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ORIGINAL ARTICLE

Sustainability values orientation, minimalism, and happiness

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Abstract
In today's world, by prioritizing economic values and striving for more profit, human beings are destroying the environment and natural resources. Since values are the antecedents of human behavior, determining value orientations and hierarchies is important for sustainability. While creating economic systems, people often neglect the needs of the ecosystem of which they are a part and become unhappy as a result. The first aim of this study is to determine the impact of minimalist behavior on happiness, the second aim is to determine the impact of value orientations on minimalist behavior, and the third aim is to determine the ranking of value orientations that represent the three dimensions of sustainability value orientation (biospheric, altruistic and egoistic value). In order to achieve these objectives, a survey was conducted with 396 participants studying or working in the fields of agriculture, environment, forestry and water affairs in Ankara, the capital of Türkiye. Statistical analyses were performed by means of structural equation modelling. The results showed that minimalist behavior had a direct impact on happiness. Biospheric values and altruistic value orientations had a direct impact on minimalist behavior, while egoistic values did not. The results show that biospheric values means were higher than altruistic values means, and altruistic values means were higher than egoistic values means. The results show that the hierarchy in sustainability value orientation is important for human happiness and sustainability. In order to ensure sustainability, decisions should be made by first considering environmental values, then social values and finally economic values in the political decision-making process. Political decision-making processes in which economic values are prioritized and the environment (harvest) and humanity (generation) are pushed into the background are not sustainable.

Keywords Altruistic · Biospheric · Egoistic · Happiness · Minimalist · Policies · Values

Introduction

With the increasing attention to climate change in recent years, it has become clear that value orientations and consumer behavior significantly influence decisions in environmental and agricultural policy. Understanding the relationship between minimalist consumer behavior, which includes sensitivity to environmental values, and happiness is critical to sustainable environmental and agricultural policy. For a sustainable life, people need various goods and actions that are compatible with nature. Firstly, people need land on which they can sustain their lives. Secondly, as social beings, they need a social environment, and lastly, they need economic values to sustain them. This study is based on the philosophy that while people create/nourish the economy, they are also made up of/nourished by soil and water. The aim of this study is therefore to analyse the hierarchy of biospheric (environmental), altruistic (social) and egoistic (economic) value orientations that make up the value orientation of sustainability. Other aims are to determine the effect of value orientations on minimalist behavior and the effect of minimalist behavior on happiness.

Decisions that impact social, environmental, and economic issues often stem from value orientations that influence disruptive or regulatory actions (Bastons and Armengou 2017). The effect of values on human behavior or decisions is explained by the Value Belief Norm Theory (Schwartz 1977). Theoretically, the value orientations of individuals are important because behavior emerges as a result of these orientations (Ihemezie et al. 2021). Values are important for

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sustainability. As lifestyles and value systems change with globalization pressures, unsustainable practices are increasingly prevalent (Garnett et al. 2018; IPBES 2019). This study focuses on three values, considering all human values as essential for the development of a sustainable approach, rather than categorizing one of them as good and others as bad. True sustainability involves the integration of ecological, socio-cultural and economic dimensions with a focus on nature and human well-being (Ketola 2015). The neglecting any one of these dimensions undermines sustainability. Therefore, a holistic approach to sustainability should consider social (cultural-historical), environmental, economic, and institutional aspects. For example, giving importance to only one of these three value orientations (economy) and ignoring other orientations is an obstacle to sustainability and human happiness. Approaching sustainability with a fragmentary logic negatively affects sustainability. The following sections included literature findings on egoistic value orientations, which represent economic values, altruistic value orientations, which represent social values, and biospheric value orientations, which represent ecological values. Afterwards, literature findings on the relationship between minimalism and happiness were given in the article.

Egoistic value orientation

In his work "The Wealth of Nations", Smith (1937) states that "we do not eat from the benevolence of the butcher or the baker, but from the desire to maximize their own interests". To ignore people's egoistic/economic values is contrary to human nature, because the economic dimension is a necessity. Conversely, focusing exclusively on environmental issues or adopting an "everything is for humans" perspective, as advocated by some radical environmentalists, is equally unsustainable. A farmer who uses excessive irrigation and pesticides to maximize yields may benefit in the short term but has significant long-term problems due to soil salinization and crop eradication. The fundamental question is: "Is there a stopping point for economic/egoistic values, and where their limits and ranking of values lie should?" In a study on the sustainable water consumption behavior of teachers in Türkiye, it was argued that for sustainability, biospheric-altruistic value orientations must be higher than egoistic value orientations and have a significant impact on personal norms (Karakaş 2024).

Politicians who cannot act fairly towards the environment and society cannot make sustainable policies. Egoists favor what is good, advantageous, profitable, cheap and abundant for themselves and often ignore the consequences of decisions that contradict their core values (Bastons and Armengou 2017). Putting individual interest above all else can be environmentally and socially destructive. Pollution, hunger and unemployment are not an issue for egoists. This problem is not about direct harm or malice, but about limited knowledge and bounded rationality (Simon 1986). Policy is made by those who have power, and power today is closely linked to capital. People seeking economic gain may prioritize selfish attitudes and behaviors to the neglect of ecological attitudes and behaviors.

Biospheric value orientation

Prioritizing egoistic/economic attitudes and behaviors is not sustainable and lacks holistic thinking. For example, a study in eight European countries reported that the use of pesticides for profit was responsible for the decline in the diversity of plants, insects and birds (Geiger et al. 2010). About 80% of wild plants in ecosystems depend on insects, and 60% of birds depend on insects (Ollerton et al. 2011). The decline of insects in the food chain leads to a decline in other species that feed on them (Hallmann et al.2021). The use of pesticides affects human health and contributes to pathogens developing resistance to chemical pesticides and making their use in agriculture unsustainable in the long term (Nicolopoulou-Stamati et al. 2016). In their pursuit of self-maximization, humans often show no consideration for other living beings and plants. Capitalism, which is driven by the principle of profit maximization and cost minimization, cannot be expected to be environmentally and socially conscious (Abramovich and Vasiliu 2023).

In a study of wild insects in the United States ecosystem, it was calculated that dung beetles, while alive, generate approximately 60 billion dollars in economic value for wildlife feeding, pollination, pest control, and manure burial for ecosystem sustainability (Losey and Vaughan 2006). It has been estimated that the removal of dung beetles from cattle pastures would result in a decrease in beef production of about 8 kg per year due to overuse of pesticides and similar reasons (Anderson et al. 1984). Scientific experiments have shown that 80% of nitrogen is lost when cattle manure is dried in the sun before it is buried (Gillard 1967). Dung beetles contribute to the conservation of their ecosystems by burying fresh manure, thus facilitating the efficient use of nitrogen. While the altruistic behavior of dung beetles is beneficial to their ecosystems, it is concerning that humans, in their quest to maximize profits, are wiping out these and other insects through the use of pesticides.

The prioritization of values is a crucial guide for the development of sustainable agricultural policies. In China, for example, Mao Zedong's 1958 policy of doubling food production with half the existing labor force led to the eradication of some 21 billion sparrows, which were considered

pests (Dong and Gao 2014). Although the use of pesticides was increased many times over, subsequent outbreaks of pests could not be prevented. After the eradication of sparrows, crop yields fell by 33%, leading to the Great Famine by 1961, in which at least 16.5 million people starved to death (Chen and Wang 2021). This historical event shows that prioritizing social and economic values over biospheric values is not a sustainable agricultural policy and illustrates the failure of a fragmented policy. Some studies have shown that people with a biospheric value focus behave in a more environmentally friendly way than people with an egoistic value focus (De Groot and Steg 2007) and that egoistic value focus negatively influences environmental behavior, while the biospheric value focus positively influences it (Kıral Uçar 2020).

Altruistic value orientation

The social dimension of sustainability is related to the history and culture of society (Najjar 2022). In one culture, birds were killed for economic and social reasons, while in another, birdhouses with rich architectural and decorative features were built to protect birds from predators or harsh weather conditions. In the Ottoman Empire, birdhouses were built in palaces and mosques for sparrows, finches, pigeons, storks or swallows as early as the 15th century and in the 18th and 19th centuries (Erman 2014).

The indigenous peoples of the Americas produced using "traditional ecological knowledge", i.e., the transmission of agroecological information passed down from one generation to the next and accumulated over thousands of years through experience, observation and experimentation (Snively and Corsiglia 2001). In the mid-15th century, the cultivation of the "Three Sisters" (corn, beans, and squash) became widespread among indigenous peoples in the American Midwest and Northeast (Cicarelli 2012). This method of "honorable harvesting", which was later abandoned due to industrialization and the prioritization of economic concerns, showed considerable advantages in experiments: Soil respiration increased by 24%, nitrate content decreased by 15% and soil nitrogen content increased by 32% (Kapayou et al. 2023). This sustainable production method, which also increased yields, offers benefits for both the environment and human health.

Poverty reduction is a crucial strategy for less developed and developing countries with a relatively high share of agriculture in their gross domestic product. These countries prioritize economic growth over social and environmental issues to reduce poverty (Schoon and Seath 2015). Smallholder farmers in these countries often neglect social and environmental values in favor of practices that increase their income (Hidayati et al. 2021). For example, a study examining the role of the state in the capitalist system concluded that the growing gap between small and large farmers, social injustice, waste of resources and financial crises are due to excessive state intervention in agricultural production (Bonanno 1987).

Minimalism and happiness

Value orientations and consumer behavior have long been a topic of debate. One study suggests that minimalism, which focuses on values, contributes to happiness and satisfaction (Adamczyk et al. 2022). In an article examining the minimalist style in contrast to materialism, which leads to lower life satisfaction and decision fatigue, participants who consumed less reported that they felt less stressed and had increased their awareness of conscious consumption (Bardey et al. 2021). In economic systems that function according to capitalist rules, waste/consumption is perceived as a natural process. The consumer economy will continue as long as waste continues, leading to the depletion of the environment and natural resources. With humanity consuming more resources than ever before (Almond et al. 2020), materialism, defined as overconsumption, has catastrophic consequences for the environment. Specifically, materialism is examined in three dimensions: "centrality of acquisition"," "acquisition as the pursuit of happiness" and "success defined by possessions" (Richins and Dawson 1992). Numerous studies have found a negative relationship between materialism and life satisfaction (Belk 1985; Keng et al. 2000; La Barbera and Gürhan 1997; Richins and Dawson 1992). Achieving the Sustainable Development Goals (SDGs) seems to be a major challenge with this philosophy. On the other hand, the IPBES report states that reducing overall consumption and waste is a strategic goal for a transformative change in global sustainability pathways (IPBES 2019). Recently, due to growing environmental concerns, minimalist consumption patterns have been proposed as an alternative to economic attitudes and thoughts that promote stockpiling and waste. To understand minimalism, one must first comprehend voluntary simplicity, which has been described as the "contemporary simplicity movement of the 1990s that promoted anti-consumerist and environmental views" (Alexander & Ussher, 2012; Lee et al. 2020; McGouran and Prothero 2016). Voluntary simplicity is an ecological lifestyle that embraces core values such as social responsibility, material simplicity rather than overconsumption, and spirituality (Elgin 1977).

Some have argued that changes in dietary behavior are necessary to reduce the impact of the food system on climate change and reduce emissions to target levels (Garnett 2011).

Kang (2021) defines minimalism as "a sustainable lifestyle in which individuals significantly limit their materialistic existence by refraining from the accumulation of material goods or adopting prudent purchasing behavior." Similarly, Leonardo da Vinci advocated the idea that "simplicity is the highest level of sophistication" (Glasgow 2014). Minimalism means re-evaluating priorities in life, moving away from material accumulation and finding satisfaction in relationships and activities that give life more meaning. People who embrace voluntary simplicity make their decisions of their own free will and seek sources of satisfaction beyond material gain (Kuanr et al. 2022). Advocates of voluntary simplicity, who emphasize reducing unnecessary consumption in the face of finite global resources, prefer sustainable consumption and keep consumption to a minimum (Vannini and Taggart 2013; Yang et al. 2022).

While minimalists strive to reduce their consumption, they may also behave in an environmentally friendly manner due to ecological concerns (Martin-Woodhead 2021). They strive to buy environmentally friendly products, advocate for the abolition of the use of animals as commodities and the abolition of animal testing and try to reduce their ecological footprint (Ishaq et al. 2021). Furthermore, minimalists find happiness in connecting with nature, as opposed to material consumption. While some consumers seek happiness solely in material consumption, others seek happiness through experiential consumption (Carter and Gilovich 2010). Happiness, in its simplest form, can be defined as a positive emotional and mental state. Numerous studies suggest a positive relationship between life satisfaction and happiness (Diener 2000; Lin et al. 2010), and some argue that life satisfaction and happiness can be used interchangeably (Diener 2006).

The culture of overconsumption and hoarding, which causes significant harm to the environment (Bradshaw 2019), has been shown not to contribute to the well-being or happiness of individuals (Helm et al. 2019; Seegebarth et al. 2016). Many studies, argue that consumptive lifestyles driven by economic concerns and egoistic values are not a reliable route to well-being; instead, simpler lifestyles such as minimalism are thought to contribute to happiness (Hausen 2019). Research shows that minimalist lifestyles contribute to happiness, with individuals who consume less being happier than other consumers (Alexander & Ussher, 2012), and that minimalism promotes positive emotions (Kang et al. 2021). This investigation is important because no studies were found in the literature that deal with biospheric values, egoistic values, altruistic values, minimalism and happiness together. This article explores the gap in the literature regarding value orientations for sustainability, their relationship to minimalism and the impact of minimalism on happiness. Furthermore, this study aims to determine the hierarchy of values orientation in relation to sustainability. For that reason, the research hypotheses are.

H_1. Egoistic value orientation has effect on minimalist behavior,

H_2. Biospheric value orientation has a positive influence on minimalist behavior,

H_3. Altruistic value orientation has a positive influence on minimalist behavior,

H_4. Egoistic value orientation has effect on happiness,

H_5. Biospheric value orientation has a positive influence on happiness,

H_6. Altruistic value orientation has a positive influence on happiness, and.

H_7. Minimalist behavior has a positive effect on happiness.

Methodology

A survey was conducted as an instrument for data collection. Since survey-based research requires the approval of the ethics committee, approval was obtained from the Yozgat Bozok University Social and Human Sciences with the number 12/31. Socioeconomic variables such as gender, marital status, age, monthly income and education level were used in the surveys. A scale with a total of 12 statements developed by Schwartz (1992) and adapted by Stern (2000) was used to measure the participants' orientation towards the sustainability values orientation. This scale was translated into Turkish. In addition, a minimalist behavior consisting of 6 statements (Iwata 1999) and a subjective happiness scale consisting of 4 items (Lyubomirsky and Lepper 1999) were used. The surveys were designed in a 7-point Likert scale format. After rating them from 1 to 7, participants were asked to mark them in order of importance. Participants were also asked to rate these three value orientations on a scale of 1 to 10 to measure their value orientations in relation to sustainability and to test the consistency of the previous Likert statements. The online forms were distributed to selected participants via social media channels during the data collection phase.

The population of this study conducted in Türkiye was limited to the province of Ankara, the capital of the country. The population of the study consists of people working or educated in the fields of agriculture, forestry, environment and water. The data used in the study was collected from participants who were at least 18 years old. The participants, were given a questionnaire that they could complete voluntarily via social media and e-mail. In this study, 25 items with a 7-point Likert scale were used. It is recommended to include at least five to ten times the number of Likert items in the study population (Kline 1994) (Büyüköztürk 2002;

Table 1 Fit indices abbreviations and thresholds

Fit Indices	Abbreviations	Thresholds
Incremental Fit Index	IFI	$0.90 \leq IFI < 1$
Tucker-Lewis Index	TLI	$0.90 \leq TLI < 1$
Comparative Fit Index	CFI	$0.90 \leq CFI < 1$
Goodness of Fit Index	GFI	$0.90 \leq GFI < 1$
Root Mean Square Error of Approximation	RMSEA	$0.05 \leq RMSEA \leq 0.08$
Standardized Root Mean Square Residual	SRMR	≤ 0.08
Chi-square /Degrees of Freedom	X^2/DF	< 5

Tabachnick et al. 2007). Therefore, a minimum sample size of 175 is sufficient (Kline 1994), but the survey was conducted with 396 participants (Oğuz and Karakayacı 2017).

In order to determine the ranking of the value orientations in the study, the mean values of the responses to the Likert-type expressions were taken. These results were compared with data from previous studies such as regression coefficients and correlations (Hansla 2011; Imaningsih et al. 2019; Ojea and Loureiro 2007; Sarpong et al., 2021; Valizadeh et al. 2021; Yadav 2016). Kaiser-Meyer-Olkin (KMO) and Bartlett's test were used to test the adequacy of the sample (Kaiser 1974). Kaiser (1974) stated that the lower limit for the KMO test should be 0.50, and if $KMO \leq 0.50$, factorization of the data set would not be possible. In this study, an exploratory factor analysis was carried out first. After performing exploratory factor analysis, confirmatory factor analysis was performed to determine the goodness of fit indices in Table 1. The coefficients of the influence of the factors on each other were then calculated using structural equation modeling.

In the study, the internal reliability of the factors was calculated using Cronbach's alpha (>0.70). After the convergent validity of the factors was tested with Average Variance Extracted ($AVE > 0.50$), the criteria Composition Reliability ($CR > 0.80$) and discriminant validity heterotrait-monotrait ($HTMT < 0.90$) were used (Franke and Sarstedt 2019; Henseler et al. 2015). In addition, the reference ranges in Table 1 were used as fit-goodness indices in the research (Bagozzi and Yi 1988; Browne and Cudeck 1992; Kline 2015). Statistical analyzes were performed using Jamovi Desktop version 2.3.28, an open-source program.

Results

Socio-demographic findings

As conducting a face-to-face survey is costly and laborious and the margin of error in coding the data is likely to be high, the questionnaires were sent to survey participants online via social media. Completing the questionnaires took an average of around 5 min. According to the research results, 52.80% of the participants were male and 47.20% female. Although 59.30% of the participants were married, 40.70% were single, widowed or divorced. 36.50% of the participants were between 18 and 30 years old, 36.50% were between 31 and 41 years old and 28.80% were 42 years and older. The minimum age was 18 years, the maximum age was 64 years, and the average age was calculated as 35.13 years. It was found that the average monthly income of the 396 study participants was ₺34,196 Turkish liras. 30.80% of the participants had an income of ₺20,000 and below, 37.40% had an income of 20,001–40,000 and 31.80% had an income of ₺40,001 and above. Since 2012, 12 years of compulsory education has been implemented in Türkiye. Therefore, education was discussed in three categories. 13.10% of the participants have 12 years of education or less, 71.70% have 12–16 years of education and 15.20% have 16 years of education or more (Table 2).

Table 2 Socio-demographic profile of participants

Variable	Categories	Frequency	Response (%)
Gender	Male	207	52.80
	Female	187	47.20
Marital Status	Single, widowed or divorced	161	40.70
	Married	235	59.30
Age	18 to 30 years old	141	35.60
Mean; 35.13	31 to 41 years old	141	35.60
	42 years old or over	114	28.80
Monthly Income	≤ ₺20,000 ($625)	122	30.80
Mean; ₺34,196 ($1067)	₺20,001–40,000 ($625–1250)	148	37.40
	≥ ₺40,001 ($1250)	126	31.80
Education (Year)	≤12 Year	52	13.10
Mean; 15.29	12–16 Year	284	71.70
	≥16 Year	60	15.20

Note: $1=₺32 in April 2024

The results of structural model

The first aim of the study was to determine the influence of minimalist behavior on happiness. Then, it was to determine the value orientations that affect minimalist behavior. To achieve this goal, three value orientations (BV, AV and EV), minimalist behavior and the subjective happiness factor were considered. In addition, after the item analysis, one item was removed from the AV orientation and one item from the subjective happiness factor (Table 4). After removing these two items from the analysis, the analysis was re-run. Following these procedures, the adequacy of the sample in the study was determined by the Kaiser-Meyer-Olkin

(KMO) test to measure sample adequacy, which showed that the sample was sufficient (KMO = 0.847, $p < 0.001$).

In the exploratory factor analysis, principal component analysis was used as the extraction method and Varimax with Kaiser Normalization was used as the rotation method. The result of the exploratory factor analysis was a five-factor structure that explained 71,058% of the total variance. The items included in the analysis and their abbreviations are listed in Table 3.

The AVE values calculated to test the convergent validity of the factors were higher than 0.50 for all factors. The AVE values of the factors were calculated at 0.585 for the lowest and 0.784 for the highest value. The CR values calculated to test the composite reliability of the factors were also above 0.80 for all factors. The composite reliability coefficients (CR) of the factors ranged from a minimum of 0.817 to a maximum of 0.916. In addition, the Cronbach's alpha values calculated to test the internal reliability of the factors were above 0.70 (Table 4).

Table 3 Questionnaire items

Construct	Abbr.	Item
Biospheric Value	BV1	Respecting the world (Understanding the world)
	BV2	Protecting the environment for the sustainability of humans and other living things
	BV3	Ensuring sustainable agriculture and preventing pollution for nutrition
	BV4	Being one with nature
Altruistic Value	AV1	Equality (striving for equal opportunities for all)
	AV2	Social justice (helping poor, weak people)
	AV3	Benevolence (striving for the welfare of others)
	AV4	Striving for a world at peace. *
Egoistic Values	EV1	Influencing people and events
	EV2	Authority (with authority, leadership)
	EV3	Social power (controlling others)
	EV4	Wealth (accumulation of money and property)
Subjective Happiness	HP1	I think I'm generally happy.
	HP2	Compared to most of my peers, I consider myself happy.
	HP3	I'm usually very happy. I enjoy life regardless of what's going on. I make the most of everything.
	HP4	I'm usually not very happy. Even though I'm not depressed, I never look as happy as I am.*
Minimalist Behavior	MB1	I try to live a simple life and not buy non-essential items.
	MB2	When I shop, I decide to do so after serious consideration of whether a product is necessary for me.
	MB3	Even if I have money, it is not my policy to buy things suddenly.
	MB4	I'm someone who keeps using something old as long as it can still be used.
	MB5	When shopping, I seriously consider being able to use a product for a long time without getting tired.
	MB6	I try to use the products I purchase for as long as possible.

*: This item was removed from the analysis

In structural equation modeling, the assessment of the goodness-of-fit indices is essential. Therefore, the values of the fit indices of the measurement model were calculated via confirmatory factor analysis in this study. The calculations showed that all fit indices (GFI = 0.972, IFI = 0.966, CFI = 0.966, TLI = 0.961, (CMIN/DF) $X^2/df = 2.477$, SRMR = 0.072 and RMSEA = 0.064) were within acceptable ranges in accordance with the literature (Kline 2015).

The criterion HTMT < 0.90 was used in the study to test discriminant validity. It was found that the highest correlation between the factors was between AV and BV and the correlation coefficient of these factors was 0.721. Based on the data obtained from the analysis, it was found that the correlation between the factors was less than 0.90 and the factors have discriminant validity (Table 5).

The parameter estimates were made with a confidence interval of 95%. Research hypotheses were tested through structural equation modeling. According to the results of the hypothesis test, seven of the proposed hypotheses were interpreted. Accordingly, H_1 states that egoistic value orientation has no effect on minimalist behavior (β =-0.074, $p = 0.116$); H_2 states that biospheric value orientation has a positive effect on minimalist behavior (β = 0.402, $p < 0.01$); and H_3, states that altruistic value orientation has a positive effect on minimalist behavior (β = 0.194, $p < 0.01$). According to the results of the analysis, H_1 rejected, H_2 and H_3 were accepted. Since only biospheric value orientation was found to be significant direct effect on happiness, hypothesis H_5 was accepted, egoistic value orientations and altruistic value orientations were not found to be significant, and hypotheses H_4 and H_6 were rejected. Finally, H_7 was tested and it was seen that minimalist behavior has a positive effect on happiness (β = 0.352, $p < 0.01$) (Fig. 1).

According to the analysis results, it was seen that biospheric value orientations have a direct effect on both happiness and minimalist behavior. The direct effect of biospheric value orientations on happiness was calculated as 25%. The indirect effect of minimalist behavior on happiness was calculated as 14% and the total effect was calculated as 54%. In this respect, the calculations made also revealed the partial mediation effect of minimalist behavior between biospheric value orientations and happiness (Fig. 1). In addition, the result that the coefficients of altruistic value orientations were insignificant on happiness and significant on minimalist behavior shows that minimalist behavior has a positive

Table 4 Reliability and convergent validity of data

Construct	Abbr.	Factor loading	CR	AVE	Cronbach's alpha
Biospheric Value	BV1	0.800	0.891	0.670	0.906
	BV2	0.843			
	BV3	0.803			
	BV4	0.829			
Altruistic Value	AV1	0.756	0.817	0.597	0.828
	AV3	0.786			
	AV4	0.777			
Egoistic Values	EV1	0.760	0.859	0.604	0.782
	EV2	0.859			
	EV3	0.729			
	EV4	0.755			
Subjective Happiness	HP1	0.901	0.916	0.784	0.881
	HP2	0.870			
	HP3	0.885			
Minimalist Behavior	MB1	0.670	0.894	0.585	0.874
	MB2	0.795			
	MB3	0.758			
	MB4	0.771			
	MB5	0.833			
	MB6	0.751			

Table 5 The HTMT ratio of correlations

BV	BV	AV	EV	MIN	HP
	1.000				
AV	0.221	1.000			
EV	0.182	0.721	1.000		
MIN	0.082	0.256	0.323	1.000	
HP	0.129	0.447	0.503	0.292	1.000

full mediation effect between happiness and altruistic value orientations.

Table 6 Descriptive statistics of indirect and direct items

EV (4 item-indirect)	Min.	Max.	Mean	Std. Deviation
	1	7	4.91	1.25
AV (4 item-indirect)	1	7	6.48	0.71
BV (4 item-indirect)	1	7	6.56	0.80
EV (direct)	1	10	7.82	1.99
AV (direct)	1	10	8.93	1.53
BV (direct)	1	10	8.94	1.48

Analysis of the sustainability values orientation

The primary aim of the study was to determine the sustainability values orientation. The basic philosophy of this study, based on the idea that "humans create/nourish the economy, but are also shaped/nourished by land and water", emphasizes the prioritization of value orientations from a sustainability perspective. To test the accuracy of participants' value orientations, statements were addressed to them both directly and indirectly. First, the mean and standard deviation of the indirect responses to the 12 latent statements presented to participants in the form of a 7-point Likert scale were calculated. To confirm this, the participants were then asked directly to rate the importance of their direct social, economic and biospheric value orientations on a scale of 1 to 10 in 3 statements (Table 6).

Indirect results consisting of 12 statements and 3 factors and direct results consisting of 3 statements were calculated. The result of these calculations is the following sustainability values orientation: BV (6.56)>AV (6.48)>EV (4.91), which is consistent with the philosophy of the study. To support the accuracy of this sustainability values orientation, the analysis of the average values of the responses to

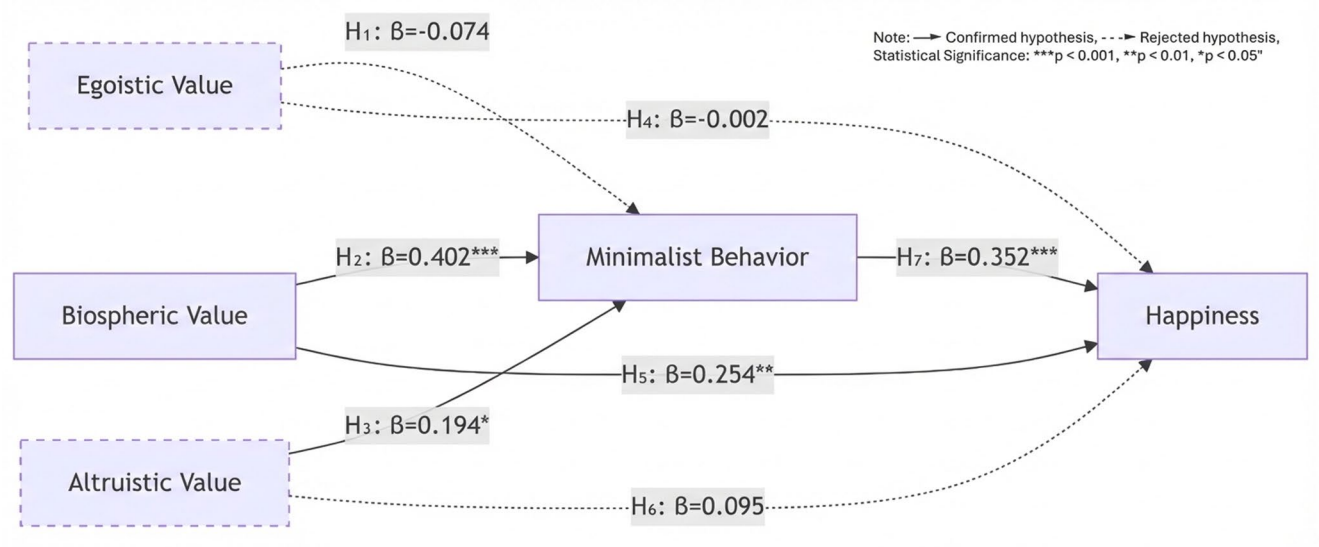


Fig. 1 Path diagram of factors and hypothesis test

the direct statements presented to the participants at the end of the survey showed BV (8.94), AV (8.93) and EV (7.82). According to the results of this study conducted in Türkiye, the mean scores of the responses to the statements directly and indirectly addressed to the participants corresponded to the sustainability values orientation BV > AV > EV (Table 6).

Discussion

Some scientists have argued that a change in dietary behavior is necessary to reduce the impact of the food supply chain on climate change (Garnett 2011). Minimalism as environmentally friendly behavior can both mitigate the effects of climate change and contribute to human happiness. Previous research has found that a minimalist lifestyle contributes to happiness (Hausen 2019), with individuals who consume less being happier compared to other consumers (Alexander & Ussher, 2012). The findings regarding the relationship between minimalist behavior and happiness in Türkiye are consistent with previous studies (Malik and Ishaq 2023). Since the value orientations that influence this behavior affect both consumer behavior and political decision-making processes, they are an important issue that deserves attention. In line with the basic philosophy of this research, when considering the sustainability values orientation, it is essential that the highest value is BV, as humans are nourished/shaped by land and water. The hierarchy should consist of biospheric values (BV), followed by altruistic values (AV) and then egoistic values (EV). With this perspective, this section has discussed the sustainability values orientation in different countries and their impact on different variables.

In a study which is investigating the influence of willingness to pay for eco-labeled electrical products on BV, AV and EV among 476 Swedish residents, it was found that the BV average (3.00) was higher than the AV average (2.73) (Hansla 2011). In another study value orientations towards pro-environmental behavior in the public in Mongolia, BV (4.49) was calculated to be greater than (4.28) EV (3.70). These values from studies in Mongolia and Sweden appear to be consistent with the sustainability values orientation (Liu et al. 2018).

In a study on food choices in the United States and Germany, the average values of value orientations were calculated. In Germany, the sustainability values orientation BV (5.51) > AV (5.43) > EV (5.25) is valid for sustainable values; however, in the United States, the sustainability values orientation is AV (5.59) > EV (5.57) > BV (5.31), so the sustainability values orientation is not valid (Arbit et al. 2017). In Spain, a study used a 5-point Likert scale to calculate the influence of value orientations on the willingness to pay for environmental goods. The results were not consistent with the sustainability values orientation and showed EV (4.44) > AV > (4.14) > BV (3.95) (Ojea and Loureiro 2007).

A study examining the effects of perceived usefulness (EV) and environmental consciousness (BV) on purchase intention to purchase water-efficient appliances in China found that the effect of EV (0.37) was greater than that of BV (0.21) (Sarpong et al., 2021). In India, a study to determine consumers' purchase intention for organic food found that the effect of EV on consumers' purchase intention for organic food (0.37) was higher than AV (0.20), and the effect of EV (0.63) on attitude was also higher than AV (0.11) (Yadav 2016). These studies, conducted in Spain, China and India, suggest that participants do not adhere to a sustainability values orientation.

A study in Iran examined farmers' behaviors related to water conservation from a participant-based perspective, focusing on values that influence the recognition of responsibility and its consequences. Values effective in defining responsibility were found to be significant for BV (0.34), AV (0.25) and EV (-0.22). While the factors affecting awareness of consequences yielded significant results for BV (0.29) and EV (-0.28), AV (0.06) was found to be non-significant (Valizadeh et al. 2021). A study conducted in Mongolia investigated factors that influence pro-environmental behavior in public spaces and found a negative influence of EV (0.13) and a positive influence of AV (0.33) (Liu et al. 2018). Although the research results of Valizadeh (2021) and Liu et al. (2018) differ, Valizadeh's (2021) study partially agrees with the sustainability values orientation, except for the negative result of EV. If EV had also provided positive results in Valizadeh's (2021) study, it could have been considered fully consistent with the sustainability values orientation.

In a study conducted in Indonesia, EV was found to have a significant and positive effect (0.16) on the green functional benefit, while AV had an insignificant effect on the green functional benefit. BV had a significant positive effect (0.40) on green functional benefit (Imaningsih et al. 2019). The results of this study in Indonesia, where AV was found to be non-significant, are not consistent with the sustainability values orientation. The reason for this could be that the dependent variable, the green functional benefits, is a result of egoistic values (Steg et al. 2014).

In Brazil, the Czech Republic, Germany, India, New Zealand and Russia, the effects of BV, AV and EV factors on environmental awareness and conservation behavior were examined. It was found that the average Likert scale values in the Czech Republic, Germany and India were consistent with the sustainability values orientation. However, the results from Brazil, New Zealand and Russia did not match the sustainability values orientation (Schultz et al. 2005).

The effects of value orientations on food choice anxiety and ethical commitment to food in the United States and Germany, AV and BV were found to significantly explain ethical commitment to food, while EV did not. Regression analysis revealed that the results in both countries were similar to those of this study in Türkiye, particularly in the United States with BV (0.25), AV (0.24) and in Germany with BV (0.41), AV (0.18), with the results in Germany being particularly similar to the results of this study conducted in Türkiye.

In a study of values and moral commitment in the United States, the regression coefficient showed that BV was significant compared to AV, while EV was insignificant. Similarly, in Germany, the regression coefficient showed that BV was significant compared to AV, while EV was not significant. In India, only EV explained moral commitment. Therefore, the overall effect of values on moral engagement around food in these three countries can be interpreted as insignificant (Arbit et al. 2017).

In India, the impact of the factors EV, BV and AV on environmental awareness was measured. The effect sizes of these three value orientations were determined as follows: AV> (0.27) EV> (0.18) BV> (0.17). When calculating the influence of these value orientations on attitude towards green hotels, the effect sizes of the value orientations of young customers were determined as follows: BV (0.37)>AV (0.36)>EV (0.24), which is consistent with the sustainability values orientation (Verma et al. 2019). To summarize, it can be said that the results from Mongolia, Germany, the Czech Republic and Sweden are similar to the value orientations in Türkiye. The value orientations in Pakistan and Iran are partly similar to those in Türkiye. On the other hand, the value orientations in countries such as the United States, China, Spain, Russia, New Zealand, Brazil and India differ from those in Türkiye. According to these results, it can be said that the reason for the different value orientations lies in factors such as culture, geography, economy and history.

Malik and Ishaq (2023) found in their study of 343 Pakistani consumers that minimalist practices have a direct impact on consumer satisfaction. According to their research, minimalist behavior has a 23% effect on happiness. Both Meissner (2019) and Babauta (2009) claimed in his book "The Power of Less" that minimalist living leads to greater personal satisfaction and happiness. However, it has also been claimed that excessive consumption is not a source of happiness (Helm et al. 2019; Petruzzellis et al. 2021; Seegebarth et al. 2016). In this study conducted in Türkiye, a positive relationship was found between minimalism, defined as a focus on general human well-being and identified as an individual phenomenon, and happiness (Fernandes and Saraiva 2022). The results are consistent with the articles in the literature.

Factors such as the implementation of different social, economic and educational policies and the culture in different countries can have an impact on value orientations. The sustainability values orientation is culture dependent. For example, in an article examining proverbs about nature that are common in Türkiye and Kyrgyzstan, there are some proverbs that show the sustainability values orientation in Turkish culture. In Turkish culture, the land (BV) is valued more highly than the economy (EV), which is reflected in proverbs such as: "Take a handful of earth instead of a handful of gold" (Bir avuç altının olacağına bir avuç toprağın olsun) and "Whoever cuts down a young tree cuts off a person's head." (Yaş kesen, baş keser). In addition to such proverbs, there are also proverbs such as "Your neighbor does not give what the tree gives" (Ağacın verdiğini komşun vermez), which regards the environment (BV) to be more important than social networks such as the neighborhood (AV) (Gülüm and Mustafa 2013). This cultural foundation is particularly important today, as Türkiye faces significant environmental challenges. These include rising average temperatures, increasing forest fires, severe water scarcity, high rates of soil erosion and degradation, biodiversity and rapid urbanisation. As these proverbs suggest, Türkiye's unique cultural values seem to coincide with its value orientation towards sustainability. These unique values can be seen as an opportunity for Türkiye to advance its agricultural and environmental policy processes by preserving its local ecological culture and knowledge. It is expected that this study will contribute to the literature by proposing sustainable value orientations in a hierarchical model, considering minimalist behavior and happiness together and incorporating them into policy-making processes.

Conclusion

Happiness is a subjective concept, and this study found a significant positive effect of minimalist behaviors on happiness. Pollution and the destruction of natural resources are linked to negative consequences and reduced well-being. In terms of human happiness and sustainability, solutions such as low-impact development, low-consumption lifestyles, voluntary simplicity, nature-based solutions, and slow fashion—all rooted in minimalist principles—could offer beneficial pathways. To advance sustainability, it may be valuable to review economic, environmental, and social policies through a lens that acknowledges resource limits and human needs, reflecting the philosophy that "anything more than we need is poison." If a capitalist approach that prioritizes economic and egoistic value orientations

continues unchallenged, humanity could face the stark reality expressed in the prophecy: "Only when the last tree has been cut down, the last fish has been caught, and the last stream poisoned, will we realize we cannot eat money."

As a result of this research, biospheric values affect both minimalist behavior and happiness; therefore, biospheric value orientations could be included in policy-making processes. The sustainability of agricultural and environmental policy is closely linked to cultural and value-based factors. Because value orientations can drive social and cultural change, they are relevant for achieving sustainable development goals. Such change often begins with individuals, and individual change is frequently rooted in shifting value priorities. Therefore, understanding the sequence of sustainable value orientations could be important for progress. This research highlights biospheric value orientations as potentially central within the hierarchy of sustainable values, particularly regarding responsible consumption and production. Since soil and the environment provide the basic necessities of life, and humans are fundamentally dependent on them, agricultural and environmental values could be given higher priority in political decision-making.

The integration of biospheric values into policy processes requires an interdisciplinary approach. Because political changes are gradual, several steps may be considered, involving both legal regulations and social transformation. For example, strategic environmental assessments could be conducted before policymaking, using reports from bodies such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) as guidelines. Although the Constitution of the Republic of Türkiye includes an article on environmental protection (Article 56), exploring amendments similar to Ecuador's Rights of Nature is one possible avenue. Policy mechanisms such as a carbon tax, a plastic tax, or sanctions for activities causing biodiversity loss could be implemented, along with expanding payment for ecosystem services programs that incentivize conservation. To foster public participation and awareness, the traditional ecological knowledge of indigenous peoples and local communities could be incorporated into processes, and citizen assemblies could be used for decisions addressing the climate and biodiversity crises. Additionally, integrating sustainability and ecological literacy into educational curricula and media content could support a broader cultural shift. Shifting from viewing nature solely as a "resource" to adopting a systemic perspective, where humans are part of the biosphere, could lead to policies that more effectively prioritize nature-based solutions.

This research suggests that a hierarchical ordering of sustainable values—placing biospheric values first, followed by social and then economic values—could provide a coherent framework. This indicates that political decision-making might benefit from treating environmental policy as the foundation for social and economic policy. Ignoring this order could lead to environmental, social, and economic challenges. While social and economic dimensions are important, prioritizing them over environmental and agricultural policy may result in less sustainable long-term outcomes. Based on this research, developing agricultural and environmental policies that are consistently aligned with a sustainability-values orientation across all policy areas appears crucial for human well-being and sustainability. Policies that do not align with this orientation could be considered less sustainable and potentially harmful to society, the environment, and the economy over time.

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Declarations

Conflict of interest The author declares no conflict of interest.

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