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Meital Peleg Mizrachi and Alon Tal *

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Article

Fast Fashion, Sustainability, and Nudge Theory—Examining the Effects of Choice Architecture on Consumption of Sustainable Fashion, Over Fast Fashion

Meital Peleg Mizrachi [1] and Alon Tal [2,*]

[1] Ph.D., Postdoctoral Fellow, Department of Economics, Yale University; meital.pelegmizrachi@yale.edu
[2] Professor, School of Sustainability, Stanford University; alontal@stanford.edu
* Correspondence: MPM meital.pelegmizrachi@yale.edu; .+1 (475) 3310240

Abstract: This study considers ways to increase the consumption of sustainable fashion, given the significant environmental and social damages, associated with the industry. A series of experiments were conducted examining the impacts of choice architecture (nudges) under field conditions in collab-oration with one of Israel's largest shopping centers. The study sought to identify which interven-tions at the retail level successfully motivate sustainable fashion behavioral change regarding purchases and willingness to pay more, along with agreement with several statements regarding the climate crisis and sustainable fashion. Among the types of nudges examined in this field study were providing information, increasing accessibility to sustainable alternatives and appealing to social identity, in relation to demographics and green self-image. The study found that offering alternatives to con-sumers constitutes the most effective way to "nudge" consumers toward more sustainable pur-chasing behavior. Nonetheless, this does not negate the contribution of providing information and strengthening social norms regarding sustainable fashion. Additionally in all groups, most partic-ipants reported that they do not know how to distinguish between sustainable and non-sustainable fashion, nor do they believe that the clothes they purchased were actually sustainable. The findings emphasize the need for policies that will increase the accessibility of sustainable fashion.

Keywords: sustainable fashion; nudge; purchasing behavior; consumption; alternatives; providing infor-mation; green self-image; Quasi-experiment; shopping mall

1. Introduction

In recent years, there is increasing awareness about the environmental and social externalities associated with the rapidly growing fast fashion sector [1]. Clothes are cheaper than ever [2] and the magnitude of the negative impacts associated with them is well-characterized [1]. While regulations, such as the EU strategy for sustainable and circular textiles, and the Bangladesh Accord [3,4], are beginning to influence "supply" and affect the way clothes are produced, the potential for significantly changing the demand side, with reference to consumer preferences is still poorly developed. A growing consensus is forming about sustainable fashion policies that are designed to modify demand and consumption patterns, such as the European Union's campaign to reduce fast fashion consumption [5] and the Helsinki Fashion Library, which seek to transform consumer fashion consumption patterns [6]. Fast fashion sales, however, continue to skyrocket [2], making the question: "What is the most efficient way to influence consumers?" more relevant than ever.

This article initially describes the environmental and social hazards of fast fashion, alongside the economic contribution of the fashion industry. It then goes on to consider consumer dynamics in the fashion world and how they can be influenced. In the next section, a series of "nudges" are depicted, each with the potential to induce greater preference for sustainable clothing. The research then contrasts the empirical effectiveness of each "nudge" when implemented in real world conditions. The overall purpose of the research is to provide practical tools, both for policy makers and sustainable fashion producers, to reduce the gap between consumers' generally positive attitude

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towards sustainability and sustainably manufactured clothing -- and their actual purchasing behaviors. In addition, the study seeks to improve present understanding of behavioral aspects of economic decisions concerning sustainable fashion consumption.

1.1. Economic, Environmental and Social Dimensions of the Fashion Industry

The fashion industry is one of the most polluting, exploitative and profitable industries in the world. In addition to being strongly associated with child labor [7,8] and unsafe working conditions [9,10] the manufacture, distribution, sale and use of clothing, all produce adverse environmental effects. These phenomena, to a great extent, can be traced to the characteristics of the economic model prevailing in the fashion industry: highly globalized mass production, constant consumption and a linear take-make-disposal model [11,12].

Most of the environmental and occupational burdens associated with mass production and disposal occurs among developing countries characterized by low GDP and a surfeit of low-wage workers [7, 13,14]. The associated environmental hazards are significant. They include utilization of fossil fuels, along with copious amounts of water and toxic fertilizers [15]. The release of untreated sewage into water and significant contamination, frequently, are also caused by the dyeing process for clothes. The fashion industry annually produces a total of one billion tons of CO_2, more than all international flights and maritime shipping combined [16]. Landfilling of huge amounts of textile waste in developing countries, typically, is a result of massive clothing donations from Western countries and their excess consumption of apparel [17].

Exploitation of workers and occupational risks are additional areas of grave concern: the garment assembly process alone employs 40 million workers worldwide, of which 20% are children under the age of twelve [18]. Harsh, exploitive conditions include long shifts, lack of vacation, safety deficiencies and occupational risks are very common [14].

Nonetheless, alongside the environmental damages it engenders, it is important to recognize the economic value of the fashion industry, as a global business of 2.3 trillion dollars [18]. Both have grown exponentially due to rapid expansion of the fast fashion model. Fast fashion describes swift dissemination of runway trends to consumers, offering inexpensive, mass-produced garments with global appeal, albeit often sacrificing quality.

Globally, 80 billion pieces of new clothing are purchased each year, translating into a substantial driver of global GDP. The industry as a whole employs more than 300 million people worldwide, representing a powerful economic force [19]. In fact, during the last fifteen years, aggregate clothing production has approximately doubled. Demand is driven by a growing middle-class population and increased per capita sales [20-22].

1.2. Consumer Preferences for Sustainable Fashion

Sustainable fashion is an approach to fashion that strives to be socially and environmentally responsible. It relies on an ethical commitment to the environment and putting people first [23]. Other concepts synonymous with the term sustainable fashion, including green or eco fashion. Ethical and slow fashion are also used in the literature [24].

Within the broad menu of sustainable fashion it is customary to include, second-hand clothes, independent designers, designers who produce via fair trade, clothes made using organic materials, clothes made from textile scraps and high-quality clothes that are made to last [25]. In addition, an accepted prerequisite of sustainable fashion consumption is a revealed preference for fewer clothes, under a quality versus quantity approach [26].

It is important to emphasize alternatives to fast fashion do not necessarily mean that that a luxury expensive garment is a priori more sustainable than a cheaper alternatives or that expensive clothes are always more sustainable. In fact, there's great controversy about what sustainable fashion entails. There are numerous options, some of which actually contradict each other. The only consensus in the field is that reducing consumption constitutes the most sustainable way to moderate the environmental and social pathologies [25]. With that in mind, to increasing the willingness to pay more (WTPM) for garments is generally considered a key component of a strategy to promote sustainable consumption, and serves as a somewhat rare launching point between the business sector and the environmental movement.

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The prevailing consumer preference for fast fashion, constitutes a key driver in the growth of the industry. Hence, shifts in consumer behavior – namely, reducing clothing purchases, choosing to purchase sustainable alternatives and prolonging garment lifetimes – are essential to reducing the damages associated with the fashion industry. Expanding the market share of sustainable fashion, is not only a policy objective which benefits the environment. The industrial sector itself also stands to benefit. The global sustainable or "ethical" fashion market-size reached a value of nearly $6.35 billion in 2019, having increased at a compound annual growth rate (CAGR) of 8.7% since 2015. Contemporary analysts predict that the market is expected to grow from $6.35 billion to $8.25 billion within four years at a compound annual growth rate (CAGR) of 6.8% [27,28].

Indeed customer demand for sustainable clothing is on the rise. Studies indicate that consumers increasingly prioritize fashion items based on personal values [29,30], with younger generations showing particular interest in sustainability issues. Generation Z, in particular, is driving the global demand for sustainable fashion, with six out of ten consumers from Generation Y and Z preferring sustainable products over cheaper alternatives; additionally, 37% are willing to pay more for responsible products [31]. These trends are particularly pronounced among Generation Z women [26, 32].

In this context, recent research indicates that women and the younger generations tend to express a higher interest in fashion in general. This is reflected in a tendency to purchase more clothes, more frequently as recreation, or motivated by pleasure, rather than any actual need for additional clothing [33,34]. In fact, young women are the main target audience of fashion companies. As a result, paradoxically, they not only tend to purchase more fast fashion, but also purchase more sustainable fashion and express a greater interest in the field [35].

One possible explanation for this gap can be found in Lades' study [36] on the use of nudges to promote ethical consumption. Based on neuroscientific findings, Lades suggests that self-image motives can lead to impulsive consumption, contrasting with reflexive thought and self-control. In this context, a strong green self-image may drive higher consumption of sustainable fashion rather than a decrease in consumption per se. Therefore, both aspects of reflexive thought can be leveraged to promote ethical consumption. This raises a dilemma regarding the most effective strategy for reducing fast fashion consumption: promoting sustainable fashion or advocating consumption reduction? The question reflects the broader inquiry into the nature of sustainable fashion, discussed earlier.

Environmental attitudes and individual value priorities are also important variables in purchasing fashion in general and sustainable fashion in particular. A positive correlation exists between the importance of fashion brand sustainability and consumers' decisions to buy sustainable clothing products. Furthermore, it is well established that consumers tend to have a greater preference for brands or products that align more closely with their self-concept [37,38]. Nonetheless, the sustainability of a fashion brand and positive attitude towards the sustainability of fashion brands or product is not a guarantee of increased acquisition of sustainable products [39]. In fact, a gap between actual purchasing behavior and a positive attitude towards sustainability is more common than a positive attitude towards sustainability that translates into actual purchasing behavior.

It is worth noting that actual purchasing behavior of sustainable clothing by customers is still relatively modest, and reducing the gap between positive consumer attitudes towards sustainable fashion and their actual purchasing behavior remains a huge challenge [40]. Consumers often express their interest in sustainability, but for many reasons continue to look for fast and cheap fashion items [41-43]. Frequently, there is a marked dissonance between the pro-environmental attitudes of fashion consumers and actual consumer choices [44,45]. A contemporary expression of this gap can be seen in the fact that the ultra-fast fashion company, SHEIN, which is particularly popular among Generation Z, is the most profitable fashion company in the United States today [46,47]. This suggests that in order to transform the environmental and social performance of the fashion industry it is not enough to simply create sustainable fashion options. It is also necessary to direct consumer preferences by additional means.

1.3. Theory: Nudges and Consumer Preferences

One effective method to shape consumer preferences in fashion is through "nudging" or "choice architecture." This concept, derived from behavioral economics, political theory, and social

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psychology, involves subtle interventions that steer individuals towards preferred options without eliminating alternatives or altering economic incentives significantly. Choice architecture focuses on designing environments through soft mechanisms to gently influence decision-making [48]. Nudges, widely utilized in commercial and public policy realms, are favored for their broad influence, low costs, accessibility, and non-invasiveness.

In fashion choice architecture is frequently used to increase excessive sales: Fashion chains create unique scents for themselves, distributing them at high volumes in stores; sale product stands in clothing stores are usually located at the entrance to the store with shelves placed at the average eye level, of 1.67 meters. This design is intended to encourage consumers to pull out garments [49,50]. The lighting, background music, and absence of a clock in the stores, are all nudges designed to create a "party feeling" which is attractive for a certain target public, and can remove customer inhibitions, extending the length of customers' stay.

Pricing of clothes also constitutes a nudge: seasonal sales at their inception often include a 50% discount mechanism but indirectly: clothing is priced at a discount, but in order to exploit it, consumers are pushed to purchases additional items they don't need. An example of this pricing method is 1+1 sales, or three items for a lower price than two [51]. All these are nudges leading consumers to purchase more fashion items than originally intended.

Choice architecture can also be deployed with the purposes of promoting social objectives or creating a positive environmental impact. A series of studies conducted in Asia [52] and Europe [53] found a positive effect of nudge on consumers' WTPM for sustainable products. Yan, Henninger, and Jones identified nudging as an effective way to induce actions that reduce microfiber pollution arising from textiles [54]. Roozen, Raedts and Meijburg showed a significant positive influence of verbal nudges in encouraging consumer preference for sustainable versions of clothes, and WTPM for sustainable apparel [55]. A German study on "Sustainability Labels for Fashion in Online Retail" revealed that such labels, serving as nudges, boosted consumers' willingness to buy sustainable fashion items and pay higher prices. However, the magnitude of the effect depends on consumers' trust in the environmental claims and the credibility of the fashion brand [56].

The professional literature divides green nudges into three categories:

(1) Green nudges that *provide information* about a product's green characteristics, for example information on CO2 emissions from e-commerce deliveries [57].
(2) Green nudges in the area of identity, fostering *comparisons with others*. These nudges highlight social norms, by comparing preferences with peers or stimulating competition for social status by encouraging consumers to signal green behavior to their environment; [58-60].
(3) Green nudges that exploit behavioral effects of *intentionally designed default choices* [59].

Accordingly, people can be motivated toward pro-environmental behavior by three main strategies: First, facilitating green behavior directly by reducing cognitive costs.; Second, the salience of certain features can be increased; and finally, people's sense of 'social identity' can be harnessed, by using normative motivations that favor green consumerism [48,61]. All three approaches can encourage sustainable consumption. Nonetheless, given limited resources and bandwidth among sustainable fashion marketers and producers, identifying the most effective green nudge constitutes a particularly salient pursuit. It should be noted that the impact of nudges on sustainable fashion consumption has been studied sparingly, partly due to the limited research focusing on sustainable fashion consumption. The present research attempts to address this scarcity.

This study was designed to examine the effects of choice architecture under field conditions, through a series of quasi experiments, conducted in collaboration with one of the largest shopping centers in Israel, "Dizengoff Center". Dizengoff Center is a mall founded in 1977, in the heart of Tel Aviv. There are over 400 stores in the mall, of which roughly half are fashion stores, visited daily by about 50,000 visitors. In order to answer the question of what the most effective way to nudge customers towards sustainable fashion, four separate field trials were conducted, examining the effect of three types of nudges on consumers' willingness to purchase sustainable fashion, at the expense of fast fashion:

(1) Providing information on the damages caused by the fashion industry; (2) Increasing alternatives, in the form of options for purchasing sustainable fashion products; and (3) Emphasizing the social identity attained through the purchase of sustainable fashion. We hypothesized that all

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three green nudges would positively influence consumers' willingness to purchase sustainable fashion, albeit in varying manners and degrees, as detailed below:

Hypothesis A: Nudge 1 would reduce the quantity of fashion products purchased by consumers and increase their willingness to pay more (WTPM) for sustainable options.

Hypothesis B: Nudge 2 would increase both the proportion of sustainable fashion products purchased and consumers' WTPM.

Hypothesis C: Nudge 3 would increase the proportion of sustainable fashion products purchased by consumers, but would not affect their WTPM.

Hypothesis D: Across all experimental conditions, women's WTPM would be higher than men's.

Additionally, we hypothesized that consumers with a high green self-image, based on self-report, would report encountering more sustainable fashion products, and identifying fewer barriers to purchasing sustainable fashion (Hypothesis E). Furthermore, we posited that younger consumers would report more barriers to purchasing sustainable fashion than adults (Hypothesis F).

Finally, we hypothesized that consumers who report a high action-based green self-image would purchase fewer fashion products compared to those who report a non-action-based green self-image (Hypothesis G). Moreover, we hypothesized that the higher the green self-image, the more consumers would agree with statements regarding the climate crisis and sustainable fashion, regardless of their actual purchase behavior (Hypothesis H).

2. Materials and Methods

The purpose of the research was to examine: a) which nudges influences consumers to purchase more sustainable fashion? And b) which constitutes the most effective strategy? In addition the study identifies barriers and catalysts for sustainable fashion consumption, among different demographic consumer groups. To this end, four separate field trials were conducted:

2.1. Nudge 1: Knowledge: Providing Information to Consumers, About the Environmental and Social Damages of the Fashion Industry

Over 100 signs were hung throughout the Dizengoff Center mall, providing article-based information about the environmental and social impact of the fashion industry. Among the messages hung were:

- “Fast and cheap fashion is not really cheap, somewhere someone else is paying the full price”
- “We have enough clothes in the world for the next fifty years"
- "Over 64% of women workers in textile factories say that they suffer physical and verbal abuse every day".

(See photos A1 –A5 in Appendix A at Supporting File. For the full list see Appendix B at Supporting File).

To assess the impact of the information campaign on consumers, approximately 200 questionnaires (see Appendix C in *Supporting Files*) were distributed at eight different mall exits. Volunteers handed out paper questionnaires that were later digitized for analysis. They informed recipients that the mall was conducting a survey to enhance the customer experience but did not read the questions aloud. Despite printing 400 questionnaires at the experiment day, about half were either unreturned or completed insufficiently, leading to disqualification of several potential respondents from the sample. Participation in filling out the questionnaires was voluntary, and the team implementing the survey were instructed not to persuade or ask more than once, due to the request of the mall. The recipients did not receive a financial incentive or any other kind of incentive to encourage them to answer the questionnaire.

2.2. Nudge 2: Increased the Sustainable Fashion Alternatives within the Mall

In order to encourage purchase of sustainable fashion and more broadly transform it into a default behavior for consumers, a three day sustainable fashion festival was held involving over thirty stalls selling sustainable fashion products. Among the examples of products sold at the festival are: second-hand clothes, clothes from independent designers, recycled jewelry, organic cotton underwear and more (see photos A6-A8 in Appendix A). All products sold in the festival were certified as sustainable by an impartial association that promotes sustainable fashion.

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To assess the impact of expanding sustainable fashion options, 200 out of 260 distributed questionnaires collected at mall exits were analyzed. Notably, experiments 1 and 3 involved a random sample of mall visitors, unaware of the impending intervention, while the sustainable fashion festival was extensively advertised. Although many attendees likely came specifically for the festival, potentially introducing bias, approximately 50,000 individuals visited the mall during the intervention period, with only several hundred attending festival-exclusive activities. Moreover, the festival featured additional events like a clothes swap party and an upcycling workshop in a separate mall building from where products were sold. Prior research suggests that environmental nudges can maintain transparency without compromising effectiveness [62]. Hence, despite the considerable turnout for the sustainable fashion festival, their impact on survey outcomes is presumed insignificant.

2.3. Nudge 3: Highlighting the Social Identity Involved in Purchasing Sustainable Fashion

Every customer at the mall entrance was given a cloth shopping bag with the statement "I only buy green fashion". Accordingly, from the moment recipients wore the bag, they essentially declared to those around them, that they would only purchase sustainable fashion (see photos A9 and A10 in Appendix A). We assumed that 'green fashion' is more familiar and popular among the general Israeli public than 'sustainable fashion,' so we used this term during the experiment. Here too, about 200 questionnaires were collected from those leaving the mall at eight different exits. Finally, group 4 was examined - a *control* group who encountered no experimental intervention, except for the distribution of questionnaires upon exiting the mall. Again, roughly 200 questionnaires were collected from the control group as they left the mall. The four experiments were conducted throughout the month of July 2021, one week apart, on a fixed day, from 16:00 PM to 21:00 PM.

Several caveats are germane: in nudge 1, signs only provided negative information about the fashion industry and did not specifically nudge consumers to purchase green fashion. It is possible that the nudge's effect was to reduce purchases in general, rather than increase sustainable fashion sales. In nudge 2, which presented respondents with sustainable alternatives, several festival stalls sold used clothes which were cheaper than other sustainable fashion options mentioned earlier. This rendered the WTPM criterion less valid in experiment 2 for measuring purchase sustainability. To address this limitation, we included a variable measuring agreement with statements on the climate crisis and sustainable fashion, which refer to both perceptions and beliefs as well as actual behavior, across all experiments. Finally, in nudge 3 the bags could have been interpreted by consumers as a marketing campaign by the mall, limiting their influence on social identity. The bags, however, did not have a logo of the mall or of any other entity, while the color and font of the inscription contrasted highly with the mall's branding (green lettering on white bags, as opposed to pink and black branding).

The questionnaire received by participants covered:

- *Demographics*: Age, gender, major occupation in life and identify of people with whom they came to shop.;
- *Impact on Consumption*: Did they purchase clothing items, and if so, how many? Did they notice if they were sustainably produced and how much did they pay for them? (Participants were asked to state the amount of clothing purchased and money spent).
- *Attitudes*: degree of agreement with several statements regarding sustainable fashion (questions 8-11), and the climate crisis (questions 12-14) on a Likert scale of 1 to 5. For example: "I prefer to buy a single item over several cheap items at the same price", "The climate crisis is a critical crisis and must be addressed urgently"; "I believe there is a connection between my consumer choices and the climate crisis".
- *Barriers to purchasing sustainable fashion:* These were presented using a nominal scale, with three options (yes/no/I'm not sure). For example: "I feel I know how to distinguish between green and non-green clothes".
- *Green self-image*: These questions compare self-reported environmental awareness on a Likert scale of 1 to 5 (question 18) with actual green behaviors on a descriptive nominal scale (question 19). For instance: "My social circle recognizes me as environmentally conscious compared to others," and "Which of these actions do you regularly engage in: donate to environmental organizations, volunteer

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for green causes, follow a vegan or vegetarian diet, refrain from car ownership, avoid purchasing new clothes, or buy organic products?"

2.4. Dependent and Independent Variables

Dependent variables in the statistical analysis include:

- Attitudes towards the climate crisis, examined by the degree of agreement with statements about the climate crisis;
- Attitudes regarding fast fashion and sustainable fashion, tested by the degree of agreement with the statements on fashion;
- Perceived green self-image tested by both self-perception and reported actions;
- Willingness to pay more (WTPM) for sustainable fashion, based on the ratio between the amount of clothing items purchased, and the total expenditure on clothing;
- Barriers facing sustainable fashion, tested by the degree of agreement with statements concerning the consumers' fashion purchases at the time of the experiment;
- Independent variables are:
- Type of intervention (providing information / increasing alternatives / social identity);
- Common environmental behaviors;
- The social group with which respondents came to the mall (family, friends, alone, etc.). And;
- General demographic characteristics.

The questionnaire also examined the conspicuousness of the nudge: Did participants notice the writing on the cloth bag? Did they participate in the festival? This question served as a vigilance measure. The questionnaire was developed based on prior studies exploring motives for fashion consumption and sustainability [63-65]. It was also refined with input from professors and experts in sustainable fashion consumption. Before administering the questionnaire in experiments, a pilot version was distributed to fifty subjects, applying a snowball technique in WhatsApp groups.

To examine the relationship between the type of intervention or the relationship to people with whom respondents came to shop, and the degree of agreement with the statements concerning climate and fashion, a two-way analysis of variance was performed. It assessed the relationship between the four types of interventions (knowledge, alternative, social norms and a control group) and five options, involving the people with whom respondents came to shop. A follow-up Bonferroni test was then conducted.

The number of items purchased, the average expenditure for each item of clothing represents the WTPM, and the degree of agreement with the statements, were all examined in relation to each of the interventions, in relation to gender and in relation to age group. To examine how perceived green self-image and common environmental behaviors predict agreement with statements related to climate change, a simultaneous multiple regression was conducted. T-tests were then used to analyze barriers to purchasing sustainable fashion. These tests aimed to determine differences in perceived green self-image and environmental behaviors between respondents who can distinguish green clothes and those who cannot; respondents who encounter sustainably produced clothes while shopping and those who do not, and respondents who believe their purchased clothes are green products versus those who do not. Additionally, clothing purchase patterns, expenditure, and agreement with statements were analyzed in relation to gender, age, and green self-image. Finally, barriers to purchasing sustainable fashion were examined in each of the intervention groups, in relation to gender, age and green self-image.

During the four days of the experiment, 1100 questionnaires were distributed, of which 675 questionnaires were filled out satisfactorily (425 questionnaires were partially or inadequately filled out and consequently rejected while entering data from the questionnaires).

3. Results

3.1. General

As is often the case in quasi-experiments, there was some asymmetry in the natural allocation of the different groups. There were more women than men, and more participants came to the mall with friends or a partner than alone. Moreover, the majority of participants were either employed or self-employed. (For a full description see Table 1).

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Table 1. Demographic characteristics of the study participants.

	N	%
Gender		
Man	224	32.9%
Woman	451	66.8%
With whom did they come to the mall?		
Alone	208	30.8%
with friends	232	34.4%
with a partner	79	11.7%
with family members	143	21.2%
Other	13	1.9%
Main occupation		
High school student	150	22.2%
Soldier	39	5.8%
Student	63	9.3%
employee/ self- employs	295	43.7%
Pensioner	62	9.2%
On Maternity Leave	4	0.6%
Unemployed	54	8.0%
Other	8	1.2%
Age		
16-20	N=199	29.66%
21-30	N=150	22.36%
31-45	N=158	23.55
46-60	N=98	14.61%
61-75	N=47	7.00%
76 and older	N=19	2.83%

3.2. Differences between the Intervention Conditions

In examining WTPM for sustainable fashion under the various intervention conditions, it was found that in the *knowledge* group the purchase amount (157.2 NIS, SD=256.8) and the number of items purchased (1.7, SD=2.4) revealed the highest responses. The lowest purchase amount (109.8 NIS, SD=201.4) and number of items purchased (1.4, SD=2.3) were found among the *social norms* group. The ratio between the amount spent, and the number of items purchased (represents low WTPM), was highest among the *control* group (See Figure1 and Table 2).

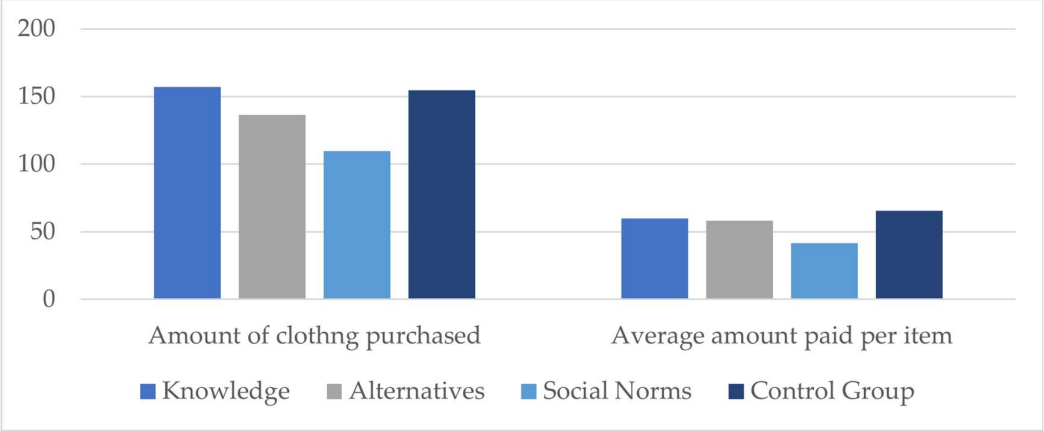

Figure 1. WTPM for Sustainable Fashion in NIS under the Various Intervention Conditions.

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Table 2. WTPM for Sustainable Fashion under the Various Intervention Conditions.

	control (N=123)		**knowledge (N=169)**		**Alternative (N=149)**		**social norms N= (234)**	
	SD	M	SD	M	SD	M	SD	M
The amount of purchase	300.6	154.7	256.8	157.2	233.8	136.6	201.4	109.8
Number of items purchased	2.4	1.5	2.4	1.7	2.1	1.6	2.3	1.4
Average amount spent on an item	130.3	65.5	99.1	59.9	124.6	58.3	71.4	41.5

In examining the degree of agreement with the statements regarding the climate crisis and sustainable fashion among the different intervention groups, it was found that the *alternatives* group expressed the highest agreement (4.4, SD=0.9), followed by the *social norms* group (4.1, SD=0.9), then the *knowledge* group (4.0, SD=1.0), and finally the lowest agreement was found among the *control* group (3.8, SD=1.0) (see Figure 2 and Table 3).

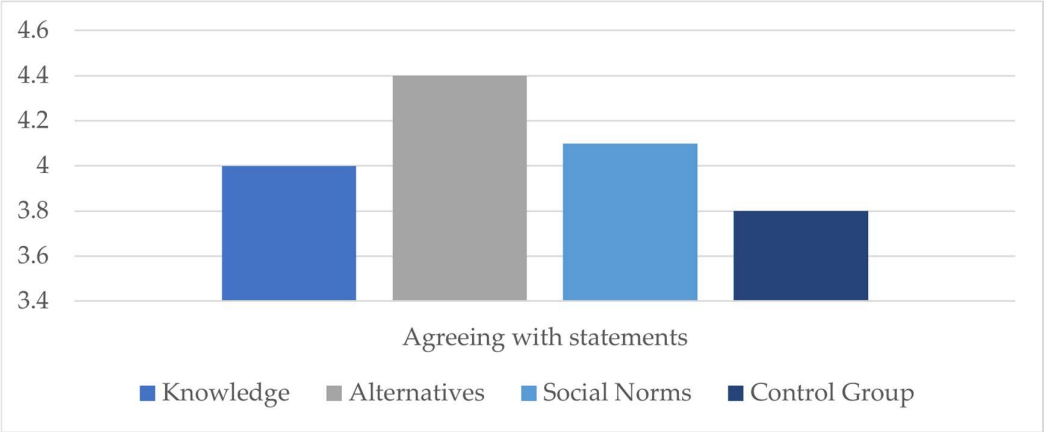

Figure 2. The Degree of Agreement with Statements Regarding the Climate Crisis and Sustainable Fashion among the Different Intervention Groups.

Table 3. Degree of Agreement with the Statements Regarding the Climate Crisis and Sustainable Fashion and predominance of green self-image among the Different Intervention Groups.

	control (N=123)		**knowledge (N=169)**		**Alternative (N=149)**		**social norms N= (234)**	
	SD	M	SD	M	SD	M	SD	M
Agreeing with the statements about climate and sustainable fashion	1.0	3.8	1.0	4.0	9.	4.4	9.	4.1
Predominance of green self-image (self-report)	1.4	4.1	1.5	4.3	1.3	4.5	1.3	4.4
Predominance of green self-image (based on actions)	1.2	1.4	1.1	1.7	1.2	1.7	1.1	1.6

In examining the predominance of participants' green self-image (based on self-reporting as opposed to actions) among the different experimental groups, it was found that the green self-image based on self- reporting, was highest among the *alternative* group (M=4.5, SD=1.3) and lowest among the *control* group (M=4.1, SD=1.4). In assessing green self-image based on actions, it was also found that the highest self-image existed among the *alternative* group (M=1.7, SD=1.2) and the lowest among the *control* group (M=1.4, SD=1.2). Among all intervention groups, green self-image based on actions was significantly lower than that based on self-reporting (see Table 3).

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Differences between the Intervention Conditions in Barriers to Purchasing Sustainable Fashion

In examining barriers to purchasing sustainable fashion among the different intervention groups, the *alternative* group showed the greatest ability to distinguish between "green" clothing and those not sustainably produced (32.2%, N=48/149). The *social norms* group (who were given a tote bag with a sustainable consumption slogan) were the least able to differentiate between green and non-green clothes (41.9%, N=98/234); the *knowledge* group, exposed to signage reported the lowest level of confidence in differentiating between sustainable and unsustainable clothing (44.4%, N=75/169) (For full results see Figure 3 and Table 4).

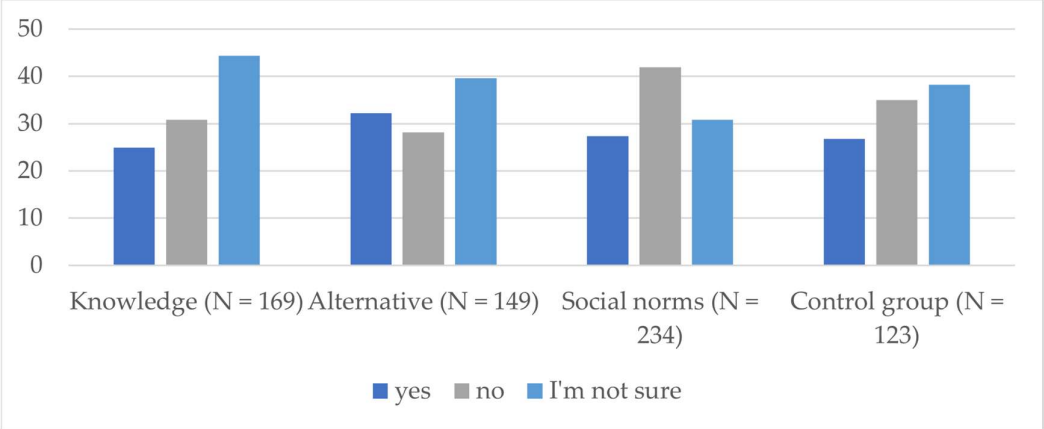

Figure 3. Agreement with the Statement "I Feel Like I Know How to Distinguish Between Green and Non-Green Clothes" Among the Different Intervention Groups.

Table 4. Prevalence and percentages of agreement with the Statement "I Feel Like I Know How to Distinguish Between Green and Non-Green Clothes" Among the Different Intervention Groups.

	Control (N=123)		**knowledge (N=169)**		**Alternative (N=149)**		**social norms N= (234)**	
I feel like I know how to distinguish between green clothes and those that are not	%	N	%	N	%	N	%	N
Yes	26.8	33	24.9	42	32.2	48	27.4	64
No	35.0	43	30.8	52	28.2	42	41.9	98
I'm not sure	38.2	47	44.4	75	39.6	59	30.8	72

In response to the question "I came across many green clothes today", the most frequent answer in all groups was "no". Nonetheless *alternatives* group, contained the highest proportion of participants who answered "yes" (28.2%). The highest proportion answering "no" was found in the *knowledge* group (59.2%,). (For the full results see Figure 4 and Table 5).

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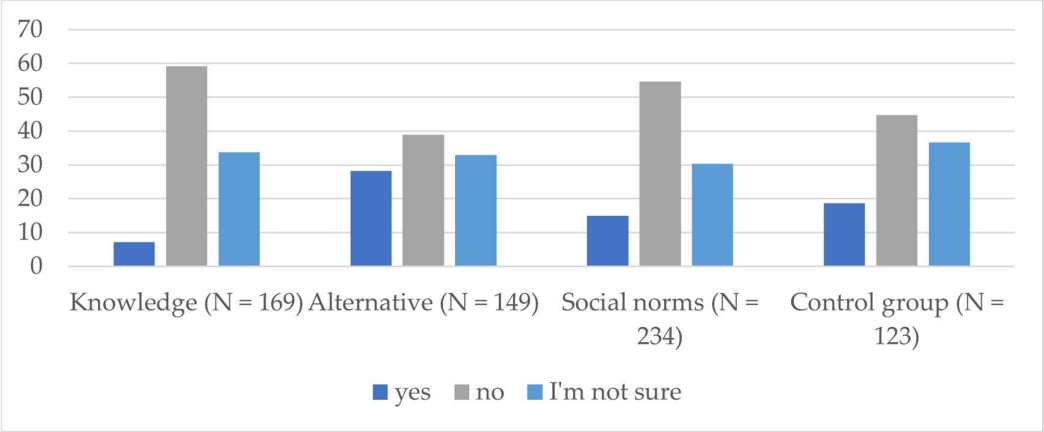

Figure 4. Agreement with the Statement "I Came across Many Green Clothes Today" Among the Different Intervention Groups.

Table 5. Prevalence and percentages of agreement with the Statement "I Came across Many Green Clothes Today" Among the Different Intervention Groups.

	Control (N=123)		**knowledge (N=169)**		**Alternative (N=149)**		**social norms N= (234)**	
I came across many green clothes today	%	N	%	N	%	N	%	N
Yes	18.7	23	7.1	12	28.2	42	15.0	35
No	44.7	55	59.2	100	38.9	58	54.7	128
I'm not sure	36.6	45	33.7	57	32.9	49	30.3	71

In response to the question "I believe the clothes I bought today are green clothes", the most common answer among all groups was “no”. The *alternatives* group, however, had the highest rate of participants who answered "yes" relative to the other groups (23.5%), while the knowledge group had the highest rate of participants who answered “no” (50.9%) (See Table 6).

Table 6. Prevalence and percentages of agreement with the Statement "I Believe that the Clothes I Bought Today Are Green products" Among the Different Intervention Groups.

	Control (N=123)		**knowledge (N=169)**		**Alternative (N=149)**		**social norms N= (234)**	
I believe that the clothes I bought today are green products	%	N	%	N	%	N	%	N
Yes	15.4	19	8.3	14	23.5	35	17.5	41
No	43.1	53	50.9	86	40.9	61	50.4	118
I'm not sure	41.5	51	40.8	69	35.6	53	32.1	75

3.3. Analysis based on Demographic Characteristics

3.3.1. Gender

The gender analysis inter alia assessed WTPM for sustainable fashion and the association between gender green self-image based on self-reporting and based on actions. The amount of purchases, the number of items purchased and the average amount per item were all higher among men (M=143.9, SD=249.2; M=1.8, SD=2.4 and M=56.4, SD=124.2 respectively). At the same time, the degree of agreement with environmental statements was higher among women (M=4.2, SD=0. 9 relative to M=3.9, SD=1.0 among men). This was also true regarding self-reporting of green self-image (M=4.5, SD=1.3 among women compared to M=4.1, SD=1.5 among men) as well as environmental actions (M=1.7, SD=1.1 among women compared to M=1.3, SD=1.2 among men) (See Table 7).

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Table 7. WTPM for Sustainable Fashion, Degree of Agreement with Environmental Statements and Green Self-Image Based on Gender Analysis.

	Women (N=451)		**Men (N=222)**	
	SD	M	SD	M
Amount purchased	241.0	132.4	249.2	143.9
Number of items bought	2.2	1.4	2.4	1.8
Average amount per item	92.5	53.4	124.2	56.4
Agreed with statements on climate and sustainable fashion	.9	4.2	1.0	3.9
Predominance green self-image (self-reporting)	1.3	4.5	1.5	4.1
Predominance green self-image dominance (based on actions)	1.1	1.7	1.2	1.3

In evaluating the barriers to purchasing sustainable fashion, more men than women reported not knowing how to distinguish between green clothes and those that are not: (29.7% of women reported not knowing how to distinguish, compared to 46.4% of men). The most common answer among both genders regarding whether they encountered many "green clothes" today, was "no". Nonetheless, more women than men said they had encountered green clothing (18.4%vs. 12.6% respectively) while more men than women also said they were uncertain (35.6% of men vs. 31.7% of women).

Most respondents amongst both women and men, reported that they had not purchased green clothes. At the same time, again the proportion of women reporting purchases of green clothes was higher than among male respondents (17.5% among women compared to 13.5% among men). (see Table 8).

Table 8. Barriers to Purchasing Sustainable Fashion Based on Gender.

	Women (N=451)		**Men (N=222)**	
	%	N	%	N
I feel like I know how to distinguish between green clothes and those that are not				
Yes	29.7	134	23.4	52
No	29.3	132	46.4	103
I'm not sure	41.0	185	30.2	67
I came across many green clothes today				
Yes	18.4	83	12.6	28
No	49.9	225	51.8	115
I'm not sure	31.7	143	35.6	79
I believe that the clothes I bought today are green products				
Yes	17.5	79	13.5	30
No	46.8	211	47.3	105
I'm not sure	35.7	161	39.2	87

3.3.2. Age

An analysis of WTPM for sustainable fashion, agreement with statements about the climate crisis and sustainable fashion, and green self-image based on self-reporting as well as on actions in relation to age, was also conducted. The youngest cohort spent the most on clothing with the highest number of items, comparing dramatically to the 61-75 age group, which purchased the least number of items for the lowest amount (1.7 items in the amount of NIS 158.4 in the 16-20 age group compared to 0.8

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items in the amount of 69.4 NIS in the 61-75 age group). Agreement with statements regarding the climate crisis and sustainable fashion was most common among the 76 and older respondents, while the age group that expressed the lowest agreement was 16-20 (M=4.9 at the 61-75 age group, compared to M=3.9 in the 16-20 age group).

As for the extent of a green self-image based on self-reporting, it was found that groups aged 61-75 and 76 and older reported the highest green self-image (5). Other age groups reported a somewhat lower green self-image, ranging from 4.2 to 4.3. By way of contrast, when examining green self-image based on actions, the age group 76 and older on average had a green self-image ranking of only 1.7 while the other age groups ranged from 1.4 to 1.6.

Responses to questions examining barriers to purchasing sustainable fashion differed among the various age groups. In response to the question "I feel like I know how to distinguish between green and non-green clothes", the age group that strongly reported an ability to differentiate, was the oldest cohort 76 years and older (52.6%) as well as 61-75 years old (51.1%). Purportedly, the 31-45 and 21-30 age groups largely reported that they did not know the difference (39.2%and 40.0%respectively). In the 16-20 age group, the most common answer was “I'm not sure” (35.2%, N=70/199). (See Figure 5 and Table 9).

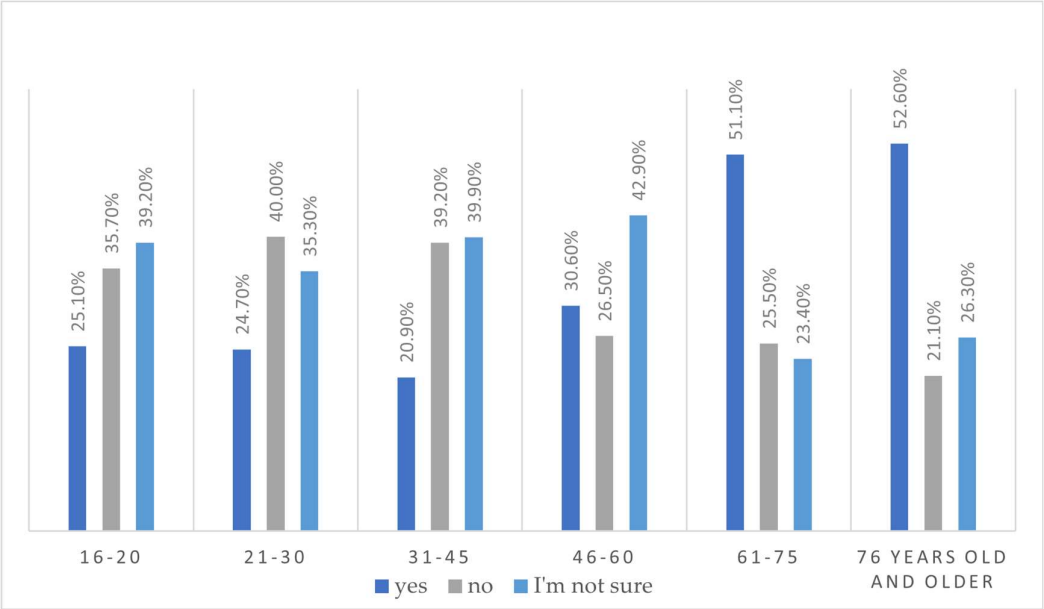

Figure 5. Agreement with the Statement "I Feel like I Know How to Distinguish between Green and Non-Green Clothes" Among Different Age Groups.

Table 9. Barriers to Purchasing Sustainable Fashion among the Different Age Groups.

	31-45 (N=158)		**21-30 (N=150)**		**16-20 (N=199)**	
I feel like I know how to distinguish between green clothes and those that are not	%	N	%	N	%	N
Yes	20.9	33	24.7	37	25.1	50
No	39.2	62	40.0	60	35.7	71
I'm not sure	39.9	63	35.3	53	39.2	78
I came across many green clothes today						
Yes	13.9	22	18.0	27	15.6	31
No	51.3	81	47.3	71	49.2	98
I'm not sure	34.8	55	34.7	52	35.2	70

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I believe that the clothes I bought today are green products						
Yes	11.4	18	12.7	19	22.6	45
No	48.7	77	44.7	67	43.2	86
I'm not sure	39.9	63	42.7	64	34.2	68
	76 and above (N=19)		**61-75 (N=47)**		**46-60 (N=98)**	
I feel like I know how to distinguish between green clothes and those that are not	%	N	%	N	%	N
Yes	52.6	10	51.1	24	30.6	30
No	21.1	4	25.5	12	26.5	26
I'm not sure	26.3	5	23.4	11	42.9	42
I came across many green clothes today						
Yes	21.1	4	27.7	13	13.3	13
No	52.6	10	51.1	24	56.1	55
I'm not sure	26.3	5	21.3	10	30.6	30
I believe that the clothes I bought today are green products						
Yes	26.3	5	21.3	10	12.2	12
No	57.9	11	53.2	25	50.0	49
I'm not sure	15.8	3	25.5	12	37.8	37

In response to the question "I came across many green clothes today" the most common answer among all age groups was “no”. The age groups that most often reported encountering many green clothes were 61-75 years old (27.7%) and then 76 years old and older (21.1%) (See Figure 6 and Table 9). The most common answer among all age groups responding to the statement: "I believe the clothes I bought today are green clothes", was “no”. Nonetheless, the age group that most reported a belief that the clothes they purchased were in fact “green”, were those respondents 76 and older (26.3%). Yet, this was also the age group in which the rate of "no" respondents were the highest (57.9%), and the rate of "I'm not sure" respondents was the lowest (15.8%). The 21-30 years old cohort expressed the least certainty that the clothes they had purchased that day were green (42.7%) (See Figure 7 and Table 9).

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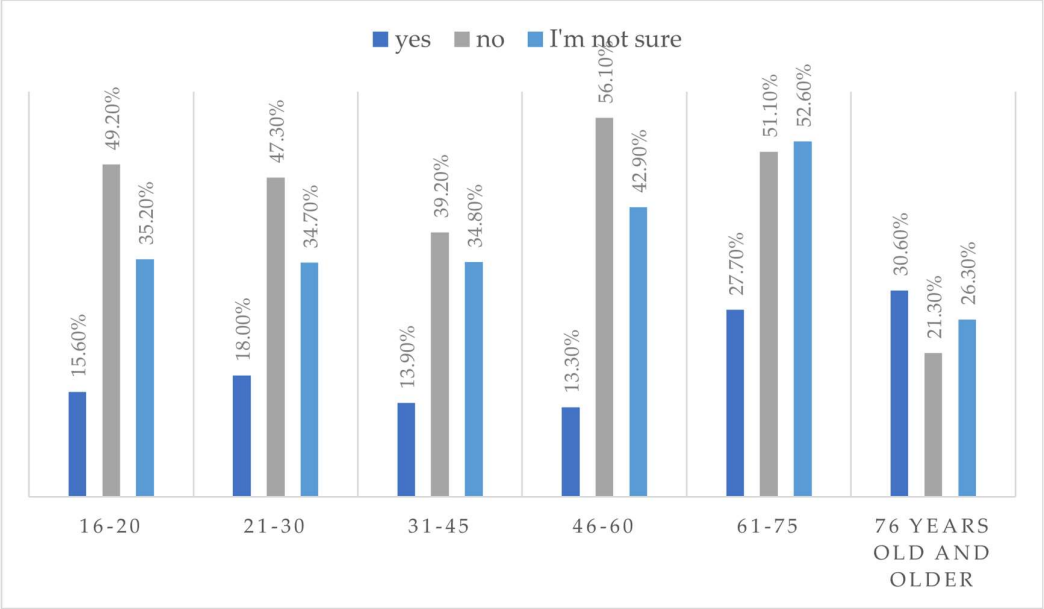

Figure 9. Agreement with the Statement "I Came Across Many Green Clothes Today" Among the Different Age Groups.

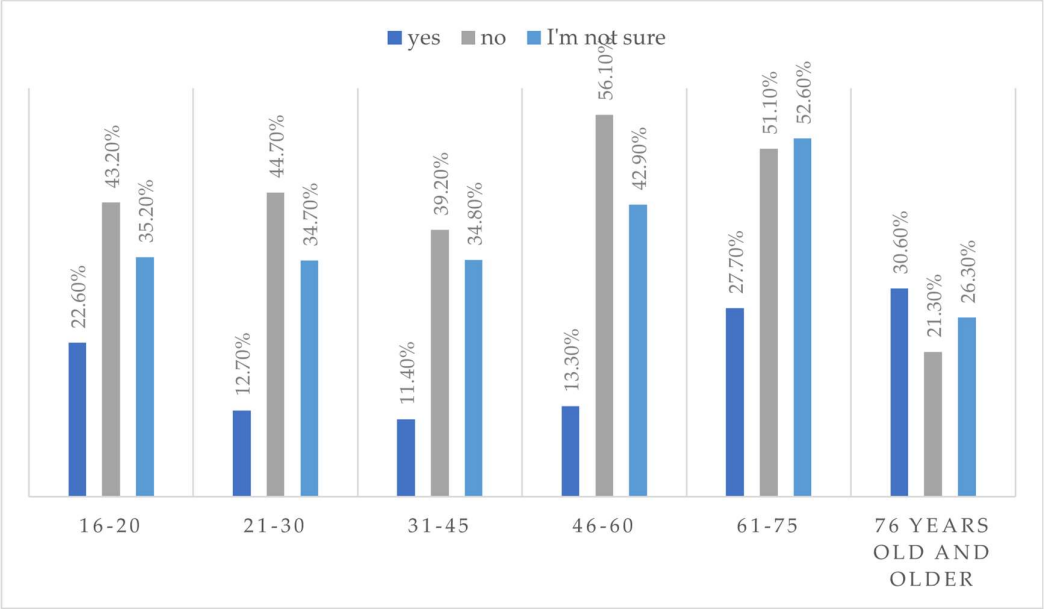

Figure 7. Agreement with the Statement "I Believe the Clothes I Bought Today Are Green Clothes" Among the Different Age Groups.

3.4. Analysis of Variance

To examine the relationship between the type of intervention (*knowledge/ alternatives/ social norms*), the people with whom respondents came to the mall, the agreement with climate-related statements and sustainable fashion and Green self-image an analysis of variance was conducted. In a bivariate analysis of variance, a significant primary effect was found for the type of intervention to which respondents were exposed ($F(3,656)=3.78$, $^{**}p=.01$, partial $\eta 2=.02$). At the same time, no significant effect was found for the variable involving the people with whom respondents were accompanied to the mall ($F(4,656)=2.05$, n.s) with no interaction found ($F(11,656)=1.62$, n.s).

Bonferroni follow-up tests suggest that in cases where respondents were exposed to "alternatives", results were more meaningful ($M = 4.47$, $SD = .13$). The degree of agreement with statements regarding climate crisis and sustainable fashion was also higher among respondents who

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were "provided information" (M = 4.07, SD =.08), significantly greater than in the *control* group (M =3.85, SD = .15). Confidence intervals were not measured since the experiments were quasi-experiments and therefore random sampling or normal distribution cannot be assumed.

To examine the relationship between green self-image based on self-reported and actions, and agreement with the statements on climate and fashion, a simultaneous multiple regression was performed. The regression model significantly explains 28.2% of the variance in the degree of agreement with the statements (F(2,671)=132.1, **p<.001). Green self-image based on self-reporting was a significant predictor of agreement with environmental statements. In other words, the higher the level of reporting about green self-image, the higher the agreement with statements about climate and fashion (β=.47, t=13.06, **p<. 001). Green self-image based on the number of actions was also found to be a significant predictor of agreement with climate and fashion statements. Accordingly, the higher the number of actions, the higher the agreement with pro-environmental statements (β=.13, t=3.62, **p<.001). (See Table 10)

Table 10. Regression Coefficients for predicting agreement with Statements about Climate Crisis and Sustainable fashion.

	B	**SEB**	**B**
Green self-image dominance (self-report)	.47	.02	***32.
Green self-image dominance (number of actions)	.13	.03	***11.

A T-test for independent samples was conducted to examine the difference in green self-image between those who reported the ability to distinguish green clothes from others and those who didn't, based on self-report and actions in barriers to purchasing sustainable fashion. As anticipated, a significant disparity was observed between the groups (t(418.93)=10.6, **p<0.01). Those who claimed knowledge of distinguishing green clothes exhibited a higher green self-image (M=5.06, SD=1.15) compared to those who reported inability (M=3.74, SD=1.42). A significant difference was also found between the groups as defined by green self-image based on actions (t(362.12)=5.11, **p<001). Respondents' knowledgeable about distinguishing green clothes showed a higher green self-image based on their reported actions (M=1.85, SD=1.25), surpassing those who lacked this knowledge (M=1.27, SD=1.05).

To examine the hypothesis regarding differences in self-reported green self-image and actions among those encountering many green clothes while shopping versus those who did not, an independent samples T-test was conducted. A significant disparity between the groups emerged (t(450)=4.02, **p<0.001). Individuals encountering many green clothes exhibited a higher self-reported green self-image (M=4.87, SD=1.33) compared to those encountering fewer green clothes (M=4.25, SD=1.43).

A difference emerged between groups with high and low green self-image based on actions (t(451)=2.91, **p<.05). Those who reported encountering many green clothes while shopping exhibited a higher green self-image (M=1.93, SD=1.26) than those encountering fewer green clothes (M=1.56, SD=1.14).

In testing differences in green self-image between those believing their clothes purchased are green products and those who do not, a significant difference was found (t(248.15)=5.80, **p<0.01). Individuals believing that they had purchased green products exhibited a higher self-reported green self-image (M=4.96, SD=1.14) than those who did not (M=4.16, SD=1.51). Furthermore, a significant difference emerged between the groups regarding green self-image based on actions (t(425)=2.75, **p<0.01): Those believing their purchases were green products exhibited a higher green self-image based on actions (M=1.86, SD=1.17) compared to those who did not (M=1.51, SD=1.14) (see table 11).

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Table 11. Means and standard deviations of green self-image based on Self-Reporting and Actions, According to Barriers to Purchasing Sustainable Fashion.

	Green self-image based on a number of actions		Green self-image based on self-report	
I feel like I know how to distinguish between green clothes and those that are not	M	SD	M	SD
Yes	1.85	1.25	5.06	1.15
No	1.27	1.05	3.74	1.42
I encountered many green clothes today				
Yes	1.93	1.26	4.87	1.33
No	1.56	1.14	4.25	1.43
I believe that the clothes I bought today are green products				
Yes	1.86	1.17	4.96	1.14
No	1.51	1.14	4.16	1.51

4. Discussion

Since its inception, fashion has always served as a means by which individuals shape their physical and social identities. Fashion has the power to change people, not only in their appearance, but also their perceptions, feelings, and beliefs [41,66,67]. In the discourse about fashion and the environment, there is a tendency to emphasize the environmental damages of the fashion industry [68]. Given the growing cultural and psychological power of fashion, however, sustainable fashion also has the ability to positively influence consumption patterns in many areas that go beyond consumers' clothing choices. This underlies the importance of promoting sustainable fashion.

This study found that offering consumers sustainable alternatives was the most effective way to "nudge" them to support sustainable fashion. In other words, a distinct primary effect was found when providing an *alternatives* intervention. Moreover, the largest proportion of consumers who reported that they know how to differentiate between green clothes and those could not, was the group that had been primed to realize that sustainable alternatives to fast fashion exist. This was also true for respondents who believe that the clothes they purchased were indeed green clothes, and among all levels of green self-image. It can be concluded that offering the public accessible sustainable clothing alternatives constitutes the most effective way to encourage sustainable fashion purchasing patterns.

Providing, simplified information along with a new framing of products constitute common nudging tools to promote sustainable consumption. Their impact on people's actual choices, however, appears to be limited and largely context dependent. Previous studies [55, 57, 60, 69,70] found that nudges which change the physical environment and change default options are more effective than merely simplifying and framing information differently. This is especially true in the field of climate protection, even when the default is transparent, as in the present study [62]. This study's results showing that providing information constitutes the least effective nudge are consistent with these findings.

Nonetheless, the analysis does not negate the potential contribution that new information and strengthening social norms encouraging sustainable fashion may provide. The percentage of people who reported that they "did not encounter green clothes" during the visit to the mall, as well as those that "don't believe they know how to distinguish between green clothes and those that are not", was higher among respondents who had been exposed to new knowledge. This effect was also more common among groups who were nudged to conform to new social norms than in the *control* group. Similarly the level of agreement with statements concerning the climate crisis and sustainable fashion among the *alternatives* and *information* groups, indicates that engaging in the subject increase's awareness about the problem.

Another explanation for the relatively limited impact of providing information could be people's inclination to disregard climate-related information when it conflicts with their existing beliefs, especially when it may involve incurring extra costs [71]. Sustainable fashion, frequently linked with

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higher clothing prices, appears to be an artifact of this phenomenon. This tendency might further explain the diminished impact of information. Furthermore, research in the field indicates that nudges that provide information have limited to no effect on cooperative goals within a collaborative environment [72]. Addressing the climate crisis and mitigating the negative impacts of the fashion industry are inherently collaborative goals that cannot be achieved individually; they depend on wide societal cooperation for success. This highlight the need for judicious public policy on the subject.

4.1. Demographic Nuances: A Surprising Generation Gap

More than half of the adults, aged 61 and over, reported with greater confidence that they know how to differentiate between green clothes and those that are not. The older the respondent, the more confident they are about the environmental merits or flaws of new clothing. In contrast, among the 16–20-year-old group, the rate of participants reporting uncertainty as to whether the clothes they purchased are green, was particularly high. Moreover, the oldest respondents were also the most modest clothing consumers, as far as quantities purchased and associated expenses. With regard to the degree of sustainability these results are somewhat ambiguous. This is because buying clothes sparingly is considered to be a preferred, sustainable pattern, while spending little on clothing may not be. This paradox, in many ways, embodies a broader question: what is sustainable fashion?

This is an important finding, because the primary target audience of sustainable fashion advocates is Generation Z and Y, demographic groups between the ages of 16 and 35. Ostensibly, young people are more concerned about the climate crisis than their parents. Yet, these generations are also often characterized by confusion and distrust in authority figures [73,74]. This finding, along with the results regarding green self-image, amplify the effect involving the influence of alternatives to sustainable consumption.

5. Conclusions

5.1. Greenwash and Reliability in Fashion

It is noteworthy that in all groups, most participants reported not knowing how to distinguish between sustainable and non-sustainable fashion. The confusion among consumers reflects a common, global phenomenon. A 2015 study reported that there are relatively few consumers who can successfully distinguish between different types of labels and certifications [75].

In a study conducted in Germany about sustainability and fashion labels it was found that although many fashion products are labeled as sustainable, only 14% of the products are labeled as sustainable by an impartial third party [56]. The lack of an authoritative arbiter makes it difficult for consumers to understand to what extent product should be deemed sustainable.

Moreover, in a recent report, "License to Greenwash", ten certifications, labels and environmental voluntary initiatives in the field of fashion were examined [76]. In the absence of sufficient legislation and oversight in the field, environmental certification labels have become a common means of spreading greenwashing. The phenomenon contributes to a further decrease in consumer trust. This is particularly important because trust has been found to be a mediating variable in consumers' willingness to purchase sustainable products [56, 77-79]. In other words, the greater the reliability of the product, the more consumers are willing to buy more of it for a higher price -- and vice versa. This could also explain the relatively low effect found in the study for providing information.

In all experimental situations, including this study's *control* group, most of participants did not believe that the clothes they purchased were sustainably produced. The proportion of people who did believe that the clothes they purchased were green, was highest among the alternatives group, which had been exposed to sustainable options. Among respondents in the *social norms* groups and the *knowledge* group, the proportion of people who could distinguish green clothing was higher than in the *control* group. These two results indicate that the prominent placing of sustainable alternatives can strengthen consumer trust. Providing information and creating a social norm can positively affect awareness. This awareness, however, does not necessarily translate into the purchase of sustainable fashion.

As mentioned, among all the demographic groups and at all levels of green self-image, those exposed to sustainable *alternatives* were more likely to report that they did know how to differentiate

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between green and environmentally destructive clothes and those who were exposed to *knowledge* were the least. Even so, the rate of consumers in the *alternative* group who reported knowing how to identify green clothes was less than half. It is also possible that participants in the *knowledge* group by being exposed to the potential environmental and social hazards of clothing took the issue more seriously than other groups. Accordingly, being able to honestly express an inability to identify "green clothes" might be seen as an expression of a newly acquired sense of responsibility.

Similarly, the *social norm* group had the highest proportion of consumers admitting they lacked requisite knowledge to identify green fashion. Carrying a bag emblazoned with "I only buy green fashion" likely prompted contemplation, following initial unease to a realization of an inability to identify sustainable fashion. This underscores the importance of a dependable certification policy from a public policy standpoint. Supplying credible information from an impartial government source promises to enhance consumer confidence and encourage greater adoption of sustainable fashion.

5.2 The Gap between Consumer Statements and Their Actual Purchases

This study confirms the desire of consumers to purchase sustainably: this impulse is expressed, inter alia, through a high degree of agreement with statements regarding the climate crisis and fashion. However, a significant gap exists between these intentions and actual sustainable consumer behaviors across all groups.

The study reveals that men tend to spend more and buy more clothing items than women, while women show greater agreement with perceptions linking climate to fashion. Additionally, young people exhibit higher spending and purchase rates compared to older adults. This indicates a lower susceptibility to fast fashion trends but also an attraction to low prices with high environmental costs. Notably, senior citizens demonstrate the highest agreement with pro-environmental statements, reflecting their consumer behavior.

The gap between consumer statements and their actual purchases is a well-known challenge facing sustainable fashion manufacturers [80,81]. It constitutes a significant obstacle to increasing the proportion of fashion manufacturers who aspire to become more sustainable [82-85]. Studies from around the world that address the action gap in the field of sustainable fashion found that a lack of understanding and lack of knowledge about what sustainable fashion really is, offers a compelling explanation to the gap [86]. In addition to other factors like lack of sufficient trust and environmental knowledge [87], social influences, beliefs and low level of knowledge are influential [84,88].

From a business perspective, the action gap can also be seen as an opportunity. Past studies found that consumers are willing to pay more for sustainable products if they value environmental protection and believe that purchasing these products will contribute to that objective [89]. Considering that knowledgeable, environmentally conscious consumers focus on quality over quantity [81], fashion companies that focus on creating sustainable fashion in small quantities through fair production, and above all, with transparency, may be able to help narrow the gap while increasing consumers' WTPM for sustainable fashion products.

From the perspective of public policy, creating opportunities to increase profits through sustainable fashion (e.g., subsidizing production of sustainable fashion) may indeed offer a significant incentive for fashion companies to adopt green strategies. Yet, relying exclusively on economic motivations is unwise. Frequently, pollution and exploitation remain cheaper than sustainable production. Therefore, it is not enough to rely solely on market forces. There are several incipient examples of legislation to this end that have been adopted internationally during the last decade [90]. It is time to advance a holistic strategy that addresses the challenges of reliable certification and greenwash prevention. These measures will contribute to the overall aim of increasing the number and accessibility of sustainable alternatives, strengthening the impact of the nudge found to be the most effective in this study.

Ultimately, nudges are powerful tools that have the potential to contribute to ongoing efforts to improve the sustainability of the fashion industry. Yet, their effect is often of limited duration and dependent on context. To minimize the purchasing gap, a robust set of policies promoting sustainable fashion is essential. While nudges have a role, constituting a vital component within a comprehensive strategy, they cannot serve as the sole approach. Considering consumer distrust in market alternatives, relying solely on nudges without a clear definition of sustainable fashion will likely

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result in unsatisfactory outcomes, reflected in the fashion industry's expanding environmental footprint notwithstanding heightened sustainability aspirations. At the same time, well-designed, non-coercive interventions targeting consumer behaviors can make an important contribution to a more sustainable fashion industry.

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Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Photos

Photo A1. Signs Hang from the Ceiling of the Mall.

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Photo A2. Electronic Sign outside the Mall.

Photo A3. In order to produce one T-shirt it is Necessary to Use one Hundred and Fifty Grams of Insecticides.

Photo A4. Eighty-Two Percent of our Clothes End Up in Incineration or Landfill.

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Photo A5. Eight Thousand Toxic Chemicals are used in the Process of Dyeing the Clothes.

Photo A6. Sales Stand of Ecological Birthing Boxes.

Photo A7. Secondhand Clothes Stand.

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Photo A8. Customers at a Second-Hand Clothing Stand.

Photos A9 and A10. Participants Holding Cloth Bags, with the Inscription "I Only Buy Green Fashion".

Appendix B

Captions on signs

- Eighty thousand toxic chemicals are used in the process of dyeing the fabrics
- Fast and cheap fashion is not really cheap, somewhere someone else is paying the full price
- In order to produce one pair of jeans, it takes the amount of water that a person drinks for 7.5 years
- It takes 2700 liters of water to produce one t-shirt
- We have enough clothes in the world for the next fifty years
- Over 64% of women workers in textile factories say that they suffer physical and verbal abuse every day
- 21 % of the clothes we own will never be worn
- 80% of the time we wear 20% of the clothes in our closet
- Raising animals for wool consumes a huge amount of resources. In a country with 300 sunny days a year do we really need another sweater?

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- • Did you know? Polyester made from petroleum
- • The decomposition process of synthetic fabrics takes several hundred years, please think wisely before throwing them away

Appendix C

Questionnaire

Dear customer: We are conducting an experiment in collaboration with Tel Aviv University, with the aim of improving the fashion shopping experience, the questionnaire is completely anonymous and will be used to improve the shopping experience only.

Thank you very much for your cooperation.

1. With who did you come to Dizengoff Center today?

A. alone

B. with friends

c. with a spouse

d. with family members (children / parents)

e. Other

2. During your visit, did you purchase items of clothing (including bags, shoes, scarves, etc.)?

A. Yes

B. No

3. In what amount of money did you buy?_____

4. How many items did you buy?_____

5. What is the cost of each item?_____

Please indicate to what extent you agree with the following statements:

6. I prefer to buy a single item over several cheap items at the same price

I don't agree at all 1	2	3	4	5	Strongly agree 6

7. When I buy a garment, I look for information about the composition of the fabric

I don't agree at all 1	2	3	4	5	Strongly agree 6

8. When I buy clothes, I look for information about the terms of employment of the clothing manufacturers

I don't agree at all 1	2	3	4	5	Strongly agree 6

9. I prefer to buy locally made clothes

I don't agree at all 1	2	3	4	5	Strongly agree 6

10. I believe it is important to purchase green products (green products are products that are not harmful to the environment, or less harmful than their counterparts)

I don't agree at all 1	2	3	4	5	Strongly agree 6

11. The climate crisis is a critical crisis and must be dealt with urgently

I don't agree at all 1	2	3	4	5	Strongly agree 6

12. I believe there is a connection between my consumer choices and the climate crisis

I don't agree at all 1	2	3	4	5	Strongly agree 6

13. I feel that I know how to distinguish between green clothes and those that are not

A. Yes

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B. No
C. Not sure

14. I came across many green clothes today during my shopping
A. Yes
B. No
C. Not sure

15. I believe that the clothes I bought today are green products
A. Yes
B. No
C. Not sure

16. My social environment will testify to me that in relation to other people I have a high environmental awareness

I don't agree at all 1	2	3	4	5	Strongly agree 6

17. Which of the following behaviors do you regularly do (you can mark more than one answer)
A. Donate money / volunteer in a green organization
B. Consume a vegan/vegetarian diet
C. Avoid car ownership
D. Avoid buying new clothes
E. buy organic products

18. A (depends on experiment). Did you notice the inscription on your bag?
A. Yes
B. No
c. I'm not sure

18. B (depends on the experiment). A sustainable fashion festival took place this week. Are you:
A. I did not hear or participate
B. I heard but did not participate
C. Participate in one or more activities of the festival

19. Please indicate your main occupation
A. High school student
B. a soldier
C. student
D. Full-time employee/self-employed
E. pensioner
F. A woman on maternity leave
G. Not employed

20. Age: _____

21. Gender:
A. man
B. woman
C. Not interested in answering

References

1. Rahman, O.; Hu, D.; Fung, B.C.M. A Systematic Literature Review of Fashion, Sustainability, and Consumption Using a Mixed Methods Approach. *Sustainability* **2023**, *15*, 12213. https://doi.org/10.3390/su151612213
2. Niinimäki, K.; Peters, G.; Dahlbo, H. *et al.* The environmental price of fast fashion. *Nat Rev Earth Environ* **2020**, 1, 189–200. https://doi.org/10.1038/s43017-020-0039-9
3. Chowdhury, S. F. Impact of the Accord and Alliance on labor productivity of the Bangladesh RMG industry. Doctoral dissertation, Brac University, 2020. .
4. EU strategy for sustainable and circular textiles. Available online: https://environment.ec.europa.eu/publications/textiles-strategy_en (accessed on 25 June 2024).
5. ReSet the Trend - #ReFashionNow-Become a role model!. Available online: https://environment.ec.europa.eu/topics/circular-economy/reset-trend_en (accessed on 25 June 2024).
6. Astrid, C,; Saskia, C.; Hendrik, S. Organizational characteristics explaining participation in sustainable business models in the sharing economy: Evidence from the fashion industry using conjoint analysis. *Business Strategy and the Environment* **2020**, *29:6*, 2603-2613. https://doi.org/10.1080/14606925.2017.1353018
7. Lotfi, M.; Boote, A. The unsustainable impact of patriarchy on the industry. *Lampoon Magazine* **2023**, *27*. https://lampoonmagazine.com/article/2023/03/28/the-unsustainable-impact-of-patriarchy-on-the-industry-maryam-lofti-with-amy-boote/
8. Children's rights in the garment and footwear supply chain. Available online: https://www.unicef.org/reports/childrens-rights-in-garment-and-footwear-supply-chain-2020 (accessed on 25 June 2024).
9. Dzhengiz, T.; Haukkala, T.; Sahimaa, O. (Un)Sustainable transitions towards fast and ultra-fast fashion. *Fash Text* **2023**, 10, 19. https://doi.org/10.1186/s40691-023-00337-9
10. 10 Truly Oppressive Working Conditions Of The Clothing Industry. Available online: https://citi.io/2017/03/23/10-truly-oppressive-working-conditions-of-the-clothing-industry/ (accessed on 25 June 2024).
11. Pal, R.; Gander, J. Modelling environmental value: An examination of sustainable business models within the fashion industry. *Journal of Cleaner Production* **2018**, 184, 251-263. https://doi.org/10.1016/j.jclepro.2018.02.001
12. The Business of Fashion, & McKinsey & Company. The state of fashion 2017. Available online: https://www.mckinsey.com/~/media/McKinsey/Industries/Retail/Our%20Insights/The%20state%20of%20fashion/The-state-of-fashion-2017-McK-BoF-report.pdf (accessed on 25 June 2024).
13. Franklin-Wallis, O. *Wasteland: The Secret World of Waste and the Urgent Search for a Cleaner Future*, 1rd ed.; Hachette Books: New York ,New York, 2023; pp.117 –156.
14. Bick, R.; Halsey, E.; Ekenga, C.C. The global environmental injustice of fast fashion. *Environ Health* **2018**, 17, 92. https://doi.org/10.1186/s12940-018-0433-7
15. Changing Markets Foundation & STAND. Synthetics Anonymous- Fashion brands' addiction to fossil fuels. Changing markets foundation 2021. Available online: http://changingmarkets.org/wp-content/uploads/2021/07/SyntheticsAnonymous_FinalWeb.pdf (accessed on 25 June 2024).
16. Mäkinen, K. Clothing rental – service development proposals through service design. master thesis, Turku University of Applied Sciences, Turku, Finland, 2019. https://www.theseus.fi/bitstream/handle/10024/226728/Makinen_Kaisa.pdf
17. Manieson, L.A.; Ferrero-Regis, T. Castoff from the West, pearls in Kantamanto? A critique of second-hand clothes trade. *Journal of industrial ecology* **2023**, *27*(3). 811-821. https://doi.org/10.1111/jiec.13238
18. The Business of Fashion, & McKinsey & Company. The state of fashion 2022. Available online: https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/state%20of%20fashion/2022/the-state-of-fashion-2022.pdf (accessed on 25 June 2024).
19. The Business of Fashion, & McKinsey & Company. The state of fashion 2019. Available online: https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/fashion%20on%20demand/the-state-of-fashion-2019.pdf (accessed on 25 June 2024).
20. Cheng, W.H.; Song, S.; Chen, C.Y.; Hidayati, S.C.; Liu, J. Fashion meets computer vision: A survey. *ACM Computing Surveys (CSUR)* **2021**, *54*(4).1-41. https://doi.org/10.1145/3447239
21. The Circular Economy: A Wealth of Flows - 2nd Edition. Available online: https://www.ellenmacarthurfoundation.org/the-circular-economy-a-wealth-of-flows-2nd-edition (accessed on 25 June 2024).
22. Hwang, J.; Sun, X.; Zhao, L.; Youn, S.-y. Sustainable Fashion in New Era: Exploring Consumer Resilience and Goals in the Post-Pandemic. *Sustainability* **2024**, *16*, 3140. https://doi.org/10.3390/su16083140
23. Holy, M.; Borčić, N. Information, consumerism and sustainable fashion. *SUSTAINABLE GROWTH AND DEVELOPMENT IN SMALL OPEN ECONOMIES* **2018**, 179. https://www.mek.oszk.hu/20500/20514/20514.pdf#page=180

 doi:10.20944/preprints202406.1986.v1

24. Hehorn, J.; Ulasewicz, C.. *Sustainable Fashion: Why Now? A Conversation Exploring Issues, Practices and Possibilities*. 1rd ed.; New York: Fairchild Book: New York, New York, 2008; pp. 24–37.
25. Peleg Mizrachi, M.; Tal, A. Sustainable Fashion—Rationale and Policies. *Encyclopedia* **2022**, *2*, 1154-1167. https://doi.org/10.3390/encyclopedia2020077
26. Guo, W.; Kim, E. Categorizing Chinese Consumers' Behavior to Identify Factors Related to Sustainable Clothing Consumption. *Sustainability* **2023**, *15*, 6126. https://doi.org/10.3390/su15076126
27. Sustainable Fashion Market Analysis Shows The Market Progress In Attempt To Decrease Pollution In The Global Ethicalfashion Market 2020. Available online: https://www.globenewswire.com/news-release/2020/10/28/2116073/0/en/Sustainable-Fashion-Market-Analysis-Shows-The-Market-Progress-In-Attempt-To-Decrease-Pollution-In-The-Global-Ethicalfashion-Market-2020.html (accessed on 25 June 2024).
28. Ethical Fashion Market 2022 - By Product (Organic, Man-Made/Regenerated, Recycled, Natural), By Type (Fair Trade, Animal Cruelty Free, Eco-Friendly, Charitable Brands), By End-User (Men, Women, Kids), and By Region, Opportunities and Strategies – Global Forecast To 2030. Available online: https://www.thebusinessresearchcompany.com/report/ethical-fashion-market (accessed on 25 June 2024).
29. Gazzola, P.; Pavione, E.; Pezzetti, R.; Grechi, D. Trends in the Fashion Industry. The Perception of Sustainability and Circular Economy: A Gender/Generation Quantitative Approach. *Sustainability* **2020**, *12*, 2809. https://doi.org/10.3390/su12072809
30. Ray, S.; Nayak, L. Marketing Sustainable Fashion: Trends and Future Directions. *Sustainability* **2023**, *15*, 6202. https://doi.org/10.3390/su15076202
31. The global consumer: Changed for good-Consumer trends accelerated by the COVID-19 pandemic are sticking. Available online: https://www.pwc.com/gx/en/consumer-markets/consumer-insights-survey/2021/gcis-june-2021.pdf (accessed on 25 June 2024).
32. Zhang, Y.; Liu, C.; Lyu, Y. Profiling Consumers: Examination of Chinese Gen Z Consumers' Sustainable Fashion Consumption. *Sustainability* **2023**, *15*, 8447. https://doi.org/10.3390/su15118447
33. Weber, S.; Weber, O. How Fashionable Are We? Validating the Fashion Interest Scale through Multivariate Statistics. *Sustainability* **2022**, *14*, 1946. https://doi.org/10.3390/su14041946
34. Bhattacharjee, A.; Chanda, R. S. Psychology of consumer: study of factors influencing buying behavior of millennials towards fast-fashion brands. *Cardiometry* **2022**, *23*, 360-368. DOI: 10.18137/cardiometry.2022.23.360-368
35. Morgan, L. R.; Birtwistle, G. An investigation of young fashion consumers' disposal habits. *International journal of consumer studies* **2009**, *33,2*, 190-198. https://doi.org/10.1111/j.1470-6431.2009.00756.x
36. Lades, L. K. Impulsive consumption and reflexive thought: Nudging ethical consumer behavior. *Journal of Economic Psychology* **2014**, *41*, 114-128. https://doi.org/10.1016/j.joep.2013.01.003
37. Malhotra, N. K. Self concept and product choice: An integrated perspective. *Journal of Economic Psychology* **1988**, *9, 1*, 1-28. https://doi.org/10.1016/0167-4870(88)90029-3
38. Thøgersen, J.; Ölander, F. Human values and the emergence of a sustainable consumption pattern: A panel study. *Journal of economic psychology* **2002**, *23(5)*, 605-630. https://doi.org/10.1016/S0167-4870(02)00120-4
39. Mandarić, D.; Hunjet, A.; Vuković, D. The impact of fashion brand sustainability on consumer purchasing decisions. *Journal of Risk and Financial Management* **2022**, *15, 4*, 176. https://doi.org/10.3390/jrfm15040176
40. Lee, E.-J.; Choi, H.; Han, J.; Kim, D. H.; Ko, E.; Kim, K. H.. How to "nudge" your consumers toward sustainable fashion consumption: An fMRI investigation. *Journal of Business Research* **2020**, 117, 642–651. https://doi.org/10.1016/j.jbusres.2019.09.050
41. Jung, S.; Jin, B. A theoretical investigation of slow fashion: Sustainable future of the apparel industry. *International Journal of Consumer Studies* **2014**, 38(5), 510–519. https://doi.org/10.1111/ijcs.12127
42. Ramonienė, L.. Sustainability motives, values and communication of slow fashion business owners. *Journal of Philanthropy and Marketing* **2023**, *28(2)* 1788. https://doi.org/10.1002/nvsm.1788
43. Meyner, N.; Olofsson, N.; Fager, F. The effect of substantial factors that influence consumers' purchase decisions on clothes in the Fast Fashion industry in Sweden. A quantitative study of the significant substantial factors which affect Swedish consumers' purchase decisions when buying Fast Fashion items. Bachelor's degree project, Jönköping University-Business School, International Management, Jönköping, Sweden, May 2023.
44. Joergens, C. Ethical fashion: Myth or future trend? *Journal of Fashion Marketing and Management* **2006**, *10(3)*, 360–371. https://doi.org/10.1108/13612020610679321
45. Neumann, R.; Mehlkop, G. Neutralization strategies account for the concern-behavior gap in renewable energy usage–Evidence from panel data from Germany. *Energy Research & Social Science* **2023**, *99*, 103041. https://doi.org/10.1016/j.erss.2023.103041
46. Shein Revenue and Usage Statistics (2024). Available online: https://www.businessofapps.com/data/shein-statistics/ (accessed on 25 June 2024)

47. Peleg Mizrachi, M. he Good, the Bad, and the Sustainable: How Technology Has Changed and Continues to Change the World of Fashion, from Cotton Gin to Digital Clothes. In *Roadmap to Sustainable Textiles*, 1nd ed.; Ayşegül, K., İbrahim, M., Kanat. S.; IntechOpen: London, UK, 2024; DOI: 10.5772/intechopen.112104
48. Thaler, R.H. From cashews to nudges: The evolution of behavioral economics. *American Economic Review* **2018**, *108*(6) 1265-1287.
49. Herstein, R.; Gilboa, S; Gamliel, E. Private and national brand consumers' images of fashion stores, *Journal of Product & Brand Management* **2013**, *22*, 5/6. 331-341. https://doi.org/10.1108/JPBM-03-2012-0110
50. Herstein, R. H; Berger, R. *Creating & Managing Brand Image*, 1rd ed.;Lambert Academic Publishing: Saarbrücken, Germany, 2015; pp. 57-73.
51. Ben-Ami, M.; Hornik, J.; Eden, D.; Kaplan, O. Boosting consumers' self-efficacy by repositioning the self. *European Journal of Marketing* **2014**, *48*,11, 1914-1938. https://doi.org/10.1108/EJM-09-2010-0502
52. Banerjee, A.; Dutta, T.; Mishra, A. S. Value-based nudging of ethnic garments: a conjoint study to differentiate the value perception of ethnic products across Indian Markets. *Journal of Fashion Marketing and Management* **2023**, *27*,4, 612-631. https://doi.org/10.1108/JFMM-02-2022-0038
53. Schürmann, C.L.; Helinski, C.; Koch, j.; Westmattelmann, D. DIGITAL NUDGING TO PROMOTE SUSTAINABLE CONSUMER BEHAVIOR? AN EXPERIMENTAL ANALYSIS IN ONLINE FASHION RETAIL. European Conference on Information Systems, Kristiansand, Norway, 11-16.06.2023.
54. Yan, S.; Henninger, C.E.; Jones, C.; McCormick, H., Sustainable knowledge from consumer perspective addressing microfibre pollution. *Journal of Fashion Marketing and Management* **2020**, 24, 3, 437- 454. https://doi.org/10.1108/JFMM-08-2019-0181
55. Roozen, I.; Raedts, M.; Meijburg, L. Do verbal and visual nudges influence consumers' choice for sustainable fashion?. *Journal of Global Fashion Marketing* **2021**, *12(1)*, 4, 327-342. https://doi.org/10.1080/20932685.2021.1930096
56. Gossen, M.; Jäger, S.; Lena Hoffmann, M.; Bießmann, F.; Korenke, R.; Santarius, T. Nudging Sustainable Consumption: A Large-Scale Data Analysis of Sustainability Labels for Fashion in German Online Retail. *Frontiers in Sustainability* **2022**. *3*, 922984. https://doi.org/10.3389/frsus.2022.92298
57. Nijssen, S. R.; Pijs, M.; van Ewijk, A.; Müller, B. C. Towards more sustainable online consumption: The impact of default and informational nudging on consumers' choice of delivery mode. *Cleaner and Responsible Consumption* **2023**, *11*, 100135. https://doi.org/10.1016/j.clrc.2023.100135
58. Bicchieri, C.; Dimant, E. Nudging with care: the risks and benefits of social information. *Public Choice* **2019** ,*191*, 443–464. https://doi.org/10.1007/s11127-019-00684-6
59. Schubert, C. Green nudges: Do they work? Are they ethical?, *Ecological Economics* **2017**, 132, 329-342. https://doi.org/10.1016/j.ecolecon.2016.11.009
60. Loschelder, D. D.; Siepelmeyer, H.; Fischer, D.; Rubel, J. A. Dynamic norms drive sustainable consumption: Norm-based nudging helps café customers to avoid disposable to-go-cups. *Journal of Economic Psychology* **2019**, *75*, 102146. https://doi.org/10.1016/j.joep.2019.02.002
61. Sunstein, C. R.; Reisch, L. A. Automatically green: Behavioral economics and environmental protection. *Harv. Envtl. L. Rev* **2014**. *38*, 1, 127. http://dx.doi.org/10.2139/ssrn.2245657
62. Bruns, H.; Kantorowicz-Reznichenko, E.; Klement, K., Jonsson, M. L.; Rahali, B. Can nudges be transparent and yet effective?. *Journal of Economic Psychology* **2018**, *65*, 41-59. https://doi.org/10.1016/j.joep.2018.02.002
63. Colasante, A.; D'Adamo, I. The circular economy and bioeconomy in the fashion sector: Emergence of a "sustainability bias". *Journal of Cleaner Production* **2021**, *329*, 129774. https://doi.org/10.1016/j.jclepro.2021.129774
64. Cairns, H. M.; Ritch, E. L.; Bereziat, C. Think eco, be eco? The tension between attitudes and behaviours of millennial fashion consumers. *International Journal of Consumer Studies* **2022**, *46*(4), 1262-1277. https://doi.org/10.1111/ijcs.12756
65. Morgan, L. R.; Birtwistle, G. An investigation of young fashion consumers' disposal habits. *International journal of consumer studies* **2009**, *33*,2, 190-198. https://doi.org/10.1111/j.1470-6431.2009.00756.x
66. Negrin, L. Appearance and identity. In *Appearance and identity: Fashioning the body in postmodernity*. Palgrave Macmillan US: New York, New York, 2008, 9-32.
67. Yoh, E. Application of the fashion therapy to reduce negative emotions of female patients. *The Research Journal of the Costume Culture* **2015**, *23*,1, 85–101. https://doi.org/10.7741/RJCC.2015.23.1.085
68. Munasinghe, P.; Druckman, A.; Dissanayake, D. G. K. A systematic review of the life cycle inventory of clothing. *Journal of Cleaner Production* **2021**, *320*, 128852. https://www.sciencedirect.com/science/article/pii/S0959652621030481
69. Lehner, M.; Mont, O.; Heiskanen, E. Nudging – A promising tool for sustainable consumption behaviour?. *Journal of Cleaner Production* **2016**, *134*, 166-177. https://doi.org/10.1016/j.jclepro.2015.11.086
70. Meske, C.; Potthoff, T. THE DINU-MODEL – A PROCESS MODEL FOR THE DESIGN OF NUDGES. In Proceedings of the 25th European Conference on Information Systems (ECIS), Guimarães, Portugal, June 5-10, 2017.

71. Momsen, K.;Ohndorf, M. Information avoidance, selective exposure, and fake (?) news: Theory and experimental evidence on green consumption. *Journal of Economic Psychology* **2022**, *88*, 102457. https://doi.org/10.1016/j.joep.2021.102457
72. Engel, C.; Kurschilgen, M. The fragility of a nudge: the power of self-set norms to contain a social dilemma. *Journal of Economic Psychology* **2020**, *81*, 102293. https://doi.org/10.1016/j.joep.2020.102293
73. Marczak, M.; Winkowska, M.; Chaton-Østlie, K.; Rios, R. M.; Klöckner, C. "When I say I'm depressed, it's like anger." An Exploration of the Emotional Landscape of Climate Change Concern in Norway and Its Psychological, Social and Political Implications. *Research Square* **2021**. https://doi.org/10.21203/rs.3.rs-224032/v2
74. Wood, S. Generation Z as consumers: trends and innovation. Institute for Emerging Issues: *NC State University* **2013**, *119*, 9, 7767-7779. https://archive.iei.ncsu.edu/wp-content/uploads/2013/01/GenZConsumers.pdf
75. Hwang, C. G.; Lee, Y. A.; Diddi, S. Generation Y's moral obligation and purchase intentions for organic, fair-trade, and recycled apparel products. *International Journal of Fashion Design, Technology and Education* **2015**, *8*,2, 97-107. https://doi.org/10.1080/17543266.2014.996917
76. Licence to Greenwash: How certification schemes and voluntary initiatives are fuelling fossil fashion. Available online: https://changingmarkets.org/report/licence-to-greenwash-how-certification-schemes-and-voluntary-initiatives-are-fuelling-fossil-fashion/ (accessed on 26 June 2024).
77. Kumar, P.; Polonsky, M.; Dwivedi, Y. K.; Kar, A. Green information quality and green brand evaluation: the moderating effects of eco-label credibility and consumer knowledge. *European Journal of Marketing* **2021**, *55*, 7, 2037-2071 https://doi.org/10.1108/EJM-10-2019-0808
78. Rossi, C.; Rivetti, F. Assessing Young Consumers' Responses to Sustainable Labels: Insights from a Factorial Experiment in Italy. *Sustainability* **2020**, *12*, 10115. https://doi.org/10.3390/su122310115
79. Badiei Khorsand, D.; Wang, X.; Ryding, D.; Vignali, G. Greenwashing in the Fashion Industry: Definitions, Consequences, and the Role of Digital Technologies in Enabling Consumers to Spot Greenwashing. In *The Garment Economy: Understanding History, Developing Business Models, and Leveraging Digital Technologies,* 2 Eds. Cham: Springer International Publishing: Gewerbestrasse Cham, Switzerland, 2023, pp. 81-107.
80. McNeill, L.; Moore, R. Sustainable fashion consumption and the fast fashion conundrum: fashionable consumers and attitudes to sustainability in clothing choice. *International Journal of Consumer Studies* **2015**, *39*,3, 212-222. https://doi.org/10.1111/ijcs.12169
81. Richey, A. K. The Green Gap: How Consumers Value Sustainable Fashion. *Chancellor's Honors Program Projects* **2021**. https://trace.tennessee.edu/cgi/viewcontent.cgi?article=3458&context=utk_chanhonoproj
82. Hassan, L. M.; Shiu, E.; Shaw, D. Who Says There is an Intention– Behaviour Gap? Assessing the Empirical Evidence of an Intention–Behaviour Gap in Ethical Consumption. *Journal of Business Ethics* **2016**, *136* ,2, 219–236. https://doi.org/10.1007/s10551-014-2440-0
83. Henninger, C.E.; Singh, P. Ethical Consumption Patterns and the Link to Purchasing Sustainable Fashion. In: Henninger, C., Alevizou, P., Goworek, H., Ryding, D. (eds) *Sustainability in Fashion* **2016**. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-51253-2_6
84. Joshi, Y.; Rahman, Z. Factors affecting green purchase behavior and future research directions. *International Strategic Management Review* **2015**, *3*(1-2), 128–143. https://doi.org/10.1016/j.ism.2015.04.001
85. Wiederhold, M.; Martinez, L. F. Ethical consumer behaviour in Germany: The attitude- behaviour gap in the green apparel industry. *International Journal of Consumer Studies* **2018**, *42*,4, 419– 429. https://doi.org/10.1111/ijcs.12435
86. How data is making the business case for sustainable fashion. Available online: https://www.thinkwithgoogle.com/intl/en-emea/consumer-insights/consumer-trends/how-data-making-business-case-sustainable-fashion/ (accessed on 26 June 2024).
87. Tetik, C.; Cherradi, O. Attitude-Behavior Gap in sustainable clothing consumption. Bachelor's degree project, Jönköping University-Business School, International Management, Jönköping, Sweden, May 2020.
88. Sreen, N.; Purbey, S.; Sadarangani, P. Impact of culture, behavior and gender on green purchase intention. *Journal of Retailing and Consumer Services* **2018**, *41*, 177– 189. https://doi.org/10.1016/j.jretconser.2017.12.002
89. Jung, H.J.; Choi, Y.J.; Oh, K.W. Influencing Factors of Chinese Consumers' Purchase Intention to Sustainable Apparel Products: Exploring Consumer "Attitude–Behavioral Intention" Gap. *Sustainability* **2020**, *12*, 1770. https://doi.org/10.3390/su12051770
90. Peleg Mizrachi, M.; Tal, A. Regulation for Promoting Sustainable, Fair and Circular Fashion. *Sustainability* **2022**, *14*, 502. https://doi.org/10.3390/su14010502