TURNING WASTE INTO FASHION: DEMOGRAPHIC AND PSYCHOLOGICAL DRIVERS OF RECYCLED APPAREL PURCHASE INTENTION IN CROATIA

PRETVARANJE OTPADA U MODU: DEMOGRAFSKI I PSIHOLOŠKI POKRETAČI NAMJERE KUPOVINE RECIKLIRANE ODJEĆE U HRVATSKOJ

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Abstract

Purpose – This paper examines demographic (generation, gender) and psychological (sustainability knowledge, environmentalism, disgust sensitivity) drivers of purchase intention for apparel made from recycled plastic.

Design/Methodology/Approach – A cross-sectional online survey was conducted among Croatian consumers (N=241). Generational and gender differences were tested with independent-samples t-tests, and relationships among focal constructs were assessed using Spearman's rank correlations.

Findings and implications – Older cohorts reported higher sustainability knowledge and stronger green consumption values than younger cohorts, and female respondents reported higher fashion-related sustainabil-

Sažetak

Svrha – U radu se istražuju demografski (generacija, spol) i psihološki (znanje o održivosti, ekološka orijentacija, osjetljivost na gađenje) pokretači namjere kupovine odjeće izrađene od reciklirane plastike.

Metodološki pristup – Empirijsko istraživanje provedeno je putem online anketnog upitnika na uzorku hrvatskih potrošača (N = 241). Razlike između generacija i spolova testirane su primjenom t-testa za nezavisne uzorke, dok su povezanosti među ključnim konstruktima ispitane Spearmanovim korelacijama rangova.

Rezultati i implikacije – Starije kohorte iskazale su višu razinu znanja o održivosti i jače vrijednosti zelene potrošnje u odnosu na mlađe, a kod žena je uočena viša razina znanja o održivosti u području mode u odnosu na muškarce. Znanje o održivosti pozitivno je povezano

ity knowledge than males. Sustainability knowledge was positively associated with environmentalism, with environmentalism modestly but positively associated with purchase intention, whereas disgust sensitivity was not significantly associated with purchase intention. These findings suggest that consumer value-based appeals should be accompanied by credible information on recycling processes and quality assurances to mitigate any perceived uncertainty about recycled content.

Limitations – The study relied on a convenience sample from only one country and predominantly composed of female respondents; it used a cross-sectional, self-report design focused on intentions rather than observed behavior.

Originality – The study integrates demographic segmentation with cognitive, value-based, and affective factors to explain recycled apparel purchase intentions in a rarely studied market context. It also clarifies the contingent role of disgust-related barriers in consumer acceptance of recycled apparel under survey conditions, contributing new insights to sustainable marketing theory and practice.

Keywords: purchase intention, recycled apparel, sustainable fashion, sustainability knowledge, disgust sensitivity, generational differences.

s ekološkom orijentacijom. Uz to, ekološka orijentacija je pozitivno, ali umjereno povezana s namjerom kupovine. Nasuprot tomu, osjetljivost na gađenje nije pokazala značajnu povezanost s namjerom kupovine. Ovi rezultati upućuju na to da bi apeli na potrošačke vrijednosti trebali biti popraćeni vjerodostojnim informacijama o procesima recikliranja i jamstvima kvalitete kako bi se ublažila eventualna percipirana nesigurnost u vezi s udjelom recikliranog materijala.

Ograničenja – Primarno ograničenje istraživanja očituje se u korištenju prigodnoga uzorka potrošača iz jedne zemlje, s prevladavajućim udjelom ženskih ispitanika te presječnom dizajnu istraživanja temeljenom na samoprocjenama i usmjerenom na namjere, a ne na stvarno opaženo ponašanje.

Doprinos – U radu je integrirana demografska segmentacija s kognitivnim, vrijednosnim i afektivnim čimbenicima u objašnjenju namjere kupovine reciklirane odjeće u rijetko istraživanom tržišnom kontekstu. Razjašnjava se i uvjetna uloga prepreka povezanih s gađenjem u prihvaćanju takve odjeće među potrošačima u anketnim uvjetima te se donose nove spoznaje za teoriju i praksu održivoga marketinga.

Ključne riječi: namjera kupovine, reciklirana odjeća, održiva moda, znanje o održivosti, osjetljivost na gađenje, generacijske razlike

1. INTRODUCTION

The fashion industry is widely regarded as one of the most environmentally intensive consumer-goods sectors due to its enormous scale, heavy resource use, and waste generation. It contributes significantly to global greenhouse gas emissions and water pollution, while also producing rising volumes of post-consumer textile waste (World Economic Forum, 2020; European Parliament, 2020; United Nations, 2018). A particularly acute issue is the end-of-life stage. Most discarded clothing is never recovered for reuse or recycling, and only a tiny fraction is recycled into new garments (European Parliamentary Research Service, 2022). These unsustainable dynamics are intensified by the rise of "fast fashion" practices—short product lifecycles, frequent purchasing, and accelerated disposal—that collectively intensify material throughput and strain waste-management systems (Olivar Aponte et al., 2024).

In response, businesses, policymakers, and researchers are increasingly promoting sustainability transitions in the apparel value chain. A major thrust of these efforts is the adoption of circular-economy strategies that extend product lifespans, reduce landfill waste, and close material loops through greater reuse and recycling (Gupta et al., 2020; Islam et al., 2021). Within this broader movement, one notable innovation is converting plastic waste into textile fibers (e.g., recycled polyester), enabling the production of new garments from recycled plastic (Alaghemandi, 2024).

However, scaling these innovations remains challenging due to limited infrastructure, economic constraints, and—crucially—the need for consumer acceptance of recycled materials in clothing (European Parliamentary Research Service, 2022; McKinsey & Company, 2025). Consumer acceptance is critical in this context because recycled apparel, despite its sustainability benefits, has attributes that consumers cannot directly verify. In this sense, "recycled content" and related sustainability claims function as credence attributes, requiring consumers to rely on firm-provided information, labels, and brand credibility rather than direct inspection to evaluate both environmental performance and quality (Girard & Dion, 2010; Daugbjerg et al., 2014; Park & Lin, 2020). Moreover, knowing that a garment is made from waste materials can trigger perceptions of contamination or doubts about its comfort and quality, which may reduce willingness to buy—especially among individuals highly sensitive to disgust or impurity cues (Meng & Leary, 2021). Consequently, explaining recycled apparel purchase intention benefits from considering both cognitive antecedents (e.g., knowledge and pro-environmental values) emphasized in pro-environmental behavior models, as well as affective barriers linked to contamination-related avoidance (Hines et al., 1987; Ajzen, 1991; Schaller & Park, 2011).

Accordingly, this study examines the drivers of consumers' purchase intentions toward recycled apparel by integrating demographic and psychological perspectives within the Croatian market context. Three key predictors of recycled apparel intention are investigated: sustainability knowledge in the fashion domain as a cognitive factor; environmentalism as a value-based factor, measured by green consumption values that reflect the priority placed on environmentally responsible purchasing; and disgust sensitivity as an affective factor associated with contamination aversion. Generational cohort and gender are also included as segmentation variables, based on evidence that age and gender influence environmental knowledge and pro-environmental orientations among consumers.

2. LITERATURE REVIEW

2.1. Generational differences in sustainability knowledge and environmentalism

Sustainability knowledge refers to consumers' understanding of environmental issues—such

as climate change, resource scarcity, and pollution—and of solutions, such as recycling and sustainable products (Heeren et al., 2016). Younger generations (Gen Z and Millennials) are often assumed to have the highest level of sustainability knowledge (Bollani et al., 2019; Matheny, 2019; Manley et al., 2023). Indeed, some studies suggest that today's youth display greater environmental awareness than older adults. For example, in Japan, Yamane and Kaneko (2021) observed that young people are leading the shift toward sustainable lifestyles, a trend attributed to their greater access to information. Similarly, Satinover Nichols and Wehr Holt (2023) found that younger cohorts reported greater knowledge of sustainable development issues than older cohorts, attributing this to more extensive environmental education and greater digital media exposure among youth. Such findings reinforce the narrative that, having grown up with climate change in school curricula and media, the young would be more knowledgeable about sustainability than earlier generations.

However, other evidence challenges the notion of youth as the most sustainability-savvy. Empirical findings are mixed, and several studies indicate that older adults may report equal or higher environmental awareness and concern than younger adults (Wiernik et al., 2013; Aimé, 2020; Pinho & Gomes, 2024). A commonly cited explanation is "shifting baseline syndrome," which proposes that younger cohorts may underestimate environmental decline because they lack historical reference points, whereas older cohorts can compare current conditions with earlier baselines (Jones et al., 2020).

Generational differences in sustainability knowledge likely reflect both cohort effects (formative experiences unique to each generation) and life-stage effects (knowledge accumulation with age). Older cohorts may have developed pro-environmental values by witnessing pollution crises or resource shortages firsthand, whereas younger cohorts have learned about sustainability largely through formal education (Gibson et al., 2023; Pimpa, 2023). Moreover, older adults often possess more practical, experience-based sustainability knowledge (e.g., repair and reuse skills), while younger adults tend to have more theoretical knowledge from schooling (Judijanto et al., 2024). Given these dynamics, older generations could hold an advantage in overall sustainability knowledge and environmental awareness. Therefore, the following is proposed:

H1: Older generations (Gen X and Baby Boomers) will have higher sustainability knowledge than younger generations (Gen Y and Gen Z).

In addition to knowledge, generational differences have also been observed in environmentalism, meaning individuals' pro-environmental value orientation and green consumption tendencies (Błoński et al., 2023; Ágoston et al., 2024). While younger people are sometimes portrayed as the most environmentally conscious, research often finds that older adults engage in equal or even greater sustainable behaviors. For example, older consumers report higher rates of recycling and energy conservation than younger ones, and meta-analyses show a small positive relationship between age and pro-environmental behavior (Wiernik et al., 2013). During the COVID-19 pandemic, older Italians also increased their sustainable purchasing more than did younger generations. By contrast, many younger consumers (especially Gen Z) express strong environmental concerns but do not consistently act on them. This attitude–behavior gap among youth is well documented: young people want to live sustainably but often fail to act sustainably due to factors such as price sensitivity and convenience (Casalegno et al., 2022; Vermeir & Verbeke, 2006). Life-stage factors may enable older individuals to translate their values into action more effectively. Over time, older adults tend to develop habitual eco-friendly practices and may feel a stronger moral responsibility for environmental protection. Thus, the following is hypothesized:

H2: Older generations (Gen X and Baby Boomers) will report higher environmentalism than younger generations (Gen Y and Gen Z).

2.2. Gender differences in sustainability knowledge

A gender gap in environmental knowledge and attitudes is well documented. Women, on average, exhibit greater awareness of environmental issues and stronger pro-environmental values than do men. Zelezny et al. (2000) found, in a meta-analysis, that women were more likely than men to engage in pro-environmental behaviors and to hold eco-friendly attitudes. Hunter et al. (2004) similarly reported that women express higher concern for the environment and greater support for environmental protection policies. Explanations for this gender gap often involve gender socialization and value differences: women are socialized to be more caring and nurturing, which may extend to concern for the environment. Women may also perceive higher environmental risks, particularly related to health and safety, which can motivate greater awareness. For example, Flynn et al. (1994) found that women perceived a higher risk from environmental hazards than men. Xiao and McCright (2015) similarly reported that women have greater concern about environmental and health risks, which partly explains their higher pro-environmental attitudes. Such risk perception and caregiving values could lead women to acquire more sustainability knowledge and be more attentive to sustainability information.

Several empirical studies provide further nuance to these gender differences. For example, research on Education for Sustainable Development (ESD) in Europe finds that girls outperform boys on sustainability knowledge tests, and the gap widens with age (Olsson & Gericke, 2017). Environmental education programs may amplify girls' over boys' sustainability knowledge. Verachtert and Stiers (2024) found that girls benefited more from ESD curricula in terms of sustainability knowledge. Similarly, Setiawan et al. (2023) reported that girls showed larger gains in sustainability understanding from educational interventions. These findings suggest that women may enter adulthood with higher sustainability knowledge due to both socialization and educational experiences.

However, some research reveals domain-specific reversals of the typical gender pattern. For instance, a 37-country survey by Imbulana Arachchi and Managi (2021) found that men had greater knowledge in technical sustainability domains such as energy and climate systems, while women were more likely to rate sustainability as important. In higher education contexts, Marcos-Merino et al. (2020) found minimal gender differences in sustainability knowledge among university students, perhaps because both genders in such samples are relatively knowledgeable. Vicente-Molina et al. (2013) also found that although women tended to have slightly higher environmental concern, sustainability knowledge predicted pro-environmental behavior similarly for men and women. These mixed findings suggest that gender differences in sustainability knowledge may be domain-specific and measurement-sensitive.

In the context of sustainable fashion, sustainability knowledge relates to an understanding of eco-friendly materials, recycling processes, and the environmental impact of clothing. Given that women often show greater environmental concern and may be more engaged in fashion consumption, it is plausible that women will have greater sustainability knowledge in the fashion domain than men. Therefore, the following hypothesis is proposed:

H3: Female consumers will have higher sustainability knowledge than male consumers.

2.3. Sustainability knowledge, environmentalism, and purchase intention

The expectation that greater sustainability knowledge leads to stronger environmentalism

(i.e., pro-environmental attitudes and values) is grounded in established theories. The Knowledge-Attitude-Behavior (KAB) model suggests that increased knowledge about environmental issues fosters positive environmental attitudes, which then motivate pro-environmental behaviors (Hines et al., 1987). Similarly, the Theory of Planned Behavior posits that knowledge shapes beliefs, which, in turn, influence attitudes and behavioral intentions (Ajzen, 1991). The Value-Belief-Norm (VBN) theory also implies that the awareness of environmental consequences and knowledge can activate pro-environmental personal norms and values (Stern, 2000). These frameworks support the idea that sustainability knowledge is an antecedent of environmentalism.

Empirical findings generally support a positive link between sustainability knowledge and environmentalism. Students who learn more about sustainability become more environmentally conscious and develop stronger eco-friendly attitudes (Zsóka et al., 2013; Estrada-Vidal & Tójar-Hurtado, 2017). Laroche et al. (2001) found that consumers with greater environmental knowledge were more likely to value eco-friendly products and to engage in green purchasing behavior. Lee et al. (2020) similarly reported that environmentally knowledgeable consumers were more responsive to green marketing and more willing to buy sustainable products. Saari et al. (2021) suggested that environmental knowledge increases perceived environmental risk and concern, thereby strengthening pro-environmental attitudes. Furthermore, subjective knowledge (what individuals think they know) may correlate more strongly with environmentalism than objective knowledge, because feeling knowledgeable increases confidence and involvement. Peschel et al. (2016) and Dursun et al. (2019) found that perceived green knowledge was a stronger predictor of green attitudes than actual knowledge. Leclercq-Machado et al. (2022) also found that subjective knowledge was more strongly associated with sustainable consumption orientations. These findings indicate that sustainability knowledge, particularly perceived knowledge, is likely to be associated with stronger environmentalism.

If sustainability knowledge feeds into environmentalism, in turn, environmentalism serves as a key attitudinal driver of green purchase intention. Meta-analyses show that pro-environmental attitudes and values are among the strongest predictors of green purchase intentions (Paul et al., 2016; Zhuang et al., 2021). In the fashion domain, Choi and Johnson (2019) found that consumers' environmental concern significantly increased their intention to purchase sustainable apparel. Dangelico et al. (2022) also reported that green consumption values predicted willingness to buy eco-friendly fashion. These studies suggest that environmentalism is likely to positively influence purchase intention for recycled apparel.

However, because apparel is a credence-attribute product category, the influence of general environmentalism on purchase intention may be moderated by product-specific factors. Consumers may value sustainability but still hesitate to buy recycled clothing if they perceive trade-offs in style, comfort, or quality, or else if they are skeptical of recycled material claims. Hustvedt et al. (2008) found that perceived quality and fashionability significantly influenced the intention to purchase eco-friendly apparel, even among environmentally concerned consumers. Pandey and Yadav (2023) also suggested that perceived quality and trust mediate the effect of environmental concern on sustainable apparel purchase. Park and Lin (2020) discussed that environmental attitudes often fail to translate into sustainable fashion purchases due to barriers such as price, availability, and skepticism, illustrating the attitude-behavior gap. Nevertheless, at the level of intention, environmentalism remains a positive predictor, as supported by the meta-analytic evidence. Therefore, the following hypotheses are proposed:

H4: Sustainability knowledge will be positively correlated with environmentalism.

H5: Environmentalism will be positively correlated with purchase intention for recycled apparel.

2.4. Disgust sensitivity, contamination inferences, and recycled apparel

Finally, disgust sensitivity is another psychological factor that may shape consumers' reactions to recycled apparel. Disgust sensitivity refers to individual differences in the tendency to feel disgust toward contamination cues and impure substances, functioning as part of a "behavioral immune system" that motivates avoidance of pathogens (Schaller & Park, 2011). According to contagion theory, people believe that contact with a contaminant can transfer an essence of impurity, leading them to view objects as tainted even after cleaning (Rozin et al., 1986; Rozin & Nemeroff, 2002). In consumer contexts, products perceived as having been in contact with contaminants or undesirable sources are often devalued. Argo et al. (2006) and Morales and Fitzsimons (2007) found that consumers show decreased product evaluations when they believe a product has been touched by others or exposed to contamination. In their studies, Newman et al. (2011) and Huang et al. (2017) similarly demonstrated that perceived contamination reduces purchase likelihood even when there is no actual contamination. Apparel is a high-contact category that directly touches the body, which may amplify disgust-based avoidance of products perceived to be contaminated.

Empirical research on fashion sustainability consistently finds that high disgust sensitivity reduces consumers' acceptance of products with salient "contact histories" or waste origins. For second-hand clothing, Hur (2020) found that consumers with higher disgust sensitivity were more likely to perceive second-hand apparel to be contaminated and less likely to purchase it, especially for garments worn close to the skin. Similarly, Meng and Leary (2021) found that emphasizing that a garment is made from recycled plastic bottles increased perceived contamination and disgust, lowering purchase intention. Their experiments showed that this effect was stronger for wearable items (e.g., shirts) than for less intimate items (e.g., tote bags) and was amplified among individuals high in trait disgust. These findings suggest that recycled apparel may evoke contamination inferences that reduce willingness to buy, particularly among high-disgust consumers. Therefore, the following hypothesis is proposed:

H6: Higher disgust sensitivity will be associated with lower purchase intention for recycled apparel.

3. METHODOLOGY

The study employed a cross-sectional online survey to examine how demographic (generation, gender) and psychological factors relate to consumers' intentions to purchase apparel made from recycled plastic. A survey design is suitable for capturing consumer attitudes and intentions, as well as for testing group differences and associations among constructs within one time period (Dillman et al., 2014).

Data was collected in Croatia using a structured questionnaire administered via Google Forms over a three-week period. Participation was voluntary and anonymous. In total, 241 usable responses were obtained, yielding a predominantly female sample (78%). The generational composition was Gen Z (28.6%), Millennials/Gen Y (24.9%), Gen X (27.0%), and Baby Boomers (19.5%). A non-probability convenience sampling approach was used; therefore, the findings should be interpreted as context-specific, limiting statistical generalizability beyond the study setting (Dillman et al., 2014).

Before starting the questionnaire, participants were presented with an informed-consent statement explaining the study purpose, voluntary participation, anonymity, and the absence of personally identifiable data collection. The procedure followed standard ethical principles for online survey research and relevant institutional guidance.

The questionnaire included multi-item measures for all focal constructs, each captured on a 7-point Likert-type response scale (1=strongly disagree, 7=strongly agree). Environmentalism was operationalized as green consumption values and measured using the GREEN scale (Haws et al., 2014), as applied in sustainable consumption research (Summers et al., 2016). Sustainability knowledge was measured with fashion-domain items adapted from prior apparel sustainability knowledge measures (Zhang et al., 2021) and tailored to capture knowledge of fashion-related environmental impacts and familiarity with eco-friendly brands.

Purchase intention for apparel made from recycled plastic was assessed with three items adapted from a green purchase intention scale (Prakash et al., 2018) and reworded to refer specifically to recycled-plastic clothing. Disgust sensitivity was measured using selected contamination-relevant items from the Disgust Scale (Haidt et al., 2002), adapted to the waste-textile context. An open-ended question was included to capture respondents' spontaneous perceptions of recycled apparel and to complement the quantitative measures. Scale adaptations were kept to a minimum to preserve conceptual equivalence with the original instruments; items that could not be adapted without altering meaning were omitted to protect content validity. Full item wording for all multi-item scales is provided in the Appendix.

To mitigate common method bias, several procedural remedies (Podsakoff et al., 2003) were implemented: respondents remained anonymous, constructs were presented in separate questionnaire sections, and item wording and order were varied to discourage patterned responding. Also, the questionnaire was pre-tested on five participants to assess comprehension, terminology clarity, and overall readability, and minor wording adjustments were made accordingly.

Data analysis included descriptive statistics and hypothesis tests. For generational hypotheses, respondents were grouped into younger (Gen Y and Gen Z) and older (Gen X and Baby Boomers) cohorts, and differences were assessed using independent-samples *t*-tests. Gender differences were tested using independent-samples *t*-tests. Associations among the focal constructs were examined using rank-order correlations (Spearman's ρ). As an exploratory extension, a rank-based multiple regression model (OLS on ranked composite scores) was estimated to jointly predict purchase intention from environmentalism, sustainability knowledge, and disgust sensitivity.

4. RESEARCH RESULTS

Results are presented in alignment with the study's hypotheses (H1–H6). Group differences in sustainability knowledge and environmentalism were tested using independent-samples *t*-tests (H1–H3). Associations among the focal constructs were examined using Spearman's rank-order correlations (ρ) due to non-normal distributions (H4–H6). All hypothesis tests were two-tailed with α=.05. Descriptive group statistics are reported in Tables 1, 3, and 5; inferential t-test results are summarized in Tables 2, 4, and 6; and correlations among focal variables are presented in Table 7. An exploratory, multivariate model predicting purchase intention is reported in Table 8. Overall, respondents reported moderate sustainability knowledge and purchase intention, and relatively high environmentalism. Internal consistency for the multi-item measures was satisfactory (Cronbach's α ranging from .82 to .91).

4.1. Generational differences in sustainability knowledge

H1 predicted that older generations (Generation X and Baby Boomers) would have higher sustainability knowledge than younger generations (Millennials/Generation Y and Generation Z). This hypothesis was supported by the data. The older generation cohort (n=112, approximately 46% of the sample) had a higher

mean sustainability knowledge score (M=4.82, SD=1.58) than did the younger cohort (n=129, ~54%; M=4.33, SD=1.69) on a 7-point scale (see Table 1). An independent-samples *t*-test confirmed that this difference was statistically significant, $t(239)=2.29$, $p=.023$ (two-tailed; see Table 2). The effect size was modest (Cohen's $d=0.30$), indicating that older adults in the sample reported slightly greater sustainability knowledge on average than their younger counterparts. For context, both group means were near the midpoint of the knowledge scale (4), suggesting moderate self-perceived knowledge overall, with older adults having a slight edge. These results support H1.

TABLE 1: Group statistics for sustainability knowledge by generation (7-point scale; higher=more knowledgeable)

Generation Group	n	Mean	SD
Older (Gen X & Baby Boomers)	112	4.82	1.58
Younger (Gen Y & Gen Z)	129	4.33	1.69

Source: Authors' own research.

TABLE 2: Independent-samples t-test: sustainability knowledge (older vs. younger)

Contrast	*t*	df	*p* (two-tailed)	Mean diff.	SE diff.
Older – Younger	2.29	239	0.023	0.48	0.21

Source: Authors' own research.

4.2. Generational differences in environmentalism

H2 stated that older generations would exhibit higher environmentalism than younger generations. Results supported this hypothesis (see Table 3). The older generation group (n=112) reported a significantly higher level of environmentalism (i.e., stronger green consumption values) in their purchasing orientation (M=5.59, SD=1.39) compared to the younger generation group (n=129; M=4.77, SD=1.50). On a 7-point environmentalism scale, older adults scored about 0.8 points higher on average (see Table 3). This difference was statistically significant, $t(239)=4.38$, $p<.001$, with a medium effect size (Cohen's $d=0.56$). Therefore, H2 was supported.

TABLE 3: Group statistics for environmentalism by generation

Generation Group	N	Mean	SD
Older (Gen X & Baby Boomers)	112	5.59	1.39
Younger (Gen Y & Gen Z)	129	4.77	1.50

Source: Authors' own research.

TABLE 4: Independent-samples t-test: environmentalism (older vs. younger)

Contrast	t	df	*p* (two-tailed)	Mean diff.	SE diff.
Older – Younger	4.38	239	<.001	0.82	0.19

Source: Authors' own research.

4.3. Gender differences in sustainability knowledge

H3 predicted that female consumers would have higher sustainability knowledge in the fashion domain than male consumers. As shown in Table 5, female respondents (n=189) reported higher sustainability knowledge (M=4.82) than did male respondents (n=52; M=3.60). The difference was statistically significant, $t(239)=4.98$, $p<.001$ (see Table 6), with a large effect size (Cohen's $d=0.77$). In practical terms, the average knowledge rating for women was above the midpoint while that for men was below it, underscoring the magnitude of this difference. Thus, H3 was supported, indicating that women in this sample reported higher sustainability knowledge.

TABLE 5: Group statistics for sustainability knowledge by gender

Gender	n	Mean	SD (reported)
Male	52	3.60	0.21*
Female	189	4.82	0.12*

Source: Authors' own research. * SD values as reported in the source table; magnitudes may reflect standard errors rather than standard deviations.

TABLE 6: *T*-test for the difference in sustainability knowledge between female and male respondents

Contrast	*t*	df	*p* (two-tailed)	Mean diff. (F–M)	SE diff.
Female – Male	−4.98	239	<.001	1.23	0.25

Source: Authors' own research.

4.4. Relationship between sustainability knowledge and environmentalism

H4 proposed that sustainability knowledge would be positively correlated with environmentalism. As shown in the correlation matrix (Table 7), sustainability knowledge was moderately and positively associated with environmentalism (Spearman's ρ=.501, *p*<.001). This correlation suggests that roughly 25% of the variance in environmentalism scores is shared with levels of sustainability knowledge, indicating a substantial linkage. In other words, participants with greater sustainability knowledge also tended to report higher environmentalism. Accordingly, H4 was supported.

4.5. Relationship between environmentalism and purchase intention

H5 predicted that environmentalism would be positively associated with purchase intention for recycled apparel. The results support this expectation: environmentalism was positively correlated with purchase intention (Spearman's ρ=.272, *p*<.001; see Table 7). In addition, sustainability knowledge was also positively correlated with purchase intention, albeit more weakly (Spearman's ρ=.211, *p*=.001; see Table 7). Therefore, H5 was supported.

4.6. Disgust sensitivity and purchase intention

H6 predicted that higher disgust sensitivity would be associated with lower purchase intention for recycled apparel. However, this hypothesis was not supported. Spearman's ρ indicated that disgust sensitivity was virtually unassociated with purchase intention (ρ=.015, *p*=.814; see Table 7). In other words, participants high in disgust sensitivity were not less willing to buy clothing made from recycled plastic than those low in disgust sensitivity. Thus, H6 was not supported. Because the correlation between disgust sensitivity and purchase intention was close to zero, an additional quadratic specification was tested; however, the quadratic term was not statistically significant, suggesting no evidence of a curvilinear association.

Aside from its negligible link with purchase intention, disgust sensitivity exhibited only weak positive relationships with the other key

TABLE 7: Spearman's rank-order correlation matrix (ρ) for focal variables (n=241)

Variable	1. Purchase intention	2. Environmentalism	3. Sustainability knowledge	4. Disgust sensitivity
1. Purchase intention	—	—	—	—
2. Environmentalism	.272**	—	—	—
3. Sustainability knowledge	.211**	.501**	—	—
4. Disgust sensitivity	.015	.234**	.221**	—

Source: Authors' own research. Note: Entries are Spearman's ρ coefficients (two-tailed tests). *p<.05. **p<.01.

variables in the study. For example, it showed small but significant correlations with environmentalism (ρ=.234, p<.001) and sustainability knowledge (ρ=.221, p<.001), as shown in Table 7. In practical terms, participants higher in trait disgust sensitivity tended to be only slightly more environmentally concerned and knowledgeable than those with lower disgust sensitivity. These positive associations were relatively minor in magnitude.

4.7. Exploratory multivariate model of purchase intention

To provide an integrative assessment of the relative contribution of the psychological constructs, an exploratory multivariate model was estimated with purchase intention as the dependent variable and environmentalism, sustainability knowledge, and disgust sensitivity entered simultaneously as predictors. Because the focal measures exhibited non-normal distributions, the analysis was conducted on rank-transformed composite scores (i.e., an OLS regression on ranks), which is consistent with the Spearman-based association tests reported above.

As shown in Table 8, the overall model was significant, F(3, 237)=7.36, p<.001, explaining 8.5% of the variance in purchase intention (R^2=.085; adjusted R^2=.074). Environmentalism remained a positive unique predictor of purchase intention (β=.232, p=.002), whereas sustainability knowledge (β=.109, p=.135) and disgust sensitivity (β=−.063, p=.326) did not show independent effects once the shared variance among predictors was taken into account. Collinearity was not a concern (VIFs≤1.36).

5. DISCUSSION

As hypothesized in H1 and H2, older participants demonstrated greater sustainability knowledge and stronger environmental values than their younger counterparts. This pattern is consistent with prior work showing that older cohorts can match or exceed younger ones in pro-environmental attitudes and behaviors (Peluso et al., 2021; Pomarici & Vecchio, 2014; Royne et al., 2011) and with meta-analytic evidence indicating a small positive association between age and green behaviors (Wiernik et al., 2013). At the same time, the broader literature on generational differences remains mixed: some studies report stronger sustainability engagement among youth (Satinover Nichols & Wehr Holt, 2023; Yamane & Kaneko, 2021), whereas others suggest context-dependent or reversed patterns (Casalegno et al., 2022; Gray et al., 2019). Overall, the present results align with accounts emphasizing both cohort effects and life-stage influences on environmental engagement (Mannheim, 1952; Radzi et al., 2025). In particular, older individuals' longer exposure to ecological change may increase sensitivity to environmental decline, consistent with "shifting baseline" explanations (Jones et al., 2020).

H3 was also supported: women reported higher sustainability knowledge in the fashion domain than did men. This finding mirrors a substantial body of research documenting higher environmental knowledge and pro-environmental orientations among women (Flynn et al., 1994; Hunter et al., 2004; Vicente-Molina et al., 2013; Zelezny et al., 2000) and is consistent

TABLE 8: Exploratory rank-based multiple regression predicting purchase intention (n=241)

Predictor	Std. β	SE	t	p	VIF
Environmentalism	.232	0.073	3.20	.002	1.36
Sustainability knowledge	.109	0.072	1.50	.135	1.36
Disgust sensitivity	-.063	0.064	-0.98	.326	1.07

Source: Authors' own research. Note. Std. β coefficients are standardized. VIF=variance inflation factor. Model statistics: F(3, 237)=7.36, p<.001; R^2=.085; adjusted R^2=.074.

with sustainability education studies showing higher environmental literacy among female students (Olsson & Gericke, 2017; Setiawan et al., 2023). Nevertheless, prior work cautions that gender gaps vary across domains and measurement approaches (Imbulana Arachchi & Managi, 2021; Xiao & McCright, 2015). The present study's focus on fashion consumption—an area in which women are often more involved as consumers—may therefore accentuate gender differences relative to more technical sustainability topics.

Beyond demographic differences, the findings supported the expected cognitive-value pathways. Consistent with H4, greater sustainability knowledge was associated with stronger environmentalism, aligning with knowledge–attitude–behavior perspectives and intention-based models (Ajzen, 1991; Hines et al., 1987), as well as empirical evidence linking environmental literacy to more pronounced environmental values (Estrada-Vidal & Tójar-Hurtado, 2017; Saari et al., 2021; Zsóka et al., 2013). H5 was likewise supported: stronger green values were associated with higher purchase intention for recycled apparel. This is consistent with meta-analytic evidence that pro-environmental attitudes predict green purchase intentions (Paul et al., 2016; Zhuang et al., 2021) and with sustainable fashion research linking environmental motivations to sustainable apparel adoption (Choi & Johnson, 2019; Dangelico et al., 2022). However, the moderate magnitude of this relationship aligns with the attitude–behavior gap in sustainable consumption and highlights the role of category-specific constraints, including perceived quality and trust in sustainability claims (Hustvedt et al., 2008; Park & Lin, 2020; Vermeir & Verbeke, 2006). The weak direct association between sustainability knowledge and purchase intention similarly suggests that knowledge may influence intention primarily through value-based orientations rather than operating as an independent driver (Dursun et al., 2019; Peschel et al., 2016). Consistent with this interpretation, the exploratory multivariate regression (Table 8) indicated that environmentalism was the only unique predictor of purchase intention when the psychological constructs were considered simultaneously.

Finally, H6 was not supported: dispositional disgust sensitivity was not related to purchase intention for recycled apparel. This contrasts with experimental evidence indicating that salient waste-origin cues can elicit contamination inferences and reduce willingness to purchase among disgust-sensitive consumers (Meng & Leary, 2021), as well as broader "yuck factor" research on perceived impurity as a barrier to adoption (Powell et al., 2019; Raggiotto et al., 2024). A plausible interpretation is that trait disgust affects evaluations primarily when situational cues activate contamination concerns, consistent with contagion-based accounts (Rozin et al., 1986; Rozin & Nemeroff, 2002). In a survey context, where recycled textiles may be implicitly construed as being processed and safe, dispositional disgust may therefore have limited explanatory power compared with more proximal perceptions of cleanliness, quality, and credibility (Meng & Leary, 2021).

6. CONCLUSION

This study was aimed at improving the understanding of sustainable fashion consumption by examining how demographic (age, generation) and psychological (knowledge, values, affect) factors relate to consumers' intentions to purchase apparel made from recycled plastic. The findings indicate that sustainability-related orientations are not confined to younger consumers: older cohorts reported higher sustainability knowledge and stronger green consumption values than younger cohorts. In addition, women reported higher fashion-related sustainability knowledge than did men, reinforcing the importance of considering domain-specific knowledge in sustainability research. The results also support a cognition–values–intention logic, in which sustainability knowledge is positively associated with environmentalism and

environmentalism is positively associated with recycled apparel purchase intention. At the same time, disgust sensitivity did not emerge as a direct correlate of purchase intention in this survey setting, suggesting that affective barriers may not operate as a stable, standalone predictor of intentions without additional activating cues. An exploratory multivariate regression further indicated that environmentalism retains unique explanatory power for purchase intention when sustainability knowledge and disgust sensitivity are considered jointly (Table 8).

From a managerial perspective, these findings suggest that stimulating demand for recycled apparel requires strategies beyond increasing general awareness. As recycled content is not directly verifiable at the point of purchase, recycled apparel operates as a credence-claim product, which heightens the importance of trust and perceived credibility. Marketing communications should therefore combine value-based appeals, such as environmental benefits and waste reduction, with credibility-enhancing signals that reduce uncertainty, including transparent information about sourcing and processing, consistent labeling, and third-party verification where feasible. Additionally, recycled apparel should be positioned as a quality alternative rather than a compromised substitute. This approach emphasizes the communication of performance-relevant attributes, such as durability, comfort, and design, alongside sustainability, and the use of pricing strategies that do not signal inferior quality. Given the observed demographic differences in sustainability knowledge and environmental values, segmentation and targeting efforts may be more effective when prioritizing consumer groups with stronger sustainability orientations as potential early adopters.

Several limitations should be noted. The data was collected from a single-country convenience sample with a strong female skew, which limits generalizability. In particular, the predominance of female respondents may have influenced the magnitude of the observed gender differences and means that the findings should not be interpreted as representative of the gender structure of Croatian consumers. Future research studies should strive to use more gender-balanced samples to assess whether the observed pattern is replicated. The cross-sectional, self-report design restricts causal inference and may be susceptible to common-method bias. Additionally, some measures were adapted for the recycled apparel context and require further validation. These relationships should be replicated using larger and more representative samples, including cross-cultural comparisons, in future research that should incorporate behavioral outcomes, such as purchase choice, willingness-to-pay, or field data, to assess whether intentions translate into actual purchasing. Experimental research would be valuable for clarifying boundary conditions around recycled apparel adoption, such as by manipulating the salience and framing of recycled origins, the provision of process or quality information, or garment type (skin-contact versus outerwear). Further research could also examine whether perceived quality, trust in sustainability claims, and perceived contamination function as mediators or moderators of the values–intention relationship in recycled fashion markets.

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APPENDIX

Scale items used in the questionnaire

All items were measured on a 7-point Likert-type scale (1=strongly disagree, 7=strongly agree), unless noted otherwise.

Environmentalism/Green consumption values (GREEN; Haws et al., 2014; see also Summers et al., 2016)

1. It is important to me that the products I use do not harm the environment.
2. I consider the potential environmental impact of my actions when making many of my decisions.
3. My purchase habits are affected by my concern for our environment.
4. I am concerned about wasting the resources of our planet.
5. I would describe myself as environmentally responsible.

Sustainability knowledge in the fashion domain (adapted from Zhang et al., 2021)

1. I am informed of environmental issues in the fast fashion industry such as waste and pollution caused by excessive production of garments.
2. I am knowledgeable about the apparel brands that sell eco-friendly fashion products.

Purchase intention for apparel made from recycled plastic (adapted from Prakash et al., 2018)

1. I am willing to buy apparel made from recycled plastic while shopping.
2. I will make an effort to buy apparel made from recycled plastic in the near future.
3. I intend to buy apparel made from recycled plastic because it is more environmentally friendly.

Disgust sensitivity (selected contamination-related items from the Disgust Scale; Haidt et al., 2002)

1. I try to avoid letting any part of my body touch the toilet seat in a public restroom, even when it appears clean.
2. I have no problem buying and wearing shirts from used clothing stores. (reverse-coded)
3. I probably would not go to my favorite restaurant if I found out that the cook had a cold.
4. I would not hold a dollar bill between my lips (e.g., if I needed a free hand), because so many strangers have touched it with their dirty hands.