

**International Journal of Applied Systemic Studies**

ISSN online: 1751-0597 - ISSN print: 1751-0589

<https://www.inderscience.com/ijass>

---

**A systematic literature review of frugality and sustainability with life satisfaction: antecedents and consequences model**

Satinder Kumar, Garima Kathuria

**DOI:** [10.1504/IJASS.2023.10060003](https://doi.org/10.1504/IJASS.2023.10060003)

**Article History:**

Received:	26 March 2023
Last revised:	27 March 2023
Accepted:	21 June 2023
Published online:	25 June 2024

---

## A systematic literature review of frugality and sustainability with life satisfaction: antecedents and consequences model

---

Satinder Kumar\* and Garima Kathuria

School of Management Studies,  
Punjabi University Patiala, India  
Email: Kumarsatinder1981@gmail.com  
Email: garimakathuria25298@gmail.com

\*Corresponding author

**Abstract:** The purpose of this paper is to examine the antecedents of frugality and sustainability simultaneously to relate their consequences with life satisfaction. A systematic literature review has been done with the PRISMA framework. The initial selection, results in a total of 564 articles, where 456 are from Scopus and 108 from the Web of Science database. After screening these articles, we analyse 44 articles which are related to the study. A conceptual model has been framed; results indicate the positive relationship of all the antecedents with frugality as well as with sustainability. Also highlights, that they have a positive relationship with frugal and sustainable consumption behaviour, along with its moderating role and later these behaviours positively relate to life satisfaction. The findings provide valuable guidelines to managers, policymakers, and academicians for a better understanding of consumers and framing marketing strategies for life satisfaction. It also helps society to make rational decisions for sustainability.

**Keywords:** sustainability; frugality; sustainable consumption behaviour; frugal behaviour; life satisfaction.

**Reference** to this paper should be made as follows: Kumar, S. and Kathuria, G. (2024) 'A systematic literature review of frugality and sustainability with life satisfaction: antecedents and consequences model', *Int. J. Applied Systemic Studies*, Vol. 11, No. 1, pp.19–41.

**Biographical notes:** Satinder Kumar is best known for his work in the area of digital marketing. He earned his Doctoral degree in Ethical Issues in E-Marketing. He has been an Assistant Professor in Marketing at the School of Management Studies (SMS) since 2009. He has published more than 50 articles/research papers in a wide range of leading management and psychology journals including the *Journal of Tourism Management* (ABDC classified, A\* category), and the *Journal of Retailing and Consumer Services* (ABDC classified, A category) and more than 20 paper in SCOPUS indexed journals. He is on a panel of Inderscience, Scopus and ABDC-indexed journals as a reviewer and research advisor.

Garima Kathuria is a regular research scholar at the School of Management Studies and doing her doctoral in the area of social media marketing. She has three years of teaching experience and has been teaching as well as doing research. She has attended many workshops and conferences to present her research work.

## **1 Introduction**

In today's era every person has a materialistic lifestyle and this resource intensive lifestyle causes environmental degradation. So, there is a need to move towards sustainable consumption patterns (Dhandra, 2019). Sustainable consumption is an extensive concept that apprehensions the dealings of social and ecological issues such as environmental protection, quality of life and human needs. It predominant the ecologically conscious consumer behaviour to socially conscious and frugal consumer behaviours (Pepper et al., 2009). According to Kaur and Luchs (2022), there are two complementary forms of sustainable consumption i.e., frugal consumption and socially conscious consumption. Frugal consumption means restrained in acquiring and resourceful in using goods and services (Goldsmith et al., 2014; Lastovicka et al., 1999). However, socially conscious consumption is less harmful for others (Kaur and Luchs, 2022).

Evans (2011) commented that frugality can be the consequence of self-control to prevent superfluous expenditure, hence it lowers the ecological impact of consumption. Frugality offers a vision of sustainable consumption which slows down the process of sustainable harm (Bove et al., 2009). It involves voluntary restraint and moderation in consumption habits (Lastovicka et al., 1999). Therefore, frugality can also be viewed as value which means a guide to action and judgement across specific situations (Durning and Durning, 1992). According to Sharma et al. (2020), right measures have to be taken for the survival of future generation. For this, researchers need to understand that there is a link between green attitude and frugality, as frugality does not inevitably suggest for denial from consuming expensive goods and services, rather it suggest reducing resource wastage and also for its optimum utilisation (Sadom et al., 2020). Individuals with frugal consumption behaviour develop the habit of saving and unveiling conservation in their day-to-day activities like, saving water and electricity (Wang et al., 2021).

Commensurately, there is a need to examine what might be some of the key antecedents of frugality and sustainability, simultaneously that strengthen the association between sustainable consumption behaviour and frugal behaviour. A substantial amount of research on frugality has been conducted over the last decade, which drives positive relationship between sustainability and frugality (Bove et al., 2009; Rao, 2017; Evans, 2011), but Wang et al. (2021) found that there is a negative relationship between frugality and green purchase intention. On the other side, literature is talking about the relationship between mindfulness and frugality (Dhandra, 2019), pro-environmental behaviour and frugality (Suárez et al., 2020; Evers et al., 2018a), mindfulness and sustainable consumption (Kaur and Luchs, 2022; Ericson et al., 2014), voluntary simplicity and sustainable behaviour (Aidar and Daniels, 2020; De Geus, 2013). Voluntary simplicity and frugality (Aidar and Daniels, 2020), ecologically conscious consumer behaviour and sustainable behaviour (Mishra et al., 2022; Chan and Lau, 2000).

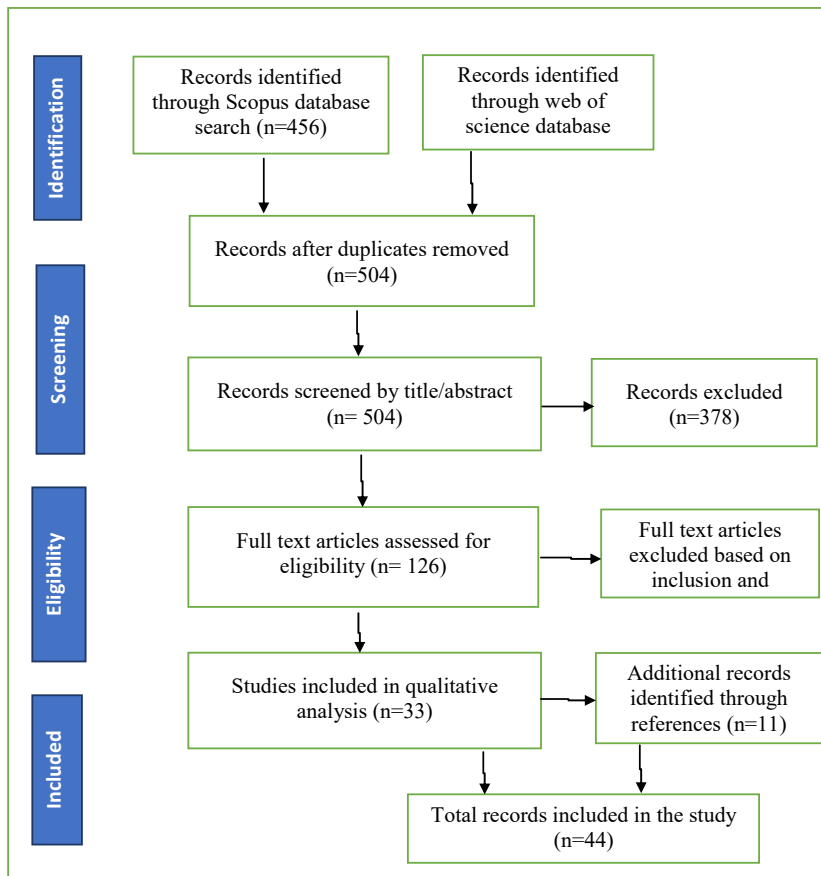
Specifically, with the help of the model- antecedents and consequences, we examine the role of various antecedents and consequences of frugality and sustainability. This study would help in creating and raising awareness among peoples regarding sustainability as well as would also help industrial persons in framing strategies. Literature indicates, there are various research in the context of frugality but they took frugality and sustainability separately. The antecedents which we have taken is the novel one, no past research had taken these antecedents and consequences in the context of

frugality and sustainability simultaneously. This paper bridges this gap and extends the model to consider frugality and sustainability in unified structure.

## 2 Research methodology

In this research we followed the ‘systematic literature review’ methodology described by Tranfield et al. (2003) and Macpherson and Jones (2010). As recognised by Wang and Chugh (2014), this method has many advantages as compared with unstructured reviews. It adopts a transparent and scientific process which helps in minimisation of bias and errors (Tranfield et al., 2003); and in improving the quality of the review process and outcomes (Mihalache and Mihalache, 2016). Further, this study uses PRISMA protocol.

**Figure 1** Flow chart for selection of relevant studies (PRISMA framework) (see online version for colours)



**Table 1** List of literature (44 articles)

Sr.	Author	Country	Types of study	Variables	Sample size	Finding
1	Kaur and Luchs (2022)	South Korea, USA	Empirical study	Mindfulness, frugal purchasing, values, sustainable consumption	750	Positive correlation exists between mindfulness with altruistic values and biosphere values but not with egoistic values.
2	Wilson and Bellezza (2022)	USA	Empirical study	consumer minimalism, decluttering, voluntary simplicity, frugality, materialism	3,735	Three dimensions of consumer minimalism (sparse aesthetic, number of possessions, and mindfully curated consumption) indicates that different consumption contexts have varying results.
3	Djafarova and Foots (2022)	UK	Qualitative study	Generation Z, ethical consumption, theory of planned behaviour, consumer behaviour	–	Generation Z has strong awareness towards environmental and ethical issues.
4	Mishra et al. (2022)	India, UAE	Empirical study	Psychological ownership, sustainable purchase behaviour, ecological consciousness, frugality, fashion orientation	400	The findings show mediation effect of 'psychological ownership towards the environment' between sustainable purchasing behaviour and ecological consciousness.
5	Kumar et al. (2021)	UK, India	Empirical study	Predictive, sustainable development, eco-responsible purchase intention, eco-friendly apparels, consciousness and willingness to pay.	232	Consumers have a positive attitude towards environment and responsible purchase intention.
6	Mishra et al. (2021)	India, Dubai, Italy	Empirical study	Psychological ownership, social influence, sustainable consumption behaviour, self-expressiveness, environmental commitment, fashion consciousness	332	Study shows that every time there is an increase in environmental commitment and n self-expressiveness there was an increase in sustainable consumption behaviour.
7	Wang et al. (2021)	China, USA	Empirical study	Frugality, green purchase intention, saving, green concern	369	The association between frugality and purchasing intention is negatively moderated by green concern.
8	Ek Styvén and Mariani (2020)	Sweden, UK	Empirical study	Distance from consumption system, clothing, economic motivations, perceived sustainability, secondhand buying, P2P sharing platforms, sharing economy	412	Economic motivations and perceived sustainability, have positive inspiration towards buying secondhand.
9	Michaelis et al. (2020)	US	Empirical study	Resourcefulness, self-regulation, frugality, self-control construct validation	155	Frugal behaviours foresee long term resource usage and self-control foresees behaviours depends on known ends goals.
10	Dhandra (2019)	South Korea	Empirical study	Mindfulness, sustainable consumption, unsustainable consumption, materialism, green purchase intention, life satisfaction	420	This finding of this study stated that mindfulness is positively related with social conscious behaviour, green purchase intention and frugal purchasing behaviour.
11	Li et al. (2019)	China	Empirical study	Carbon emissions, consumer lifestyle, household survey, social awareness	8,000	People with frugal lifestyle, also play the role of social awareness.
12	Lee (2019)	Korea	Empirical study	Environmental protection, sharing economy	537	Anti-consumption lifestyles consist of voluntary simplicity, environmental protection, frugality, small luxury and tightwads and these are affecting the acceptance of commercial sharing system.
13	Coşkun and Özbük (2019)	Turkey	Empirical study	Environmental knowledge, happiness, emerging economy, frugality, environmental locus of control, green segmentation	227	True greens scored best for environmental attitudes and buying intentions, while non-greens scored lowest.

**Table 1** List of literature (44 articles) (continued)

<i>Sr.</i>	<i>Author</i>	<i>Country</i>	<i>Types of study</i>	<i>Variables</i>	<i>Sample size</i>	<i>Finding</i>
14	Emekci (2019)	Turkey	Empirical study	Green consumer, green consumption, theory of planned behaviour, structural equation modelling, green buying behaviour	272	Perceived consumer effectiveness has greater influence on the green buying behaviour and attitudes towards intentions.
15	Felix and Almager (2019)	USA	Empirical study	Psychological ownership, environmentally friendly products, materialism, recycling intentions	236	Both individual and collective dimensions of psychological ownership positively related with purchasing green products.
16	Joshi et al. (2019)	India	Empirical study	Predicted sustainable consumption, Sustainable consumption intention, individual factors, behavioural factors, Situational factors	325	Individual norm, attitude towards sustainable consumption and environmental intention are the main predictors of sustainable consumption intention.
17	Johnson and Chattaraman (2019)	America	Empirical study	Social signalling, self-signalling, socially responsible consumption, millennial generation	12	Motivations for social responsibility are not generous in individuals who provide support to others.
18	Lin and Niu (2018)	Taiwan	Exploratory study	Environmental attitude, environmental consciousness, environmental knowledge, environmental policy, green consumption, social norms, sustainable development, well-being	649	Environmental knowledge, social norms and conscious behaviour towards environment has a positive impact on environmental attitude of consumers
19	Naderi and Van Steenburg (2018)	USA	Empirical study	Green consumption, millennials, sustainable consumption, pro-environmental behaviour, self-interest	285	Millennials act in favor of the environment due to rational and self-centered motivations rather than emotional or others-focused motivations.
20	Evers et al. (2018)	Australia	Empirical study	Creative end-use consumption behaviour, frugality, materialism	398	Consumers' sustainable behaviour is positively impacted by materialism and thrift.
21	Fischer et al. (2017a)	Germany	Qualitative and quantitative study	Sustainable consumption, consumer behaviour	163	Young consumers' sustainable consumption behaviours are reliable and valid scale to measure in the areas of food and clothing.
22	Nepomuceno and Laroche (2017)	Canada	Empirical study	Materialism, self-control, resistance to consumption, long-term orientation, consumer well-being, sustainability.	194	By enhancing long-term orientation and self-control, frugality scores of high and low-materialism individuals increase.
23	Paswan et al. (2017)	USA	Empirical study	Environmental sustainability, human-nature balance, time orientation, PR environmental behaviour.	137	When peoples believe in balance achievement between mankind and conservation activities, they would be more likely to engage in pro-environmental behaviour.
24	Ladhari and Tchegna (2017)	Canada	Empirical study	Emotions, fair trade, personal values, socially conscious behaviour	268	Intention of obtaining fair trade products is inclined by socially conscious behaviour, consumer values and with their emotions related to that.
25	Barbaro and Pickett (2016)	US	Empirical study	Mindfulness, connectedness to nature, behavioural regulation, pro-environmental behaviour	296	Mindfulness and pro-environmental behaviour are exaggerated by the connectedness to nature.
26	Barbarossa and Pastore (2015)	Italy	Qualitative study	Green products, actual purchase, eco-friendly	51	Lack of availability in the traditional supermarkets and consumers 'high perceived prices are the most appropriate barriers in actual buying of green products.

**Table 1** List of literature (44 articles) (continued)

Sr.	Author	Country	Types of study	Variables	Sample size	Finding
27	Cho et al. (2015)	USA	Empirical study	Frugal, Sustainable consumption, consumer ethics, guilt	586	Fashion consciousness, frugal apparel consumption, and ecologically conscious consumption enhances the likelihood of sustainable consumption.
28	Barber and Deale (2014)	USA	Empirical study	Mindfulness, sustainability, clusters	563	Mindful peoples mostly search for products and services to which they are emotionally related which gives environmental benefits.
29	Ericson et al. (2014)	Norway	Qualitative study	Mindfulness, sustainability, well-being, empathy, and values	–	Mindfulness pays to the wellbeing and that will give rise to stronger empathy and compassion
30	Goldsmith et al. (2014)	US	Empirical study	Frugality, materialism, consumer independence, brand engagement in self-concept.	256	Frugal consumers are independent in their decision making of buying products and these types of consumers are less status conscious, less materialistic, and less involved in brands.
31	Walther and Sandlin (2013)	USA	Empirical study	Green capital, voluntary simplifiers, family and social reproduction, anti-consumption.	10	Adult simplifiers practiced frugality or voluntary simplicity and spread these feeding patterns to their own children.
32	Sharma and Iyer (2012)	US	Review Paper	Green marketing, sustainability, Jugaad, frugal engineering, new product development	–	The innovation process is mostly dependent on economical engineering that satisfies green marketing goals.
33	Akehurst et al. (2012)	UK and Portugal	Empirical study	Green consumer behaviour, ecological consciousness, green purchase intention, green purchase behaviour, green marketing, green consumer profile, demographics, and psychographics	186	Psychographic variables like altruism and perceived consumer effectiveness, has higher relevancy than socio-demographics in explaining ecologically conscious consumer behaviour.
34	Urien and Kilbourne (2011)	US, France	Empirical study	Generativity, self-enhancement values, environmentally responsible consumption, ecofriendly behavioural intentions	283	Individuals whose generativity scores are in height have eco-friendly intentions but in case of generativity it is opposite.
35	Chancellor and Lyubomirsky (2011)	USA	Qualitative study	Hedonic adaptation, well-being, thrift, appreciation, gratitude, motivation	–	Eliminating burdensome loans, recycling great experiences through diversity and reflection, and renting instead of buying would all result in people spending less and enjoying more hedonic benefits.
36	Bove et al. (2009)	Australia	Empirical study	Recreational shopping, frugality, market mavenism, intrinsic religiosity, shopping antipathy.	50	Shopping antipathy, market mavenism and age were positively related with frugality but intrinsic religiosity, recreational shopping and social class were not associated with frugality.
37	Pepper et al. (2009)	UK	Empirical study	Consumer behaviour, frugality, sustainable consumption, values	2,000	Socially conscious consumer behaviour seems as attribute of pro-social values. But frugal behaviour relates to low personal materialism.

**Table 1** List of literature (44 articles) (continued)

<i>Sr.</i>	<i>Author</i>	<i>Country</i>	<i>Types of study</i>	<i>Variables</i>	<i>Sample size</i>	<i>Finding</i>
38	Brown and Kasser (2005)	US	Empirical study	Subjective well-being (SWB), ecologically responsible behaviour (ERB), dispositional mindfulness, intrinsic values	206	Subjective wellbeing and ecologically responsible behaviour were explained by mindfulness and intrinsic values and these are the clues of a sustainable life.
39	Kim and Choi (2005)	Minnesota	Empirical study	Green Purchase behaviour, environmental concern, perceived consumer effectiveness (PCE), collectivism	304	Perceived consumer effectiveness influence collectivism and thus collectivism values influence beliefs about consumer effectiveness and this leads to green buying behaviour.
40	Todd and Lawson (2003)	New Zealand	Empirical study	Frugality, values, lifestyle, non-consumption	3,710	The best way to understand frugality is as a lifestyle choice, which can be either a personality attribute or a value.
41	Thøgersen and Ølander (2002)	Denmark	Empirical study	Consumer behaviour, values, sustainable consumption, environmental protection	1,520	Individual value priorities influence the emergence of sustainable consumption pattern.
42	Chan (2001)	Hong Kong	Empirical study	Cultural and psychological factors, green purchase behaviour, man-nature orientation	549	Ecological knowledge, Ecological affect, degree of collectivism has a positive impact on attitudes towards green purchases.
43	Lastovicka et al. (1999)	USA	Qualitative and empirical	Frugality, consumer behaviour, consumer traits	90	Frugality scale has a replicable unidimensional factor known-groups validity, reasonable internal consistency reliability and freedom from commonly considered response-set tendencies.
44	Webster (1975)	England	Empirical study	Socially conscious consumer, social responsibility, perceived consumer effectiveness, socioeconomic and demographic variables	7,000	A consumer who is socially conscious considers the effects of his or her private consumption on the general public in addition to using their purchasing power to affect social change.



To ensure the accuracy of systematic literature review, this study has made substantial efforts to quest relevant literature, including published journals, dissertations and conference proceeding. ‘Sustainability’ OR ‘sustainable behaviour’ OR ‘sustainable consumption behaviour’ OR sustainable buying behaviour’ AND ‘frugality’ OR ‘frugal behaviour’ OR ‘frugal consumption behaviour’ OR ‘frugal buying behaviour’ are used as keywords. The search includes a total of 564 research papers, 456 from Scopus database and 108 from web of science database. After excluding the duplicates (60 articles), we screened and read the titles and abstracts of 504 articles. Only 126 articles met the criteria for eligibility test. And after that based on exclusion and inclusion criteria full text articles have been excluded and only those articles are taken which are of ABDC Listed journals (A\*, A, and B), 33 articles are left and 11 articles are additionally included through references. Finally, 44 articles have been selected for review and analysis.

**Figure 2** Research paper according to research design (see online version for colours)

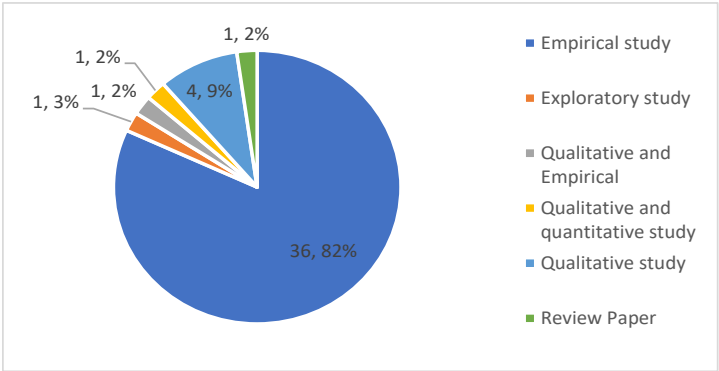


Figure 2 represents research papers according to the areas of study. Major portion of this study covers empirical papers, less are qualitative and least are review based, qualitative and exploratory.

**Figure 3** Research papers according to years (see online version for colours)

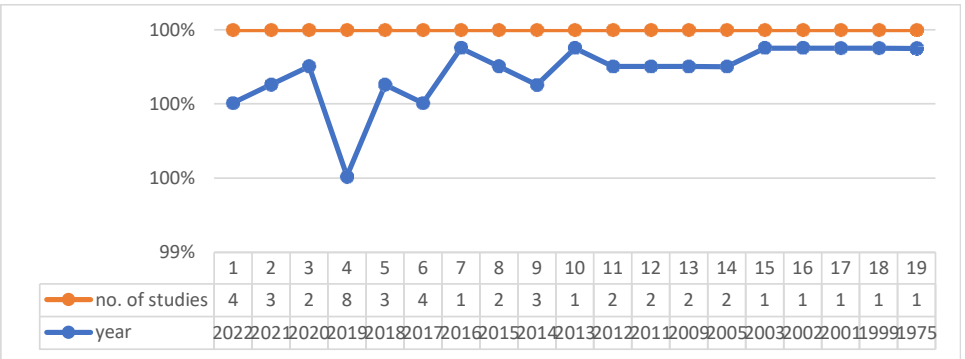


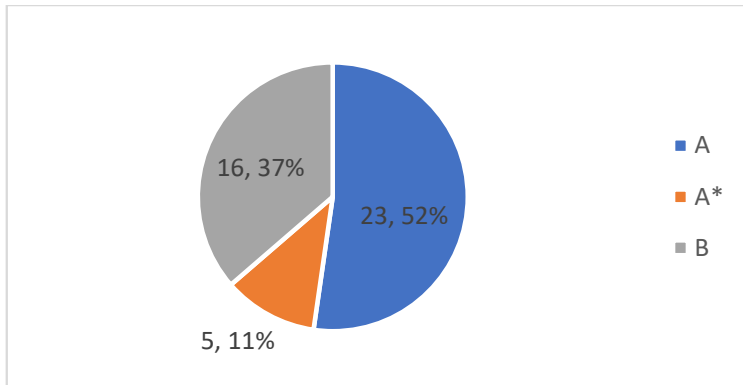
Figure 3 represents papers according to years of study. Highest no. of studies observed in the year 2019. The second highest is in the year 2017. Also, in current scenario there is a growth in publications in this area.

**Table 2** List of journals/publisher name with the rating

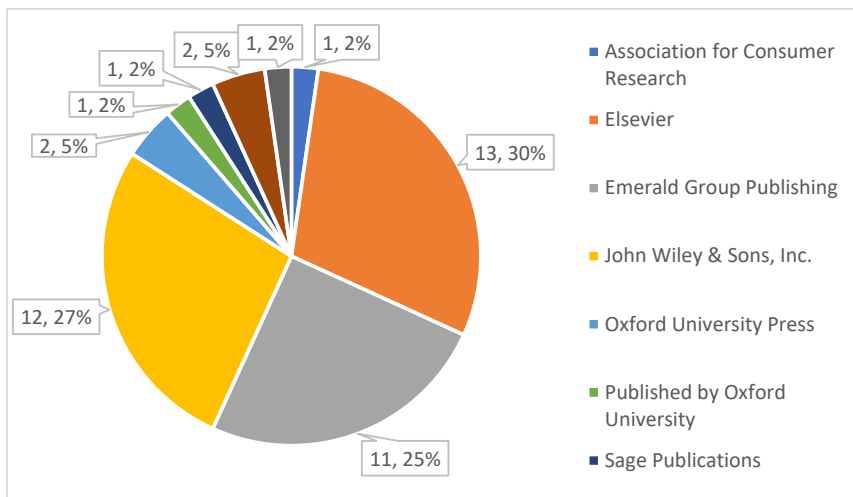
<i>Sr.</i>	<i>Author/year</i>	<i>Rating</i>	<i>Publisher</i>	<i>Journal name</i>
1	Kaur and Luchs (2022)	A	John Wiley & Sons, Inc.	<i>Psychology and Marketing</i>
2	Wilson and Bellezza (2022)	A*	Published by Oxford University	<i>Journal of Consumer Research</i>
3	Mishra et al. (2022)	B	Emerald Group Publishing	<i>Asia Pacific Journal of Marketing and Logistics</i>
4	Djafarova and Foots (2022)	B	Emerald Group Publishing	<i>Young Consumers</i>
5	Wang et al. (2021)	A	Elsevier	<i>Journal of Retailing and Consumer Services</i>
6	Kumar et al. (2021)	A	Elsevier	<i>Journal of Retailing and Consumer Services</i>
7	Mishra et al. (2021)	A	Taylor & Francis Online	<i>Journal of Strategic Marketing</i>
8	Ek Styvén and Mariani (2020)	A	John Wiley & Sons, Inc.	<i>Psychology and Marketing</i>
9	Michaelis et al. (2020)	A*	Elsevier	<i>Journal of Business Venturing</i>
10	Dhandra (2019)	A	Elsevier	<i>Ecological Economics</i>
11	Li et al. (2019)	A	Elsevier	<i>Ecological Economics</i>
12	Emekci (2019)	B	Emerald Group Publishing	<i>Journal of Consumer Marketing</i>
13	Felix and Almaguer (2019)	B	Emerald Group Publishing	<i>Journal of Consumer Marketing</i>
14	Coşkun and Özbük (2019)	B	Emerald Group Publishing	<i>Young Consumers</i>
15	Lee (2019)	B	Emerald Group Publishing	<i>Asia Pacific Journal of Marketing and Logistics</i>
16	Joshi et al. (2019)	B	John Wiley & Sons, Inc.	<i>International Journal of Nonprofit and Voluntary Sector Marketing</i>
17	Johnson and Chattaraman (2019)	B	John Wiley & Sons, Inc.	<i>Journal of Consumer Behavior</i>
18	Naderi and Van Steenburg (2018)	B	Emerald Group Publishing	<i>Young Consumers</i>
19	Lin and Niu (2018)	B	John Wiley & Sons, Inc.	<i>Business strategy and the environment</i>
20	Evers et al. (2018a)	A	John Wiley & Sons, Inc.	<i>Psychology and Marketing</i>
21	Paswan et al. (2017)	B	Emerald Group Publishing	<i>Journal of Consumer Marketing</i>
22	Fischer et al. (2017a)	B	Emerald Group Publishing	<i>Young Consumers</i>
23	Ladhari and Tchegnna (2017)	A	John Wiley & Sons, Inc.	<i>International Journal of Consumer Studies</i>

**Table 2** List of journals/publisher name with the rating (continued)

<i>Sr.</i>	<i>Author/year</i>	<i>Rating</i>	<i>Publisher</i>	<i>Journal name</i>
24	Nepomuceno and Laroche (2017)	A	Springer International Publishing	<i>Journal of Business Ethics</i>
25	Barbaro and Pickett (2016)	A	Elsevier	<i>Personality and Individual Differences</i>
26	Barbarossa and Pastore (2015)	B	Emerald Group Publishing	<i>Qualitative Market Research: An International Journal</i>
27	Cho et al. (2015)	A	John Wiley & Sons, Inc.	<i>International Journal of Consumer Studies</i>
28	Goldsmith et al. (2014)	A	Elsevier	<i>Journal of Retailing and Consumer Services</i>
29	Barber and Deale (2014)	A	Sage Publications	<i>Cornell Hospitality Quarterly</i>
30	Ericson et al. (2014)	A	Elsevier	<i>Ecological Economics</i>
31	Walther and Sandlin (2013)	A	John Wiley & Sons, Inc.	<i>International Journal of Consumer Studies</i>
32	Akehurst et al. (2012)	B	Emerald Group Publishing	<i>Management Decision</i>
33	Sharma and Iyer (2012)	A*	Elsevier	<i>Industrial Marketing Management</i>
34	Urien and Kilbourne (2011)	A	John Wiley & Sons, Inc.	<i>Psychology and Marketing</i>
35	Chancellor and Lyubomirsky (2011)	A	Elsevier	<i>Journal of Consumer Psychology</i>
36	Bove et al. (2009)	A	Elsevier	<i>Journal of Retailing and Consumer Services</i>
37	Pepper et al. (2009)	A	John Wiley & Sons, Inc.	<i>International Journal of Consumer Studies</i>
38	Brown and Kasser (2005)	A	Springer International Publishing	<i>Social Indicators Research</i>
39	Kim and Choi (2005)	B	Association for Consumer Research	<i>Advances in Consumer Research</i>
40	Todd and Lawson (2003)	B	Elsevier	<i>Australasian Marketing Journal</i>
41	Thøgersen and Ölander (2002)	A	Elsevier	<i>Journal of Economic Psychology</i>
42	Chan (2001)	A	John Wiley & Sons, Inc.	<i>Psychology and Marketing</i>
43	Lastovicka et al. (1999)	A*	Oxford University Press	<i>Journal of Consumer Research</i>
44	Webster (1975)	A*	Oxford University Press	<i>Journal of Consumer Research</i>

**Figure 4** Contribution of paper rating wise (ABDC) (see online version for colours)

This research emphasises ratings particularly as A\*, A and B. The majority of papers are from A category journals (52%), such as *Journal of Retailing and Consumer Services*, psychology and marketing, *International Journal of Consumer Studies* etc. there are 11% papers from A\* category such as *Journal of Consumer Research*, *Journal of Business Venturing* and 37% from B such as *Journal of Consumer Marketing*, *Journal of Consumer Behavior*, etc.

**Figure 5** Research publications according to publishing house and publishers (see online version for colours)

The relevant review is built up and identified by different databases such as sage publications, Taylor and Francis, emerald group publishing, Elsevier etc. The highest number is from Elsevier.

### 3 Theoretical background and hypothesis development

#### *Frugality*

According to Webster's Revised Unabridged Dictionary, frugality is "that careful management of anything valuable which expends nothing unnecessarily, and applies what is used to a profitable purpose". Roccas and Brewer's (2002) defined that frugality can be either a value or a trait, which helps us differentiate between the two. It can be identified by the extent to which consumers are constrained in both their ability to purchase economic goods and services as well as their ability to creatively use economic goods and services to attain longer-term goals (Lastovicka et al., 1999).

#### *Sustainability*

The term sustainability was first coined over several hundred years ago by Hans Carl von Carlowitz-a German forester in 1712 in his text *Sylvicultura Oeconomica* to manage forest on long term basis. It was defined as an ecosystem's capacity to maintain its resilience in the face of human aggression (Veiga, 2010). The goal of environmental sustainability is to ensure the long-term survival of global life support systems (Goodland, 1995). Firms started an attempt to add to sustainability by embracing new energy sources, utilising reused unrefined components and growing harmless to the ecosystem items like half breed vehicles (Veiga, 2010).

#### *Mindfulness*

Buddhist philosophy originated mindfulness and was opined as "a state of consciousness that involves awareness and attention of the self, others, outside environment and substantially supports decision-making" (Barbaro and Pickett, 2016). Mindfulness generates a sense of care for self, society and nature, as individuals with greater mindfulness are not likely to engage in unsustainable behaviour and they are positively related with frugal purchasing behaviour (Dhandra, 2019). It has the ability to promote sustainable behaviour and lifestyle (Ericson et al., 2014). Mindful consumption contains sustainability concepts such as frugality (Fischer et al., 2017b). Mindful people are more concerned about society and helps in achieving greater ecologically sustainable lifestyles (Crompton and Kasser, 2009; Barber and Deale, 2014).

H1(a) Frugality is positively impacted by mindfulness.

H1(b) Sustainability is positively impacted by mindfulness.

#### *Consumer minimalism*

Minimalism in consumption can be viewed in various forms like, wardrobe capsules, decluttering, monochromatic home design and tiny home living. Minimalist consumer, overlaps on limiting the number of purchase and possessions (Wilson and Bellezza, 2022) and they are more ecologically focused, practice sustainability, and focuses on waste reduction (Pangarkar et al., 2021). In fact, these consumers are ready to pay more for the products that indicate inconspicuous minimalism because of the differentiation connected and sustainability initiatives (Han et al., 2010). Another form of consumer

minimalism related to green consumption values, consistent with environmentally sustainable consumption. Minimalist fashion called re-branding and traditional frugality are desirable, fashionable lifestyle choice, which could popularly promote sustainable consumption practices (Martin-Woodhead, 2017). Innovators of frugality end up by being strong advocates of their choice, the virtues of reducing consumption and the honour of being minimalist (Rathour and Mankame, 2021).

H2(a) Consumer minimalism enhances frugality.

H2(b): Consumer minimalism enhances sustainability.

### *Voluntary simplicity*

Voluntary simplicity is used to describe a way of life that prioritised individual mental and spiritual well-being thus, involved austerity and frugal living (Craig-Lees and Hill, 2002). Beyond a reduction in the use of resources, voluntary simplicity contributed to sustainability (Kraisornsuthasinee and Swierczek, 2018). It is a current version of ancient time where inner growth is ranked over material accumulation and is often discussed as a more sustainable lifestyle (Aidar and Daniels, 2020). This way of living incorporates consumption restraint, a keen awareness to protect the environment, and the desire to reach our fullest potential (Elgin and Mitchell, 1977). It also associates with sustainable consumption and frugal consumer behaviour (Wu et al., 2013). It has a value-based lifestyle, which highlighted consumption reduction as a main principle and there is comparative ascription of voluntary simplicity towards sustainable behaviour (Chatterjee, 2020).

H3(a) Frugality thrive through voluntary simplicity.

H3(b) Sustainability thrive through voluntary simplicity.

### *Ecologically conscious consumer behaviour*

According to Pepper et al. (2011) there were three domains of consumer behaviour pertinent to sustainability; socially conscious, frugal consumer behaviours and ecologically conscious. Consumer, who is ecologically conscious, aimed to have a positive impact on the environment (Roberts, 1996). Those ecological consumers who have high sense of self-dedication are willing to put their interest to safeguard the environment (Gao et al., 2020). As per Chan and Lau (2000), Akehurst et al. (2012), and Kumar et al. (2021) ecological affect and ecological knowledge have strong positive relationship with green purchase intention and actual green purchase behaviour. Ecological consciousness and frugality trigger sustainable purchase behaviour (Mishra et al., 2022). It enhances the likelihood of sustainable consumption (Cho et al., 2015) and ecologically responsible behaviour are the clues of a sustainable life (Brown and Kasser, 2005).

H4(a) Ecologically conscious consumer behaviour positively affects frugality.

H4(b) Ecologically conscious consumer behaviour positively affects sustainability.

*Pro-environmental behaviour*

Pro-environmental behaviour refers to behaviour that harms the environment as little as possible, or even benefits the environment (Steg and Vlek, 2009). Promoting sustainable and cooperative behaviour is one objective of pro-environmental policy (Wittmann and Sircova, 2018; Lavelle et al., 2015). Consumers who carefully use their physical and financial resources, involved in pro-environmental behaviour oftenly (Naderi and Van Steenburg, 2018). Frugality is basically seems as comprising pro-environmental behaviour (Evers et al., 2018b; Wang et al., 2021). As per Hernández et al. (2012), and Tapia-Fonllem et al. (2013), frugal behaviour and pro-environmental behaviour maintain close empirical and theoretical relation and both these types of behaviour influence by cognitive and emotional processes. Psychological factors such as universalism, frugality, participation categories of intrinsic satisfaction were also correlated with pro-environmental behaviour (Kaida and Kaida, 2016).

H5(a) Pro-environmental behaviour favourably impacts frugality.

H5(b) Pro-environmental behaviour favourably impacts sustainability.

*Relationship of frugality with frugal behaviour and sustainable consumption behaviour*

Resistance to consumption is closely related to sustainability (Nepomuceno and Laroche, 2017). Frugal consumers are more likely to resist consumption than non-frugal consumers (Goldsmith et al., 2014; Lastovicka et al., 1999). There are studies which showed behavioural analysis of frugality as consumption reduction behaviours showing restraint in one's purchasing and making efficient use of one's resources are examples of frugality, which implies that frugality can motivate sustainable consumption behaviour (Lastovicka et al., 1999; Muiños et al., 2015). Behind that the main motivation of frugality was to save while consuming goods and services. It is possible to considered positive relationship of frugality with environmentally sustainable actions (Hernández et al., 2012; Tapia-Fonllem et al., 2013). It offers a vision of sustainable consumption thus, slowing down the process of environmental harm (Bove et al., 2009).

H6(a) Frugality influences frugal behaviour in a favourable way.

H6(b) Frugality influences sustainable consumption behaviour in a favourable way.

*Relationship of sustainability with frugal behaviour and sustainable consumption behaviour*

Sustainability can be achieved when customers are engaged in minimum behavioural shifts that will help facilitate more sustainable lifestyle (Verhofstadt et al., 2016; Jackson and Michaelis, 2003), which leads to sustainable behaviour. People are more likely to adopt sustainable behaviour when we educate them about the social and environmental effects of their consumption habits and their internal values are also supported by a positive outlook on sustainability (Sharma and Jha, 2017; Peattie and Collins, 2009). Frugality is also associated with pro-environmental behaviour and sustainable consumption (Evers et al., 2018a). According to Geiger et al. (2018), frugality focused on less is more principle, that is one of the facets of sustainability. Frugal behaviour is

prejudiced by people's awareness which is associated with sustainable consumption (Suárez et al., 2020), as the intention to consume is environment friendly, socially-just, and economically sustainable (Balderjahn et al., 2013).

H7(a) Frugal behaviour is positively impacted by sustainability.

H7(b) Sustainable consumption behaviour is positively impacted by sustainability.

### *Relationship of frugal behaviour and sustainable consumption behaviour with life satisfaction*

The attempt to understand sustainable consumption behaviour has become universal in recent years. Oslo Roundtable (1994) evaluated that sustainable consumption gives satisfaction with life. It comprises purchasing only sustainable goods recycling waste from household, buying goods made with recycled material, use energy efficient appliances, investing in ethical funds etc. (Jackson, 2005). Kaur and Luchs (2022) explained two complementary forms of sustainable consumption-socially conscious consumption and frugal consumption and depicted that green purchase intention, socially conscious purchasing, frugal purchasing and life satisfaction depicts a positive relationship. Understanding frugality is important part of response to unfavourable effects of excessive consumption on environment, on society and also on personal life satisfaction (Ballantine and Creery, 2010).

H8(a) Frugal behaviour is associated with higher levels of life satisfaction.

H8(b) Sustainable consumption behaviour is associated with higher levels of life satisfaction.

### *Moderating role of frugality and sustainability*

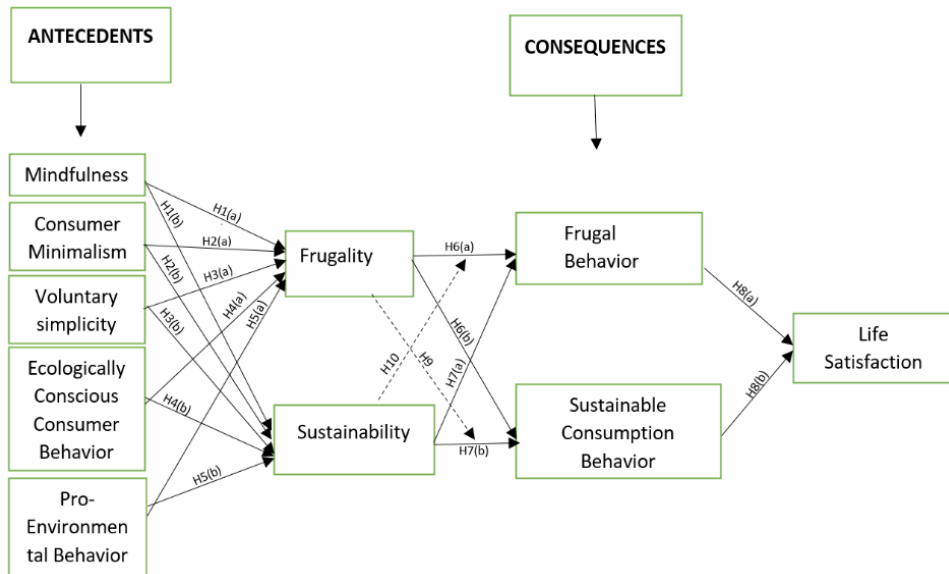
Frugality is directly conducive to sustainability (Sandler, 2009; Pepper et al., 2009). Frugal consumption lifestyle and values are closely related to not only sustainable development but also environmental protection (Wang et al., 2021). Previous studies on the hedonic delights of frugality (Hulme, 2019), frugality and subjective well-being (Sung, 2017), antecedents of frugality (Goldsmith et al., 2014), the measurement of frugal lifestyle (Lastovicka et al., 1999), was conducted which shows the relationship between frugality and sustainable consumption behaviour (Awais et al., 2020).

The efficiency of sustainability is perceived from frugality which affects the frugal behaviour. According to Geiger et al. (2018), frugality focused on less is more principle, that is one of the facets of sustainability and frugal behaviour infers restraint in the consumption of resources and avoidance of waste and is prejudiced by people's awareness which was associated with sustainable consumption (Suárez et al., 2020), (Tapia-Fonllem et al., 2017), because the intention to consume was environment friendly, socially-just, and economically sustainable (Balderjahn et al., 2013).

H9 The relationship between sustainability and sustainable behaviour can be moderated by frugality.

H10 Sustainability acts as a moderator between frugality and frugal behaviour.



**Figure 6** Conceptual model for future research (see online version for colours)

#### 4 Discussion and conclusions

Study's main objective is to uncover the common antecedents and consequences of frugality and sustainability as both are related to each other (Pepper et al., 2009; Geiger et al., 2018; Wang et al., 2021; Rao, 2017). A perspective of sustainable consumption offers by frugality inhibits the development of sustainable harm (Bove et al., 2009). Additionally, frugality aiding persons are self-controlled to live in a sustainable environment (Roccas and Brewer, 2002). In the present study, to achieve objectives a conceptual model has been established based on antecedents and consequences model. Five antecedents have been identified which are commonly related to frugality and sustainability and they have relationship with each other respectively. Remarkably, the findings reveal that the identified antecedents positively affect both frugality and sustainability (H1, H2, H3, H4, and H5). These results are in line with past studies (Kaur and Luchs, 2022; Dhandra, 2019; Wilson and Bellezza, 2022; Goldsmith et al., 2014; Mishra et al., 2022; Chatterjee, 2020; Elgin and Mitchell, 1977; Wang et al., 2021; Evers et al., 2018a; Suárez et al., 2020). In addition, the relationship of frugality with sustainable consumption behaviour and frugal behaviour, also, the relationship of sustainability with sustainable consumption behaviour and frugal behaviour is taken into consideration. The developed relationships are consistent with past studies that frugality and sustainability is positively related with sustainable consumption behaviour and frugal behaviour (Verhofstadt et al., 2016; Lastovicka et al., 1999; Muiños et al., 2015; Goldsmith et al., 2014; Jackson and Michaelis, 2003; Wang et al., 2021; Evers et al., 2018a).

Moreover, this study also finds the moderating role of frugality between sustainability and sustainable consumption behaviour and also in sustainability between frugality and frugal consumption behaviour (Sandler, 2009; Pepper et al., 2009).

Additionally, we investigate that frugal behaviour and sustainable consumption behaviour have positive relationship with life satisfaction. According to Oslo Roundtable (1994) “the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the role of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generation” and hence gives satisfaction with life. Fascinatingly, being frugal is a crucial component in addressing the negative effects of excessive consumerism on the environment, society, and personal life satisfaction (Ballantine and Creery, 2010).

Overall, the study provides the better understanding of the antecedents and consequences of frugality and sustainability with respect to their influence on life satisfaction along with behaviour.

## 5 Implications

The elements that strongly support the adoption of more frugal lifestyles can be identified based on the demographic and value antecedents of frugal consumer behaviour. Our study has implications for managers and policy makers. Broadly, our results suggest that managers can use our model for creating marketing strategies and for a better knowledge of the behaviour of their customers that will lead to their business growth. Further, policy makers will be benefited from our research by well understanding the antecedents of frugality and sustainability, thereby, act in accordance with these.

The present study aims to encourage sustainable consumption behaviour among consumers, as it offers various common antecedents of frugality and sustainability. Consumers will start using the resources optimally and become more conscious about what they should buy or not. They will come to know worth of the product that they are going to buy also they will become aware and get advantages which will help them in their frugal behaviour. It will also help society to take rational decision that will lead to sustainability.

## 6 Limitations

The limitations of this study open pathways to future research. First, we only did systematic literature review but bibliometric analysis and meta-analysis can also be done using these same constructs. Secondly, we focused on only two constructs frugality and sustainability, some other constructs can also be used. Further, it encourages to conduct further study for better understanding many more variables of frugality and sustainability.

## References

- Aidar, L. and Daniels, P. (2020) ‘A critical review of voluntary simplicity: definitional inconsistencies, movement identity and direction for future research’, *The Social Science Journal*, pp.1–14, <https://doi.org/10.1080/03623319.2020.1791785>.
- Akehurst, G., Afonso, C. and Gonçalves, H.M. (2012) ‘Re-examining green purchase behaviour and the green consumer profile: new evidences’, *Management Decision*, Vol. 50, No. 5, pp.972–988, <https://doi.org/10.1108/00251741211227726>.

- Awais, M., Samin, T., Gulzar, M.A., Hwang, J. and Zubair, M. (2020) 'Unfolding the association between the big five, frugality, e-mavenism, and sustainable consumption behavior', *Sustainability*, Vol. 12, No. 2, p.490, <https://doi.org/10.3390/su12020490>.
- Balderjahn, I., Buerke, A., Kirchgeorg, M., Peyer, M., Seegebarth, B. and Wiedmann, K.P. (2013) 'Consciousness for sustainable consumption: scale development and new insights in the economic dimension of consumers' sustainability', *AMS Review*, Vol. 3, No. 4, pp.181–192, <https://doi.org/10.1007/s13162-013-0057-6>.
- Ballantine, P.W. and Creery, S. (2010) 'The consumption and disposition behaviour of voluntary simplifiers', *Journal of Consumer Behaviour: An International Research Review*, Vol. 9, No. 1, pp.45–56, <https://doi.org/10.1002/cb.302>.
- Barbaro, N. and Pickett, S.M. (2016) 'Mindfully green: examining the effect of connectedness to nature on the relationship between mindfulness and engagement in pro-environmental behavior', *Personality and Individual Differences*, Vol. 93, pp.137–142, <https://doi.org/10.1016/j.paid.2015.05.026>.
- Barbarossa, C. and Pastore, A. (2015) 'Why environmentally conscious consumers do not purchase green products: a cognitive mapping approach', *Qualitative Market Research: An International Journal*, Vol. 18, No. 2, pp.188–209, <https://doi.org/10.1108/QMR-06-2012-0030>.
- Barber, N.A. and Deale, C. (2014) 'Tapping mindfulness to shape hotel guests' sustainable behavior', *Cornell Hospitality Quarterly*, Vol. 55, No. 1, pp.100–114, <https://doi.org/10.1177/1938965513496315>.
- Bove, L.L., Nagpal, A. and Dorsett, A.D.S. (2009) 'Exploring the determinants of the frugal shopper', *Journal of Retailing and Consumer Services*, Vol. 16, No. 4, pp.291–297, <https://doi.org/10.1016/j.jretconser.2009.02.004>.
- Brown, K.W. and Kasser, T. (2005) 'Are psychological and ecological well-being compatible? The role of values, mindfulness, and lifestyle', *Social Indicators Research*, Vol. 74, No. 2, pp.349–368, <https://doi.org/10.1007/s11205-004-8207-8>.
- Chan, R.Y. (2001) 'Determinants of Chinese consumers' green purchase behavior', *Psychology & Marketing*, Vol. 18, No. 4, pp.389–413, <https://doi.org/10.1002/mar.1013>.
- Chan, R.Y. and Lau, L.B. (2000) 'Antecedents of green purchases: a survey in China', *Journal of Consumer Marketing*, Vol. 17, No. 4, pp.338–357, <https://doi.org/10.1108/07363760010335358>.
- Chancellor, J. and Lyubomirsky, S. (2011) 'Happiness and thrift: when (spending) less is (hedonically) more', *Journal of Consumer Psychology*, Vol. 21, No. 2, pp.131–138, <https://doi.org/10.1016/j.jcps.2011.02.004>.
- Chatterjee, R.S. (2020) 'Towards sustainable consumption behaviour through voluntary simplicity: a value mapping orientation', *International Journal of Sustainable Society*, Vol. 12, No. 2, pp.111–133, <https://doi.org/10.1504/IJSSOC.2020.107896>.
- Cho, E., Gupta, S. and Kim, Y.K. (2015) 'Style consumption: Its drivers and role in sustainable apparel consumption', *International Journal of Consumer Studies*, Vol. 39, No. 6, pp.661–669, <https://doi.org/10.1111/ijcs.12185>.
- Coşkun, A. and Özbük, R.M.Y. (2019) 'Environmental segmentation: young millennials' profile in an emerging economy', *Young Consumers*, Vol. 20, No. 4, pp.359–379, <https://doi.org/10.1108/YC-12-2018-0912>.
- Craig-Lees, M. and Hill, C. (2002) 'Understanding voluntary simplifiers', *Psychology & Marketing*, Vol. 19, No. 2, pp.187–210, <https://doi.org/10.1002/mar.10009>.
- Crompton, T. and Kasser, T. (2009) *Meeting Environmental Challenges: The Role of Human Identity*, Vol. 29, WWF-UK, Godalming, UK.

- De Geus, M. (2013) 'The transition to green lifestyles based on voluntary simplicity: the difficult road towards enjoyable, graceful and sustainable lifestyles', Paper presented at the *Symposium 'The Transition to Sustainable Communities: Justice, Resilience and Practices of Sustainable Living'*, School of Politics, International Studies and Philosophy, University of Belfast, 29 March 2010, In *Environmental Philosophy: The Art of Life in a World of Limits*. Emerald Group Publishing Limited, Vol. 13, pp.31–49, [https://doi.org/10.1108/S2051-5030\(2013\)0000013006](https://doi.org/10.1108/S2051-5030(2013)0000013006).
- Dhandra, T.K. (2019) 'Achieving triple dividend through mindfulness: more sustainable consumption, less unsustainable consumption and more life satisfaction', *Ecological Economics*, Vol. 161, pp.83–90, <https://doi.org/10.1016/j.ecolecon.2019.03.021>.
- Djafarova, E. and Foots, S. (2022) 'Exploring ethical consumption of generation Z: theory of planned behaviour', *Young Consumers*, Vol. 23, No. 3, pp.413–431, <https://doi.org/10.1108/YC-10-2021-1405>.
- Durning, A.T. and Durning, A.B., (1992) *How Much is Enough?: The Consumer Society and the Future of the Earth*, WW Norton & Company, New York.
- Ek Styvén, M. and Mariani, M.M. (2020) 'Understanding the intention to buy secondhand clothing on sharing economy platforms: the influence of sustainability, distance from the consumption system, and economic motivations', *Psychology & Marketing*, Vol. 37, No. 5, pp.724–739, <https://doi.org/10.1002/mar.21334>.
- Elgin, D. and Mitchell, A. (1977) 'Voluntary simplicity', *Planning Review*, Vol. 5, No. 6, pp.13–15.
- Emekci, S. (2019) 'Green consumption behaviours of consumers within the scope of TPB', *Journal of Consumer Marketing*, Vol. 36, No. 3, pp.410–417, <https://doi.org/10.1108/JCM-05-2018-2694>.
- Ericson, T., Kjønstad, B.G. and Barstad, A. (2014) 'Mindfulness and sustainability', *Ecological Economics*, Vol. 104, pp.73–79, <https://doi.org/10.1016/j.ecolecon.2014.04.007>.
- Evans, D. (2011) 'Thrifty, green or frugal: Reflections on sustainable consumption in a changing economic climate', *Geoforum*, Vol. 42, No. 5, pp.550–557, <https://doi.org/10.1016/j.geoforum.2011.03.008>.
- Evers, U., Gruner, R.L., Sneddon, J. and Lee, J.A. (2018a) 'Exploring materialism and frugality in determining product end-use consumption behaviors', *Psychology & Marketing*, Vol. 35, No. 12, pp.948–956, <https://doi.org/10.1002/mar.21147>.
- Evers, C., Dingemans, A., Junghans, A.F. and Boevé, A. (2018b) 'Feeling bad or feeling good, does emotion affect your consumption of food? A meta-analysis of the experimental evidence', *Neuroscience & Biobehavioral Reviews*, Vol. 92, pp.195–208, <https://doi.org/10.1016/j.neubiorev.2018.05.028>.
- Felix, R. and Almaguer, J. (2019) 'Nourish what you own: psychological ownership, materialism and pro-environmental behavioral intentions', *Journal of Consumer Marketing*, Vol. 36, No. 1, pp.82–91, <https://doi.org/10.1108/JCM-10-2017-2417>.
- Fischer, D., Böhme, T. and Geiger, S.M. (2017a) 'Measuring young consumers' sustainable consumption behavior: development and validation of the YSCSB scale', *Young Consumers*, Vol. 18, No. 3, pp.312–326, <https://doi.org/10.1108/YC-03-2017-00671>.
- Fischer, D., Stanszus, L., Geiger, S., Grossman, P. and Schrader, U. (2017b) 'Mindfulness and sustainable consumption: a systematic literature review of research approaches and findings', *Journal of Cleaner Production*, Vol. 162, pp.544–558, <https://doi.org/10.1016/j.jclepro.2017.06.007>.
- Gao, J., Zou, C., Zhang, K., Xu, M. and Wang, Y. (2020) 'The establishment of Chinese ecological conservation redline and insights into improving international protected areas', *Journal of Environmental Management*, Vol. 264, p.110505, <https://doi.org/10.1016/j.jenvman.2020.110505>.
- Geiger, S.M., Otto, S. and Schrader, U. (2018) 'Mindfully green and healthy: an indirect path from mindfulness to ecological behavior', *Frontiers in Psychology*, Vol. 8, p.2306, <https://doi.org/10.3389/fpsyg.2017.02306>.

- Goldsmith, R.E., Flynn, L.R. and Clark, R.A. (2014) 'The etiology of the frugal consumer', *Journal of Retailing and Consumer Services*, Vol. 21, No. 2, pp.175–184, <https://doi.org/10.1016/j.jretconser.2013.11.005>.
- Han, Y.J., Nunes, J.C. and Drèze, X. (2010) 'Signaling status with luxury goods: the role of brand prominence', *Journal of Marketing*, Vol. 74, No. 4, pp.15–30, <https://doi.org/10.1509/jmkg.74.4.015>.
- Hernández, B., Suárez, E., Corral-Verdugo, V. and Hess, S. (2012) 'The relationship between social and environmental interdependence as an explanation of proenvironmental behavior', *Human Ecology Review*, Vol. 19, No. 1, pp.1–9.
- Hulme, A. (2019) 'The hedonic delights of frugality: pound store shopping in austere times', *Journal of Consumer Culture*, Vol. 19, No. 4, pp.551–566, <https://doi.org/10.1177/1469540519872068>.
- Jackson, T. (2005) 'Live better by consuming less?: is there a "double dividend" in sustainable consumption?', *Journal of Industrial Ecology*, Vol. 9, Nos. 1–2, pp.19–36, <https://doi.org/10.1162/1088198054084734>.
- Jackson, T. and Michaelis, L. (2003) *Policies for Sustainable Consumption*, Sustainable Development Commission, London.
- Johnson, O. and Chattaraman, V. (2019) 'Conceptualization and measurement of millennial's social signaling and self-signaling for socially responsible consumption', *Journal of Consumer Behaviour*, Vol. 18, No. 1, pp.32–42, <https://doi.org/10.1002/cb.1742>.
- Joshi, Y., Sangroya, D., Srivastava, A.P. and Yadav, M. (2019) 'Modelling the predictors of young consumers' sustainable consumption intention', *International Journal of Nonprofit and Voluntary Sector Marketing*, Vol. 24, No. 4, p.e1663, <https://doi.org/10.1002/nvsm.1663>.
- Kabat-Zinn, J. (2009) *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*, 10th ed., Hachette Books, New York.
- Kaida, N. and Kaida, K. (2016) 'Pro-environmental behavior correlates with present and future subjective well-being', *Environment, Development and Sustainability*, Vol. 18, No. 1, pp.111–127, <https://doi.org/10.1007/s10668-015-9629-y>.
- Kaur, T. and Luchs, M.G. (2022) 'Mindfulness enhances the values that promote sustainable consumption', *Psychology & Marketing*, Vol. 39, No. 5, pp.990–1006, <https://doi.org/10.1002/mar.21636>.
- Kim, Y. and Choi, S.M. (2005) 'Antecedents of green purchase behavior: an examination of collectivism, environmental concern, and PCE', *ACR North American Advances*, Vol. 32, pp.592–599.
- Kraisornsuthasinee, S. and Swierczek, F.W. (2018) 'Beyond consumption: the promising contribution of voluntary simplicity', *Social Responsibility Journal*, Vol. 14, No. 1, pp.80–95, <https://doi.org/10.1108/SRJ-02-2017-0029>.
- Kumar, A., Prakash, G. and Kumar, G. (2021) 'Does environmentally responsible purchase intention matter for consumers? A predictive sustainable model developed through an empirical study', *Journal of Retailing and Consumer Services*, Vol. 58, p.102270, <https://doi.org/10.1016/j.jretconser.2020.102270>.
- Ladhari, R. and Tchetgna, N.M. (2017) 'Values, socially conscious behaviour and consumption emotions as predictors of Canadians' intent to buy fair trade products', *International Journal of Consumer Studies*, Vol. 41, No. 6, pp.696–705, <https://doi.org/10.1111/ijcs.12382>.
- Lastovicka, J.L., Bettencourt, L.A., Hughner, R.S. and Kuntze, R.J., (1999) 'Lifestyle of the tight and frugal: theory and measurement', *Journal of Consumer Research*, Vol. 26, No. 1, pp.85–98, <https://doi.org/10.1086/209552>.
- Lavelle, M.J., Rau, H. and Fahy, F. (2015) 'Different shades of green? Unpacking habitual and occasional pro-environmental behavior', *Global Environmental Change*, Vol. 35, pp.368–378, <https://doi.org/10.1016/j.gloenvcha.2015.09.021>.

- Lee, H. (2019) 'The effect of anti-consumption lifestyle on consumer's attitude and purchase intention toward commercial sharing systems', *Asia Pacific Journal of Marketing and Logistics*, Vol. 31, No. 5, pp.1422–1441, <https://doi.org/10.1108/APJML-06-2018-0218>.
- Li, J., Zhang, D. and Su, B. (2019) 'The impact of social awareness and lifestyles on household carbon emissions in China', *Ecological Economics*, Vol. 160, pp.145–155, <https://doi.org/10.1016/j.ecolecon.2019.02.020>.
- Lin, S.T. and Niu, H.J. (2018) 'Green consumption: environmental knowledge, environmental consciousness, social norms, and purchasing behavior', *Business Strategy and the Environment*, Vol. 27, No. 8, pp.1679–1688, <https://doi.org/10.1002/bse.2233>.
- Macpherson, A. and Jones, O. (2010) 'Strategies for the development of *International Journal of Management Reviews*', *International Journal of Management Reviews*, Vol. 12, No. 2, pp.107–113, <https://doi.org/10.1111/j.1468-2370.2010.00282.x>.
- Martin-Woodhead, A. (2017) 'Minimalism as sustainable fashion', Conference paper: *Circular Economy: Transitioning to Sustainability*, July.
- Michaelis, T.L., Carr, J.C., Scheaf, D.J. and Pollack, J.M. (2020) 'The frugal entrepreneur: a self-regulatory perspective of resourceful entrepreneurial behavior', *Journal of Business Venturing*, Vol. 35, No. 4, p.105969, <https://doi.org/10.1016/j.jbusvent.2019.105969>.
- Mihalache, M. and Mihalache, O.R. (2016) 'A decisional framework of offshoring: integrating insights from 25 years of research to provide direction for future', *Decision Sciences*, Vol. 47, No. 6, pp.1103–1149, <https://doi.org/10.1111/deci.12206>.
- Mishra, S., Malhotra, G., Chatterjee, R. and Abdul, W.K. (2022) 'Ecological consciousness and sustainable purchase behavior: the mediating role of psychological ownership', *Asia Pacific Journal of Marketing and Logistics*, Vol. 32, No. 2, pp.414–431, <https://doi.org/10.1108/APJML-08-2021-0591>.
- Mishra, S., Malhotra, G., Chatterjee, R. and Sanatkumar Shukla, Y. (2021) 'Impact of self-expressiveness and environmental commitment on sustainable consumption behavior: the moderating role of fashion consciousness', *Journal of Strategic Marketing*, pp.1–23, <https://doi.org/10.1080/0965254X.2021.1892162>.
- Muñoz, G., Suárez, E., Hess, S. and Hernández, B. (2015) 'Frugality and psychological wellbeing. the role of voluntary restriction and the resourceful use of resources/Frugalidad y bienestar psicológico. El papel de la restricción voluntaria y el uso ingenioso de recursos', *Psycology*, Vol. 6, No. 2, pp.169–190, <https://doi.org/10.1080/21711976.2015.1026083>.
- Naderi, I. and Van Steenburg, E. (2018) 'Me first, then the environment: young Millennials as green consumers', *Young Consumers*, Vol. 19, No. 3, pp.280–295, <https://doi.org/10.1108/YC-08-2017-00722>.
- Nepomuceno, M.V. and Laroche, M. (2017) 'When materialists intend to resist consumption: the moderating role of self-control and long-term orientation', *Journal of Business Ethics*, Vol. 143, No. 3, pp.467–483, <https://doi.org/10.1007/s10551-015-2792-0>.
- Oslo Roundtable (1994) *Oslo Roundtable on Sustainable Production and Consumption*, Ministry of the Environment, Oslo, Norway.
- Pangarkar, A., Shukla, P. and Charles, R. (2021) 'Minimalism in consumption: a typology and brand engagement strategies', *Journal of Business Research*, Vol. 127, pp.167–178, <https://doi.org/10.1016/j.jbusres.2021.01.033>.
- Paswan, A., Guzmán, F. and Lewin, J. (2017) 'Attitudinal determinants of environmentally sustainable behavior', *Journal of Consumer Marketing*, Vol. 34, No. 5, pp.414–426, <https://doi.org/10.1108/JCM-02-2016-1706>.
- Peattie, K. and Collins, A. (2009) 'Guest editorial: perspectives on sustainable consumption', *International Journal of Consumer Studies*, Vol. 33, No. 2, pp.107–112, <https://doi.org/10.1111/j.1470-6431.2009.00758.x>.
- Pepper, M., Jackson, T. and Uzzell, D. (2009) 'An examination of the values that motivate socially conscious and frugal consumer behaviours', *International Journal of Consumer Studies*, Vol. 33, No. 2, pp.126–136, <https://doi.org/10.1111/j.1470-6431.2009.00753.x>.

- Pepper, M., Jackson, T. and Uzzell, D. (2011) 'An examination of Christianity and socially conscious and frugal consumer behaviors', *Environment and Behavior*, Vol. 43, No. 2, pp.274–290, <https://doi.org/10.1177/0013916510361573>.
- Rao, B.C. (2017) 'Advances in science and technology through frugality', *IEEE Engineering Management Review*, Vol. 45, No. 1, pp.32–38, <https://doi.org/10.1109/EMR.2017.2667219>.
- Rathour, A. and Mankame, G. (2021) 'Decluttering the future: an analysis of Indian minimalism', *International Journal of Policy Sciences and Law*, Vol. 1, No. 3, pp.1744–1765.
- Roberts, J.A., (1996) 'Green consumers in the 1990s: profile and implications for advertising', *Journal of Business Research*, Vol. 36, No. 3, pp.217–231, [https://doi.org/10.1016/0148-2963\(95\)00150-6](https://doi.org/10.1016/0148-2963(95)00150-6).
- Roccas, S. and Brewer, M.B. (2002) 'Social identity complexity', *Personality and Social Psychology Review*, Vol. 6, No. 2, pp.88–106, [https://doi.org/10.1207/S15327957PSPR0602\\_01](https://doi.org/10.1207/S15327957PSPR0602_01).
- Sadom, N.Z.M., Quoquab, F., Mohammad, J. and Hussin, N. (2020) 'Less is more: the role of frugality in the Malaysian hotel industry', *International Journal of Tourism Cities*, Vol. 8, No. 1, pp.260–285, <https://doi.org/10.1108/IJTC-02-2020-0021>.
- Sandler, R.L. (2009) *Character and Environment: A Virtue-Oriented Approach to Environmental Ethics*, Columbia University Press, New York.
- Sharma, A. and Iyer, G.R. (2012) 'Resource-constrained product development: implications for green marketing and green supply chains', *Industrial Marketing Management*, Vol. 41, No. 4, pp.599–608, <https://doi.org/10.1016/j.indmarman.2012.04.007>.
- Sharma, P., Chrisman, J.J., Chua, J.H. and Steier, L.P. (2020) 'Family firm behavior from a psychological perspective', *Entrepreneurship Theory and Practice*, Vol. 44, No. 1, pp.3–19, <https://doi.org/10.1177/1042258719879675>.
- Sharma, R. and Jha, M. (2017) 'Values influencing sustainable consumption behaviour: exploring the contextual relationship', *Journal of Business Research*, Vol. 76, pp.77–88, <https://doi.org/10.1016/j.jbusres.2017.03.010>.
- Steg, L. and Vlek, C. (2009) 'Encouraging pro-environmental behaviour: an integrative review and research agenda', *Journal of Environmental Psychology*, Vol. 29, No. 3, pp.309–317, <https://doi.org/10.1016/j.jenvp.2008.10.004>.
- Suárez, E., Hernández, B., Gil-Giménez, D. and Corral-Verdugo, V. (2020) 'Determinants of frugal behavior: the influences of consciousness for sustainable consumption, materialism, and the consideration of future consequences', *Frontiers in Psychology*, Vol. 11, p.567752, <https://doi.org/10.3389/fpsyg.2020.567752>.
- Sung, Y.A. (2017) 'Age differences in the effects of frugality and materialism on subjective well-being in Korea', *Family and Consumer Sciences Research Journal*, Vol. 46, No. 2, pp.144–159, <https://doi.org/10.1111/fcsr.12246>.
- Tapia-Fonllem, C., Corral-Verdugo, V., Fraijo-Sing, B. and Durón-Ramos, M.F. (2013) 'Assessing sustainable behavior and its correlates: a measure of pro-ecological, frugal, altruistic and equitable actions', *Sustainability*, Vol. 5, No. 2, pp.711–723, <https://doi.org/10.3390/su5020711>.
- Tapia-Fonllem, C., Fraijo-Sing, B., Corral-Verdugo, V. and Ortiz Valdez, A. (2017) 'Education for sustainable development in higher education institutions: Its influence on the pro-sustainability orientation of Mexican students', *Sage Open*, Vol. 7, No. 1, p.2158244016676295, <https://doi.org/10.1177/2158244016676295>.
- Thøgersen, J. and Ölander, F. (2002) 'Human values and the emergence of a sustainable consumption pattern: a panel study', *Journal of Economic Psychology*, Vol. 23, No. 5, pp.605–630, [https://doi.org/10.1016/S0167-4870\(02\)00120-4](https://doi.org/10.1016/S0167-4870(02)00120-4).
- Todd, S. and Lawson, R. (2003) 'Towards an understanding of frugal consumers', *Australasian Marketing Journal (AMJ)*, Vol. 11, No. 3, pp.8–18, [https://doi.org/10.1016/S1441-3582\(03\)70131-1](https://doi.org/10.1016/S1441-3582(03)70131-1).

- Tranfield, D., Denyer, D. and Smart, P. (2003) 'Towards a methodology for developing evidence-informed management knowledge by means of systematic review', *British Journal of Management*, Vol. 14, No. 3, pp.207–222, <https://doi.org/10.1111/1467-8551.00375>.
- Urien, B. and Kilbourne, W. (2011) 'Generativity and self-enhancement values in eco-friendly behavioral intentions and environmentally responsible consumption behavior', *Psychology & Marketing*, Vol. 28, No. 1, pp.69–90, <https://doi.org/10.1002/mar.20381>.
- Veiga, M.M. (2010) 'International guidelines on mercury management in small-scale gold mining', *Journal of Cleaner Production*, Vol. 18, No. 4, pp.375–385, <https://doi.org/10.1016/j.jclepro.2009.10.020>.
- Verhofstadt, E., Van Ootegem, L., Defloor, B. and Bleys, B. (2016) 'Linking individuals' ecological footprint to their subjective well-being', *Ecological Economics*, Vol. 127, pp.80–89, <https://doi.org/10.1016/j.ecolecon.2016.03.021>.
- Walther, C.S. and Sandlin, J.A. (2013) 'Green capital and social reproduction within families practising voluntary simplicity in the US', *International Journal of Consumer Studies*, Vol. 37, No. 1, pp.36–45, <https://doi.org/10.1111/j.1470-6431.2011.01050.x>.
- Wang, C.L. and Chugh, H. (2014) 'Entrepreneurial learning: past research and future challenges', *International Journal of Management Reviews*, Vol. 16, No. 1, pp.24–61, <https://doi.org/10.1111/ijmr.12007>.
- Wang, H., Ma, B., Bai, R. and Zhang, L. (2021) 'The unexpected effect of frugality on green purchase intention', *Journal of Retailing and Consumer Services*, Vol. 59, p.102385, <https://doi.org/10.1016/j.jretconser.2020.102385>.
- Webster Jr., F.E., (1975) 'Determining the characteristics of the socially conscious consumer', *Journal of Consumer Research*, Vol. 2, No. 3, pp.188–196, <https://doi.org/10.1086/208631>.
- Wilson, A.V. and Bellezza, S. (2022) 'Consumer minimalism', *Journal of Consumer Research*, Vol. 48, No. 5, pp.796–816, <https://doi.org/10.1093/jcr/ucab038>.
- Wittmann, M. and Sircova, A. (2018) 'Dispositional orientation to the present and future and its role in pro-environmental behavior and sustainability', *Heliyon*, Vol. 4, No. 10, p.e00882, <https://doi.org/10.1016/j.heliyon.2018.e00882>.
- Wu, D.E., Thomas, J.B., Moore, M. and Carroll, K. (2013) 'Voluntary simplicity: the great American apparel diet', *Journal of Fashion Marketing and Management: An International Journal*, Vol. 17, No. 3, pp.294–305, <https://doi.org/10.1016/j.jfmm.2013.05.005>.