

Psychometric Properties of the Antecedents of Green Purchasing Behaviour: A Pilot Reliability and Validity Study

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Abstract

Measuring consumers' green purchasing behaviours with reliable instruments is crucial for assessing consumers' eco-friendly behaviours, and this requires a valid and reliable instrument designed specifically to evaluate such behaviours. This pilot study aims to assess the reliability and validity of a questionnaire for assessing informational social influence, normative social influence, objective environmental knowledge, subjective environmental knowledge, perceived self-efficacy, general environmental attitude, specific environmental attitude, and mindfulness as antecedents of green purchasing behaviour. Data were collected through an electronic survey of 30 Jordanian consumers and analysed using SPSS 27.0. Based on computed Cronbach's α values (ranging from 0.617 to 0.897) and composite reliability scores (lowest = 0.846, highest = 0.932), the result supported all the construct measures as reliable. Similarly, item factor loadings (ranging from 0.516 to 0.938) and average variance explained (AVE) statistics (lowest = 0.548, highest = 0.732) confirmed the validity of construct measures. The pilot results suggest that the questionnaire is suitable for assessing consumers' green purchasing behaviour.

Introduction

As environmental concerns continue to escalate worldwide, there has been a growing emphasis on sustainable practices and environmentally responsible consumer behaviour (Taghvaei *et al.*, 2022). One important area gaining traction in scholarly literature is consumers' green purchasing behaviour (Skackauskiene and Vilkaite-Vaitone, 2022). Human-induced environmental concerns are a major driver of environmental degradation (Ariff *et al.*, 2019), necessitating the formulation of appropriate laws and regulations by nations, the adoption of green practices by organisations, and the promotion of sustainable resource

utilisation among consumers. Consumers are now increasingly becoming conscious of the impact of their purchasing behaviours on the natural environment, and thus actively seek products and services that demonstrate minimal environmental impact (Salwa, 2023). Researching the factors that influence green purchasing behaviour has become a vital research domain for both academics and practitioners alike, as it holds the potential to shape sustainable consumption patterns and foster environmentally-conscious economies (Riyaz and Jan, 2023).

In understanding the antecedents of green purchasing behaviour, researchers and scholars have recognised the need for reliable and valid instruments (Sudbury-Riley and Kohlbacher, 2016). This is necessary for a comprehensive assessment of the factors that influence consumers' green purchase behaviours. However, there are as many antecedents of green purchasing behaviours as there are people conscious of the impact their consumption behaviours have on the natural environment (Chanda *et al.*, 2023; Yang *et al.*, 2023). Thus, capturing the entire gamut of green purchasing behaviours in one measuring instrument is a daunting task due to the complexity and diversity of the behaviours involved (Foumani *et al.*, 2023). Green purchasing encompasses a wide range of actions, influenced by a myriad of interrelated factors, cultural variations, and evolving environmental contexts. Nevertheless, such an instrument could provide researchers and environmentalists with reliable measures to capture the general disposition of consumers towards green behaviours.

The lack of a general and easily administered instrument for assessing consumers' green purchasing behaviour justifies the need for the current pilot study. Recently, a researcher lamented about "not being able to locate a complete scale appropriate for this study" (Wei *et al.*, 2023, p. 4). Therefore, this pilot study addresses this critical gap by constructing and testing the reliabilities and validities of a fairly comprehensive but parsimonious instrument that captures the diverse aspects of green purchasing behaviour. The pilot study contributes to the field of responsible consumption and consumer green behaviour by developing a reliable instrument that researchers, policymakers, and other stakeholders can use to gauge consumers' eco-friendly behaviours.

Conceptual Clarifications

Several constructs drawn from across diverse disciplinary domains were pooled and harmonised to capture the variegated facets of green purchasing behaviours. The relevant constructs include informational social influence (ISI), normative social influence (NSI), objective environmental knowledge (OEK), subjective environmental knowledge (SEK), perceived self-efficacy (PSE), general environmental attitude (GEA), specific environmental attitude (SEA), mindfulness (MIND), and green purchasing behaviour. This section clarifies these constructs.

Informational social influence (ISI) is an intriguing psychological phenomenon denoting an individual's dependence on information from others as reliable evidence, especially when they feel uncertain about their judgments. Within consumer behaviour, ISI defines how consumers actively seek product information from their social networks. Bhukya and Paul's (2023) bibliometric study provides an overview of the concept of consumer behaviour research, emphasising the potent influence of social interactions on consumers' decision-making processes and, ultimately, their purchasing behaviour.

Normative social influence (NSI) refers to consumers' inclination to conform to positive expectations set by themselves, their peer group, social circles, or other persons. It encompasses the consumers' inherent motivation to bolster their self-image within the

sphere of influence of a significant reference group, known as value-expressive conformity. NSI describes the consumer's tendency to adapt their behaviour to align with others' expectations to gain some desired benefits or avoid unpleasant outcomes (Bhukya and Paul, 2023). Thus, NSI is one mechanism for gaining insights into the complexities of consumer decision-making and the factors that influence their purchasing behaviour in social settings.

Objective environmental knowledge (OEK) encompasses the cognitive capacity of consumers to understand the significance of ecological symbols, appreciate complex environmental concepts, exhibit environmentally conscious behaviours, and comprehend environmental challenges (Player *et al.*, 2023). This cognitive dimension plays a pivotal role in shaping consumers' understanding of the natural world and their ability to make informed and eco-friendly decisions. OEK gives a fillip to consumers' ability to contribute positively to sustainable practices and foster a greener and more environmentally responsible society.

Subjective environmental knowledge (SEK) pertains to an individual's cognitive capacity to recognize and appreciate environmental issues and their impacts (Player *et al.*, 2023). It reflects a person's awareness of the intricate relationships between human actions and the environment, fostering a profound sense of responsibility towards ecological well-being. SEK empowers consumers to make informed and conscientious decisions, actively participate in sustainable initiatives, and advocate for environmental preservation.

Perceived self-efficacy (PSE) embodies an individual's internal evaluation of their competence and confidence to effectively execute the necessary actions for accomplishing a desired goal within a given context (Salisu and Awang, 2018). This concept revolves around the beliefs and perceptions individuals hold about their capacity to overcome challenges and accomplish goals. Perceived self-efficacy enables individuals to approach various situations with a proactive and determined mindset, believing that they have the skills and resources to navigate through obstacles and achieve their goals.

General environmental attitude (GEA) encompasses the broader ecological stance, derived from consumers' preferences regarding environmental protection, healthy eating habits, recognition of and environmental issues and problems (Schmiedebach *et al.*, 2022). The concept reflects individuals' wholistic disposition towards the environment, including their values, beliefs, and behaviours that collectively influence consumers' decision-making and behaviour, thereby shaping a greener and more sustainable lifestyle.

Specific environmental attitude (SEA) centres on particular environmentally-oriented behaviours, and, in the context of this research, signifies a consumer's predisposition towards buying green products (Schmiedebach *et al.*, 2022). It thus refers to an individual's cognisance of the environmental impact of their consumer choices, opting for eco-friendly products that align with their environmental values and beliefs.

Mindfulness (MIND) refers to the cognitive capacity that enables individuals to maintain heightened awareness and attentiveness towards present events, novel experiences, and diverse situations. Mindfulness comprises three core dimensions: novelty seeking, characterized by actively seeking and exploring new and unique aspects of the environment; novelty producing, entailing the cultivation of creativity and the generation of innovative perspectives; and engagement, emphasizing deep and focused immersion in the present moment (Pagnini *et al.*, 2019).

Green purchasing behaviour (GPB) refers to the conscientious approach adopted by customers, including individuals, households, businesses, and governments, in their purchasing decisions which involves actively selecting and acquiring products that are

environmentally friendly, recyclable, and capable of reducing or mitigating negative impacts on the environment (Abdo *et al.*, 2023).

Methodology

Research Design

In this study, the online survey design was used (Ma and McCord, 2007). The design entails creating a structured questionnaire for data collection via electronic media to obtain survey data from respondents. Thus, a questionnaire was in collecting pilot data for assessing the reliabilities and validities of constructs serving as the antecedents influencing green purchasing behaviour among consumers in Jordan.

Respondents, Data Collection, and Data Analysis

The respondents are all Jordanian citizens aged 18 and above. However, care was exercised to engage only employed Jordanians who had the means to engage in purchasing activities regularly. Thus, the purposive sampling strategy was employed (Sibona *et al.*, 2020). The pilot study was carried out between October 2020 and November 2020 and utilised an online questionnaire based on Google Forms. The link to the form was distributed to the respondents via email, WhatsApp and Facebook. Thirty responses were recorded, and these respondents formed the pilot study sample size, which is considered adequate (Viechtbauer *et al.*, 2015). For data analysis, SPSS version 27.0 was employed in computing the reliabilities and validities of the constructs piloted.

Generation of Construct Indicators

Items used in measuring the constructs piloted in this study were adapted from established measures in the literature. All variables were measured as reflective constructs except for Mindfulness (MIND) which was a formative construct and for OEK that was a continuous variable. Appendix A shows the multiple-choice categories used for OEK and the associated data, while Appendix B contains items used in measuring all the pilot study constructs which all rated the scale on a 5-place bipolar agree/disagree scale except Mindfulness (MIND) was rated using Likert's 7-point agreement scale. It is important to note that all the variables were measured as first-order constructs save Mindfulness (MIND) which was treated as a second-order construct with three factors and was thus assessed at the dimensional level. It is also noteworthy that the formative items for mindfulness were intentionally designed without an expectation of internal consistency, as the researcher deemed it unlikely that high correlations among the measures would be present (Davicik, 2014).

Informational Social Influence (ISI): Four items used in measuring ISI were adapted from Bearden *et al.* (1989) who reported excellent psychometrics for the construct (i.e., $CR = 0.86$, $\alpha = 0.77$, $AVE = 0.61$). Similarly, the *Normative Social Influence (NSI)* indicators were sourced from Bearden *et al.* (1989) and adapted as a 5-item scale. Bearden *et al.* (1989) reported excellent reliability ($CR = 0.92$ and $\alpha = 0.88$) while for validity ($AVE = 0.63$) indices for the scale. Unlike all the other constructs, *Objective Environmental Knowledge (OEK)* was scored using a five-category, multiple-choice format, with 1 point awarded for each accurate response and 0 points for incorrect answers, and responses for the four questions summed to generate a global score for the construct. The OEK items were adopted from Kim *et al.* (2018) (see Appendix A for the scale). In assessing *Subjective Environmental Knowledge (SEK)*, six items were adapted from the work of Mohr *et al.* (1998) and reported a good reliability

and validity (i.e., $CR = 0.88$, $\alpha = 0.62$, $AVE = 0.55$). *Perceived Self-Efficacy* (PSE) was measured with 7 items adapted from Chen *et al.*'s (2001) New General Self-Efficacy Scale (NGSE). Chen and colleagues scored the scale on a 5-point Likert agreement scale and also reported excellent reliability statistics ($CR = 0.93$, $\alpha = 0.90$) and ($AVE = 0.61$) for validity for the PSE in a test-retest evaluation.

To measure *General Environmental Attitude* (GEA), five items were adapted from Chen *et al.* (2018). Their analysis revealed excellent reliability ($\alpha = 0.83$), ($CR = 0.93$), and validity ($AVE = 0.73$) indices for the scale. *Consumers' Specific Environmental Attitude* (SEA) was evaluated based on an adapted six-item inventory pooled from Jaiswal and Kant (2018); Joshi and Rahman (2019) who, respectively, utilised a 5-point Likert scale with ($CR = 0.90$, $\alpha = 0.86$, $AVE = 0.60$). The construct of *Mindfulness* (MIND) with 7-point Likert-type scale was adapted from Pirson *et al.* (2018) and was measured at second order level using three factors: Novelty Producing (NP), Novelty Seeking (NS), and Engagement (ENG) having 5, 4, and 4 items, respectively. According to Pirson *et al.* (2018), "coefficient alphas reliability estimates of the entire scale ranged from 0.76 to 0.81, the composite reliability (CR) ranges from 0.92 to 0.85, and the AVE was between 0.78 and 0.58" in a series of tests. Finally, a five-item scale, adapted from do Paço *et al.* (2019), was used in measuring *Green Purchasing Behaviour* (GPB). The scale has excellent psychometrics ($CR = 0.89$, $\alpha = 0.84$, $AVE = 0.61$) which do Paço *et al.* (2019) reported based on data collected using a 7-point Likert-like rating scheme.

Results

Construct reliability was evaluated through composite reliability (CR) and Cronbach's alpha coefficient. The results presented in Table 1 revealed that the computed composite reliability (CR) values ranged from 0.846 to 0.932, falling within the satisfactory range of 0.70 to 0.90 for research (Hair *et al.*, 2022). Additionally, Cronbach's alpha values for the constructs ranged from 0.617 to 0.897, indicating acceptable and good internal consistency (Watkins, 2021). Validities of the pilot study constructs were examined using average variance extracted (AVE) and factor loadings. AVE values for the constructs ranged from 0.548 to 0.732, signifying satisfactory levels and confirming that the construct items share a substantial proportion of variance. An AVE value of 0.50 or higher is considered acceptable, as it indicates that the construct explains at least 50% of the variance of its items (dos Santos and Cirillo, 2021).

Table 1
Constructs' Reliability and Validity Statistics

Construct	Items	FL	IIR	CR	AVE	α
Informational Social Influence (ISI)	ISI1	.636	.404	0.860	0.609	0.778
	ISI5	.806	.650			
	ISI8	.782	.612			
	ISI2	.878	.771			
Normative Social Influence (NSI)	NSI3	.885	.783	0.922	0.630	0.879
	NSI12	.773	.598			
	NSI22	.783	.613			
	NSI9	.842	.709			
	NSI13	.844	.712			
	NSI4	.687	.472			
Green Purchasing Behaviour (GPB)	NSI17	.725	.526	0.878	0.548	0.617
	SEK18	.824	.679			

Construct	Items	FL	IIR	CR	AVE	α
Subjective Environmental Knowledge (SEK)	SEK6	.707	.500			
	SEK7	.724	.524			
	SEK10	.864	.746			
	SEK23	.723	.523			
	SEK11	.565	.320			
Perceived Self-Efficacy (PSE)	PSE14	.836	.700			
	PSE21	.516	.289			
	PSE19	.856	.733			
	PSE25	.830	.689	0.925	0.644	0.897
	PSE15	.849	.720			
	PSE20	.814	.660			
	PSE16	.858	.740			
General Environmental Attitude (GEA)	GEA26	.789	.623			
	GEA27	.911	.830			
	GEA32	.803	.645	0.932	0.732	0.825
	GEA34	.858	.736			
	GEA30	.909	.826			
Specific Environmental Attitude (SEA)	SEA28	.817	.710			
	SEA31	.566	.320			
	SEA36	.736	.540	0.901	0.606	0.864
	SEA29	.900	.810			
	SEA35	.765	.585			
	SEA33	.843	.710			
Mindfulness (MIND): Novelty Producing (NP)	MIND47	.932	.870			
	MIND48	.681	.460			
	MIND51	.912	.832	0.923	0.711	0.781
	MIND56	.713	.510			
	MIND59	.938	.880			
Mindfulness (MIND): Novelty Seeking (NS)	MIND46	.598	.380			
	MIND53	.846	.716	0.846	0.583	0.756
	MIND55	.807	.650			
	MIND58	.779	.607			
Mindfulness (MIND): Engagement (ENG)	MIND49	.796	.630			
	MIND50	.863	.800	0.886	0.658	0.812
	MIND54	.708	.500			
	MIND57	.868	.750			
Green Purchasing Behaviour (GPB)	GPB37	.806	.650			
	GPB38	.773	.600			
	GPB39	.640	.410			
	GPB40	.790	.624	0.887	0.614	0.836
	GPB41	.889	.790			
	MIND50	.863	.800			
	MIND54	.708	.500			
MIND57	.868	.750				

FL = Factor loading, IIR = Individual item reliability, CR = Composite reliability, AVE = Average variance extracted, α = Cronbach's alpha.

Regarding factor loading, the pilot study revealed that the indicator of perceived self-efficacy (PSE21) had the smallest factor loading of 0.516, with an indicator reliability of 0.289, while the indicator of general environmental attitude (GEA27) showed the highest factor loading of 0.911, accompanied by an indicator reliability of 0.83. Factor loadings of 0.70 or greater indicate retention of the item, whereas items with factor loadings between 0.40 and 0.70 are considered for potential removal from the scale (Hair *et al.*, 2022).

Discussions

Cronbach's alpha, a measure of internal consistency reliability, measures the extent to which a construct's items are correlated and measure the same underlying construct. In this pilot study, Cronbach's alpha scores for the constructs ranged from 0.617 to 0.897. Although $\alpha = 0.70$ is usually considered the minimum threshold (Morgan *et al.*, 2011), given the dependence of alpha on the number of items in a summated scale (Morgan *et al.*, 2011), several scholars (e.g., Xue *et al.*, 2016; Zhang *et al.*, 2023) consider $\alpha \geq 0.60$ a reasonably acceptable internal consistency reliability threshold. Thus, alpha statistics provide evidence of good and acceptable internal consistency and reliability for the constructs in the questionnaire.

Similarly, the composite reliability indices of all the constructs assessed in this pilot study were well above Hair *et al.*'s (2022) recommended threshold of 0.70. Thus, the composite reliability indices demonstrated that the items within each construct are highly reliable, and their variances were adequately explained by their respective latent constructs. Higher composite reliability values suggest that a significant proportion of the observed variance of the constructs studied can be attributed to the true underlying construct rather than to random measurement error. In the current pilot study, the composite reliability values approached CR = 0.90, suggesting a high level of consistency and precision, thereby instilling confidence in the instrument's ability to accurately assess the green purchasing behaviour constructs.

AVE is a stringent criterion for assessing convergent validity; it measures the degree to which the items within each construct converge or share a common variance. According to dos Santos and Cirillo (2021), adequate convergent validity is achieved when AVE scores ranged between 0.50 and 1.00. In this pilot study, the AVE scores, ranging from 0.548 to 0.732, provide compelling evidence of the convergent validity of the constructs developed in this pilot study for measuring consumers' green purchasing behaviours. In other words, the AVE scores demonstrate that the constructs successfully explain a substantial proportion of variance among their respective items, assuring that items are indeed measuring what they are intended to measure, and thereby bolstering the validity of the instrument. Thus, researchers can be confident in the validity of the instrument to effectively capture the constructs related to consumers' green purchasing behaviour.

Item factor loading is a crucial indicator of the construct's validity, representing the strength of each item's relationship with its underlying latent construct in the measurement model. In this pilot study, item factor loadings for all the green behaviour constructs fall within the range of 0.516 to 0.911. Although factor loadings ≥ 0.70 are typically considered strong indicators of a construct, Watkins (2021) recommends that factor loading of "0.45 are

fair" (p. 93). Indeed, eliminating items in this pilot study with loadings below this threshold would have compromised the validity of the constructs. Further, Ramayah *et al.* (2018) suggest that loadings ≥ 0.4 are adequate provided other items have high scores and the AVE > 0.50 .

Overall, the questionnaire's internal consistency reliabilities and convergent validities demonstrated its suitability for assessing antecedents of consumers' green purchasing behaviour. The reported reliabilities and validities provide empirical justifications for researchers to confidently employ the instrument as a reliable tool in future research focused on understanding the factors influencing consumers' environmentally responsible purchasing choices. Also, the instruments themselves can facilitate the identification of key antecedents of green purchasing behaviour. Researchers can place trust in the instrument's ability to capture and evaluate consumer attitudes and preferences towards eco-friendly products, ultimately contributing to the advancement of sustainable consumption practices and a greener future.

Contributions of the Study

The present pilot study contributes to the field of consumer behaviour and environmental psychology by establishing the robustness and reliability of a survey instrument for assessing a spectrum of factors influencing green purchasing behaviours. The reliability and validity of several constructs associated with green purchasing behaviours (informational social influence, normative social influence, objective and subjective environmental knowledge, perceived self-efficacy, general and specific environmental attitudes, as well as mindfulness) were empirically established. This contribution not only confirms the psychometric robustness of the questionnaire and its viability as a tool for measuring consumers' green purchasing behaviour but also the theoretical domain of psychological factors underpinning green consumer choices within the Jordanian context.

Conclusion

This pilot study successfully examined the psychometric properties of the antecedents of green purchasing behaviour, including informational social influence, normative social influence, objective environmental knowledge, subjective environmental knowledge, perceived self-efficacy, general environmental attitude, specific environmental attitude, and mindfulness. The results demonstrated strong reliability for all the items, as evidenced by composite reliability and Cronbach's alpha values meeting and exceeding the recommended thresholds. Furthermore, construct validity was robustly established, with factor loadings falling within the acceptable range, and AVE values surpassing the minimum criterion. Additionally, indicator reliability exceeded the specified threshold for all items. Thus, this pilot study provides reliable and valid tools for evaluating the antecedents of consumers' eco-friendly purchasing choices in Jordan and elsewhere.

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Appendix A

The Objective Environmental Knowledge (OEK) is a scale with a continuous variable ranging from 0 to 4. It assesses participants' understanding by summing the correct responses to four multiple-choice questions. The answers are provided using a five-category, multiple-choice format, with 1 point awarded for each accurate response and 0 points for incorrect answers.

Category (Total Point)	Frequency	Percent	Cumulative Percent
No knowledge (0)	3	10.0	0.10
Poor knowledge (1)	11	36.6	46.6
Fair knowledge (2)	8	26.7	73.3
Good knowledge (3)	6	20.0	93.3
Excellent knowledge (4)	2	6.70	100
Total	30	100	

Appendix B: Measures of the Reflective Constructs

Informational Social Influence (ISI)

- 1) To make sure I buy the right green products, I often observe what others are buying and using. (ISI1)
- 2) If I have little experience with a green product, I often ask my friends about the product. (ISI5)
- 3) I often consult other people to help choose the best alternative available from a green product class. (ISI8)
- 4) I frequently gather information from friends or family about a green product before I buy. (ISI2)

Normative Social Influence (NSI)

- 1) I rarely purchase green products until I am sure my friends approve of them. (NSI3)
- 2) When buying products, I generally purchase green products that I think others will approve of. (NSI12)
- 3) If other people can see me using a product, I often purchase green products they expect me to buy. (NSI22)
- 4) I like to know what green products make good impressions on others. (NSI9)

Appendix B: Measures of the Reflective Constructs

- 5) I achieve a sense of belonging by purchasing the same green products that others purchase. (NSI13)
 - 6) If I want to be like someone, I often try to buy the same green products that they buy. (NSI4)
 - 7) I often identify with other people by purchasing the same green products they purchase. (NSI17)
-

Subjective Environmental Knowledge (SEK)

- 1) I know that I buy environmentally friendly products. (SEK18)
 - 2) I know more about recycling than the average person. (SEK6)
 - 3) I know how to select products and packages that reduce the amount of waste ending up in landfills. (SEK7)
 - 4) I understand the environmental phrases and symbols on the product. (SEK10)
 - 5) I am confident that I know how to sort my recyclables properly. (SEK23)
 - 6) I am very knowledgeable about environmental issues. (SEK11)
-

Perceived Self-Efficacy (PSE)

1. I have confidence in my ability to obtain most of the green products I plan to purchase when shopping. (PSE14)
 2. When facing difficult choices between buying green products or non-green products, I am certain that I will choose to purchase green products. (PSE21)
 3. In general, I think that I can purchase green products that are important to me. (PSE19)
 4. I believe I can successfully purchase any green product I desired. (PSE25)
 5. I feel I can successfully overcome many challenges associated with purchasing green products. (PSE15)
 6. I am confident that I can effectively perform the many tasks associated with purchasing green products. (PSE20)
 7. Compared to other people, I can effectively make most of the decisions associated with green purchasing. (PSE16)
-

General Environmental Attitude (GEA)

1. Advocating an environmentally friendly lifestyle is necessary. (GEA26)
 2. I think the government needs to focus more on environmental protection. (GEA27)
 3. I think it is very important to promote consumers' attention to environmental issues. (GEA32)
 4. I think it's important to control environmental pollution. (GEA34)
 5. I think the earth's resources are limited, so environmental protection is important. (GEA30)
-

Specific Environmental Attitude (SEA)

1. I believe by practising green purchasing, I will help in reducing pollution and also help in improving the environment. (SEA28)
 2. I believe by practising green purchasing, I will help in reducing the wasteful use of natural resources. (SEA31)
 3. I believe by practising green purchasing, I will help in conserving natural resources. (SEA36)
-

Appendix B: Measures of the Reflective Constructs

4. I feel good about myself when I am involved in green purchasing. (SEA29)
 5. I like the idea of purchasing green products. (SEA35)
 6. I have a favourable attitude towards purchasing a green version of a product. (SEA33)
-

Mindfulness (MIND)

Novelty Producing (NP):

1. I generate a few novel ideas. (MIND47)
 2. I make many novel contributions. (MIND48)
 3. I am very creative. (MIND51)
 4. I find it easy to create new and effective ideas. (MIND56)
 5. I am not an original thinker. (MIND59)
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Novelty Seeking (NS):

6. I like to investigate things. (MIND46)
 7. I try to think of new ways of doing things. (MIND53)
 8. I like to be challenged intellectually. (MIND55)
 9. I like to figure out how things work. (MIND58)
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Engagement (ENG):

10. I seldom notice what other people are up to. (MIND49)
 11. I avoid thought-provoking conversations. (MIND50)
 12. I am rarely aware of changes. (MIND54)
 13. I am rarely alert to new developments. (MIND57)
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Green Purchasing Behaviour (GPB)

1. When I want to buy a product, I look at the ingredients label to see if it contains environmentally damaging things. (GPB37)
 2. I prefer green products over non-green products when their product qualities are similar. (GPB38)
 3. I choose to buy environmentally friendly products. (GPB39)
 4. I buy green products even if they are more expensive than non-green ones. (GPB40)
 5. When I consider buying a product, I look for a certified environmental label. (GPB41)
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