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Textile Recycling: The Influence of Moral Licensing on the Overconsumption of Clothing

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By

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Rebecca Williams

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In Partial Fulfillment
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Rebecca Williams
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Abstract

The advent of fast fashion has drastically altered how Americans consume clothing, from purchase to disposal. Unnecessary clothing consumption may be perceived as morally transgressive in a pro-environmental context. Clothing donation has become the provided solution to deal with the surplus of unwanted clothing, and recycling adheres to pro-environmental morals. Clothing donation may provide guilt alleviation from overconsumption and morally license people to consume more new clothing. This thesis investigates the effect of moral licensing on the overconsumption of clothing and seeks to quantify the relationship between quantity of clothing purchased and donated.

A total of 904 undergraduate students participated in this survey research. The surveys measured the relationship between clothing purchase and clothing donation, and the influence of pro-environmental behavior and recycle guilt on the relationship between fashion consumption and clothing donation. These surveys consisted of both established and piloted scales. Results showed a significant positive correlation of .248 ($p < .01$) between quantity of clothing purchased and quantity of clothing donated, and that anticipated guilt from not recycling a recyclable material is a statistically significant moderator of the relationship between fashion consumption and clothing donation.

The alleviation of consumption guilt by recycling may morally license people to consume more new clothing. Recognizing such patterns is essential to addressing the environmental problem of fast fashion and overconsumption.

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Introduction

The American economy is built on a continuous cycle of consumption. The capitalist framework depends on expansion and measures macroeconomic growth by monetary value of all legal economic transactions, including material goods consumed, and American culture has developed in tandem with this growth metric. Consumerism has become a way of life.

The consumerism of American society has led to the overconsumption of resources and is contributing to global climate change. The economics of globalization and capitalism fuel the cycle of purchase and disposal and increasingly externalize the true costs of consumption to ecosystems' regenerative capacity, the "commons," and especially to the poorest and most vulnerable populations of the world. The importance of clothing and fashion in our society warrants it an influential role in our changing climate. According to designer Eileen Fisher, the textile industry is "the second largest polluter in the world... second to the oil industry" (Vartan, 2017).

The impact of the fashion industry extends beyond the manufacture and retail of clothing as post-consumer waste. Americans buy 20 billion new garments per year, and subsequently discard 70 pounds of clothing per capita annually (Gasseling, 2017). In 2003, the consumption of manufactured cotton, wool and other fibers per capita was 83.8 pounds, with post-consumer waste approximated at 35 pounds per capita (Hawley, 2006).

Recycling unwanted clothing by donating to thrift stores is a common method of clothing disposal that diverts waste from landfills and is an environmentally friendly

alternative to throwing things away. There is a moral imperative to recycle useable

items among people with environmental morals, values and beliefs. Recycling may

alleviate the feelings of guilt associated with waste. This guilt alleviation may morally

license people to consume more new clothing and contribute to continued clothing

overconsumption.

This research examines the influence of moral licensing on the overconsumption

of clothing. It seeks to discover patterns in clothing consumption among people who

have both environmental morals and high levels of fashion consumption. Among the

infinite reasons for the overconsumption of clothing, this research Is focused on a

preliminary investigation of one contributing mechanism.

The Second Hand Clothing Industry

Consumers may not realize that used clothing can be recycled rather than sent to

the landfill. Hawley (2006) defines textile recycling as, "...either pre consumer or post-

consumer waste that is removed from the waste stream and recycled back into the

market (both industrial and end consumer)" (264). The textile recycling industry keeps

10 pounds of post-consumer textile waste per capita from the landfill annually, or 2.5

billion pounds total (Hawley, 2006). Within the textile recycling industry, used textiles

can be resold to another buyer, baled and shipped worldwide, or processed into raw

material. Individual consumers can sell or exchange their unwanted clothing with people

in individual trades, online or in consignment stores. Most unwanted clothing is donated

to thrift stores or charities such as the Salvation Army or Goodwill. Only 20% of the clothing donated to thrift store ends up being sold domestically (Claudio, 2007).

The remaining 80% of donated clothing that doesn't make it to the sales floor is sold to textile recycling companies. These companies buy used textiles from charities at a few cents per pound and take them to their sorting facilities. The clothing is then sorted and sent to become rags, incinerated to create energy, exported to be mechanically or chemically recycled into raw material, sent to the specialty items or vintage market, exported internationally as second hand clothing (SHC), or sent to the landfill (Hawley, 2006). There are approximately 3,000 textile recyclers in the United States (Claudio, 2007).

Figure 1: *Donated Clothing Destination*

In 2012, the top 5 exporters of SHC were the United States, the United Kingdom, Germany, South Korea and Belgium. The top five importers of SHC in 2012 were the Russian Federation, Pakistan, Malaysia, Ukraine and India. High quality used winter clothing is sent to eastern Europe, good summer clothing is sent to Africa, and the lowest quality clothing is sent to South Asia (Norris,15). In 1980, Sub-Saharan African SHC imports were higher per capita than any other developing region, with one article of clothing imported for every 3rd person in the region (Haggblade, 1990). In 2003, Sub-Saharan Africa imported 26.8% of the worlds SHC (Baden & Barber, 2005).

While textile recycling reduces the amount of waste that ends up in American landfills, the second hand clothing industry (SHCI) shifts the environmental burden of American consumerism on to developing countries and sabotages economic growth by creating dependence (Gasseling, 2017). In 2016, for example, the regional economic grouping of the East African Community agreed to completely ban SHC imports by 2019 (Kuwonu, 2017). According to Abubakar et al., cheap SHC imports drive the further decline of traditional clothing in Nigeria, resulting in the loss of Nigerian social identity. Nigerian dress was replaced by western dress during colonization and the continued economic dependence on SHC perpetuates western political and economic control over the country (2018). According to Gasseling (2017), SHC importing countries have decreased purchasing power, pushed a decline in domestic textile manufacturing, increased competition with textile producers in Asia, lowered local incomes, and increased dependence on American SHC. Similarly, American clothing manufacturers based in Haiti pay a low minimum wage, and the availability of SHC keeps the cost of living lower which may make Haitian employees more accepting of low wages

(Gasseling, 2017). In India, unregulated illegal import of SHC into the country subjects people to unsafe working conditions (Norris, 2015). When imported SHC is purchased and discarded in countries that have lower environmental and health standards for dealing with waste like Haiti, it is burned, buried or abandoned in piles. American landfills may receive less textile waste due to textile recycling, but the burden of waste disposal is passed on to countries with less infrastructure to manage it (Gasseling, 2017).

Despite the controversial qualities of the SHCI and its interdependence with the textile recycling industry, recycling textiles by donation can be an environmentally friendly option for American consumers. In 1999, Koch & Domina regarded textiles and apparel as materials with relatively untapped reuse and recycling potential. In an effort to reduce environmental degradation and resource depletion, American consumers are encouraged to recycle by donating their unwanted clothing to charity rather than throwing it away (Norris, 2015). In 2015, 16 million tons of new textiles were generated globally but still 10.5 million tons of textile waste became landfill in America, accounting for 7.6 percent of all municipal landfill in that year. That same year, the American recycling rate of clothing and footwear was 14.2 percent, with just 2.5 million tons of textile waste recycled (US EPA, 2017).

Clearly, additional diversion of textiles from landfills is necessary. Landfills emit greenhouse gases and pollute surrounding communities. Recycling is a more environmentally conscious alternative to sending unwanted clothing to the landfill, but it comes with its own set of problems that are examined in the remainder of this introduction and the following literature review.

Overconsumption

While the term "sustainability" has many definitions and contexts, this research relies on the framework of sustainability presented by Ehrenfeld, "I define sustainability as the *possibility* that all forms of life will flourish forever. For human beings, flourishing comprises not only of survival and maintenance of the species but also a sense of dignity and authenticity" (pg. 24, 2005). The earth's resources are finite, and recycling in its purest form is essential to sustainability in that it stops useable resources from going to waste.

Textile recycling is a component of sustainability; however, textile recycling as a solution for textile waste on its own disregards the unsustainability of consumerism. Overconsumption occurs when groups or individuals have a choice in their level of consumption and that consumption level threatens that species' own life-support system (Princen et al., 2002).

> *Promoting green products and sustainable lifestyles is only scratching at the surface of a problematic capitalist world order built on ever-expanding economic growth, consumption, and markets, and efficiencies and profits realized by distancing and externalizing the environmental and social costs of producing, using, and replacing consumer goods (Dauvergne, 2010, pg 8).*

The importance of and need for textile recycling comes from the total volume of overconsumption and disposability of clothing. In sizeable clothing markets, clothing has become short-lived; its replacement is easier and less expensive than repairing or modifying it before it is worn out (Harris et al., 2016). Fast fashion, characterized by its low price, fast production and quick salesfloor turnaround, is fueled by globalization and consumerism which results in an excess of used clothing that becomes part of the SHCI (Claudio, 2007). The overconsumption of clothing stems from pressure from the fashion industry and the media to constantly update wardrobes, the lack of knowledge or disinterest in mending clothing, and the short life span of low quality clothing (Harris et al. 2016). Clothing can be produced at continuously dropping prices due to the driving force of globalization; the price of clothing is now so cheap that it is considered disposable by many consumers (Claudio, 2007).

The ability to recycle clothing by donating it to charity can relieve the feelings of guilt that people have associated with overconsumption. Clothing purged in cleaning sprees and closet cleanouts are often donated (Ha-Brookshire & Hodges, 2009). Simply throwing clothing away can make people feel guilty, and donating clothing alleviates the guilt people experience from purchasing clothing that they didn't wear (Joy et al., 2012).People feel guilty for having too much clothing in their closets and donate clothing to create more space (Ha-Brookshire & Hodges, 2009; Joy et al., 2012). In the context of consumption, recycling can act as a driver for continuous consumption.

> *In the United States, for example, conventional wisdom casts recycling as*
> *a primary mechanism for mass publics to "save the planet" without*

confronting the hard truth that recycling can be a reward for ever-

increasing consumption. Questions about driving forces and the impact of

consumption continue to hang in there, un-addressed. They are like the

proverbial 800-pound gorilla in the living room that everyone chooses to

ignore (Princen et al, 2002, pg 2).

This research seeks to investigate one of the un-addressed driving forces of consumption. Considering the negative global impacts of the SHCI, a critical examination of the relationship between fast fashion and textile recycling is warranted. The purpose of this research is to investigate how fast fashion and textile recycling can lead to continued overconsumption. The remainder of this review will begin with an introduction to moral licensing theory and the role of guilt as a mechanism. Pro-environmental behavior and behavioral spillover, which can be motivated by guilt, will be covered in the following section as well as an overview of fashion engagement and fast fashion. The review will conclude with an analysis of methods used to answer similar questions about clothing consumption and donation within the context of moral licensing and pro-environmental behavior. This research will ultimately answer the question: "Is used clothing donation associated with more new clothing consumption?"

Conceptual Framework

The following conceptual model represents the hypothesized phenomenon that increased used clothing donation is associated with increased new clothing consumption. This framework proposes that people are morally licensed to purchase more new clothing after they donate unwanted clothing because the act of donating clothing alleviates the guilt associated with waste. The guilt alleviation is generated by the pro-environmental behavior of recycling. If fashion-engaged people donate used clothing as a pro-environmental behavior, their alleviation of guilt from consumption may let them feel morally license them to consume more new clothing.

Figure 2: *Conceptual Framework*
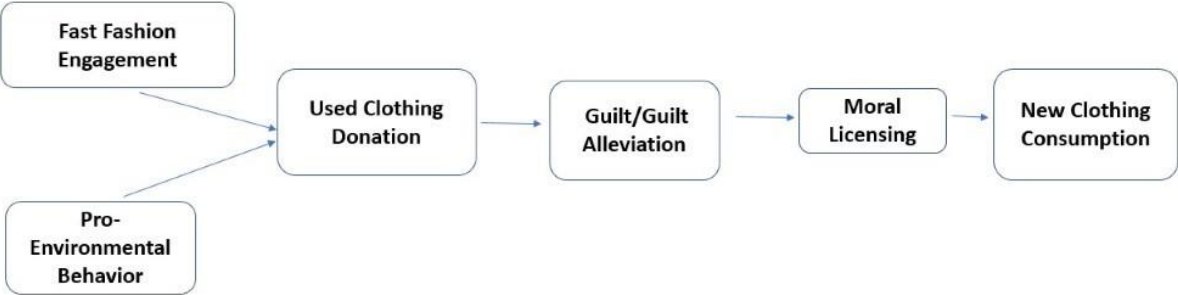
Research Question and Objectives

Research Question: Is increased used clothing donation associated with increased new clothing consumption?

Objectives:

1. Understand the relationship between moral licensing, used clothing donation, and new clothing consumption.

2. Determine whether people with higher levels of fashion engagement and pro-environmental behavior donate and purchase more clothing than those with lower levels.

3. Contribute to the research on overconsumption, fast fashion, and moral licensing.

Chapter 1: Literature Review

Moral Licensing

The following section will provide a review of moral licensing theory and the mechanism of guilt. Morality is the effort to conduct oneself with the best reasons and with consideration of the individuals who are affected by those actions (Rachels, 2003). People base their self-worth partly on how moral they perceive themselves to be; if self-worth is damaged by immoral behavior, people will subsequently behave morally to bolster their self-worth. *Moral licensing* can occur when someone behaves morally and subsequently feels entitled to act immorally; they can speak or behave in less moral ways without discrediting themselves (Miller & Effron, 2010). Moral licensing was illustrated in a study by Tiefenbeck et al. (2013) that found people used more electricity after signing up for a water-use reduction program. Alternatively*, moral cleansing* occurs when an individual first behaves immorally and then regains moral acceptability through subsequent physical, emotional or social moral behavior. Zhong & Liljenquist (2006) found that people were more likely to elect to cleanse their hands after recalling a past immoral deed. Together, it is proposed that moral licensing and moral cleansing create a moral self-regulation process (Sachdeva et al., 2009).

According to Sachdeva et al. moral self-regulation has two models: moral credits and moral credentials. The moral credits model is analogous to maintaining a steady bank account balance; what moral behaviors one did in the past can provide license to behave immorally in the future, and past immoral behaviors can be compensated for

with future moral behavior. This maintains a self-perceived neutral moral state (Miller & Effron, 2010; Sachdeva et al., 2009). The moral credentials model operates such that moral transgressions are not viewed as transgressions at all because of previous morally sound behavior (Miller & Effron, 2010). The moral credits and moral credentials models often function synergistically to produce the moral licensing effect. When people are given the opportunity to perceive and express themselves as moral, they subsequently behave less altruistically than people who perceive and express themselves as morally transgressive (Sachdeva et al., 2009).

Monin & Miller (2001) identified moral licensing via the credentials model in their study examining how people manage the fear of appearing prejudice. When male participants were given the opportunity to disagree with five sexist statements, they were then more likely to state that a job was better suited for a man than a woman. The study also found that when given the opportunity to establish nonprejudiced credentials, study participants were more likely to select a white man for a job than an African-American female (Monin & Miller, 2001). A study from Effron et al. (2009) found that people were more likely to state that a police force job was better suited for white people when they had previously been given the opportunity to state support for Barack Obama. Those who weren't given the opportunity to verbally support Obama responded ambiguously to the same questions about racial preference. Similarly, Bradley-Geist et al. (2010) found that people will establish moral credentials in anticipation of behaving immorally; knowing that they would have to write an essay in opposition to affirmative action, study participants were more likely to reference a past experience with a Hispanic friend than those who were not anticipating writing the essay.

Research on moral licensing also includes the examination of selfish behavior (Merrit et al., 2010). For example, people make more indulgent consumption choices after imagining themselves volunteering for charity (Khan & Dar, 2006). A study from Sachdeva et al. (2009) assigned participants the task of writing a short story about themselves using either positive or negative traits. When given the opportunity to donate part of their compensation to charity, the group that wrote about themselves using only positive traits donated the least money, while the group that wrote about themselves using only negative traits donated the most money. Moral licensing theory explains how people regulate their perceived morality.

Guilt

Most people are eagerly groping for some medium, some way in which they can bridge the gap between their morals and their practices (Alinksy, 1969, pg 94).

Guilt, or lack of guilt, can also be a mechanism of moral licensing. When people make decisions based on positive or negative emotions such as guilt, moral licensing is more likely to occur than in decisions that are reason based (Truelove et al., 2014). Guilt is a social phenomenon and functions to enforce communal norms. People may feel guilty when they commit transgressions against others and will seek to make amends to alleviate that guilt (Baumeister et al., 1994). Consumers who have guilt related to social-environmental transgressions are likely to alleviate that guilt through

amendments and commitments such as recycling or donating to charity (Dahl et al.,

2003). Guilt is related to environmental intention (Truelove et al., 2014). When people

behave in a way that doesn't align with their environmental values and intentions, they

feel guilty and defend themselves in social settings by expressing their past "green"

behavior that compensates for the transgression (Hope et al., 2018). For example,

people reported that their environmentally conscious home-based behaviors (such as

recycling) compensate for the environmentally unsustainable practices while on

vacation (such as flying) (Barr et al., 2010). When prudent consumers make indulgent

choices, they will make subsequent utilitarian choices to launder the negative hedonic

emotions they acquired from their indulgence (Ramanathan & Williams, 2007). In

summary, the alleviation of guilt by adopting moral behaviors to maintain the moral self

is analogous to moral cleansing, and the possession of moral entitlement from previous

moral behavior that allows a person to be morally transgressive without guilt is related

to moral licensing (Trulelove et al., 2014).

<u>Pro-environmental behavior</u>

Pro-environmental behavior (PEB) is a behavior that consciously seeks to have a

less harmful or positive impact on the environment. (Kollmuss & Agyeman, 2002). While

there are many theoretical approaches to PEB, two widely accepted theories of PEB

within Environmental Social Psychology are Shwartz's Norm-Activation Theory and

Stern et al.'s Value-Belief-Norm Theory, which is a specific application of Shwartz's

theory (Turaga et al., 2010). These two theories address the moral obligation to behave

pro-environmentally (Steg & Vlek, 2009). The following section will introduce Norm-

Activation and Value-Belief-Norm Theories and their application to understanding pro-environmental behavior as a morally motivated action.

Norm-Activation Theory

Norm-Activation Theory (Shwartz, 1970) addresses the mechanism of altruistic behavior. To behave altruistically, individuals need to have a personally held moral norm become activated. This requires the individual to be aware that their actions can affect the well-being of another, that the individual can control their actions, the individual is aware of the consequences of their actions and have accepted responsibility for their actions. This results in a sense of moral obligation to behave altruistically; the individual weighs the anticipated pride they will feel from acting on the personal norm with the anticipated guilt they will have if they violate the norm (Shwartz, 1970).

Norm-Activation Theory has been applied to PEB, which is considered moral behavior (Turaga et al., 2010). A Norm-Activation Theory approach to PEB is that a person believes that their pro-environmental actions can eliminate or reduce environmentally related threats to people, other species or the biosphere. This theory requires that the individual has an awareness of consequences (AC) of their actions on the environment, and that they have ascribed responsibility to themselves (AR) to act in a way to reduce those consequences (Stern et al., 1999). Figure 3 is adapted from an illustration from Park & Ha (2014) in their study on consumer recycling behavior. It outlines Norm-Activation Theory and its relationship to PEB.

Figure 3: *Norm-Activation Theory & PEB,* Redrawn from Park, J., & Ha, S. (2014).
Understanding consumer recycling behavior: Combining the theory of planned behavior
and the norm activation model. *Family and consumer sciences research journal*, *42*(3),
p.280.
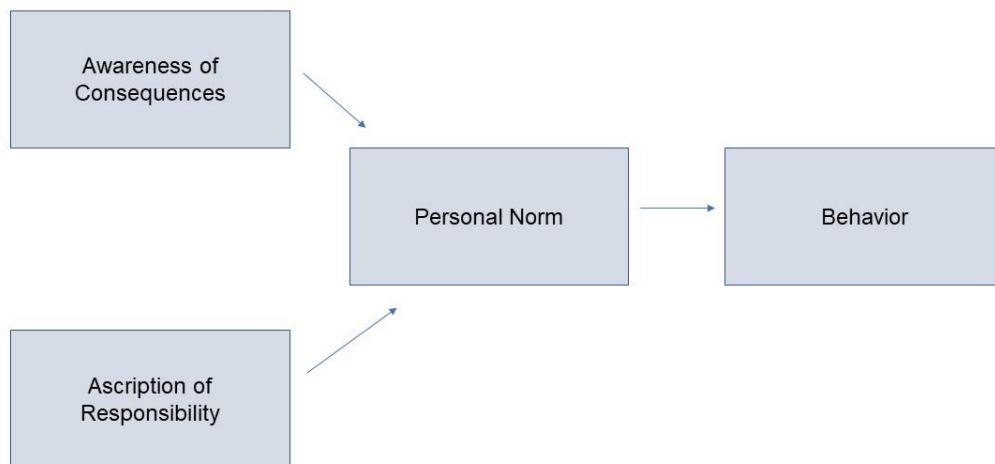
Value-Belief-Norm Theory

Value-belief-norm Theory (Stern et al., 1999) builds from the concept of personal
norms, awareness of consequences and ascription of responsibility presented in Norm-
Activation Theory to create a more complex theoretical understanding of PEB as
morally motivated. Value-belief-norm Theory explains that personal values, personal
beliefs, and personal norms are all involved in an individual's PEB. Values that
contribute positively to PEB fall into the three categories of self-interest, altruism
(towards humans), and biospheric (altruism towards other species). Beliefs are broad

understanding or assumptions that people have regarding the environment and the impact that humans have on it. Values, beliefs and norms influence each other in a causal chain and result in a moral obligation to behave pro-environmentally (Stern et al., 1999).

Figure 4 is adapted from Stern et al. (1999) and illustrates the full complexity of Value-Belief-Norm Theory. While some of the elements outlined in Figure 4 are beyond the scope of this research, the premise that values and beliefs generate environmental norms and subsequent pro-environmental behavior supports the underlying assumptions of this research. For example, Figure 4 references "New Ecological Paradigm." This is a scale that measures the belief that humans have an impact on the environment and can influence ecological balance and is not used in this study (Dunlap, 2000).

Figure 4: *Value-Belief-Norm Theory,* Redrawn from Stern et al. (1999), A value-belief-norm theory of support for social movements: The case of environmentalism. Human Ecology Review, 6, p. 84.

Values　　　　**Beliefs**　　　　　　　　**Norms**　　　**Behavior**
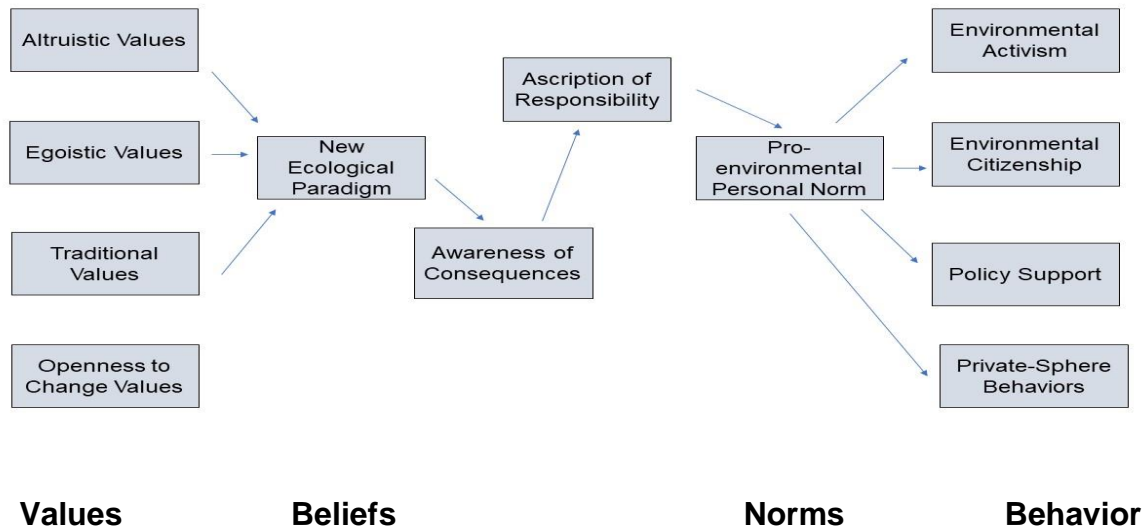
Norm-Activation Theory and Value-belief-norm Theory are more effective in determining relatively low-cost pro environmental behaviors (like recycling) compared to high cost pro environmental behaviors (decreased car use) (Kollmuss & Agyeman, 2002; Steg & Vlek, 2009). The present research applies the moral obligations of Norm-Activation Theory and Value-belief-norm Theory to the drivers of textile recycling and consumption. These theories establish that PEB can be morally motivated and provide the foundation for examining moral licensing in the context of PEB.

Behavioral Spillover

Behavioral spillover in PEB occurs when the adoption of one PEB results in the adoption or elimination of another PEB. Positive spillover occurs when the adoption of one PEB leads to the increase or adoption of another PEB. For example, the implementation of a bag tax resulting in the increased use of recyclable materials. Negative behavioral spillover occurs when the adoption of one PEB leads to the reduction of elimination of another (Truelove et al., 2014). Jacobsen et al. (2012) illustrate negative spillover with their study showing that households that bought in to a "green energy" program subsequently used more energy than those that did not buy in.

Moral licensing is one driver of PEB negative spillover (Truelove et al, 2014). Mazar & Zhong (2010) studied the licensing effects of mere exposure to green products compared to the actual purchase of green products. While participants who were simply exposed to green products subsequently behaved more altruistically than those exposed to conventional products, participants who actually purchased the green products were more likely to subsequently cheat and steal in an anonymous dictator game than those who purchased the conventional products. This suggests that exposure to eco-friendly products can prime people to behave altruistically, but purchasing these items licenses them to behave in morally transgressive ways (Mazar & Zhong, 2010).

Among study participants who were committed to the goal of a green identity, Longoni et al. (2014) investigated the subsequent behavior of people who were acknowledged as "green." In their study, participants utilized an online shopping platform that provided them with green stamps as a validation of a green purchase.

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When people made purchases that were acknowledged as "green" they were less likely to subsequently recycle than those who weren't acknowledged as "green" after they made purchases. Those that received the "green" validation had fulfilled their goal of a maintaining a green identity, which led them to a state of completion and therefore reduced their subsequent "green" behavior. Those that did not receive the validation subsequently recycled more because they were still striving to achieve the goal of a green identity (Longoni et al., 2014). Negative spillover is illustrated by the reduction of green behavior after being acknowledged as "green."

Meijers et al. (2015) studied attendees of a holiday charity event to assess the effect of charitable donation on subsequent PEB. After making a monetary donation at the charity event, people reported that they were less likely to engage in pro-environmental behavior, while those that did not donate money at the event reported that they were more likely to behave pro-environmentally. Donating to charity licensed people to report that they would behave less environmentally friendly (Meijers et al., 2015).

Recycling is a PEB and elicits feelings of pride and positive environmental identity (Ma et al., 2019). Recycling eliminates the negative feelings associated with waste, and the positive feelings people generate from recycling license them to use more resources (Ma et al., 2019). When the option to recycle paper is available, people use more paper (Catlin & Wang, 2013). When people recycle, which is both normalized and an "easy" PEB, they may feel that they have done their part and either remain stagnant in that level of PEB or actually engage in environmentally *unfriendly* behavior

(Thomas & Sharp, 2013).While moral licensing is not always the rule, it is likely to occur within pro-environmental behavior (Dütschke et al., 2018).

Moral licensing from pro-environmental behavior can result in negative spillover. People can be morally licensed by recycling, donating to charity, or making "green" consumption choices. Princen et al. (2002) explain that on the occasion that consumption is considered in a sustainability context, it often takes the form of a "moral imperative to consume recycled or recyclable products" (pg 2). Considering the literature, it is possible that the pro-environmental behavior of donating used clothing as a method of recycling morally licenses people to consume more new clothing. This research examines the possibility that the negative spillover from donating clothing is the subsequent purchase of new clothing.

Fashion Engagement, Fast Fashion & Recycling

The following section will define fashion, fashion engagement, and fast fashion. Fashion is defined as clothing that extends beyond utilitarian purposes; it is a form of self-expression and expresses lifestyle and values. Fashion fulfills emotional needs by expressing personality (Gwozdz, 2013). Fashion is a clothing style that is broadly accepted by a group of people and a given fashion can maintain popularity for weeks to years (Joung, 2014). *Fashion orientation* is defined by the opinions, attitudes and beliefs and individual has about fashion products (Belleau & Nowlin, 2001) and includes an individual's fashion leadership, fashion interest and how much they value being well dressed (Gutman & Mills, 1982). For the purposes of this study, "fashion engagement" includes fashion consumption and fashion orientation.

Fast Fashion

Fast fashion is cheap, trendy clothing that is produced at an unsustainable rate. Fast fashion has changed the nature of fashion consumption over the past decade; the six-month turnaround time for consumer fashion production of the past is now only a couple of weeks (Joy et al., 2012; McNeill & Moore, 2015). Historically, there have been two fashion seasons a year; one season for cool weather and one season for warm weather. Today, there are 52 fashion seasons per year with new styles entering stores every week. The world now consumes 80 billion new clothing items per year; a 400% increase in clothing consumption since the 1990's (Ozdamar-Ertekin, 2017). The speed at which clothing is purchased and discarded makes the trip of a T-shirt from the cutting room floor to the landfill faster than ever before. (Claudio, 2007).

Mass communication and social media provides consumers instant access to popular culture and celebrity style which influences consumer demand for new fashion trends. Fast fashion producers keep up with consumer demand for constantly changing trends through quick manufacturing and the production of a variety of styles inspired by catwalk fashion shows and consumer cues (Barnes & Lea-Greenwood, 2006; Tokatli, 2007). To keep up with speed and a competitively low price point, fast fashion retailers sell apparel that is made to be worn no more than 10 times due to poor materials and manufacturing quality; after 10 washes the item is considered disposable (McAfee et al., 2004; Morgan & Birtwistle, 2009).

Due to fast fashion's dependence on producing cheap clothing, output of new styles, and inherent disposability, fast fashion consumption is the focus of this research. Because young female consumers in their teens and twenties are the primary

consumers of fast fashion (Mintel, 2007; Morgan & Birtwistle, 2009), this research will be targeted at female undergraduate students.

Clothing Recycling

An individual's interest in fashion will have an impact on how much new clothing they consume. People who are more fashion sensitive dispose of more clothing (Lang et al., 2013). Weber et al. (2017) measured the individual "fashion index" of study participants, and found that people who score higher on a fashion index scale dispose of more clothing than those with a lower fashion index score, and people across the spectrum of the fashion index are willing to recycle unwanted clothing through donation. Joy et al. (2012) report:

Leticia, a Hong Kong office worker, did, however, have guilt pangs: "I fill up big garbage bags of things and then throw them away. It is a lot of wasted goods—some of which I may not even have worn more than once. I do feel guilty, but I have a small apartment and I cannot keep them." She rationalizes her actions on the basis of limited space, but shows no attempt to reducing her shopping sprees. Alexa, a Hong Kong teacher, took specific steps to assuage her guilt: "I give all my clothes to my maid...she is always in fashion after I've had my fill with these clothes. But at least I don't feel guilty. It is recycling!" (283-284).

It is clear that fashion interest is important to measure within the scope of this research; people with a higher level of fashion interest discard more clothing overall, and there is a general acceptance of clothing donation as a recycling method. Therefore, it is likely that people who are engaged in fashion donate and buy more clothing than those who are not.

Recycling is a pro-environmental behavior and can morally license people to consume more resources. Altruistic behavior like donating to charity can morally license people to subsequently behave morally transgressive. Individuals who are fashion oriented purchase more clothing and dispose of more clothing than those who do not. This research will investigate the relationship between used clothing donating and new clothing consumption, with an examination of how pro-environmental behavior, fashion engagement and moral licensing influence that relationship.

Chapter 2: Methods

This study uses quantitative methods. Quantitative research is important because it helps to create an understanding of the social world by using data. It allows the researcher to estimate frequencies, patterns and relationships of phenomenon within the sample population. Within the field of environmental studies, quantitative methods are useful in that they can illustrate a broad picture of the social context of climate change. How do human patterns that contribute to the further degradation of the environment work socially and psychologically? This type of research can illustrate patterns and trends that warrant a closer examination.

Objectives

This study uses a quantitative approach to examine relationships between used clothing donation and new clothing consumption. Part one of this research looks for a quantifiable relationship between quantity of clothing purchased and quantity of clothing donated. Part two takes this one step further and examines whether the relationship between fashion consumption and quantity of clothing donated is different at various levels of "recycle guilt." This study calls for quantitative methods because it is seeking to test the theories that support the hypothesis that there is an association between quantity of clothing purchased and donated. The purpose of this study is to discover basic consumptive patterns and apply one of many theoretical explanations to that pattern. This study is a preliminary exploration of one aspect of the overconsumption of clothing.

Study Area

Undergraduate students at Western Washington University of typical college ages were the subjects for this research. Traditional college-aged students have been the target of similar studies. This age group is sensitive to fashion and changing trends. Fast fashion brands specifically market to this age group. The survey was conducted during summer quarter, so is limited to students taking classes during that time. These participants self-selected to participated in this study and may have attracted a disproportionate number of environmental studies students due to their predisposition to participate in environmentally focused research.

Survey Instrument

The survey consisted of 45 questions, including Likert scale, multiple choice, and open answer. The survey instrument included both adapted measures and original design. Original design was used where no pre-existing instrument could be found. The first section of the survey measured pro-environmental behavior using a Likert scale adapted from Schultz, 2005 (p.451). The scale offered answers from "Never" to "Often" on questions such as, "In the past year, how often have you picked up litter that was not your own?"

Two sections of the survey measured the two parts of a participant's fashion engagement: fashion consumption and fashion orientation. Fashion consumption was measured using a scale adopted from Gwozdz et al., 2013 (p. 25). This scale gathers data on time and money spent on clothing and number of clothing items purchased. An

example of a question from the fashion consumption scale is, "On average, how much money do you spend on clothing each month?" Fashion orientation was measured using a scale adopted from Gutman & Mills, 1982 (pg 72). This scale asked participants to state their level of agreement or disagreement on a Likert scale with statements such as, "It is important to be well dressed."

The fast fashion variable was calculated using a newly designed Likert scale that asked how often participants purchased clothing from a list of fast fashion retailers. These retailers were: H&M, Old Navy, Forever 21, Charlotte Russe, Target, Top Shop and American Apparel. These retailers were chosen based on existing knowledge and general feedback from undergraduate students at the university. Recycle guilt was measured using a Likert scale adopted from Elgaaied, 2012 (p. 372). Questions in this scale pertained to whether someone would feel guilty if they didn't recycle, such as, "I would feel guilty if I did not recycle on a daily basis." Questions pertaining to recycling morals were adopted from Tonglet et. al (2004) and Tanner & Medin (2004) but were not used in the analysis in order to simplify the construct of guilt.

The quantitative variables of clothing purchased and donated were measured on a scale of 1-7. The measurements refer to individual items over a 12-month period. "1" on the scale represents "0" items, while a "7" represents "121+" items. Each additional number added 20 items to the participants score. The "Purchase" variable specifically referred to *new* clothing items, not used. These were newly designed scales.

Age was reduced to a scale of 1-9, beginning with 18 years old, ending in 80+, and included a "prefer not to answer" option. Household and Individual income were

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measured using a scale with steps ranging from $0- $200,000+, and included a "prefer not to answer" option. These were newly designed scales.

Data Collection

The survey was administered online via Qualtrics during the summer 2019 academic quarter at Western Washington University. Instructors teaching summer courses were contacted by email with a description of the research project and a request to post the survey link on their course Canvas pages. The survey link was also shared with different department coordinators who then shared the link among faculty. The link was posted on MyWestern student pages. The survey was open from mid-June to the end of September. The survey was incentivized with the chance for participants to win one of two $25 Amazon giftcards.

Statistical Analysis

Statistical Package for Social Sciences (SPSS) version 26 was used to conduct the statistical analysis. A correlational test was used to measure the association of quantity donated and quantity purchased. The interpretation of the correlation coefficient is based after Cohen's guidelines; a coefficient of .1 is small, .3 is medium, and greater than or equal to .5 is large (1988).

Multiple regression with an interaction was used in the second phase of analysis. This statistical tool is used for assessing how well a dependent variable can be predicted by multiple independent variables. Separate regression analyses were conducted to measure how well pro-environmental behavior, fashion consumption, and recycle guilt predict quantity of clothing donated. An interaction term was used in this

analysis. Interactions, or moderations, measure whether different levels of one independent variable produce a different relationship between another independent variable and a dependent variable. In this context, it was used to test whether the relationship between fashion consumption and donation is different at various levels of pro-environmental behavior, and different at various levels of recycle guilt.

Testing for significance was set at a p-value of less than or equal to .05. This is based on the null-hypothesis testing method. In order to reject the null hypothesis (that there is no relationship), a p-value of less than or equal to .05 must be established. This determines that there is a .05% chance or less of committing a Type 1 error. Type 1 errors occur when a researcher rejects the null hypothesis, but the null hypothesis is in fact, true. This type of statistical testing allows us to assume that the observed relationships are unlikely to have occurred due to random chance.

Z-Scores

This research utilizes z-scores in its analysis. Z-scores standardize data. This allows for individual data points to be measured by their distance from the mean in standard deviation units, based on all results observed with the given measure. A data point that equals the mean value will have a z-score equal to zero. Data points that are above the mean will have positive z-scores, and data points below the mean will have a z-score below zero. This is the method used for calculating percentiles for the SAT or GRE.

Z-scores also allow for combining units of measurement due to their standardized nature. The scales used in this research quantify different units of

measurement such as hours spent shopping, dollars spent on clothing, and items of

clothing purchased. These values were converted to z-scores in order to calculate

scores on scales with more than one unit of measurement.

Chapter 3: Results

The following section illustrates and describes the statistical analysis used on the collected survey data. This section shows the descriptive statistics for the overall data set, the basic correlations among the variables and the regression with interaction results.

Analysis was conducted during fall quarter of 2019. The final overall response number was 904. Not every participant answered every question on the survey, so there is some missing data in the various analyses.

As described in Chapter 3, the variable "Fashion Engagement" was designed as a combination of the variables "Fashion Consumption" and "Fashion Orientation." "Fashion Consumption" relates to quantity of clothing purchased, time spent shopping, and money spent on clothing. "Fashion Orientation" measures the beliefs, opinions and attitudes of fashion and the importance of being well dressed (Belleau & Nowlin, 2001, Gutman & Mills, 1982). The two scales did not have a strong correlation with each other, so combining them to make one variable was not useful. "Fashion Consumption" had stronger reliability than "Fashion Orientation," so "Fashion Consumption" was used in the following analyses and "Fashion Orientation" was not used.

Table 1: *Descriptive Statistics*

Table 1
Descriptive Statistics

Variable	N	Minimum	Maximum	M	SD	α
Pro-environmental Behavior	883	13.00	40.00	31.1416	4.84701	.725
Fashion Consumption (standardized)	895	-1.32	5.61	.0010	.79365	.765
Fast Fashion	880	8.00	27.00	12.6170	3.28300	.623
Purchase	749	1	6	1.29	.722	-
Donate	748	1	7	2.18	1.457	-
Recycle Guilt	892	3.00	12.00	9.7915	2.14806	.899
Age	890	1	9	1.52	.676	-
Household Income	865	1	10	4.10	2.780	-
Individual Income	886	1	8	1.31	.669	-

Table 1 lists the descriptive statistics of each variable used in this analysis. Z-scores were used to standardize the "Fashion Consumption" scale in order to quantify the multiple units of measurement of the scale.

The mean for "Purchase" is 1.29, which falls between "0-20" and "21-40" items purchased in a year. The maximum for that same variable is 6, which equals "101-120" items purchased in the last year. The mean for "Donate" is 2.18, which falls between "21-40" and "41-60" items donated in the last year. The maximum is 7, which equals "121+" items donated in the last year.

The mean for "age" falls between the "18-20" and "21-29" years old ranges. The mean household income of 4.18 falls between "$50k -$74K" and "$74k-$99K" per year. The mean individual income of 1.31 falls between "$0-$9K" and "$10k-$24K."

Figures 5-11 illustrate the frequency of variables listed in Table 1.

Figure 5: *Pro-environmental Behavior Frequency*
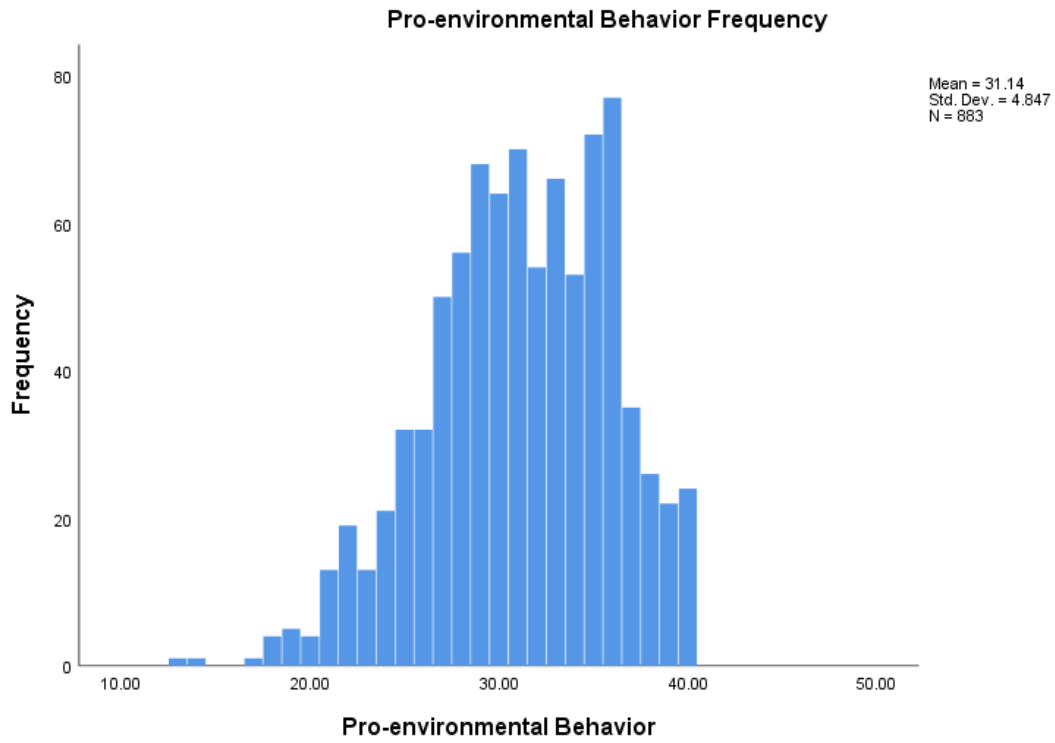
Figure 5 illustrates the frequency of pro-environmental behavior scores ($\alpha = .725$).

Figure 6: *Fashion Consumption Frequency*
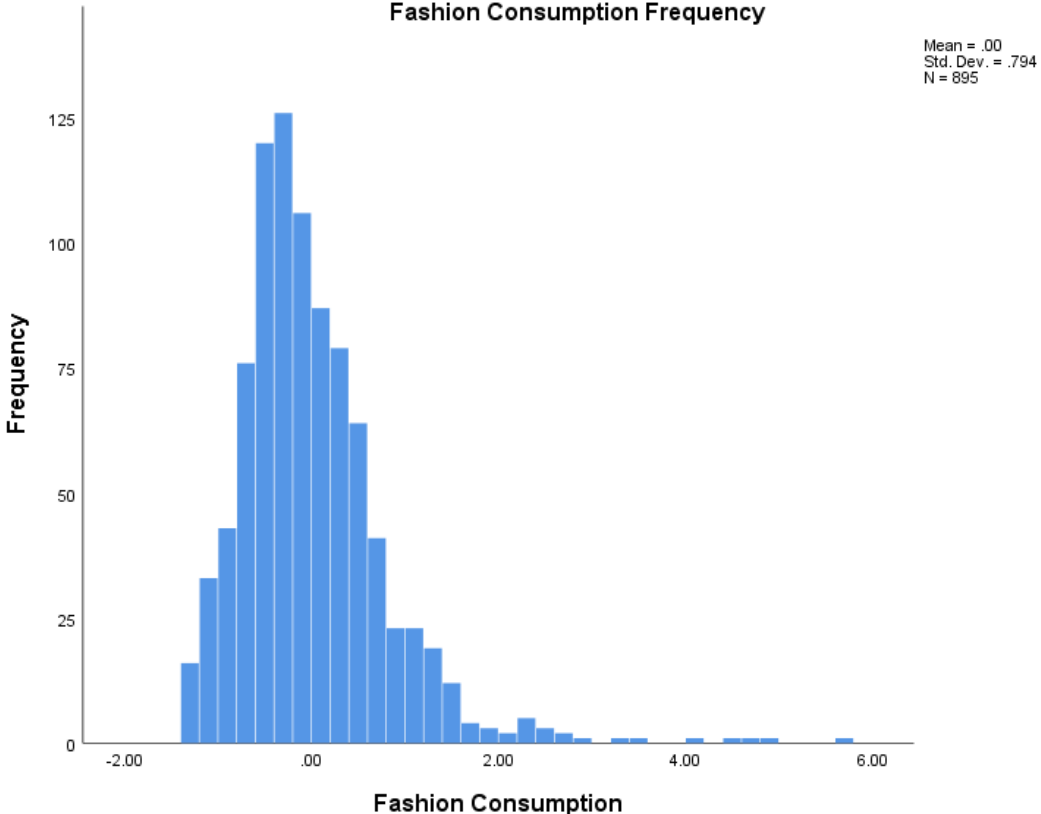
Figure 6 illustrates the frequency of fashion consumption scores ($\alpha = .765$).

Figure 7: *Fast Fashion Frequency*

Fast Fashion Frequency

Mean = 12.62
Std. Dev. = 3.283
N = 880
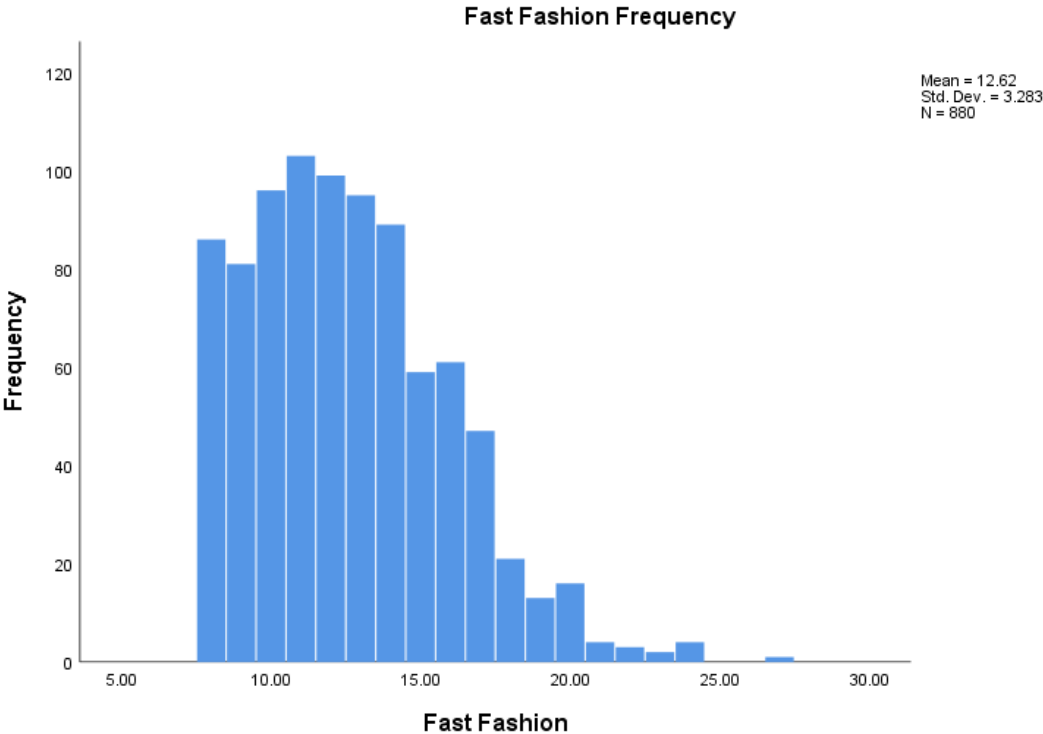
Figure 7 illustrates the frequency of fast fashion purchase ($\alpha = .623$).

Figure 8: *Fast Fashion By Retailer Frequency*

Fast Fashion Frequency by Retailer
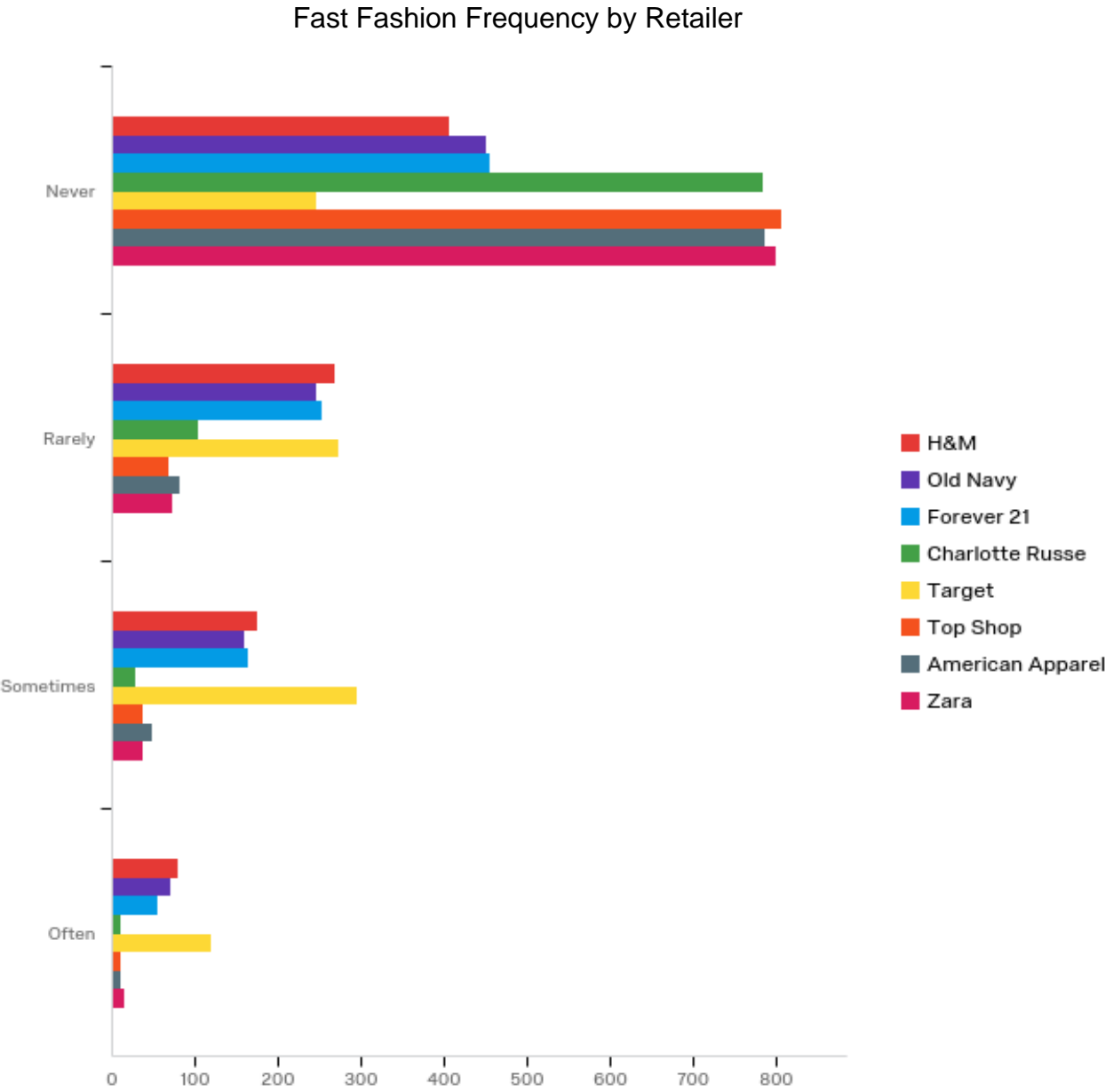
Figure 8 illustrates the frequency of fast fashion purchase by individual fast fashion retailers.

Figure 9: *Purchase Frequency*

Purchase Frequency

Mean = 1.29
Std. Dev. = .722
N = 749
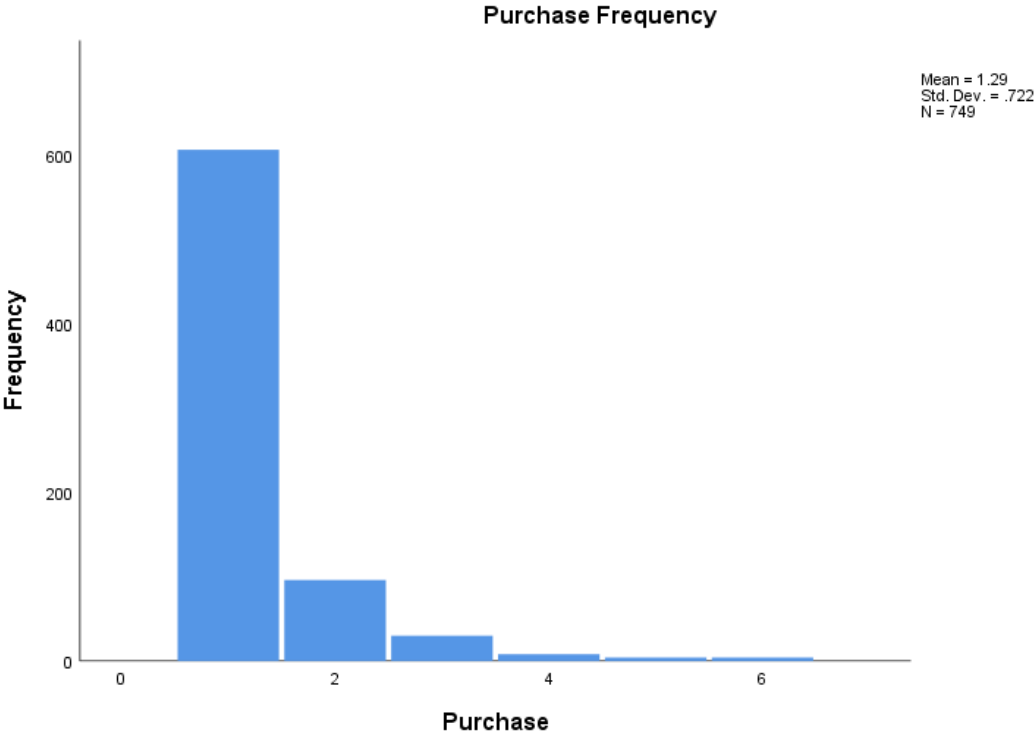
Figure 9 illustrates the frequency of reported new clothing purchased over a 12-month period.

Figure 10: *Donation Frequency*
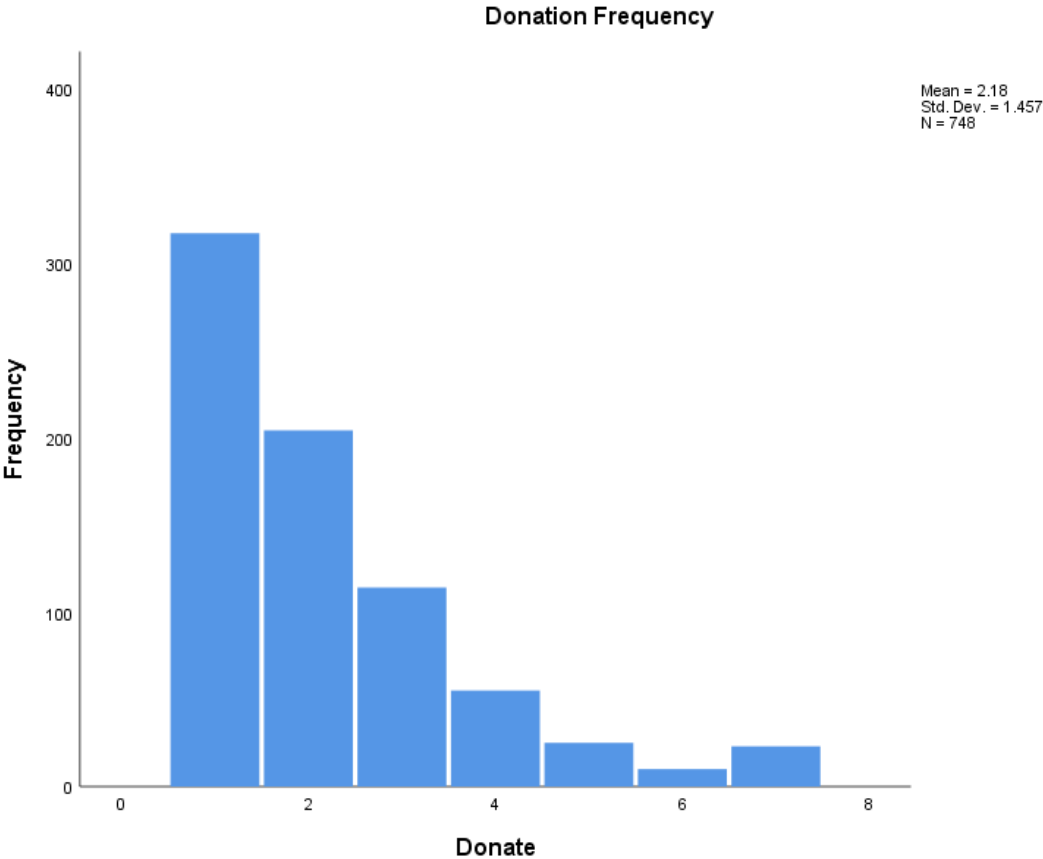
Figure 10 illustrates the frequency of quantity of clothing donated over a 12-month period.

Figure 11: *Recycle Guilt Frequency*
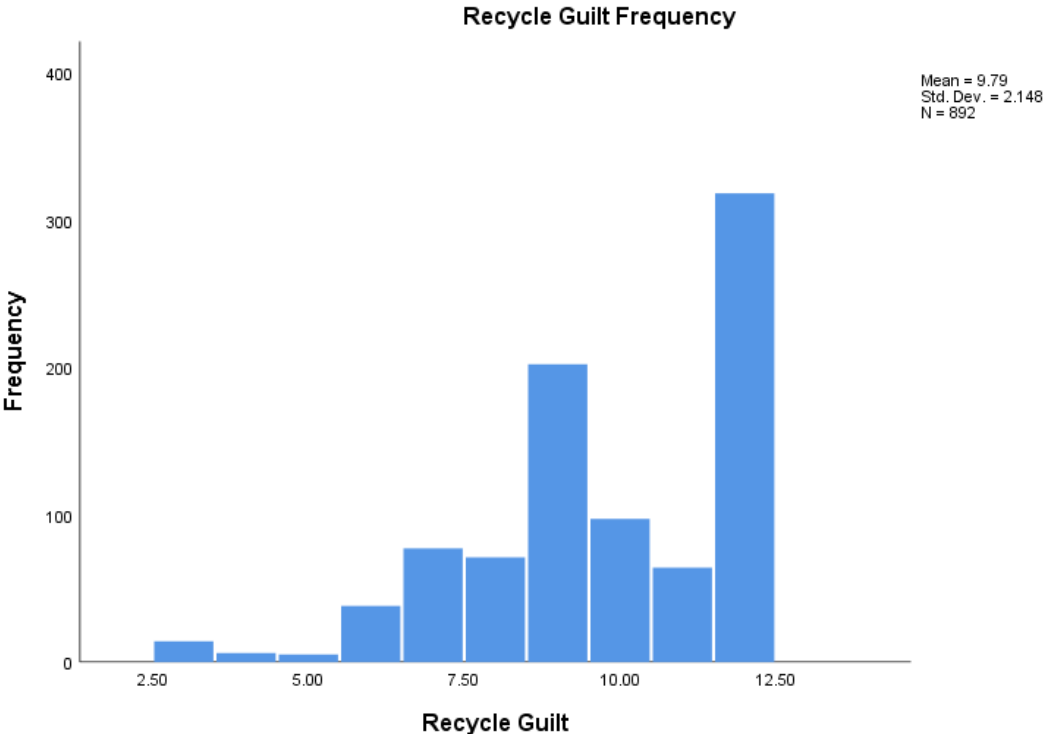
Figure 11 illustrates the frequency of anticipated recycle guilt scores ($\alpha = .899$).

Correlations

Table 2: *Correlations: Donation and Purchase*

Table 2
Correlations: Donation & Purchase

Variable	n	M	SD	*r*
1. Purchase	749	1.29	.722.	-
2. Donate	744	2.18	1.457	.248**

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2 addresses the initial and most basic question of this research, "Is amount of clothing donated associated with amount of new clothing purchased?" There is a subtle, positive and statistically significant (p < .01) correlation of .248 between amount of clothing donated and amount of clothing purchased in a 12-month period in this population sample. Therefore, amount of clothing donated and amount of new clothing purchased are associated.

Figure 12: Purchase & Donation Correlation

Purchase & Donation Correlation

$y=1.52+0.51*x$

Donate (y-axis), *Purchase* (x-axis)
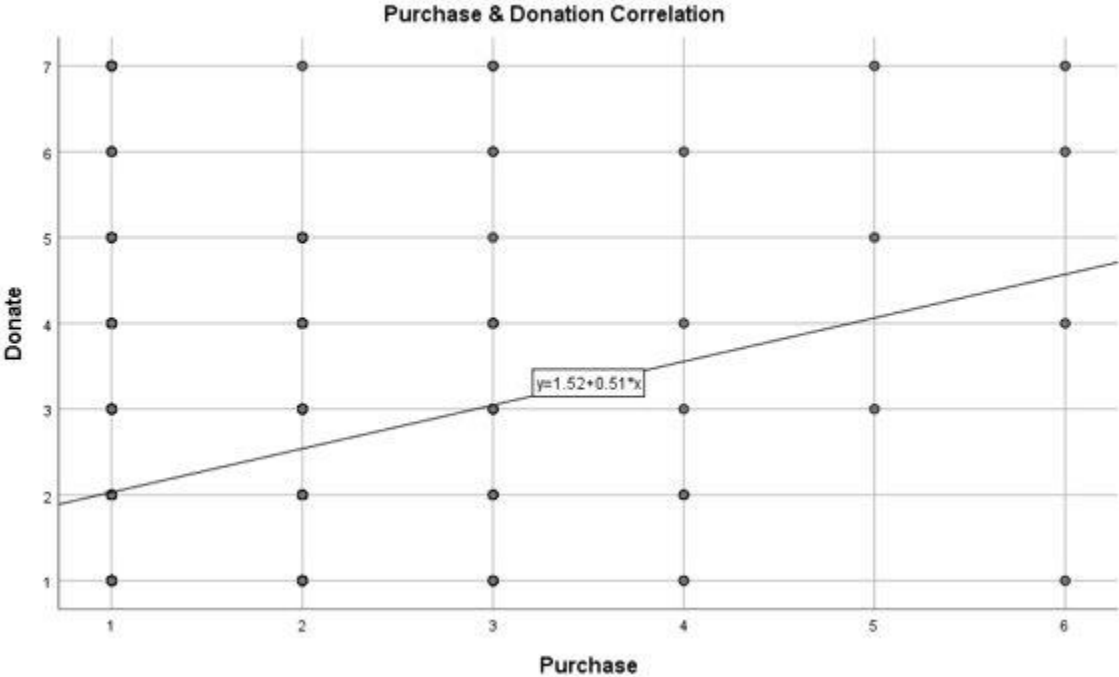
     Figure 12 Scatter plot and regression line illustrating the correlation of reported quantity of clothing donated and quantity of new clothing purchased over a 12-month period.

Table 3: *Correlation of Pro-environmental Behavior and Recycle Guilt*

Table 3
Correlation: Pro-Environmental Behavior and Recycle Guilt

Variable	n	M	SD	*r*
1. PEB	884	31.1416	4.84701.	-
2. Recycle Guilt	876	9.7915	2.14806	.527**

**. Correlation is significant at the 0.01 level (2-tailed).

Both pro-environmental behavior and recycle guilt were used in this analysis as shown in Table 3. The correlation of .527 (p < .01) suggests that while pro-environmental behavior and recycle guilt have a strong, positive relationship, they are not the same. Those with high PEB may not always have high recycle guilt, and those with low PEB may not always have low recycle guilt.

Table 4*: Correlations: Fashion Consumption, Purchase, Donation and Fast Fashion*

Table 4

Correlations: Fashion Consumption, Purchase, Donation and Fast Fashion

Variable	n	2	3	4
1. Fashion Consumption	895	.467**	.292**	.291**
2. Purchase	749	-	.248**	.213**
3. Donate	748	-	-	.156**
4. Fast Fashion	880	-	-	-

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 lists the correlation of fashion consumption score, quantity purchased in a 12-month period, quantity donated in a 12-month period, and fast fashion score. There is a subtle, positive correlation of .213 ($p < .01$) between quantity purchased and fast fashion score, and a moderate, positive correlation of .291 ($p < .01$) between fashion consumption and fast fashion score. There is strong, positive correlation of .467 ($p < .01$) between fashion consumption score and quantity purchased. There is a moderate, positive correlation of .292 ($p < .01$) between fashion consumption score and

quantity donated. The weak, positive correlation between quantity donated and fast

fashion score is .156 (p < .01).

Regression

Table 5: *Donation predicted from Fashion Consumption, Recycle Guilt with Interaction*

Table 5

Donation predicted from Fashion Consumption, Recycle Guilt with Interaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.319[a]	.102	.098	1.385

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.731	3	53.577	27.949	.000[b]
	Residual	1422.370	742	1.917		
	Total	1583.101	745			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.168	.051		42.712	.000
	Fashion Consumption	.553	.064	.310	8.690	.000
	Recycle Guilt	.076	.024	.112	3.204	.001
	Recycle Guilt X Fashion Consumption	.054	.027	.071	1.984	.048

Table 5 shows the analysis of fashion consumption and recycle guilt predicting quantity donated with an added interaction term. Data were centered for the interaction analysis. The overall regression equation is significant $F (3, 742) = 27.949$, $p < .001$ with an R2 of .102. The participants' predicted number of clothing items donated over a 12-month period is 2.168 + .553(Fashion Consumption) + .076(Recycle Guilt) + .054 (Recycle Guilt) X (Fashion Consumption). The regression explains an overall variance of 10.2% and the interaction term is significant ($p < .05$). Therefore, the relationship between fashion consumption and donation changes at different levels of recycle guilt. Figure 13 illustrates this moderated relationship.

Figure 13: *Recycle Guilt Moderates the Donation & Fashion Consumption Relationship*
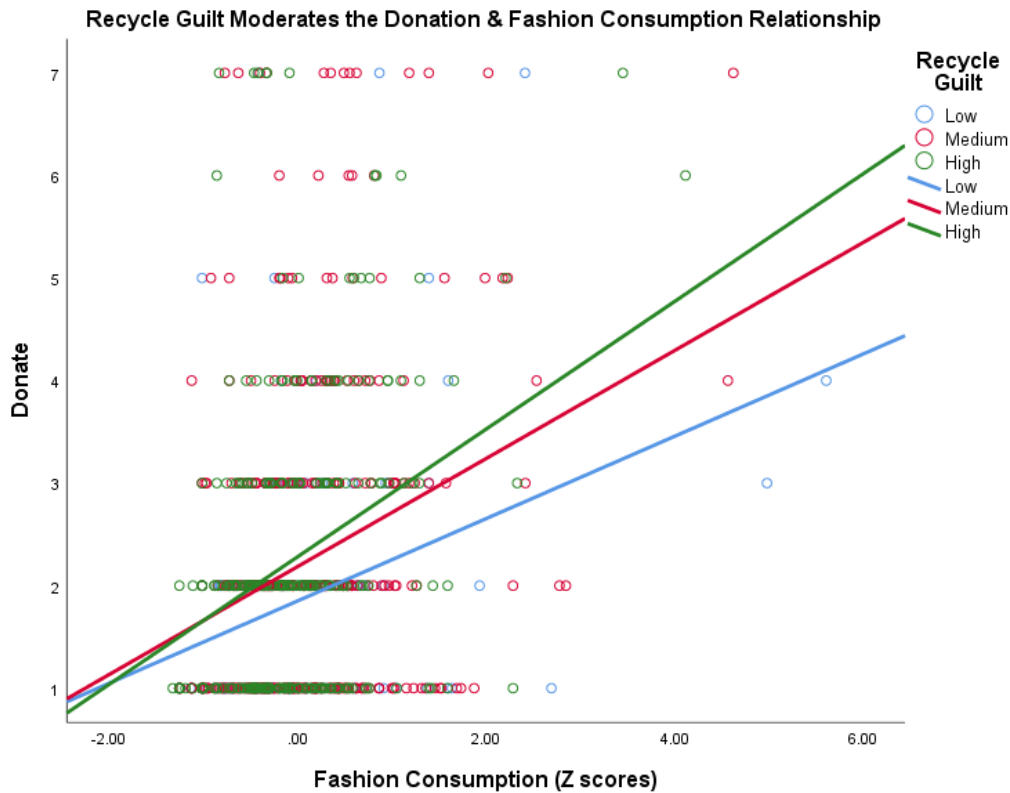
Figure 13 is an illustration of the moderation effect that "Recycle Guilt" has on the

relationship between "Fashion Consumption" and "Donation." The graph is for

illustrative purposes only as the analysis was conducted with "Recycle Guilt" as a

continuous variable. For Figure 13, "Recycle Guilt" was divided into 3 groups: Low,

Medium, and High levels of recycle guilt. The "Low" group is all the data that were one

standard deviation or more below the mean value, the "Medium" group is all the data

that was within or equal to one standard deviation below and one standard deviation

above the mean value, and the "High" group is everything higher than one standard

deviation above the mean value. The graph illustrates that people with low recycle guilt

are predicted to have a weaker relationship between fashion consumption and donation,

while people with high recycle guilt are predicted to have a stronger relationship between fashion consumption and donation.

The results of this research indicate that there is a significant, positive correlation between quantity of clothing donated and quantity of new clothing purchased. Additionally, this research predicts that the relationship between fashion consumption score and quantity of clothing donated over a 12-month period is moderated by recycle guilt. People who anticipate experiencing more guilt from not recycling are predicted to have a stronger relationship between fashion consumption and quantity of clothing donated.

Table 6: *Donation predicted from PEB, Fashion Consumption, and Interaction*

Table 6

Donation predicted from PEB, Fashion Consumption and Interaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.096	.092	1.399

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	150.893	3	50.298	25.693	.000[b]
	Residual	1427.126	729	1.958		
	Total	1578.019	732			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.171	.052		41.917	.000
	Fashion Consumption	.533	.063	.298	8.428	.000
	PEB	.029	.011	.095	2.686	.007
	PEB X Fashion Consumption	.013	.013	.036	1.029	.304

A multiple regression analysis predicting quantity of clothing donated from pro-environmental behavior and fashion consumption with an interaction term was conducted, as shown in Table 6. The overall regression is significant $F(3, 729) = 25.693$, $p < .001$ and an R2 of .096. The overall regression explains 9.6% of the variance. The interaction term was not significant, therefore the predicted relationship between donation and fashion consumption is not moderated by pro-environmental behavior.

The lack of statistical significance found in the relationship between fashion consumption and donation with PEB as a moderator is still relevant to the overall findings of this research. The difference between the statistically significant moderator "recycle guilt" and the non–significant moderator "PEB" will be discussed in the following chapters.

Raw data from this research will remain on file with researcher as per IRB requirement.

Chapter 4: Discussion

The purpose of this research was twofold: to measure the relationship between quantity of clothing donated and quantity of new clothing purchased, and to investigate the influence of moral licensing on the relationship between fashion consumption and used clothing donation. The following chapter will discuss the results presented in chapter 4 by addressing limitations of and recommended adjustments to this specific study.

Discussion

Undergraduate students at Western Washington University were the target demographic of this research. College students are commonly used for research related to fashion. This is because the predominant age group of this demographic is specifically marketed to by the fashion industry. This demographic is sensitive to changing fashion trends and are often at the forefront of the newest clothing styles.

College students tend to come from privileged backgrounds with economic stability, which is evident in the average reported annual household income of $75,000. On the other hand, the average reported annual individual income was significantly lower at $10,000, which indicates that they may have less buying power than people who are out of school and able to work full time. This study did not include any questions on who pays for a participants' clothing (the individual or their family) so the results of this study have a limited application outside of the college environment. The participants' ability to purchase new clothing may not represent any population outside of undergraduate students. This study is also limited to understanding patterns of

students at WWU due to the unknown and unique characteristics of each undergraduate educational institution. Participants self-selected to participate in this study which created unknown bias in study results. +

Additionally, this study did not take in to account the academic departments that each student was part of. It is likely that this study attracted many students from the environmental studies department because of predisposed interest in environmental topics, which could have an impact on their responses to questions related to pro-environmental behavior and recycle guilt. This study also did not consider the relationship between pro-environmental behavior and amount of used clothing purchase, and it is possible that this group purchases more used clothing than other groups.

Fashion Consumption & Fashion Orientation

The initial research design was such that the "Fashion Consumption" and "Fashion Orientation" scales would be combined as a single scale to measure "Fashion Engagement." After completing the research and conducting preliminary analyses, it was clear that the two scales were not correlated enough to be combined in to one accurate scale. "Fashion Consumption" had a higher reliability than "Fashion Orientation," which is what determined which scale would be used for the rest of the analysis.

It is likely that the two scales didn't correlate because being oriented towards fashion doesn't necessarily mean that you purchase a lot of clothing. It is very possible that people with a high level of fashion orientation are focused on quality over quantity and have an awareness of the value of clothing. A high score on the fashion

consumption scale implies that the participant purchases a high quantity of clothing, which may or may not have anything to do with quality of purchased items. In retrospect, the behavior of participants who score high on these scales could be a future study on its own.

The low correlation between the fashion consumption and fashion orientation scales could also be due to how different people prioritize the different elements of those scales. This could be due to numerous socio-economic and cultural factors that are beyond the scope of this study. For example, someone may score high on the fashion orientation scale's question on the importance of being well dressed but may score low on the fashion consumption scale's question on amount of money spent on clothing.

Pro-environmental Behavior

Pro-environmental behavior was not found to be a significant moderator of the relationship between fashion consumption and quantity donated. This means there is no evidence to predict that the relationship between fashion consumption and quantity donated is different at different levels of PEB. It is notable that while PEB was not a significant moderator, recycle guilt was found to be. This finding suggests that PEB and recycle guilt, although related, have a different impact on consumption and disposal patterns.

Pro-environmental behavior may not have been a significant moderator because high levels of PEB may overcome any moral licensing effect. The environmental commitment and awareness possessed by those with the highest level of PEB may render moral licensing related to clothing donation psychologically irrelevant. People

with high PEB and high clothing donation quantity might not consume clothing in the same patterns as those with moderate or low PEB. Likewise, people with high PEB and a high fashion consumption score may not dispose of clothing at the same rate or may find other, more environmentally conscious uses for their unwanted clothing.

Recycle Guilt & Moral Licensing

There is no established measure for quantifying moral licensing, so a scale was adopted based on the literature. Anticipated recycle guilt was measured and analyzed as one method for quantifying moral licensing. Guilt and guilt alleviation are mechanisms of moral licensing, so questions pertaining to anticipated recycle guilt served as the measure of that mechanism. While anticipated guilt does not directly equate to moral licensing, it is a dominant element of moral licensing theory.

Recycle guilt was found to be a statistically significant moderator of the relationship between fashion consumption and quantity of clothing donated. Therefore, we can predict that the relationship between these two factors is stronger for people with higher levels of recycle guilt. While this finding alone does not prove that people are morally licensed by clothing donation to purchase more new clothing, it establishes that guilt and anticipated guilt impact people's clothing consumption and disposal patterns. This pattern fits with the existing literature on moral licensing and recycling.

Reported Quantities

This study relies on self-reported quantities of new clothing purchased and donated and is subject to social acceptability bias. This type of bias occurs when survey participants provide inaccurate responses in effort to appear socially acceptable. It is

likely that social acceptability bias has occurred within this research in responses to questions related to quantity of clothing items purchased. The mean of quantity of new clothing items purchased in a 12-month period was 1.29 (approximately 0-20 items), and the frequency is illustrated in Figure 12. This amount is implausibly low and has likely been subject to social acceptability bias. Priming participants with questions about pro-environmental behavior, fast fashion and recycling may have instilled a level of guilt related to consumption, which could have impacted the amount of new clothing they were willing to report that they purchased.

Additionally, it is difficult to calculate the true relationships between quantity purchased and donated because it is likely that survey participants do not recall the exact amount of clothing they purchased or donated in the last 12 months. It is also possible that survey participants under reported the amount of new clothing purchased because of nature of the survey.

Other issues related to quantities were found in the units that study participants chose to report amount of clothing donated. Part of this survey asked for quantity donated and purchased during the past 30 and 90 days and was in an open answer format (see Appendix 1). Some participants stated amount of clothing donated by number of "garbage bags" or large ranges. These data points were omitted from the analyses, and only the 12-month survey questions that had multiple choice quantity options were used. These omitted data would have been useful in measuring the relationship between clothing donation and purchase over the last 30 days and 90 days, rather than only 12 months. The shorter time span would have allowed participants to give a more accurate account of quantities purchased and donated.

The survey questions that recorded amount of clothing purchased and donated over 12 months also created loss of accuracy. The provided ranges forced the data into categorical rather than continuous measurements, and much of the range in responses was likely lost in the choice between "0-20" and "21-40" items of clothing. In retrospect, a scale that allowed for continuous, numerical responses from 0-120 on quantity of clothing purchased and consumed would have generated more precision and accuracy.

Chapter 5: Conclusion

Applications

This study contributes to the literature that supports moral licensing theory and questions the role of recycling in overconsumption. The findings from this study establish a positive correlation between quantity of clothing donated and quantity purchased, and that guilt may strengthen the relationship between fashion consumption and clothing donation. While this is a preliminary study, the relationships found in this study can be applied to understanding one mechanism of the overconsumption of clothing.

The possibility that clothing donation can relieve some of the guilt from overconsumption of clothing, and that guilt alleviation may allow for continuous new clothing purchase has practical implications and invites a further examination of textile recycling infrastructure and methods. Large domestic secondhand clothing retailers such as Goodwill and Value Village often market to potential clothing donors that making the donation is "green" and "sustainable." This is evident in Value Village's "Rethink, Reuse" campaign that highlights the environmental benefits of donating clothing to and purchasing clothing from their stores. While it is undoubtedly more environmentally friendly to purchase used clothing and donate unwanted clothing rather than throw it away, it is not a solution. An excess of used clothing due to overconsumption is what generates over $1 billion net income annually for Value Village, the largest for-profit thrift store in the world (Herzog, 2017). The industry relies on the overconsumption of clothing in order to accumulate merchandise as part of its

business model. The environmentally friendly marketing strategy used by Value Village is in effect, greenwashing. The findings of this research further support the evidence of this dynamic.

If environmental sustainability is the goal of textile recycling, the finding that there is a positive association between clothing purchase and donation, and that guilt serves as a moderating mechanism between fashion consumption and donation, highlights the need to address the dominant textile recycling model. Educating consumers on what happens to their clothing after they donate it is essential, and some textile recycling organizations have already taken on similar initiatives. For example, Ragfinery, a non-profit in Bellingham, WA, has recently begun the practice of refusing donations of clothing that they cannot use in their store. This is a model that could be replicated elsewhere and become a catalyst for changing how people consume clothing.

Future Research and Recommendations

This research is a preliminary study that has established a positive correlation between amount of clothing purchased and amount of clothing consumed. It has also established that anticipated recycle guilt influences the relationship between fashion consumption and quantity of clothing donated. This research has generated many applications and future research recommendations. While this was not a study that documented direct cause and effect relationships, the relationships warrant further research and can be applied to examining existing patterns of fast fashion and overconsumption.

Fashion Orientation

Fashion engagement as a construct was part of this study's original design and was a combination of established fashion orientation and fashion consumption scales. The weak correlation between fashion orientation and fashion consumption generates questions about the differences between the two constructs.

It is likely that having a high fashion orientation score is different than a high fashion consumption score because of the values the two constructs measure. If a study participant has a high fashion orientation score, they may value fashion more than a disposable commodity. This person may not consume fast fashion at the rate that someone with a high fashion consumption score does, because they are more aware of the low quality and disposability of fast fashion. Additionally, an individual with a high fashion orientation score may not purchase new clothing at the rate that someone with a high consumption score does because they may value their individual clothing items more than someone with a high fashion consumption score does. Therapeutic shopping might also generate a high fashion consumption score but not necessarily a high fashion orientation score.

The dynamic between fashion consumption and fashion orientation is one that would make an engaging and insightful research study. A study that examines the purchase habits of fashion orientation and consumption as two separate groups could generate useful information. This study could use mixed methods; a quantitative study that measures number of clothing items purchased and a quantitative study that uses interviews and focus groups to establish trends in how the two groups think about and value their clothing and fashion.

In addition, a study could be conducted that measured amount of money spent per item for high fashion orientation and high fashion consumption groups. It is possible that people with high fashion orientation scores spend more money for an individual item of clothing, but purchase less items. Similarly, this study could measure time spent between first discovering a fashion item and purchasing the item. People with high fashion consumption scores may have more impulsive buying behavior than high fashion orientation people.

Purchase, Disposal & Fast Fashion

This study relied on survey participant's reported recollection of how much clothing purchased and donated over the past 12 months. As discussed earlier, this may cause certain inaccuracies. A future, more in depth study could ask participants to track donations and purchases as they occur over the course of a year. This would help to eliminate underestimations and generalizations of specific quantities.

Additionally, a study that looked specifically at fast fashion consumers clothing purchase and disposal habits compared to non-fast fashion and used clothing consumers purchase and disposal habits could shed further light on understanding these patterns. It is possible that the nature of fast fashion specifically drives the relationship between consumption and donation, rather than fashion in general. This would help explain the reason that recycle guilt acts as a moderator while PEB does not. It is possible that people with high PEB do not consume fast fashion for environmental reasons.

Pro-environmental Behavior

This research calls to question whether donating clothing is actually a pro-environmental behavior. If clothing donation serves the purpose of providing guilt alleviation and allows continued consumption, does it qualify as PEB? It is possible that it depends on the individual's motivation for donating clothing rather than throwing it away.

A mixed methods study could help to establish trends in the motivations people feel to donate their clothing. A survey could be administered to people as they are making a clothing donation to a charity or thrift store. The survey could ask multiple choice questions on the main reasons participants chose to donate that day. It could specifically ask participants if their choice to donate clothing was environmentally motivated, and if they believed clothing donation was a PEB.

The qualitative element of this study could include interviews of people who have recently donated clothing. These interviews would address similar questions to the survey but allow for a more in depth analysis. It could also ask about seasonal "closet cleanouts" and the function that clothing donation has in that process. The analysis would look for themes in why people donate clothing rather than throw it away, and what actions were taken before making the clothing donation.

Guilt as a motivator for PEB is another necessary area of study. Guilt may be a motivator for some low commitment PEBs, such as recycling, but may not be as effective in motivating high commitment PEBs, such as consumption reduction. The investigation of guilt and its efficacy as a PEB motivator would be of use in generating long term environmental behavior change strategies.

Moral Licensing

Because this study has found that recycle guilt influences clothing consumption and disposal, and the existing literature on consumption and recycling also reflects that, this phenomenon warrants further investigation. A behavioral study of guilt alleviation from unwanted clothing donation would address this relationship more specifically. A quantitative before and after study could be undertaken to measure guilt directly after clothing purchase, closet cleanout, and donation drop off. It is likely that participants would be hesitant to document guilt alleviation from donation in a quantitative survey, so an additional qualitative study would be crucial.

A qualitative study involving interviews of fashion consumers and people donating clothing could further measure trends in why people donate clothing. Open-ended interview questions related to feelings associated with clothing purchase, clothing donation, fashion and closet cleanouts would generate useful insight into the moral licensing effect. These interviews could intentionally avoid priming participants with questions that specifically state the word "guilt," but look or evidence or patterns of that in the analyses.

Conclusion

The objectives of this research were to understand the relationship between moral licensing, used clothing donation, and new clothing consumption, and to determine whether people who are engaged in fashion and pro-environmental behavior donate and purchase more clothing than those who aren't. This research has succeeded in finding a positive correlation between clothing purchase and clothing

donation. It has found that recycle guilt, rather than pro-environmental behavior,

influences the relationship between fashion consumption and clothing donation.

In the existing literature, guilt has been identified as a mechanism of moral

licensing, and moral licensing from recycling has been identified as a driver of

overconsumption. This research contributes to the existing literature through its findings

related to consumption, recycling, and moral licensing.

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Appendix A: *Survey Instrument*

Pro-Environmental Behavior

How often have you done each in the following year?

1. **Looked for ways to reuse things**

   Never   Rarely   Sometimes   Often

2. **Recycled newspapers**

   Never   Rarely   Sometimes   Often

3. **Recycled cans or bottles,**

   Never   Rarely   Sometimes   Often

4. **Encouraged friends or family to recycle**

   Never   Rarely   Sometimes   Often

5. **Purchased products in reusable containers**

   Never   Rarely   Sometimes   Often

6. **Picked up litter that was not your own**

   Never   Rarely   Sometimes   Often

7. **Composted food scraps**

   Never   Rarely   Sometimes   Often

8. **Conserved gasoline by walking or bicycling**

   Never   Rarely   Sometimes   Often

9. **Voted for a candidate who supported environmental issues**

   Never   Rarely   Sometimes   Often

10. **Volunteered time to help an environmental group**

    Never   Rarely   Sometimes   Often

Fashion Orientation

11. **I am confident in my ability to recognize fashion trends**

    Strongly agree   Agree   Disagree   Strongly Disagree

12. **Clothes are important to how I express my individuality**

    Strongly agree   Agree   Disagree   Strongly Disagree

13. **It is important to be well dressed**

    Strongly agree   Agree   Disagree   Strongly Disagree

14. **If you want to get ahead, you have to dress the part**

    Strongly agree   Agree   Disagree   Strongly Disagree

15. **What you think of yourself is reflected by what you wear**

    Strongly agree   Agree   Disagree   Strongly Disagree

16. **I like to shop for clothes at a variety of stores**

    Strongly agree   Agree   Disagree   Strongly Disagree

Fashion Consumption

Questions 17-21 refer to both new and second hand clothing

17. **On average, how many hours do you spend per week shopping (including online shopping)?**

18. **On average, how many articles of clothing do you buy each month?**

19. **On average, how much money do you spend on clothing each month?**

20. **On average, how frequently to go shop for clothing?**

    Daily   Weekly   Monthly   A few times every 6 months

    A few times a year   Less than a few times per year

21. **How do you acquire new clothing? Check all that apply**

    a. **Designer Store**

    b. **Name Brand Clothing Store (ex: Old Navy, American Eagle, GAP)**

    c. **Online Shopping/Mail order**

    d. **Small Boutiques**

    e. **Second Hand**

    f. **Supermarket (ex: Fred Meyer, Target)**

    g. **Swap/free**

    h. **Specialty Store (ex: REI)**

    i. **Department Store (ex: Macy's, Nordstrom)**

Fast Fashion Consumption

22. **How often do you purchase clothing from these retailers?**

    a. **H&M**

    Never Rarely Sometimes Often

    b. **Old Navy**

    Never Rarely Sometimes Often

    c. **Forever 21**

Never Rarely Sometimes Often

    d. **Charlotte Russe**

Never Rarely Sometimes Often

    e. **Target**

Never Rarely Sometimes Often

    f. **Top Shop**

Never Rarely Sometimes Often

    g. **American Apparel**

Never Rarely Sometimes Often

    h. **Zara**

Never Rarely Sometimes Often

i.**Other (Please specify)**

Never Rarely Sometimes Often

Recycle Guilt

23. **I would feel guilty if I did not recycle on a daily basis**

Strongly agree   Agree   Disagree   Strongly Disagree

24. **My conscience would bother me if I did not recycle on a daily basis**

Strongly agree   Agree   Disagree   Strongly Disagree

25. **I would have a bad conscience toward the environment if I did not recycle my waste on a daily basis**

Strongly agree   Agree   Disagree   Strongly Disagree

Recycling Morals 1

26. **I feel I should not waste anything if it could be used again**

Strongly agree   Agree   Disagree   Strongly Disagree

27. **I would feel guilty if I did not recycle my household waste**

Strongly agree   Agree   Disagree   Strongly Disagree

28. **Recycling aligns with my principles**

Strongly agree   Agree   Disagree   Strongly Disagree

29. **Everybody should share the responsibility to recycle household waste**

Strongly agree   Agree   Disagree   Strongly Disagree

Recycle Morals 2

30. **Which describes your feelings about recycling household waste?**

People should only recycle if it leads to benefits that are great enough.

People should do this no matter how small the benefits.

Not recycling is acceptable if it saves people enough money.

31. **How do you think about the morality of recycling household waste?**

People have no obligation to recycle.

People have a moral obligation to recycle even if they do not want to.

People have a moral obligation to recycle, but it is each person's own business.

Textile Consumption vs. Disposal

*For the following questions 30-38, "clothing" refers to apparel and footwear. It **does not** refer to socks, underwear or accessories. Please respond based on clothing that you **used personally,** rather than clothing purchased or sold as gifts or for income purposes (ex: online clothing business).*

32. **How many *new* (not second hand) clothing items have you purchased in the last 30 days?**

33. **How many *new* (not second hand) clothing items have you purchased in the last 90 days?**

34. **What is the approximate amount of *new* (not second hand) clothing items you purchased in the last 12 months?**

    0-20   21-40   41-60   61-80   81-100   101-120   121+

35. **What is the approximate amount of unwanted clothing items you threw in the trash in the last 12 months?**

    0-20   21-40   41-60   61-80   81-100   101-120   121+

36. **How many unwanted clothing items have you donated to charity/thrift store in the last 30 days?**

37. **How many unwanted clothing items have you donated to charity/thrift store in the last 90 days?**

38. **What is the approximate amount of unwanted clothing items you donated to a charity/thrift store in the past 12 months?**

    0-20   21-40   41-60   61-80   81-100   101-120   121+

39. **What is the approximate amount of unwanted clothing items you have sold to a consignment stores, resale shops or online in the past 12 months?**

    0-20   21-40   41-60   61-80   81-100   101-120   121+

40. **What is the approximate amount of unwanted clothing items you traded or gave away to friends in the last 12 months?**

    0-20   21-40   41-60   61-80   81-100   101-120   121+

Demographics

41. **What is your gender?**

    a. **Self report**

    b. **Prefer not to answer**

42. **What is your age?**

    a. **18-20**

    b. **21-29**

    c. **30-39**

    d. **40-49**

    e. **50-59**

    f. **60-60**

    g. **70-79**

    h. **80+**

    i. **Prefer not to answer**

43. **Which of the following best describes your employment status?**

    a. **Employed, working 40 or more hours per week**

    b. **Employed, working 1-39 hours per week**

    c. **Not employed, looking for work**

    d. **Not employed, NOT looking for work**

    e. **Retired**

    f. **Disabled, not able to work**

    g. **Prefer not to answer**

44. **Approximately how much money did your total household combined earn last year?**

    a. **$0-$9,999**

    b. **$10,000- $24,999**

    c. **$25,000-$49, 999**

    d. **$50,000-$74, 999**

    e. **$75,000-$99, 999**

    f. **$100,000- $124,999**

    g. **$125,000- $149, 999**

    h. **$150,000- $199,999**

    i. **$200,000 and up**

    j. **Prefer not to answer**

45. **Approximately how much money did you individually earn last year?**

a. **$0-$9,999**

b. **$10,000- $24,999**

c. **$25,000-$49, 999**

d. **$50,000-$74, 999**

e. **$75,000-$99, 999**

f. **$100,000- $124,999**

g. **$125,000- $149, 999**

h. **$150,000- $199,999**

i. **$200,000 and up**

j. **Prefer not to answer**