

**Predicting U.S. Adolescents' Purchasing of Denim Jeans using Quality Attributes,
Behavioral Characteristics, and Sociodemographics**

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ABSTRACT

Jeans were predominant in American closets until the early 2000s when athleisure grew and passed denim in sales. Currently, athleisure is leading the mindshare of adolescents and has been since spring 2014. Youth have as much discretionary spending as college-students, but youth have fewer to no financial responsibilities. This study sought to establish a predictive model of the factors that contribute to the decision-making process when purchasing denim by 13- to 19-year-old adolescents living in the United States. A conceptual model was developed from the buyer-decision process, quality attributes, behavioral characteristics, and sociodemographics to predict an adolescent's denim purchase intention. An opt-in panel of 460 adolescents living in the United States took a researcher-developed questionnaire online. A hierarchical multiple regression analysis was used to predict the intention to purchase denim jeans using product attributes, sociodemographics, and purchasing behaviors of denim jeans. The statistically significant predictors of intention to purchase denim were intrinsic attributes-appearance of fabric on body, cognitive attributes, if denim had a tighter fit, and if denim was purchased in the last three months. Predictors that decreased respondents' intention to purchase denim jeans included if the price for one pair of denim was increasingly more than \$40 and gender. The findings suggest the factors adolescents consider important when purchasing denim jeans so that manufacturers could adjust production and marketing as needed. Research efforts should include interpersonal and media influences in the conceptual model to predict denim jean purchases. Qualitative research should have youth evaluate product attributes when denim jeans are present.

Keywords: adolescent, survey, denim jeans, buyer-decision process, purchase intention, marketing, quality attributes

Introduction

Denim jeans have been a staple in the American closet since Levi Strauss & Company came out with the first riveted blue jean in 1873 ("The Invention of the Blue Jean," n.d.). Jeans expanded from the working class to the general population during the hippie movement in the 1960s; then in the late 1970s designer jeans became a high-end fashion garment (Montanez,

2019). Not far behind, athletic wear became a fashion statement in the early 1980s, but it was in the early 2000s when athleisure made an impact on the fashion world and in the closets of women (Payer, 2018).

The athleisure trend is replacing denim jeans with leggings, jeggings, and tights in many closets. Piper Jaffray surveys about 6,000 upper income teens, with an average age of 16 years, every six months to

find out their preferences in fashion, movies, food, etc. In 2014, athleisure passed denim as the preference for female teens at 14.4% of the mindshare compared to denim at 12.7%. In spring 2015, athleisure took an even higher set of the female teen mindshare at 15.6% with denim only at 9.1%. In spring 2018, the athletic brands continued to lead the market with Nike (23%) and Adidas (6%) being two of the top five clothing brands and making up 29% of the mindshare for all teens.

The apparel industry is recognizing the discretionary spending Generation Y (Millennials) and Z possess. Lindstrom (2004) stated that these generations are the “richest generations in history” (p. 191). Royer, Jordan, and Harrison (2005) found that the discretionary spending of youth is just as much as college-students, but youth have fewer to no financial responsibilities. On top of this financial freedom, 93% of parents of Gen Z children said their children influenced their family and household spending (as cited in Fromm, 2018). Gen Z is on track to directly spend up to \$143 billion a year. In spring 2017, Piper Jaffray reported teens were spending 19% of their income on clothing. Since that time, Piper Jaffray reported overall teen spending was up 2%, and since fall 2017 it was up 6%. The Statistic Brain Research Institute compiled statistics on teen spending and intentions for spending during 2016. Using the numbers from Statistic Brain and the percentage from Piper Jaffray, teen spending on clothing comes out to be about \$39.3 billion per year. This age group is powerful and profitable in the market (Zollo, 1999); therefore, a better understanding of consumer preferences toward denim jeans from 13- to 19-year-old adolescents would give designers, manufacturers, and marketers the opportunity to create and sell denim jeans that are more appealing and relevant to fashion innovators and early adopters. This change could help take back their market share and mindshare of adolescents 13- to 19-years-old.

A few studies have looked at consumer preferences toward denim

clothing, such as jeans, in Canada (Rahman, 2011, 2012), Shanghai, Bangalore (Jin, Park, & Ryu, 2010; Wu, 2005), India (Binwani, 2014), Australia (Jegethesan, Sneddon, & Soutar, 2012), and South Africa (Herbst & Burger, 2002; Klerk & Lubbe, 2008). Fewer studies have focused on consumer denim preferences within the United States, which is an interesting gap in the research because jeans were first worn by male miners on the west coast of the United States (Binwani, 2014; Shin, Fowler, & Lee, 2013).

Adolescents have had their own subculture since the 1950s when the concept of a “teenager” was accepted. Since this time, teenagers have been recognized as having different values and responsibilities that make them a separate market group to be studied (Brown, 1972). Many of the studies on denim jeans have primarily examined preferences in consumers who are 18 years and older (Feather, Ford, & Herr, 1996; Hull, 1963; Klerk & Lubbe, 2008; Schutz & Phillips, 1976; Swinker & Hines, 2005). Thus, the present state of knowledge about consumer preferences is limited to those purchasing the clothing; however, additional research is necessary to investigate the preferences of 13- to 19-year-old adolescents (Shin et al., 2013).

With new technology shifting the markets, it was important to see what the current consumer preferences are. It was also important to see what would keep teens purchasing “traditional wear,” such as denim. This investigation was undertaken to explore the factors adolescents, ages 13-19, use when deciding to purchase denim. Female teens are normally the innovators and early adopters of fashion (Beaudoin, Lachance, & Robitaille, 2003; Goldsmith, Heitmeyer, & Freiden, 1991). Fashion innovators and early adopters are important in to the fashion world by getting new designs out by word-of-mouth and electronic word-of-mouth (Bush, Bush, Clark, & Bush, 2005; Martínez & Polo, 1996; Phau & Lo, 1996; Wolny, 2013). These become important factors for the denim industry as they are coming back from a sales lull due to the rise of athleisure

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wear. Determining what product attribute discrepancies exist may help the denim industry to change their model and further increase sales.

Since athleisure was launched, there is still a large portion of the mindshare that is preferring athleisure over denim. This has also lowered the overall sales of denim jeans. A better understanding of consumer preferences toward denim jeans from 13- to 19-year-old adolescents will give designers, manufacturers, and marketers the opportunity to create and sell denim jeans that are more appealing and relevant to fashion innovators and early adopters to compete in a changing market.

Purpose and research objective

The purpose of this study was to establish a predictive model of the factors that contribute to the decision-making process when purchasing denim by 13- to 19-year-old adolescents living in the United States. The research objective addressed in this manuscript was to determine what quality attributes, past experience, and sociodemographic characteristics predict intention to purchase denim jeans.

To fulfill the objectives of the study the following hypotheses will be explored: (1) Quality attributes (e.g. intrinsic attributes-appearance of fabric on the body, intrinsic attributes-physical composition, extrinsic attributes, cognitive attributes, denim jean design feature preferences) have no effect on U.S. adolescents' decision-making process when purchasing denim jeans. (2) Previous purchase behavior have no effect on U.S. adolescents' decision-making process when purchasing denim jeans. (3) Sociodemographics have no effect on U.S. adolescents' decision-making process when purchasing denim jeans.

Theoretical framework/Literature review

First introduced by Engel, Kollat, and Blackwell (1968), the buyer-decision process is the five steps consumers go through when deciding on whether or not they should make a purchase. Five steps exist in this process: need recognition,

information search, evaluation of alternatives, purchase decision, and post purchase behavior. The scope of this study only encompassed the first four steps of the buyer-decision process. The entire buyer-decision process is important to marketers, rather than just the purchase decision, because they can better predict the needs of consumers and adjust as needed (Kotler & Armstrong, 2016).

The buyer-decision process begins with consumers recognizing a need. This need can be recognized through internal stimuli (hunger, thirst, general needs, etc.) or external stimuli (peers, parents, advertising, etc. (Kotler & Armstrong, 2016). The decision process can end here; consumers may recognize the need but not want to move forward or may not have the means to move forward (Engel et al., 1968). After the need is recognized, consumers start finding options that are viable. Consumers use cognitive attributes to find information to help them make their purchase decision. They look to personal sources, such as friends and family; commercial sources, such as advertising; public sources, such as mass media and social media; and experiential sources, such as using the product (Engel et al., 1968; Kotler & Armstrong, 2016). Consumers also look to intrinsic and extrinsic attributes they have seen in their past experiences, such as trying on the product in the dressing room (Kotler & Armstrong, 2016). The process may stop at this point because consumers could not or did not want to find alternatives.

After the information has been collected, consumers will evaluate each of the options. They continue to use personal and media influences, as well as product attributes (intrinsic and extrinsic) that are from previous experiences and new experiences to make this decision. They will decide which attribute is the most important to their situation, what they believe about the various brands they have explored, and how satisfied they think they will be with the product (Kotler & Armstrong, 2016). The decision process could stop at this step because consumers are too cautious to move

forward, or none of the options seem to fit the needs of the buyers (Engel et al., 1968). Each of the preceding steps has led to the purchase itself, but there is still not a guarantee of purchase. The influence of friends and family may still affect the final decision, as well as unexpected situations that were not in the consumers' initial analysis (Engel et al., 1968; Kotler & Armstrong, 2016).

Product attributes in clothing

In a seminal publication, Schutz, Cardello, and Winterhalter (2005) separated the construct of clothing comfort into three distinct categories, including intrinsic, extrinsic, and attitudinal/cognitive attributes. Intrinsic and extrinsic product attributes are also commonly used by researchers to assess consumer views on products (Olson & Jacoby, 1972; Rahman, 2011, 2012). Other research implied that attitudinal/cognitive attributes play a role in assessing consumers' view, even if they have not been put in these terms before (Norman, 1976; Rahman, 2011, 2012).

Product attributes are used by manufacturers and consumers to determine if the garment meets industry standards and if the garment meets personal standards (Swinker & Hines, 2005). Abraham (1992) identified 79 attributes consumers use when evaluating clothing and making a purchase, which are further divided into four themes: physical appearance, physical performance, expressive, and extrinsic. Rahman (2011) stated that the product attributes can help a consumer compare products in the decision-making process. Wearers then use each of these attributes to decide what they value out of their clothing; consumers may prefer construction over brand name, country-of-origin over aesthetics, or fit over comfort. If the decision-making process turns out favorable toward the garment, then the decision may result in a purchase. Product attributes are important to continue to be studied because there is not a consensus on what attributes are affecting consumer purchases more than others (Swinker & Hines, 2005).

The definition of intrinsic attributes has been agreed upon by many as the inherent attributes of a garment that cannot be changed without changing the garment itself (Abraham, 1992; Bayraktar et al., 2015; Olson & Jacoby, 1972; Rahman, 2011; Wang & Tang, 2011). Intrinsic attributes include, but are not limited to, fabric (e.g., weight, construction, fiber content), style (e.g., boot cut, skinny jean, flare, etc.), color, pattern, texture, fit, coordinating notions (e.g., buttons, zippers, ribbon, etc.), garment construction (e.g., plaids match, seams well stitched, cut on grain, etc.), and design details (e.g., darts, pleats, gathers, necklines, length, etc.) (Abraham, 1992; Rahman, 2011; Schutz et al., 2005).

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A discrepancy exists between what intrinsic attributes consumers focus on and what intrinsic attributes manufacturers focus on. Consumers generally focus on the aesthetic part of the garment, such as additional style details, if the garment is trendy, and the image it portrays. Manufacturers may shift their focus to those attributes as well, instead of the construction, fabric, and notions. This shift in focus may cause manufacturers to lower their quality standards on the construction of the garment itself (Swinker & Hines, 2005). The challenge facing the industry to use consumer perspectives to measure quality is that consumer perspectives change over time as they become more experienced shoppers (Abraham, 1992). Intrinsic attributes, in relation to extrinsic attributes, are more influential when young consumers are deciding on what garment to purchase (De Long, LaBat, Nelson, Koh, & Kim, 2002; Rahman, 2011; Rahman, Yan, & Liu, 2009; Rahman, Zhu, & Liu, 2008; Swinker & Hines, 2005).

Comfort is an intrinsic attribute that is not normally independent of other product attributes (Abraham, 1992). Clothing comfort is a relative construct to people. Research has been conducted to understand what factors impact the perception of clothing comfort. Comfort also encompasses the same aspects when looking at product

attributes. Schutz et al. (2005) separated the construct of clothing comfort into three distinct categories including intrinsic, extrinsic, and attitudinal/cognitive factors. A person's perception of level of comfort in an article of clothing can be determined by, but is not limited to, the feel of the fabric, the fit, the construction of the garment, the style of the garment, the activity the person is participating in, the person's mood, and other environmental factors (Kamalha, Zeng, Mwasiagi, & Kyatuheire, 2013). Fit is closely related to comfort because if the garment does not conform well to the body (Rahman, 2011), then the wearer may not purchase the item. The physical factors of comfort and fit were the two most influential components when determining if a consumer was satisfied with the article of clothing (Kaplan & Okur, 2008; Morris & Prato, 1981).

Extrinsic attributes are the parts of the product that can be changed without influencing the physical garment (Wang & Tang, 2011). Extrinsic attributes were found to not be as influential as intrinsic attributes, in general (Olsen & Jacoby, 1972) and for denim jeans (Rahman, 2011; Rahman, Jiang, & Liu, 2010). The extrinsic attributes relevant to consumers for a product like denim jeans were branding, store, reputation of the manufacturer, and care instructions (Bayraktar et al., 2015; Olsen & Jacoby, 1972; Rahman, 2011; Schutz et al., 2005; Wu, 2005).

Branding is an effective tool of marketers. In fall 2018, Piper Jaffray reported 45% of teens said brand is important when making a purchase. In contrast, Zollo (1999) said there was a decrease in brand loyalty in apparel among adolescents because of the increase of brand options. Herbst and Burger (2002) also found that adolescents were willing to switch jean brands if the prices become too high. Often brand alone was not a significant product attribute when purchasing denim jeans; but when it was correlated with price, style, quality, and perception of self, the relationships were significantly positive (Rahman, 2011; Wade, 2011). In a survey

done by TRU Teenage Marketing and Lifestyle Study (1997), as cited in Zollo (1999), 62% teens stated they bought the same brand of jeans the last two or three times they went shopping. TRU (1997) also found that 46% of boys found jean brand choice to be important and 33% of girls.

Hansen (1969) was one of the first to propose that clothing evaluation should include the attitudes and the perceptions of the consumers. In the modern age, purchasing clothing has become more than just a physical need (Rahman, 2011). Schutz et al. (2005) suggested that the attitudinal or cognitive factors was the most dynamic category. Cognitive attributes are the interpretations of a product based on knowledge (Hines & Swinker, 2001), emotions (Klerk & Lubbe, 2008), personal values (Hines & O'Neal, 1995), experiential values (Rahman et al., 2010, 2011), social values (Rahman, 2012), psychological values, symbolic meaning (Rahman, 2012; Rahman et al., 2010, 2011), and religious beliefs and values (Harrell, 1986; Pişkin, 2000). Cognitive attributes included elements such as the functionality of the garment, sensory properties of the garment (Rahman, 2012), and influenced by the opinion of the wearer. They indicated that these attitudes are formed through the consumers' previous experiences with similar garments or the brand, peer groups, and advertising efforts by the garment designer. In summary, cognitive attributes were the intangible aspects of clothing evaluation. They are the filter through which the consumer sees intrinsic and extrinsic attributes (Swinker & Hines, 2005).

In the recent past, there has been an increased consumer awareness of sustainability in the fashion industry (Fernando, 2007). Manufacturers and retailers have put a greater focus educating consumers on eco-friendly choices on due to the mass consumption of clothing (Fernando, 2007; Shen, Zheng, Chow, & Chow, 2014). Although adolescents are open to environmentally safe practices, sustainability is not usually a concept they relate with fashion. "Fast-fashion" is the

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antithesis of sustainability as it is meant to be inexpensive and only last as long as the latest trend. This is appealing to young consumers as it imitates high fashion but in their budget (Joy, Sherry, Venkatesh, Wang, & Chan, 2012).

Denim preferences. Fit was the most important attribute to consumers when determining if they like a pair of denim jeans (Morris & Prato, 1981; Rahman, 2011, 2012; Shin et al., 2013; Wu, 2005); consumers relate the fit to the overall quality of the denim jeans and their personal satisfaction (Rahman, 2011). Specific attributes of fit are relative to the current trends. For example, Rahman (2011) found low-rise form-fitting jeans were preferred, while Young (1979) found high-rise and flare jeans were preferred. Other attributes that were found to be important in denim selection were comfort (Morris & Prato, 1981; Rahman, 2011; Upadhyay & Ambavale, 2013), fabric, stitch, style, and color (Rahman, 2011, 2012).

In a study done by Rahman (2012), the visual judgements of denim jeans (color, fabric, and stitch) were associated with price, quality, social appropriateness, and appearance and body image. The tactile judgments of denim jean (hand feel and stretch) were associated with price, quality, and shape retention—physical and psychological comfort. Rahman (2011) also found that denim jeans could be used as a signifier of image.

Previous denim purchase behavior

The “Denim Jeans Industry Market Analysis” (2018) analyzed the denim jeans market and found that 96% of consumers in the U.S. own a pair of jeans. On average, most consumers, in and out of the United States, own five to 10 pairs of jeans (Rahman, 2011; Rahman et al., 2010; Son, 2007; Wang & Tang, 2011; Wu, 2005).

Research has also been done how often denim is worn and what consumers are willing to pay on denim. Most consumers also indicated they wear denim almost every day (Rahman, 2011; Rahman et al., 2010). A denim jean market analysis indicated that 60% of consumers wear denim jeans an average of four days a week (“Denim Jeans Industry Market Analysis,” 2018). The average price of a pair of denim jeans in the United States was \$46.43 (“Denim Jeans Industry Market Analysis,” 2018). Most consumers were willing to spend about \$45 on an item of clothing (Son, 2007) and anywhere from \$6-\$18 on a single pair of denim jeans (Fadiga, 2003; Wu, 2005).

Sociodemographic characteristics and clothing

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Some sociodemographic characteristics affected the consumer decisions that were made but did not affect the views of clothing standards. Influential sociodemographic characteristics included age, gender, education, and ethnicity (Mascarenhas & Higby, 1993; Moschis & Churchill, 1987; Peters, 1989; Shim & Koh, 1997; Yoh, 2005). Ostermeier and Eicher (1966) found that adolescent girls generally agreed on clothing and appearance, regardless of social class.

A visual conceptual model illustrating what was described in the preceding paragraphs is shown in Figure 1. To summarize, from the buyer-decision process, influential quality attributes are used by respondents in the information search and evaluation of alternatives. Each of these factors then assist in predicting purchase intentions of denim jeans for adolescents. Previous denim purchase behavior and sociodemographics also affect denim purchase intention for adolescents. This model informs the research design and the variables.

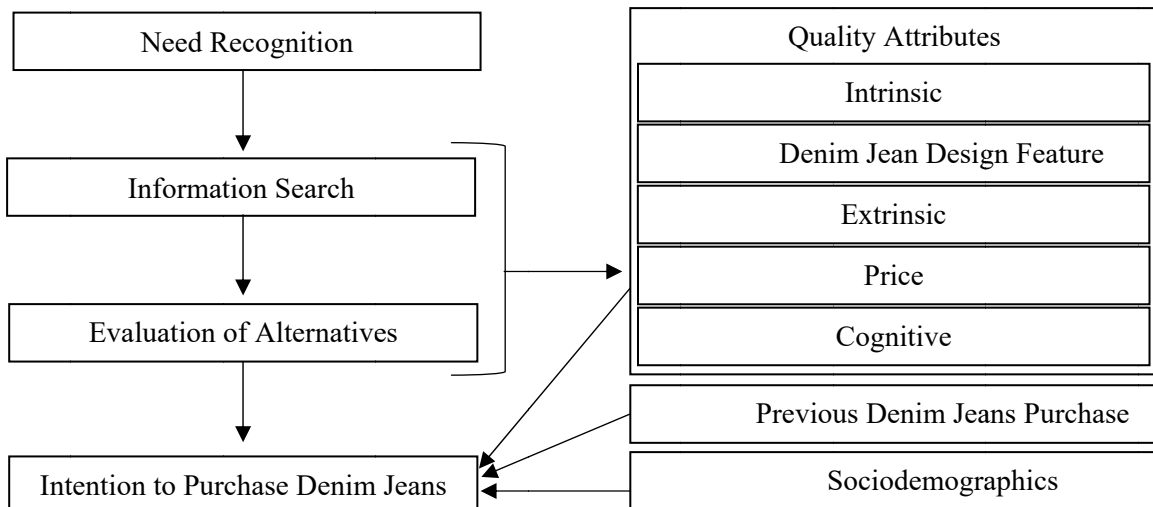


Figure 1. A conceptual model of intent to purchase denim jeans by U.S. adolescents.

Methods

This study used survey methodology to answer the research hypotheses. The population for this study was adolescents ranging in age from 13 to 19 from the United States. The U.S. population for youth between the ages of 10 to 19, as well as the number of factors used in the regression model led the researchers to request 460 usable responses.

A questionnaire created in Qualtrics consisted of five sections. Sections one through three measured quality attribute preferences using a 5-point Likert scale ranging from 1 = not important to 5 = very important. Section four measured purchasing behaviors of denim jeans using multiple choice questions on specific denim features and past purchasing behaviors of denim jeans. This section also measured purchase intentions using a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree, and purchase likelihood using a 5-point Likert scale ranging from 1 = very unlikely to 5 = very likely. Finally, section five asked multiple choice questions to gather sociodemographic information from participants.

Non-probability sampling and an opt-in panel was used to collect the sample for this study. The marketing research and survey company, Centiment, distributed the questionnaire online to the participants. The

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company used representative balancing to ensure the opt-in panel respondents reflected the age and gender of youth from the U.S. census. This addressed exclusion, selection, and nonparticipation bias, all limitations of nonprobability sampling (Baker et al., 2013).

The face and content validity of this study was established by a panel of faculty at [university]. A soft launch of the questionnaire, similar to a pilot study, ensured the questionnaire worked properly and allowed the researchers to revise the instrument before the questionnaire was administered to the actual survey participants. To ensure consistency of Likert-type scale items within the questionnaire, Cronbach's alpha (α) was used. The researchers reported a reliability score of .81 for intrinsic attributes, .73 for extrinsic attributes, and .91 for purchase intentions. The cognitive attributes construct had the lowest reliability with a Cronbach's alpha of .69. The results and conclusions drawn from this construct should be used with caution.

An exploratory factor analysis further determined internal consistency amongst the 19 quality attribute items in the actual survey. The orthogonal rotation returned a component matrix. The items that were cross-loaded were placed with the factor that had the higher indicator loading. Price was

an item that did not load with the four factors and was removed from the extrinsic attributes construct. Seventeen items were kept for the PCA model. These four factors account for 58.35% of the variance, and were labeled as intrinsic attributes-physical composition (29.10% of the variance), intrinsic attributes-appearance of fabric on body (12.95% of the variance), extrinsic attributes (9.94% of variance), and cognitive attributes (6.36% of the variance).

Results

The majority of respondents were male ($n = 228$, 49.6%) and roughly one-third of respondents were 18 years old ($n = 176$, 38.3%). They mainly identified as Christian or Protestant ($n = 145$, 31.5%), white or Caucasian ($n = 235$, 51.1%), and not working for pay outside the home ($n = 287$, 62.4%). Respondents mostly shopped in store ($n = 398$, 86.5%) and paid less than \$100 on clothing per month ($n = 238$, 51.7%) with a credit/debit card ($n = 254$, 55.2%).

A hierarchical multiple regression was run to determine the factors that predict adolescents' intention to purchase denim jeans (see Table 1). The first model used only the quality attributes (intrinsic-physical appearance, intrinsic-appearance of fabric on the body, extrinsic, and cognitive). The model was significant, $F(4, 452) = 28.92$, $p = .000$, and the intrinsic attributes-appearance of fabric on the body subconstruct was identified as a significant predictor ($p = .000$). The R^2 value was .20, which indicated this construct accounted for 19.7% of the variance in intention to purchase.

The second model built on the first model by adding respondents' preferences for specific denim design features (tighter fit, darker color, thicker material, material doesn't matter, plain pockets, regular rise, skinny leg), previous denim purchase

behavior (owns 1-5 pairs of denim jeans, purchased denim 0-3 months ago, spent less than \$40 on one pair of denim jeans), and how respondents pay for clothing (credit card). The second model was also statistically significant, $F = (15, 441) = 14.36$, $p = .000$. The intrinsic attributes-appearance of fabric on the body subconstruct was still a predictor. The addition of the variables in this model did make the cognitive attributes construct significant. The factors of tighter fit ($p = .001$), the purchase of denim jeans less than 3 months ago ($p = .000$), and \$40 or less spent on a pair of denim jeans ($p = .001$) were identified as significant predictors of purchase intention as well. When compared to looser fit and no preference, preference for tighter fit jeans showed a .32 greater intention to purchase denim jeans ($B = .32$). Respondents who had purchased denim less than 3 months ago, compared to those that had never purchased denim or more time had elapsed since purchasing denim, also had a .36 greater intention to purchase denim jeans ($B = .36$). Finally, every one-unit increase for those that spent more than \$40 on a pair of denim jeans estimated a .17 decrease in intention to purchase denim jeans ($B = -.17$). The R^2 value increased from the first model by .12, accounting for an additional 12.4% of the variance in regards to purchase intention.

Finally, the third model included all of the aforementioned factors as well as sociodemographic characteristics (age, male, white or Caucasian, Christian/Protestant, work for pay outside the home, and doing the majority of shopping in store). Model three statistically significantly predicted 34.7% of the variance, $R^2 = .35$, $F(21, 435) = 10.99$, $p = .000$, adjusted $R^2 = .32$. Males were a significant predictor ($p = .013$); males had less intention than females to purchase denim jeans ($B = -.23$).

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Table 1. Hierarchical Multiple Regression Predicting Intention to Purchase Denim Jeans from Quality Attributes, Previous Denim Purchase Behavior, and Sociodemographics

Variable	Intention to Purchase Denim Jeans					
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Constant	1.62		2.18		1.52	
Intrinsic Attributes-Physical Composition	.03	.03	.06	.05	.04	.04
Intrinsic Attributes-Appearance of fabric on body	.43***	.38	.25***	.22	.22***	.20
Extrinsic Attributes	.08	.08	.07	.07	.09	.09
Cognitive Attributes	.07	.09	.07*	.09	.07*	.10
Tighter fit			.32***	.16	.27**	.14
Darker color			-.04	-.02	-.02	-.01
Thicker material			.04	.02	.06	.03
Material doesn't matter			.05	.02	.07	.03
Plain pocket design			.07	.03	.06	.03
Regular rise		J	-.16	.08	-.09	-.05
Skinny leg		T	-.04	-.02	.03	.01
Owens 1-5 pairs of denim jeans		A	-.14	-.07	-.13	-.06
Purchased denim 0-3 months ago		T	.36***	.18	.36***	.18
Spent less than \$40 on one pair of denim jeans		M	-.17***	-.18	-.16***	-.17
Pay for clothing with credit card			.12	.06	.11	.05
Age					.06	.08
Male					-.23*	-.12
White or Caucasian					.04	.02
Christian/Protestant					-.10	-.05
Work for pay outside the home					-.05	-.02
In-store shopping					-.03	-.01
R2	.20		.33		.35	
F	28.92***		14.36***		1.00***	
ΔR^2			.12		.02	
ΔF			7.42		2.06	

Note. N = 456.

*p < .05, **p < .01, *** p < .001

Discussion/Conclusions/Recommendations

The first model yield results to show first hypothesis was rejected. The quality attributes have do have an effect on U.S. adolescents' decision-making process when purchasing denim jeans. In this study, the significant quality attributes were intrinsic attributes-appearance of fabric on the body, cognitive attributes, and tighter fit. These factors were important contributors to respondents as they went through the

information search and evaluation of alternatives in the buyer-decision process.

The intrinsic attributes subconstruct of appearance of fabric on the body was a significant predictor of intention to purchase across all three models. The most important attribute in this subconstruct was "comfort and fit" and was also shown to be a significant predictor of intention to purchase for respondents. In other denim jeans studies, comfort and fit was also rated as a significant predictor across age groups,

genders, and countries (Auty & Elliott, 1998; Binwani, 2014; Herbst & Burger, 2002; Jegethesan et al., 2012; Jin et al., 2010; Morris & Prato, 1981, Rahman, 2011; Rahman, 2012; Rahman et al., 2010; Shin et al., 2013; Upadhyay & Ambavale, 2013; Wu, 2005). As tighter jeans are preferred, in comparison to looser fit and no preference, there is a greater intention to purchase denim jeans ($B = .27$). This further confirmed the finding that fit was important to consumers when selecting denim jeans. While fit is relative to the wearer, tighter fit being preferred could also be seen in leg preference where all but 8.3% (6.3% bootcut, 1.1% flared, 0.9% wide leg) of the study's respondents preferred a straight leg or a leg with some sort of taper.

Cognitive attributes were also found to be a significant positive predictor of intention to purchase denim jeans. Attributes that made up this construct included personal values, morals, religion, and social awareness. The increased consumer awareness of sustainability in the fashion industry could explain the significance of this construct (Fernando, 2007). Cognitive attributes may also be a significant predictor of adolescent denim purchasing because Generation Z wants a cause to stand up for more than past generations. The clothing that they wear can be more than just useful, but also have a story behind it. Significance could also be achieved by the variability in interpretation of the respondents. The attributes in this construct are highly interpretive and influenced by the experiences adolescents have had with denim jeans (i.e. intrinsic and extrinsic attributes) and their sociodemographic situation.

Extrinsic attributes were not found to be a significant predictor in this study. This may be accounted for in previous research that found extrinsic attributes are not as influential as intrinsic attributes (Olsen & Jacoby, 1972; Rahman, 2011; Rahman et al., 2010). Brand was included in the extrinsic attribute construct. Brand may have contributed to the insignificance of this construct because of teen willingness to

switch brands due to the increase of brand options (Fromm, 2018; Zollo, 1999). Brand image may also not be as important to this generation as it has been in the past.

When the second model was added the second hypothesis was rejected. Previous purchase behavior did have an effect on U.S. adolescents' decision-making process when purchasing denim jeans. Significant past purchasing behaviors included if respondents had purchased denim in the last three months and the price of one pair of denim. Respondents that had purchased denim in the last three months showed a positive significant effect on purchase intention. This may be accounted for denim jeans recently being an object of research and purchase. They may have used the denim they just bought as a point of reference when responding to the questionnaire. Also, for every unit of increase on the price denim jeans over \$40, there was a decrease in the likelihood respondents would purchase. This might be due to the limited funds of the respondents and, according to Piper and Jaffray (2018), teens still spend most of their money on food.

Finally, males also showed a significant decrease in intention to purchase denim jeans over their female counterparts. This might be accounted for in that male teenagers spend less time at the mall than females (Maurya & Sharma, 2014; Zollo, 1999). Gender discrepancies could also be significant because of the different ways males and females consume clothing. Female teens are normally the innovators and early adopters of fashion (Beaudoin, Lachance, & Robitaille, 2003; Goldsmith, Heitmeyer, & Freiden, 1991), while males are more influenced by peers in their clothing choice (Maurya & Sharma, 2014).

Implications

This study's findings suggest that manufacturers use the latest trend forecasting reports and studies to know what styles are going to be the most relevant in the coming fashion season. Rahman (2011) found high rise was not preferred because it

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was out of style, while Young (1979) discovered high rise was preferred. This showed that consumer denim preference is subject to the current trends. In this study, regular rise for males and high rise for females were the preferred rise of denim. Continued awareness of trends and fashion movements, will be important for manufactures to capture the younger market. This is because the younger market are often the innovators and want to have something new and different than the general public. Manufacturers should also continue to expand the social awareness and communication with consumers about their sustainable practices. They have the opportunity to educate consumers on sustainable fashion choices to decrease the environmental impact the denim industry has on the environment. Since adolescents found the cognitive attribute to be important when purchasing denim, this education could have an impact on sales. If manufactures were to attach this education to their brand, then brand images may also become important for their consumers. Finally, attaching obvious sustainability could also entice adolescents' to remain loyal to a brand. Finally, intrinsic cues, specifically appearance of the fabric on the body, continue to be more important to adolescent consumers than extrinsic cues. Manufacturers and retailers should focus their production and marketing on comfort and fit, body perception, aesthetics, stretch, and color of the denim, because that is what the consumer sees and notices. But still be aware of the quality their consumer expects out of their garment. This study was looking at mainstream denim. Consumers of high-end denim may value different attributes than those that purchase mainstream denim. Manufacturers need to be aware of these differences that may exist in their consumers. Manufacturers often have high- and low-end lines. If manufacturers are trying to target a mainstream U.S. adolescent, then they probably should not price their denim over \$40.

Areas for future research

Lennon and Fairhurst (1994) suggested that there could be discrepancies in evaluating product attributes if the garment is present at the time of evaluation or not. This study could be repeated with physically present denim jeans as the respondents answer the questions. The study could be modeled after research conducted by Rahman (2012) with a smaller sample size, qualitative methods, and jeans that are physically present, but with a younger age group. A longitudinal study could also be conducted with this research. This would create an understanding of denim preferences as a generation gets older. The study could show if there is a move away from tighter fitting denim, similar to the fit of athleisure wear, as a person ages. Additional research could better determine which specific attributes are influencing intrinsic attributes-appearance of fabric on body and cognitive attributes to be significant predictors of adolescent denim purchasing. Influential factors of this study could also be studied by gender to see if there were significant differences. Each of these are more ambiguous consumer concepts that usually require other attributes to definitively assess their value. Finally, since athleisure wear is what took a portion of the denim market, repeating this study with athleisure wear and comparing the results could be useful.

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