

2011

La ola verde: female, Hispanic consumers and the green movement

Stefanie Ann Ramirez

Louisiana State University and Agricultural and Mechanical College

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_theses



Part of the [Human Ecology Commons](#)

Recommended Citation

Ramirez, Stefanie Ann, "La ola verde: female, Hispanic consumers and the green movement" (2011). *LSU Master's Theses*. 1434.

https://digitalcommons.lsu.edu/gradschool_theses/1434

This Thesis is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Master's Theses by an authorized graduate school editor of LSU Digital Commons. For more information, please contact gradetd@lsu.edu.

LA OLA VERDE: FEMALE, HISPANIC CONSUMERS AND THE GREEN MOVEMENT

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Science

In

The School of Human Ecology

by
Stefanie Ann Ramirez
B.S.M., Tulane University, 2005
August, 2011

ACKNOWLEDGEMENTS

While it is almost impossible to thank everyone who provided help and support throughout this process, I am grateful to have you in my life during this accomplishment.

My greatest debt of gratitude goes to my major professor Dr. Lisa Barona McRoberts. I am appreciative for her guidance and support as well as the amount of patience, time, and experience she provided. There are no words to describe my thanks for all that she has done. I am inspired by her determination and passion for her students and influenced to become the best professor possible.

I am indebted to my committee, Dr. Loren Marks, and Corey Globke. Their patience, time and scholarly support are greatly appreciated. Also, I would like to thank Dr. Chuanlan Liu, Robin McGee, and Billy Jo Fischer who each served previously on my committee.

The strength and courage to start and complete this endeavor would never have happened without the loving and faith-based rearing provided by my parents, the late Mariano A. and late Felicitas P. Ramirez. Without the encouragement and love they instilled, I would never have accomplished this.

The greatest thanks goes to my family for their prayers, support, and love. I am especially grateful to my aunt, Anita Perez, for all the love and prayers she could give in this endeavor; my cousin, Cristina Salas for her daily support throughout this journey; and my big brother, Carlos Hernandez, for always believing in me. Without them, and the extensive family I have around the world, I could not have made it this far.

I would also like to thank my godmothers, Julie Treviño, Rosie Hernandez, Minerva Rodriguez and Oneida Alegria for their support. As well as, all my friends who have helped in their special ways. Specifically, Claudine Smack, Christie Wiedmann, Brittany Butler-Miller,

Juan Carlos Ortiz, Ryan Aldridge, Melissa Mendoza, Courtney Ordone, Ghislaine “Gigi” Camey-Ubilla, and Dreama Goldsmith. Additionally, I’d like to thank Katie Brown, Krystn Hammond, Larissa Miller, Michelle Hassing, Michael Gomez, Kelsey “Dobby” Robinson and Jessica “Lil Bit” Walther. Lastly, a heartfelt thanks to the Smack and Abadie families who have opened their homes to me during my time at LSU.

A special thank you to the professors, instructors, graduate students, and staff in the Textile Science, Apparel Design, and Merchandising department at LSU, who have contributed to this accomplishment. In particular to Dr. Jenna Kuttruff, whose open door helped me acclimate to what was the scary endeavor that is graduate school. Thank you for your support and always being available to answer even the simplest of questions.

Ultimately, I give the greatest thanks and praise to God who got me through this and brought such amazing people into my life.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	ii
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
ABSTRACT.....	viii
CHAPTER	
1 INTRODUCTION.....	1
Statement of the Problem.....	3
Purpose of Study.....	3
Theoretical Framework.....	3
Objectives.....	4
Limitations.....	4
Definitions.....	5
Assumptions.....	6
2 REVIEW OF LITERATURE.....	7
Hispanic Population.....	7
Environmental Responsibility.....	13
Fashion Industry’s Environmental Impact.....	16
Theoretical Framework.....	18
Hypothesis.....	30
3 METHOD.....	33
Research Design	33
Participant Selection	34
Data Collection Strategy: Online Survey Method	35
Survey Instrument	37
Variable Operationalization.....	38
Statistical Analysis	45
4 RESULTS.....	46
Participant Characteristics.....	46
Variable Characteristics.....	48
Reliability.....	49
Hypothesis Testing.....	50
5 CONCLUSIONS AND DISCUSSION.....	54
Major Findings.....	54
Conclusion.....	57
Discussion.....	58
Implications.....	58

Limitations and Future Research..... 60

REFERENCES..... 62

APPENDIX

A IRB EXCEPTION APPROVAL..... 73

B INITIAL E-MAIL INVITATION..... 75

C ENVIRONMENTAL RESPONSIBILITY APPAREL PRODUCT CONSUMPTION SURVEY 76

VITA..... 82

LIST OF TABLES

Table 1: Independent Variable Operationalization.....	38
Table 2: Dependent Variable Operationalization.....	43
Table 3: Demographic Profile of Hispanic Participants (n=65)	47
Table 4: Statistical Characteristics of Variables.....	48
Table 5: Variable Reliability.....	49
Table 6: Results of Regression Analysis.....	50

LIST OF FIGURES

Figure 1: Theory of Planned Behavior.....	28
Figure 2: Conceptual Framework Model	29
Figure 3: Hypothesized Conceptual Model with Variables.....	44

ABSTRACT

Due to their impact on the environment, apparel companies have gradually begun to change manufacturing and production processes and provide consumers with environmentally responsible apparel product options. Among these consumers are Hispanics, a consumer group which research has shown to have a strong purchasing power and astounding population increase. Between 2000 and 2010, the total population in the United States increased by 23.7million people, with Hispanics accounting for over 50% of that total increase (Humes, Jones, & Ramirez, 2011). It is estimated that by 2125 Hispanics will account for 50% of the total U.S. population (Day, 1996). Additionally, between 1990 and 2006, Hispanic buying power had a 450% growth versus a 176% growth of the non-Hispanic population (Humphreys, 2008). It is expected that Hispanic buying power will increase to \$1.2 trillion by the year 2012 (Humphreys, 2007). Specifically, females account for 80% of household buying decisions (Gogoi, 2005). With this substantial financial impact, it is imperative that retailers better understand this consumer group. Using the theory of planned behavior and acculturation theory, the purpose of this research was to study the effects environmental knowledge has on environmental attitude and the influence environmental attitude, subjective norms, and the perceived control have on behavioral intention to purchase environmentally responsible apparel products.

An online survey of 548 female Hispanic university students in the southeast region of the United States was conducted to collect data in this empirical quantitative study. The study of 65 participants found significant relationships between: environmental knowledge and attitude; attitude and behavioral intent; subjective norms and behavioral intention; and perceived behavioral control and behavioral intent within the female Hispanic population. These results

reflect the application of the Theory of Planned Behavior as a theoretical framework to aid in measuring the behavioral intention with respect to the purchase of environmentally responsible apparel products.

CHAPTER 1

INTRODUCTION

The increased drive for stricter global policies on industries directly affects the textile and apparel industry around the world. Within the United States, the textile industry ranks among one of the major industries with annual retail sales of clothing and apparel reaching approximately \$180 billion (Textile Barometers, 2003). Annual retail sales of clothing and apparel reached \$217 billion (United States Census Bureau, 2008). Changes have already occurred to gear the industry towards environmental consciousness. Organic cotton now accounts for 2% of the total United States cotton production (Hyvarinen, 1999). Recycled soda bottles are being used to produce 100% polyester, keeping an estimated 2.4 billion bottles out of U.S. landfills each year (Rudie, 1994). Textile and apparel organizations have joined the movement gradually by introducing environmentally safe textile manufacturing processes. In 1992, “the American Textile Manufacturers Institute (ATMI) launched its Encouraging Environmental Excellence (E3) program to encourage reducing, reusing, and recycling” as well as encouraging “corporations to establish environmental goals,” educate employees on environmental issues, and “increase community environmental awareness” (Chen & Burns, 2006, p. 252-253). Environmental concern is evident within the textile and apparel industry. Whether by force or choice, companies have gradually begun to change their manufacturing and production processes, providing consumers with environmentally responsible apparel options.

Even with increased global awareness and product alternatives, there is still a disparity between environmentally responsible attitudes and behaviors of consumers. According to Cowe and Williams, a survey from 2000 revealed a 30:3 statistical ratio correlation between green attitudes and green behavior. Thirty percent of people claim to be concerned about the

environment and ethical integrity of products they purchase but only 3% translate the attitude into behavior or actual green consumption (Cowe & Williams, 2000). Questions plague market researchers, companies, and government policy makers as to the reasons behind the disparity.

Environmental concern is not the only issue causing change in the United States. Drastic demographic changes have occurred in the past 20 years within the country. According to the a report from the Pew Hispanic Center, the Hispanic population grew from 35.3 million in 2000 to 45.5 million in July 2007 becoming 15.1% of the nation's total population accounting for 50.5% of the total U.S. population growth (Fry, 2008). The U.S. Census Bureau (2008, May) projects the ethnic group will grow at three times the rate of the total population. From 1996 to 2006, Hispanic economic power rose from \$212 billion to \$798 billion and is estimated to increase to \$1.2 trillion by 2012 (Humphreys, 2007). The astonishing numbers have profound implications for those looking to understand this demographic group in the United States, such as marketers and companies (Suro & Passel, 2003). Therefore, it is important to consider the financial impact of the Hispanic population on the American economy. Furthermore, they could affect the consumption of environmentally responsible apparel products as well.

Reviewing consumer attitudes, preferences, and behaviors of Hispanic consumers is imperative to understanding how retailers, products, and commerce will be affected by this consumer group's impact. Additionally, it is important to study consumer attitudes, preferences, and behaviors in order to find if and how these consumers impact the consumption of environmentally responsible products. In particular, it is the specific purpose of this study to examine these affects, if any, on the consumption of environmentally responsible apparel products. Environmental responsibility has become such an important issue, it is important not to allow more of a disparity between consumers' attitude and behavior towards it.

Statement of the Problem

A literature search resulted in few studies conducted regarding the U.S. Hispanic market and their consumption of environmentally responsible products. Information regarding their consumption of environmentally responsible apparel products was further limited. For these reasons, this study sought to research the consumption behavior of U.S. Hispanic consumers and the influences on their consumption behavior of environmentally responsible apparel products.

Purpose of Study

According to a May 2008 release of the United States Census Bureau News: Census Bureau Report, Hispanic consumers are the fastest growing market group within the U.S. population. The rapid and substantial population growth, along with the considerable buying power associated with the growth, lends to the imperative need to better understand the Hispanic consumer group. Understanding their consumption behavior could lead to increasing their purchase intentions and maximizing their actual purchase and utilization of environmentally responsible apparel products. For this reason, the purpose of the study was to explore the behavioral intention to consume environmentally responsible apparel products of female, Hispanic consumers. Specifically, the study focused on: studying the knowledge of environmentally responsibility and environmentally responsible apparel products of female, Hispanic consumers, as well as the demographic's intention to purchase environmentally responsible apparel products.

Theoretical Framework

The study used two theories to support the research conducted. Acculturation theory was used to understand the relation culture has on individuals and population groups on consumer behavior. Ajzen's theory of planned behavior was used to demonstrate how behavioral

intentions can be predicted through understanding the attitudes toward a particular behavior, subjective norms, and perceived behavioral control. Together, the theories created a foundation to explore the consumption behavior of the female Hispanic population within the United States and its relation to environmentally responsible apparel products.

Objectives

The overall research objective for the study was to study and profile female, Hispanic consumers and their behavioral intent to consume environmentally responsible apparel products. Each variable was further operationalized and defined in Chapter 3 of this study. Specifically, the objectives of the study:

1. Examined the factual environmental knowledge of female, Hispanic consumers as it related to environmental attitude through the measurement of:
 - a. Environmental knowledge and
 - b. Knowledge of environmentally responsible apparel products;
2. Measured the environmental behavior intentions of female, Hispanic consumers based on their:
 - a. Environmental attitude
 - b. Subjective norms toward environmental responsibility and
 - c. Perceived behavioral control of environmentally responsible behavior; and
3. Profiled the acculturation levels of female, Hispanic consumers and measured if acculturation impacts their behavioral intention.

Limitations

1. Identification with Hispanic ethnicity was self-reported.

2. The study used a convenience sample from a university setting in the southeastern region of the United States.
3. Louisiana was not included as one of the twenty-one states having estimated Hispanics as their largest minority (U.S. Census Bureau, July 2010).

Definitions

Attitude – a general evaluative reaction towards an issue or behavior (Oskamp, Mindick, Berger, & Motta, 1977).

Environmentally responsible apparel products – refers to “fibers, fabrics, or apparel whose manufacturing, usage, maintenance, and ultimate disposal have minimal negative impact on the environment (Chen & Burns, 2006, p. 248). The study included accessories in addition to apparel.

Environmental responsibility – “factual information that individuals have about the environment, the ecology of the plant, and the influence of human action on the environmental/ecology” (Arcury & Johnson, 1987, p. 32).

Factual knowledge – knowledge on a subject derived from facts; salient information (Stutzman & Green, 1982).

Green consumers – individuals who exhibit environmental concern in purchase behavior (Shrum, McCarty, & Lowrey, 1995).

Green movement – refers to the awareness and concern for environmental issues affecting the globe, living an environmentally conscious lifestyle, and the consumption of environmentally responsible products [created for the current research based on the history of the evolution of the conservation movement into the present environmental movement (Ray & Anderson, 2000)].

Hispanic – “refers to persons who trace their origin or descent to Mexico, Puerto Rico, Cuba, Spanish speaking Central and South America countries, and other Spanish cultures. Origin can be considered as the heritage, nationality group, lineage, or country of the person or the person’s parents or ancestors before their arrival in the United States. People who identify their origin as Hispanic...may be of any race” (United States Census Bureau, 2009).

Intention – “how hard people are willing to try” or “how much effort they are planning to exert, in order to engage in a behavior” (Ajzen, 1991, p. 181).

Perceived behavioral control – people’s perceptions of their ability to perform a given behavior (Ajzen, 2002).

Subjective norm – perceived social pressure to engage or not engage in a particular behavior (Ajzen, 1991).

Assumptions

For the purpose of the current research study, it was assumed that the information the subject provided in indicating their ethnicity is true. Additionally, for the research, it was assumed that Hispanics, as a consumer group, behave differently from the rest of the nation’s consumer population. Research has shown Hispanics are influenced by their collectivist culture (Hofstede, 1980). Due to the cultural differences and acculturation, it is assumed their consumption behavior, such as brand loyalty and patronage (Berkowitz, Bao, & Allaway, 2005; Eastlick & Lotz, 2000; Lam, 2007), can be related to the family structure and cultural differences.

CHAPTER 2

REVIEW OF LITERATURE

The current exploratory study examined female, Hispanic consumers and their level of environmentally responsible apparel product consumption. The review of literature focused on four elements: the Hispanic population, environmental responsibility, the fashion industries environmental impact, and the theoretical framework used in this study. Within the element of the Hispanic population, the study expanded on female, Hispanic consumers and the target age being studied.

Hispanic Population

The term Hispanic originated in 1978 as an ethnic label developed by the Office of Management and Budget (Marin & Marin, 1991). It was meant to label “a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race” (Federal Register, 1978, p. 19,269). According to the classification used by the Selig Center for Economic Growth, Hispanic refers to a person of Mexican, Puerto Rican, Cuban and/or other Spanish/Latin American/Caribbean/Latino culture or origin, and is considered an ethnic category rather than a racial group. Persons of Hispanic origin therefore may be of any race, and since their culture varies with the country of origin, the Spanish language is used as a unifying factor (Humphreys, 2007). The United States Census Bureau uses the same definition with the exception of “Spanish language” to classify the ethnic group.

Another term used is Latino which was developed in the 1980s by social scientists and meant to reflect the political, geographical, and historical links among Latin American nations (Marin & Marin, 1991). The problem posed is, when operationalized, the label excludes individuals whose heritage is rooted in Spain, Portugal, and the Philippines. For the purpose of

this research, the term Hispanic will be used to denote a person who self-identifies with Latin American or other Spanish/Latino culture or origin, regardless of race, language, or country of origin.

Demographics

As of July 2009, the median age of the Hispanic population within the United States was 27.4 years (U.S. Census Bureau, July 2010). The educational attainment of the Hispanic population reflects an increase in success. As of 2009, 62% of Hispanics 25 years of age and older, had at least a high school education. As a whole population, 30.9% of individuals 18 years of age and older held a high school diploma and 17.7% held at least a bachelor's degree (U.S. Census Bureau, April 2010). Comparatively, within the U.S. Hispanic population, 29.7% held a high school diploma and 12% held at least a bachelor's degree. As of October 2008, 12% of American undergraduate and graduate college students were Hispanic (U.S. Census Bureau, May 2010). The consumer population, although a minority group, is attaining similar results as the total population within the realm of education.

Population Growth

The growth of the United States population has been greatly impacted by rapid multiplication of the Hispanic population within the country. According to the United States Census Bureau, the Hispanic population in the country is a rapidly growing population (2009). From 1990 to 2006, the Hispanic population grew from 22.4 million to 44.3 million becoming 14.8% of the nation's total population. Between 2000 and 2006, the population's growth rate was three times that of the total population as it grew 24.3% compared to 6.1% of the total population accounting for 50% of the nation's growth. As of July 2009, the United States' Hispanic population grew to an estimated 48.4 million, making it 16% of the total national population

(U.S. Census Bureau, July 2010). During the one-year span between July 2008 and 2009, 1.4 million Hispanic alone were added to the population.

Hispanics have already become the largest and fastest growing minority within the US and will become an even larger population and consumer group. As of 2008, 53% of the growing population is native-born meaning the population has begun permanent establishment within the United States (U.S. Census Bureau, July 2010). As native-born citizens, their ties to the United States are stronger than previous generations making their consumer group even more important to the consumer make-up of the United States.

Future Growth

A May 2008 Census Bureau projection estimated the Hispanic population to grow at 3 times the rate of the total population becoming 15.5% of the total population in 2010 and reaching 102.6 million in 2050 thus becoming 24.4% of the total U.S. population. The 2010 Census reflected that more than half of the population growth between 2000 and 2010 in the United States stemmed from the increase in the Hispanic population (Humes, Jones, & Ramirez, 2011). This report also indicated that one out of six people living in the United States are Hispanic. In that ten year span, the Hispanic population grew by 43% from 35.5 million in 2000. This census indicated that there were 50.5 million Hispanics in the United States comprising 16% of the total population. Out of the 27.3 million increase in population within the country between 2000 and 2010, Hispanic population growth accounted for over 50% of that national increase (Humes, Jones, & Ramirez, 2011). Additionally, it is believed the Hispanic population may become the second-largest ethnic group, second only to non-Hispanic whites (Day, 1996).

By 2015, it is speculated that minorities will make up 40% of the U.S. population with Hispanics being the largest minority group (Miller & Washington 2009). After the year 2020,

Hispanics as an ethnic group, are projected to add more people to the U.S. population each year than all other races and ethnicities combined (Day, 1996). Adding to the impact of the Hispanic population in the make-up of the entire US population is the projection from 2030 to 2050 indicating a zero contribution by the non-Hispanic White population due to their decline in size. By 2125, it is estimated the Hispanic population will represent over 50% of the total U.S. population. An August 2008 U.S. Census Bureau news release estimated the Hispanic population to grow from 46.7 million to 132.8 million during the 2008-2050 time span and double from 15% to 30% of the nation's population.

The projections presented above are, in part, tabulated using data from Vital Statistics related to the fertility of Hispanic and non-Hispanic women living in the United States. A 2006 fertility report, conducted by the U.S. Department of Commerce for the U.S. Census Bureau, highlights that non-Hispanic women, ages 40 to 44, end their childbearing years with below replacement-level fertility (Dye, 2008). In other words, at the end of their childbearing years, non-Hispanic women do not produce enough children to meet replacement levels of the national population for this racial and/or ethnic groups. Hispanic women were the population group whose fertility exceeded the level required for natural replacement of the national population. Additionally, according the report, as of June 2006, comparatively to non-Hispanic women ages 15 to 44; Hispanic women had the highest number of children born. Multiple factors could account for their stark contrast in fertility rates and such factors may also lead to contrasts in consumption behavior. Birth rate among the Hispanic population will ultimately produce an important shift in the Hispanic population as well as the overall U.S. population as the largest component of the Hispanic population will comprise itself of second-generation Hispanics (Suro & Passel, 2003). This generation will produce substantial differences in education, earnings,

English fluency, and attitudes that can have effects on consumer behavior. For this reason, as the group continues to grow in the United States, the data further establishes the need for research to provide information about the demographic, especially within the realm of consumer behavior.

Buying Power

Buying power is defined as “the total personal income of residents that is available, after taxes, for spending on virtually everything that they buy” (Humphreys, 2008). With such a large and continuously growing population, buying power is significantly important to apparel retailers. This consumer group has established itself in the United States, will continue to grow and thus provide a constant flow of consumers. As such a rapidly growing population, Hispanics cannot be ignored as potentially economically and financially powerful. In a study started in 1990 at the Selig Center for Economic Growth, Hispanic economic clout reached \$862 billion (Humphreys, 2007). According to Humphreys, from 1990 to 2006, their economic power had risen from \$212 billion to \$798 billion and estimated to grow to \$1.2 trillion in 2012 at a more than 450% growth from 1990 to 2012 compared to non-Hispanic buying power that is growing at a rate of 176% during the same time period. Hispanics controlled \$951 billion (8.9%) in spending power exceeding the 1990 value by 349% which surpassed the 141% increase in non-Hispanic buying power as well as the 151% increase of the buying power of all U.S. consumers (Humphreys, 2008). As of 2008, the median income of Hispanic households was \$37, 913 (U.S. Census Bureau, July 2010). Overall, in 2012, Hispanic buying power will account for 9.7% of the total US buying power. Of that buying power, \$862 billion will be in disposable income (Humphreys, 2007). The population will only continue to grow even more economically prosperous because of better employment opportunities to aid in the buying power increase,

consistent population growth, and young population with growing career opportunities (Humphreys, 2007).

Apparel Products

One important result from Humphrey's study conducted through the Selig Center for Economic Growth is that the differences in per capita income, wealth, demographics, and culture lead to differences in the spending habits of Hispanics as a group as compared to the average U.S. consumer yet they spend more on apparel (Humphreys, 2007 & 2008). In 2002, Hispanics spent \$15 billion, 10.2% of retailers' total sales on apparel products (Cartagena, 2005). Apparel product sales to Hispanics are projected to grow 6.7% per year from 2002 to 2012, doubling the annual rate for sales to the non-Hispanic population. According to the Association of Hispanic Advertising Agencies, the retail industry is currently "underdeveloped in the Hispanic market (Cartagena, 2005). Their buying power and allocation of money in the apparel industry reveals a need for the shopping and purchasing habits of the consumer group to be studied and understood. The more apparel retailers and the industry know about them, the higher the probability they can gain them as consumers. Without the industry knowledge or continued investigation, the apparel industry could lose billions to trillions of dollars from a consumer population whose income is largely spent on apparel goods. In addition, the industry will lose the opportunity to influence a large and financially powerful consumer group.

Female Hispanics

Companies and marketers have seen the importance in studying the female consumer. According to a February 2005 special report of BusinessWeek, although women earn less than men, they make more than 80% of the buying decisions in all homes (Gogoi, 2005). Their incomes have increased by 63% in the last three decades comparatively to the less than 1%

increase for men. Women are also expected to control \$1 trillion of the wealth in the United States, an estimated 60% of the country's wealth (Krotz, n.d.). With this level of power, it is imperative for researchers to learn more about the significance of the female consumer, especially in the case of the female Hispanic consumer. Female Hispanics, in particular, continue to be neglected by retailers. According to a June 2004 online publication of *Women's Wear Daily*, 12.3 million Hispanic women, 11% of the total female population in the US, spent \$6.3 billion on apparel from May 2003 to May 2004 (Seckler, 2004).

Environmental Responsibility

The debut and success of the documentary film, *An Inconvenient Truth*, depicting former United States vice president Al Gore's global warming education campaign, grossed forty-nine million dollars and became one of the highest grossing documentaries to date worldwide (Bender, Burns, David, & Guggenheim, 2006). The film provided many Americans a first-hand view and understanding of the effects humanity has had on the environment and catapulted environmental issues into the American limelight. However, the environmental movement has had its roots planted in U.S. and global history for longer than a decade.

Historically, concern for the environment can be traced back for centuries. The emergence of technological advances during the Industrial Revolution of the 17th through 19th centuries gave way to the introduction of the first government policies protecting the environment (American Meteorological Society, 2009). The use of fossil fuels increased public concerns about clean air and air pollution. The first attempt to control air pollution in the United States occurred in Chicago and Cincinnati in 1881 (American Meteorological Society, 2009). The Bureau of Mines, under the Department of the Interior, created the Office of Air Pollution to control smoke emissions but was closed due to inactivity. Smog incidents in Los Angeles and

Pennsylvania raised public awareness again in the late 1940s enacting the Air Pollution Control Act of 1955, which continues to be in effect in present day, despite revision and amendments (American Meteorological Society, 2009).

During the 1970s, a “period known as the Environmental Crisis,” the environmental movement became a mainstream concern (Barr, 2008, p. 3). The creation of Earth Day in 1970 resulted in an annual celebration in the United States on April 22nd, and world-wide by the United Nations on the March Equinox. It was originally intended as grassroots environmental teach-in demonstration founded by U.S. Senator Gaylord Nelson of Wisconsin and Congressman Paul McCloskey of California in 1969 (Lewis, 1985). The first Earth Day gave way to the mutual understanding of various environmental organizations and the common values they shared. In December 1970, the Environmental Protection Agency was initiated to create a “broad systems approach [that]...would give unique direction to our war on pollution” (Lewis, 1985). As the environmental movement evolved, scientists, politicians, and global community members learned that concern for the environment does not stem solely from combating pollution, as demonstrated by the Environmental Protection Agency’s mission. Said mission states the Environmental Protection Agency it is to combine environmental science, research, education, and assessment efforts to protect human health and the environment (United States Environmental Protection Agency, 2009).

The establishment of events like Earth Day and organizations such as the U.S. Environmental Protection Agency stem from social concerns about environmental issues that compel constituents to implore their politicians to create government policies enforcing the protection of the environment. In 1983, the Brundtland Commission, formally known as the World Commission on Environment and Development, was formed with the intention to:

“propose long-term environmental strategies for sustainable development to the year 2000 and beyond,” recommend ways for countries at different economic and social development to cooperate with each other to achieve “common and mutually supportive objectives which take account of the interrelationship between people, resources, environment, and development,” develop ways the international community can effectively deal with environmental concerns, and define perceptions of long-term environmental issues and efforts needed to successfully deal with the problems of protecting the environment (United Nations, 1983). The Brundtland Commission published the Brundtland Report in 1987 and characterized a definition of sustainability as the ability “to meet the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987, p. 19). In other words the premise of sustainability, and for humans to live sustainably, requires that the Earth’s resources be consumed at a pace in which they can be replenished. Thus, in order for this to occur, human sustainability must require the integration of economic, social, and environmental spheres.

In efforts to reach integration, the Brundtland Report gave way to the unprecedented 1992 Earth Summit in Rio de Janeiro in which 172 governments, 108 heads of state, and 2,400 representative of non-governmental organizations attended to address issues on: the “systematic scrutiny of patterns of production..., alternative sources of energy..., new reliance on public transportation..., and the growing scarcity of water” (United Nations, 1997). The message relayed from the Summit was meant as a transformation of attitudes and behaviors to bring about the change necessary that would alter international and national plans and policies to ensure all economic decisions took into full account all environmental impacts. The end result of the Summit was the adoption of “Agenda 21 a global plan of action to promote sustainable

development” (United Nations Documentation: Research Guide, 2009). Five years later, in 1997, world leaders met in Kyoto, Japan to finalize negotiations in accordance to reduce emissions of greenhouse gases (Guber, 2003,. The international environmental treaty intended to achieve a commitment to stabilize greenhouse gas concentrations in the atmosphere among thirty-seven industrialized countries and the European community (UNFCCC, 2009). It established legally binding commitments for the reduction of four greenhouse gases produced by industrialized nations as well as general commitments for all member countries. The Kyoto Protocol forced, and continues to regulate, companies to reorganize their production and manufacturing procedures in order to adhere to the commitments made by their governments, thus revolutionizing governmental and economic efforts to protect and restore the environment.

The historic timeline of environmentalism and the public policies created to further understand and educate on environmental issues influenced the development of research concerning environmentally responsibility. Within the fashion industry, studies have been conducted on multiple topics concerning environmentalism. Among those topics are: clothing disposal (Shim, 1995), fashion management (Swan, 2004), consumption (Butler & Francis, 1997; Kim & Damhorst, 1998; Hustvedt & Dickson, 2009; Hiller-Connell, 2010 & 2011); and the reuse and recycling of apparel (Domina & Koch, 1999; Bartl & Marini 2008). Although this does not encompass an unabridged list of the research that has immersed, it gives an idea of the areas of research within the fashion industry that have been affected by environmentalism.

Fashion Industry’s Environmental Impact

One of the most important, yet slow to adjust, proponents for the environmental movement is the fashion industry. Prior to the fifteen century, it took at least a hundred years for styles to change yet by the end of that same century, styles were changing every decade.

Research has shown that, in order for fashion change to occur, society must have three important factors occurring concurrently: “sufficient affluence for a reasonably large number of persons to participate in the fashion process, a class structure that is open enough to allow movement from one social class to another, and a means of communication of fashion information” (Tortora & Eubank, 2010, 8). Fashion evolved from the 18th century to eventually become a system of seasonality. The intent of the fashion industry, in order to maximize profit, is to develop new products for consumers at the expense of existing items making existing items obsolete (Waldman, 1993; Sproles, 1981). This process is known as planned obsolescence. Fast fashion is a form of planned obsolescence. Consumption of apparel products has evolved drastically from a utilitarian perspective to one of planned obsolescence. The establishment and success of fast fashion apparel chains such as Forever 21, H&M, Mango, and Zara are evidence of this evolution. Although spanning at least four centuries, the evolution into a fast fashion industry has created a culture of disposal that has led to environmental concerns and issues.

The fashion industry uses more water than any other agricultural industry in the United States alone, with at least 8000 chemicals used to turn raw materials into textiles, which includes 25% of the world’s pesticides used to grow non-organic cotton (NHPR, 2009). At 16% of the world’s insecticides, cotton production, primarily for the textile and apparel industry, requires more insecticides than any other single major crop in the world (Environmental Justice Foundation, 2007). Additionally, the U.S. Environmental Protection Agency (2009, November 17) considers many domestic textile manufacturing facilities to be hazardous waste generators. The Technical Textile Markets, a textile industry publication, stated the demand for man-made fibers such as petroleum derived polyester has nearly doubled in the last 15 years (NHPR, 2009). The “manufacture of polyester and other synthetic fibers is an energy-intensive process requiring

large amounts of crude oil in addition to emitting volatile organic compounds and solvents, particulate matter, acid gases and other production by-products into the air and water.”

Clothing Disposal

The manufacture and production of clothing is not the only element of the fashion industry negatively affecting the environment. During World War I, clothing was repaired, mended, or tailored to fit other family members, or recycled within the home. During the war, manufacturers reduced the varieties, sizes, and colors of their productions and even urged designers to create styles that would use less fabric and avoid needless decoration (Sasser, 2000). Unfortunately, by the mid-1920s, industrialization grew more during the 20th century affording increased means of production of all consumer goods and leading to a production and consumption increase of 10-15% in the middle of the war. It was reported in 1993 that approximately 8 million tons of waste materials buried in landfills in the United States are from post-consumer textiles (Shim, 1995). The United States Environmental Protection Agency (EPA) reported that Americans throw away more than 68 pounds of clothing and textiles per person per year (Claudio, 2007). In 2008, the U.S. EPA estimated that a total of 12.4 million tons of textiles were generated making up 5% of the total municipal solid waste generation (United States Environmental Protection Agency, 2009, Nov. 17).

Over four centuries of the fashion process has put our environment in a precarious position. From contamination of air and water to the accumulation of waste to global warming, each aspect of the fashion industry has a negative effect on the well-being of the environment. The textile recycling industry estimated removing 2.5 billion pounds of post-consumer textile waste from the overall waste generation (Council for Textile Recycling, 2008). The conscious effort equated to 10 pounds of post-consumer textile waste per person in the United States.

Although textile programs exist, 85% of the overall post-consumer textile waste ends up in landfills. Additionally, with a trend of “throwaway fashion” increasing and a growing market share by fast fashion retailers such as Forever 21 and H&M within the fashion industry, lower prices and increases in fashion purchase frequency are exponentially increasing disposal of apparel products at an astonishing rate (Birtwistle & Moore, 2006; Birtwistle & Moore, 2007). Fashion is a social process, and as such requires changes to the process and the mentality of individuals involved to make adjustments that would lead to ecologically minded alterations to the decision making involved.

Theoretical Framework

Studying consumer behavior involves the understanding of the social and psychological attributes that lead consumers to make their purchase and non-purchase behaviors. The consumer undergoes a sequence of mental information processing based on rational problem solving and decision making processes (Foxall & Goldsmith, 1994). Foxall and Goldsmith delineate eight points that portray the information process consumers undergo. Of the eight points, five are applied in the current study through various theoretical elements: receiving information from the consumer’s surroundings, interpreting this information according to their personal experience [e.g. opinions, personal characteristics, and social environment], searching for additional information to clarify the want/need, develop beliefs, attitudes, and intentions that determine consumption behavior, and acting upon their mental processes to make a purchase. The process invisibly drives consumers to make the decisions that affect their consumption patterns. But, the invisible force is driven by more involved and detail factors in the consumer’s subconscious.

Acculturation Theory

Culture's ecological role in human life has been described as the middle ground "between the physical environment and human activity" consisting of a "collection of specific objectives and values and a body of knowledge and beliefs" (Forde, 1949, p. 463). Culture serves as the mediator between humans and their physical environment under which "standards for deciding what is, standards for deciding what can be, standards for how one feels about it, and standards for deciding how to go about doing it" are created (Simpson, Gerard, Goodenough, & Inkeles, 1961, p. 522). It is concluded that without culture the human race could not fully comprehend its surroundings.

Understanding culture and its relation to individuals and groups is critical in understanding consumer behavior. Solomon and Rabolt (2004) state that "culture is the accumulation of shared meanings, rituals, norms, and traditions among members of an organization or society" (p. 37). Abstract ideas, such as symbols, values and ethics, and tangible objects and services, all produced and/or valued by a society, are included in the concept of culture. Each cultural group varies from the other because of four distinct dimensions of culture: power distance, uncertainty avoidance, masculinity/femininity, and individualism (Solomon & Rabolt, 2004). Power distance refers to the formation of interpersonal relationships when differences in power or authority are present. How people feel about and react to ambiguous situations, as well as the beliefs and institutions that help them deal with situations, establish their level of uncertainty avoidance. The dimension of masculinity and femininity refers to the delineation of gender roles. Individualism refers to the extent to which a culture places emphasis on the importance of the person versus the group. An individualist culture attaches more importance to the welfare, growth, and achievement of the individual. Collectivist cultures

emphasize the importance of the group as a whole. All of this, in turn, cultivates and dictates the action and behavior individuals are expected to demonstrate affecting all aspects of their life including their consumption. Empirical evidence has been found supporting the theory that culture is a fundamental determinant of consumer behavior (Henry, 1976). Culture should be considered as a factor and understood when discussing and studying consumer behavior.

In studying the Hispanic consumer in the United States, it is vitally important to understand the paradox between the Hispanic and United States cultures the consumers live in. In a study by Hofstede (1980) on the four dimensions of culture, which included numerous Latin American countries, the traditional cultural orientation of Hispanics ranked low on individualism and high on: power distance, uncertainty avoidance and the set role and strength of the masculine role within the culture. It classifies traditional Hispanic culture as collectivist where the members' concern is placed on the benefit of and commitment to the group over self-interest. This indicates that the sources for decisions on action and behavior are based on the authority of referent groups such as the family. In these countries, consumption behavior depends on the choices made by the family (Hofstede, 1980). For example, if a particular brand of toothpaste is purchased for the household, the same brand will be consumed by all members of the family regardless of what generation they belong to. Even when an individual moves out of the family home, it is more than likely that toothpaste brand will continue to be purchased. Hofstede further explains that traditional United States culture referred to by some researchers as Anglo culture, places more importance and emphasis on the individual and is considered an individualist culture group. Individuals in the cultural group depend on themselves as their referent group and hold weak ties with other consumers indicating that their consumption behavior reflects personal values.

As a group, Hispanics in the United States hold ties not only to the traditional Hispanic culture but also to the traditional United States (Anglo) culture. For the current study, it is important to understand both because living in the United States adds another dimension to the culture of Hispanics living in the country. Acculturation is the process by which a single individual or a whole group modifies to a newer, more dominant culture and ranges from rejection of the dominant culture to full assimilation (Phinney, 2003). For Hispanics born in the United States, regular contact and exposure to the traditional (Anglo) culture of the country, a culture very different and distinct from that of the original Latin American country of their ancestry, often results in an alteration to their ethnic identity. Acculturation has become a multi-dimensional integration process that involves language, socio-cultural factors such as country of origin, age, perceived ethnicity, ethnicity of persons with whom the Hispanic individual socializes, preference of language for media and entertainment, socio-economic status, education level, religious beliefs, values, and family traditions while also maintaining values, beliefs, and practices unique to Hispanic culture (Siatkowski, 2007). All factors and the process itself create the boundaries by which ethnic identity is constructed. Boundaries aid in determining membership to an ethnic group and designating the categorization by which individuals can identify themselves at a given time and place (Nagel, 1994). Studies have shown that the maintenance or increase of ethnic identification although ethnic boundaries may weaken over time, even with the introduction of a more dominant culture, as in the case of Hispanics in the United States. Although considered a paradox, it was defined by Herbert Gans as another step in acculturation known as “symbolic ethnicity” wherein an individual has “a nostalgic allegiance to the culture of the immigrant generation” and pride in tradition without incorporating it into their

everyday behavior (p. 1). In order for the step to occur, individuals and groups must construct the boundaries and elements of what represents their ethnicity.

Ethnic Identification

For categorization purposes, the U.S. Census Bureau viewed ethnicity as a biological characteristic for members of the population. Over time, ethnic identity evolved into a process of internal and external opinions and processes involving self-identification and societal designations of ethnicity (Nagel, 1994). Plainly stated, ethnic identification became a mixture of what each individual thought their ethnicity was and what outsiders thought their ethnicity is supposed to represent. Therefore, construction of ethnic boundaries is based on biology and the establishment of perceived internal and external ethnic values. In turn, the values create culture. Immigration in the United States in the early 1900s required automatic assimilation (Hermann, 1997). Anyone who did not do so was seen as a threat to American culture. Americanization efforts, conducted as a religious campaign, depicted economic and social success as only attainable by becoming American. It led immigrants, mainly European at the time, to assimilate quickly. By the end of the century, this process had changed dramatically wherein immigrants and their offspring have maintained their cultural identities.

Understanding cultural differences is vital in comprehending and capitalizing on differences that exist within the nation. As the national demographic shifts, businesses need to know how to reach and meet the needs of consumers. Marketers must be aware of tactics and strategies that will reach and gain response from new consumer groups in order to help businesses reach said consumers. Consumer acculturation has been used to define a subset of acculturation and socialization wherein behaviors, attitudes, and values of a culture differ from the culture of origin are learned (Lee, 1988). Within acculturation studies, three trends have

appeared in research that defines acculturation and are used understanding consumption: the concepts of ethnic identity, strength of ethnic affiliation, and situational ethnicity (Ogden, Ogden, & Schau, 2004).

The first trend, ethnic identification, has endured issues of misclassification. Due to this, researchers have adopted the method of self-identification to measure ethnicity or ethnic identification. The second trend, strength of ethnic identification, is used to operationalize the degree of ethnic affiliation of an individual. Depending on a researcher's preference, this can be measured as dichotomous or multichotomous (continuous measure) construct. Lastly, situational ethnicity or felt ethnicity, is founded in the idea that the acculturation process varies depending on the context the behavior occurs (Ogden, Ogden, & Schau, 2004). As people take on different roles in their daily lives, roles bring about different levels of acculturation or ethnicity (O'Guinn & Faber, 1985). As a result, consumption behavior can reveal various degrees of situational ethnicity depending on the meanings associated with the roles and what is consumed within them.

Age

Research has shown a correlation between the acculturation process and age. A 1980 psychosocial model of acculturation by Szapocznik and Kurtine demonstrates individual acculturation is a function of gender and age through a linear function of the amount of time a person is exposed to a host culture and the rate at which the acculturation process takes place. Within the model, the researchers also found two differentiated aspects of the acculturation process: the process as a behavioral dimension of functioning and the internalized process of value orientation. Although the model does not explain how or why, it suggests that younger generations acculturate faster than adults. In particular, a 1997 study by Cuellar, Nyberg, and

Maldonado found that acculturation is highly correlated with generational status. The later the generation, the more acculturated individuals are as compared to immigrants (considered first-generation) or second-generation individuals. A cultural orientation study, featuring three generations of Hispanic adolescents, conducted in 2000 by Perez and Padilla found most Hispanic adolescents, within a few generations, will exhibit predominant American culture orientation while maintaining traces of their traditional Hispanic cultural orientation. Their study demonstrated the important role peer groups play in the influence of American cultural orientation. At the adolescent stage, individuals learn behaviors, such as acceptable forms of American dress and mannerisms, as well as acquiring knowledge of popular culture from their peers.

Hispanics

Szapocznik and Kurtine expanded their 1980 acculturation model to explain the acculturation process of Hispanics as well. They found that members of the Hispanic culture need to have the ability to participate not only in their traditional culture but also that of their host culture thus conceptualizing acculturation as a multidimensional process. It is found that the most important variable influencing an individual's accommodation to the host culture in the model is the amount of time of exposure. The most important variable influencing retention of characteristics of the Hispanic culture is degree and availability of community support for the culture of origin.

Acculturation and Consumer Behavior

As previously mentioned, a study conducted by Hofstede indicated consumption differences between collectivist and individualist cultures. Hispanics within the United States fall within the scope of influence from both cultures. This can be understood best through the

progressive learning model wherein it is assumed people learn from a new culture gradually as their contact with said new culture increases (Wallendorf & Reilly, 1983). The more Hispanics learn about U.S. culture, it can be expected their consumption behavior includes mixed practices from both Hispanic and U.S. cultures. It has been found that ethnic identity is an important factor to analyze with respect to consumption factors of specific ethnic groups (Hirschman, 1981). The acculturation process not only includes how an individual purchases and consumes goods and/or services but also how the individual learns to attribute the meanings to the self and others as consumers (Penaloza, 1989). This learning process involves the acquisition of consumption skills, knowledge, and behaviors. Ultimately, acculturation relates to consumer behavior in that those consumption skills, knowledge, and behaviors are acquired through a learning process which is directly affected by the interactions of two or more cultures. Understanding Hispanic identity and their acculturation could aid in closing the knowledge gap in comprehending this group's consumer behavior and thus lends to the idea that Hispanics should be considered as a different market group within the mainstream U.S. consumer market.

Measuring Acculturation

In most acculturation studies involving Hispanics, language has been viewed as the most important measures of acculturation. The research intended in the current study will involve, for the most part, individuals who were born in the United States and whose primary language is English. Some studies measuring the degree of acculturation, found cultural awareness and ethnic loyalty as two accurate factors (Padilla, 1980). Padilla (1980) explains that cultural awareness entails cultural heritage of the participant, their spouse, and their parents, language preferences and use, cultural identification and preference and social behavior orientation. Ethnic loyalty involves cultural pride and affiliation, perceived discrimination, and social

behavior orientation (Padilla, 1980). Many shortcomings of acculturation measurements lies in the fact that acculturation is considered a unidimensional process wherein it is thought that individuals move from one cultural domain to another (Marin & Gamba, 1996). In order to accurately measure acculturation, bidirectional changes behaviors between cultural domains, in the case of this study Hispanic must be measured.

Theory of Planned Behavior

It is assumed intentions capture factors influencing a behavior and indicate the willingness or amount of effort individuals would exert to perform a behavior (Ajzen, 1991). Fishbein and Ajzen, in an effort to study the discrepancies between attitude and behavior, developed the theory of reasoned action in 1975. The theory suggested that an individual's behavioral intention depended on their attitude toward the behavior and other predictions of behavior indicated by subjective norms. Attitude is defined as the sum of belief about a behavior weighted by the evaluations of these beliefs; subjective norms are an individual's beliefs about how others will view the behavior (Miller, 2005). In 1980, Ajzen & Fishbein further developed the theory by separating behavioral intention from actual behavior. The attitude toward the behavior and the subjective norms together lead to behavioral intention which in turn leads to actual behavior. The theory established that behavioral intention, when related to the performance of a particular behavior, is the precursor to the actual behavior. If an individual saw a behavior as a positive attitude and they believe people with a social influence on them see the behavior as positive, it would result in a higher intent to perform that behavior and therefore more likely to perform the behavior. The intention to perform a behavior is thus seen as a function of an individual's attitude towards that performance and their subjective norms. In a study investigating the variables in the Fishbein-Ajzen theory of reasoned action model,

Stutzman and Green (1982) established factual knowledge as a necessary precondition for attitude thus indicating a necessity to understand an individual's factual knowledge on attitude.

In 1985, Ajzen further developed his theory into the theory of planned behavior through which it was established the inclusion of influences on behavior that are beyond an individual's control. In relation to environmentally responsible behavior, uncontrollable influences are reflected in the inconsistencies between pro-environmental orientation and contradicting behavior. According to the theory, as reflected in Figure 1, attitude toward a behavior, subjective norms, and perceived behavioral control all affect each other and an individual's intention to perform a behavior, therefore leading the individual to actually perform the behavior (Ajzen, 1991). Perceived behavioral control is the individual's perception of their ability to perform the behavior. According to this theory, the more favorable the attitude and subjective norm and the greater perceived behavioral control, the higher the individual's intent to perform the behavior. The theory of planned behavior thus gives way to the idea that an individual's attitudes and their knowledge can affect their behavioral intention and thus influence, if not predict, their actual behavior. Research has shown support for the use of theory of planned behavior in predicting intention and behavior (Armitage & Conner, 2001). The theory has been used as a predictive model for explaining human behavior since its development. Previous research has indicated considerable support for the use of the theory of planned behavior in relation to the examination of consumers' intent to purchase environmentally responsible products and environmental psychology (Kalafatis, Pollard, East, & Tsogas, 1999; Bamberg, 2003; Van Birgelen, Semeijn, & Keicher, 2009).

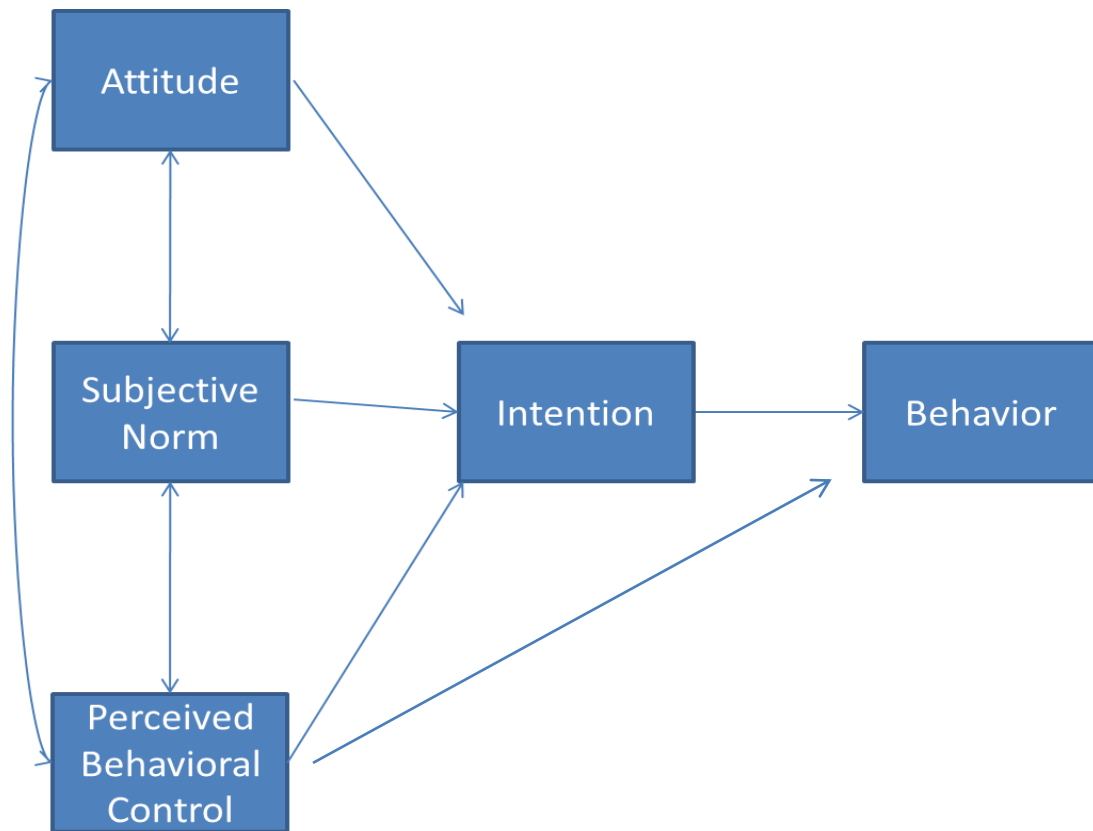


Figure 1: Theory of Planned Behavior

From original by Icek Ajzen (1991)

Theory Integration: Theory of Planned Behavior and Acculturation

The theory of planned behavior (Ajzen, 1991) is based on the implications that behavioral intent is predicted by attitude, subjective norms, and perceived behavioral control. Ultimately, the theory is meant to establish behavioral intent as a predictor for actual behavior. Various studies have tried to improve or extend this theory model by hypothesizing and adding other external variables and predictors to predict behavioral intention and actual behavior (Conner & Armitage, 1998; Staats, 2003). Studies have posed identity-related and group-related as some of the external variables suggested to make an impact worth studying (Carrus, Nenci, & Caddeo, 2008). These external variables have been suggested because of research indicating self-identity as an important variable influencing behavior (Epstein, 1973; Markus, 1980; Rosenberg, 1981;

Sparks & Shepherd, 1992; Turner, 1982). Figure 2 depicts the integration of an external variable with the theory of planned behavior. Playing a major role within behavior is culture. Studies have shown acculturation has contributed in predicting purchase intention through the use of the theory of planned behavior framework (Shen, Dickson, Lennon, Montalto, & Zhang, 2003). The reason for this is because acculturation reflects an individual's values, attitudes, and behaviors (Berry, 1990). For this reason it is important to study acculturation as an external variable affecting behavioral intention within the theory of planned behavior.

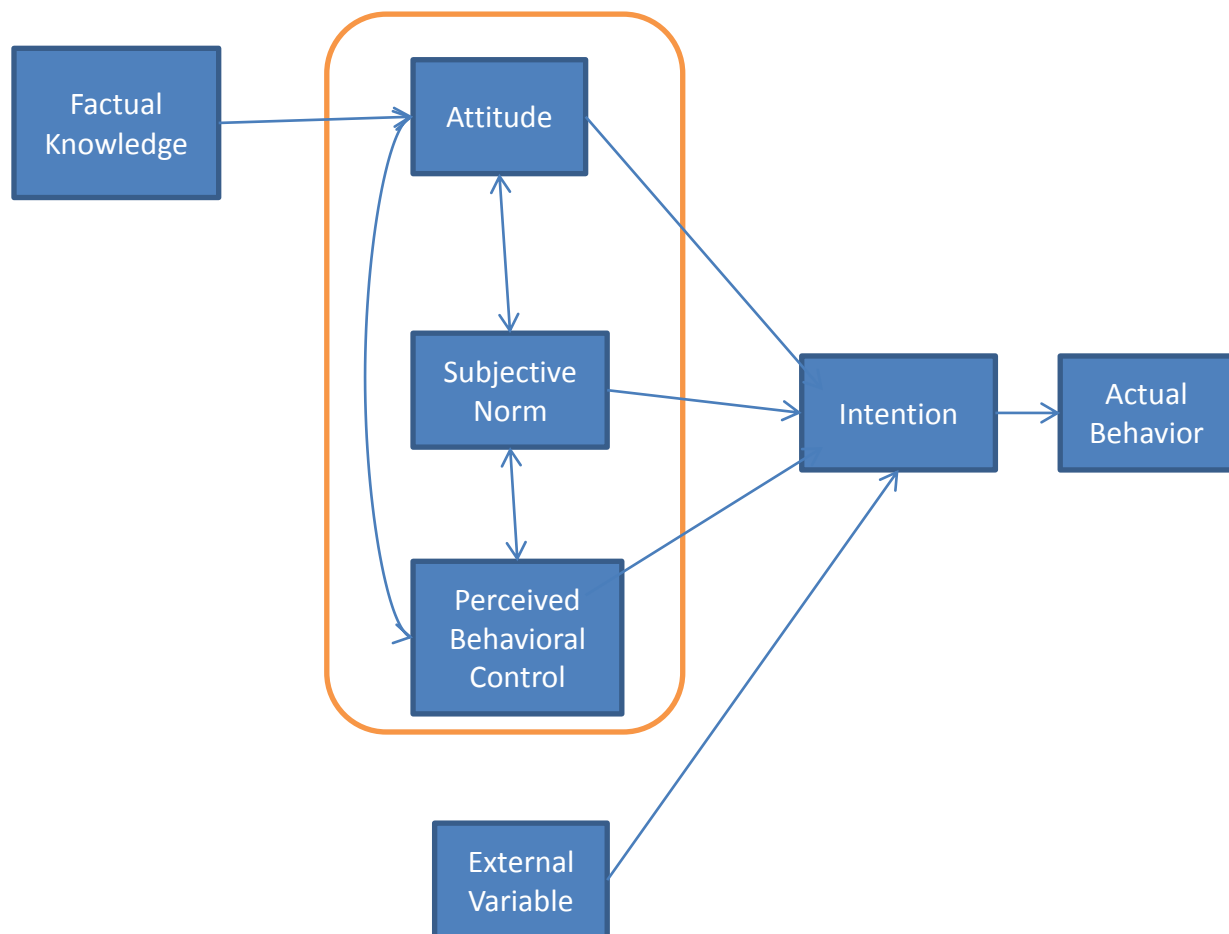


Figure 2: Conceptual Framework Model
Adapted from original by Icek Ajzen (1991)

Hypotheses

The literature review provided a foundation to establish the impact the Hispanic community has on the U.S. market through their population growth and purchasing power. Specifically, the research shows the importance of female, Hispanics as an influential target market to study within this demographic group. Research also indicated the importance of environmental responsibility within the apparel industry. Using the theory of planned behavior and acculturation as a theoretical framework, hypotheses were developed for this study to seek out relationships between female, Hispanic consumers and the consumption of environmentally responsible apparel products. The hypotheses pertained specifically to the female, Hispanic consumer group.

Hypothesis 1

As the review of literature above indicated the theory of reasoned action led to the development of the theory of planned behavior. Stutzman & Green (1982), when investigating the variables in the Fishbein-Ajzen theory of reasoned behavior model, established factual knowledge as precondition for any attitude. Additionally, Kaiser, Wolfing, & Fuhrer (1999), established environmental attitude as a predictor of ecological behavior. A study by Fraj-Andres & Martinez-Salinas (2007) further supports the significant effect environmental attitudes have on ecological behavior as well as revealing that the level of environmental knowledge moderates this relationship. Based on this research, it is hypothesized that:

H1 – Factual environmental knowledge influences attitude.

Hypothesis 2

The theory of planned behavior creates the theoretical foundation supporting the use of attitude, subjective norms, and perceived behavioral control as predictors of behavioral intention. The literature in this chapter indicated considerable support for the use of the theory of planned

behavior in relation to the examination of consumers' intent to purchase environmentally responsible products and environmental psychology.

Previous studies using the theory of planned behavior have indicated environmental attitude is a predictor of ecological behavior (Kaiser, Wolfing, & Fuhrer, 1999) and have found positive relationships between environmental attitude and ecological behavior (Weigel, Vernon, Tognacci, 1974; Langeheine & Lehmann, 1986; Hines, Hungerford, & Tomera, 1986/87; Lynne & Rola, 1988; Axelrod & Lehman, 1993; Smith, Haugtvedt, & Petty, 1994). Also in agreement with the theory, studies have shown subjective norms regarding the environment have been found to affect the intent to behavior ecologically (Olsen, 1981; Kantola, Syme, & Nesdale, 1983; Midden & Ritsema, 1983). Additionally, studies have also successfully applied the perceived behavioral control variable from the theory of planned behavior to the study of environmental and ecological behavioral intention (Kaiser & Gutscher, 2003; Mannetti, Pierro, & Livi, 2004). This research lead to the hypothesis that:

H2 – Behavioral intention is influenced by:

- a. Environmental attitude,
- b. Subjective norms toward environmental responsibility, and
- c. Perceived behavioral control of environmentally responsible behavior.

Hypothesis 3

Research has indicated the importance of studying cultural influence on behavior. Specifically, in relation to environmental behavior, studies have indicated culture's impact on consumer behavior. A study by Ahmed, De Camprieux, & Hope (1981) indicated evidence that environmentally friendly behavior varies across different cultures. Studies have been conducted to understand pro-environmental consumer behavior as well as purchase behavior in relation to

the interaction between culture and the knowledge-attitude-behavior relationship as well as the cross-cultural disparities that have been found, (Arbuthnot & Lingg, 1975; Chan, 2001; Laroche, Toffoli, Kim, & Muller, 1996; Laroche, Tomiuk, Bergeron, & Barbaro-Forleo., 2002). With the growth and purchase power of the Hispanic population in the United States, as reviewed in this chapter it was hypothesized that:

H3 – Acculturation levels of female, Hispanics influences behavioral intention.

CHAPTER 3

METHOD

This chapter describes the methods applied in the current study. It is arranged as follows: Research Design, Participant Selection, Data Collection Strategy, Instrument, and Statistical Analysis. The purpose of the study was to investigate the intention, through knowledge and attitudes, and acculturation levels of female, Hispanic consumers and measure the possible relationship of the three factors toward their consumption of environmentally responsible apparel products. Specifically, the intent of the research was to develop and test an instrument measuring the consumer groups': environmental knowledge, environmental apparel knowledge, attitude toward environmental responsibility, level of acculturation, and intentions to purchase environmentally responsible apparel products. A survey method was employed to collect data in this empirical quantitative study using a non-probability convenience sampling of university students.

Research Design

The study was intended to be an empirical, quantitative study sampling from a university setting. As a quantitative study, a survey method was used to seek out information on female, Hispanics. The instrument developed for the study is attached hereto as Appendix B.

Institutional Review Board application approval is attached as Appendix A. Participants were asked to complete an e-mail questionnaire quantifying the following independent variables:

The independent variables for the research are:

1. Factual Knowledge, defined by
 - a. Environmental knowledge, and

- b. Knowledge of environmentally responsible apparel products;
2. Environmental attitude, defined by environmental responsibility;
3. Subjective norms toward environmental behavior, defined by responsibility feelings;
4. Perceived control of to purchase environmentally responsible apparel products; and
5. Acculturation levels of female, Hispanics.

The dependent variables are:

1. Environmental attitude defined by environmental responsibility; and
2. Behavioral intention toward purchasing environmentally responsible apparel products.

Terminology of the independent and dependent variables is further explained later in this chapter. Results were analyzed to seek possible relationships between the independent variables and attitudes of female, Hispanic consumers pertaining to environmental responsibility and their behavioral intention to purchase of environmentally responsible apparel products.

Participant Selection

The non-probability convenience sample for the research study was derived from the available student population at a university in the southeast region of the United States. The institution is a four-year public state university with a total enrolled population of 28, 771 students (fall 2010 Enrollment, 2010). Of that population, the self-reported possible total Hispanic student population of said institution is 898 students of which 548 are Hispanic females. Therefore, the sample size for the study is adequate.

University personnel in the registrar's office were contacted to retrieve a random sampling of the student population. The e-mail addresses of all female, Hispanic students at the university were selected.

Data Collection Strategy: Online Survey Method

Research demonstrates many positive advantages in using online survey methods for data collection. For example, Evans and Mathur (2005) listed the following sixteen major strengths of online surveys: global reach, business-to-business and business-to-consumer appeal, flexibility, speed and timeliness, technological innovations, convenience, ease of data entry and analysis, question diversity, low administration cost, ease of follow-up, controlled sampling, large sample easy to obtain, control of answer order, required completion of answers, go to capabilities, and knowledge of respondent vs. non-respondent characteristics (p. 197). Duffy, Smith, Terhanian, and Bremer (2005) noted speed of response, lower cost, avoiding interviewer effects on responses, and convenience as advantages of online surveys.

Within the Evans and Mathur (2005) study, nine attributes were pinpointed as potential weaknesses: perception as junk mail, skewed attributes of Internet population, questions about sample selection and implementation, respondent lack of online experience/expertise, technological variations, unclear answering instructions, impersonal, privacy issues, and low response rate. Duffy, Smith, Terhanian, & Bremer (2005) list mode effects and sampling issues such as selection error as disadvantages.

There are two forms of online survey methods: e-mail surveys and Web based surveys. An e-mail survey consists of a questionnaire sent to participants as a text document included within or attached to an e-mail message (Van Selm & Jankowski, 2006). Participants have multiple options in responding. If the questionnaire is sent within the body of an e-mail message, participants use the 'reply' function, insert their responses within the text of the e-mail, and return it to the researcher(s). A questionnaire attached to the e-mail message consists of a document created via a word processing or spreadsheet software. The method requires

participants to download the document, save it after inputting their responses, and reattaching it to an e-mail addressed to the researcher(s). Web-based surveys are created using software or an online survey service (Wright, 2005). A link is sent to participants via an e-mail message through which they can access the questionnaire (Van Selm & Jankowski, 2006). The e-mail survey encounters many disadvantages such as formatting and incompatible software that risk decreased responses but can be overcome by the use of Web-based questionnaires (Van Selm & Jankowski, 2006). For this reason, a Web-based survey method was used for the dissemination of the instrument created for the study.

Collection Procedure

The survey was constructed using traditional paper-and-pencil format and was administered upon approval from the Institutional Review Board (IRB) of the four-year public university. Please see IRB approval attached as Appendix A. The survey was adapted into a Web-based survey using Qualtrics™ survey software.

Due to the university e-mailing policy, a broadcast e-mail could not be sent to the entire student population. Therefore, appropriate university measures were taken to create a listserv for each population group retrieved from the registrar's office (i.e. female, Hispanic students and female students). The researcher was responsible for sending an e-mail notification of the survey to the selected student population. Participants received an introductory letter via e-mail explaining the purpose of the study, the investigator's contact information and inviting individuals to participate. The e-mail included a hyperlink to the Web based survey. The introductory letter is attached as Appendix B. Due to the electronic nature of the survey, a paper consent form was not used. To overcome the issue, the introductory letter stated individuals would grant their consent to participate by clicking on the hyperlink in the e-mail. The data

collection was conducted over a fifteen day period. The first reminder e-mail was sent to the sample population 7 days after the introductory e-mail. A second reminder was sent 7 days after the first reminder.

Incentive

Because of a low response rate during the first seven days, an incentive was added. The first survey dissemination was thrown out to avoid bias and reliability. The e-mail addresses associated with those initial surveys were removed from the overall participant pool. Another initial letter inviting participants to take the survey was sent with an indication of the incentive. A reminder letter was sent 7 days after the initial invitation.

Survey Instrument

Once converted to web-based format, the instrument was formatted into an e-mail survey and distributed to the sample populations. The survey consists of a total of 89 questions. Of the total questions, all participants answered 86 questions with 4 additional demographic questions. The order of question topics is as follows: environmental knowledge, knowledge of environmentally responsible apparel products, environmental responsibility, responsibility feelings (subjective norms), perceived control to purchase environmentally responsible apparel products, behavioral intention toward purchasing environmentally responsible apparel products, and acculturation. The latter portion of the survey included 4 questions on demographic information. Appendix C reflects the survey instrument. Likert-type scales were used to obtain information from the survey participants. The scales are discussed in detail within the variable operationalization.

Variable Operationalization

Operationalization and validity of social research can only occur when the abstract constructs of a study are converted into tangible, solid procedures that can be observed, documented, and replicated (Crano & Brewer, 2002). A construct, abstract theory or concept, is identified by conceptual definition. The construct or concept only becomes scientifically researchable when the operational definition is established to redefine the abstract theory or concept through observable, measurable, or manipulated empirical terms. The validity of a study is enhanced when the definition and identification of constructs and conceptual and operational definitions are established (Crano & Brewer, 2002). Table 1 and Table 2 describes the independent and dependent variables respectively, constructs, conceptual definition, operational definitions, and the scales used to measure the constructs used in the current research study.

Independent Variables

The independent variables for the study were: environmental knowledge, knowledge of environmentally responsible apparel products, environmental responsibility, subjective norms toward environmental behavior, perceived control to purchase environmentally apparel products, and acculturation. Each individual variable and the scales used to measure them are further explained in the chapter and are categorized in Table 1.

Table 1: Independent Variable Operationalization

Construct	Conceptual Definition	Operational Definition	Scale
Factual Environmental Knowledge	What an individual knows about environment and environmentally responsible apparel	Level of environmental knowledge And Level of knowledge of environmentally responsible apparel	Kaiser, Ranney, Hartig, & Bowler (1999): Ecological behavior, environmental attitude, and feelings of responsibility for the environment Kim & Damhorst (1998): Environmental concern and

		products	apparel consumption
Environmental Attitude	How an individual acts toward the environment	Level of environmental responsibility	Dunlap, Van Liere, Mertig, & Jones (2000): New Ecological Paradigm
Subjective norms toward environmental responsibility	Perceived responsibility an individual feels to engage in environmentally responsible behavior	Level of responsibility feelings	Kaiser, Ranney, Hartig, & Bowler (1999): Ecological behavior, environmental attitude, and feelings of responsibility for the environment
Perceived behavioral control of environmental behavior	An individual's perception of their ability to perform a behavior	Level of perceived control to purchase environmentally responsible apparel products	Kaiser, Ranney, Hartig, & Bowler (1999): Ecological behavior, environmental attitude, and feelings of responsibility for the environment
Acculturation	How an individual associated themselves between the Hispanic culture and the Anglo culture of the United States	Level of Hispanic acculturation	Marin & Gamba, (1996): Bidimensional Acculturation Scale for Hispanics (BAS)

Factual Knowledge

Factual knowledge was defined by two variables within this study: environmental knowledge and knowledge of environmentally responsible apparel products. Information on both these variables and the scales used to measure them is found below.

Environmental Knowledge

In 1999 study, Kaiser, Ranney, Hartig, and Bowler established that factual knowledge of the environment can be seen as a precondition of attitude. Additionally, two types of environmental attitudes to predict ecological behavior were used: attitude toward the environment and attitudes toward ecological behavior. In the study, they developed a 10-item scale to measure environmental knowledge. This scale has been tested and used by various research studies (Hartig, Kaiser, & Bowler, 2001). For this current study only the environmental

knowledge items are used to establish a precondition for the environmental attitude variable. The response format used is a 5-point Likert scale ranging from “strongly agree” to “strongly disagree”. Only 1 item in the scale will need to be recoded.

Knowledge of Environmentally Responsible Apparel Products

Kim and Damhorst (1998) developed an 11-item product knowledge scale to measure an individual’s level of knowledge about the impact apparel products have on the environment. The original study used a 7 point Likert-type scale measure ranging from “agreed” to “disagreed” and originally yielded a Cronbach’s alpha of 0.60. Of the 11 items, 7 are true items and 4 are false. Corresponding agreement and disagreement responses to the respective items will indicate an individual’s level of awareness of apparel products as related to environmental facts. For this study, the scale was reduced to a 5 point Likert scale for consistency with the other scales used, and defined as knowledge of environmentally responsible apparel products (ERAP).

Environmental Responsibility

Environmental attitude is operationalized as a multi-dimensional variable known as environmental responsibility. The level of ecological concern is used as the measurement of environmental responsibility for the study. In 1978, Dunlap and Van Liere developed the New Environmental Paradigm (NEP) scale to measure the overall relationship between humans and the environment. The NEP came to be widely used to investigate pro-environmental orientation. The NEP has been used in multiple research studies and with diverse populations to measure environmental attitude (Scott & Willits, 1994; Corral-Verdugo, Carrus, Bonnes, Moser, & Sinhal, 2008; Dunlap, 2008). In 2000, Dunlap, Van Liere, Metrig, and Jones redesigned the scale to investigate the 5 hypothesized areas of ecological worldview: reality of limits to growth, anti-anthropocentrism, frailty of nature’s balance, rejection of exemptionalism, and the possibility of

an eco-crisis. The redesigned measurement scale was named the New Ecological Paradigm Scale and includes a 15-item using a 5 point Likert scale ranging from “strongly agrees” to “strongly disagree”. This variable is the only variable used once as a dependent and independent variable. As an independent variable, it is used to indicate if attitude can be a predictor of behavioral intention.

Subjective Norms: Responsibility Feelings

Kaiser, Ranney, Hartig, and Bowler (1999) developed a 5-item scale to measure subjective norms toward environmentalism known as responsibility feelings. For this study, subjective norms were defined as responsibility feelings. The response format used is a 5-point Likert scale ranging from “strongly agree” to “strongly disagree”. Only 2 items in the scale required recoding. The original study used a principal-factor analysis to analyze responses.

Perceived Control to Purchase Environmentally Responsible Apparel Products

The 1998 Kim and Damhorst study also developed an 8-item environmental apparel consumption scale to measure an individual’s frequency in purchasing environmentally responsible apparel products. To measure perceived control, the questions were reworded to reflect the individual’s perceived control to purchase environmentally responsible apparel products. The original study used a measure used a 5 point Likert-type scale and originally yielded a Cronbach’s alpha of 0.80. Corresponding agreement and disagreement responses to the respective items indicate an individual’s perception towards their ability to purchase environmentally responsible apparel products.

Acculturation

Level of acculturation is one construct that is used often to investigate differences in ethnic consumer behavior (Chattaraman, Rudd, & Lennon, 2009). One-dimensional models of

acculturation fail to identify individuals who relate with both cultures in the acculturation process and for this reason, researchers have argued against these models (Chattaraman et al., 2009; Laroche, Kim, & Tomiuk, 1998). For this reason only one bi-dimensional measure of acculturation was used in the study. The acculturation scale used in the study is the 1996 Bidimensional Acculturation Scale (BAS) for Hispanics by Marin and Gamba. The scale provides the option for measuring the Hispanic and non-Hispanic cultural domains of an individual to obtain a bi-dimensional measure. Each domain is measured by a 12-item scale and is based on three language-related areas: language use, linguistic proficiency, and electronic media. The English version of the scale was used. Questions pertaining to the Hispanic domain were items 4-6, 13-18, and 22-24, while questions concerning the non-Hispanic domain are items 1-3, 7-12, 19-21. The original study used a 4 point response format and averaged the answers for each cultural domain for each eligible participant resulting in 2 scores and valued a score of 2.5 or higher in both domains to be interpreted as bicultural. The current study adapted the scale into a 5-point Likert scale. As a 4-point scale, participants in the study wherein the BAS scale was created could only respond with a positive or negative answer. According to Cabassa (2003), expanding the rating scale to a 5-point scale to include a larger range of options can correct a skew in distribution that occurred during the original study for which the BAS was created. The survey was pretested with an undergraduate class to insure that the survey format, design, and wording were clear and user friendly. Based on participant comments, modifications were made.

Dependent Variables

The dependent variables for the study are: environmental attitude (defined as environmental responsibility), and behavioral intention to purchase environmentally responsible apparel products. Table 2 depicts the operationalization of the dependent variables.

Table 2: Dependent Variable Operationalization

Construct	Conceptual Definition	Operational Definition	Source
Environmental Attitude	How an individual acts toward the environment	Level of environmental responsibility	Dunlap, Van Liere, Mertig, & Jones (2000): New Ecological Paradigm
Behavioral Intention	How ready an individual is to purchase ERAP	Intent to consume environmentally responsible apparel products	Kaiser, Ranney, Hartig, & Bowler (1999): Ecological Behavior Intention

Environmental Responsibility

Although environmental attitude, defined as environmental responsibility, was operationalized above as an independent variable, it was also used as a dependent variable. In this case, it is used as a dependent variable to indicate if factual knowledge can be used as a predictor for environmental attitude before it can be considered as an independent variable.

Behavioral Intention

The 1999 Kaiser, Wolfing, and Fuhrer study discussed in the environmental knowledge and subjective norms section of independent variable for this study established a scale to predict environmental behavior intent. The 11-item ecological behavior intention scale of their survey is used to directly measure the dependent variable of environmental behavior intention.

Re-establishing the Variable Terms

The use of various scales with varying terms can lead to confusing terminology. For this study, the independent and dependent variables are re-established for consistency and clarity.

The independent variables for this research were:

1. Factual knowledge as defined by
 - a. Environmental knowledge, and
 - b. Knowledge of environmentally responsible apparel products (ERAP);

2. Environmental responsibility;
3. Responsibility feelings;
4. Perceived control to purchase environmentally responsible apparel products; and
5. Acculturation.

The dependent variables for this research were:

1. Environmental responsibility; and
2. Behavioral intention to purchase ERAP

In clarifying these terms, the terminology of the hypotheses was also redefined. Therefore, the hypotheses were:

H1a – Environmental knowledge influences attitude.

H1b – Knowledge of ERAP influences attitude.

H2 – Behavioral intention to purchase ERAP is influenced by:

- a. Environmental responsibility,
- b. Responsibility feelings, and
- c. Perceived control to purchase environmentally responsible apparel products.

H3 – Acculturation levels of female, Hispanics influences behavioral intention to purchase ERAP.

Figure 3 depicts the hypothesized conceptual model for the variables and hypotheses tested in this study.

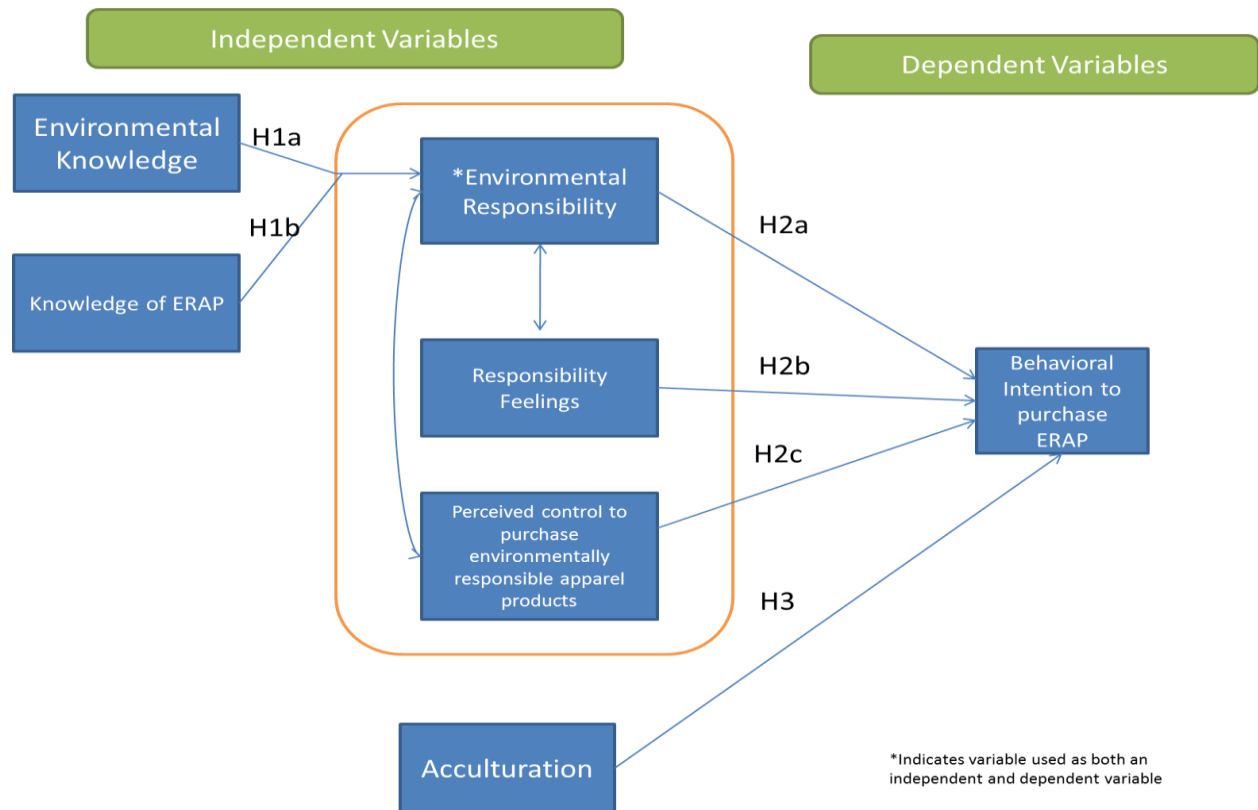


Figure 3: Hypothesized Conceptual Model with Variables
(Adapted from Ajzen 1991)

Statistical Analysis

Data obtained in this study was entered in the Statistic Package for Social Sciences (SPSS) for statistical analysis. Descriptive analysis was run on the demographic data obtained. Variables were developed. Reliability tests were run on each multi-item scale prior to analysis. Multiple regressions were conducted to test the hypotheses.

CHAPTER 4

RESULTS

The purpose of this study was to measuring the female, Hispanic consumer groups': environmental knowledge, knowledge of environmentally responsible apparel knowledge, environmental responsibility, responsibility feelings, perceived behavioral control to purchase environmentally responsible apparel products, level of acculturation, and intentions to purchase environmentally responsible apparel products. This chapter presents results of the study and analysis of the objectives. There are four sections including an overview of the participant characteristics, variable characteristics, measurement assessments, and hypothesis testing.

Participant Characteristics

The population was derived from a convenience sample obtained from a university setting in the southeastern region of the United States. In order to obtain a representative convenience sample from this population, the researcher obtained the e-mail address to all 548 female, Hispanic students at this university. An initial dissemination of the questionnaire resulted in only 1672 respondents within a 4-week period. To achieve a better response rate, the researcher offered an incentive option. The initial 16 responses were thrown out and the e-mail addresses associated with those responses were removed from the overall 548 e-mails obtained. The survey was then re-disseminated to the remaining 532 participants in the sample population was reduced. Within the 15 day time limit placed on responding, 65 participants responded with completed surveys. Within the questionnaire, participants were asked if they considered themselves to be Hispanic and 65 responded yes to the question about identifying with the Hispanic ethnicity. Table 3 shows the demographic information about the participants from this study. Of the 65 female respondents, 53.8% ranged between 18-25 years old. In terms of

academic classification, 75.4% were undergraduate students and 24.6% were graduate or professional students. The annual income distribution breakdown was as follows: 78.5% earned \$0-\$15,000, 12.3% earned \$15,001-\$30,000, 3.1% earned \$30,001-\$45,000, 1.5% earned \$45,001-\$60,000, 1.5% earned \$60,001-\$75,000, and 3.1% earned \$75,001 or higher.

Table 3: Demographic Profile of Hispanic Participants (n=65)

Respondent	N	%
Age		
18-21 years old	35	53.8
22-25 years old	15	23.1
26-29 years old	5	7.7
30 years old and older	10	15.4
Academic Classification		
Freshman	12	18.5
Sophomore	8	12.3
Junior	14	21.5
Senior	10	15.4
5 th year student	5	7.7
Graduate/Professional	16	24.6
Race		
Caucasian	34	52.3
Black/African American	1	1.5
Other	30	46.2
Yearly Income		
\$0-\$15, 000	51	78.5
\$15,001-\$30,000	8	12.3
\$30,001-\$45,000	2	3.1
\$45,001-\$60,000	1	1.5
\$60,001-\$75,000	1	1.5
\$75,001-higher	2	3.1

Variable Characteristics

Respondents were asked to rate their knowledge, attitudes, and behaviors to 60 questions regarding environmentalism and environmental behavior. Participants answered 24 additional questions regarding acculturation. The statistics for these answers can be found in Table 4. Female, Hispanic participants have a strong environmental knowledge base (mean=1.982), moderate environmental responsibility (mean=2.473) indicating pro-environmental orientation,

moderate responsibility feelings (mean=2.465), and moderate perceived control to purchase environmentally responsible apparel products (mean=2.717). In terms of acculturation level scoring, Marin and Gamba (1996) suggest a mean score of 2.5 to be the cut-off score indicating low or high adherence to each cultural domain. Acculturation scoring indicated that the population sample of female, Hispanic participants is moderate in Hispanic acculturation (mean=2.774) and high in non-Hispanic acculturation (mean=4.708). According to Marin and Gamba (1996), scores about the 2.5 mark in the Hispanic and non-Hispanic domain can be interpreted as an indication of biculturalism on the part of the respondents.

Table 4: Statistical Characteristics of Variables

Variable	N	Mean	Std. Deviation
Environmental Knowledge	65	1.982	.54224
Environmental Responsibility	65	2.473	.47503
Responsibility Feelings	65	2.465	.81402
Perceived control to purchase environmentally responsible apparel products	65	2.717	.77254
Behavioral intention to purchase ERAP	65	2.836	.60627
Acculturation	65	3.7410	.49965
Hispanic Acculturation	65	2.774	1.17387
Non-Hispanic Acculturation	65	4.708	.36028

Reliability

To assess reliability and internal consistency of the variables, Cronbach's alpha was calculated. A benchmark alpha of .70 was set as an acceptable measure of reliability (Nunnally & Bernstein, 1994). The value of Cronbach's alpha for environmental knowledge was .815, environmental responsibility was an alpha of .757, responsibility feelings an alpha of .909, perceived behavioral control to purchase environmentally responsible apparel products an alpha of .821, acculturation was an alpha of .969, and behavioral intention had an alpha of .764.

However, one variable, knowledge of environmentally responsible apparel products, had an alpha of reliability score of .242. Therefore, the seven variables previously identified were reduced to six, removing knowledge of environmentally responsible apparel products, due to its low reliability. Table 5 shows the reliability of the measures used as well as the reliability for the variable removed. The removal of this variable left a total number of 73 items.

Table 5: Variable Reliability

Factor Label	Reliability
Environmental Knowledge	.815
Knowledge of Environmentally Responsible Apparel Products	.242
Environmental Responsibility	.757
Responsibility Feelings	.909
Perceived Behavioral Control to Purchase Environmentally Responsible Apparel Products	.821
Acculturation Both Acculturation Domains	.848
Hispanic Domain	.969
Non-Hispanic Domain	.809
Behavioral Intention	.764
*Indicates variable removed due to low reliability	

Hypotheses Testing

Based on results of reliability scores, scales were revised to create 73 items with variables to measure each respective construct. These variables were used to conduct multiple regressions to test the hypotheses. Table 6 shows the results generated from running regression models.

Table 6: Results of Regression Analysis (n=65)

Independent Variables	Dependent Variables	
	Environmental Responsibility	Behavioral Intention
Environmental Knowledge	$\beta = .539$ $t = 5.081^{**}$ $F\text{-value} = 25.812^*$ $\text{Adjusted } R^2 = .279$	
Environmental Responsibility		$\beta = -.359$ $t = -3.051^{***}$ $F\text{-value} = 9.309^*$

		Adjusted R ² = .115
Responsibility Feelings		β = -.420 t= -3.677** F-value = 13.520* Adjusted R ² = .164
Perceived control to purchase environmentally responsible apparel products		β = .269 t= 2.213** F-value = 4.897* Adjusted R ² = .057
Acculturation_Both Domains		β = -.082 t= -.657 F-value = .432 Adjusted R ² = -.009
Acculturation_ Hispanic Domain		β = -.023 t= -.182 F-value = .033 Adjusted R ² = -.015
Acculturation_ Non-Hispanic Domain		β = -.154 t= -1.238 F-value = 1.533 Adjusted R ² = .008
*Indicates significant linear regression ** p< .001 *** p< .005		

Hypothesis H1

H1 suggested that factual knowledge, defined as environmental knowledge and knowledge of environmentally responsible apparel products in this study, influences attitude, defined by environmental responsibility. To test this hypothesis, the variables being tested were split. Hypothesis H1a suggested environmental knowledge influences environmental responsibility. Hypothesis H1b suggested knowledge of environmentally responsible apparel products influences environmental responsibility.

Hypothesis H1a

H1a suggested environmental knowledge influences environmental responsibility. A regression model with environmental responsibility as the dependent variable and environmental knowledge as the independent variable was conducted. As shown in Table 6, the overall regression model is significant (F=25.812, R²=.279). Pearson's correlation coefficient was

calculated reflecting environmental knowledge has a direct moderate positive influence on attitude, measured by environmental responsibility ($r(63) = .539, p < .01; \beta = .539, t = 5.081$), indicating a significant linear relationship and providing support for H1a, implication that environmental knowledge positively influences environmental responsibility.

Hypothesis H1b

H1b suggested knowledge of environmentally responsible apparel products influences environmental responsibility. While conducting reliability testing, the variable measuring the knowledge of environmentally responsible apparel products resulted in a Cronbach's alpha of .242 which indicated poor internal consistency. For this reason, the variable was removed and, consequently, so was hypothesis H1b.

Hypothesis H2

H2 suggested based on the Theory of Planned Behavior, that behavioral intention is influenced by three independent variables: attitude (H2a), subjective norms (H2b), and perceived behavioral control (H2c). In this study, attitude is defined by environmental responsibility, subjective norms are defined by responsibility feelings, and perceived behavioral control is defined by the perceived control to purchase environmentally responsible apparel products. Behavioral intention is measured by the behavioral intention to purchase environmentally responsible apparel products. Multiple regressions were conducted with each independent variable as predictor of influence for behavioral intention.

Hypothesis H2a

H2a suggested behavioral intention to purchase environmentally responsible apparel products is influenced by environmental responsibility. To test this hypothesis, a regression with environmental responsibility as the independent variable and behavioral intention as the

dependent variable was conducted. The regression is significant in environmental responsibility predicting behavioral intention ($F= 9.309$, $R^2= .129$). A Pearson's correlation coefficient was calculated examining the relationship between environmental responsibility and behavioral intention. A moderate correlation that was significant was found ($\beta=-.359$, $t=-3.051$). These findings indicate support for H2a, indicating that environmental responsibility among female, Hispanic consumers does influence behavioral intention to purchase environmentally responsible apparel products.

Hypothesis H2b

H2b suggested behavioral intention to purchase environmentally responsible apparel products is influenced by responsibility feelings. The regression model is significant ($F= 13.520$, $R^2= .164$). Pearson's correlation coefficient found a moderate negative correlation ($\beta= -.420$, $t=-3.677$), indicating a significant linear relationship between responsibility feelings and behavioral intention. Therefore, H2a is supported by the data indicating that responsibility feelings among female, Hispanic consumers negatively influence behavioral intention to purchase environmentally responsible apparel products.

Hypothesis H2c

H2c suggested behavioral intention to purchase environmentally responsible apparel products is influenced by the perceived control to purchase environmentally responsible apparel products. The regression model is significant in the consideration of perceived control to purchase environmentally responsible apparel products influencing behavioral intention to purchase environmentally responsible apparel products ($\beta=.269$, $t=2.213$) thus supporting H2c. These findings indicate that the perceived ability to control the purchase of environmentally

responsible apparel product can predict or influence behavioral intention to purchase environmentally responsible apparel products among female, Hispanic consumers.

Hypothesis H3

H3 suggested acculturation levels influence behavioral intention to purchase environmentally responsible apparel products. Marin and Gamba (1996) suggest a mean score of 2.5 to be the cut-off score indicating low or high adherence to each cultural domain.

Acculturation scoring indicated that the population sample is moderate in Hispanic acculturation (mean=2.77) and high in non-Hispanic acculturation (mean=4.71). The regression model was not significant in neither the Hispanic nor Non-Hispanic domain acculturation influencing behavior intention to purchase environmentally responsible apparel products (Hispanic domain $\beta = -.023$, $t = -.82$; non-Hispanic domain $\beta = -.154$, $t = -1.238$). When both acculturation domains were grouped together, the regression model is also not significant ($\beta = -.082$, $t = -.657$).

These results do not support H3 and indicate that behavioral intention to purchase environmentally responsible apparel products, is not predicted nor influenced by neither Hispanic nor non-Hispanic acculturation

CHAPTER 5

CONCLUSIONS AND DISSCUSSION

The overall research objective for the study was to study and profile female, domestic Hispanic consumers and their behavioral intent to consume environmentally responsible apparel products. Through the incorporation of behavioral and acculturation theories, this research developed the framework to empirically examine female, Hispanic consumers intent to purchase environmentally responsible apparel products. Using the Theory of Planned Behavior as a model, a model was developed that facilitated the testing of six hypotheses to answer the research questions posed in this study. This chapter provides a discussion of the findings along with the implications they present. The chapter concludes with a brief discussion on future research possibilities this research poses.

Major Findings

The research extends previous studies combining Ajzen's Theory of Planned Behavior and cultural theory to study behavioral intention. Previous studies have focused on the impact of cultural influences, ethnic identification, or self-identification of a consumer group on the purchase intent or actual purchase behavior. Studies have ranged from apparel purchases of different racial and ethnic groups (Shen et al., 2003; Jin & Kang, 2010) and non-apparel purchases (Walker, Courneya, & Deng, 2006; Carrus, Nenci, & Caddeo, 2009) to health-related behaviors (Salabarria-Pena, Lee, Montgomery, Hopp, & Muralles, 2003; Fila & Smith, 2006). This study is a pioneer in female, Hispanic consumers' acculturation, and their impact on purchase intention of environmentally responsible apparel products. This research focused on three major objectives to study the relationship, if any exists, of female, Hispanic consumers, their acculturation levels, and their intent to purchase environmentally responsible apparel

products. The population sample came from a very specific student-based consumer group from at a university in the southeastern region of the United States.

Participant Scores

Results from this study indicated that female, Hispanic consumers have low knowledge of environmentalism and have a high pro-environmental responsibility orientation. They hold moderate responsibility feelings towards the environment and perceive moderate control to purchase environmentally responsible apparel products. Results indicate that female Hispanic consumers are moderate in their behavioral intention to purchase environmentally responsible apparel products. Lastly, this sample population reflects an overall moderate acculturation level. Specifically, the participants reflected moderate Hispanic acculturation and very high non-Hispanic acculturation leading to the conclusion of bi-culturalism of this target group.

Objective 1

The first objective of this research study was to examine the factual environmental knowledge of female, Hispanic consumers as it related to environmental attitude, measured by environmental responsibility, through the measurement of environmental knowledge and the knowledge of environmentally responsible apparel products. Analysis of the scales used in this study resulted in the lack of reliability of the scale measuring the knowledge of environmentally responsible apparel products. For this reason, that variable was removed thus leaving only the scale measuring environmental knowledge. Results revealed that environmental knowledge had a positive effect on environmental attitude leading to support that increased environmental knowledge influences environmental responsibility. This further supports previous studies that indicate environmental knowledge is found to be positively related to environmental attitudes (Arcury, 1990; Bradley, Waliczek, & Zajicek, 1999; Meinhold & Malkus, 2005).

Objective 2

The second objective was to study and measure the behavior intentions to purchase environmentally responsible apparel products of female, Hispanic consumers based on their: attitude, subjective norms, and perceived behavioral control. Attitude was measured by environmental responsibility, subjective norms were measured by the consumer's responsibility feelings towards environmentalism, and perceived behavioral control was measured by the consumer's perceived control to purchase environmentally responsible apparel products. Each variable was tested individually on its relation to behavior intention to purchase environmentally responsible apparel products. Results of this study showed that environmental responsibility, responsibility feelings, and perceived control to purchase environmentally responsible apparel items, can each influence behavioral intention to purchase environmentally responsible apparel products.

Results indicate attitude, measured by environmental responsibility, has an influence on behavioral intention to purchase environmentally responsible apparel products. These results support previous studies (De Groot & Steg, 2007; Fielding, McDonald, & Louis, 2008; Steg & Vlek, 2009) indicating positive relationships between pro-environmental attitude and pro-environmental behavior intention. For responsibility feelings, results indicated a negative influence on behavioral intention to purchase environmentally responsible apparel products. Previous research indicates contradictory findings reflecting responsibility feelings having a positive influence on pro-environmental behavior intention (De Groot & Steg, 2007; Fielding, McDonald, & Louis, 2008). Results for perceived control to purchase environmentally responsible apparel products also indicated a positive relation between behavioral intention to purchase environmentally responsible apparel products and perceived control to purchase

environmentally responsible apparel products. These results further support other research studies that have established perceived behavioral control as a predictor of behavioral intention (De Groot & Steg, 2007).

Objective 3

The last objective was to study and profile the acculturation levels of female, Hispanic consumers and measure if acculturation impacts their behavioral intention to purchase environmentally responsible apparel products. The participants of this study demonstrated a moderate Hispanic acculturation and high non-Hispanic acculturation indicating biculturalism. Results indicated that neither the Hispanic nor non-Hispanic acculturation domains, when separated or grouped as one, predict behavioral intention to purchase environmentally responsible apparel products therefore indicating that acculturation does not have an influence on behavioral intention to purchase environmentally responsible apparel products.

Conclusion

Ultimately, this study found significant relationships between: environmental knowledge and environmental responsibility; attitude, measured by environmental responsibility and behavioral intent, measured by the behavioral intention to purchase environmentally responsible apparel products; subjective norms, measured by responsibility feelings, and behavioral intention; and perceived behavioral control, measured by the perceived control to purchase environmentally responsible apparel products and behavioral intent within the female, Hispanic population. These results reflect the application of the Theory of Planned Behavior as a theoretical framework to aid in measuring the behavioral intention with respect to the purchase of environmentally responsible apparel products.

Discussion

This research study sought to examine the behavioral intentions of female, Hispanic consumers because of their strong buying power and exceedingly high population growth. Specifically, the importance of sustainability within the fashion industry led to specifically examining this consumer group's intent to purchase environmentally responsible apparel products. Although the findings in the study in relation to the acculturation levels of female, Hispanic consumer groups were not significant, the theoretical model used established a positive application in its use with measuring the behavioral intent to purchase environmentally responsible apparel products. Additionally, the findings indicating a bicultural consumer group within this study reflects research indicating that the bicultural segment of the Hispanic population comprises 53% of the overall consumer group which is anticipated to continue growing therefore further indicating the importance of studying this evolving target market (Hammer & Skolnicki, 2005). Limitations within the study could be the factors for why the results were not significant and support an indication of the consumer behavior differences of the Hispanic consumer group.

Implications

The intent of academic studies is to expand the body of knowledge on specific subjects. Within apparel merchandising, research findings not only contribute to academia but have practical applications within the fashion industry.

Theoretical Implications

Acculturation and Hispanic consumers add more dimensions to research on consumer behavior. By including acculturation theory and this consumer group, established theories can be tested and new theories can be developed to better understand consumer behavior. This study

adds to the limited body of knowledge on environmentally responsible consumer behavior with respect to specific consumer groups. Future research can be built upon this study to increase the body of knowledge on acculturation and Hispanics as a consumer group.

Practical Implications

Research in the review of literature of this study reflects the importance of Hispanics as a consumer group because of their buying power and population growth. By understanding what effects this consumer group's purchase behavior, retailers can improve meeting the needs of their consumers. In doing so, it can lead to increased purchases thus increasing sales and profits. Additionally, this information may aid environmentally responsible apparel firms to increase their consumer base.

Limitations and Future Research

The population was derived from a convenience sample of university students which is a very unique population. Literature has shown that university students do differ from the overall population in multiple factors (Solomon & Rabolt, 2004). Among those factors is their purchase power due to higher amounts of disposable income. This factor could indicate the opportunity to study female, Hispanic university students as a specific consumer group in relation to the purchase of environmentally responsible apparel products.

Hispanic identification could also make an impact on results. First, in regards to Hispanic ethnic identification, participants self-reported their Hispanic ethnicity. This self-report could exclude individuals who are considered Hispanic under regulations set by the United States Census Bureau but do not identify with the ethnic group. The differences in self-reporting could provide added information to acculturation theory on Hispanic individuals and thus add to the body of knowledge concerning Hispanic consumption. Second, acculturation was

considered as a bi-dimensional factor in this study by measuring language and linguistic proficiency. Studies have shown that in certain instances, acculturation can be measured as a multidimensional factor. Although this study was a bi-dimensional acculturation study, the addition of more acculturation factors could lead to further understanding this consumer groups and support the findings of this study. Third, there is research that has shown behavioral differences between generations of cultural groups (Cleveland & Chang, 2008; Mathur, Guiry, & Tikoo, 2008). This could indicate the need to study the effects generational differences have on behavioral intention and actual behavior. Although this study did not differentiate what generation the participants belong to, conducting future studies on generational differences could provide more insight on the acculturation of the participants. In relation to consumption behaviors, further research could also contribute towards unlocking the factors influencing consumption of green products. Additionally, Louisiana has a small Hispanic population in comparison to the overall Hispanic population within the United States. According to the United States Census Bureau, as of 2009, twenty-one states have estimated Hispanics as their largest minority (U.S. Census Bureau, July 2010). Louisiana is not listed among the twenty-one states and it is understood that, because it is a convenience sample reflecting a university setting within a state with a lower than average Hispanic population, it is not representative of the national population. This could culturally set Louisiana Hispanics apart from the consumer behaviors of other Hispanics in the United States and lead to further research concerning the differences between those Hispanics closer to communities enriched with their original Hispanic heritage and those that are more isolated. These differences could provide added dimensions and insight to the measurement of acculturation among Hispanics that research has not covered. Lastly, another limitation in regards to Hispanic identity is the lack of knowledge as to whether the

Hispanic participants sampled are U.S. born. Studies have shown that the amount of time spent in the United States and subsequent exposure to mainstream U.S. culture can make an impact on acculturation (Korzenny, 1998). The research does reflect and prepare a study that can be applied to a sample Hispanic population that does accurately represent the nation's demographics. Lastly, it is unknown how much the population sample knows about environmentally responsible apparel products which could have an effect on their consumption. Future studies could conduct specialized research strictly on their knowledge in order to further dissect the understanding of environmentally responsible apparel product consumer behavior and intention.

Further research expansion of this study would increase the body of knowledge about the female Hispanic consumers. Studying a population sample outside of a university setting or conducting further research on university aged Hispanics not enrolled in a university might provide vital insight for comparison. Research on the limitations placed on this study could also provide important information on this consumer group as well as on the consumption of environmentally responsible apparel products. Future research could also extend into comparing behavioral intent purchase environmentally responsible apparel products against actual purchase behavior. This exploration into university aged female Hispanics can be the basis for further examination for other Hispanic demographic groups.

REFERENCES

- Ahmed, S.A., De Camprieux, R., & Hope, P. (1981). A comparison of English and French Canadian attitudes toward energy and environment. *Canadian Journal of Administrative Sciences Association*, 2, 1-10.
- Arcury, T.A. (1990). Environmental attitude and environmental knowledge. *Human Organization*, 49 (4), 300-304.
- Arcury, T.A., & Johnson, T.P. (1987). Public environmental knowledge: A statewide survey. *Journal of Environmental Education*, 18(4), 31-37.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control: From cognition to behavior*, edited by J. Kuhl and J. Beckman, 11-39. Berlin: Springer-Verlag.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665-683.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. New Jersey: Prentice Hall.
- American Meteorological Society. (2009). *History of the Clean Air Act*. Retrieved March 21, 2009, from <http://ametsoc.org/sloan/cleanair/indexhtml>
- Arbuthnot, J. & Lingg, S. (1975). A comparison of French and American environmental behaviors, knowledge, and attitudes. *International Journal of Psychology*, 10 (4), 275-281.
- Armitage, C.J. & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40, 471-499.
- Axelrod, L. J. & Lehman, D. R. (1993). Responding to environmental concern: What factors guide individual action? *Journal of Environmental Psychology*, 13, 149-159.
- Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of Environmental Psychology*, 23(1), 21-32.
- Barr, S. (2003). *Environment and Society: Sustainability, Policy, and the Citizen*. Burlington, VT: Ashgate.

- Bartl, A. & Marini, I. (2008). Recycling of apparel. *Chemical Engineering Transactions*, 13, 327-333.
- Bender, L. (Producer), Burns, S.Z. (Producer), David, L. (Producer), & Guggenheim, D. (Director). (2006). *An Inconvenient Truth* [Motion Picture]. United States: Paramount Pictures.
- Berkowitz, D., Bao, Y., & Allaway, A. (2005). Hispanic consumers, store loyalty and brand preference. *Journal of Targeting, Measurement, and Analysis for Marketing*, 14(1), 9-24.
- Berry, J.W. (1990). Psychology of acculturation: Understanding individuals moving between cultures. In R.W. Brislin (Ed.), *Applied cross-cultural psychology* (pp.232-253), Newbury Park, CA: Sage Publications.
- Birtwistle, G. and Moore, C.M. (2006), "Fashion adoption in the UK: a replication study", paper presented at Anzmac Conference, Brisbane. http://conferences.anzmac.org/ANZMAC2006/documents/Birtwhistle_Grete.pdf
- Birtwistle, G. & Moore, C.M. (2007). Fashion clothing – where does it all end up. *International Journal of Retail & Distribution Management*, 36(3), 210-216.
- Bradley, J.C., Waliczek, T.M., & Zajicek, J.M. (1999). Relationship between environmental knowledge and environmental attitudes of high school students. *The Journal of Environmental Education*, 30 (3), 17-21.
- Butler, S.M. & Francis, S. (1997). The effects if environmental attitudes on apparel purchasing behavior. *Clothing and Textiles Research Journal*, 15(2), 76-85.
- Cabassa, L. (2003). Measuring acculturation: Where we are and where we need to go. *Hispanic Journal of Behavioral Sciences*, 25(2), 127-146.
- Carrus, G., Nenci, A. M., & Caddeo, P. (2009). The role of ethnic identity and perceived ethnic norms in the purchase of ethnical food products. *Appetite*, 52 (1), 65-71.
- Cartagena, C. (2005). *Latino Boom! Everything you need to know to grow your business in the U.S. Hispanic market*. New York: Ballantine.
- Chan, R.Y.K. (2001). Determinants of Chinese consumers' green purchase behavior. *Psychology and Marketing*, 18(4), 389-413.
- Chattaraman, V., Rudd, N., & Lennon, S. (2009). Identity salience and shift sin product preferences of Hispanic consumers: Cultural relevance of product attributes as a moderator. *Journal of Business Research*, 62, 826-833.
- Chen, H. & Burns, L. (2006). Environmental analysis of textile products. *Clothing and Textiles Research Journal*, 24(3), 248-261.

- Claudio, L. (2007). Waste couture: Environmental impact of the clothing industry. *Environmental Health Perspectives*, 115(9), A448-A454.
- Cleveland, M. & Chang, W. (2008). Migration and materialism: The roles of ethnic identity, religiosity, and generation. *Journal of Business Research*, 62 (10), 963-971.
- Conner, M., & Armitage, C.J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28, 1429-1464.
- Corral-Verdugo, V. Carrus, G., Bonnes, M. Moser, G., & Sinha, J. B. P., (2008). Environmental beliefs and endorsement of sustainable development principles in water conservation: Toward a new human interdependence paradigm scale. *Environment and Behavior*, 40, 703-725.
- Council for Textile Recycling. (2008). *Textile Recycling Fact Sheet* [Fact sheet]. Retrieved October 1, 2010 from <http://www.nctextileconnect.com/documents/CTR%20Fact%20Sheet.pdf>
- Cowe, R. & Williams, S. (2000). *Who are the ethical consumers?* United Kingdom: The Co-operative Bank.
- Crano, W.D. and Brewer, M.B. (2002). *Principles and Methods of Social Research*, 2nd Ed. New Jersey: Lawrence Erlbaum Associates, Publishers.
- Cruz, T., Marshall, S., Bowling, M., and Villaveces, A. (2008). The validity of a proxy acculturation scale among U.S. Hispanics. *Hispanic Journal of Behavioral Sciences*, 30 (4), 425-446.
- Cuellar, I., Nyberg, B., & Maldonado, R. E. (1997). Ethnic identity and acculturation in a young adult Mexican-origin population. *Journal of Community Psychology*, 25(6), 535-549.
- Day, J.C. (1996). *Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050*. U.S. Bureau of the Census, Current Population Reports, P25-1130, U.S. Government Printing Office, Washington, DC.
- De Groot, J. & Steg, L. (2007). General beliefs and the theory of planned behavior: The role of environmental concerns and the TPB. *Journal of Applied Social Psychology*, 37 (8), 1817-1836.
- Deshpande, R., Hoyer, W., and Donthu, N. (1986). The Intensity of Ethnic Affiliation: A Study of the Sociology of Hispanic Consumption. *The Journal of Consumer Research*, 13, 2, 214-220.
- Dillman, D. (2007). *Mail and Internet Surveys: The tailored Design Method*, 2nd Ed. New Jersey: John Wiley & Sons.

- Domina, T. & Koch, K. (1999). Consumer reuse and recycling of post-consumer textile waste. *Journal of Fashion Marketing and Management*, 3(4), 346-359.
- Duffy, B., Smith, K., Terhanian, G. & Bremer, J. (2005). Comparing data from online and face-to-face surveys. *International Journal of Market Research*, 47(6), 615-639.
- Dunlap, R. E., 2008. The new environmental paradigm scale: From marginality to worldwide use. *The Journal of Environmental Education*, 40(1), 3-18.
- Dunlap, R. and Van Liere, K. (1978). The new environmental paradigm. *The Journal of Environmental Education*, 9 (4), 10-19.
- Dunlap, R., Van Liere, K., Mertig, A., & Jones, R. (2000). Measuring endorsement of the new ecological paradigm: A revised NEP scale. *Journal of Social Issues*, 56(3), 425-442.
- Dye, Jane Lawler. (2008). Fertility of American Women: 2006. *U.S. Census Bureau: Current Population Reports P 20-558*, 1-24.
- Eastlick, M.A. & Lotz, S.L. (2000). Objective and multidimensional acculturation measures: Implications for retailing to Hispanic consumers. *Journal of Retailing and Consumer Services*, 7(3), 149-160.
- Environmental Justice Foundation. (2007). *The deadly chemicals in cotton*. London, UK: Pesticide Action Network
- Epstein, S. (1973). The self-concept revisited. *American Psychologist*, 28, 404-416.
- Evans, J.R. and Mathur, A. (2005). The value of online surveys. *Internet Research*, 15(2), 195-219.
- Fall 2010 Enrollment. (2010). *LSU Fall Facts 2010* [Brochure]. Baton Rouge, LA: LSU `Office of Communications & University Relations.
- Federal Register*. (1978, May 4). Washington, D.C.: Government Printing Office.
- Fielding, K.S., McDonald, R. & Louis, W.R. (2008). Theory of planned behavior, identity and intentions to engage in environmental activism. *Journal of Environmental Psychology*, 28(4), 318-326.
- Fila, S. & Smith, C. (2006). Applying theory of planned behavior to healthy eating behaviors in urban Native American youth. *International Journal of Behavioral Nutrition and Physical Activity*, 3(11), 1-10.
- Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

- Forde, C.D. (1949). *Habitat, Economy and Society*. London: Methuen.
- Foxall, G. & Goldsmith, R. (1994). *Consumer psychology for marketing*. London: Routledge.
- Fraj-Andres, E. & Martinez-Salinas, E. (2007). Impact of environmental knowledge of ecological consumer behavior. *Journal of International Consumer Marketing*, 19(3), 73-102.
- Fry, R. (2008, October 23) *Latino settlement in the new century*. Washington, DC: Pew Hispanic Center.
- Gans, H. (1979). Symbolic ethnicity: The future of ethnic groups and cultures in America. *Ethnic and Racial Studies*, 2(1), 1-20.
- Gogoi, P. (2005, February 14). Special Report: I am woman, hear me shop. *BusinessWeek*. Retrieved January 21, 2010, from http://www.businessweek.com/bwdaily/dnflash/feb2005/nf20050214_9413_db_082.htm.
- Guber, D. (2003). *The grassroots of a green revolution: Polling America on the environment*. Cambridge, MA: The MIT Press.
- Hammer, C. & Skolnicki, J. (2005). Ethnic marketing by the numbers: Integrating diverse data to reveal new opportunities. *Consumer Insight*, 1-13, 35 <http://web.mit.edu/course/4/4.293/OldFiles/!Phoenix/Research/Ethnic%20Marketing/Ethnic%20Marketing%20by%20the%20Numbers.pdf>.
- Hartig, T., Kaiser, F., & Bowler, P. (2001). Psychological restoration in nature as appositive motivation for ecological behavior. *Environment and Behavior*, 33(4), 590-607.
- Henry, W. (1976). Cultural values do correlate with consumer behavior. *Journal of Marketing Research*, 13 (2), 121-127.
- Herrmann, D. (1997). "Making Americans: Conceptions of the Ideal American in Campaigns to Americanize New Immigrants in Early 20th Century." *The American Nation, National Identity and Nationalism*. Ed. K. Kracau. New Brunswick: Transaction.
- Hiller-Connell, K.Y. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 34(3), 279-286.
- Hiller-Connell, K.Y. (2011). Exploring consumers' perceptions of eco-conscious acquisition behaviors. *Social Responsibility Journal*, 7(1), 61-73.
- Hines, J. M., Hungerford, H. R. & Tomera, A. N. (1986/87). Analysis and synthesis of research on responsible environmental behavior: a meta-analysis. *Journal of Environmental Education* **18**, 1]8.

- Hirschman, E.C. (1981). American Jewish ethnicity: Its relationship to some selected aspects of consumer behavior. *Journal of Marketing*, 45(3), 102-110.
- Hofstede, G. (1980). *Culture's Consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications.
- Humes, K., Jones, N., & Ramirez, R. (2011, March). Overview of race and Hispanic origin: 2010. *2010 Census Briefs*, 1-24. <http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf>
- Humphreys, J. (2008). The multicultural economy 2008. *Georgia Business and Economic Conditions*, 68 (3), 1-16.
- Humphreys, J. (2007). The multicultural economy 2007. *Georgia Business and Economic Conditions*, 67 (3), 1-16.
- Hustvedt, G. & Dickson, M.A. (2009). Consumer likelihood of purchasing organic cotton apparel: Influence of attitudes and self-identity. *Journal of Fashion Marketing and Management*, 13(1), 49-65.
- Hyvarinen, A. (1999). Eco-labeling and environmentally friendly products and production methods affecting the international trade in textiles and clothing. International Trade Center, Geneva. United Nations Conference on Trade and Development. Retrieved April 4, 2009, from <http://www.intracen.org/mds/sectors/textiles/ecour99.htm>
- Jin, B. & Kang, J. (2010). Face or subjective norm? Chinese college students' purchase behaviors toward foreign brand jeans. *Clothing and Textiles Research Journal*, 28(3), 218-233.
- Kaiser, F. & Gutscher, H. (2003). The proposition of general version of the theory of planned behavior: Predicting ecological behavior. *Journal of Applied Social Psychology*, 33(3), 586-603.
- Kaiser, F. Ranney, M., Hartig, T. & Bowler, P. (1999). Ecological behavior, environmental attitude, and feelings of responsibility for the environment. *European Psychologist*, 4(2), 59-74.
- Kaiser, F., Wolfing, S., and Fuhrer, U. (1999). Environmental attitude and ecological behavior. *Journal of Environmental Psychology*, 19, 1-19.
- Kalafatis, S. Pollard, M., East, R., & Tsogas, M. (1999). Green marketing and Ajzen's theory of planned behavior: A cross-market examination. *Journal of Consumer Marketing*, 16(5), 441-460.
- Kantola, S. J., Syme, G. J. & Nesdale, A. R. (1983). The effects of appraised severity and efficacy in promoting water conservation: an informational analysis. *Journal of Applied Social Psychology*, 13, 164-182.

- Kim, H.S. & Damhorst, M.L. (1998). Environmental concern and apparel consumption. *Clothing and Textiles Research Journal*, 16(3), 126-133.
- Korzenny, F. (1998). Acculturation: Conceptualization and measurement. *Quirks's Marketing Research Review*, 12, 32-37.
- Krotz, J. (n.d.). Women power: how to market to 51% of Americans. *Microsoft Small Business Center*. Retrieved April 22, 2008, from <http://www.microsoft.com/smallbusiness/resources/marketing/market-research/women-power-how-to-market-to-51-of-americans.aspx#WomenpowerhowtomarkettoofAmericans>
- Lam, D. (2007). Cultural influence on proneness to brand loyalty. *Journal of International Consumer Marketing*, 19(3), 7-21.
- Langeheine, R. & Lehmann, J. (1986). A new view of the social foundation of environmental concern. *Zeitschrift fur Soziologie*, 15, 378-384.
- Laroche, M., Kim, C., & Tomiuk, M.A. (1998). Italian ethnic identity and its relative impact on the consumption of convenience and traditional foods. *Journal of Consumer Marketing*, 15(2), 125-151.
- Laroche, M., Toffoli, R., Kim, C., & Muller, T.E. (1996). The influence of culture on pro-environmental knowledge, attitudes, and behavior: A Canadian perspective. *Advances in Consumer Research*, 23, 196, 202.
- Laroche, M., Tomiuk, M.A., Bergeron, J., & Barbaro-Forleo, G. (2002). Cultural differences in environmental knowledge, attitudes, and behaviors of Canadian consumers. *Canadian Journal of Administrative Sciences*, 19(3), 267-282.
- Lee, W.N. (1988). "Becoming an American Consumer: A Cross-cultural Study of Consumer Acculturation among Taiwanese, Taiwanese in the Unites States and Americans". *Communications*. Urbana-Champaign, IL: University of Illinois.
- Lewis, J. (1985, November). The birth of the EPA. *Environmental Protection Agency Journal*. Retrieved March 21, 2009, from <http://www.epa.gov/history/topics/epa/15c.htm>
- Lynne, G. D. & Rola, L. R. (1988). Improving attitude-behavior prediction models with economic variables farmer actions toward soil conservation. *Journal of Social Psychology*, 128, 19-28.
- Maloney, M.P., Ward, M.P., & Braucht, G.N. (1975). A revised scale for the measurement of ecological attitudes and knowledge. *American Psychologist*, 30, 787-790.
- Marin, G. & Gamba, R.J. (1996). A new measurement of acculturation for Hispanics: The bidimensional acculturation scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences*, 18 (3), 297-316.

- Marin, G. & Marin, B.V. (1991). *Research with Hispanic populations*. Newbury Park, CA: Sage.
- Markus, H. (1980). "The self in thought and memory." Pp. 102-130 in *The self in social psychology*, edited by D.M. Wegner and R.R. Vallacher. Oxford: Oxford University Press.
- Mannetti, L, Pierro, A., & Livi, S. (2004). Recycling: Planned and self-expressive behaviour. *Journal of Environmental Psychology*, 24(2), 227-236.
- Mathur, S., Guiry, M., & Tikoo, S. (2008). Intergenerational culture-specific consumption between Asian Indian immigrants in the U.S. and Indians residing in an Indian metropolis. *Journal of International Consumer Marketing*, 20 (3 & 4), 69-80.
- Meinhold, J.L. & Malkus, A.J. (2005) Adolescent environmental behaviors: Can knowledge, attitudes, and self-efficacy make a difference? *Environment and Behavior*, 37(4), 511-532.
- Midden, C. J. H. & Ritsema, B. S. M. (1983). The meaning of normative processes for energy conservation. *Journal of Economic Psychology*, 4, 37-55.
- Milfont, T. and Duckitt, J. (2004). The structure of environmental attitudes: A first- and second-order confirmatory factor analysis. *Journal of Environmental Psychology*, 24(3), 289-303.
- Miller, K. (2005). *Communications Theories: Perspectives, Processes, and Contexts*. New York: McGraw-Hill.
- Miller, R., & Washington, K. (2009). Consumer Behavior. Richard K. Miller & Associates. Retrieved February 5, 2009, from Business Source Complete database.
<http://www.lib.lsu.edu.libezp.lib.lsu.edu/apps/onoffcampus.php?url=http://search.ebscohost.com.libezp.lib.lsu.edu/login.aspx?direct=true&db=bth&AN=35436475&site=ehost-live&scope=site>
- Nagel, J. (1984). Constructing ethnicity: Creating and recreating ethnic identity and culture. *Social Problems*, 41(1), 152-176.
- NHPR (2009, November 15). *EarthTalk: How does the fashion industry affect the environment?* Retrieved November 16, 2009, from <http://www.nhpr.org/node/27882>.
- Ogden, D., Ogden, J., & Schau, H. (2004). Exploring the impact of culture and acculturation on consumer purchase decision: Toward a micro-cultural perspective. *Journal of the Academy of Marketing Science Review*, 2004(3), 1-22.

- O'Guinn, T. & Faber, R. (1985). New perspectives on acculturation: The relationship of general and role specific acculturation with Hispanics' consumer attitudes. *Advances in Consumer Research*, 12(1), 113-117.
- Olsen, M. E. (1981). Consumers' attitudes toward energy conservation. *Journal of Social Issues* 37, 108-131.
- Oskpam, S. Mindick, B., Berger, D. & Motta, E. (1978). A longitudinal study of success versus failure in contraceptive planning. *Population & Environment*, 1 (1), 69-83.
- Padilla, A. (1980). *Acculturation: Theory, Models, and some new findings*. Boulder, CO: Westview Press, Penaloza, L. (1989). Immigrant consumer acculturation. *Advances in Consumer Research*, 16, 110-118.
- Phinney, J.S. (2003). Ethnic identity and acculturation. In K. Chun, P. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 63–81). Washington, DC: American Psychological Association.
- Ray, P and Anderson, S. (2000). *The cultural creatives: How 50 million people are changing the world*. New York: Three Rivers Press.
- Rosenberg, M. (1981). "The self-concept: Social product and social force." Pp. 593-624 in *Social Psychology: Sociological Perspectives*, edited by M. Rosenberg and R.H. Turner. New York: Basic Books.
- Rudie, R. (1994, February). How green is the future? *Bobbin*, pp. 16-20.
- Salabarría-Peña, Y., Lee, J.W., Montgomery, S.B., Hopp, H.W., & Muralles, A.A. (2003). Determinants of Female and Male Condom Use Among Immigrant Women of Central American Descent. *AIDS and Behavior*, 7(2), 163-174.
- Sasser, S. (2000). *Waste and want: A social history of trash*. New York City, NY: Metropolitan Books.
- Schlegelmilch, B., Bohlen, G., and Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30(5), 35-55.
- Scott, D. & Willits, F.K. (1994). Environmental attitudes and behavior: A Pennsylvania survey. *Environment and Behavior*, 26(2), 239-260.
- Seckler, V. (2004, June 30). Hispanics: A hidden opportunity. *WWD*. Retrieved January 21, 2010 from www.wwd.com

- Shen, D., Dickson, M.A., Lennon, S., Montalto, C., & Zhang, L. (2003). Cultural influences on Chinese consumers' intentions to purchase apparel: Test and extension of the Fishbein behavioral intention model. *Clothing and Textiles Research Journal*, 21(2), 89-99.
- Shim, S. (1995). Environmentalism and consumers' clothing disposal patterns: An exploratory study. *Clothing and Textiles Research Journal*, 13(1), 38-48.
- Shrum, L.J., McCarty, J.A., & Lowrey, T.M. (1995). Buyer characteristics of the green consumer and their implications for advertising strategy. *Journal of Advertising*, 24(2), 71-82.
- Siatkowski, A.A. (2007). Hispanic acculturation: A concept analysis. *Journal of Transcultural Nursing*, 18(4), 316-323.
- Simpson, G.C., Gerard, R.W., Goodenough, W.H., & Inkeles, A. (1961). Evolution and Man's Progress: Comments of cultural evolution. *Daedalus*, 90 (3), 514-533.
- Smith, S. M., Haugtvedt, C. P. & Petty, R. E. (1994). Attitudes and recycling: does the measurement of affect enhance behavioral prediction? *Psychology & Marketing* 11, 359-374
- Solomon, M. & Rabolt, N. (2004). *Consumer Behavior in Fashion*. Upper Saddle River, NJ: Prentice Hall.
- Sparks, P. & Shepherd, R. (1992). Self-identity and the theory of planned behavior: Assessing the role of identification with "green consumerism." *Social Psychology Quarterly*, 55(4), 388-399.
- Sproles, G. (1981). Analyzing fashion life cycles: Principles and perspectives. *Journal of Marketing*, 45(4), 116-124.
- Stats, H. (2003). Understanding pro-environmental attitudes and behavior: An analysis and review of research based in the theory of planned behavior. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.). *Psychological theories for environmental issues* (pp.171-201). Aldershot, UK: Ashgate.
- Steg, L. & Clek, C. (2009). Encouraging pro-environmental behavior: An integrative review and research agenda. *Journal of Environmental Psychology*, 29, 309-317.
- Stutzman, T.M. & Green, S.B. (1982). Factors affecting energy consumption: Two field tests of the Fishbein-Ajzen model. *Journal of Social Psychology*, 117, 183-201.
- Suro, R. & Passel, J. S. (2003, October 14). *The rise of the second generation: Changing patterns in the Hispanic population growth*. Washington, DC: Pew Hispanic Center.
- Swan, J. (2004). Replying to Clark: The fashion of management fashion. *Organization*, 11(2), 307-313.

- Szapocznik, J., & Kurtines, W. (1980). Acculturation, biculturalism, and adjustment among Cuban Americans. In A. Padilla (Ed.), *Acculturation: Theory, models and some new findings*. Boulder, CO: Westview Press.
- Textile Barometers. (2003, June). Business and financial news. *Textile World*, p. 17.
- Totorá, P.G. & Eubank, K. (2010). *Survey of Historic Costume*. New York City, NY: Fairchild.
- Turner, J.C. (1982). "Towards a cognitive redefinition of the social group." Pp.15-40 in *Social Identity and Intergroup Relations*, edited by H. Tajfel. Cambridge, UK: Cambridge University Press.
- United Nations. (1983). *Process of preparation of the environment perspective to the year 2000 and beyond*. General Assembly Resolution 38/161, 19 December 1983. Retrieved April 4, 2009, from <http://www.un.org/documents/ga/res/38/a38r161.htm>
- United Nations. (1997). *UN Conference on environment and development 1992*. Department of Public Information, 23 May 1997. Retrieved April 4, 2009, from <http://www.un.org/geninfo/bp/enviro.html>
- United Nations Documentation: Research Guide. (2009). *The Environment*. Department of Public Information, 20 January 2009. Retrieved April 4, 2009, from <http://www.un.org/Depts/dhl/resguide/specenv.htm>
- United Nations Framework Convention on Climate Change (UNFCCC). (2009). *Kyoto Protocol*. Retrieved March 21, 2009, from http://unfccc.int/kyoto_protocol/items/2830.php
- U. S. Census Bureau. (n.d.). U.S. Census Bureau News: Census Bureau Reports – Hispanic Population of the United States. Retrieved September 22, 2008, from <http://www.census.gov/population/www/socd>
- U.S. Census Bureau. (2007, July 16). *Facts for Features*. Retrieved May 20, 2009, from <http://www.census.gov/newsroom/releases/pdf/cb07-ff14.pdf>
- U. S. Census Bureau. (2008). *The 2008 Annual Retail Trade Report --Estimated Annual Sales of U.S. Retail and Food Services Firms by Kind of Business: 1992through 2008*. Retrieved April 25, 2010, from <http://www2.census.gov/retail/releases/current/arts/sales.pdf>
- U. S. Census Bureau. (2008, May 1). *U.S. Census Bureau News: Census Bureau Reports – U.S. Hispanic population surpasses 45 million now 15 percent of total*. Retrieved May 10, 2010, from <http://www.census.gov/Press-Release/www/releases/archives/population/011910.html>

- U. S. Census Bureau. (2008, August 14). *U.S. Census Bureau Newsroom: An older and more diverse nation by midcentury*. Retrieved September 3, 2010, from <http://www.census.gov/newsroom/releases/archives/population/cb08-123.html>
- U. S. Census Bureau. (2009). *About the Hispanic Population of the United States: Hispanic Population of the United States*. Retrieved May 10, 2010, from <http://www.census.gov/population/www/socdemo/hispanic/about.html>
- U. S. Census Bureau. (2010, April 20). *U.S. Census Bureau Newsroom: Census Bureau reports nearly 6 in 10 advanced degree holder age 25-29 are women*. Retrieved August 27, 2010, from <http://www.census.gov/newsroom/releases/archives/education/cb10-55.html>
- U. S. Census Bureau. (2010, May 11). *U.S. Census Bureau: School enrollment—Social and economic characteristic of students: October 2008*. Retrieved August 27, 2010, from <http://www.census.gov/population/www/socdemo/school/cps2008.html>.
- U. S. Census Bureau. (2010, July 15). *U.S. Census Bureau News: Facts for Features – Hispanic Heritage Month 2010: Sept. 15-Oct. 15*. Retrieved August 27, 2010, from http://www.census.gov/newsroom/releases/pdf/cb10ff-17_hispanic.pdf
- United States Environmental Protection Agency. (2009). *About EPA*. Retrieved March 21, 2009, from <http://www.epa.gov/epahome/aboutepa.htm>
- United States Environmental Protection Agency. (2009, November 17). *Textiles*. Retrieved September 30, 2010, from <http://www.epa.gov/epawaste/conservation/materials/textiles.htm>
- Van Birgelen, M., Semeijn, J., & Keicher, M. (2009). Packaging and pro-environmental consumption behavior: Investigating purchase and disposal decisions for beverages. *Environment and Behavior*, 41(1), 125-146.
- Van Selm, M. and Jankowski, N.W. (2006). Conducting online surveys. *Quality & Quantity*, 40(3), 435-456.
- Waldman, M. (1993). A new perspective on planned obsolescence. *The Quarterly Journal of Economics*, 108(1), 273-283.
- Walker, G.J., Courneya, K.S., & Deng, J. (2006). Ethnicity, gender, and the theory of planned behavior: The case of playing the lottery. *Journal of Leisure Research*, 38(2), 224-248.
- Wallendorf, M. and Reilly, M.D. (1983). Ethnic migration, assimilation, and consumption. *Journal of Consumer Research*, 10(3), 292-302.
- Weigel, R.H., Vernon, D.T.A., & Tognacci, L.N. (1974). Specificity of the attitude as a determinant of attitude-behavior congruence. *Journal of Personality and Social Psychology*, 30, 86-88.

World Commission on Environment and Development. (1987). *Our common future*. Oxford: Oxford University Press.

Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, 10(3). Available at <http://jcmc.indiana.edu/vol10/issue3/wright.html>

APPENDIX A IRB EXEMPTION APPROVAL

Application for Exemption from Institutional Oversight

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/ projects using living humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

- Applicant, Please fill out the application in its entirety and include the completed application as well as parts A-E, listed below, when submitting to the IRB. Once the application is completed, please submit two copies of the completed application to the IRB Office or to a member of the Human Subjects Screening Committee. Members of this committee can be found at <http://www.lsu.edu/screeningmembers.shtml>

- A Complete Application Includes All of the Following:

(A) Two copies of this completed form and two copies of part B thru E.

(B) A brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts 1&2)

(C) Copies of all instruments to be used.

*If this proposal is part of a grant proposal, include a copy of the proposal and all recruitment material.

(D) The consent form that you will use in the study (see part 3 for more information.)

(E) Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: (<http://phrp.nihtraining.com/users/login.php>.)

(F) IRB Security of Data Agreement: (<http://www.lsu.edu/irb/IRB%20Security%20of%20Data.pdf>)



Institutional Review Board
Dr. Robert Mathews, Chair
131 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.6792
irb@lsu.edu
lsu.edu/irb

1) Principal Investigator: Dr. Lisa B. McRoberts

Rank: Assistant Professor

Dept: School of Human Ecology

Ph: 225-578-3957

E-mail: lmicrob1@lsu.edu

2) Co Investigator(s): please include department, rank, phone and e-mail for each

Stefanie Ramirez, Graduate Student
School of Human Ecology
361-739-644
sramir2@lsu.edu

IRB# <u>ES184</u>	LSU Proposal # _____
<input checked="" type="checkbox"/>	Complete Application
<input checked="" type="checkbox"/>	Human Subjects Training

3) Project Title: La Ola Verde: Female, Hispanic Consumers and the Green Movement

Study Exempted By:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
203 B-1 David Boyd Hall
225-578-8692 | www.lsu.edu/irb
Exemption Expires: 9-13-2013

4) Proposal? (yes or no) ☒ No ☐ If Yes, LSU Proposal Number _____

Also, if YES, either

☐ This application completely matches the scope of work in the grant

OR

☐ More IRB Applications will be filed later

5) Subject pool (e.g. Psychology students) university students from LSU and Tulane University

*Circle any "vulnerable populations" to be used: (children <18; the mentally impaired, pregnant women, the aged, other). Projects with incarcerated persons cannot be exempted.

6) PI Signature Dr. McRoberts Date 9/10 (no per signatures)

** I certify my responses are accurate and complete. If the project scope or design is later changes, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action: Exempted ☒ Not Exempted _____ Category/Paragraph 2

Reviewer Mathews

Signature Robert C Mathews

Date 9/14/10

Parts B thru E for Application for Exemption from Institutional Oversight
Stefanie Ramirez
Thesis entitled: La Ola Verde: Female, Hispanic Students and the Green Movement

Part D: Consent Form

No formal signature will be required but the paragraphs below will be what participants will read and review before beginning the survey in order to obtain their consent without a signature.

Environmentally Responsible Apparel Product Consumption Survey

This survey will ask questions about your knowledge of environmental consciousness and your apparel product shopping habits. You will be asked some general questions about the topics and then asked a series of agree/disagree questions that will help us understand attitudes that exist within the community. It is completely anonymous and your information will not be shared by a third party but will be strictly used for the purpose of the researcher's study. Your participation will be greatly appreciated for this project. Information obtained during the course of the study will remain confidential, to the extent allowed by law.

Your participation is voluntary. Your name will not be used in any way. You will not be contacted by any third party who wants to sell you something. We expect the survey to take no more than 15 minutes on average. This study has been approved by the Institutional Review Board of LSU's campus that exists to protect human subjects in studies such as this one.

Your response is very important to the success of this study. If you complete the survey and submit it, you are providing consent to use your data in collective data set. If you have questions about this study, you may contact:

Robert C. Mathews, Chairman Institutional Review Board for Research with Human Subjects
Louisiana State University and A&M College
203 B-1 David Boyd Hall
Baton Rouge LA 70803

(225) 578-6792 or (225) 578-3386

Or

Principle Investigator Stefanie Ramirez, sramir2@tigers.lsu.edu

Study Exempted By:

Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
203 B-1 David Boyd Hall
225-578-8692 | www.lsu.edu/irb

Exemption Expires: 9-13-2013

APPENDIX B
INITIAL E-MAIL INVITATION

RE: Eco-Fashion Survey

As a university student, you are part of a unique consumer group. Learning from your habits and behaviors is vital to the fashion industry. Because of this, you are being asked to take a few minutes to complete the survey so that we can assess the LSU community's attitudes, behavior, and habits towards environmental responsibility. You will be asked some general questions about the topics and then asked a series of agree/disagree questions that will help us understand attitudes that exist within the university community. You do not need nor are expected to have knowledge of environmental issues.

If you have to stop before you have completed the survey, you should be able to return to it by clicking on the link in your invitation which is provided below. **Please respond by Saturday, January 19, 2011 at 11:59p.m** (central time). Your participation is voluntary. Your name will not be used in any way. You will not be contacted by any third party who wants to sell you something. We expect the survey to take no more than 20 minutes on average.

Additionally, to show appreciation, respondents who completely finish the survey by the deadline (Monday, January 17th at 12 noon) are eligible to participate in a lottery, winning valued at a total of \$150.

1st prize: \$50 Visa gift card

Runner-up prize (10 winners): \$10 gift card each (choice of either Visa or Starbucks gift card)

Your participation is greatly appreciated. The survey will take no more than 15 minutes on average to complete. Please visit the link below to access the survey, and I hope you win a prize!

Thank you!

Link: http://lsu.qualtrics.com//SE/?SID=SV_efwyfjyOrLfS1rm

The study has been approved by the Institutional Review Board of LSU's campus that exists to protect human subjects in studies such as this one. If you have any questions about the survey or cannot connect to the survey, please email Stefanie Ramirez at sramir2@tigers.lsu.edu.

APPENDIX C

ENVIRONMENTALLY RESPONSIBLE APPAREL PRODUCT CONSUMPTION SURVEY

The survey will ask questions about your knowledge of environmental consciousness and your apparel product shopping habits. You will be asked some general questions about the topics and then asked a series of agree/disagree questions that will help us understand attitudes that exist within the community. It is completely anonymous and your information will not be shared by a third party but will be strictly used for the purpose of the researcher's study. Your participation will be greatly appreciated for the project. Information obtained during the course of the study will remain confidential, to the extent allowed by law.

Your participation is voluntary. Your name will not be used in any way. You will not be contacted by any third party who wants to sell you something. We expect the survey to take no more than 15 minutes on average. The study has been approved by the Institutional Review Board of LSU's campus that exists to protect human subjects in studies such as this one.

Your response is very important to the success of the study. If you complete the survey and submit it, you are providing consent to use your data in collective data set. If you have questions about the study, you may contact:

Robert C. Mathews, Chairman Institutional Review Board for Research with Human Subjects
Louisiana State University and A&M College

203 B-1 David Boyd Hall

Baton Rouge LA 70803

(225) 578-6792 or (225) 578-3386

Or

Principle Investigator Stefanie Ramirez, sramir2@tigers.lsu.edu

You must be 18 years of age or older to participate.

Please complete each question fully with the answers that best apply to your individual situation. Remember that the questions strictly apply to apparel and accessories. There are no right or wrong answers. We are interested in your opinions. Please answer all items. Only fully answered surveys can be considered.

As you complete the survey, keep in mind that environmentally responsible apparel products refers to clothing and accessories made from and/or using: reclaimed or recycled fibers and/or textile, environmentally responsible fibers and/or textiles, organically grown fibers, non-toxic or low impact dyeing methods, and/or eco-friendly design

The following questions are to be answered in reference to your general knowledge. They are to be applied strictly to what you know. The scale for your answers is listed below:

1 = Strongly agree

2= Agree

3 = Neither Agree nor Disagree

4= Disagree

5 = Strongly disagree

Do you agree or disagree that:

1. We are approaching the limit of the number of people the earth can support.	1	2	3	4	5
2. Humans have the right to modify the natural environment to suit their needs.	1	2	3	4	5
3. When humans interfere with nature it often produces disastrous consequences.	1	2	3	4	5
4. Human ingenuity will insure that we do NOT make the earth unlivable.	1	2	3	4	5
5. Humans are severely abusing the environment.	1	2	3	4	5
6. The earth has plenty of natural resources if we just learn how to develop them.	1	2	3	4	5
7. Plants and animals have as much right as humans to exist.	1	2	3	4	5
8. The balance of nature is strong enough to cope with the impact of modern industrial nations.	1	2	3	4	5
9. Despite our special abilities humans are still subject to the laws of nature.	1	2	3	4	5
10. The so-called "ecological crisis" facing humankind has been greatly exaggerated.	1	2	3	4	5
11. The earth is like a spaceship with very limited room and resources.	1	2	3	4	5
12. Humans were meant to rule over the rest of nature.	1	2	3	4	5
13. The balance of nature is very delicate and easily upset.	1	2	3	4	5
14. Humans will eventually learn enough about how nature works to be able to control it.	1	2	3	4	5
15. If things continue on their present course, we will soon experience a major ecological catastrophe.	1	2	3	4	5

1. Chemical pollutants are produced during manufacturing of synthetic or manufactured fibers such as polyester.	True	False
2. Chemical pollutants are not produced during processing of natural fibers such as cotton.	True	False
3. Federally and regionally mandated standards for clean air and water have not yet been imposed on textile consumption.	True	False
4. Air pollution can occur during some common dye processes of textiles.	True	False
5. Dyeing and finishing processes use a lot of water.	True	False

6. Fibers such as wool cannot be commercially recycled.	True	False
7. Disposable diapers have substantially contributed to the quantity of textile products discarded in landfills.	True	False
8. Special finishes on fabrics may create problems for recycling.	True	False
9. Phosphate-containing detergents can be a source of water pollution.	True	False
10. Natural fibers are usually bio-degradable.	True	False
11. The use of larger quantities of natural fibers will significantly decrease energy consumption.	True	False

1=Strongly agree

2=Agree

3=Neither agree nor disagree

4=Disagree

5=Strongly disagree

Do you agree or disagree that...

1. Melting of the polar ice caps may result in a flooding of shores and islands.	1	2	3	4	5
2. Fossil fuels (e.g. gas, oil) produce CO ₂ in the atmosphere when burned.	1	2	3	4	5
3. All living beings (micro-organisms, plants, animals, and human) are interdependent with one another.	1	2	3	4	5
4. Poisonous metals are introduced into the food chain, for instance, via ground water.	1	2	3	4	5
5. Ozone near the ground may cause respiration problems.	1	2	3	4	5
6. A change in climate caused by increased levels of CO ₂ in the atmosphere is called the greenhouse effect.	1	2	3	4	5
7. Poisonous metals remain in the body.	1	2	3	4	5
8. World climate will probably massively change if CO ₂ continues to be emitted in to the atmosphere in as huge amounts as it is now.	1	2	3	4	5
9. A reduced number of species may interrupt the food chain, affecting some subsequent species in the chain.	1	2	3	4	5
10. The greenhouse effect does not result in the melting of glaciers in central Europe.	1	2	3	4	5

I agree that...

1. I support raising parking fees I cities.	1	2	3	4	5
2. I am ready to pay environmental taxes (e.g. raising fuel or automobile taxes).	1	2	3	4	5
3. I support speed limits on freeways (i.e. 70 mph and 45 mph).	1	2	3	4	5
4. I support efforts to create automobile free inner cities.	1	2	3	4	5
5. I would prefer to drive only if absolutely necessary (i.e. no other mode of transportation is available)	1	2	3	4	5
6. I would prefer not to drive to work any longer.	1	2	3	4	5
7. I would prefer to be able to go shopping without my automobile.	1	2	3	4	5

8. I will stop the engine at red lights in the future.	1	2	3	4	5
9. I will still need my automobile in the future.	1	2	3	4	5
10. My next automobile will be small and as ecologically sound as possible.	1	2	3	4	5
11. I will travel by automobile or by airplane during my vacations.	1	2	3	4	5

1=Strongly agree

2=Agree

3=Neither agree nor disagree

4=Disagree

5=Strongly disagree

I agree that...

1. Because my personal contribution is very small I do not feel responsible for air pollution.	1	2	3	4	5
2. I do not feel responsible for the greenhouse effect.	1	2	3	4	5
3. I feel responsible for the condition of the air.	1	2	3	4	5
4. I feel at least co-responsible for the presently occurring environmental problems.	1	2	3	4	5
5. Because I drive an automobile – as rare as that may be – I contribute to, and am responsible for air pollution	1	2	3	4	5

1=Never

2=Very Rarely

3=Occasionally

4=Very frequently

5=Always

1. I consider purchasing apparel made from recycled material.	1	2	3	4	5
2. I consider purchasing second-hand apparel.	1	2	3	4	5
3. I consider selecting garments made from fabrics that require cooler washing temperature, shorter drying time, or less ironing.	1	2	3	4	5
4. I consider an apparel product because of environmental concerns.	1	2	3	4	5
5. I consider selecting apparel that I can wear over a longer term compared to trendy apparel that goes out of style quickly.	1	2	3	4	5
6. I consider buying clothing made of organically grown natural fibers.	1	2	3	4	5
7. I consider buying apparel with low impact or no dye processing.	1	2	3	4	5
8. I consider buying apparel with environmentally-friendly labeling or packaging techniques.	1	2	3	4	5

Do you consider yourself of Hispanic ethnicity?

1. Yes

2. No

a. If you answered no, proceed to demographics section

b. If you answered yes, please answer the following questions before proceeding to the demographics section

If yes, do you identify with a particular Hispanic sub-group?

1. Mexican American
2. Cuban American
3. Puerto Rican
4. Other, please specify: _____

1=Never

2= Very rarely

3=Occasionally

4= Very frequently

5=Always

How often do you....

1. Speak English?	1	2	3	4	5
2. Speak English with your friends?	1	2	3	4	5
3. Think in English?	1	2	3	4	5
4. Speak Spanish?	1	2	3	4	5
5. Speak Spanish with your friends?	1	2	3	4	5
6. Think in Spanish?	1	2	3	4	5

1= Not at all

2=Not well

3= Neither

4=Well

5=Very well

How well do you...

1. Speak English?	1	2	3	4	5
2. Read in English?	1	2	3	4	5
3. Understand television programs in English?	1	2	3	4	5
4. Understand radio programs in English?	1	2	3	4	5
5. Write in English?	1	2	3	4	5
6. Understand music in English?	1	2	3	4	5
7. Speak Spanish?	1	2	3	4	5
8. Read in Spanish?	1	2	3	4	5
9. Understand television programs in Spanish?	1	2	3	4	5
10. Understand radio programs in Spanish?	1	2	3	4	5
11. Write in Spanish?	1	2	3	4	5
12. Understand music in Spanish?	1	2	3	4	5

1=Never

2= Very rarely

3=Occasionally

4= Very frequently

5=Always

How often do you...

1. Watch television programs in English?	1	2	3	4	5
2. Listen to radio programs in English?	1	2	3	4	5
3. Listen to music in English?	1	2	3	4	5
4. Watch television programs in Spanish?	1	2	3	4	5
5. Listen to radio programs in Spanish?	1	2	3	4	5
6. Listen to music in Spanish?	1	2	3	4	5

Demographics

We are now going to ask you for some demographic information. This is used only to better analyze our data and not to identify any individual.

What is your current age? _____

Gender:

1. Female
2. Male

What race do you consider yourself to be?

1. Caucasian
2. Black or African American
3. Native American
4. Native Hawaiian
5. Other Asian/Pacific Islander
6. Other (please specify): _____

Which of the following academic classification best describes you?

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. 5th year student
6. Graduate/Professional Student

Average Yearly Income (circle the one that best applies):

1. 0 – \$15,000
2. \$15,001 - \$30,000
3. \$30,001 - \$45,000
4. \$45,001 - \$60,000
5. \$60,001 – 75,000
6. \$75,001 – higher

VITA

Stefanie Ann Ramirez was born in Corpus Christi, Texas, on August 8, 1983. In May 2005, she completed her undergraduate studies at Tulane University in New Orleans, Louisiana, where she earned a Bachelor of Science in Management from the A.B. Freeman School of Business with a triple major in marketing, management, and Latin American studies. After two years in retail management, co-directing a modeling agency, styling, and fashion show production, she enrolled at Louisiana State University in August 2007 to pursue a graduate degree. She is a candidate for a Master of Science degree in human ecology with a concentration in fashion merchandising and a minor in theatre to be awarded in August 2011.

Upon entering her second semester of graduate studies, she began working as a graduate assistant for Dr. Lisa B. McRoberts with whom she is still assigned. Through this assistantship, she was given the opportunity to develop her teaching skills through assisting in various apparel design courses as well as teaching a textile science lab course. This experience aided in finalizing plans on pursuing a future career as professor in the field of textile science, apparel design, and merchandising with a specialization in sustainability.