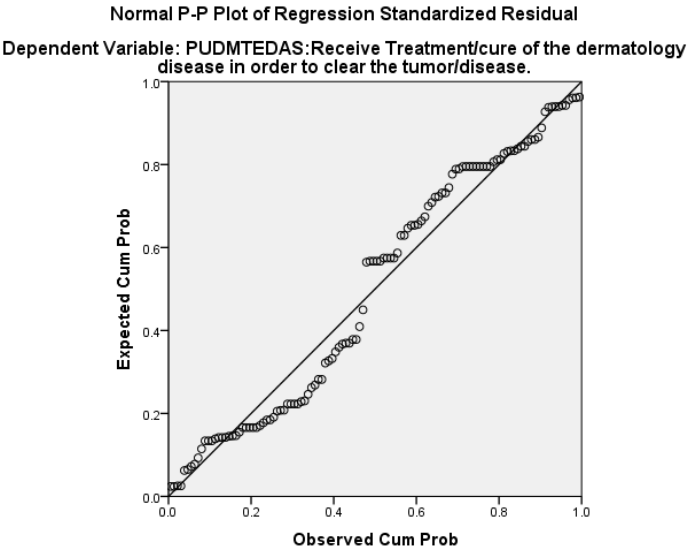

Figure 29. Normal p-p plots of regression of the criterion to receive treatment/cure of the dermatology disease to clear the tumor/disease

No perfect multicollinearity. The variance inflection factors (VIF) permitted to assess the multicollinearity amongst predictors in relation with each of the nine

dependent variables. All the VIF values shown in Table 7 are below 10. A value of 10 or greater indicates the perfect multicollinearity amongst predictors (Field, 2009). This assumption was met.

Table 7

Predictors' Variance Inflection Factors (VIF) for Each Criterion

Criterion	VIF
told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug.	2.44
told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use.	2.56
published in the newspaper, magazines, review, or the journal contained this statement "you are encouraged to report negative side effects of prescription drugs to the US Food and Drugs Administration (FDA) Visit wmedwatch5 or call 1-800-FDA-1088."	1.14
passed on television/radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA	1.22
audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter.	1.29
said the drug risk(s)/danger(s) approved by F.D.A and included in the drug information or label.	2.03
Stated the most important dangers that the dermatology patient may face taking the advertised drug.	1.9
stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government.	1.61
stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA	1.4
stated "ask your doctor if [drug name] is right for you."	1.12
described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment.	1.22
encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor	1.19

(table continues)

Criterion	VIF
had the company's name of the advertised skin cancer drug.	1.37
gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition.	1.35
stated "ask your healthcare provider for more information".	1.06

Hypotheses Testing

Research Question 1: Is product claim advertisement a predictor of the types of medical services utilized amongst adult dermatology patients in the United States?

Hypothesis 1 (H_0): Product claim advertisement does not significantly prompt the utilization of the types of medical services amongst adult dermatology patients in the United States.

Hypothesis 1 (H_1): Product claim advertisement significantly prompts the utilization of the types of the medical services amongst adult dermatology patients in the United States.

Analytical Strategy for the Hypothesis Testing 1. The first hypothesis testing was product claim advertisement predicting or not the utilization of the types of medical dermatology services amongst the target population. Question 27 was the set of predictors, and question 32(5) was the unique criterion used to test the hypotheses and to answer the related research question. Indeed, question 27 served as the set of predictors for the forced entries multiple regression test with each of the seven criteria or question 32's items (set of criteria or measures). Amongst the seven multiple regression tests per criterion, only five models had the statistically significant *P* values with 95% confidence interval ($P < .05$) from the model summary output tables: (a) question 32(1), $P = .000$ and

R = .496, (b) question 32(2), *P* = .003 and *R* = .456, (c) question 32(5), *P* = 0.000 and *R* = .512, (d) question 32(6), *P* = .036 and R = .397, (e) question 32(7), *P* = .042 and *R* = .392. The five models had different multiple correlation coefficients *R*. Question 32(5) had the highest multiple correlation coefficient *R* = .512 amongst the five significant criteria. Thus, question 32(5) helped to answer this research question.

Answer to Research Question 1. The following multiple regression results (Table 8) show that product claim advertisement significantly predicts the utilization of the type of the medical services amongst adult dermatology patients. Indeed, a forced entry multiple regression analysis was conducted to evaluate how well product claim advertisement predicted the type of medical dermatology service utilized. The set of predictors was product claim advertisement with 10 measures or items that were (a) told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug, (b) to told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use, (c) published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088", (d) passed on television/radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA, (e) audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter, (f) said the drug risk(s)/danger(s) approved by FDA and included in the drug information or label, (g) stated the most important dangers that the dermatology patient may face taking the

advertised drug, (h) stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government,(i) stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA, (j) stated "Ask your doctor if [drug name] is right for you.", while the criterion variable was to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug index. The linear combination of the product claim measures was significantly related to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug, F (10,109) = 3.87, $p < .05$. The sample multiple correlation coefficient R was .51, indicating that approximately 26% of the variance of to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug in the sample can be accounted for by the linear combination of the set of the predictors product claim advertisement measures, $R^2 = .262$. The loss of predicted power or shrinkage of 6.7% has been verified with the Adjusted $R^2 = .195$. Consequently, a model from the population would account for approximately 6.7% less variance by the criterion. Table 8 shows the multiple regression model summary or results.

Table 9 shows the indices of the relative strength of each particular predictor in relation with the criterion to talk to the dermatologist/surgeon/doctor about a dermatology advertised prescription drug. Only one out of 10 bivariate correlations between the set of predictors product claim strength measures and talk to the dermatologist/surgeon/doctor about a dermatology advertised prescription drug index was negative, and one out of 10 were statistically significant ($P < .05$). Four out 10 partial correlations between the product claim strength measures and to talk to the dermatologist/surgeon/doctor about a

dermatology advertised prescription drug index were significant. Out of the four, only the partial correlation between the strength measure of stated "Ask your doctor if [drug name] is right for you" predictor and to talk to the dermatologist/surgeon/doctor about a dermatology advertised prescription drug index was positive, $p = 0.00$. These correlation analyses may lead to the conclusion that stated "Ask your doctor if [drug name] is right for you" is the only useful predictor. However, it alone accounted for only 0.20% of the variance of to talk to the dermatologist/surgeon/doctor about a dermatology advertised prescription drug index, while the other variables contributed an additional 25.8% (26% - 0.20% = 25.8%). Moreover, predictors were correlated. However, the correlation was not a source of concern for the multiple regression model giving that all the VIF statistics were lower than 10.

Table 8

Multiple Regression Model Summary[b]

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	Change statistics					Durbin-Watson
					R Square change	*F* change	df1	df2	Sig. *F* change	
1	.512[a]	0.262	0.195	0.844	0.262	3.875	10	109	0.000	1.925

Note. a. Predictors: (Constant), DPCAES: "Stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA ", DPCAES: "Told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use. ", DPCAES: "Passed on Television/Radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA ", DPCAES: "Published in the newspaper, magazines, review, or journal contained this statement " "You are encouraged to report negative side effects of prescription drug to the US Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088, DPCAES: Stated "Ask your doctor if [drug name] is right for you.", DPCAES: "Stated the most important dangers that the dermatology patient may face taking the advertised drug. ", DPCAES: "Audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter.", DPCAES: "Stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government.", DPCAES: "Said the drug risk(s)/danger(s) approved by FDA and included in the drug information or label).", DPCAES: "Told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug."

b. Dependent Variable: TDMTUEPDAS: Talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug.

Table 9

Bivariate and Partial Correlations between each Predictor and Talk to the Dermatologist/Surgeon/Doctor About a Dermatology Advertised Prescription Drug Index

Predictors	Correlation between each predictor and the criterion	Correlation between each predictor and the criterion controlling for all other predictors
stated "ask your doctor if [drug name] is right for you."	0.04*	0.00*
told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug	0.06	0.18
told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use	-0.10	-0.24*
published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the US Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088	0.20	0.19
passed on Television/Radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA	0.14	0.15
audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter	0.24	0.07
said the drug risk(s)/danger(s) approved by the FDA and included in the drug information or label	0.20	-0.01*
stated the most important dangers that the dermatology patient may face taking the advertised drug	0.40	0.28
stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government	0.17	-0.01*
stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA	0.21	0.06

Note. * $P < .05$. Confidence interval 95%.

Research Question 2: Is product claim advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in the United States?

Hypothesis 2 (H_0): Product claim advertisement does not significantly prompt the purposes of medical services utilization amongst adult dermatology patients in the United States.

Hypothesis 2 (H_1): Product claim advertisement significantly prompts the purposes of the medical services utilization amongst adult dermatology patients in the United States.

Analytical Strategy for the Hypothesis Testing 2. The second hypothesis testing was product claim advertisement predicting or not the purpose of the medical dermatology services utilization amongst the target population. Question 27 was the set of predictors, and question 36(4) was the unique criterion used to test the hypotheses and to answer the related research question. Indeed, question 27 served as set of predictors for the forced entry multiple regression tests in relation with each of the four criteria or question 36's items (set of criteria or measures). Amongst the four multiple regression tests per criterion, only one model had the statistically significant P values ($P \leq .05$) from the four model summary output tables: question 36(4), $P = .05$ and $R = .386$. Consequently, question 36(4) helped to answer this research question.

Answer to Research Question 2. The following forced entry multiple regression results (Table 10) show that product claim advertisement significantly predicts the purpose of the utilization of the medical service amongst adult dermatology patients. In that regard, a forced entry multiple regression analysis was conducted to evaluate how

well product claim advertisement predicted the purpose of the medical dermatology service utilized. The set of predictors was product claim advertisement with 10 measures or items. The measures were (a) told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug, (b) to told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use, (c) published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088", (d) passed on television/radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA, (e) audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter, (f) said the drug risk(s)/danger(s) approved by the FDA and included in the drug information or label, (g) stated the most important dangers that the dermatology patient may face taking the advertised drug, (h) stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government,(i) stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA, (j) stated "Ask your doctor if [drug name] is right for you.", while the criterion variable was to receive treatment/cure of the dermatology disease in order to excise the tumor/lesion.

The linear combination of the product claim measures was significantly related to receive treatment/cure of the dermatology disease to excise the tumor/lesion index,

F (10,109) = 1.91, $P \leq .05$. The sample multiple correlation coefficient R was .40, indicating that approximately 15% of the variance of to receive treatment/cure of the dermatology disease to excise the tumor lesion index in the sample can be accounted for by the linear combination of the set of the predictors product claim advertisement measures, $R^2 = .149$. The loss of predicted power or shrinkage of 7.8% has been verified with the Adjusted $R^2 = .071$. Consequently, a model from the population would account for approximately 7.8% less variance by the criterion. Table 10 shows the multiple regression model summary or results.

Table 11 shows the indices of the relative strength of each particular predictor in relation with the criterion to receive treatment/cure of the dermatology disease in order to excise the tumor/lesion. Height out of 10 bivariate correlations between the set of predictors product claim strength measures and receive treatment/cure of the dermatology disease in order to excise the tumor/lesion index were negative, and seven out of 10 were statistically significant ($P < .05$). Seven out 10 partial correlations between the set of predictors product claim strength measures and to receive treatment/cure of the dermatology disease in order to excise the tumor/lesion index were statistically significant ($P < .05$). The partial correlations between the predictors strength measures (a) told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use, $P = 0.12$, (b) published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA). Visit MedWatch5 or call 1-800-FDA-1088, $P = 0.20$, (c) stated the most important dangers that the

dermatology patient may face taking the advertised drug, $P = 0.07$, and (d) receive treatment/cure of the dermatology disease to excise the tumor/lesion index were not statistically significant, $P > .05$.

These correlation analyses may lead to the conclusion that the three predictors strength measures with nonsignificant partial correlations with to receive treatment/cure of the dermatology disease to excise the tumor/lesion index were relatively not important. However, this judgment required caution because predictors were correlated. However, the correlation was not sources of concern for the multiple regression model giving that all the VIF statistics were lower than 10.

Table 10

Multiple Regression Model Summary[b]

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	Change statistics					Durbin-Watson
					R square change	*F* change	df1	df2	Sig. *F* change	
1	.386[a]	.149	.071	.844	.149	1.910	10	109	0.051	1.348

Note. a. Predictors: (Constant), DPCAES: "Stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA", DPCAES: "Told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use.", DPCAES: "Passed on Television/Radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA", DPCAES: "Published in the newspaper, magazines, review, or journal contained this statement " "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088, DPCAES: Stated "Ask your doctor if [drug name] is right for you.", DPCAES: "Stated the most important dangers that the dermatology patient may face taking the advertised drug. ", DPCAES: "Audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter." , DPCAES: "Stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government.", DPCAES: "Said the drug risk(s)/danger(s) approved by FDA and included in the drug information or label).", DPCAES: "Told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug."
b. Dependent Variable: PUDMTEDDAS: Receive treatment/cure of the dermatology disease in order to excise the tumor lesion.

Table 11

Bivariate and Partial Correlations Between Each Predictor and to Receive Treatment/Cure of the Dermatology Disease in Order to Excise the Tumor Lesion Index

Predictors	Correlation between each predictor and the criterion	Correlation between each predictor and the criterion controlling for all other predictors
stated "Ask your doctor if [drug name] is right for you."	-0.04*	-0.03*
told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug	-0.25*	-0.25*
told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use	-0.08*	0.12
published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the US Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088	0.23	0.20
passed on Television/Radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA	-0.12	-0.02*
audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter	-0.12	-0.06*
said the drug risk(s)/danger(s) approved by the FDA and included in the drug information or label	-0.07*	-0.08*
stated the most important dangers that the dermatology patient may face taking the advertised drug	0.04*	0.07
stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government	-0.01*	0.04*
stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA	-0.04*	-0.04*

Note. * $p < .05$. Confidence interval 95%.

Research Question 3: Is help-seeking advertisement a predictor of the types of medical services utilized amongst adult dermatology patients in the United States?

Hypothesis 3 (H_0): Help-seeking advertisement does not significantly prompt the types of medical services utilized amongst adult dermatology patients in the United States.

Hypothesis 3 (H_1): Help-seeking advertisement significantly prompts the types of the medical services utilized amongst adult dermatology patients in the United States.

Analytical Strategy for the Hypothesis Testing 3. The third hypothesis testing was about help-seeking advertisement predicting or not the type of the medical dermatology services utilized amongst the target population. Question 30 was the set of predictors and question 34(2) was the unique criterion used to test the hypotheses and to answer the related research question. Indeed, question 30 served as the set of predictors for the forced entry multiple regression tests in relation with each of the fourteen criteria or question 34's items (set of criteria or measures). Amongst the fourteen multiple regression tests per criterion, only one model had the statistically significant *P* values ($P < .05$) from the fourteen model summary output tables: question 34(2), $P = .04$ and $R = .303$. Consequently, question 34(2) helped to answer this research question.

Answer to Research Question 3. The following forced entry multiple regression results (Table 12) show that help-seeking advertisement significantly predicts the type of medical services utilized amongst adult dermatology patients. In that regard, a forced entry multiple regression analysis was conducted to evaluate how well help-seeking advertisement predicted the type of the medical dermatology service utilized. The set of

predictors was help-seeking advertisement with five measures. The items were (a) described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment, (b) encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor, (c) had the company's name of the advertised dermatology drug, (d) gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition, (e) stated "Ask your healthcare provider for more information", while the criterion variable was to go for dermatology disease screening test index. The linear combination of the help-seeking measures was significantly related to go for dermatology disease screening test index, F (5,114) = 2.31, $p < .05$. The sample multiple correlation coefficient R was .30, indicating that approximately 9.2% of the variance of to go for dermatology disease screening test index in the sample can be accounted for by the linear combination of the set of the predictors help-seeking advertisement measures, $R^2 = .092$. The loss of predicted power or shrinkage of 4% has been verified with the Adjusted $R^2 = .05$. Consequently, a model from the population would account for approximately 4% less variance by the criterion. Table 12 shows the multiple regression model summary or results.

Table 13 shows the indices of the relative strength of each particular predictor in relation with the criterion to go for dermatology disease screening test index. Only one out of five bivariate correlations between the set of predictors help-seeking strength measures and to go for dermatology disease screening test index was negative, and the same one out of five was statistically significant ($P < .05$). None of the five partial

correlations between the set of predictors help-seeking strength measures and to go for dermatology disease screening test index was statistically significant ($P > .05$). These correlation analyses may lead to the conclusion that the five predictors' strength measures having nonsignificant partial correlations with to go for dermatology disease screening test index were relatively not important. However, this judgment required caution because predictors were correlated. However, the correlation was not a source of concern for the multiple regression model giving that all the VIF statistics were lower than 10.

Table 12

Multiple Regression Model Summary[b]

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	Change statistics					Durbin-Watson
					R Square change	*F* change	df1	df2	Sig. *F* change	
1	.303[a]	.092	.052	.725	.092	2.312	5	114	0.048	1.985

Note. a. Predictors: (Constant), DHSAES: Stated "Ask your healthcare provider for more information". , DHSAES: Encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor, DHSAES: Had the company's name of the advertised skin cancer drug., DHSAES: Described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment., DHSAES: Gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition.
b. Dependent Variable: TDMTUEDDAS: Go for dermatology disease screening test.

Table 13

Bivariate and Partial Correlations Between Each Predictor and to Go for Dermatology Disease Screening Test Index

Predictors	Correlation between each predictor and the criterion	Correlation between each predictor and the criterion controlling for all other predictors
described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment.	0.15	0.11
encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor	-0.02*	-0.08
had the company's name of the advertised dermatology drug.	0.09	0.45
gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition.	0.12	0.09
stated "Ask your healthcare provider for more information".	0.25	0.23

Note. * $P < .05$. Confidence interval 95%.

Research Question 4: Is help-seeking advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in the United States?

Hypothesis 4 (H_0): Help-seeking advertisement does not significantly prompt the purposes of medical services utilization amongst adult dermatology patients in the United States.

Hypothesis 4 (H_1): Help-seeking advertisement significantly determines the purposes of the medical services utilization amongst adult dermatology patients in the United States.

Analytical Strategy for the Hypothesis Testing 4. The fourth and last hypothesis testing was about help-seeking advertisement predicting or not the purpose of the medical dermatology services utilized amongst the target population. Question 30 was

the set of predictors and question 38(3) was the unique criterion used to test the hypotheses and to answer the related research question. Indeed, question 30 served as the set of predictors for the forced entry multiple regression tests in relation with each of the four criteria or question 38's items (set of criteria or measures). Amongst the four multiple regression tests per criterion, only two models had the statistically significant *P* values ($P < .05$) from the model summary output tables: (a) question 38(1), $P = .01$ and $R = .347$, (b) question 38(3), $P = .003$ and $R = .381$. The two models had different multiple correlation coefficients *R*. Question 38(3) had the highest multiple correlation coefficient $R = .381$. Question 38(3) helped to answer this research question for that reason.

Answer to Research Question 4. The following forced entry multiple regression results (Table 14) show that help-seeking advertisement significantly predicts the purpose of medical service utilized amongst adult dermatology patients. In that regard, a forced entry multiple regression analysis was conducted to evaluate how well help-seeking advertisement predicted the purpose of the medical dermatology service utilized. The set of predictors was help-seeking advertisement with five measures or items. The items were (a) described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment, (b) encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor, (c) had the company's name of the advertised dermatology drug, (d) gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition, (e) stated "Ask your healthcare provider for more information", while the criterion variable was to receive treatment/cure of the dermatology disease in order to

clear the tumor/disease index. The linear combination of the help-seeking measures was significantly related to receive treatment/cure of the dermatology disease in order to clear the tumor/disease index, F (5,114) = 3.87, $p < .05$. The sample multiple correlation coefficient R was 4, indicating that approximately 14.5% of the variance of to receive treatment/cure of the dermatology disease in order to clear the tumor/disease index in the sample can be accounted for by the linear combination of the set of the predictors help-seeking advertisement measures, $R^2 = .145$. The loss of predicted power or shrinkage of 3.7% has been verified with the Adjusted $R^2 = .108$. Consequently, a model from the population would account for approximately 3.7% less variance by the criterion. Table 14 shows the multiple regression model summary or results.

Table 15 shows the indices of the relative strength of each particular predictor in relation with the criterion to receive treatment/cure of the dermatology disease to clear the tumor/disease index. None of the five bivariate correlations between the set of predictors help-seeking strength measures, and to receive treatment/cure of the dermatology disease to clear the tumor/disease index was positive, and all the five were not statistically significant ($P > .05$). The partial correlations between the strength measures for (a) described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment, (b) gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition, and (c) to receive treatment/cure of the dermatology disease in order to clear the tumor/disease index were statistically significant ($P < .05$).

These correlation analyses may lead to the conclusion that the strength measures for (a) described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment, (b) gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition, and (d) to receive treatment/cure of the dermatology disease to clear the tumor/disease are the only useful predictors. However, this judgment required caution because predictors were correlated. However, the correlation was not a source of concern for the multiple regression model giving that all the VIF statistics were lower than 10.

Table 14

Multiple Regression Model Summary[b]

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	Change statistics					Durbin-Watson
					R Square change	*F* change	df1	df2	Sig. *F* change	
1	.381[a]	.145	.108	1.57	.145	3.88	5	114	0.003	1.19

Note. a. Predictors: (Constant), DHSAES: Stated "Ask your healthcare provider for more information". , DHSAES: Encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor, DHSAES: Had the company's name of the advertised skin cancer drug., DHSAES: Described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment., DHSAES: Gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition.
b. Dependent Variable: PUDMTEDAS: receive treatment/cure of the dermatology disease in order to clear the tumor/disease.

Table 15

Bivariate and Partial Correlations Between Each Predictor and to Receive Treatment/Cure of the Dermatology Disease in Order to Clear the Tumor/Disease Index

Predictors	Correlation between each predictor and the criterion	Correlation between each predictor and the criterion controlling for all other predictors
described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment.	0.14	-0.02*
encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor	0.17	0.12
had the company's name of the advertised dermatology drug.	0.32	0.28
gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition.	0.21	0.03*
stated "ask your healthcare provider for more information".	0.12	0.16

Note. * $P < .05$. Confidence interval 95%.

Additional Findings

Some Predictors and Criteria not Significantly Related

Data analysis showed that the linear combination of product claim advertisement measures was not significantly related to (did not predict) participate normally to the dermatology treatment regimen, $R^2 = .145$, F (10,109) = 1.84, $p = .06$ (not significant) and to fill the dermatology disease prescription drug, $R^2 = .091$, F (10,109) = 1.08, $p = .378$ (not significant) as types of medical dermatology services utilized after exposure. Additionally, the linear combination of product claim advertisement measures was not significantly related to the purpose to receive treatment/cure of the dermatology in order to look for well-being $R^2 = .078$, F (10,109) = .923, $p = .515$ (not significant). The linear combination of the help-seeking measures was not significantly related the medical

service to consult a dermatologist/doctor regarding any symptom/problem related to skin, hair, or nails, R^2 = .060, F (5,114) = .145, p = .212 (not significant) and to the purpose to receive dermatology treatment/service for the dermatology disease symptom management, R^2 = .003, F (5,114) = .064, p = .997 (not significant).

PT Theory Validation in the Context of This Study

PT is the theoretical framework of this study analyzed in Chapter 2. PT analyzed individual behaviors while making a decision in a risky situation. As analyzed in Chapter 2, the dermatology patient has to make the decision to utilize medical services or not after exposure to a dermatology product claim or help-seeking advertisement and as the consequence of that exposure. In that condition, dermatology patient may lose his/her life by refusing to use or by using medical services after exposure (risky situation). The risk consists of losing or saving his/her life by not using or using the medical dermatology services.

The test and validation of the PT in this study was through the study's hypotheses testing, as stated in Chapter 2.The four hypotheses testing (Tables 8, 10, 12, 14) that preceded showed a statistically significant relationship between the DTCAs (product claim and help-seeking advertisements) and the utilization of medical dermatology services (types and purposes) amongst the target population. Consequently, those results permitted to make the claim PT was verified and applicable in the context of medical dermatology services utilization prompted by the DTCAs directed directly to consumers.

Study Model Validation

The literature review enabled me to develop the study model presented in Chapter 2 (Figure 2). Indeed, the model explained, based on the literature, how adult dermatology patients utilized medical services as the consequence of their exposure to the dermatology product claim or/and help-seeking advertisements. The model, as stated in Chapter 2, needed an empirical test and validation amongst the study target population through the questionnaire completion and hypotheses testing. The hypotheses testing permitted to review the study model proposed in Chapter 2 (Figure 2). The review consisted of selecting only the dependent variables (Table 16) with a statistically significant relationship ($P \leq .05$) with independent variables for the illustration and validation of the model (Figure 30).

In that regard, the dermatology patient in contact with the product claim advertisement (set of predictors) utilized the following services: (a) to request and obtain a medical prescription of the dermatology drug advertised (Q32(1)), (b) to receive the advertised drug therapy/chemotherapy (Q32(2)), (c) to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug (Q32(5)), (d) to visit a physician/dermatologist office (Q32(6)), and (e) to receive skin, hair, and/or nails health maintenance treatment (Q32(7)). Meanwhile, the patient exposed to help-seeking advertisement went for dermatology disease screening test or used the screening test service (Q34 (2)).

In terms of purposes of utilization, the target dermatology patients exposed to a product claim advertisement utilized medical services in order to excise the tumor/lesion

(Q36(4)). Al contrary, the dermatology patients in contact with the help-seeking advertisement received medical services either to detect/diagnose early the dermatology disease (Q38(1)) or to clear the tumor/disease (Q38(3)).

Table 16

Dependent Variables With Significant P Values for the Study Model Validation

Types and purposes of utilization	$P \leq .05$
Product claim types of medical services utilized	
to request and obtain a medical prescription of the dermatology drug advertised (Q32(1))	0.00
to receive the advertised drug therapy/chemotherapy (Q32(2))	0.00
to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug (Q32(5))	0.00
to visit a physician/dermatologist office (Q32(6))	0.04
to receive skin, hair, and/or nails health maintenance treatment (Q32(7))	0.04
Help-seeking type of medical service utilized	
to go for dermatology disease screening test (Q34(2))	0.04
Product claim purpose of utilization	
to receive treatment/cure of dermatology disease in order to excise the tumor/lesion (Q36(4))	0.05
Help-seeking purpose of utilization	
to detect/diagnose early the dermatology disease (Q38(1))	0.01
to receive treatment/cure of dermatology disease in order to clear the tumor lesion/disease (Q38(3)	0.00

Note. $P \leq .05$. Confidence interval = 95%.

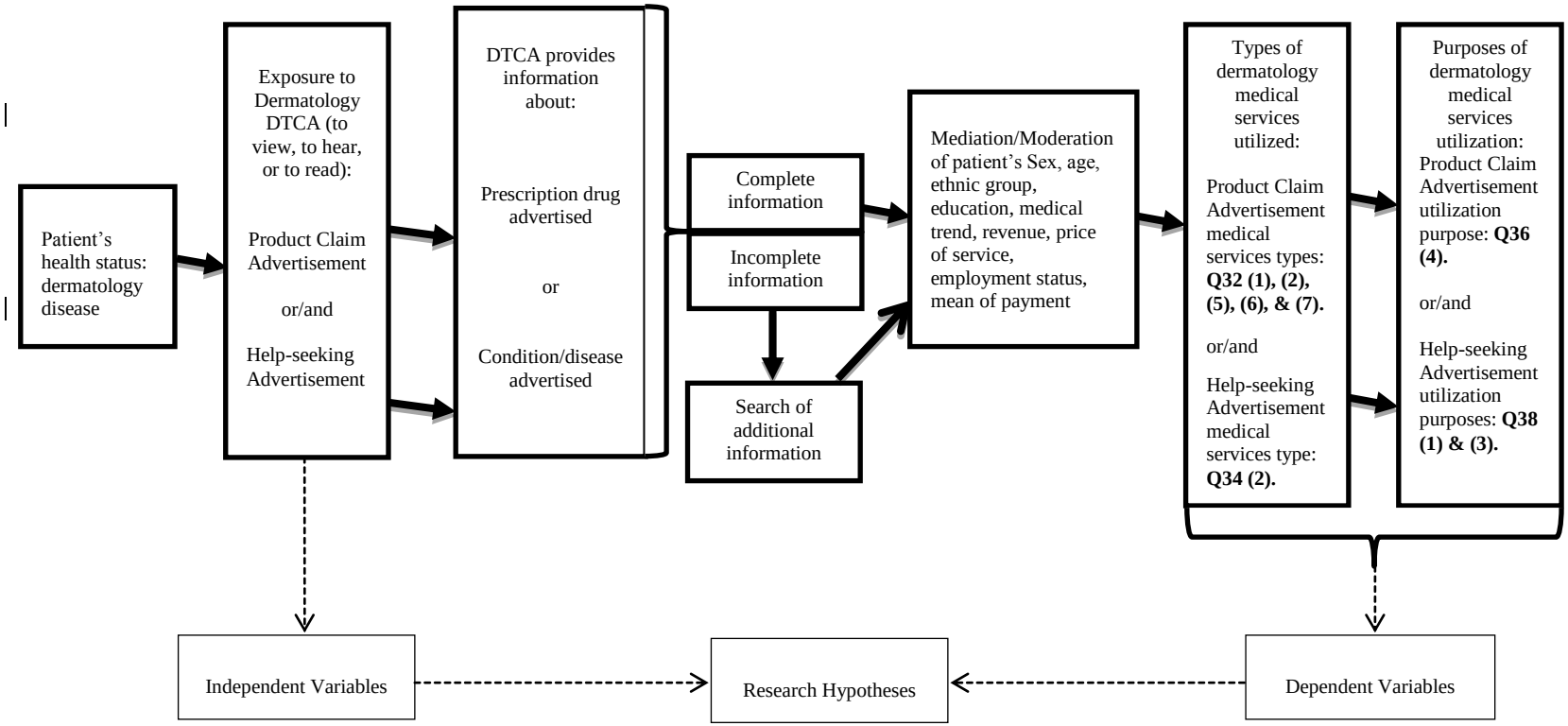

Figure 30. Empirical and validated model of the relationship between DTCAs and utilization of medical services by adult dermatology patients after Exposure to DTCAs, by H. Zouetchou, 2015, "Direct-to-consumer advertisements and medical services utilization amongst adult dermatology patients in the United States", dissertation submitted as partial requirements for the degree of Doctor of Philosophy, Health Sciences, p. 191, unpublished. Copyright 2015 by Walden University.

The More Predicting Product Claim and Help-seeking Characteristics

The measurement items or independent variables used for product claim and help-seeking advertisements were the characteristics of the advertisements defined by the US FDA. This research was interested also to know which characteristic applied in a DTCA could predict more than other characteristics a particular type or purpose of medical dermatology services utilized amongst the target population. The forced entry simple regressions were conducted amongst product claim advertisement (question 27) and the types (question 32) and purposes (question 36) of medical services utilization. Moreover, the forces entry simple regressions were conducted amongst help-seeking advertisement (question 30) and the types (question 34) and purposes (question 38) of medical services utilization. Then, the simple regressions permitted to identify the particular type or purpose of medical dermatology service utilized that was prompted significantly more by a considered product claim or help-seeking characteristic or item. The simple index of effect size R^2 enabled an identification of the characteristics with the highest simple index of effect size R^2 for a considered type or purpose of utilization. The characteristic/item with the highest simple index of effect size R^2 (amongst all variables significantly predicting the variable) was considered being the one predicting more or explaining more the variance in a considered type or purpose than other characteristics.

Product claim advertisement characteristics and types of utilization. The result of the simple regression test showed an independent variable/characteristic told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug having the highest R^2 value of 0.11, $p = 0.00$,

regarding the dependent variable to request and obtain a medical prescription for the dermatology drug advertised. This R^2 value meant that the characteristic told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug accounted for 11% of the variance in to request and obtain a medical prescription for the dermatology drug advertised. This independent variable significantly predicted more than any other the dependent variable to request and obtain a medical prescription for the dermatology drug advertised. Moreover, an independent variable passed on television/radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA, $R^2 = 0.04$, $p = 0.03$, significantly predicted less the dependent variable to request and obtain a medical prescription for the dermatology drug advertised.

The characteristic told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug has the highest R^2 value of 0.08, $p = 0.00$, regarding the dependent variable to receive the advertised drug therapy/chemotherapy. Consequently, the independent variable explained 8% of the variance in to receive the advertised drug therapy/chemotherapy. Also, the characteristic stated "Ask your doctor if [drug name] is right for you.'', $R^2 = 0.04$, $p = 0.03$, predicted significantly less the type of utilization to receive the advertised drug therapy/chemotherapy. Furthermore, the variable stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government, $R^2 = 0.04$, $p = 0.05$, predicted more than the characteristic stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA

R^2 = 0.04, p =0.02 the dependent variable to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug.

The characteristic stated the most important dangers that the dermatology patient may face taking the advertised drug, R^2 = 0.08, p =0.00, significantly predicted more than the characteristic published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088", R^2 = 0.03, p =0.05, the type to visit a physician/dermatologist office. Finally, only stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA characteristic, R^2 = 0.04, p =0.04, significantly predicted the type to receive skin, hair, and/or nails health maintenance treatment.

Product claim advertisement characteristics and purposes of utilization. In terms of purpose of utilization prediction, only the characteristic stated the most important dangers that the dermatology patient may face taking the advertised drug, R^2 = 0.04, p =0.03, explained 4% of the variance in the purpose to receive dermatology treatment to have rebuilt the part of the body damaged by the dermatology disease. Moreover, the characteristic stated the most important dangers that the dermatology patient may face taking the advertised drug, R^2 = 0.05, p =0.02, explained 5% of the variance in the purpose to receive treatment/cure of the dermatology to look for well-being. However, the characteristic published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or

call 1-800-FDA-1088.", R^2 = 0.07, p =0.00, the purpose to receive treatment/cure of the dermatology disease in order to clear the tumor. Finally, the dependent variables told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug.", R^2 = 0.06, p =0.01, and published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088.", R^2 = 0.06, p =0.01, both explained equally 6% of the variance in the purpose of receiving treatment/cure of the dermatology disease to excise the tumor lesion.

Help-seeking advertisement characteristics and types of utilization. The simple regression tests indicated that the characteristic described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment ", R^2 = 0.04, p =0.04, accounted for 4% of the variance in the type of utilization to receive gene therapy/biological therapy, while the variable stated "Ask your healthcare provider for more information", R^2 = 0.06, p =0.01, explained 6% of the variance in to go for dermatology disease screening test type of utilization. In the mine time, the simple regression showed that the variable described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment, R^2 = 0.04, p =0.03, accounted for 4% of the variation of to receive laser surgery.

Help-seeking advertisement characteristics and purposes of utilization. The characteristic encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor, R^2 = 0.05, p =0.02, accounted for 5% of the variance in

to receive dermatology treatment/service to detect/diagnose early the dermatology disease. Lastly, the variable had the company's name of the advertised dermatology drug, $R^2 = 0.10$, $p = 0.00$, predicted more than the characteristic gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition, $R^2 = 0.04$, $p = 0.02$, the purpose of to receive treatment/cure of the dermatology disease to clear the tumor/disease.

Summary and Transition

Chapter 4 aims to present the pilot study results, to test the multiple regression assumptions, to test the four hypotheses, the PT, the study model, and to answer the four research questions. The final sample of this study was 120 respondents. 71% of the 120 had the skin disease, 24% had hair disease, and 5% had nails disease.

The results of the pilot study showed the Cronbach's Alpha & reliability statistics of the six scales ranging from 0.01 to 0.68 and within the Cronbach's Alpha & acceptable range of was zero through one. These results enabled the final validation of the research study instrument (questionnaire) before its use for the final study.

All the four multiple regression assumptions were met. Thus, all the multiple regressions models of this study were generalizable, free of bias, and the results obtained from the sample were applied to the entire population of the study.

The findings of the study permitted to reject all the four null hypotheses (H0s) and to validate all the alternative hypotheses. Therefore, the results of the study showed that product claim and help-seeking advertisements significantly predicted respectively the utilization of the following medical services (a) to talk to the

dermatologist/surgeon/doctor about dermatology advertised prescription drug and (b) to go for dermatology disease screening test amongst adult dermatology patients attending church services at the Saint Nicholas Catholic Church or/and receiving primary care services at MedStar Primary Care Clinic. Besides, product claim and help-seeking advertisements significantly predicted respectively the following purposes (a) to receive treatment/cure of the dermatology disease to excise the tumor/lesion and (b) to receive treatment/cure of the dermatology disease to clear the tumor/disease. The study model and PT were validated based on the study hypotheses testing.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Study Purpose, Nature and Motivation

The purpose, nature, and motivation of this study are the content of this section. The intent of this quantitative correlation study was to describe the relationship between product claim, help-seeking (independent variables), and types and purposes of medical dermatology services utilization (dependent variable) amongst patients aged at least 18 years old. The patients were attending church services at Saint Nicholas Catholic Church or/and receiving primary care services at MedStar Primary Care Clinic in Houston, Texas. Also, I sought to test PT (Kahneman & Tversky, 1979) based on the description of the relationship amongst product claim, help-seeking, and types and purposes of medical dermatology services utilization.

The quantitative nature of this study was due to the research question and the use of the cross-sectional survey research method. In that regard, a sample of 120 participants selected based on the predetermined criteria completed a questionnaire of 38 questions. The forced entry multiple regression analysis of the responses permitted me to address the research questions. Moreover, all the multiple regression assumptions were met, enabling the results from the sample inferable to the general population of the study (Field, 2009).

I undertook this study to fill a gap found in the DTCAs and health services utilization literature. In fact, previous researchers found that drug and disease DTCAs prompted the utilization of medical services in general (Limbu & Torres, 2009; Mackert

et al., 2010). However, those researchers were silent about the question of the relationship between the product claim, help-seeking DTCAs, and the types and purposes of utilization of medical services amongst the specific group of adult dermatology patients attending church services at Saint Nicholas Catholic Church or/and receiving primary care services at MedStar Primary Care Clinic in Houston, Texas.

Findings Summary

The results of the study presented in Chapter 4 showed that product claim advertisement significantly prompted the utilization of the following medical dermatology services: (a) to request and obtain a medical prescription for the dermatology drug advertised, (b) to receive the advertised drug therapy/chemotherapy, (c) to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug, (d) to visit a physician/dermatologist office, and (e) to receive skin, hair, and/or nails health maintenance treatment. The patients exposed to the help-seeking advertisement used the screening test of the dermatology disease.

Product claim significantly determined the tumor/lesion excision as the purpose of medical services utilization. Finally, help-seeking advertisement significantly predicted early disease diagnosis and tumor/disease clearance purposes of medical dermatology service utilization. Many other types and purposes of medical services utilized had a nonsignificant relationship with product claim and help-seeking advertisements. An interpretation of the findings, the limitations of the study, recommendations, and implications for positive social change are the contents of Chapter 5.

Interpretation of the Findings

Literature Findings Versus Study Findings

These research findings confirmed, to a certain extent, the literature findings regarding an impact of the dermatology DTCAs directed directly to consumers on the use of medical dermatology services.

Research Question 1: Is product claim advertisement a predictor of the types of medical services used amongst adult dermatology patients in Houston, Texas?

Research Question 1 was about product claim advertisement prompting the types of medical services that dermatology patients used after exposure. According to the literature analyzed in Chapter 2, 94% of cancer nurse practitioners have received a request for the cancer drug advertised from patients (Gray & Abel, 2012). Then, these cancer patients talked/asked their doctor about the medication featured in the advertisement or visit a dermatologist office. Furthermore, 69.6% of APNs have seen patients naming the drug they wanted because of their exposure to the DTCAs (Mackert et al., 2010). Approximately 26% of the APNs testified that some patients kept their treatment plan due to the impact of the DTCA (Mackert et al., 2010). Fifty-three million consumers have talked to their physicians about a particular prescription drug that they have seen in a DTCA in the United States of America (Limbu & Torres, 2009). Also, approximately 21.2 million consumers were prompted to talk to their doctors about an illness in response to a drug advertisement influence (Limbu & Torres, 2009). Thirty-one percent of Americans claimed in 1999 having discussed with the doctors regarding a prescription of a drug seen in an advertisement. A 2003 survey showed 35% of

respondents have sought and gained more information from their physicians regarding the prescription medicine advertised (Limbu & Torres, 2009).

The study findings follow now. Sixty-eight percent of the respondents totally agreed having requested and obtained a medical prescription of the dermatology drug advertised due to their exposure to a dermatology product claim advertisement (P = .000 and R = .496). In the same logic, 47% of the respondents have totally agreed having received the advertised drug therapy (P = .003 and R = .456). Besides, 67% totally agreed having talked to the dermatologist/surgeon/doctor about dermatology advertised prescription drug (P = 0.000 and R = .512). Seventy percent totally agreed having visit a physician/dermatologist office (P = .036 and R = .397). Finally, 55% of the respondents agreed having received skin, hair, and/or nails health maintenance treatment under the influence of the DTCAs of a prescription drug (P = .042 and R = .392). The preceding study findings supported the above relationship between medical services utilization and the product claim advertisement from the peer-reviewed literature. However, some nonsignificant results (P > .05) contradicted the peer-reviewed literature by showing nonsignificant relationships between product claim and a particular type of the dermatology medical service. For example, 52% of the respondents agreed to participate normally in the dermatology treatment regimen due to the DTCAs exposure. However, the correlation between the variables was statistically nonsignificant (R = .381, P = .06). Also, 49% agreed to fill the dermatology prescription drug after exposure to a product claim, but the p value was higher than .05 (R = .301, P = .37).

The comparative analysis of the literature and study findings demonstrated that product claim advertisement persuaded, informed, and educated patients to use medical services in general, and certain medical dermatology services in particular amongst the study target population. The nonsignificant relationship still showed the presence of the relationships with *R* values. However, the relationships were statistically not important, consequently, did not deserve any consideration before Research Question 2.

Research Question 2: Is product claim advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in Houston, Texas?

Research Question 2 was the relationship between product claim and the purpose of medical dermatology services utilization. The research findings both confirmed and disconfirmed the peer-reviewed literature results analyzed in Chapter 2. According to peer-reviewed literature, a dermatology patient exposed to a dermatology product claim received medical treatment (a) to clear the tumor, (b) to excise the tumor lesion (Samarasinghe et al., 201), or (c) to detect early the skin cancer or other dermatology conditions (Kontos & Viswanath, 2011). Furthermore, patients received treatments to recover from the dermatology illness or to cure/treat the disease (French et al., 2011).

These research findings showed only 4% of the respondents totally agreeing having received treatment/cure of the dermatology disease to excise the tumor/lesion after an exposure to a product claim advertisement. However, the correlation between the two variables was statistically significant ($R = .386$, $P = .05$). Fifty-six percent respondents agreed to receive dermatology treatment/cure to look for well-being. However the *p* value was not statistically significant ($R = .279$, $P = .51$).

This analysis prompted the claim that product claim effectively decided patients about the considered purpose of the dermatology service utilization within the study target population. Moreover, product claim effectively decided patients beyond the study limits as supported by the literature findings. The statistically significant results showed that the relationship was statistically important and deserved consideration. The nonsignificant *p* value meant that the relationship between the product claim and the considered purpose was real amongst the study population. However, the same relationship was not statistically important and, therefore, did not deserve any attention before Research Question 3.

Research Question 3: Is help-seeking advertisement a predictor of the types of medical services utilized amongst adult dermatology patients in Houston, Texas?

Research Question 3 was about the impact of help-seeking advertisement on the types of medical dermatology services utilized. The evidence from the literature reviewed in Chapter 2 stated that the patient exposure to a cancer help-seeking advertisement led (a) to consult a dermatologist regarding any symptoms observed, (b) to utilize preventive services, (c) screening/testing services for early detection of the disease, (d) or to search for additional health information outside of the DTCAs (Kontos &Viswanath, 2011). In 1999, around 25% of survey respondents visited their doctors to ask more about an illness due to a help-seeking advertisement effect (Limbu and Torres, 2009). Patients exposed to help-seeking advertisement (a) visited/consulted the doctor about symptoms they had, (b) talked with the doctor regarding a condition advertised, or (c) discussed new medical conditions advertised with their physicians (Flood, 2010; Kornfield et al., 2013; & Limbu

and Torres, 2010). Moreover, help-seeking advertisement prompted patients to search for information from outside of the advertisement (Hall et al., 201b).

This research finding showed that help-seeking advertisement significantly prompted 71% patients who totally agreed having gone for dermatology disease screening test after exposure (R = .303, p = .04). However, help-seeking advertisement nonsignificant decided 81% patients who totally agreed having consulted a dermatologist/doctor regarding any symptom/problem related to skin, hair, or nails (R = .245, p = .21). Seventy-nine percent respondents agree having searched for additional health information outside of the disease announcement due to their help-seeking exposure. However, the correlation between help-seeking advertisement and the search of additional health information outside of the disease announcement was not statistically significant (R = .082, p = .97).

The preceding analysis led to the claim that help-seeking effectively was impacting patients about the considered types of the medical dermatology services utilized within the study target population. Furthermore, help-seeking effectively decided patients beyond this study sphere as supported by the literature findings. The nonsignificant p values meant that the relationship between the help-seeking and the considered types of medical services was factual amongst the study population, however were not statistically important, therefore, did not deserve any consideration before Research Question 4.

Research Question 4: Is help-seeking advertisement a predictor of the purposes of medical services utilization amongst adult dermatology patients in Houston, Texas?

The Research Question 4 was the impact of help-seeking advertisement on the purposes of medical dermatology services utilization. According to the literature, skin help-seeking advertisement exposure led to seek the treatment of the condition or to manage the diseases symptom (MD Anderson Cancer Center, 2013; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013a). Patients sought for early detection, wellness, and wellbeing when utilizing medical services after an exposure to help-seeking (French et al., 2011; Kontos & Viswanath, 2011; Wellington, 2010). In addition, help-seeking advertisement exposure prompted patients to receive medical dermatology services (a) to treat the condition, (b) to manage the diseases symptom (M D A C C, 2013; Samarasinghe et al., 2011; The Skin Cancer Foundation, 2013a), or (c) to detect early the disease (Kontos & Viswanath , 2011).

These study findings showed that help-seeking advertisement significantly prompted 63% patients who totally agreed having received dermatology treatment/service to detect/diagnose early the dermatology disease (R = .347, p = .01). Then, help-seeking advertisement significantly prompted 34% patients who totally agreed having received dermatology treatment/service to clear the tumor or disease (R = .381, p = .003). However, help-seeking advertisement nonsignificant prompted 42 % patients who agreed having received dermatology treatment/service to manage the disease symptoms (R = .053, p = .99). Sixty-nine percent did not agree at all using dermatology services to excise the tumor lesion/disease due to help-seeking influence. The p value was not significant (R = .206, p = .41).

The preceding analysis prompted the claim that help-seeking effectively was impacting patients about the considered purposes of the dermatology service utilization within the study target population. Also, help-seeking effectively decided patients beyond this study sphere as supported by the literature findings. The nonsignificant *p* values meant that the relationship between the help-seeking and the considered purposes of medical services was real amongst the study population, however, were not statistically important, and did not deserve any attention.

Finally, the simple regression tests showed that certain single product claim or help-seeking characteristic significantly predicted or explained more than others the variance in an outcome variable. Consequently, an advertiser who wants to obtain a particular outcome or effect on the study population, most use in the advertisement the specific characteristic shown by this study results as being the variable predicting more the target outcome. Moreover, according to Phrma (2011) and Limbu and Torres (2009), the objective of the DTCAs information was not to persuade the consumer to purchase a drug or products/services after exposure. As presented earlier, the results of this study showed that the DTCAs significantly prompted the utilization of dermatology medical services after exposure to a DTCA. The patient using medical dermatology service(s) due to an exposure to a DTCA paid for or purchased the service(s) (2.5% of the sample claimed to pay with Medicaid and 97.5% with other means). Therefore, this study results constitutes a limit to Phrma (2011) and Limbu and Torres (2009) argument: the DTCAs were not planned to be persuasive. However, the DTCAs ended up being persuasive.

Study Findings and Theoretical Framework (PT)

The study findings presented in Chapter 4 provided evidence of the product claim and help-seeking advertisements prompting the types and purposes of medical services utilization amongst the study population. In that regards, the multiple correlation *R* of the forced entry multiple regression analysis represented the strength index of the degree of the correlation between product claim and help-seeking (dependent variables) and types and purposes of medical dermatology services utilization (independent variables) for the sample (Green & Salkind, 2011).

This study was a quantitative correlation study, as stated in Chapter 3. Therefore, the aim of the study was also to test PT used as the literature foundation of the study and describe in Chapter 2. The quantitative design tests a theory. The test of the theory consists of describing the relationship between the dependent and independent variables. The variables measurement is through the use of instrument or questionnaire to generate numbers and check statistically the relationship between variables (Creswell, 2009). This study used a questionnaire with 38 questions to measure the study variables product claim, help-seeking, types and purposes of medical dermatology services utilization. Then, forced entry multiple regression analysis permitted to check and to confirm a correlation between the study variables.

The correlation between the variables led to the claim that PT was valid or applicable in the context of this study. The validation of PT meant that PT was able to help to describe the social phenomenon of the medical dermatology services utilization due to the impact of the dermatology DTCAs amongst adult dermatology patients

attending church services at the Saint Nicholas Catholic Church or/and receiving primary medical services at MedStar Primary Care Clinic in Houston, Texas. As stated in Chapter 2, PT is a decision-making theory model that permits to describe how an individual makes a choice when facing a risky situation or uncertainty (Kahneman & Tversky, 1979; Kothiyal et al., 2011; Mello & Cajueiro, 2010; O'Connell, 2011). In the context of this study, the risky situation is to recover/stay alive due to medical dermatology services utilization after exposure to a DTCA, or to lose the life/decease in the case of nonutilization. The dermatology patient has to make the decision in the risky condition of dermatology disease to utilize medical services or not after being in contact with dermatology product claim or help-seeking advertisement.

Limitations of the Study

The quantitative nature of this study was the first limitation. The cross-sectional survey method served to conduct this study. The cross-sectional survey method led to the use of the sophisticated instruments that were a 38-question questionnaire for data collection, and the computer software SPSS 21.0 for data analysis. The questionnaire gave less flexibility to the respondents in the expression of their attitudes and views regarding the problem of the DTCAs and utilization of medical dermatology services. SPSS 21.0 program required from the user a particular training and familiarity to be able to operate the program. Also, the cross-sectional survey collected data only one time from January 12 through February 22, 2015 (one month and 10 days) (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008).

The second limitation and threat to this research internal validity was the environment and the time of the questionnaire completion. Ideally, the setting of the completion has to be free of any source of noise or distraction. The time has to be appropriate for the respondent to avoid any bias in the answers (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). Saint Nicholas Catholic Church's hall did not offer a total noise free environment. Faithful carried out usually multiple activities (sources of noises around the hall) after church services within the parish perimeter. Then, MedStar Primary Care Clinic's meeting rooms where the questionnaire completion took place were exposed, from time to time, to some little noises from other patients in the lobby area or the television sets. However, the doors were kept closed at the two locations during questionnaires completion to limit the risk of distraction due to the noises in the environment. The time of the questionnaire completion was after the church service or the meeting with the doctor at the respondent convenient. No questionnaire completion was terminated prematurely due to the noises or time reason.

The third limitation was the use of the new instrument or questionnaire to collect data for the first time. Indeed, the expert and pilot study validations, as described in Chapters 3 and 4, did not eliminate completely the risk of the first-time use of the questionnaire. The questionnaire must be capable of exactly measuring the concepts of the DTCAs and utilization of medical services under investigation. Only multiple uses of this questionnaire will give more assurance of the instrument capability of measuring the concepts of interest, and will eliminate the possible construct validity threat due to the first time use.

The fourth limitation is the geographic limit of the study. The data collection took place only in one city, the Houston city. Then, within the city, the data collection covered only one church and one clinic. Therefore, the study's results could not be generalized to the national population of adult dermatology patients who have used medical services for a medical reason due to an exposure to a DTCA. In the same logic, this study did not have a sample frame to avoid sampling bias that could affect the external validity of the findings. Thus, using a nonrandom purposive sample scheme to select the sample was a risk for the external validity of the study. However, the predetermined inclusion criteria in the questionnaire helped to select a representative sample. Then, all the multiple regression assumptions were met before the hypotheses testing took place. The use of inclusion criteria and the assumption test enabled, until certain extend, the credibility of the external validity of this study.

The fifth and last limitation was the lack of the mediators or moderators effect test regarding product claim and help-seeking advertisements predicting the types and purposes of medical dermatology services utilization. According to Frosch et al. (2010), patients' age, sex, education, or medical history moderate or mediate the effect of an exposure to a DTCA on the medical services utilization in the process of seeking medical care. This study failed to test the effect of patients' sex, age, highest grade of school completed, type of dermatology disease, race/ethnicity, or annual household income on the product claim and help-seeking advertisements prompting the types and purposes of medical dermatology services utilization. Despite the failure, there are recommendations for the future researches.

Recommendations for Further Research

This research study offers avenues for further research. F.D.A. (2012b) and Lee-Wingate and Xie (2010) distinguish three types of the DTCAs that are product claim, help-seeking, and reminder. This study only focused on product claim, and help-seeking advertisements. Further research may be interested in the reminder advertisement prompting medical dermatology services or not. Moreover, a new research could investigate on the type of the DTCAs prompting more than others the utilization of medical dermatology services. The bottom line would be to advise pharmaceutical announcers on the type of the DTCAs that informs, educates, or prompts more (than other types) the patient to use medical dermatology services. The use of medical dermatology services as the consequence of the DTCAs exposure could lead to a healthier society.

The geographic limit of this study constituted a source of possible new studies. This study only was limited to the Houston city. Then, the study sites only were two locations within Houston city. Finally, the data collection took place amongst 120 participants. A further study covering the 50 States with more than 120 respondents could generate different interesting results.

It is known from the literature that patients' age, sex, education, or medical history were mediators, and moderators of the DTCAs impacting medical services utilization after exposure (Frosch et al., 2010). This study failed to evaluate the possible mediation or moderation effect of patients' sex, age, highest grade of school completed, type of dermatology disease, race/ethnicity, or annual household income on the relationship between the DTCAs and the utilization of medical dermatology services

amongst the study population. A future study focusing on the mediation or moderation analysis may generate additional information/results regarding the relationship between product claim, help-seeking, and types and purposes of medical dermatology services utilization.

The study findings revealed the television and online/websites as the main media of exposure to the DTCAs amongst the study population. However, the study results did not specify the television channels and websites of use amongst the population. Further study could focus on the television and websites viewers' usage habits to identify the study population familiar television channels and websites. Pharmaceutical announcers interested in this study population would select television channels and website accordingly for the future product claim and help-seeking diffusion or broadcast. This said, there are several implications for this study that deserve analysis.

Implications

Positive Social Change

I undertook this research study to satisfy related plausible social change implications. The key study social change implication is the dermatology health promotion via education, awareness building, and increase amongst patients aged 18 and over attending church services at Saint Nicholas Catholic Church and/or receiving primary care services at MedStar Primary Care Clinic in Houston, Texas. In fact, according to Williams and Co. (2013), skin cancer is the driving force of the dermatology service demand in the United States. Skin cancer health promotion in particular has diverse reasons. For instance, an individual victim of skin cancer will have a high chance

to be healed when the disease is diagnosed at the early stage. In addition, an increase almost up to 77% occurred in nonmelanoma skin cancer treatment from 1992 through 2006 (American Cancer Society, 2013a; National Cancer Institute, 2013a; Skin Cancer Foundation, 2013b).

Product claim advertisements enable awareness creation. Product claim created based on this study results will educate and create awareness amongst patients about (a) benefits and potential negative effects of the drug advertised use, (b) balanced advantages and dangers of the drug, (c) how to report the negative side effect of the drug, (d) additional sources of information about the drug, (e) the FDA approved drug risks, (f) the most important danger of the drug, (g) the brand and generic drug name, (h) at least one disease treated by the drug, and (i) the conversation with doctor about the drug advertised. Patients exposed to the advertisements will, consequently, (a) request and obtain a prescription of the drug advertised, (b) receive the advertised drug therapy, (c) adhere to the treatment regimen, (d) have a conversation with the dermatologist regarding the drug advertised, (e) visit the dermatology office, and (f) use the dermatology help maintenance treatment. The patients impacted by the education on the most important danger of the drug advertised will utilize medical dermatology service to rebuild the part of the body damaged by the dermatology disease or to look for well-being. The education on the benefits and potential negative effects of the drug advertised use and on how to report the negative side effect of the prescription drug will prompt the patient to utilize medical dermatology services for the tumor excision.

Conversely, help-seeking advertisements from this study results presented in Chapter 4 will educate and create awareness amongst patients about (a) dermatology diseases, (b) diseases symptoms and conversation with the doctor regarding the advertised symptoms, (c) dermatology drug manufacturers, and (d) possible sources of information about the disease outside the advertisement. In doing so, the help-seeking advertisements will prompt the study population (a) to use screening test services, (b) to receive gene therapy/biological therapy, and (c) to receive laser surgery. The diseases symptoms and conversation with the doctor education will prompt an early diagnosis of the dermatology disease. The education about the possible sources of information about the disease outside the help-seeking will lead to the tumor/disease clearance.

Empirical Implication

The empirical implication of the study is from the explanatory study model empirically, statistically validated, and presented in Chapter 4. The study model explained how product claim or help-seeking advertisements prompted the types and purposes of medical dermatology services utilization amongst the specific study target population. The explanation clarified the process of adult dermatology patient exposure to the DTCAs and the consequent utilization of medical services. The explanation provided the types and purposes of medical dermatology services that product claim or help-seeking advertisements significantly prompted within the study population. Also, this study results added new knowledge to the field of the DTCAs research.

Recommendations for Practice

The study has practice and policy implications. Past researchers have claimed an influence of drug and disease DTCAs on the consumer's use of medical services. However, none of them has focused the analysis on the specific characteristics of the drug and disease advertisements, as defined by the FDA, which influenced consumers more to utilize medical dermatology services. I run 198 forced entries simple regressions. Thirty-one out of 198 were statistically significant. The statistically significant simple regression results in Chapter 4 helped to identify, in the particular era of dermatology treatment, the FDA's characteristics of product claim and help-seeking advertisements that significantly predicted more certain types and purposes of medical dermatology services utilized. Furthermore, for each significantly predicting characteristic, a specific predicted type or purpose of utilization was also identified. Consequently, the more predicting characteristics identified could be the communication axes for the DTCAs of pharmaceutical companies targeting exclusively the population under investigation. Indeed, the DTCAs inform and educate patients about drug, diseases, and treatment options. The DTCAs prompt the patients to adhere to the drug treatment plan (Phrma, 2011). As far as policy is concerned, the FDA as well as Phrma may use the results of this study to develop the new DTCAs regulations, policies, principles, and laws, or to revise the existing one.

Conclusion

This research study aimed to describe the statistically significant relationship between product claim and help-seeking advertisements, and each measurement items of

the types and purposes of medical dermatology services utilization. The study target population was the dermatology patients aged 18 years and over living in Houston, Texas, attending church services at Saint Nicholas Catholic Church, and/or receiving primary care services at MedStar Primary Care Clinic. A total of 120 participants was the final sample.

The evidence from the literature reviewed in Chapter 2 showed that product claim and help-seeking advertisements significantly predicted the types and purposes of medical services utilization in the United States by the dermatology patients (Limbu & Torres, 2009; Mackert et al., 2010). I used a cross-sectional survey method to collect data and to achieve this study objective. I tested the study's hypotheses using a forced entry multiple regressions test. The study findings enabled me to make the claim that product claim and help-seeking advertisements significantly prompted adult dermatology patients attending church services at Saint Nicholas Catholic Church and/or receiving primary care services at MedStar clinic in Houston, Texas to receive certain medical dermatology services for medical reasons. In other words, product claim and help-seeking advertisements informed, educated, and persuaded patients to utilize certain medical dermatology services for certain medical reasons as presented in Chapter 4. However, the patient still needs the physician's help to use the advertised drug or/and most dermatology services despite the education provided by the product claim and help-seeking advertisements (Kontos & Viswanath, 2011; La Barbera, 2012). Patients are less familiar with some of the medical dermatology services.

Concretely, the set of independent variables product claim significantly prompted the study population to receive the following medical dermatology services: (a) to request and obtain a medical prescription of the dermatology drug advertised, (b) to receive the advertised drug therapy/chemotherapy, (c) to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug, (d) to visit a physician/dermatologist office, and (e) to receive skin, hair, and/or nails health maintenance treatment. Product claim significantly prompted only the purpose to receive treatment/cure of the dermatology disease to excise the tumor/lesion.

Regarding the help-seeking set of independent variables, the only type of dermatology service significantly prompted was to go for dermatology disease screening test. Finally, help-seeking set significantly prompted to receive dermatology treatment/service to detect/diagnose early the dermatology disease, and to receive treatment/cure of the dermatology disease to clear the tumor/disease as purposes of medical services utilization.

Besides, forced simple regressions permitted to identify a particular characteristic of product claim or help-seeking, as defined by the FDA, prompting significantly more than others a particular type or purpose of medical dermatology services amongst the study population. For instance, product claim characteristic told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug prompted more than any other characteristic (with the highest R^2 value of 0.11, $p = 0.00$) patients to request and obtain a medical prescription of the dermatology drug advertised. Al contrary, the characteristic passed on television/radio station (s) told

to the viewer/listener where to get additional prescription drug information approved by the FDA (R^2 = 0.04, p = 0.03) predicted significantly less the request and obtainment of a medical prescription of the dermatology drug advertised. Furthermore, the characteristic stated both the vulgar designation/name of the drug approved (brand) and nonapproved (generic) by the U.S. government (R^2 = 0.04, p = 0.05) impacted more than the characteristic stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA (R^2 = 0.04, p =0.02) patients to talk to the dermatologist/surgeon/doctor about dermatology advertised prescription drug. Concerning the purposes of utilization, the product claim characteristic stated the most important danger that the dermatology patient may face taking the advertised drug (R^2 = 0.04, p =0.03) determined significantly more a patient to receive dermatology treatment to rebuild the part of the body damaged by the dermatology disease.

As far as help-seeking advertisement is concerned, the characteristic described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment (R^2 = 0.04, p =0.04) determined significantly more a patient to receive gene therapy/biological therapy. Furthermore, the characteristics stated ask your healthcare provider for more information (R^2 = 0.06, p =0.01) predicted more a patient to go for dermatology disease screening test. In the mine time, the characteristic encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor (R^2 = 0.05, p =0.02) significantly predicted more a patient to receive dermatology treatment/service to detect/diagnose early the dermatology disease. Lastly, the characteristic had the company's name of the advertised dermatology drug (R^2 = 0.10,

p = 0.00), predicted more than the characteristic gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition (R^2 = 0.04, p =0.02) a patient to use the medical service for the tumor/disease clearance.

This study is interesting for the study population for many reasons. Indeed, the study's findings provided evidence of the prescription drug and diseases DTCAs influencing significantly the utilization of medical dermatology services amongst the target population. The study findings revealed that 71% of the sample had skin diseases, 24% hair diseases, and 5% nails diseases. Skin diseases patients formed the largest proportion of the sample. Most of skin conditions are curable when detected early as discovered in the literature. Also, according to the study results, 85% of the samples were in contact with drug advertisement through television channels versus 56.7% for the online/websites medium. In addition, 90.8% of the samples were exposed to the dermatology pharmaceutical disease(s) announcement through television channels versus 62.5% for online/websites medium. Consequently, announcers are encouraged to use the product claim and help-seeking advertisements characteristics that were statistically significant predicting or predicted in this study to create the new DTCAs. The announcers will broadcast the new product claim and help-seeking announcements using television channels and online/websites to reach the study population. The effect of the new DTCAs on the population of this study will contribute to more healthy skin, hairs, and nails.

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NB: I have deleted the appendices B, E, M, and P in the course of the dissertation writing and revisions.

Appendix A: Heribert Zouetchou National Institutes of Health Certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that

Heribert ZOUETCHOU successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 12/07/2013

Certification Number: 1340638

Appendix C: Informed Consent Form

You are invited to take part in a research study that seeks to learn if patients with skin, hair, and nails diseases who have seen, read, or heard (exposure) a pharmaceutical drug company's dermatology advertisement would receive a treatment for a medical reason because of the exposure to that advertisement. The advertisement should be about dermatology drug(s) or disease and directed directly to patients.

The researcher is inviting you to be in the study regarding adults of both sexes living in Houston, Texas. More details about the eligibility criteria are given in the Background Information section below.

This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part. This study is being conducted by a researcher named Heribert Zouetchou, who is a doctoral student at Walden University.

Background Information:
The purpose of this research study is to describe the relationship between the dermatology pharmaceutical direct-to-consumer advertisement (DTCAs) and the utilization of medical dermatology services amongst adult patients with skin, hair, and/or nails diseases in the United States of America. In other words, this research's intent is to describe the relationship between dermatology product claim, help-seeking advertisements and types and purposes of the utilization of medical services amongst adult dermatology patients.
Inclusion/eligibility criteria are (a) you attend church services at Saint Nicholas Catholic Church or receive primary care services at MedStar Primary Care Clinic in Houston, Texas, (b) you (the participant) have been diagnosed with a dermatology disease, (c) are at least 18 years old, (d) have seen, read, or heard (exposure) a dermatology advertisement about a dermatology prescription drug or/and disease directed directly to the dermatology patients and have received a treatment for a medical reason because of the exposure to the advertisement within one year, (e) speak, read, and understand English language, (f) are receiving dermatology treatment at a dermatology facility in Houston, Texas, and (g) are living in Houston, Texas for at least six months continuously.

Be advised that the researcher cannot answer any questions about your current condition. If you have any question(s) of that nature, please, follow up with your primary care physician.

Procedures:
If you agree to be in this study, you will be asked to:

Complete a questionnaire that asks about some demographic information, your exposure to a dermatology pharmaceutical company's advertisement directed directly to patient regarding skin, hair, and/or nails prescription drug or disease, and the reception for a medical reason of the medical dermatology service as the consequence of having seen, heard, or read such advertisement in the past 12 months. The survey contains 2 sections:

- an eligibility section of the questionnaire that asks about topics such as your demographic information (such as race/ethnicity and age), the skin, hair, and/or nails disease(s), how you pay for treatments, and your exposure to a skin, hair, and/or nails drug or disease advertisement from dermatology pharmaceutical companies. Answering the questions should take about 8 minutes.

- Another section called main questionnaire asks about topics such as your exposure to a skin, hair, and/or nails drug or disease advertisement from dermatology pharmaceutical companies, and the treatments you have received after seeing, hearing, or reading such advertisements, and the medical reason why you receive the service. Completing this section should take about 20 minutes.

Please, respondent, be advised, in order to get accurate results, responses are needed for each question and if there are questions that you do not want to answer, you may discontinue the completion of the questionnaire at any time without any penalty, discontinuation of services, or negative impact of your relationship with the researcher.

Here are some sample questions:

Q.3. Familiarity with English Language (*Please, check **only one**).*

Speak, read and understand.
Do not speak, read and understand *(Terminate the Completion)*

Q.4. Attending to church service(s) at Saint Nicholas Catholic Church or receiving primary care services at MedStar Primary Clinic in Houston (*Please, check **only one**).*

☐ Yes.
☐ No *(Terminate the Completion)*

Q.7. Have you been diagnosed with dermatology disease(s) in **the past 12 months** (*check **only one***)?

☐ Yes
☐ No (*Terminate the Completion)*
☐ Other (*Specify*): (*Terminate the Completion)*

Q.8. Are you **currently** receiving dermatology treatment/services (s) here in Houston after you have been diagnosed with dermatology disease(s) in **the past 12 months** (*check **only one***)?

☐ Yes
☐ No (*Terminate the Completion)*
☐ Other (*Specify*): (*Terminate the Completion)*

Q.19. Race/Ethnicity (C*heck **only one***).

- ☐ White
- ☐ Black, African American, or Negro
- ☐ Chinese
- ☐ American Indian/Alaska Native
- ☐ Filipinos
- ☐ Japanese
- ☐ Other Asians (*Specify*):
- ☐ Guamanian
- ☐ Asian Indian
- ☐ Native Hawaiian
- ☐ Other Pacific Islander (*Specify*):
- ☐ Korean
- ☐ Vietnamese
- ☐ Some Other Race (*Specify*):
- ☐ Samoan

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at Saint Nicholas Catholic Church or at MedStar Primary Care Clinic in Houston will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind during or after the study. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study involves some risks of the minor discomforts that can be encountered in daily life, such as fatigue, pain related to eyes, ears and head, stress or becoming upset. If in the course of the completion you feel any of those, the researchers recommend that you stop the completion and inform him. In that case, the researcher will immediately inform the study site's supervisor on duty and or call the Emergency Services at 911 for immediate medical attention with the participant's agreement. Being, in this study would not pose risk to your safety or wellbeing. In addition, the concerns or risks related to the participant's physical (eye for instance) regarding the flyers and the questionnaire are the length, the color, and the typography of the flyers. The solutions to these concerns are that the flyers are a written in short texts and to use a high quality paper and printing selected by infographic and/or printing's professional (Leelanddesigns company). The questionnaire text is double space, times news roman, 12 front size for easy and fast readability.
The benefit of participating in this study is to contribute to the creation of new knowledge. The new knowledge will serve to promote dermatology diseases treatment and prevention amongst patients and populations at risk. Also, the new knowledge will enable the creation of awareness about dermatology diseases and treatments options through education amongst patients. In addition, this study will permit the promotion amongst the patients and the population at risk of a regular skin, hair, and nails check and screening test for an early diagnosis of a potential dermatology disease.

Payment:
They will be no financial payment to the participants. This is to avoid any bias on the participant's willingness to participate to the study and on their answers to the questionnaire.

Privacy:
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by the researcher in locked file or password protected database. Indeed, the data collected will be stored for 5 years on the researcher's laptop hard disk, USB drive, and CD Rooms. The access to those data will be protected by a password at the researcher's discretion. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phones numbers (cell) XXX or email addresses: XXX@waldenu.edu/XXX@yahoo.fr If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 3121210. Walden University's approval number for this study is **12-09-14-0177813** and it expires on **December 10, 2015.**
You may keep the consent form.

Statement of Consent:
I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By completing the survey in a face-to-face completion with the researcher, I understand that I am agreeing to the terms described above and signing the present form.

Appendix D: A3 Recruiting Flyer

RESEARCHER

HERIBERT ZOUETCHOU

Ph.D in Health Care Administration's Candidate at Walden University, Minneapolis, Minnesota

TO DERMATOLOGY PATIENTS:

My name is Heribert Zouetchou. I am a health researcher. Also, I am a Walden University's Ph. D in Health Services candidate, Minneapolis, Minnesota. My professional activities enabled me to observe that the advertisements done directly to the consumers by pharmaceutical companies about dermatology disease(s) and/or prescription drug(s) prompt dermatology patients to use medical services/treatments for particular medical reason (s).

This research seeks to describe the relationship between the pharmaceutical advertisements about dermatology prescription drug(s) and disease(s) and the type(s) and reason(s) of the utilization of the dermatology medical treatments amongst the specific adult patients who attend church services at Saint Nicholas Catholic Church or are receiving primary care services at MedStar Primary Care Clinic in Houston, Texas.

The results will be useful:

- to create new knowledge to promote dermatology diseases treatment and prevention.
- To increase awareness by educating patients about dermatology drugs, diseases, and treatments options.
- To promote amongst the patients and the population at risk a regular skin, hair, and nails check and screening test for early diagnosis.

I would like to invite you to participate to this study and inclusion/eligibility criteria are :

- a dermatology patient attending the church services at Saint Nicholas Catholic Church, or receiving primary care services at MedStar Primary Care Clinic in Houston, Texas,
- you have been diagnosed with a dermatology disease,
- are at least 18 years old,
- have seen, read, or heard (exposure) a dermatology advertisement about a dermatology prescription drug or/and disease directed directly to the dermatology patients and have received a treatment for a medical reason because of the exposure to the advertisement within one year,
- speak, read, and understand English language,
- are receiving dermatology treatment at a dermatology facility in Houston-Texas,
- are living in Houston for at least six months continuously

You are free to participate to the study or not. You are free to leave the study at any time without any penalty. All responses from you will be confidential.

Your help will be very important because:

- it will facilitate the dermatology clinical treatment awareness using the research results,
- enables the development of new knowledge for the dermatology patients' education regarding the disease, diagnosis, treatments options and cure.

CONTACT NUMBERS

If you have any question, you may

CONTACT ME AT

[redacted]

OR

[redacted]

HERIBERT ZOUETCHOU, MBA

Appendix F: A5 Recruiting Flyer

ARE YOU A DERMATOLOGIC PATIENT?

I am conducting a research study that seeks to describe the relationship between the pharmaceutical advertisements about dermatology prescription drug(s) and disease(s) and the type(s) and reason (s) of the utilization of the dermatology medical treatments amongst the adult patients. I would like to invite you to participate to this study and inclusion/eligibility criteria are :

- a dermatology patient attending the church services at Saint Nicholas Catholic Church, or receiving primary care services at MedStar Primary Care Clinic in Houston, Texas,
- you have been diagnosed with a dermatology disease,
- are at least 18 years old,
- have seen, read, or heard (exposure) a dermatology advertisement about a dermatology prescription drug or/and disease directed directly to the dermatology patients and have received a treatment for a medical reason because of the exposure to the advertisement within one year,
- speak, read, and understand English language,
- are receiving dermatology treatment at a dermatology facility in Houston-Texas,
- are living in Houston for at least six months continuously.

The results will be useful:

- to create new knowledge to promote dermatology diseases treatment and prevention.
- To increase awareness by educating patients about dermatology drugs, diseases, and treatments options.
- To promote amongst the patients and the population at risk regular skin, hair, and nails check and screening test for early diagnosis.

If you are willing to participate into this study, you will provide the Informed Consent and complete the questionnaire

CONTACT

If you have any question, you may contact me at

[redacted]

or through email at

[redacted]

Appendix G: Study Questionnaire

Time Completion started: _____ Time Completion ends: _____ Total Length of Completion: _____
Date of Completion: / / 2015

Place of Completion (*check **only one***):

☐ MedStar Primary Care Clinic
☐ Saint Nicholas Catholic Church

ELIGIBILITY SECTION

Your answers to the following questions will help to determine if you meet the criteria to participate in this study or not. Please, answer truthfully, clearly, and consistently during the completion of this questionnaire.

INCLUSION CRITERIA

Q.1. City of residence.

☐ Houston
☐ Other (*Specify*)_____ *(Terminate the Completion)*

Q.2. Length of Residence in Houston (C*heck **only one***).

☐ At least six months.
☐ Less than six months *(Terminate the Completion)*

Q.3. Familiarity with English Language (*Please, check **only one**).*

☐ Speak, read and understand.
☐ Do not speak, read and understand *(Terminate the Completion)*

Q.4. Attending to church service(s) at Saint Nicholas Catholic Church or receiving primary care
services at MedStar Primary Clinic in Houston (*Please, check **only one**).*

☐ Yes.
☐ No *(Terminate the Completion)*

Q.5. What is **y**our age (*check **only one***)?

☐ 18 to 34 years
☐ 35 to 51 years
☐ 52 to 64 years
☐ 65 years and above

Q.6. Please, write in number your **exact** age inside the next box (*Optional*) ☐

Q.7. Have you been diagnosed with dermatology disease(s) in **the past 12 months** (*check **only one***)?

- ☐ Yes
- ☐ No (*Terminate the Completion)*
- ☐ Other (*Specify*): _____ (*Terminate the Completion)*

Q.8. Are you **currently** receiving dermatology treatment/services (s) here in Houston after you have been diagnosed with dermatology disease(s) in **the past 12 months** (*check **only one***)?

- ☐ Yes
- ☐ No (*Terminate the Completion)*
- ☐ Other (*Specify*): _____ (*Terminate the Completion)*

Q.9. Please, Indicate your dermatology disease(s) that you are **currently** receiving treatment for here in Houston (*check **not more than two)***

- ☐ Skin diseases (Eczema, dry skin, Contact Dermatitis, skin cancer, Actinic keratosis, effect of sun exposure, acne, atopic dermatitis...)
- ☐ Hair disease(s) (hair loss)
- ☐ Nails disease(s) (artificial nails)
- ☐ Other (*Specify*): _____ (*If not skin, hair, or nails related, **Terminate** the completion*).

Q.10. What dermatology treatments/service are you **currently receiving** at the medical dermatology facility in Houston (**W*rite down** a maximum of 3 treatment(s) for each applicable disease)*?

- ☐ Skin Treatment: _____
- ☐ Hair treatment: _____
- ☐ Nails treatment: _____
- ☐ Don't Know/ Not sure

In the past 12 months, have you… (***Terminate*** *completion if "No" for both Q.12.a. and Q.12.b.*)	Yes	No	Don't Know/ Not sure
Q.11a. Seen, read or heard a pharmaceutical announcement done by pharmaceutical companies (s) about a prescription drug(s) and directed directly to consumers?			
Q.11.b. Seen, read or heard a pharmaceutical announcement (s) done by pharmaceutical companies about a disease(s) and directed directly to patients?			
Q.12.a. Seen, read or heard a pharmaceutical announcement (s) done by pharmaceutical companies about dermatology prescription drug(s) and directed directly to dermatology patients?			
Q.12.b. Seen, read or heard a pharmaceutical announcement (s) done by pharmaceutical companies about dermatology disease(s) and directed directly to dermatology patients?			

Q.13. What is/are the reason (s)/expected result (s) of the dermatology treatment that you are **currently receiving** at a medical dermatology facility in Houston (**W*rite down a maximum of 3 reason(s)*** *for each applicable disease)***?**

- ☐ Reason for skin treatment:_____
- ☐ Reason for hair treatment:_____
- ☐ Reason for Nails treatment:_____
- ☐ Don't Know/ Not sure

Dermatology pharmaceutical prescription drug(s) or/and disease(s) announcement (s) directed directly to consumers seen, read or heard in **the past 12 months**. **Did the announcement…** *(**Terminate** completion if "No" for both Q.14.a. and Q.14b.)*	Yes	No	Don't Know/ Not sure
Q.14.a. State the prescription drug name that treats dermatology disease, name the treated disease, and give the risks and benefits related to the use of the advertised prescription drug?			
Q.14.b. Talk only about the dermatology disease without any reference to a prescription drug that can treat the condition (s)?			
Q.14.c. Communicate the dermatology prescription drug name and did not talk about the drug use?			

Dermatology treatment (s) **currently** received at a medical dermatology facility in Houston **. I have been PROMPTED by….** ***(Terminate*** *if "No" for both Q.***15***.a. and Q.***15** *.b.)*	Yes	No	Don't Know/ Not sure
Q.15.a. The dermatology pharmaceutical prescription drug announcement directed directly to dermatology patients that I have seen, read or heard in the past 12 months.			
Q.15.b. The dermatology pharmaceutical disease announcement directed directly to dermatology patients that I have seen, read or heard in the past 12 months.			
Q.15.c. a dermatologist/surgeon's prescription.			
Q.15.d. Another dermatology patient with the same disease who has received or is **currently** receiving the same treatment (s).			

Reason (s) of the dermatology treatment (s) **currently** received at a medical dermatology facility in Houston **. I have been PROMPTED by….**	Yes	No	Don't Know/ Not sure
Q.16.a. The dermatology pharmaceutical prescription drug announcement directed directly to dermatology patients that I have seen, read or heard in the past 12 months.			
Q.16.b. The dermatology pharmaceutical disease announcement directed directly to dermatology patients that I have seen, read or heard in the past 12 months.			
Q.16c. A dermatologist/ surgeon's prescription.			
Q.16.d. Another dermatology patient with the same disease who has received or is **currently** receiving the same treatment (s).			

OTHER

Q.17. Indicate your sex.

- ☐ Male
- ☐ Female

Q.18. Residence Status (Check ***only one***):

- ☐ US Citizen
- ☐ Permanent Resident Alien

Q.19. Race/Ethnicity (C*heck* ***only one***).

- ☐ White
- ☐ Black, African American, or Negro
- ☐ Chinese
- ☐ American Indian/Alaska Native
- ☐ Filipinos
- ☐ Japanese
- ☐ Other Asians (*Specify*):
- ☐ Guamanian
- ☐ Asian Indian
- ☐ Native Hawaiian
- ☐ Other Pacific Islander (*Specify*):
- ☐ Korean
- ☐ Vietnamese
- ☐ Some Other Race (*Specify*):
- ☐ Samoan

Q.20. Indicate the **highest** grade of school completed (C*heck* ***only one***).

- ☐ Less than 9th grade
- ☐ 9th to 12th grade, without diploma
- ☐ High School graduate
- ☐ Some college, without degree
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Graduate degree

Q.21. Current marital status (*Please, check* ***only one****).*

- ☐ Married
- ☐ Divorced
- ☐ Widowed
- ☐ Separated
- ☐ Never got married
- ☐ Unmarried in couple

Q.22. Current annual household income from all sources (*check **only one***).

- ☐ Less than $10,000
- ☐ $10,000 to $14,999
- ☐ $15,000 to $19,999
- ☐ 20,000 to $24,999
- ☐ $25,000 to $29,999
- ☐ $30,000 to $34,999
- ☐ $35,000 to $39,999
- ☐ 40, 000 and over

Q.23. Write the **exact** total number of your household members inside the next box: ☐

Q.24. I pay for my **current** dermatology treatments at medical dermatology facility in Houston (*check **not more than one),***

- ☐ With Medicaid insurance only.
- ☐ With other mean (s) of payment only (private/employer insurance, Medicare, credit/debit card, cash).
- ☐ With Medicaid insurance and other mean (s) of payment (*Specify other mean(s)*):

_____

Please, Continue to the Main Questionnaire or Q.25.

MAIN QUESTIONNAIRE

Section 1: Dermatology Product Claim Advertisement Exposure Scale (DPCAES)

The set of questions that follow are about the exposure/contact with a dermatology pharmaceutical drug(s) announcement (Q.14a), directed directly to patients in the past 12 months.

Q.25. Indicate where you have seen, read, or heard dermatology **pharmaceutical prescription drug(s)** announcement directed directly to **patients in the past 12 months** (*check **all that applies)***

- ☐ Oncology magazines/Journals
- ☐ Radio stations
- ☐ TV channels
- ☐ Pharmacy Journals
- ☐ Social media (YouTube, Facebook, Twitter, Skype, Google, LinkedIn, Yahoo)
- ☐ Newspaper
- ☐ Online/Website (pharmaceutical, Companies, U.S. Government, private)
- ☐ Other (*Specify*): _____

Q.26. Please, provide **the name/title** of the dermatology **pharmaceutical prescription drug(s)** announcement (Q.14a) directed directly to patients that you have seen, read, or heard **in the past 12 months**. (**Write down** a maximum of 3 name(s)/title(s) for each applicable disease*).*

- ☐ Skin drug announcement:_____
- ☐ Hair drug announcement: _____
- ☐ Nails drug announcement:_____
- ☐ Don't Know/Not sure

Q.27. Instructions: I would like to ask you about some things that dermatology prescription drug pharmaceutical announcements (Q.14a) directed directly to patients do. Those things can prompt patients to receive dermatology treatments for particular reason(s) or purpose(s). You will provide your answer for all statements even if you think some are alike. Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the dermatology drug pharmaceutical announcement(s) that you have seen, read, or heard in the past 12 months (***Circle* ***one answer for each statement***).

DPCAES	Not Agree at All	Not Agree	Agree/ Not agree	Agree	Totally Agree
In the past 12 months, dermatology prescription drug announcement(s)…					
1. Told to the consumers in a balanced manner the benefits and potential negative consequences of using the advertised dermatology drug.	1	2	3	4	5
2. Told in a balanced manner about the advantages and dangers related to the advertised dermatology drug use.	1	2	3	4	5
3. Published in the newspaper, magazines, review, or journal contained this statement "You are encouraged to report negative side effects of prescription drug to the U.S. Food and Drug Administration (FDA) Visit MedWatch5 or call 1-800-FDA-1088."	1	2	3	4	5
4. Passed on Television/Radio station (s) told to the viewer/listener where to get additional prescription drug information approved by the FDA	1	2	3	4	5
5. Audio broadcast stated the most serious risks/dangers that the dermatology drug user may encounter.	1	2	3	4	5
6. Said the drug risk(s)/danger(s) approved by FDA and included in the drug information or label).	1	2	3	4	5

DPCAES	Not Agree at All	Not Agree	Agree/ Not agree	Agree	Totally Agree
7. Stated the most important dangers that the dermatology patient may face taking the advertised drug.	1	2	3	4	5
8. Stated both the vulgar designation/name of the drug approved (brand) and non-approved (generic) by the U.S. government.	1	2	3	4	5
9. Stated at least one form of dermatology disease treated by the advertised drug and approved by the FDA	1	2	3	4	5
10. Stated "Ask your doctor if [drug name] is right for you."	1	2	3	4	5

Section 2: Dermatology Help-seeking Advertisement Exposure Scale (DHSAES)

The set of questions that follow are about your contact with dermatology pharmaceutical disease(s) announcement(Q.14b), directed directly to patients in the past 12 months.

Q.28. Indicate where you have seen, read, or heard dermatology **pharmaceutical disease(s)** announcement (Q.14b) **in the past 12 months** (*check **all that applies)***

- ☐ Oncology magazines/Journals
- ☐ Radio stations
- ☐ TV channels
- ☐ Pharmacy Journals
- ☐ Social media (YouTube, Facebook, Twitter, Skype, Google, LinkedIn, Yahoo)
- ☐ Newspaper
- ☐ Online/Website (drug companies, Government, private)
- ☐ Other (*Specify*): _____

Q.29. Please, provide **the name/title** of the **dermatology pharmaceutical disease**(s) announcement (Q.14b) that you have seen, read, or heard **in the past 12 months**. (**W*rite down*** *maximum 3 name(s)/title(s) for each applicable disease).*

- ☐ Skin disease announcement: _____
- ☐ Hair disease announcement: _____
- ☐ Nails disease announcements: _____
- ☐ Don't Know/Not sure

Q.30. Instructions: I would like to ask you about some things that dermatology disease(s) pharmaceutical announcements (Q.14b)directed directly to patients do. Those things can prompt patients to receive dermatology treatments for particular result(s) or purpose(s).You will provide your answer for all statements even if you think some are alike.

Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the dermatology pharmaceutical disease announcement (s) that you have seen, read, or heard in the past 12 months (***Circle* ***one answer for each statement***).

DHSAES	Not Agree at All	Not Agree	Agree/Not agree	Agree	Totally Agree
In the past 12 months, dermatology pharmaceutical disease announcement (s)…					
1. Described the type of dermatology disease without any recommendation of a specific dermatology drug for treatment.	1	2	3	4	5
2. Encouraged people with the symptoms of the described type of dermatology disease to ask/talk to their doctor	1	2	3	4	5
3. Had the company's name of the advertised dermatology drug.	1	2	3	4	5
4. Gave a telephone number/website to call or to visit for more information about the advertised dermatology disease type/described condition.	1	2	3	4	5
5. Stated "Ask your healthcare provider for more information".	1	2	3	4	5

Section 3: Types of Medical Dermatology Treatments Utilized after Exposure to Dermatology DTCA of Prescription Drug Scale (TDMTUEPDAS)

The questions that follow are about the medical dermatology treatments received after exposure to dermatology pharmaceutical prescription drug(s) announcement (Q.14a), directed directly to patients in the past 12 months.

Q.31. What is/are the medical dermatology treatment(s) that you are **currently** receiving at a medical dermatology facility in Houston because of the prescription drug(s) announcement (Q.14a) directed directly to patients that you have seen, read, or heard in the past 12 months? (**W*rite down*** *a maximum of 3 treatment(s) for each applicable treatment).*

- ☐ Skin treatment(s): _____
- ☐ Hair treatment(s): _____
- ☐ Nails treatment(s): _____
- ☐ Don't Know/Not sure

Q.32. Patients several times affirmed that they have received the following medical dermatology treatment(s) as the consequence of having seen, heard, or read dermatology pharmaceutical drug(s) announcement (Q.14a) directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the pharmaceutical prescription drug announcement(s) that you have seen, read, or heard in the past 12 months (***Circle* ***one answer for each statement***).

TDMTUEPDAS	Not Agree at All	Not Agree	Agree/Not agree	Agree	Totally Agree
In the past 12 months, dermatology prescription drug announcement (s) prompted me to…					
1. Request and obtain a medical prescription of the dermatology drug advertised.	1	2	3	4	5
2. Receive the advertised drug therapy/Chemotherapy.	1	2	3	4	5
3. Participate normally to the dermatology treatment regimen.	1	2	3	4	5
4. Fill the dermatology disease prescription drug.	1	2	3	4	5
5. Talk to the dermatologist/surgeon/doctor about a dermatology advertised prescription drug.	1	2	3	4	5
6. Visit a physician/dermatologist office.	1	2	3	4	5
7. Receive Skin, hair, and/or nails health maintenance treatment.	1	2	3	4	5

Section 4: Types of Medical Dermatology Treatments Utilized after Exposure to the Dermatology Disease DTCA Scale (TDMTUEDDAS)

The questions that follow are about the medical dermatology treatments received after exposure to dermatology pharmaceutical disease(s) announcement (Q.14b), directed directly to patients in the past 12 months.

Q.33. What is/are the medical dermatology treatment(s) that you are **currently** receiving at a medical dermatology facility in Houston because of the pharmaceutical disease(s) announcement (Q.14b) directed directly to consumers that you have seen, read, or heard in the past 12 months? (***Write down*** *a maximum of 3 treatment(s) for each applicable disease).*

- ☐ Skin disease treatment(s): _____
- ☐ Hair disease treatment(s): _____
- ☐ Nails disease treatment(s): _____
- ☐ Don't Know/Not sure

Q.34. Patients several times affirmed that they have received the following medical dermatology treatment(s) as the consequence of having seen, heard, or read dermatology pharmaceutical disease(s) announcement directed directly to patients (Q.14b). Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the dermatology pharmaceutical disease announcement(s) that you have seen, read, or heard in the past 12 months(***Circle* ***one answer for each statement***).

TDMTUEDDAS	Not Agree at All	Not Agree	Agree/Not agree	Agree	Totally Agree
In the past 12 months, dermatology pharmaceutical disease announcement (s) prompted me to…					
1. Consult a dermatologist/doctor regarding any symptom/problem related to skin, hair, or nails.	1	2	3	4	5
2. Go for dermatology disease screening test.	1	2	3	4	5
3. Receive gene therapy/biological therapy.	1	2	3	4	5
4. Participate to dermatology clinical trial/experimental treatment.	1	2	3	4	5

5. Receive cryotherapy/Cryosurgery	1	2	3	4	5
6. Receive curettage and cautery/Curettage and electrodessiccation/Electrodessiccation and curettage.	1	2	3	4	5
7. Receive an electrodessication /"scraping and burning".	1	2	3	4	5
8. Receive laser surgery.	1	2	3	4	5
9. Go through lymph node surgery.	1	2	3	4	5
10. Go through a mohs micrographic surgery	1	2	3	4	5
11. Go through a radiotherapy/radiation.	1	2	3	4	5
12. Go through skin grafting and reconstructive surgery.	1	2	3	4	5
13. Go through a standard surgical excision/resection.	1	2	3	4	5
14. Search for additional health information outside of the disease announcement.	1	2	3	4	5

Section 5: Purposes of the Utilization of Dermatology Medical Treatments after Exposure to Dermatology DTCA of Prescription Drug Scale (PUDMTEDDAS)

The questions that follow are about expected result(s)/reason(s) of the medical dermatology treatments received after exposure to dermatology pharmaceutical prescription drug(s) announcement (Q.14a), directed directly to patients in the past 12 months.

Q.35. What is/are the expected result(s)/reason(s) why of your medical dermatology treatment(s) that you are **currently** receiving at a medical dermatology facility in Houston because of the pharmaceutical prescription drug(s) announcement (Q.14a) directed directly to patients that you have seen, read, or heard in the past 12 months? (**W*rite down*** *a maximum of 3 reason(s) for each applicable disease).*

- ☐ Reason(s) skin disease treatment(s): _____
- ☐ Reason(s) hair disease treatment(s): _____
- ☐ Reason(s) nails disease treatment(s): _____
- ☐ Don't Know/Not sure

Q.36. Patients several times affirmed that they have received the medical dermatology treatment(s) for the following expected result(s)/reason(s), as the consequence of having seen, heard, or read dermatology pharmaceutical prescription drug announcement(s) directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree.

Please, indicate the extent to which you agree with each statement regarding the Dermatology pharmaceutical prescription drug announcement(s) that you have seen, read, or heard in the past 12 months (*Circle* ***one answer for each statement***).

PUDMTEDDAS	**Not Agree at All**	**Not Agree**	**Agree/Not agree**	**Agree**	**Totally Agree**
In the past 12 months, dermatology pharmaceutical prescription drug announcement (s) prompted me to…					
1. Receive dermatology treatment to have rebuilt the part of the body damaged by the dermatology disease.	1	2	3	4	5
2. Receive treatment/cure of the dermatology in order to look for well-being.	1	2	3	4	5
3. Receive treatment/cure of the dermatology disease in order to clear the tumor.	1	2	3	4	5
4. Receive treatment/cure of the dermatology disease in order to excise the tumor lesion.	1	2	3	4	5

Section 6: Purposes of the Utilization of Medical Dermatology Treatment after Exposure to Dermatology DTCA of Disease Scale (PUDMTEDAS)

The questions that follow are about expected result(s)/reason(s) of the medical dermatology treatments received after exposure to dermatology pharmaceutical disease(s) announcement (Q.14b), directed directly to patients in the past 12 months.

Q.37. What is/are the expected result(s)/reason(s) why of your medical dermatology treatment(s) that you are **currently** receiving at a medical dermatology facility in Houston because of the dermatology pharmaceutical disease(s) announcement (Q.14a) directed directly to patients that you have seen, read, or heard in the past 12 months? (**W*rite down*** *maximum 3 reason(s) for each applicable treatment).*

- ☐ Reason(s) skin disease treatment(s): _____
- ☐ Reason(s) Hair disease treatment(s): _____
- ☐ Reason(s) Nails disease treatment(s): _____
- ☐ Don't Know/Not sure

Q.38. Patients several times affirmed that they have received the medical dermatology treatment(s) for the following expected result(s)/reason(s), as the consequence of having seen, heard, or read dermatology pharmaceutical disease announcement(s) (Q.14b) directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree.

Please, indicate the extent to which you agree with each statement regarding the dermatology pharmaceutical disease announcement(s) that you have seen, read, or heard in the past 12 months (*Circle* ***one answer for each statement***).

PUDMTEDAS	**Not Agree at All**	**Not Agree**	**Agree/Not agree**	**Agree**	**Totally Agree**
In the past 12 months, dermatology pharmaceutical disease announcement (s) prompted me to…					
1. Receive dermatology treatment/service to detect/diagnose early the dermatology disease.	1	2	3	4	5
2. Receive dermatology treatment/service for the dermatology disease symptom management.	1	2	3	4	5
3. Receive Treatment/cure of the dermatology disease in order to clear the tumor/disease.	1	2	3	4	5
4. Receive Treatment/cure of the dermatology disease in order to excise the tumor lesion/disease.	1	2	3	4	5

You have come to the end of this survey. I thank you very much for your valuable contribution and precious time.

Appendix H: Questionnaire Completion Guide

This Guide provides the researcher with the necessary help to check the answer each question. Also, the guide provides with the help to check consistency amongst answers for several related questions. This is to be used by the researcher to approve each completed questionnaire.

ELIGIBILITY SECTION

Your answers to the following questions will help to determine if you meet the criteria to participate in this study or not. Please, answer truthfully, clearly, and consistently.

INCLUSION CRITERIA

Q.1. City of residence.

☐ Houston
☐ Other (*Specify*)_____ *(Terminate the completion)*

Q.2. Length of Residence in Houston (C*heck **only one***).

☐ At least six months.
☐ Less than six months *(Terminate the Completion)*

Q.3. Familiarity with English Language.

- If you check the first answer, continue with the completion.
- If you check the second answer, terminate the completion because you cannot participate in this study if you cannot speak, read, and understand English language which is the language of this survey.

Q.4. Attending to church service(s) at Saint Nicholas Catholic Church in Houston or receiving primary care services at MedStar Primary Clinic in Houston (*Please, check **only one**).*

- Yes, continue to Q.5.
- No, Terminate the completion.

Q.5. What is your age?

- Please, only one answer be checked.

Q.6. Please, write in number your **exact age** inside the next box (*Optional*)

- This answer is optional.
- However, if you choose to provide it, use a two digit number (00) to give your **exact age** at the time of the completion.

Q.7. Have you been diagnosed with dermatology disease (s) in **the past 12 months**?

- Only one answer be checked, and if you check "No", terminate the completion completely because the study is designed to survey dermatology disease patients.
- If you choose "Other" as answer, specify the name of the disease and terminate the completion.

Q.8. Are you **currently** receiving dermatology disease treatment at a dermatology facility in

Houston after you have been diagnosed with dermatology disease in **the past 12 months**?

- Only one answer be checked.
- If "No", terminate the completion completely because the study is designed to survey dermatology patients who are receiving treatment at a dermatology facility in Houston at the time of the completion as the consequence of their exposure to dermatology DTCAs in the past 12 months. Then, they attend church services at Saint Nicholas Catholic Church in Houston or receiving primary care services at MedStar Primary Care Clinic of Houston, Texas.
- Also, if you choose "Other" as answer, terminate the completion.

Q.9. Please, Indicate your dermatology disease that you are **currently** receiving treatment for in

Houston.

- There should not be more than three answers checked for this question.
- If you choose "Other" as answer, terminate the completion.

Q.10. What dermatology treatments are you **currently receiving** at the dermatology facility in Houston ?

- Write down a maximum of 3 treatment(s) for each applicable disease if your answer is different from "Don't Know/Not Sure".

Q.11:

- It is about both pharmaceutical prescription drug/disease announcements in general seen, read, or heard in the past 12 months. Check only one answer for each statement.

Q.12:

- It is about dermatology pharmaceutical prescription drug/disease announcement in particular seen, read, or heard in the past 12 months.
- Check only one answer for each statement. Terminate the completion if "No" for both Q.12.a. and Q.12.b. because the target population for this study is the dermatology patients who have seen, read, or heard in the past 12 months dermatology pharmaceutical prescription drug/disease announcement and have received treatment as the consequence of that exposure.
- If you answer "Yes" for Q12a, Q.11a should also be "Yes" too.
- If you answer "Yes" for Q12b, Q.11b should also be "Yes" too.

Q.13. What is/are the reason (s)/expected result (s) of the dermatology treatment that you are **currently receiving** at a dermatology facility in Houston?

- Write down a maximum of 3 treatment(s) for each applicable disease.

Q.14.: It is about exposure or contact with dermatology pharmaceutical prescription drug, disease, and reminder announcements in particular seen, read, or heard in the past 12 months.

- Check only one answer for each statement. *(**Terminate** completion if "No" for both Q.14.a. and Q.14.b.)*

Q.15.: It is about the factors that prompted the patients to receive current dermatology treatment(s) at a dermatology facility in Houston *(**Terminate** if "No" for both Q.15.a. and Q15.b.).*

- Check only one answer for each statement.

Q.16.: It is about the factors that prompted the patients to go for the expected results/reasons of dermatology treatment currently received in Houston **.**

Check only one answer for each statement.

OTHER

Q.17. Indicate your sex.

Please, only one answer be checked.

Q.18. Residence Status (Check ***only one***):

☐ US Citizen
☐ Permanent Resident Alien

Q.19. Race/Ethnicity.

- Please, do not check more than one answer for this question.

Q.20. Indicate the **highest** grade of school completed.

- There should not be more than one answer checked.
- The checked answer should be the highest grade of school completed by the participant

at the time of the completion.

Q.21. Current marital status?

- There should not be more than one answer checked.
- The checked answer should be the participant's marital status at the time of completion.

Q.22. Current annual household income from all sources.

- Do not check more than one answer here.
- The checked answer should be the overall income of participant's household made last year.

Q.23. Write the **exact** total number of your household members inside the next box: ☐

- Use a two digit number (00) to give your exact total number of your household's members.
- The **exact** total number of the participant's household members at the time of the completion should not include visitors, however only those who are living permanently/at least six months continuously in the household.
- The researcher will use this information to check the consistency with question 8.

Q.24. I pay for my **current** dermatology treatments …

- They should not be more than one answer checked for this question.

MAIN QUESTIONNAIRE

Section 1: Dermatology Product Claim Advertisement Exposure Scale (DPCAES)

Q.25. Indicate where you have seen, read, or heard dermatology **pharmaceutical prescription drug(s)** announcement directed directly to **patients in the past 12 months**

- Please, check all answers that apply to you. If you have an answer that is not listed, provide or specify that answer as "other"**.**

Q.26. Please, provide **the name/title** of the dermatology **pharmaceutical prescription drug(s)** announcement directed directly to patients that you have seen, read, or heard **in the past 12 months**.

- Write down a maximum of 3 name(s)/title(s) for each applicable disease, if your answer is different from "Don't Know/Not Sure".

Q.27. Instructions: We would like to ask you about some things that dermatology prescription drug pharmaceutical announcements directed directly to patients do. Those things can prompt patients to receive dermatology treatments for particular reason(s) or purpose(s). You will provide your answer for all statements even if you think some are alike. Below is a scale

that ranges from Not agree at all to Totally agree**. Please, indicate the extent to which you agree with each statement regarding the** dermatology **drug pharmaceutical announcement(s) that you have seen, read, or heard in the past 12 months.**

- Circle only one answer for each statement.

Section 2: Dermatology Help-seeking Advertisement Exposure Scale (DHSAES)

Q.28. Indicate where you have seen, read, or heard dermatology **pharmaceutical disease(s)** announcement **in the past 12 months.**

- Please, check all answers that apply to you. If you have an answer that is not listed, provide or specify that answer as "other".

Q.29. Please, provide **the name/title** of the dermatology **pharmaceutical disease**(s) announcement that you have seen, read, or heard **in the past 12 months**.

- Write down a maximum of 3 name(s)/title(s) for each applicable disease.

Q.30. Instructions: We would like to ask you about some things that dermatology disease(s) pharmaceutical announcements directed directly to patients do. Those things can prompt patients to receive dermatology treatments for particular result(s) or purpose(s).You will provide your answer for all statements even if you think some are alike. Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the** dermatology **pharmaceutical disease announcement (s) that you have seen, read, or heard in the past 12 months.**

- Respondent should answer this question by circling one number that represents the selected answer for each statement.

Section 3: Types of Medical Dermatology Treatments Utilized after Exposure to the Dermatology DTCA of Prescription Drug Scale (TDMTUEDDAS)

Q.31. What is/are the medical dermatology treatment(s) that you are **currently** receiving in Houston because of the dermatology prescription drug(s) announcement directed directly to patients that you have seen, read, or heard

in the past 12 months?

- Write down a maximum of 3 treatments for each applicable disease, if your answer is different from "Don't Know/Not Sure".
- Your answer should be appropriate for Q.9. (dermatology disease that you are currently receiving treatment for in Houston).
- Your answer should be listed also at Q.10. (the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your answer should be appropriate for Q.13. (the expected result/reasons for the dermatology treatment that you are currently receiving at a dermatology facility in Houston).

Q.32. Patients several times affirmed that they have received the following medical dermatology treatment(s) as the consequence of having seen, heard, or read dermatology pharmaceutical drug(s) announcement directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree.

Please, indicate the extent to which you agree with each statement regarding the dermatology **pharmaceutical prescription drug announcement(s) that you have seen, read, or heard in the past 12 months.**

- Respondent should answer this question by circling one number that represents the selected answer for each statement.
- Your "Agree/Totally agree" answer should be appropriate for Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your answer should be listed also at Q.10. (the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your "Agree/Totally agree" answer should be appropriate for Q.13. (the expected results/reasons of the dermatology treatment that you are currently receiving at a dermatology facility in Houston in Houston).

- Your answer should be "Yes" for Q.33.2. (the dermatology pharmaceutical prescription drug announcement prompted you to receive the current dermatology treatment).
- If you agree with Q.32.2 (Receive the advertised drug therapy) and Q.32.4 (Fill the dermatology prescription drug), you should have a type of drug treatment listed as one of your answers in Q.31. above (the medical dermatology treatment(s) that you are **currently** receiving in Houston because of the dermatology prescription drug(s) announcement directed directly to patients that you have seen, read, or heard in the past 12 months).

Section 4: Types of Medical Dermatology Treatments Utilized after Exposure to Dermatology DTCA of Disease Scale (TDMTUEDAS)

Q.33. What is/are the medical dermatology treatment(s) that you are **currently** receiving at a dermatology facility in Houston because of the dermatology pharmaceutical disease(s) announcement directed directly to consumers that you have seen, read, or heard in the past 12 months?

- Write down a maximum of 3 treatments for each applicable disease, if your answer is different from "Don't Know/Not Sure".
- Your answer should be consistent with Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your answer should be listed also at Q.10. (the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your answer should be consistent with Q.13. (the expected result/reasons for the dermatology treatment that you are currently receiving at a dermatology facility in Houston).

Q.34. Patients several times affirmed that they have received the following medical dermatology treatment(s) as the consequence of having seen, heard, or read dermatology pharmaceutical disease(s) announcement directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the**

dermatology **pharmaceutical disease announcement(s) that you have seen, read, or heard in the past 12 months**.

- Respondent should answer this question by circling one number that represents the selected answer for each statement.
- Your "Agree/Totally agree" answer should be appropriate for Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your "Agree/Totally agree" answers should be consistent with for Q.10. (the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your answer should be "Yes" for Q.15.b. (the dermatology pharmaceutical disease announcement prompted you to receive the current dermatology treatment).

Section 5: Purposes of the Utilization of Medical Dermatology Treatments after Exposure to Dermatology DTCA of Prescription Drug Scale (PUDMTEPDAS)

Q.35. What is/are the expected result(s)/reason(s) why of your dermatology medical treatment(s) that you are **currently** receiving at a dermatology facility in Houston because of the pharmaceutical prescription drug(s) announcement directed directly to patients that you have seen, read, or heard in the past 12 months?

- Write down a maximum of 3 treatments for each applicable disease, if you answer is different from "Don't Know/Not Sure".
- Your answer should be consistent with for Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your answer should be listed also at Q.10. (the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your answer should be listed also at Q.13. (the expected results/reasons of the dermatology treatment that you are currently receiving at a dermatology facility in Houston).

- Your answer should be "Yes" for Q.15.a. (dermatology pharmaceutical prescription drug announcement prompted you to receive the current dermatology treatment).
- Verify that if you Agreed/Totally agreed with Q.32.2 (Receive the advertised drug therapy) and Q.32.4 (Fill the dermatology disease prescription drug), you should have a type of drug treatment listed as one of your answers in Q.31. above (the medical dermatology treatment(s) that you are **currently** receiving at a dermatology facility in Houston because of the dermatology pharmaceutical prescription drug(s) announcement directed directly to patients that you have seen, read, or heard in the past 12 months).

Q.36. Patients several times affirmed that they have received the dermatology medical treatment(s) for the following expected result(s)/reason(s), as the consequence of having seen, heard, or read dermatology pharmaceutical prescription drug announcement(s) directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree. **Please, indicate the extent to which you agree with each statement regarding the** dermatology **pharmaceutical prescription drug announcement(s) that you have seen, read, or heard in the past 12 months.**

- Respondent should answer this question by circling one number that represents the selected answer for each statement.
- Your "Agree/Totally agree" answer should be appropriate for Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your "Agree/Totally agree" answers should be listed also at Q.13. (the expected results/reasons of the dermatology treatment that you are currently receiving at a dermatology facility in Houston).

Section 6: Purposes of the Utilization of Medical Dermatology Treatment after Exposure to dermatology DTCA of Disease Scale (PUDMTEDAS)

Q.37. What is/are the expected result(s)/reason(s) why of your medical dermatology treatment(s) that you are **currently** receiving at a dermatology facility in Houston because of the dermatology pharmaceutical disease(s) announcement directed directly to patients that you have seen, read, or heard in the past 12 months?

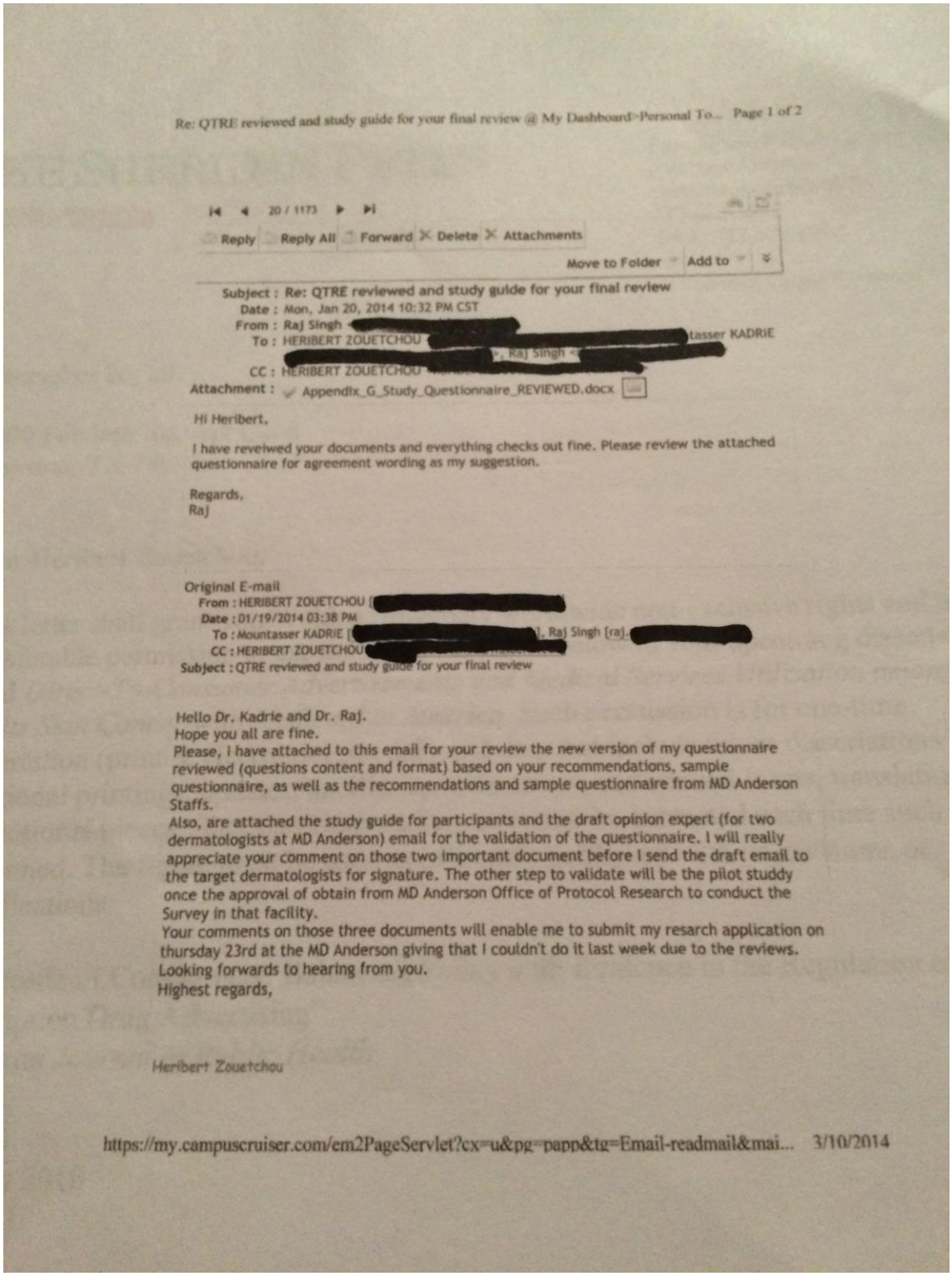
- Write down a maximum of 3 treatments for each applicable disease, if your answer is different from "Don't Know/Not Sure".
- Your answer should be consistent with Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your answer should be consistent with Q.10. (dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your answer should be listed at Q.13. (the expected result/reasons for the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your answer should be listed at Q.33. (What is/are the medical dermatology treatment(s) that you are **currently** receiving at a dermatology facility in Houston because of the pharmaceutical disease(s) announcement directed directly to consumers that you have seen, read, or heard in the past 12 months?).

Q.38. Patients several times affirmed that they have received the dermatology medical treatment(s) for the following expected result(s)/reason(s), as the consequence of having seen, heard, or read dermatology pharmaceutical disease announcement(s) directed directly to patients. Below is a scale that ranges from Not agree at all to Totally agree.

Please, indicate the extent to which you agree with each statement regarding the dermatology **pharmaceutical disease announcement(s) that you have seen, read, or heard in the past 12 months.**

- Respondent should answer this question by circling one number that represents the selected answer for each statement.
- Your "Agree/Totally agree" answers should be consistent with Q.9. (dermatology disease that you are currently receiving treatment for at a dermatology facility in Houston).
- Your answer should be consistent with Q.10. (dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your "Agree/Totally agree" answers should be listed also at Q.13. (expected results/reasons of the dermatology treatment that you are currently receiving at a dermatology facility in Houston).
- Your "Agree/Totally agree" answers should be consistent with Q.33. (What is/are the medical dermatology treatment(s) that you are **currently** receiving at a dermatology facility in Houston because of the dermatology pharmaceutical disease(s) announcement directed directly to consumers that you have seen, read, or heard in the past 12 months?.

Appendix I: Dr. Raj Final Approval of the Study Questionnaire



Re: QTRE reviewed and study guide for your final review @ My Dashboard>Personal To... Page 1 of 2

20 / 1173

Reply Reply All Forward Delete Attachments

Move to Folder Add to

Subject : Re: QTRE reviewed and study guide for your final review
Date : Mon, Jan 20, 2014 10:32 PM CST
From : Raj Singh
To : HERIBERT ZOUETCHOU [redacted] tasser KADRIE
CC : HERIBERT ZOUETCHOU [redacted] Raj Singh [redacted]
Attachment : Appendix_G_Study_Questionnaire_REVIEWED.docx

Hi Heribert,

I have reveiwed your documents and everything checks out fine. Please review the attached questionnaire for agreement wording as my suggestion.

Regards,
Raj

Original E-mail
From : HERIBERT ZOUETCHOU [redacted]
Date : 01/19/2014 03:38 PM
To : Mountasser KADRIE [redacted], Raj Singh [raj.[redacted]
CC : HERIBERT ZOUETCHOU [redacted]
Subject : QTRE reviewed and study guide for your final review

Hello Dr. Kadrie and Dr. Raj.
Hope you all are fine.
Please, I have attached to this email for your review the new version of my questionnaire reviewed (questions content and format) based on your recommendations, sample questionnaire, as well as the recommendations and sample questionnaire from MD Anderson Staffs.
Also, are attached the study guide for participants and the draft opinion expert (for two dermatologists at MD Anderson) email for the validation of the questionnaire. I will really appreciate your comment on those two important document before I send the draft email to the target dermatologists for signature. The other step to validate will be the pilot studdy once the approval of obtain from MD Anderson Office of Protocol Research to conduct the Survey in that facility.
Your comments on those three documents will enable me to submit my resarch application on thursday 23rd at the MD Anderson giving that I couldn't do it last week due to the reviews.
Looking forwards to hearing from you.
Highest regards,

Heribert Zouetchou

https://my.campuscruiser.com/em2PageServlet?cx=u&pg=papp&tg=Email-readmail&mai... 3/10/2014

Appendix J: Dr. Kadrie Final Approval of the Study Questionnaire

[redacted]

RE: QTRE reviewed and study guide for your final review @ My Dashboard>Persona

Subject : RE: QTRE reviewed and study guide for your final review
Date : Tue, Jan 21, 2014 05:17 AM CST
From : Mountasser Kadrie [redacted]
To : HERIBERT ZOUETCHOU [redacted], Raj Singh [redacted]

Hi Herbiert,

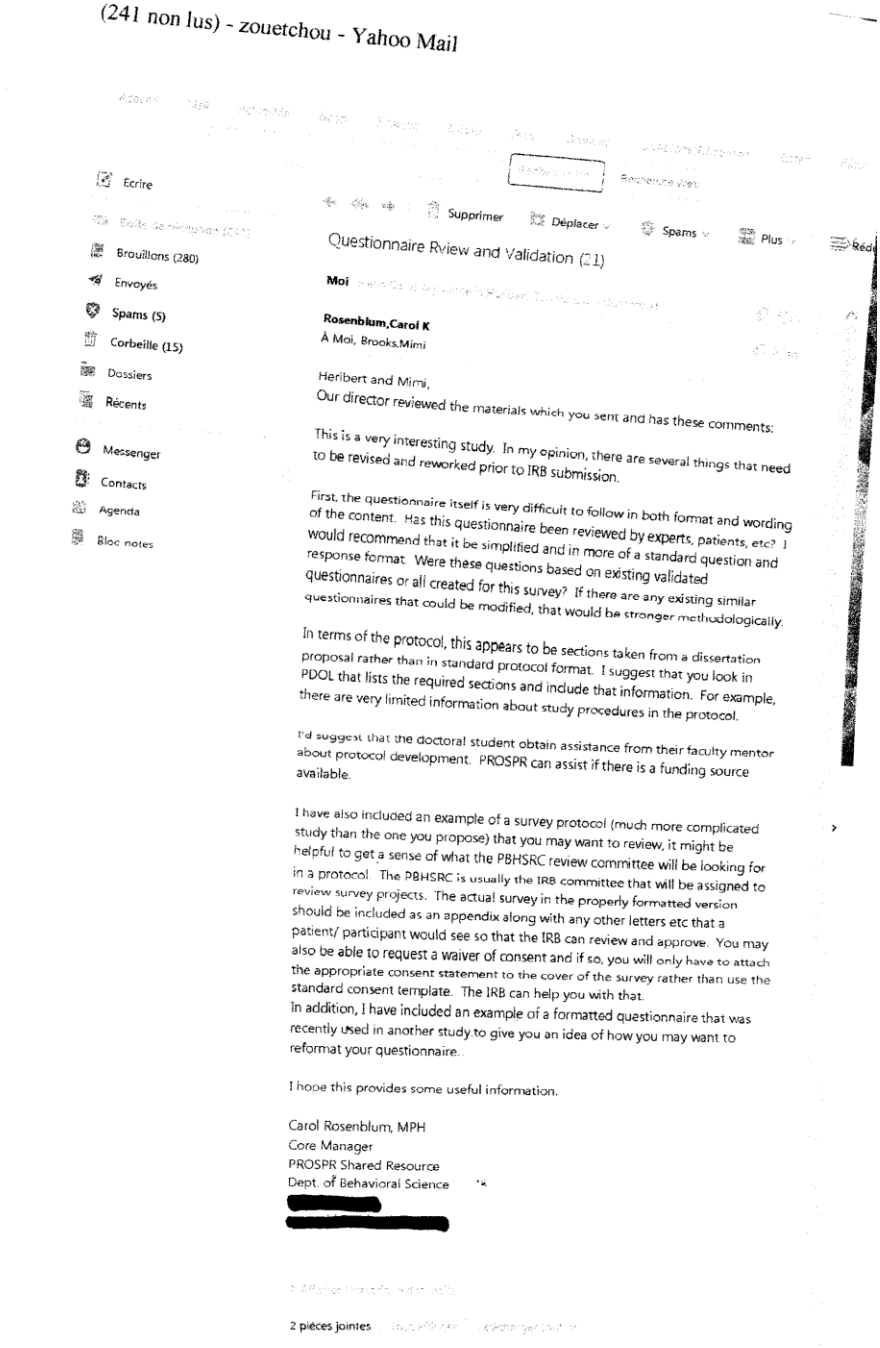
Everyone thing looks good. My only concern is the the questionnaire has too many questions and this requires at least one hour to do and this may not result in high participation rate.

Mountasser Kadrie, Ph.D., M.H.A., CMPE., CAP

Academic Program Director - Master Healthcare Administration (MHA)
College of Health Sciences
Walden University
155 Fifth Avenue South, Suite 100
Minneapolis, MN 55401

Appendix K: Dr. Thomas' Edit of the Mohs Section of the Study Questionnaire

Appendix L: Ann Parker First Draft Questionnaire Recommandations After Review



(241 non lus) - zouetchou - Yahoo Mail

Ecrire

Brouillons (280)
Envoyés
Spams (5)
Corbeille (15)
Dossiers
Récents

Messenger
Contacts
Agenda
Bloc notes

Supprimer Déplacer Spams Plus

Questionnaire Rview and Validation (21)

Moi

Rosenblum,Carol K
À Moi, Brooks,Mimi

Heribert and Mimi,
Our director reviewed the materials which you sent and has these comments:

This is a very interesting study. In my opinion, there are several things that need to be revised and reworked prior to IRB submission.

First, the questionnaire itself is very difficult to follow in both format and wording of the content. Has this questionnaire been reviewed by experts, patients, etc? I would recommend that it be simplified and in more of a standard question and response format. Were these questions based on existing validated questionnaires or all created for this survey? If there are any existing similar questionnaires that could be modified, that would be stronger methodologically.

In terms of the protocol, this appears to be sections taken from a dissertation proposal rather than in standard protocol format. I suggest that you look in PDOL that lists the required sections and include that information. For example, there are very limited information about study procedures in the protocol.

I'd suggest that the doctoral student obtain assistance from their faculty mentor about protocol development. PROSPR can assist if there is a funding source available.

I have also included an example of a survey protocol (much more complicated study than the one you propose) that you may want to review, it might be helpful to get a sense of what the PBHSRC review committee will be looking for in a protocol. The PBHSRC is usually the IRB committee that will be assigned to review survey projects. The actual survey in the properly formatted version should be included as an appendix along with any other letters etc that a patient/ participant would see so that the IRB can review and approve. You may also be able to request a waiver of consent and if so, you will only have to attach the appropriate consent statement to the cover of the survey rather than use the standard consent template. The IRB can help you with that.
In addition, I have included an example of a formatted questionnaire that was recently used in another study to give you an idea of how you may want to reformat your questionnaire..

I hope this provides some useful information.

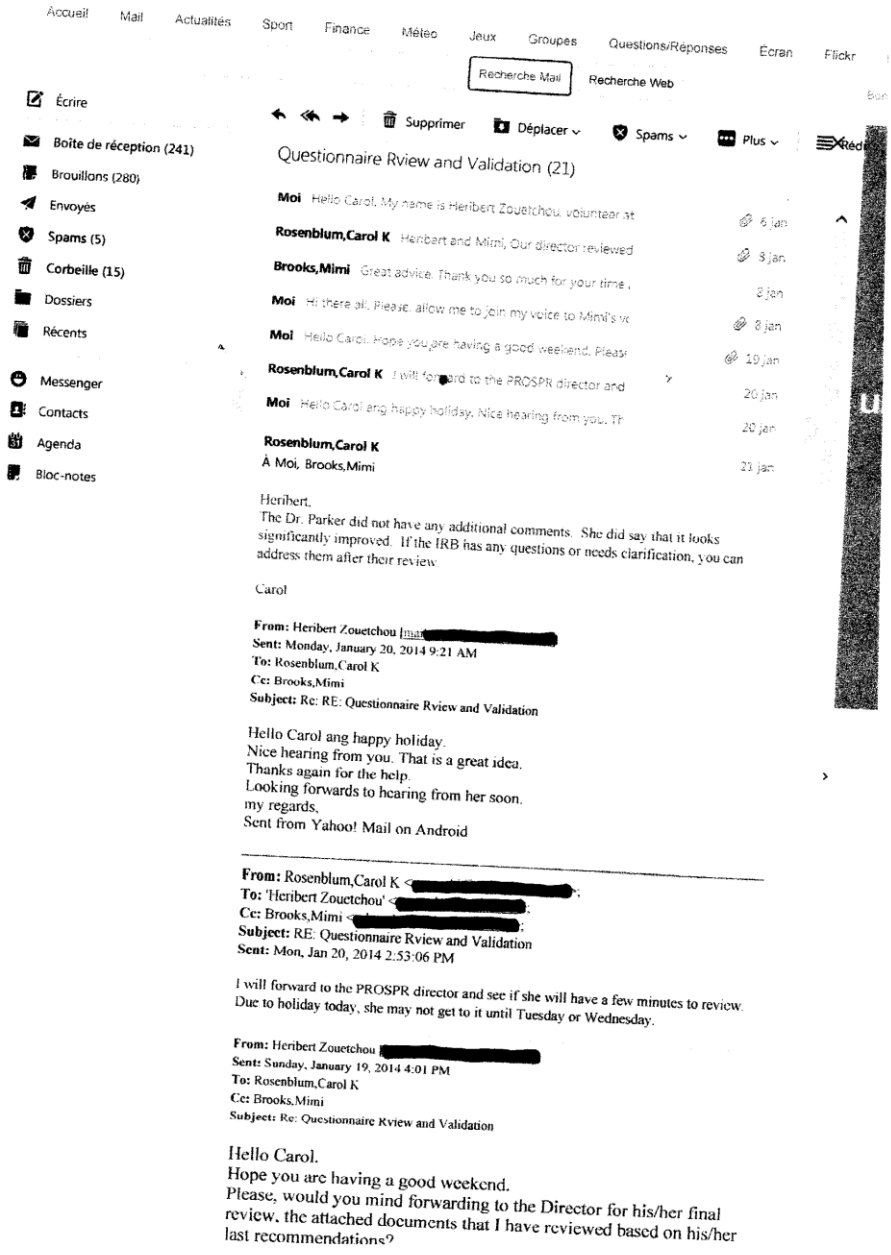
Carol Rosenblum, MPH
Core Manager
PROSPR Shared Resource
Dept. of Behavioral Science

[redacted]

2 pièces jointes

Appendix N: Dr Parker Final Approval of the Study

(241 non lus) - zouetchou - Yahoo Mail



Accueil Mail Actualités Sport Finance Météo Jeux Groupes Questions/Réponses Écran Flickr

Recherche Mail Recherche Web

Écrire

Boîte de réception (241)
Brouillons (280)
Envoyés
Spams (5)
Corbeille (15)
Dossiers
Récents

Messenger
Contacts
Agenda
Bloc-notes

Supprimer Déplacer Spams Plus

Questionnaire Rview and Validation (21)

Moi Hello Carol, My name is Heribert Zouetchou, voluntear at — 6 jan
Rosenblum,Carol K Heribert and Mimi, Our director reviewed — 8 jan
Brooks,Mimi Great advice. Thank you so much for your time — 8 jan
Moi Hi there all, Please, allow me to join my voice to Mimi's w — 8 jan
Moi Hello Carol, Hope you are having a good weekend, Pleas — 10 jan
Rosenblum,Carol K I will forward to the PROSPR director and — 20 jan
Moi Hello Carol ang happy holiday, Nice hearing from you, Th — 20 jan

Rosenblum,Carol K
À Moi, Brooks,Mimi — 21 jan

Heribert,
The Dr. Parker did not have any additional comments. She did say that it looks significantly improved. If the IRB has any questions or needs clarification, you can address them after their review.

Carol

From: Heribert Zouetchou [mai[redacted]
Sent: Monday, January 20, 2014 9:21 AM
To: Rosenblum,Carol K
Cc: Brooks,Mimi
Subject: Re: RE: Questionnaire Rview and Validation

Hello Carol ang happy holiday.
Nice hearing from you. That is a great idea.
Thanks again for the help.
Looking forwards to hearing from her soon.
my regards,
Sent from Yahoo! Mail on Android

From: Rosenblum,Carol K <[redacted]>
To: 'Heribert Zouetchou' <[redacted]>
Cc: Brooks,Mimi <[redacted]>
Subject: RE: Questionnaire Rview and Validation
Sent: Mon, Jan 20, 2014 2:53:06 PM

I will forward to the PROSPR director and see if she will have a few minutes to review. Due to holiday today, she may not get to it until Tuesday or Wednesday.

From: Heribert Zouetchou [redacted]
Sent: Sunday, January 19, 2014 4:01 PM
To: Rosenblum,Carol K
Cc: Brooks,Mimi
Subject: Re: Questionnaire Rview and Validation

Hello Carol.
Hope you are having a good weekend.
Please, would you mind forwarding to the Director for his/her final review, the attached documents that I have reviewed based on his/her last recommendations?

Appendix O: Thomas Abrams Approval of the DTCAs Variables of the Questionnaire

TELEPHONE CONVERSATION WITH THOMAS ABRAMS

Date: 08/29/2013

Time: 13: 36 (USCST) – 13:41:13 (0:05:13)

His phone number: XXX

Topic: DTCA Characteristics

Heribert: My name is Heribert from Walden University. Thank you for returning my call. I am working on my dissertation and the topic is DTCAs of prescription drug and disease. I would like to request for your expertise to review the sections of my dissertation on DTCAs written based on the FDA's website resources and your PowerPoint presentations. If you don't mind, is it possible to have your email address so that I can send you an email clarifying my request?

T. Abram: I do apologize for the voice mail, this is the first one that I have received and I don't know what went wrong with my answering machine. All the resources on our website are accurate and updated. You can use them for your dissertation. Unfortunately I don't have resources and time to review external documents. We spend a lot of time reviewing internal documents. However, if you have any question, call me I can answer for you.

Thank you! Bye bye!

Appendix Q: American Journal of Public Health's Zouetchou Permission

THE SHERIDAN PRESS

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December 26, 2013

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Dear Heribert Zouetchou,

This letter shall grant you/Walden University worldwide non-exclusive rights and non-transferable permission to use the figure indicated below in your upcoming dissertation titled *Direct-To-Consumer Advertisements and Medical Services Utilization among Adults Skin Cancer with Medicaid in America*. Such permission is for one-time dissertation (print & electronic) use only and does not include future dissertations/works, additional printings, updates, ancillaries, derivatives, customized forms, translations, or promotional pieces. Sheridan Content Services must be contacted each time such new use is planned. The figure must be used as originally published with no revisions or modifications.

"A Decade of Controversy: Balancing Policy with Evidence in the Regulation of Prescription Drug Advertising"
American Journal of Public Health
Frosch
100 (1)
January 2010
Figure 1
Pg. 25

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Regards,

Sheridan Content Services
The Sheridan Press
(on behalf of The American Public Health Association)

Appendix R: Dr Rachel Kientcha-Tita Letter of Consent

Affordable, Comprehensive, Quality Healthcare

Rachel Kientcha-Tita M.D., RPh
Medical Director
MedStar Primary Care Clinic/ Medstar Clinical Research
14629 Beechnut st., Houston, Texas,77083
Tel: (281) 933-4447
Fax: (281) 933-5557
Email: [redacted]
http://www.medstarclinic.com

May 20th, 2014.

Heribert Zouetchou
9000 Fondren Rd, Apt 268C
Houston, Texas-77074

Subject: Permission to Conduct the *Dissertation study "Direct-To-Consumer Advertisements and Medical Services Utilization amongst Dermatology Adults Patients in America."*

Dear Heribert Zouetchou,

I have reviewed the research protocol for your dissertation study or survey referred in the subject above. Based on my thorough review and our discussion regarding your proposal, I am writing to let you know that you have my full permission to conduct your dissertation research at Medstar Primary Care Clinic of Houston, Texas. The clinic's patients meet the study's inclusion criteria, and I have authority to grant permission to conduct research at MedStar Clinic. Therefore, please, go ahead and collect the survey and the existing demographic data from the clinic data base for your dissertation.

Thank you for your interest in our Clinic's diversified community. The community will be expecting you, for the implementation, during our operation hours at your convenience. Be advised that the Clinic's regular office hours are as followed: Monday-Thursday: 9:00AM- 5:30PM, and Friday: 9:00AM-2:00PM. Please, do not hesitate to advise me with any information or help you may need from the Clinic for this study.

I understand that the participation of the patients will be voluntary. Each participant will provide an informed consent before participating to the study. Also, they will be free to stop their participation at any time without any penalty. In addition, I understand that Walden University's Institutional Review Board (I.R.B.) will review, approve, and authorize the study proposal and materials before any data collection starts. This will be to ensure the protection of the participants from any harm during the study, and to ensure that the study is in compliance with the laws and regulations of the Nation. Finally, I understand that the information collected will be anonymously and confidentially used only for your dissertation and related scientific publications. The collected information may be shared with certain persons involved in the completion of this research. Once again, thank you for your interest in our community and good luck in your dissertation.

Sincerely,

Rachel Kientcha-Tita M.D., RPh
Medical Director, Medstar Primary Care Clinic

Appendix S: Rv. Fr Desmond Ohankwere Letter of Consent

Very Rev. Desmond Ohankwere, MSP
Pastor & Regional Superior of
The Missionary Society of the St. Paul
Saint Nicholas Catholic Church
2508 Clay Ave, Houston, Teaxs77003-4498
Phones: [redacted]
Fax: [redacted]

May 26th, 2014.

Heribert Zouetchou
9000 Fondren Rd, Apt 268C
Houston, Texas-77074

Subject: Permission to Conduct the *Dissertation study "Direct-To-Consumer Advertisements and Medical Services Utilization amongst Dermatology Adults Patients in America."*

Dear Heribert Zouetchou,

I have reviewed you protocol research for your dissertation study or survey referred in the subject above. Based on that and our discussion related to your proposal, I am writing to let you know that you have my permission to conduct your dissertation research at Saint Nicholas Catholic Church of Houston, Texas. The church's members meet the study's inclusion criteria, and I have authority to grant permission to conduct research at this parish. Therefore, please, free to collect the survey and the demographic for your dissertation.

Thank you for your interest in our church's multicultural community. The community will be expecting you, for the implementation, at any one of the church services at your convenience. The parish's regular mass schedule is as followed: Sundays: 9:00AM; ACCCH: 2nd, 4th, & 5th Sundays at 11:30AM; Tuesdays: 6:00 PM; and 1st Fridays: 6:00 PM. Please, advise me with any information or help you may need from the church in the course of this study.

I understand that the participation of the church members will be voluntary. Each participant will provide an informed consent before participating to the study. Also, they will be free to stop their participation at any time without any penalty. In addition, I understand that Walden University's Institutional Review Board (I.R.B.) will approve and authorize the study prior to any data collection. This will be to ensure the protection of the participants from any harm during the study, and to ensure the study compliance with the laws and regulations of the Nation. Finally, I understand that the information collected will be anonymously and confidentially used only for your dissertation and related scientific publications. The collected information may be shared with certain persons involved in the completion of this research. Once again, thank you for your interest in our community, good luck in your dissertation, and stay blessed.

Sincerely,

Rev Ohankwere

Very Rev. Desmond Ohankwere, MSP
Pastor, Saint Nicholas Catholic Church

Appendix T: Dr Mays Letter on Questionnaire Development and Approval

THE UNIVERSITY OF TEXAS
MD ANDERSON
CANCER CENTER

Steven Mays, MD

Associate Professor

June 27th, 2014

To whom it may concern,

Heribert Zouetchou spent three days in the dermatology clinic with me as an observer. During this time he encountered patients with basal cell carcinoma, squamous cell carcinoma and actinic keratoses, which are the subject of his dissertation.

In addition I have reviewed with Heribert the questionnaire for his research dissertation.

Steven Mays, MD

Associate Professor

Dermatology

MD Anderson Cancer Center