

Sustainable fashion and the older consumer: Attitudes towards organic cotton

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Abstract

The purpose of this study is to improve understanding of organic apparel consumption by focusing on the older consumer. Data were collected with a mail survey of US health and natural foods consumers. Analysis of variance found that older consumers did not have significantly different levels of green self-identity, skepticism towards environmental purchase claims or intention to search for or purchase organic cotton apparel when compared with younger consumers. Further analysis of attitudes toward organic apparel purchases finds that support of organic farming and pro-environmental companies is significantly more important to consumers over 65 than to younger (under 45) consumers. Older consumers also value paying more for organic apparel more than younger consumers even though they report significantly more difficulty in finding organic cotton products. However, the outcome of receiving health benefits or peace of mind from an organic apparel purchase was not more significantly important to any specific age group. The results of this study suggest that older US consumers are an important market for sustainable fashion products but that marketing to older consumers should focus on the broader societal benefits of organic cotton purchases rather than personal benefits.

Key words: Organic, Elderly Consumers, Apparel, Sustainability

Introduction

An important focus point for individuals in developed countries interested in increasing global sustainability has been their role as “green” consumers. Green consumerism is seen by many as one way to use market forces to reduce the environmental impact of global consumption. A significant and successful part of the “green” market has been the market for organically grown agricultural products.

What motivates the organic consumer? The reasons may be varied. Despite the environmental benefits related to organic agriculture, a vast majority (93%) of organic food consumers surveyed are motivated by “health reasons” (i.e. pesticide poisoning) while a minority (30%) cite environmental concern as a reason for organic food purchase (Hutchins & Greenhalgh, 1997). However, another survey of organic food consumers revealed that many have concerns about farming production processes that are broader than pesticide use (Conner, 2004). Many respondents stated they were opposed to corporate-based food production and were interested in supporting “sustainable” agriculture. With demographic shifts and the concentration of wealth, the mature consumer (45+) in more developed regions (i.e., US/Canada and the EU) have enormous power in the market place, including the market for organic products. Understanding the attitudes of the mature consumer toward organic

farming and organic products is therefore an important part of continuing to build the market for organic products.

The market for organic apparel products in the US has grown by fits and starts. Prior to the release of the United States Department of Agriculture (USDA) standard for organic certification in the early 2000s, several brands tried organic cotton product lines with varying and limited success (Imhoff, 1995). Along with the dynamic growth of the organic food industry, the market for organic apparel products has also grown steadily. According to the Organic Trade Association (OTA), a group of US organic producers, manufacturers and retailers, in 2009 organic fibre sales (mainly organic cotton) in the United States reached \$521 million, a growth of 10% over the previous year (OTA, 2011). Organic cotton products are now available at a wide variety of retailers in the US, from Nike to Wal-Mart.

Organic Consumers

Previous research has extensively examined the demographics and motivations of organic food consumer and found that, other than possessing higher levels of education, they are presently not much different from the general population in terms of their demographics (Dimitri & Oberholtzer, 2009). An early meta-analysis of 128 studies of environmental behaviour found no significant relationship between any of the socio-demographics variables and environmental behaviour (Hines, Hungerford, & Tomera, 1987). According to Allen and Kovach (2000), organic food purchasing and consumption is “a paradigmatic case of green consumerism” (p. 222). Looking at a more recent meta-analysis of research on “green” consumers we see that that because environmental concern, and “green” consumption (such as organic food consumption), has become commonplace in Western cultures, socio-demographics may predict levels of environmental knowledge or attitudes, but they do not predict actual “green” behaviour for developed-world consumers (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2002). To many, this suggests that efforts to increase sustainable consumer behaviour do not need to take demographic differences into consideration. However, this previous research did not examine the consumption of organic fashion, and fashion consumption may be influenced by demographics, especially age.

Older Fashion Consumers

Fashion is not food (or recycling cans) and the development and marketing of fashion products is significantly different than food product development and marketing. Researchers in food product development bemoan that “eating preferences and habits’ slow rate of change, together with the consequent consumer aversion to too much novelty in food, constitute a barrier” to constantly introducing new food products (Costa & Jongen, 2006). Fashion products are also tied to the expression of self-identity (Stone, 1962) and even where groups of fashion consumers may purchase almost identical products, an understanding of their needs and motivations is important to develop and market the products successfully. The mature fashion consumer has been studied over the years, as each generational cohort ages, in order to understand the needs of this powerful consumer group. A meta-study of consumers over 65 found that older US apparel consumers are less price sensitive and more fashion conscious than other adult fashion consumers, while spending the same amount (Tongren, 2005). Fashion is important to older women for a variety of reasons; one study

found that fashion involvement increased self-esteem by boosting social participation (Joung & Miller, 2006). Differences between fashion consumers are not limited to spending power and the purpose of shopping. Older consumers are often shopping for different products. For example, a comparison of younger (under 25) and older (over 65) fashion consumers found that the pantsuit is more fashionable to older consumers (Nam et al., 2007). Older consumers are also looking for products with different attributes than those important to younger consumers. The desire for high quality, comfort and good fit was an important difference between baby boomer (40-59) and older (60+) consumers, on the one hand, and younger consumers (under 40), on the other hand, in a study of consumers of fair trade apparel (Littrell, Ma, & Halepete, 2005). A qualitative study of 20 American women over 65 confirmed previous research that found older fashion consumers desire more than high-quality products that fit well, they also desire product that are fashionable (Thomas & Peters, 2009). This study adds however that all these attributes are important to older consumers because, just like younger consumers, their self-identity is strongly connected to fashion (Thomas & Peters, 2009).

As explained in the literature review of a recent dissertation on the “invisible mature female consumer,” there is a substantial gap in the apparel research literature on the fashion needs of older consumers. Mohylsky (2011) conducted a qualitative study with 22 American women over 50 and found that among the concerns these women had about the apparel being marketed to them were that the industry saw them as “matronly, motherly, and frumpy” (p. 94), that it was hard to find clothing that flattered their body but that wasn’t “too old looking” (p. 94) and that the choices available to them were not the “beautiful apparel that was well constructed and made from unique and quality fabric” that they desired to purchase (Mohylsky, 2011, p. 95). The participants in this study expressed confusion about who was buying the clothing being marketed to the mature female consumer, since they were looking for flattering stylish clothes and what was on offer in stores marketing to them was more likely to be a “watered down” version of the style trends (Mohylsky, 2011, p. 99). The concern expressed by the women in this study, that the industry had a preconceived image of how older consumers should look, aligns with the results of a study of fashion merchandising students and their opinion of the appropriate colours for older women (Hedge & Hustvedt, 2011). This study found that students rated the same colours as appropriate for the older woman target market that they had previously selected as “passive,” “inconspicuous” and “delicate” and that these were the same colours (low-saturation neutrals) that pose a perception difficulty for the eye as it ages.

Perhaps because the body of research on the older apparel consumer is small, it does not yet include much exploration of the older organic apparel consumer. A survey of San Francisco consumers found that while organic food consumers tended to be younger, age did not predict willingness to pay for organic apparel products (Wang, 2007). Lin (2009) conducted an intercept survey of 420 Hawaiians, 14% of whom were over the age of 45, to explore the market for organic cotton products in Hawaii. The study found a relationship between the preference for organic food products and organic cotton products and that consumers who preferred organic cotton were more concerned about the environment than those who preferred conventional cotton products. Like Wang (2007), he also found that the preference of Hawaiian consumers for organic cotton over conventional cotton was unrelated to age (Lin,

2009). Neither of these studies included details on differences in attitudes toward organic apparel purchases or organic product attributes based on age group and both studies included relatively few consumers over 65.

Previous research has found that consumers who find organic cotton content salient are motivated by their beliefs about the beneficial outcomes of the purchase, including the outcome of “improving my health or the health of my family” (Hustvedt & Dickson, 2009). Consumers in the segment that used organic cotton content to form their purchase intentions had positive attitudes toward organic and sustainable agriculture and were more concerned about the impact of clothing production on the environment than other consumers. They also preferred to “buy locally” and had a strong self-identity as environmental, organic, and socially responsible consumers (Hustvedt & Dickson, 2009).

The needs of the older fashion consumer have not been adequately explored but they do represent a segment of all markets that is growing in significance. According to the US National Institute on Aging (NIA), the increased lifespan of consumers in almost all countries around the world, with the exception of some parts of Latin America and Africa, means that between 2005 and 2030 there will be a 104% increase in the number of people over the age of 65 (NIA, 2007). In developing countries this increase will be even more rapid as the number of people over 65 will increase by 140% by 2030 (NIA, 2007). The market segment represented by consumers over 65 poses a striking level of wealth in developed countries such as the US. For example, Americans over 65 have an average net worth of more than \$130,00 and together with consumers over 55 they comprise a segment that represents 40% of consumer demand in the US (Branchik, 2010).

The purpose of this study was to explore the attitudes of older American consumers toward organic cotton. If organic fashion products are to gain the same level of market acceptance as organic food products, they must appeal to consumers of all ages. Given the buying power of this growing demographic segment, the older apparel consumer should not be left out of consideration. However, because older fashion consumers have been shown to have age-specific fashion concerns, understanding the goals and attitudes of the older consumer toward their organic apparel purchases is important in the sustainable fashion product development process.

Method

The survey was mailed to 2,905 health and natural food consumers, randomly selected from a national mailing list database firm. This sample was chosen because of the potential connection between interest in health and natural food consumption and organic apparel consumption, given that both are types of “green” consumer behaviour. The sample of adults (18 years or older) was stratified by state population to ensure full national representation. The design and mailing of the 12-page booklet followed the recommendations of Dillman in terms of format and follow up contact (Dillman, 2000).

The first portion of the questionnaire contained a conjoint task designed to elicit consumer evaluations of apparel product attributes relevant to the purchase of organic cotton apparel. Conjoint and cluster analysis were used to create two market segments based on the use of

the organic cotton content attribute. The second section of the survey contained a variety of measures for psychological variables related to sustainability (environmental, organic or socially responsible consumer behaviour, skepticism) as well as behavioural intentions. The analysis of these first two sections is outlined in a previous publication (Hustvedt & Dickson, 2009).

The survey also included 22 items measuring behavioural beliefs and outcome evaluations related to the behavioural beliefs. The behavioural beliefs, covering a wide range of issues related to ethical/environmental consumerism, were measured by asking respondents to rate their agreement (on a 7-point Likert scale) that selected outcomes would result from their purchase of an organic cotton apparel product. The outcome evaluations were measured by asking respondents to rate the importance (1 = very unimportant to 7 = very important) "How important is each of the following to you?" for each of the outcomes suggested in the behavioural beliefs. The final section of the questionnaire included demographic items such as age, gender, household income, education level and number of children at home.

The instrument was shared with industry professionals to determine face validity for any items that had been developed or adapted for this particular study, including the behavioural beliefs and outcomes associated with organic cotton apparel purchases. After receiving approval from the Institutional Review Board for Human Subjects, the instrument was also pre-tested with groups of university students to determine the reliability of the measures included in the instrument and to fine tune the instrument for ease of use by the survey respondents.

Results

The number of returned questionnaires that were at least partially complete was 422 out of 2846 questionnaires that were delivered (response rate of 14.9%). Of the 422 questionnaires, 377 (89.3%) were used to create the organic cotton user segments and were also used for the analysis presented here. This response rate was not as high as those suggested as possible (30%) by Dillman in his book on survey administration (Dillman, 2000). At the very least, the poor response rate may be due to the timing of the survey, as the holiday season would not be a convenient time for respondents to complete a lengthy survey.

Nonresponse and Incomplete Questionnaires

Analysis was conducted to determine if any implications about non-respondents could be gleaned from the survey. Of the returned surveys 136 (5%) were completely blank or blank except for comments. Participants were instructed to return blank surveys to indicate confidentially that they were not interested in participating in the survey and should be removed from the mailing list. Comments included on the blank surveys mainly suggested that the respondents were not interested in the subject of organic cotton or did not feel themselves qualified to participate for some reason.

As suggested by Dillman (2000), an analysis was conducted to compare the first and second wave of respondents in terms of several socio-demographic and psychographic variables in order to better understand the non-respondents. Analysis of Variance (ANOVA) confirmed the

first wave of respondents were significantly more educated than the second wave. This suggests that the topic or format of the survey may have been slightly more appealing to respondents with more education. Chi-square analysis of gender between the two waves suggests that the non-respondents were significantly more male than the respondents. This was not surprising considering the topic of the study was apparel, thus the men who received the study were probably less interested in the topic.

U.S. Health and Natural Foods Consumer Profile

The demographics of survey respondents are summarized in Table 1. Although the random sample purchased included any health and natural foods consumers over the age of 18, the age of the study participants ranged from 25 to 90. When broken down into categories, the majority of respondents fell in the 45 to 64-year age category and the number of respondents over the age of 65 was larger than those under the age of 45.

A comparison of the demographics of the survey respondents with the demographics of the US population shows respondents were somewhat older ($M= 57$ years) than the general population. Approximately 49% of Americans 18 and older were 45 years old and older (U.S. Census Bureau, 2004). When broken down into categories the largest age group in the general population was under 24, with 24 to 44 being the next largest.

The gender of respondents was fairly evenly divided between male (47.9%) and female (49.8%) with 2.4% of respondents declining to specify gender. The percentage of female respondents was similar to the US average of 51.1% in 2004. A majority (77.0%) of respondents did not have children under the age of 18 living in their home. This was somewhat higher than the general population (64.8%) but may be explained by the greater number of older respondents, likely past the age at which they have children living at home.

More than half of respondents did not report having completed a baccalaureate degree. Less than one percent reported not completing high school, while 19% reported high school as their highest level of education completed. Of the approximately 43% of respondents who completed a college degree, 59% had been engaged in graduate education at some point, with 17% of overall respondents reporting a completed graduate degree. The level of education reported by respondents was higher than the national average. Only 27 percent of the general population have completed a bachelor's degree or higher, compared to 43 percent of the sample. Conversely, fewer people in the sample reported a high school diploma as their highest degree (19.2%) compared to 29.5 percent of the general population. Respondents reported receiving a graduate degree at a rate (17.2%) nearly twice the national average (9.9%).

Fourteen percent of respondents declined to answer the questions about income. Of the 361 respondents who answered the question, 35% reported a total before tax household income of \$49,000 or less and 17% reported a total before tax household income of \$100,000 and over. Only 7 respondents (1.9% of all respondents) reported an annual household income of less than \$25,000 in 2004. The largest single income category was those respondents reporting a 2004 annual household income of \$25,000-\$49,000. Far fewer of the respondents in the study reported an income lower than \$50,000 (34.9%) than in the general population (55%). The

percentage of respondents reporting incomes over \$100,000 (16.6%) was very similar to the national average (15%). If the respondents who did not report income are excluded, the percentage of respondents reporting an annual pre-tax income above \$50,000 was around 14% higher than the national average (45.1%).

Table 1 Overall demographic characteristics

Characteristic	<i>f</i>	% frequency	US General Population ^a
Age	405	94.9	
24 and under	0	0.0	34.8
25 to 44	71	16.8	28.8
45 to 64	220	52.1	24.5
65 and over	114	27.0	12.0
Gender	412	97.6	
Male	202	47.9	48.9
Female	210	49.8	51.1
Education	411	96.5	
Less than 9 th grade	3	0.7	6.3
Completed high school (grades 9 through 12)	81	19.2	39.3
1-3 years technical, vocational, or college	145	34.4	27.4
Bachelor's degree	74	17.5	17.2
Some graduate work	35	8.3	-
Completed graduate degree	73	17.3	9.9
Percent high school graduate or higher	408	96.7	83.9
Percent bachelor's degree or higher	182	43.1	27.0
Children under the age of 18	412	97.6	
No	325	77.0	64.8
Yes	87	20.6	35.2
Income	361	85.5	
Less than \$10,000	7	1.7	8.9
\$10,000 to \$24,999	40	9.5	18.6
\$25,000 to \$49,999	100	23.7	27.5
\$50,000 to \$74,999	89	21.1	19.0
\$75,000 to \$99,000	55	13.0	11.1
\$100,000 and over	70	16.6	15.0

^a From US Census Bureau, 2004

Finally, because the sample was stratified by state population, the geographic distribution of the respondents was also examined. The numbers of responses from each geographic region were compared to the number of responses that would be expected based on the number of surveys sent to the region. Fewer responses than expected were received from the northeast (-3.91%) and the South (-1.79%), while more responses than expected came from the Northwest (2.27%) including Alaska, and the Southwest (2.40%) including Hawaii.

Organic Cotton Apparel Market Segments

The survey included a conjoint task designed to measure the salience of various credence attributes (percentage of organic cotton, eco-friendly processing claims, and social responsibility labelling) on consumer likelihood of purchasing organic cotton apparel products. Based on the results of this conjoint task, participants were grouped using cluster analysis into two groups: purchasers who found organic content salient and purchasers who did not (Hustvedt & Dickson, 2009). While this previous study found that these segments of organic cotton users were significantly different in terms of their attitudes, an ANOVA here found that there was no significant difference, in terms of demographic characteristics, between participants who found organic content important for their purchase decision and those who did not consider organic content when choosing a product in the conjoint task (see Table 2).

Table 2 One-way analysis of variance for effects of cluster membership on demographic variables

Variable and Source	Df	SS	MS	F	Sig.
Age					
Between groups	1	290.73	290.73	1.58	n.s.
Within groups	359	66006.03	183.86		
Education					
Between groups	1	5.52	5.52	2.97	n.s.
Within groups	363	673.98	1.86		
Children in the home					
Between groups	1	0.01	0.01	0.03	n.s.
Within groups	364	61.37	0.17		
Income					
Between groups	1	1.59	1.59	0.88	n.s.
Within groups	321	576.21	1.80		

n.s. means not significant

Age Differences in Psychographics and Behavioural Intention

An ANOVA, conducted using a number of psychographic variables, found that the general attitudes or behavioural intentions of older health and natural foods consumers do not differ significantly from those who are younger based on these six variables (see Table 3). (A discussion of the development of the first five variables can be found in Hustvedt & Dickson, 2009.)

The first variable, Environmental Attitudes, measures agreement that organic agriculture is good for the environment and that sustainable agriculture is important. A second variable, Clothing Attitudes, measures agreement that respondents would buy organic or fair trade clothing with the aim of supporting organic farming. Sustainable Self-Identity is a measure of respondents' self-identification as socially responsible, organic or environmental consumers. Participants were asked about the likelihood that they would purchase organic clothing the next time they went shopping for apparel. This variable was called Search Intention to capture the idea that finding organic apparel to complete this intention might require a search. The Purchase Intention measured the participant's likelihood of purchasing organic clothing if they happened to find it the next time they went shopping for apparel.

Table 3 One-way analysis of variance for effects of age groups on psychographic and behavioural intention variables

Variable and Source	Df	SS	MS	F	Sig.
<i>Environmental Attitudes</i>					
Between groups	2	0.21	0.11	0.15	n.s
Within groups	354	245.82	0.69		n.s
<i>Clothing Attitudes</i>					
Between groups	2	2.66	1.33	0.81	n.s
Within groups	355	580.32	1.64		n.s
<i>Sustainable Self-Identity</i>					
Between groups	2	2.01	1.00	0.95	n.s
Within groups	357	303.43	0.85		n.s
<i>Search Intention</i>					
Between groups	2	4.41	2.204	1.019	n.s
Within groups	356	770.08	2.163		n.s
<i>Purchase Intention</i>					
Between groups	2	1.80	0.901	0.56	n.s
Within groups	356	578.39	1.625		n.s
<i>Scepticism</i>					
Between groups	2	0.98	0.49	0.80	n.s
Within groups	355	217.11	0.61		n.s

n.s. means not significant

Scepticism of Environmental Product Claims

The psychographics of the sample also included a 5-item measure of scepticism based on the work of Mohr, Eroglu, and Ellen (1998) who developed and tested a measure of consumer scepticism toward environmental claims in marketing communications.

Their measure included four items measured on 7-point Likert-type scale with good reliability ($\alpha = .79$). One item in their scale, "Because environmental claims are exaggerated, consumers would be better off if such claims on package labels or in advertising were eliminated" was considered double barreled. For this reason, it was split into two items; "Environmental claims on product labels or advertising are exaggerated" and "Consumers would be better off if environmental claims on product labels or in advertising were eliminated." Their items were modified by changing "package labels" to a more general "product labels."

During principal components analysis of the measure of scepticism, all five of the items loaded onto a single factor with a factor loading over .5 (see Table 4). Reliability analysis suggested that the five items reliably measure a single underlying concept based on the Cronbach's alpha of .72. The mean for the resulting variable was 3.83 (SD= .78) on a 7-point Likert scale, indicating that, on average, respondents neither agreed nor disagreed with statements about the credibility of environmental product claims. An ANOVA also showed that the means for Scepticism did not differ significantly between the age groups (see Table 3).

Table 4 Principal components analysis of scepticism

Variable	Item	Factor Loading
<i>Scepticism</i> (Cronbach's alpha = .72 variance explained = 49% Eigenvalue = 2.45)	I do not believe most environmental claims made on product labels or in advertising	0.84
	Most environmental claims on product labels or in advertising are intended to mislead rather than inform consumers	0.82
	Environmental claims made on product labels or in advertising are exaggerated	0.64
	Most environmental claims made on product labels or in advertising are true ^a	0.62
	Consumers would be better off if environmental claims on product labels or in advertising were eliminated	0.54

^a reverse coded

Age Differences in Attitudes Toward Organic Cotton

An ANOVA was also conducted using all 22 of the behavioural beliefs and outcome evaluations to determine if the attitudes of older health and natural foods consumers differ from those who are younger. A number of the behavioural beliefs and outcome evaluations of consumers in the oldest age category were significantly stronger than those of younger consumers (see Table 5).

Table 5 One-way analysis of variance for effects of age groups on behavioural beliefs and importance of outcome

Items	Behavioural Beliefs				Importance of Outcome			
	Df	SS	MS	F	Df	SS	MS	F
<i>Fair price for producers</i>								
Between groups	2	18.25	9.13	4.37*	2	6.6	3.30	2.06
Within groups	339	707.46	2.09		346	554.64	1.60	
<i>More retailers</i>								
Between groups	2	1.33	0.67	.049	2	7.08	3.54	2.27
Within groups	337	457.42	1.36		342	532.37	1.56	
<i>Expensive product</i>								
Between groups	2	14.59	1.29	3.47*	2	19.28	9.64	3.72*
Within groups	337	708.18	2.10		341	883.65	2.59	
<i>Reduction in pesticides</i>								
Between groups	2	6.61	3.03	1.73	2	2.30	1.15	0.81
Within groups	336	641.06	1.19		347	494.32	1.43	
<i>Peace of mind</i>								
Between groups	2	6.74	3.37	1.42	2	4.46	2.23	1.03
Within groups	338	802.84	2.38		343	741.45	2.16	
<i>Health of family</i>								
Between groups	2	15.43	7.72	3.44*	2	1.85	0.92	0.76
Within groups	338	758.46	2.24		245	419.84	1.22	
<i>Product availability</i>								
Between groups	2	21.68	10.84	5.66**	2	32.42	16.21	7.97***
Within groups	331	633.77	1.92		335	681.69	2.04	
<i>Supporting producers</i>								
Between groups	2	4.74	2.37	1.56	2	13.26	6.63	3.85*
Within groups	334	508.88	1.52		345	594.00	1.72	
<i>Supporting pro-environmental companies</i>								
Between groups	2	13.61	6.81	4.12*	2	13.29	6.65	6.06*
Within groups	335	553.59	1.65		343	475.05	2.17	
<i>Supporting organic farming</i>								
Between groups	2	10.72	5.36	4.13*	2	13.18	6.59	4.37
Within groups	337	437.46	1.30		346	522.25	1.51	
<i>Quality product</i>								
Between groups	2	2.72	1.36	0.88	2	0.19	0.10	0.12
Within groups	336	517.69	1.54		346	284.49	0.82	

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

Post-hoc analysis (Tukey's) was conducted to determine if the differences between age groups were significant under more stringent tests (see Table 6).

Table 6 Mean scores on organic purchase outcomes as a function of age group

	Age Groups								
	25-44			45-64			65 and over		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
<i>Behavioural Beliefs</i>									
Fair price for organic cotton producers	61	4.97 _a	1.44	193	4.91 _a	1.53	89	5.45 _b	1.23
Purchasing a product which is not readily available	60	4.07 _a	1.40	188	4.50 _{ab}	1.37	86	4.85 _b	1.41
Supporting pro-environmental companies	61	5.40 _a	1.44	192	5.30 _a	1.35	85	5.78 _b	0.99
Supporting organic farming	61	5.69 _{ab}	1.26	192	5.61 _a	1.20	87	6.03 _b	0.88
<i>Importance of Outcome</i>									
Purchasing a product which is more expensive	61	3.79 _a	1.98	196	4.37 _b	1.58	87	4.46 _b	1.39
Supporting organic cotton producers	63	4.98 _a	1.69	196	5.26 _{ab}	1.33	89	5.57 _b	1.21
Supporting pro-environmental companies	63	5.02 _a	1.05	194	5.25 _{ab}	1.40	89	5.60 _b	1.46
Supporting organic farming	63	5.46 _a	1.02	196	5.50 _{ab}	1.31	90	5.93 _b	1.17

Note: Means in a row sharing subscripts are not significantly different at the .05 level based on Tukey's post hoc test.

Discussion and Conclusions

This study suggests that while older health and natural foods consumers in the US are not dissimilar to younger consumers in many aspects, there are also some differences based on age, and both the similarities and differences are important to discuss. The results of the analysis of the demographic data show that the respondents in the study were older, more highly educated and better off financially than the typical American consumer. This agrees with previous research that suggests that the population of consumers interested in health and natural food is more highly educated than other consumers (Dimitri & Oberholtzer, 2009). Analysis of the geographic distribution of returned surveys (based a geographically representative mailing list) suggest that interest in health and natural foods may be more prevalent in the western half of the United States.

Other studies have found that the US organic food consumer is no longer much different from the general population in terms of their demographics (Dimitri & Oberholtzer, 2009). The ANOVA of segments by demographics confirms the previous research that suggests that the purchase of organic products, including organic apparel, does not depend on variables like age or education and may be only weakly related to income. The lack of differences in the intention to search for or purchase organic apparel between the age groups dismisses any

preconception that the interest of the elderly consumer in sustainable fashion is any different than that of the younger consumer. Older consumers are not less likely than younger consumers to be concerned about the environmental impact of their apparel purchase or to consider themselves sustainable consumers. They are equally likely to be supportive of organic agriculture and organic cotton producers. A very important outcome of this study is to reinforce the idea that sustainable fashion is not just for the young.

However, while different segments of consumers may possess similar general attitudes or engage in similar behaviour, they may be consuming to meet different needs (physical or psychological). Previous research has found that consumers who find organic cotton content salient are motivated by their beliefs about the beneficial outcomes of the purchase, including the outcome of “improving my health or the health of my family” (Hustvedt & Dickson, 2009). The analysis conducted here suggests that elderly consumers (65 and over) are not more likely than those younger to believe that the purchase of organic cotton leads to health benefits. The elderly health and natural foods consumers are more likely to believe that purchasing organic cotton products results in a fair price for organic cotton producers, which may reflect a trust in ability of the supply chain to deliver price premiums to producers. The neutrality of scepticism toward environmental product claims for the overall sample also contributes to the idea that trust/scepticism is currently not an important issue in the marketing of organic apparel products.

Based on the significantly higher behavioural belief that organic apparel is not readily available, the elderly consumer may be having more difficulty than the young consumer (under 44) in finding organic cotton apparel products. Fashion products are more often targeted at younger consumers while, as previous research on the mature female apparel consumer suggests, older (45-64) and elderly consumers are marketed “watered down” versions of trends in the fashion cycle (Mohylsky, 2011). It may be that sustainable fashion is considered by retailers to be “too fashionable” to be suitable for the older consumer and for this reason, the producers of apparel marketed to mature apparel consumers have been slow to adopt organics for their products.

The significantly higher importance to the older and elderly consumer of the outcome of purchasing expensive products is possibly due to quality connotations of price. The interest of the older and elderly consumers in this study in purchasing higher priced products agrees with Mohylsky’s (2011) study of mature female consumers, which found that these consumers desire garment details such as quality fabrics and good construction. The perceived lack of availability of organic products and interest in purchasing expensive products means retailers are missing a good opportunity to target a potentially lucrative segment of consumers. For example, would higher priced, higher quality organic cotton products styled with the shapes, cuts and silhouettes that are more appealing to the elderly consumer be more profitable than the lower quality products (such as t-shirts) more typically produced with organic fibres?

Previous research has also found that supporting organic farming in general was more important to consumers than supporting organic cotton farmers in particular or supporting pro-environmental apparel companies or retailers of organic products. The analysis here finds that while this more general support is true of younger consumers, these elderly consumers

feel it is important to support organic cotton production and pro-environmental companies, not just organic farming. However, the elderly consumers are significantly more likely to believe that purchasing an organic cotton product results in support for pro-environmental companies. This, like their belief that the purchase results in fair prices for farmers, may indicate a level of optimism about the impact of their purchase on the supply chain.

The main contribution of this study, along with the creation of a demographic profile of American health and natural foods consumers, is an exploration of the attitudes toward organic cotton among consumers over 45. Most surprising is the indication that health benefits are not the distinguishing purchase outcome of importance to the older consumers included in this sample. Rather, supporting organic cotton production, pro-environmental companies and organic farming in general were outcomes of organic apparel purchases that were more important to the elderly consumer than to the younger consumer in this examination of US health and natural foods consumers.

There are naturally limitations in the application of this research. Firstly, the low response rate of the mail survey means that there is much that cannot be assumed about the attitudes of the health and natural foods consumers from which the sample was drawn. As the non-response bias analysis suggested, those who participated in the study were more likely to be females or those with higher levels of education, which suggests that the participants were either more interested in apparel shopping, more interested in organic agriculture and/or had more leisure time to complete a survey. This potential bias must be considered when applying the results of this study. Finally, because the sample was limited to consumers in the U.S., there will naturally be limitations when applying the results of this research to consumers in other markets. Research would need to be conducted to determine if older consumers in markets like the EU, which have, for example, well developed eco-labelling for fashion not available in the US, have different motivations for purchasing organic apparel. Additionally, research on organic apparel should be expanded to include consumers in developing countries, given that they are the source of much of the world's organic cotton supply.

Despite these limitations, this study demonstrates the importance of examining a marketing issue like organic products or fashion consumption with a home economics approach. Research that considers the needs and motivations of underrepresented groups of consumers, like older fashion consumers, from an interdisciplinary perspective is the hallmark of a discipline focused on improving quality of life for everyone, regardless of their apparent value to the supply chain. The results of this study provide guidance for product developers and retailers seeking to meet the "green" purchasing needs of older consumers.

Biography

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