-RESEARCH ARTICLE-

PRO-ENVIRONMENTAL CONCLUSIONS of CONSUMERS' ENDURING INVOLVEMENT with RECYCLED PRODUCTS: ECO-AWARE PURCHASING BEHAVIOR and PSYCHOGRAPHICS

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Abstract

The environmental awareness movement that started towards the end of the twentieth century has continued expanding. Recycling, or reusing waste materials as raw materials in manufacturing with varied methods, is an essential subject for today's society and the business world. Operating eco-friendly is the primary concern of green, social, and sustainable marketing. According to scholars, environmental sustainability should not be an individualistic concern for a person or a government; instead, it should be a global consideration. Recycling and environmental issues are also essential topics in Türkiye. Related to the constantly growing volume of processed waste and the disposal and recovery facilities in Türkiye, this empirical study aims to contribute to this challenging global subject to clarify Turkish consumers' involvement with recycled products and the impacts of their participation on their pro-environmental behavior. The moderating effect of sociodemographic variables on the bond between personal involvement and pro-environmental behavior is also questioned in this inquiry. A descriptive study is realized via an online questionnaire distributed to 422 participants. A structural equation model is constructed, and the hypotheses are tested with AMOS 21. The personal significance and hedonic involvement components of the personal involvement inventory influence consumers' pro-environmental purchasing activities and psychographics. Gender, age, marital status, education, profession, and family size moderate the bond between personal involvement and consumers' pro-environmental behavior for the examined sample in Türkiye.

Keywords: *Recycled Product, Sustainable Marketing, Pro-environmental Behavior, Eco-consumer Behavior, Personal Involvement.*

JEL Codes: *M310, P28, Q5.*

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TÜKETİCİLERİN GERİ DÖNÜŞTÜRÜLMÜŞ ÜRÜNLERE KARŞI KALICI İLGİLERİNİN, ÇEVRE YANLISI SONUÇLARI: ÇEVREYE DUYARLI SATIN ALMA ve YAŞAM BİÇİMİ [2]

Öz

Yirminci yüzyılın sonlarında başlayan çevrecilik ve sürdürülebilirlik ile ilgili faaliyetler günümüzde de artarak devam etmektedir. Yeniden dönüşüm ya da atıkların dönüştürülerek hammadde olarak yeniden üretimde kullanılması günümüzün en önemli konularından biridir. Çevre dostu bir dünyada yaşayabilmek, yeşil pazarlamanın, sürdürülebilir ve sosyal pazarlama alanlarının en başta gelen amaçlarındandır. Geçmişte yapılan çalışmalarda bilim insanları, çevresel sürdürülebilirliğin bireysel değil tüm dünyayı ilgilendiren bir konu olduğunu ileri sürmüşlerdir. Tüm dünyada olduğu gibi ülkemizde de geri dönüşüm ve çevrecilik konularında faaliyetler görülmektedir. Bu ampirik çalışma ile, kişilerin geri dönüşüme olan ilgilerinin çevrecilikle ilgili davranışlarını nasıl etkilediğinin ortaya çıkarılması hedeflenmiştir. Ayrıca, araştırmada kullanılan sosyodemografik faktörlerin düzenleyici etkisi de yine bu çalışma da ele alınmıştır. Kavramsal incelemeler sonucu geliştirilen araştırma modeli ve hipotezler, 420 katılımcı ile gerçekleştirilen anket çalışması neticesinde toplanan verinin SPSS VE AMOS 21 de keşfedici ve doğrulayıcı faktör analizleri uygulandıktan sonra, yapısal eşitlik modeli ile test edilirken bir yandan da yol analizleri ile hipotezlerin geçerliliği sorgulanmıştır. Kişilerin geri dönüştürülmüş ürünlere karşı olan önem ve ilgileri ve duygusal güdülenmeleri, alışveriş ve yaşam tarzlarını çevrecilik yönünde olumlu etkilemektedir. Ayrıca, cinsiyet, yaş, medeni hal, eğitim, meslek ve aile genişliği değişkenlerinin, yukarıda bahsedilen neden sonuç ilişkisinde üzerinde çalışılan örneklem grubunda, düzenleyici rol oynadığı, AMOS da gerçekleştirilen analizle tespit edilmiştir.

Anahtar Kelimeler: *Geri Dönüşüm, Çevreye Duyarlı Satın Alma, Çevreye Duyarlı Yaşam Biçim, Çevre Yanlısı Tüketici davranışı, Kişisel İlgi.*

JEL Kodları: *M310, P28, Q5.*

"Bu çalışma Araştırma ve Yayın Etiğine uygun olarak hazırlanmıştır."

1. INTRODUCTION

Recycled products constitute a significant part of current ecological strategies. Moreover, consumers' enduring involvement with recycled products and motivation to recycle make them more careful in their pro-environmental behavior.

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[2] Genişletilmiş Türkçe Özet, makalenin sonunda yer almaktadır.

Consuming scarce resources optimally without wasting them and maintaining production and consumption activities without harming the environment are the main concerns of green, social, and sustainable marketing.

Since business operations have long been a significant contributor to environmental problems, there is a growing understanding that businesses must help develop a more ecologically sustainable society (Maheshwari, 2014). Companies, particularly multinationals, are significant players in the global economy and have the resources and ability to implement ecological solutions. (Tjarnemo, 2001). Meanwhile, companies are responsible for conducting activities to foster greater sustainability. As a result, they become greener, intending to create "markets for more environmentally friendly products and services by educating and influencing customers to change" (Hart, 1997: 67).

On the other hand, marketing management should be concerned with sustainability and widen its scope to include ecological issues[(Maheshwari, 2014). Marketing scholars have put forward different green marketing definitions. Green marketing management is "the holistic management process responsible for identifying, anticipating, and satisfying the requirements of customers and society profitably and sustainably" (Peattie, 2001: 130). "Marketing activities recognize environmental stewardship as a business development responsibility and growth opportunity" (Coddington, 1993: 297). Both definitions are based on eco-orientation, considered a universal strategic concept (Maheshwari, 2014).

"Environmental sustainability is a management approach that involves developing strategies to sustain the environment and to produce profits for the company" (Kotler and Armstrong, 2007: 583). However, "environmental objectives are not incompatible with ongoing economic success. Instead, it is a close step to marketing" (Grant and Koch, 2007: 2).

A green consumer is "someone who voluntarily engages in consumer practices that are regarded as environmentally friendly" (Peattie, 2001: 132); in other words, a person who values green or environmentally friendly activities.

Research on green purchasing has been growing since the beginning of the 1990s. Green consumers consider their purchasing behaviors and expect environmentally friendly initiatives from the government and businesses in terms of service, production, processing, and resourcing. Green consumerism is not an individual value for consumers; it is a social ideology for them (Maheshwari, 2014)

Eco-friendly attitudes are well-established in developed countries. Governments have formulated regulations and incentives related to environmental issues. Environmental sustainability should, therefore, not be an individualistic concern for a person or a government; instead, it is a global matter.

"Environmentally friendly consumers exhibited a willingness to purchase green and recyclable products." In addition, their participation in social organizations dedicated to environmental conservation represents their pro-environmental concerns (Khare, 2015: 312).

The scarcity of resources and constant rise in consumption has pushed people to convert waste into raw materials to be reused. "As a result, a wide variety of waste materials, such as glass, paper, aluminum, plastic, battery, engine oil, accumulator, concrete, and organic and electronic waste, are transformed into secondary resources through physical and chemical processes, then converted into raw materials and included in the production process again. Reusing recyclable waste materials as raw materials in manufacturing with varied recycling methods" is called recycling (Büyüksaatçi et al., 2008: 1-2). Recycling prevents the waste of resources, improves living standards, and brings solutions to the energy crisis.

According to t, the Turkish Statistical Institute (TUİK) statistics, the recycling sector is enlarging its activities. In 2020, the figure for waste processed in the waste disposal and recovery facilities was 127.4 million tons; 78.3 million tons of this waste was disposed of, while 49.1 million tons were recycled. The total amount of processed waste increased by 22% compared to 2018. Plastics compose 6.13 million tons of recycled 49.1 million tons of waste annually and make a USD 6 billion contribution to the economy. The carbon emissions from production from scratch diminish with recycling, and the depletion of natural resources is prevented(www.tuik.gov.tr, 2022). Retail companies in Türkiye also highlight recycled products on their websites, advertisements, and labels.

Related to the growing recycling market in Türkiye, this empirical study aims to clarify Turkish consumers' involvement with recycled products and to determine how their familiarity shapes their pro-environmental behavior. Furthermore, this inquiry also questions the moderating effect of sociodemographics on the bond between personal involvement and pro-environmental behavior.

1.1. Conceptual Framework

1.1.1. Green Marketing

The term 'green marketing' emerged approximately fifty years ago in reaction to the green movement integrating and building upon the principles behind the ecological and societal marketing concepts.

Society's concern with the natural environment led businesses to modify their behavior to address society's new problems. As a result, some companies quickly accepted concepts like environmental management systems and waste minimization and integrated environmental issues into all organizational activities (Polonsky, 1994). However, two paradoxical realities, limited resources, and unlimited human requests, push marketers to utilize resources efficiently by avoiding waste. Hence, this paradoxical situation makes green marketing inevitable (Mishra and Charma, 2014).

Green marketing is a comprehensive management process in charge of determining, predicting, and resolving the demands of clients and society in a profitable and long-lasting way. Sustainability and holism are the fundamental concepts of green marketing, but they are tough to be converted into action. Consumer values, demographic factors, knowledge of environmental problems and alternative products, perceived personal relevance, and the ability of the individual to make an effective contribution are factors impacting the green consumer behavior and were reviewed below and took place in the research model. In addition, green marketing needs to be accompanied by corporate values and strategies, regulations, investment processes, political systems, education, and trade (Peattie and Charter, 2003).

Many companies still use conventional business metrics (earnings, ROI, market share, etc.) to assess the performance of green efforts. Few businesses are aware of the strategic advantage of the greening policy. "Green design/new product development, green positioning, green pricing, greening logistic, marketing waste, green promotion and green alliances" are the tools to implement green marketing strategies and tactics(Polonsky and Rosenberger III, 2001: 23-26).

Peattie (2001) stated three stages in the development of green marketing. The first was 'ecological' green marketing, where all marketing operations addressed environmental issues and offered solutions. The second phase was '*environmental*' green marketing, which focused on turning to clean technology and creating novel new goods to address difficulties with waste and pollution. The third stage was '*sustainable,*' which has been a hot topic in marketing and management since the end of the last century.

Mishra and Charma(2014: 79) proposed the three Rs of environmentalism as; "reduce, reuse, and recycle."

Peattie and Charter 2003) advise keeping marketing concepts promoting more sustainable ways to live and consume, such as recycling, fair trade, product-service substitutions, composting, frugality, energy efficiency, and less materialistic ways of life, is still relevant for today's and the near future's marketing people.

1.1.2. Personal Involvement

The consumer considered an intelligent, logical, problem-solving entity that keeps and analyzes sensory information to reach a well-informed choice before acting (Markin and Narayana, 1975), has been the subject of multiple studies.

Involvement, an essential input of consumer behavior, means perception of a product's importance and how different attributes affect the brand (Howard and Sheth, 1969) or product choice. Product involvement is defined as a consumer's increased incentive toward a particular product or service category due to that category's significance or relevance to the consumer. (Schneider and Rodgers, 1996).

Most definitions either directly or indirectly indicate that involvement is tied to the person in some way, typically in terms of some measure of interest or importance to the person (Antil, 1984). When users believe that a system is significant and personally pertinent to them, they are involved. Meanwhile, user involvement may be relabeled as user participation (Barki and Hartwick, 1989).

Although several definitions of involvement have arisen in social and consumer psychology, "there is considerable agreement that high involvement messages have greater personal relevance and consequences or elicit more personal connections than low involvement messages" (Petty et al., 1983: 533).

A person's general and ongoing interest in a product class explains enduring involvement with a particular circumstance, such as purchasing or choice, illustrating situational involvement (Houston, 1977). The perception of the product's value promotes enduring involvement. Conversely, situational involvement increases when a customer considers a risky proposition (Arora, 1982). Chombart de Lauwe(1972) also described rational involvement as an attitude without emotion or interest. Sign-related involvement arises if a buyer searches for a distinction between specific product alternatives that correlate to their own identity or ego (Baudrillard, 1970).

When a product choice is seen as a reflection of the individual, this equates to personal involvement. Even more, the term "ego involvement" was mentioned more than sixty years ago to underline the "individualized and emotional" features (Laurent and Kapferer, 1985: 42). A consumer's dedication to finding the best solution to a problem is called solution involvement (Greenwald, 1965).

Evaluating involvement independently from behavior is significant to study from a broader perspective (Zaichkowsky, 1985). Involvement might be classified as personal, physical, or situational (Houston, 1977). Personal involvement means "inherent values or needs that motivate one toward an object," while physical involvement is related to "characteristics of the object that cause differentiation and increase in interest." Situational involvement "temporarily increases relevance or interest towards the object," and "these three factors influence consumer's level of involvement and response to products, advertising, and purchase decision" (Zaichkowsky, 1985: 342). Personal involvement generally means personal relevance [Greenwald, 1984; Zaichkowsky, 1985). "There is a consensus that high involvement means approximately personal relevance or importance. Even if a product or a purchase decision is unimportant, it is uninvolving. In other words, if a consumer is uninvolved with an object, they perceive it unimportant and does not care about it" (Mittal, 1995: 664).

However, some researchers argued that involvement should not be reduced to a single dimension(Kiesler, 1969; Rothschild, 1979). Using an involvement profile instead of a single indicator of the involvement degree more accurately represents the nature of the interaction between a consumer and a product category (Laurent and Kapferer, 1985).

Involvement is a causal or driving factor affecting consumer communication and buying behaviors. The fact that customers' purchasing choice processes substantially vary due to their engagement makes evaluating the consumer involvement profile (CIP) critical. "The entire CIP contains five facets, with "two enduring, non-situational kinds of the perceived importance of the product and its hedonic value, indicating the consumer's relationship to a product. The other three components are perceived risk importance, probability (subjective), and the perceived sign value of the product class" (Laurent and Kapferer, 1985: 41-44). The classification of the latter facets depends on conditions being classified as enduring and situational. Every aspect of interaction contributes some unique knowledge. Since different characteristics have distinct influences on aspects of consumer behavior, it is impossible to fully understand the involvement profile of a consumer using a single index; instead, all of the profile's facets must be considered. According to the CIP theory, involvement exerts a considerable influence on consumer decision processes and information search. The impacts of engagement on consumer behavior theory are explained clearly by involvement theory (Laurent and Kapferer, 1985).

1.1.3. Consumer Behavior: Personal Involvement as an Important Input of Consumer Behavior

Consumers' involvement shapes their opinions and consumption behavior (Celci and Olson, 1988). In addition, several studies focusing on involvement and its effect on consumer behavior agreed that "involvement is a potentially important mediator of consumer behavior" (Mitchell, 1979: 191).

Involvement is a crucial factor in the explanation of behavioral variation. Involvement may be a determinant or an antecedent to behavioral phenomena such as behavior persistence and intensity (Poiesz and Bont, 1995). According to involvement theory, high and low-involvement purchases correlate to more and less involved consumers. Consumer involvement is influenced by a purchase's relevance to a particular person (Jain, 2019). Involvement is "the primary determinant of consumer behavior and decision-making" (Calvo-Porral et al., 2021: 251).

Although attitude and involvement are two separate concepts, they are connected. Also, highly involved people exhibit greater attitude-behavior consistency, according to psychologists. Highly involved people are more likely to establish intentions and behave following their attitudes when they have a positive attitude (Barki and Hartwick, 1989).

On the other hand, consumers' values and beliefs should be considered while observing factors affecting purchasing decisions (Hoyer and Mac Innis, 2004). Accordingly, environmental values play a primary role in pro-environmental behavior by influencing people's beliefs and norms and shaping consumers' pro-environmental behaviors(Maheshwari, 2014). Purchasing decisions reflect the consumer's desire to uphold social standards and values. Environmentally conscious customers are more likely to favor "cause-related promotions and green items. Consumers' pro-environmental ideas, environmental consciousness, and green purchasing behavior

are influenced by psychographics, prior beliefs, societal norms, and environmental awareness. Consumers' green attitudes, prior green purchasing experiences, participation in pro-environmental activities, and seriousness about green issues can all be described as causes of green buying (Khare, 2015).

Different aspects of involvement have varied implications for particular customer behaviors, according to the five-facet CIP mode l(Laurent and Kapferer, 1985). Mittal(1995) modified the 'relevance' of the PII to 'personal importance' and defined involvement as "a person's perceived importance of the object based upon inherent needs, value, and interests" (Mittal, 1995: 666).

Consumers' pro-environmental values affect their pro-environmental buying behaviors. People's attitudes have an impact on their thinking (cognitive function) and feelings (affective function), which in turn influences behavior like purchasing decisions (Pickett-Baker and Ozaki, 2008).

Based on the above statements, the following hypotheses are proposed:

H1: The personal importance facet of CIP in recycled products influences consumers' pro-environmental behaviors.

H2: Personal involvement inventory (PII) of recycled products influences consumers' pro-environmental behaviors.

H2 main hypothesis was assessed with four sub-hypotheses based on Mittal's (1995) four sub-groups:
H2a: Personal significance of […]
H2b: Hedonic involvement with […]
H2c: Personal relevance of […]
H2d:Attitude towards […]

[…] recycled products affect consumers' pro-environmental behaviors.

1.1.4. Sociodemographic Variables and Consumer Behavior

Scholars studied several factors affecting pro-environmental behavior. Sociodemographic characteristics are one of them (Brécard, 2009: Botetzagias, 2015; Li et al., 2019). Although consumer demographics alone are insufficient to profile green consumers, they indicate a standard set of traits that can help describe different green market segments. Also, during segmentation, demographics may present distinct clusters of consumers that may differ in their philosophies and purchasing tendencies. Therefore, trend analysis and market segment descriptors benefit the demographic study and might offer valuable data for macro marketing-related policy queries (D'Souza et al., 2007). Furthermore, a moderating influence of sociodemographic variables between the personal involvement inventory and pro-environmental behavior was also observed. Accordingly, the following hypothesis and sub-hypotheses are proposed:

H3: Sociodemographic factors of the study moderate the relationship between the aspects of PII and consumers' pro-environmental behaviors.

The following sub-hypotheses are evaluated related to the sociodemographics assessed by the survey.

H3a: Gender moderates the relationship between the factors of PII and consumers' pro-environmental buying behaviors.

Gender moderates the relationship between the personal significance of recycled products to consumers and [...]
H3aa: [...] their eco-aware buying behaviors.
H3ab: [...] psychographics.
Gender moderates the relationship between consumers' hedonic involvement with recycled products and [...]
H3ac: [...] eco-aware buying behaviors.
H3ad: [...] psychographics.

H3b: Age moderates the relationship between the facets of PII and consumers' pro-environmental buying behaviors.

Age moderates the relationship between the personal significance of recycled products to consumers and [...]
H3ba: [...]their eco-aware buying behaviors.
H3bb:[...] psychographics.
Age moderates the relationship between consumers' hedonic involvement with recycled products and [...]
H3bc: [...] eco-aware buying behaviors.
H3bd: [...]psychographics.

H3c: Marital status moderates the relationship between the components of PII and consumers' pro-environmental buying behaviors.

Marital status moderates the relationship between the personal significance of recycled products to consumers and [...]
H3ca: [...] their eco-aware buying behaviors.
H3cb: [...]psychographics.
Marital status moderates the relationship between consumers' hedonic involvement with recycled products and [...]
H3cc: [...]eco-aware buying behaviors.
H3cd:[...] psychographics.

H3d: Education level moderates the relationship between the parts of PII and consumers' pro-environmental buying behavior.

Education level moderates the relationship between the personal significance of recycled products to consumers and [...]

H3da: [...] their eco-aware buying behaviors.

H3db: [...] psychographics.

Education level moderates the relationship between consumers' hedonic involvement with recycled products and [...]

H3dc: [...] eco-aware buying behavior.

H3dd:[...] psychographics.

H3e: Profession moderates the relationship between the features of PII and consumers' pro-environmental buying behaviors.

Profession moderates the relationship between the personal significance of recycled products to consumers and [...]

H3ea: [...] their eco-aware buying behaviors.

H3eb:[...] psychographics.

Profession moderates the relationship between consumers' hedonic involvement with recycled products and [...]

H3ec: [...]eco-aware buying behaviors.

H3ed:[...] psychographics.

H3f: Income level moderates the relationship between the elements of PII and consumers' pro-environmental buying behaviors.

Income level moderates the relationship between the personal significance of recycled products to consumers and [...]

H3fa: [...] their eco-aware buying behaviors.

H3fb:[...] psychographics.

Income level moderates the relationship between consumers' hedonic involvement with recycled products and [...]

H3fc: [...] eco-aware buying behaviors.

H3fd:[...] psychographics.

H3g: Family size(number of household members) moderates the relationship between the dimensions of PII and consumers' pro-environmental buying behaviors.

Family size moderates the relationship between the personal significance of recycled products to consumers and [...]

H3ga: [...]their eco-aware buying behaviors.

H3gb:[...] psychographics.

Family size moderates the relationship between consumers' hedonic involvement with recycled products and [...]

H3gc: [...] eco-aware buying behaviors.

H3gd:[...] psychographics.

2. METHODOLOGY

2.1. The Research Model

Following the conceptual framework of this study, the following research model was constructed to be tested in Figure 1.

Figure 1. Conceptual Research Model
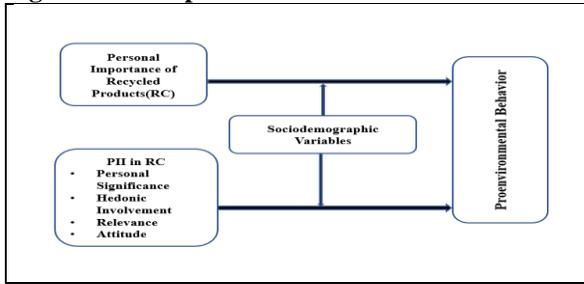
Source: Proposed by the Author

The model was evaluated with structural equation modeling (SEM). "SEM includes procedures incorporating both unobserved and observed variables. SEM is widely and easily applied for modeling multivariate relations, estimating point or interval indirect effects, and theory testing. Furthermore, SEM can effectively address numerous research problems involving nonexperimental research" (Byrne, 2010: 3-4). Due to those vast possibilities, SEM was preferred in this descriptive study to evaluate direct and indirect relationships between the research model components and test the hypotheses.

2.2. Data Collection Method and Sampling

In this study, the data were obtained using a non-probabilistic convenient sampling technique and the snowball method to reach participants (Nunan et al., 2020). The researcher applied the snowball method to get the ideal sample size quickly by contacting different groups or individuals who would provide new referrals until the below-aimed sample size was reached. The researcher also aimed to obtain more meaningful data to answer the research questions by the convenient and snowball sampling method instead of surveying the field study directly among university students.

The sample size was determined according to Thumb's rule, which requires "10 cases/observations per indicator variable in setting a lower bound of an adequate sample size" (Hair et al., 2011: 144). The study has thirty-six observed indicators; hence, the minimum requested sample size of 360 is provided. Four hundred twenty valid forms were obtained, with an excellent return rate of 99.5%. The study was conducted by receiving all participants' consent to answer an online questionnaire and keeping all answers voluntarily private. The author obtained the official permission of the Ethics Board of İstanbul Yeni Yüzyıl University on 4 October 2022 to perform

this empirical study. Subsequently, the survey was taken place between 19 October to 11 November.

Females comprised 65.2% of the sample, of which 61.2% were single. In addition, 62.9 percent of the attendants were younger than 41. Half of the respondents(57.1%) were graduates, while 31.4% were postgraduates. Forty percent of the sample was employees, and SML business owners comprised 34%. Forty-three percent of the participants had a family income between TRY 6500 and 19500, and half of the respondents were members of a family of three or four.

2.3. Measures

This study is based on mature scales and existing literature studies. Mittal's (1995) regrouped Zaichkowsky's (1985) original unidimensional PII (personal involvement inventory) scale as four categories (personal significance, hedonic involvement, personal relevance, and attitude), keeping 17 out of the original twenty statements questioned with a 5-point Likert scale. Two items were omitted due to having the same meaning as other statements because of the translation into Turkish. One comment was omitted for already being addressed by the personal importance scale. Additionally, personal importance was observed as a separate subdimension following Schneider and Rodger's (1996) proposal, including six items.

Personal importance and the four components of PII were the independent variables in the research model to interrogate the dependent variable, consumers' pro-environmental behavior. Two main hypotheses were developed to test potential relationships between independent and dependent variables. Furthermore, the moderating effects of the socioeconomic variables, including gender, age, education level, marital status, profession, net monthly family income, and family size(number of household members), were also investigated to clarify the profile of the observed Turkish individuals.

The Cronbach's alpha value of Schneider and Rogers's (1996) scale is 0.846 with an Eigenvalue of 3.860, explaining 55.2% of the changes. Mittal's (1995) reconstructed scale has 0.90 construct reliability values for purchasing decisions and product involvement factors.

The pro-environmental behavior scale was adopted from Pickett-Baker and Ozaki's (2008) green buying behavior scale, which was developed to test how pro-environmental beliefs influence consumers' evaluation of green products as a 5-point Likert measure. This past environmental behavior scale consisted of two factors past environmental attitudes with Cronbach's α values of 0.848 and past green buying behavior with a Cronbach's α of 0.804: and KMO and Bartlett's test of 0.869, including 13 statements.

The indicators of the 5 points Likert scale range from 1, for strongly disagree, to 5, for strongly agree. In this study, a pretest took place among the first 65 respondents, and the collected data were evaluated with a *t*-test and regression analysis using SPSS

21.0. Since the results were consistent, the research surveyed 422 participants via an online questionnaire, including the pretest.

2.4. Reliability and Validity Tests

The data analysis started by conducting KMO (Kaiser-Meyer-Olkin) and Bartlett tests and calculating the scales' reliability via Cronbach's alpha(α) values for all dependent and independent variables of the research model.

KMO is a sample adequacy statistic, while Bartlett's indicates a good relationship between the variances to continue the analysis at a 5% significance level (Durmuş et al., 2010).

An explanatory factor analysis was applied to the model's independent variables to reveal the hidden dimensions behind many measurable and visible features that cannot be observed and measured (Tunçer and Atan, 2020). The KMO value of the EFA was 0.891, and Bartlett's test results in Table 1 indicate the appropriateness of the sample data for the factor analysis. Variables were extracted using principal component analysis with varying-maximizing orthogonal rotation and extraction criteria of eigenvalues greater than 1. Items with a factor loading below 0.5 that deteriorated the reliability scores were eliminated. EFA concluded with three features differing from the original five, where four of six comments of personal importance arose. Eight items out of the actual seventeen PII appeared under the personal significance and the hedonic involvement at the end of EFA. The three components explained 74.906% of the variation, surpassing the minimum expected value of 50%. Personal significance, hedonic involvement, and personal importance were highly reliable, with Cronbach's α values beyond 0.70; hence the statements successfully explained the belonging components.

Table 1. EFA Results of the Latent Variables

Components				
Personal Significance		**Hedonic Involvement**	**Personal Importance**	**Statements**
PERSIG7	0.809			Recycled products are interesting to me.
PERSIG2	0.809			Recycled products mean a lot to me.
PERSIG6	0.795			Recycled products matter to me.
PERSIG1	0.786			Recycled products concern me.
PERSIG13	0.757			Recycled products are relevant.
PERSIMPO2	0.741			I attach great importance to selecting a recycled product.
PERSIG10		0.892		Recycled products are appealing.
PERSIG11		0.881		Recycled products are fascinating.
PERSIG9		0.854		Recycled products are exciting.
PERSIMPO6			0.857	The decision to select a recycled product is severe and essential.
PERSIMPO5			0.836	A recycled product should be carefully chosen.
PERSIMPO1			0.704	Choosing a recycled product is a big decision in one's life.
KMO				0.891
Bartlett's Test of Sphericity	Approx. Chi-Square			3450.554
	df			66
	Sig.			0.00
Total Variance Explained (%)				74.906
Reliability	0.910	0.930	0.785	

Extraction method: Principal component analysis, rotation method, maximum variance method.

The pro-environmental buying behavior variable formed part of the confirmatory factor analysis (CFA) as the extracted items at the end of the factor analysis (Bollen, 1991), presented with the KMO and Bartlett's tests in Table 2.

Five of the thirteen original items appeared as a conclusion of the factor analysis under two factors labeled eco-awareness and psychographics, explaining 72.181% of the variation. The KMO value is 0.69, and Bartlett's test results in Table 2 point to the appropriateness of the sample data for the factor analysis.

Table 2. Factor Analysis Results of The Pro-Environmental Behavior

	Components		
	Eco-awareness	**Psychographics**	**Statement**
BEH3	0.878		I buy products made or packaged in recycled materials.
BEH4	0.835		I buy products in reusable packages.
BEH2	0.625		I read labels to see if the contents are environmentally safe.
BEH7		0.890	I recycle newspapers.
BEH6		0.865	I recycle bottles, cans, and glass.
KMO			0.690
Bartlett's Test of Sphericity	Approx. Chi-Square		579.859
	df		10
	Sig.		0.00
Total Variance Explained(%)			72.181

Extraction method: Principal component analysis, rotation method, maximum variance method.

The eco-awareness and psychographics scales were highly reliable, with Cronbach's α values above 0.70, as presented in Table 4.

The results of EFA and the factor analysis of pro-environmental buying behaviors demonstrated that the model was well designed, and the scales of the variables were well selected. Meanwhile, all the factors' loadings in Tables 1 and 2, above 0.60, emphasized the excellent construct validity of the model. Since the scales were acceptable, the CFA phase of the analysis was executed via AMOS 21.

The CFA was conducted concerning the explicatory factor analysis (EFA) results and the dependent variable's factor analysis results to verify the factor structure's efficacy and stability. Moreover, composite reliability was used to measure the reliability of each dimension of the structural equation model (SEM). The factor loadings of all indices were equal to or above 0.5, ensuring the convergent validity of the model. Another convergent validity indicator is "to obtain all CR (composite reliability) values that are higher than AVE's (average, variance extracted), and all AVE's must be equal or greater than 0.05" (Yaşlıoğlu, 2017: 82). Therefore, all concurrent validity requirements are provided. Furthermore, besides having correlation values below the cross line, as shown in Table 5, two other conditions of the discriminant validity were also observed. MSV (maximum squared variance) and ASV (average shared square conflict) were calculated regarding "the highest correlation coefficient between the latent constructs for MSV and the mean of the squared correlation coefficients between latent constructs for ASV" (Yaşlıoğlu, 2017: 83). The latent variables of the model exhibit the characteristics MSV<AVE; ASV<MSV, as seen in Table 5.

Table 3. Reliability and Validity Examinations

Variable	Item	UC	SE	Z-Value	*p*-Value	SC	Cronbach's α	CR	AVE
Personal Significance (PERSIG)	PERSIG7	1.227	0.073	16.782	***	0.879	0.910	0,92	0,51
	PERSIG2	1.134	0.073	15.451	***	0.802			
	PERSIG6	0.990	0.060	14.755	***	0.771			
	PERSIG1	1.083	0.078	13.839	***	0.717			
	PERSIG13	1.192	0.076	15.683	***	0.814			
	IMPO2	1.000	0.000	-------	***	0.704			
Hedonic Involvement (HEDOINV)	PERSIG10	1.085	0.037	29.479	***	0.948	0.930	0,93	0,82
	PERSIG11	1.039	0.040	25.912	***	0.881			
	PERSIG9	1.000	0.000	-------	***	0.885			
Eco-aware Purchasing (ECOAWAR)	BEH3	1.000	0.000	-------	***	0.778	0.726	0,74	0,50
	BEH4	1.058	0.076	14.006	***	0.744			
	BEH2	0.831	0.076	10.954	***	0.577			
Psychographics (PSYCOGR)	BEH7	1.000	0.000	-------	***	0.769	0.758	0,77	0,62
	BEH6	0.863	0.087	9.929	***	0.809			

UC, unstandardized coefficients; SE, standard error; SC, standardized coefficients; ***p<0.001.

The goodness-of-fit indices were also coherent with the expected ones (Hair et al., 2014)] as shown in Table 4. A value of X2/df, less than 3, indicated a good fit for the model. CFI, NFI, and TLI values were within the suitable fit intervals. The importance of RMSE and GFI pointed to an excellent fit.

Table 4. The Goodness of Fit Indices of The Structural Model

Fit Index	X^2/df	GFI	RMSEA	IFI	NFI	TLI	CFI
Acceptable range*	<5	>0.90	<0.07	>0.9	>0.9	>0.9	>0.92
Model's value	2.593	0.938	0.062	0.971	0.953	0.962	0.970

*The reference values depend on the sample size above 250 and the observed variable number between 12 and 30 (Byrne, 2011).

In conclusion, all appropriate indices in Table 4 were in the acceptable range, and the model fit was satisfactory. Hence, the model was valid, and the results were reliable.

Table 5. Discriminant Validity

	Personal Significance	Hedonic Involvement	MSV	ASV
Personal Significance	0,705			
Hedonic Involvement	0,639**	0,905	0.408*	0.408*

** *p*<0.01. The diagonal is the square root of AVE.* MSV (0.639^2) <0.50 and *ASV((0.639^2)/1)≤ MSV.

The latent variables of the model, personal significance and hedonic involvement, were correlated and differentiated at a 0.01% significance level, as seen in Table 5.

2.5. Structural Equation Modeling and Path Analysis

2.5.1. Direct Effects

The performance of the structured model was monitored with path analysis.

Table 6. The Results of The Path Analysis and The Test of Hypotheses(Direct Effects)

Path to	UC	SE	C.R.	*p*	SC	Hypothesis	Hypotheses
PERIMPO→ECOAWARE	-0.023	0.05	-0.410	0.681	-0.022	H1	Unconfirmed
PERIMPO→PSYCOGR	-0.047	0.08	-0.551	0.582	-0.035	H1	Unconfirmed
PERSIG→ECOAWARE	1.017	0.09	11.34	***	0.922	**H2a**	**Confirmed**
PERSIG →PSYCOGR	0.949	0.12	7.789	***	0.682	**H2a**	**Confirmed**
HEDOINV→ECOAWAR	-0.113	0.04	-2.516	0.012	-0.147	**H2b**	**Confirmed**
HEDOINV →PSYCOGR	-0.203	0.06	-2.961	0.003	-0.210	**H2b**	**Confirmed**
PERSRELV→ECOAWA	Pers. Relevance and attitude are not extracted in the factor analysis; hence they do not pass the path analysis.					H2c	Unconfirmed
PERSRELV→PSYCOGR						H2c	Unconfirmed
ATTTITUDE→ECOAWA						H2d	Unconfirmed
ATTITUDE →PSYCOGR						H2d	Unconfirmed

PERIMPO, personal importance; PERSIG, personal significance; HEDOINV, hedonic involvement; PERSRELV, personal relevance; ATT, attitude; ECOAWAR, eco-awareness; PSYCOGR, psychographics; ***p<0.001.

The path analysis showed that, at a 5% significance level, there was no statistically supported effect of personal importance on eco-aware purchasing behavior or psychographics. Accordingly, Hypothesis H1 was rejected.

However, there were positive, statistically significant, and strong correlations between personal significance and eco-aware purchasing behavior and psychographics. The personal significance (PERSIG) highly and positively affected eco-aware purchasing behaviors (Table 6), with a standardized regression coefficient of 0.922 and a *t*-value of 11.347, adequately above the threshold *t*-value. Meanwhile, personal significance also positively and strongly influenced psychographics, with a standardized regression coefficient of 0.682 and a *t*-value of 7.789. The threshold *t*-value of 1.96 at

a 5% significance level. Therefore, Hypothesis H2a was supported as a result of the path analysis.

Conversely, hedonic involvement correlated negatively and significantly with eco-aware purchasing behaviors and psychographics. However, the impact of hedonic involvement on both dependent variables was weaker than personal significance, as shown in Table 6. The absolute *t*-values (2.516 and 2.961) crossed the threshold *t*-value of 1.96 at a 5% significance level. Subsequently, Hypothesis H2b was confirmed.

Since the other two independent variables of the theoretical model, personal relevance and attitude, were not extracted at the end of the EFA, they could not contribute to the path analysis. Appropriately, Hypotheses H2c and H2d were rejected.

In conclusion, the acceptance of Hypotheses H2a and H2b indicated that those two dimensions of PII, personal significance and hedonic involvement with recycled products, influenced consumers' pro-environmental behaviors, which consisted of eco-aware purchasing behaviors and psychographic dimensions. In contrast, the personal involvement and attitude dimensions did not. Nevertheless, considering personal importance as a separate component did not work in this study.

Therefore, Hypotheses H2a and H2b were confirmed, whereas H1, H2c, and H2d were not. The results of the hypotheses tests are displayed in Table 6.

2.5.2. Moderating Effects of Sociodemographics

Gender, age, marital status, education, profession, family income, and family size were the sociodemographic variables monitored in this study. Therefore, the relationship between personal significance and hedonic involvement with recycled products, with eco-aware purchasing behaviors and psychographics, were tested separately with 28 sub-hypotheses.

As the first step of the moderating analysis, the standardized value of all dependent and independent variables, moderators, and the products of the dependent and moderators were calculated in SPSS 21 to remove any multicollinearity effect (Baron, 1986). Then, all sub-hypotheses were tested in the path analysis in AMOS 21 with the standardized variables, including the intersected (product) ones.

As a result of the path analyses, seven of the twenty-eight hypotheses were established at a 10% significance level, with a t-value threshold of 1.64, while two were accepted at a 5% significant level. The other 18 hypotheses were not confirmed. The unstandardized regression coefficients were considered in the moderating analysis, appropriate to Hair et al.(2014).

The direction of the moderating effects was shown below with the linear diagrams structured based on Gaskin's stats tool package excel macro table (Koç et al., 2018; statwiki, 2022).

In Figure 2, the female was the less represented gender. Gender strengthened the positive relationship between hedonic involvement with recycled products and eco-aware purchasing behaviors. Hence, Hypothesis H3ac was accepted at a 10% significance level.

Figure 2. The impact of hedonic involvement on psychographics with different genders.
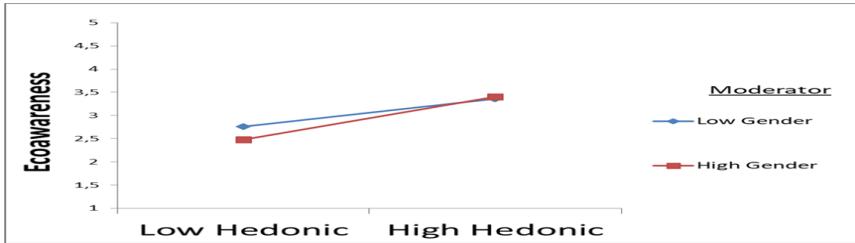
Gender favorably moderates the effect of hedonic involvement on eco-aware purchasing behaviors. Females with a low hedonic attitude act more eco-aware in their purchasing activities than males, while both genders behave similarly in cases of high involvement. The unstandardized regression coefficient for gender x hedonic participation in recycled products is 0.085, with a t-value of 1.903, above the threshold *t*-value.

Figure 3 examined the impact of personal significance on eco-aware purchasing behavior in two different age groups, older and younger. As understood from Figure 3, age strengthens the positive relationship between the personal significance of recycled goods and eco-aware purchasing behaviors. Younger consumers have more eco-aware buying behaviors with low PERSIG than older. Older people for whom recycled products have a higher personal significance act more eco-aware in their purchases than younger. The studies' age groups were 18-25, 26-33, 34-41, 42-49, 50-57, and 58 and over. Accordingly, Hypothesis H3ba was accepted at a 10% significance level.

Figure 3. The Effect of Personal Significance on Eco-Aware Purchasing Behavior at Different Ages
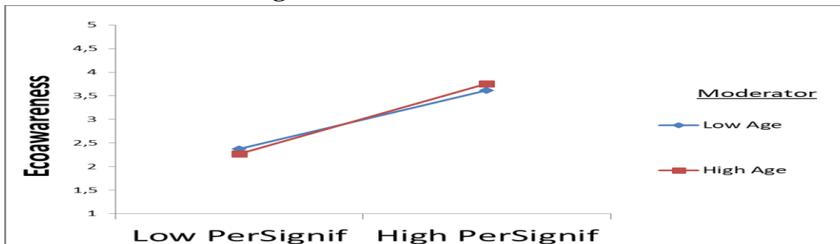
Age positively moderated the bond between PERSIG in recycled products and eco-aware purchasing behaviors. The unstandardized regression coefficient of age x personal significance in recycled products was 0.065, with a *t*-value of 1.779, passing the threshold.

Figure 4. The Impact of Personal Significance on Psychographics with Different Marital Statuses.
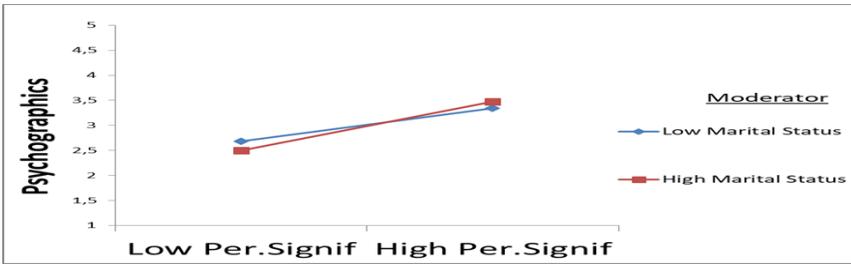
Figure 4 shows the effect of the personal significance of recycling on psychographics with two different marital statuses: high (single) and low (married). In the case of low personal relevance, married people behave more environmentally friendly, whereas, with a higher personal significance accorded to recycling, single people act more ecologically friendly than married people. Therefore, Hypothesis H3cb was confirmed at a 10% significance level, and marital status favorably was found to moderate the impact of the personal significance of recycling on psychographics and daily habits. The unstandardized regression coefficient of marital status x PERSIG in recycled products was 0.083, with the t-value of 1.865 crossing the threshold.

Figure 5 explains the correlation between hedonic involvement with recycled products and psychographics, which increases with marital status. The blue line is married participants, whereas the red one represents singles. Hypothesis H3cd was therefore approved at a 5% significance level. Marital status moderated the effect of hedonic involvement with recycled products on psychographics in a negative way.

Figure 5. Influence of Hedonic Involvement with Recycled Products on Psychographics with Different Marital Statuses
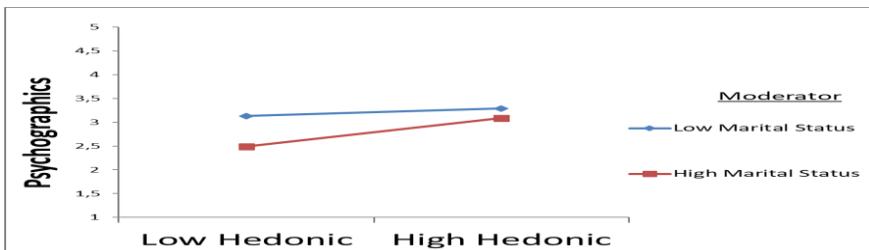
The unstandardized regression coefficient of marital status x hedonic involvement with recycled products was -0.107, with a *t*-value of 2.299 above the threshold of 1.96 at a 5% significance level.

Figure 6. Influence of Hedonic Involvement with Recycled Products on Eco-Aware Purchasing Behaviors with Different Education Levels
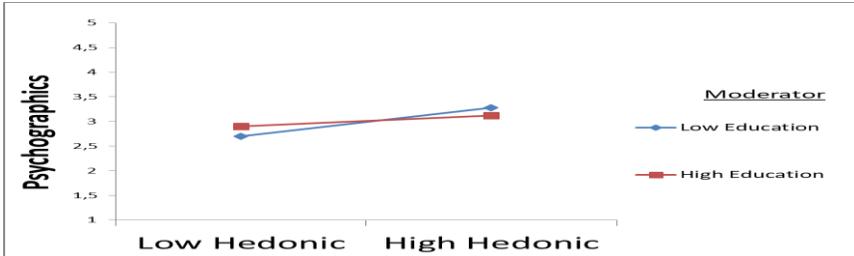
The blue and red lines in Figure 6 indicate that education dampens the positive relationship between hedonic involvement with recycled products and eco-aware buying behaviors. The red line shows that a higher education level reduces eco-aware purchasing behaviors. Hypothesis H3dc was therefore confirmed at a 10% significance level. Education negatively moderates the effect of hedonic involvement on eco-aware buying behaviors. The unstandardized regression coefficient of education level x hedonic involvement with recycled products was -0.080, with a *t*-value of -1.806, over the threshold as an absolute value.

In Figure 7, it is seen that education decreased the positive relationship between hedonic involvement with recycled products and psychographics. Red lines show that a higher education level corresponded to reduced hedonic involvement. Hypothesis H3dd was therefore confirmed at a 10% significance level. Education unfavorably moderated the effect of hedonic involvement on psychographics. The unstandardized regression coefficient of education level x hedonic involvement with recycled products were -0.090 with a t-value of -1.91, over the threshold as an absolute value.

Figure 7. Influence of Hedonic Involvement with Recycled Products on Psychographics with Different Education Levels
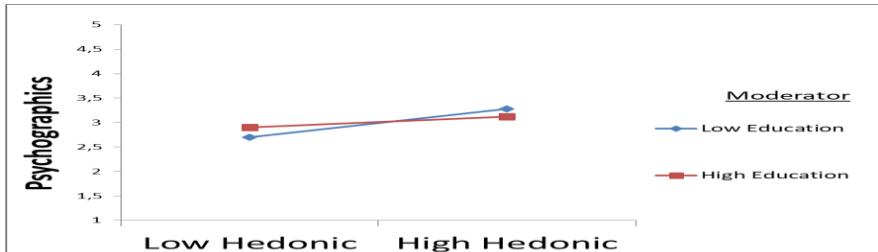
Figure 8. Effect of Hedonic Involvement with Recycled Products on Psychographics with Different Professions
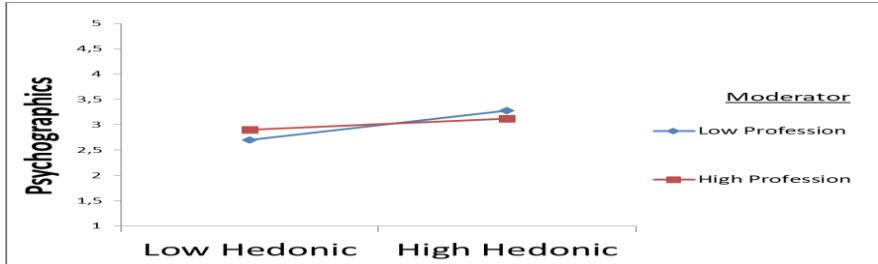
In Figure 8, the profession decreased the beneficial connection between hedonic involvement with recycled products and psychographics. The study's lowest group included those employed in a firm as executives, administrators, employees, and workers, and SML (small, medium, and large) business owners. In contrast, the highest group comprised retired and self-employed people, interest holders, students, and the unemployed. Hypothesis H3ed was therefore established at a 10% significance level. Consumers' professions moderated the effect of hedonic involvement on psychographics in a negative way. The unstandardized regression profession x hedonic participation coefficient in recycled products was -0.091, with the *t*-value of -1.906 being above the threshold as an absolute value.

Figure 9 explains the strengthening effects of family size on the relationship between the personal significance of recycled products and psychographics. Consumers who are members of large families and are interested in recycled products exhibit more psychographics than those with smaller families. Small, medium, and large families

Figure 9. The Effect of Personal Significance on Psychographics with Different Household Numbers
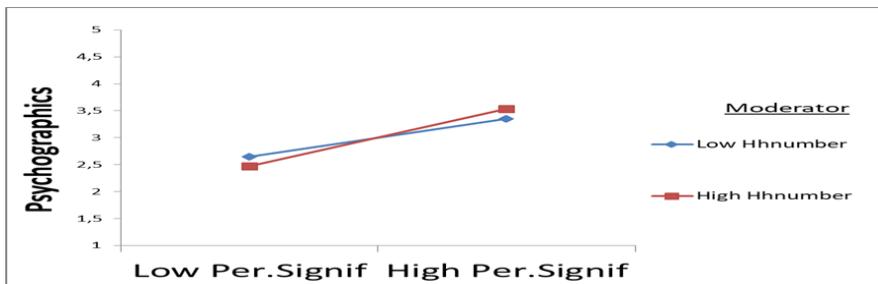
are those with two or fewer people, three or four, and five or more people. Accordingly, Hypothesis H3gb was confirmed at a 10% significance level. Furthermore, family size moderated the relationship between the personal significance of recycled products and psychographics in a positive way. The

unstandardized regression coefficient of family size x PERSIG for recycled products was 0.086, with a *t*-value of 1.852, over the threshold.

Figure 10. Impact of Hedonic Involvement with Recycled Products on Psychographics with Different Family Sizes
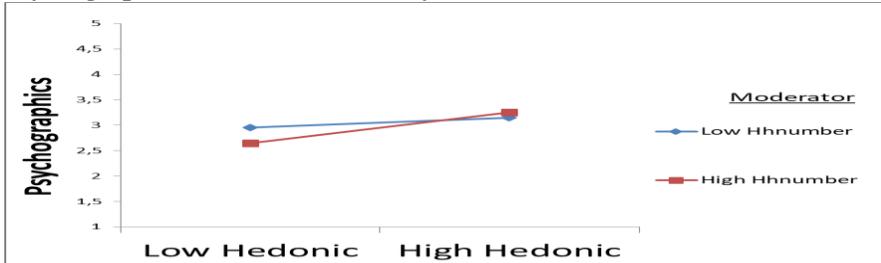
Figure 10 shows that family size strengthens the positive relationship between hedonic involvement with recycled products and psychographics. Large families and high hedonic involvement with recycled products increase psychographics. Hypothesis H3gd was therefore confirmed at a 5% significance level. On the other hand, family size positively moderated the effect of hedonic involvement on psychographics. The unstandardized regression coefficient of family size x hedonic involvement in recycled products was 0.096, with the *t*-value of 2.028 crossing the threshold of 1.96 at a 5% significance level, as shown in Table 7.

The threshold *t*- value was 1.64 at a 10% significance in Figures 2, 3, 4, 6, 7, 8, and 9.

Table 7. The Results of Moderating Effects and The Hypotheses Test

Path to	UC	SE	C.R.	*p*	Hypothesis	Hypoth.Test
Hedon x Gender→Ecoawa	0.085	0.045	1.903	0.057	H3ac	Confirmed**
Persig x Age→Ecoaware	0.065	0.036	1.779	0.075	H3ba	Confirmed**
Persig x Mst→Psycograp	0.083	0.045	1.865	0.062	H3cb	Confirmed**
Hedonic x Marsta→Psycgrhc	-0.107	0.047	2.299	0.021	H3cd	Confirmed*
Hedonic x Edu→Ecoawarens	-0.080	0.044	-1.806	0.071	H3dc	Confirmed**
Hedonic x Edu→Psycgrhcics	-0.090	0.047	-1.916	0.055	H3dd	Confirmed**
Hedonic x Proffes→Psycgph	-0.091	0.048	-1.906	0.057	H3ed	Confirmed**
Persig x HH#→Psycograp	0.086	0.046	1.852	0.064	H3gb	Confirmed**
Hedonic x HH#→ Psycogrp	0.096	0.048	2.028	0.043	H3gd	Confirmed*

"x," the moderating effects; **thresholds: p<0.10 and C.R: 1.64; * thresholds: p<0.05 and C.R:1.96.

3. RESULTS

A theoretical model was built to evaluate the link between personal involvement and customers' pro-environmental behavior. Personal significance, hedonic involvement, relevance, and attitude are independent variables and sub-dimensions of Mittal's (1995) suggested factors. Moreover, Schneider and Rodger(1996) proposed importance CIP subscale was another independent variable in the model affecting pro-environmental behavior.

According to Table 6, Hypotheses H2a and H2b were statistically significant, and the empirical data supported their paths in the model. Personal significance and hedonic involvement with recycled products influenced pro-environmental behavior through eco-aware purchasing behaviors and psychographics. Personal significance highly and positively affected both pro-environmental behaviors due to the high standardized coefficients in Table 6. Meanwhile, the effects of PERSIG in recycled products on eco-aware purchasing behavior (0.922) were higher than psychographics (0.682). Accordingly, Hypothesis H2a was confirmed at a 0.1% significance level. However, negative but statistically significant relationships existed between hedonic involvement with recycled products and pro-environmental behavior. The bonds between hedonic involvement with recycled products and eco-aware purchasing behaviors and psychographics are not as strong as personal significance due to standardized regression coefficients of -0.147 and -0.210, as shown in Table 6. Nevertheless, the impacts of hedonic involvement with eco-aware purchasing and psychographics were statistically relevant at a 5% significance level; therefore, Hypothesis H2b was confirmed.

Two other PII factors, personal relevance, and attitude, did not correlate with pro-environmental behavior due to not being extracted in the factor analyses; hence, Hypotheses H2c and H2d were rejected at the beginning of the analytical attempts.

Schneider and Roger's (1996) importance did not show statistically relevant paths in the model; therefore, Hypothesis H1 was rejected.

In conclusion, two out of four sub-hypotheses of H2 were verified in this research. Therefore, H2 was partially supported, meaning that personal significance and hedonic involvement were statistically relevant in the relationship with pro-environmental behavior at a 5% significance level, as presented in Table 6 and Figure 11.

On the other hand, the moderating roles of seven sociodemographic variables of the study, gender, age, marital status, education, profession, income, and family size, were examined via SPSS and AMOS 21. In conclusion of the conduction of twenty-eight moderating sub-analyses, seven hypotheses (H3ac, H3ba, H3cb, H3dc, H3dd, H3ed, and H3gb) were confirmed at a 10% significance level, and two (H3cd and H3gd) were approved at a 5% significance level.

Six of the seven observed sociodemographics moderated the relationships between personal involvement (personal significance and hedonic involvement) with recycled products and pro-environmental behavior(eco-aware purchasing and psychographics).

Gender positively and education level negatively moderated the influence of hedonic involvement on eco-aware purchasing behaviors at a 10% significance level. Females with low hedonic attitudes were more eco-aware in their purchasing activities than males, while both genders behaved similarly in cases of high involvement. A high education level reduced the impact of hedonic participation on eco-aware purchasing behaviors.

Education and profession moderated the impact of hedonic involvement with recycled products, on psychographics, at a 10% significance level. Higher education levels meant diminishing environmentally conscious behavior. Consumers' professions moderated the influence of hedonic involvement on psychographics in a negative way. Age positively moderated the effect of the personal significance of recycled products on eco-aware purchasing activities. In contrast, family size and marital status positively moderated the influence of PERSIG on psychographics at a 10% significance level. Younger consumers presented slightly more eco-aware buying behaviors with low PERSIG than older ones. Older people for whom recycled products had; higher personal significance was more eco-aware in their purchasing behaviors than younger ones. Consumers with large families interested in recycled products exhibit more psychographics than those with smaller families. In the case of low personal significance, married people behave more pro-environmentally, whereas, where there is higher personal significance accorded to recycling, single people act more pro-environmentally than married ones.

Family size positively and marital status adversely moderated the impact of hedonic involvement on psychographics at a 5% significance level. Large families and high hedonic involvement increased green psychographics. Marital status negatively affected the connection between hedonic participation in recycled goods and psychographics. Hedonically involved singles are more likely to engage in eco-aware purchasing behaviors than married people. Family income showed no moderating influence in this research.

To sum up, Hypotheses H3ac, H3ba, H3cb, H3cd, H3dc, H3dd, H3ed, H3gb, and H3gd were confirmed, pointing to the moderating effects of some sociodemographic variables between the relationships of two PII constructs and two pro-environmental behavior factors, as shown in Table 7 and Figure 11.

Figure 11. Final Research Model
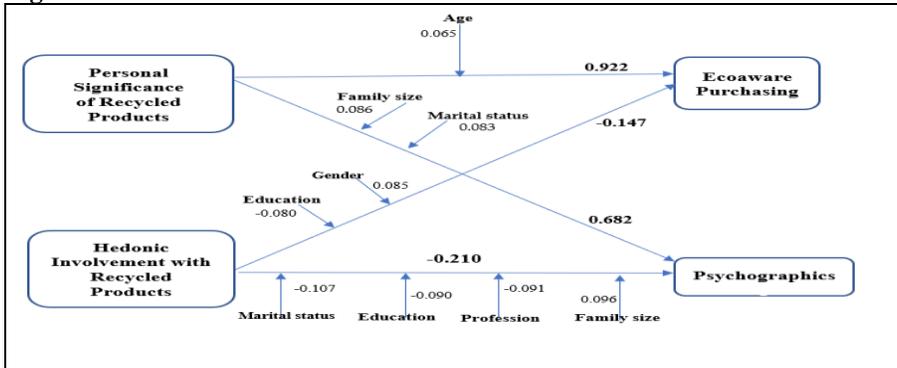
Source: Developed by the Author.

4. DISCUSSION

In the study, two enduring involvement styles (Arora, 1982; Houston, 1977), personal significance and hedonic involvement, representing long-lasting values and beliefs, are prominent. This finding is coherent with Schneider and Rodgers's (1996) claim, which includes both importance and motivational features of product involvement. Some consumers might also interpret these two involvement dimensions of the study as Baudrillard's sign-related involvement, explaining their identity and reflecting them(Laurent and Kapferer, 1985; Baudrillard, 1970).

This research supports the personal significance and hedonic involvement constructs of Mittal(1995) for recycled products. However, two other PII dimensions of relevance and attitude, and CIP's importance, were not supported.

Participants' beliefs, values, and social norms shape their pro-environmental behavior, coherent with previous studies (Khare, 2015 and 2011; Maheswari, 2014; Hoyer, 2004; Schneider and Rodgers, 1996). In addition, the personal significance of recycled products to consumers, as a cognitive function, and hedonic involvement, as an affective function, influence psychographics and pro-environmental buying behaviors (Pickett-Baker and Ozaki, 2008).
Participants' pro-environmental purchasing behavior and psychographics, exhibiting environmentally friendly actions, were also compatible with Peattie's (2001) green consumer definition [4].

Participants' PERSIG in recycled products strongly and positively influences their eco-aware purchasing and psychographics, confirming Zaichkowsky's (1996) claim that consumers' level of involvement results in different responses to products, advertising, and various purchasing decisions.

All facets of involvement were observed simultaneously in this investigation considering Laurent and Kapferer's (1985) approach, and their expected results

occurred: personal importance of CPI, personal relevance, and attitude did not significantly influence attendants' pro-environmental behavior, whereas personal significance positively and hedonic involvement negatively affected it, at a 5% significance level. These findings are also coherent with Celsi and Olson' (1988) statements that consumers' involvement shapes their opinions and inspires behavior toward consumption; Mitchell's (1979) view was that involvement is a potentially important mediator of consumer behavior, while Poiesz and Bont's (1995) and Calvo-Porral et al.(2021) claim that involvement is a primary determinant of consumer behavior.

Besides family income, all the study's sociodemographic variables, except income, moderated the relationships between the personal significance of and hedonic involvement with recycled products and eco-aware purchasing and psychographics. Gender, age, and education level arise as moderating variables in the relationships between personal involvement facets and pro-environmental behavior coherent with Anderson and Cunningham's (1972) and Berkowitz and Lutterman's (1968) studies. In this study, increasing age heightens the effect of the personal significance of recycled products on eco-aware purchasing activities, contrary to Straughan and Roberts' (1999) findings.

Gender favorably moderated the effect of hedonic involvement on eco-aware purchasing behaviors. Females with low hedonic attitudes acted more eco-aware in their purchasing activities than males, while both genders behaved similarly in cases of high involvement. Contrary to previous research, no influence was found on income (D'Souza et al., 2007). Education unfavorably contributed to the relationship between hedonic involvement and pro-environmental behavior, different from Diamantopoulos et al.'s (2003) results.

In conclusion, as in previous investigations, gender, age, and education levels, and, as additionally revealed in this study, marital status, profession, and family size are sociodemographic factors that play a role in profiling eco-aware consumers.

CONCLUSION

The findings of this study will make a meaningful contribution to the sustainability marketing, green marketing, and consumer behavior fields in terms of consumers' involvement with recycled products, pro-environmental behavior, and profiling of green consumers.

There were coherent but also adverse results to previous findings. However, the Turkish participants' recycling of newspapers, cans, bottles, and glass was noted; furthermore, their attention to green labeling is valuable for a sustainable future.

In conclusion, personal involvement is the primary determinant in this research model, shaping consumers' pro-environmental behavior.

Marital status, profession, and especially family size were crucial factors, besides previously known determinants such as gender, age, and education levels, in describing Turkish green consumers' profiles and behaviors.

In this study, applying the snowball technique as a convenient sampling method limited the generalizability of the results. Nevertheless, this sampling method might destroy the moderating effect of income variables due to similar respondents' profiles. In the future, a different sample covering all regions from Türkiye and other countries will support the model's generalizability. In future research, Mittal's (1995) four groups of PII should be retained. Moreover, different socioeconomic variables' moderating roles may be examined to assess consumer profile features, especially in other countries and cultures.

TÜKETİCİLERİN GERİ DÖNÜŞTÜRÜLMÜŞ ÜRÜNLERE KARŞI KALICI İLGİLERİNİN, ÇEVRE YANLISI SONUÇLARI: ÇEVREYE DUYARLI SATIN ALMA ve YAŞAM BİÇİMİ

1. GİRİŞ

Yirminci yüzyılın sonlarında başlayan çevrecilik ve sürdürülebilirlik ile ilgili faaliyetler günümüzde de artarak devam etmektedir. Yeniden dönüşüm ya da atıkların dönüştürülerek hammadde olarak yeniden üretimde kullanılması günümüzün en önemli konularından biridir. Çevre dostu bir dünyada yaşayabilmek, yeşil pazarlamanın, sürdürülebilir ve sosyal pazarlama alanlarının en başta gelen amaçlarındandır. Geçmişte yapılan çalışmalarda bilim insanları, çevresel sürdürülebilirliğin bireysel değil tüm dünyayı ilgilendiren bir konu olduğunu vurgulamışlardır.

Tüm dünyada olduğu gibi ülkemizde de geri dönüşüm ve çevrecilik konularında faaliyetler görülmektedir. Bu ampirik çalışma ile, kişilerin geri dönüşüme olan ilgilerinin çevrecilikle ilgili davranışlarını nasıl etkilediğinin ortaya çıkarılması hedeflenmiştir. Ayrıca, araştırmada kullanılan sosyodemografik faktörlerin düzenleyici etkisi de yine bu çalışma da ele alınmıştır. Türkiye'de gerçekleştirilen bu araştırma ile, başta pazarlama olmak üzere, toplum ve yönetim konularında literatüre ve uygulamaya katkıda bulunulması amaçlanmıştır.

2. YÖNTEM

Çalışma, tanımlayıcı araştırma yöntemi ile gerçekleştirilmiştir. Literatür taramasının ardından oluşturulan, kavramsal model ve ileri sürülen üç ana hipotez ve bunlara bağlı 32 alt hipotez(yirmi sekiz adedi düzenleyici etkiyle ilişkilidir) , online anket çalışması neticesinde toplanan verilerin SPSS ve AMOS 21 programlarında işlenmesiyle, yapısal eşitlik modellemesi ve yol analizine tabi tutularak test edilmiştir. Sosyodemografik değişkenlerin, bağımsız ve bağımlı değişkenlerin etkileşimindeki düzenleyici rolleri de yine SPSS ve AMOS 21 programlarıyla incelenmiştir.

Araştırmaya katılan 422 kişiye, elverişli(rastgele olmayan) örnekleme yönteminden, kartopu tekniği kullanılarak, sosyal medya araçları vasıtasıyla ulaşılmıştır. Toplanan 422 anketin, 420 tanesi geçerlidir. Örneklem için gerekli en az katılımcı sayısının belirlenmesinde Thumb kuralı uygulanmıştır. Bu kurala göre, gözlemlenen değişken sayısının en az 10 katı kadar bir örnekleme ihtiyaç vardır (Hair et al., 2011) ki bu çalışmada 36 adet gözlenen değişken bulunduğundan, yeterli örneklem hacminin alt sınırı olan 360 katılımcının üzerinde bir genişliğe ulaşılmıştır.

Birincil verilerin toplanmasında kullanılan anket formunda, Mittal(1995)'ın, Zaichkowsky(1985)'nin tek boyutlu olarak geliştirdiği orijinal PII ölçeğini yeniden gruplayarak elde ettiği dört boyutlu, on yedi ifadeden oluşan ölçeği ve Schneider and Rodger'ın yine Zaichkowsky(1996) den uyarladığı altı ifadeden oluşan tek boyutlu ayrı olarak değerlendirilmesini ileri sürdüğü, "kişisel önem" boyutu kullanılmıştır. Çevresel davranış için de Picket-Baker ve Ozaki'nin(2008) bilişsel ve duygusal boyutlardan oluşan on yedi ifadeli ölçeği kullanılmıştır. Tüm ölçekler, geri dönüştürülmüş ürüne uyarlanmıştır. Gözlenen değişkenler için 5li Likert aralıklı ölçeği, yedi adet sosyo-demografik değişken içinse isimsel ölçek kullanılmıştır. Çalışmanın anket formu için, İstanbul Yeni Yüzyıl Üniversite'sinin 4 Ekim 2022 tarihli Etik Kurul onayı alınmıştır.

3. BULGULAR

Ampirik çalışma neticesinde; kişilerin geri dönüştürülmüş ürünlere verdikleri önem, gösterdikleri ilgi ve karşılaştıkları duygusal güdülenmeler neticesinde, alışverişlerinde ve günlük yaşam tarzlarında çevre bilinçli eylemler sergiledikleri görülmektedir. Ayrıca, cinsiyet, yaş, medeni hal, eğitim, meslek ve aile genişliği değişkenlerinin, araştırmada görülen etkileşimler esnasında, üzerinde çalışılan örneklem grubunda, düzenleyici rol oynadığı saptanmıştır.

4. TARTIŞMA

Araştırmanın bulguları geçmiş çalışmaları destekler niteliktedir. Kişilerin geri dönüşümle ilgili kalıcı(yerleşik) dikkat ve ilgileri ve geri dönüştürülmüş ürüne karşı duygusal güdülenmeleri tüketici olarak çevresel davranışlarını, alışveriş ve yaşam tarzlarını etkilemektedir. Ayrıca, yine geçmiş çalışmalarda çevresel davranışlarda etkili olduğu görülen cinsiyet, yaş ve eğitim seviyesi değişkenlerine ilave olarak medeni durum, meslek ve ailenin genişliği faktörleri, bu çalışmada ortaya çıkan yeni demografik düzenleyici değişkenlerdir. Öte yandan aile gelirinin geçmiş çalışmaların aksine, bu çalışmada etkisi görülmemiştir.

SONUÇ

Bu çalışmada, sürdürülebilir ve yeşil pazarlama ve tüketici davranışı alanlarına faydalı katkılar sağlayabilecek nitelikte bulgular elde edilmiştir.

Kişisel ilginin alt boyutları olan kişisel önem ve duygusal güdülenme boyutları, bu araştırmada tüketicilerin çevresel davranışlarını belirleyen en önemli değişkenlerdir.

Daha önceden gözlemlenmiş bulgulara ilaveten, medeni durum, meslek türü ve ailenin genişliği bu çalışmada etkili olan farklı demografik faktörlerdir.

Araştırmada uygun örnekleme yöntemlerinden kartopu tekniğinin kullanılması neticesinde, sonuçların tüm Türk toplumu için genellemesi yapılamamıştır. Ayrıca, geçmiş çalışmalarda etkili olan gelir faktörünün, kullanılan bu örnekleme metodu sebebiyle bu çalışmada ön plana çıkamadığı tahmin edilmektedir.

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KATKI ORANI / *CONTRIBUTION RATE*	AÇIKLAMA / *EXPLANATION*	KATKIDA BULUNANLAR / *CONTRIBUTORS*
Fikir veya Kavram / *Idea or Notion*	Araştırma hipotezini veya fikrini oluşturmak / *Form the research hypothesis or idea*	Esra DEMİRBAŞ
Tasarım / *Design*	Yöntemi, ölçeği ve deseni tasarlamak / *Designing method, scale, and pattern*	Esra DEMİRBAŞ
Veri Toplama ve İşleme / *Data Collecting and Processing*	Verileri toplamak, düzenlenmek ve raporlamak / *Collecting, organizing, and reporting data*	Esra DEMİRBAŞ
Tartışma ve Yorum / *Discussion and Interpretation*	Bulguların değerlendirilmesinde ve sonuçlandırılmasında sorumluluk almak / *Taking responsibility in evaluating and finalizing the findings*	Esra DEMİRBAŞ
Literatür Taraması / *Literature Review*	Çalışma için gerekli literatürü taramak / *Review the literature required for the study*	Esra DEMİRBAŞ