Available Online at www.e-iph.co.uk
Indexed in Clarivate Analytics WoS, and ScienceOPEN

E-B Environment - Behaviour Proceedings Journal

AcE-Bs2024Langkawi

https://www.amerabra.org

e-IPH e-International Publishing House Ltd., United Kingdom

12th ASIAN Conference on Environment-Behaviour Studies,
Holiday Villa Beach Resort & Spa, Langkawi Island, Malaysia, 01-03 Mar 2024

A Scientometric Analysis and Visualisation of Sustainable Fashion

Wanzhen Ou[1], Shaliza Mohd Shariff[1]*, Rosita Mohd Tajuddin[1], Xian Ouyang[2]
** Corresponding Author*

[1] Faculty of Art & Design, Universiti Teknologi MARA, Shah Alam, Malaysia
[2] Faculty of Fine Arts and Design, Changsha Normal University, Changsha, China

orison1204@163.com, shaliza478@uitm.edu.my, rositatajuddin@uitm.edu.my, 995145040@qq.com
Tel: 1st +8618620959524

Abstract
Several studies on sustainable fashion have been reported. However, there needs to be more literature dealing with the scientometric analysis of sustainable fashion. To understand the current status of sustainable fashion, this study aimed to use bibliometric analysis and historical review to highlight recent research in sustainable fashion, to predict future research hotspots and trends in sustainable fashion, and to summarise and analyse the shortcomings in sustainable fashion. The Web of Science core database was searched for 573 publications on sustainable fashion up to 31 December 2023. VOSviewer and CiteSpace software were used to perform visual analyses.

Keywords: Sustainable fashion; Scientometric analysis; VOSviewer and CiteSpace

DOI: https://doi.org/10.21834/e-bpj.v9i28.5753

1.0 Introduction

The concept of sustainability has gradually evolved and developed throughout various industries since its inception. The fashion industry has become increasingly concerned about it in recent years, promoting a series of sustainable design research around the needs of the industry's benign development and building bridges that effectively link fashion, natural resources, environmental protection, and other elements. At this stage, big data intelligence analysis has become indispensable to enterprise marketing, especially in the fashion industry. Through the network of big data can help fashion enterprises understand the industry hotspots and quickly grasp consumer demand so that enterprise operators and scholars can timely and effectively respond to changes in the fashion market. Therefore, this study aims to highlight the latest research in sustainable fashion using bibliometric analyses and historical reviews. So that fashion business operators and sustainable fashion researchers can understand the current status of sustainable fashion research in a timely and effective manner.

Nomenclature

WGSN	World Global Sourcing Network
UN	United Nations

eISSN: 2398-4287 © 2024. The Authors. Published for AMER & cE-Bs by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/). Peer–review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), and cE-Bs (Centre for Environment-Behaviour Studies), College of Built Environment, Universiti Teknologi MARA, Malaysia.
DOI: https://doi.org/10.21834/e-bpj.v9i28.5753

2.0 Literature Review

During the environmental crisis of the late 1980s, the apparel companies Patagonia and Komodo introduced the concept of sustainable fashion in 1985 and 1988 respectively. In 2007, Helen Job, editor of WGSN (World Global Sourcing Network), an international trend forecasting organization, based on her research on economics, consumer goods, technology, and architecture, predicted that sustainable apparel would become the focus of society (Obregón, 2012; Pal & Jayarathne, 2022).

Due to the complex and dynamically changing attributes of the fashion industry, sustainable fashion is studied in a broader context, including the product life cycle, the entire process of product production, stakeholders within the system, impacts on a global scale, and consumer value reinvention. Fundamentally, sustainable fashion is defined by the sustainable attributes of its production process. For example, sustainable fashion is clothing made from 100 % organic cotton, which is grown without the use of pesticides, which reduces harmful emissions, as well as the amount of water used in the growing process (Dhange et al., 2022).

Tracing the evolution of sustainable development and the three overarching programs for sustainable development put forward by the United Nations Conference in 1972, sustainable fashion can be defined as garments that incorporate the principles of fair trade and sweatshop-free labor conditions; garments that do not harm the environment or workers through the use of biodegradable and organic cotton; garments designed to last longer; garments that are produced in ethical production systems, perhaps even locally; garments with little or no impact on the environment; and garments using eco-labels or recyclable materials (Fletcher, 2008; Joergens, 2006).

The concept of sustainable fashion, as a product of the industrial era under the joint action of economic, social, cultural, and natural factors, focuses on solving substantive problems and emphasises the natural development of humanistic attributes and social laws (Ray & Nayak, 2023). This concept has evolved from its inception to its maturity and has gradually developed across various industries. In recent years, the apparel industry has become increasingly concerned about the needs of the industry's benign development. It has promoted a series of sustainable design studies to build bridges that effectively link fashion, natural resources, environmental protection, and other elements.

Bibliometric analysis is an emerging, rapid tool for exploring the structure and trends of a topic or field through statistical methods and visualisation. The method identifies relevant nodes and extracts useful information from a large amount of information (Jiang et al., 2018; Moed et al., 1995). CiteSpace is a freely available Java application that visualises and analyses trends and patterns in the scientific literature. CiteSpace was designed by Prof. Xiaomei Chen for incremental knowledge domain visualisation and the identification of key points in the development of a domain, especially knowledge turning points and critical points (Wang & Lu, 2020). VOS viewer was created by the Centre for Scientific and Technological Research at Leiden University to visualise scientific maps.VOS viewer is free and has been used to visualise bibliometric maps (Xie et al., 2020).

3.0 Methodology

This research uses VOSviewer and CiteSpace visualisation software to visualise and analyse the literature on sustainable fashion (1993-2023). The main function of VOSviewer and CiteSpace software is to analyse the key information contained in the target literature, and its outstanding feature is its ability to transform the data of a knowledge area into a scientific analysis. The main feature of VOSviewer and CiteSpace software is the ability to analyse the key information contained in the target literature. Its outstanding feature is that it can present the literature data of a knowledge area on a knowledge map of the citation network in a multifaceted, time-shifted, and dynamic visualisation language with a clever spatial layout and focus on the evolution of this area.

To ensure the reliability and comprehensiveness of the retrieved literature, the citation data used in the bibliometric study used the Web of Science Core Collection as the data source for the relevant literature. WOS is the most commonly used database for bibliometrics research (Perazzo et al., 2019). The search condition is divided into first selecting Web of Science Core Collection. Then the topic is "Sustainable fashion". The search period is up to 31 December 2023. The literature type is the article. The literature language was English. A total of 573 documents were obtained after searching, screening, data processing, and removal of duplicates. The primary screening elements were to screen non-English literature and literature other than academic papers. The purpose of screening is to eliminate literature that is irrelevant to the study or unsuitable for this analysis and to reduce invalid factors. Screening can improve the accuracy of research data, targeting and focusing the research.

The literature data used in this study were downloaded from WOS, CiteSpace was used for bibliometric analysis, Time slicing was set to 1993-2023, year per slice was "4", node types were chosen as a country, institution, Time slicing was nominated as 1993-2023, year per slice as "4", and node types were selected as country, institution, keyword, and reference. The visualisation of co-occurrence, clustering, and emergence of country, institution, and keyword in the sustainable fashion literature was analysed. VOSviewer was used to optimize and supplement the unattractive maps.

4.0 Findings

4.1 Trends in the number of publications

The annual number of publications is an important value for assessing the development of scientific research, reflecting to a certain extent the growth of knowledge in the field and the stage of development of the research field, and can be used to evaluate and predict the development of research (Bornmann et al., 2021). The WOS search results for "sustainable fashion" yielded 573 articles related to "sustainable fashion" (Fig. 1). Analysing the number of articles published in the English language in the field of sustainable fashion from 1993 to 2023, the growth of publications on this topic can be divided into three phases: 1993-2013 is the start-up phase, with an average

annual number of 3.87 articles; 2014-2019 is the slow-growth phase, with an average annual number of 34 articles; 2020-2023 is the average growth phase; and 2020-2023 is the slow-growth phase, with an average annual number of 34 articles. The average growth stage is 2020-2023, with 77.75 publications annually.

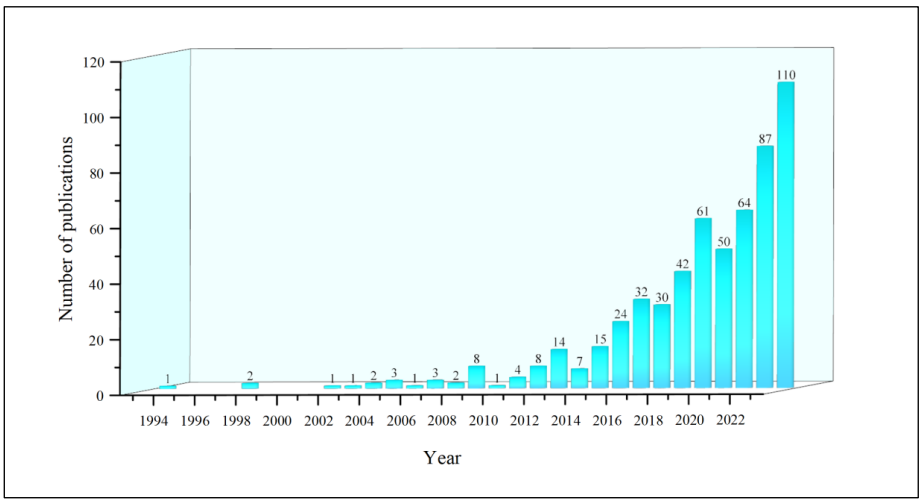


Fig. 1: Trends in annual publications in the sustainable fashion literature, 1993-2023
(Source: Author's statistics)

4.2 Cooperation map of countries and Organizations

In this study, the VOS viewer software was used to obtain the status of publications in each country from 1993-2023 (Fig. 2) to obtain a clear picture of the activity and cooperation between countries in this field. The size of the country name is positively correlated with the number of publications, and the lines between the nodes clearly show the relationship between authors. A total of 75 countries have published literature in the search area. The top 10 countries in terms of the number of publications are the USA, ENGLAND, PEOPLES R CHINA, AUSTRALIA, SOUTH KOREA, GERMANY, INDIA, CANADA, ITALY, and SPAIN. The USA ranked first, and ENGLAND and PEOPLES R CHINA ranked second and third, respectively. This shows the outstanding contribution of these three countries in this field (Table 1).

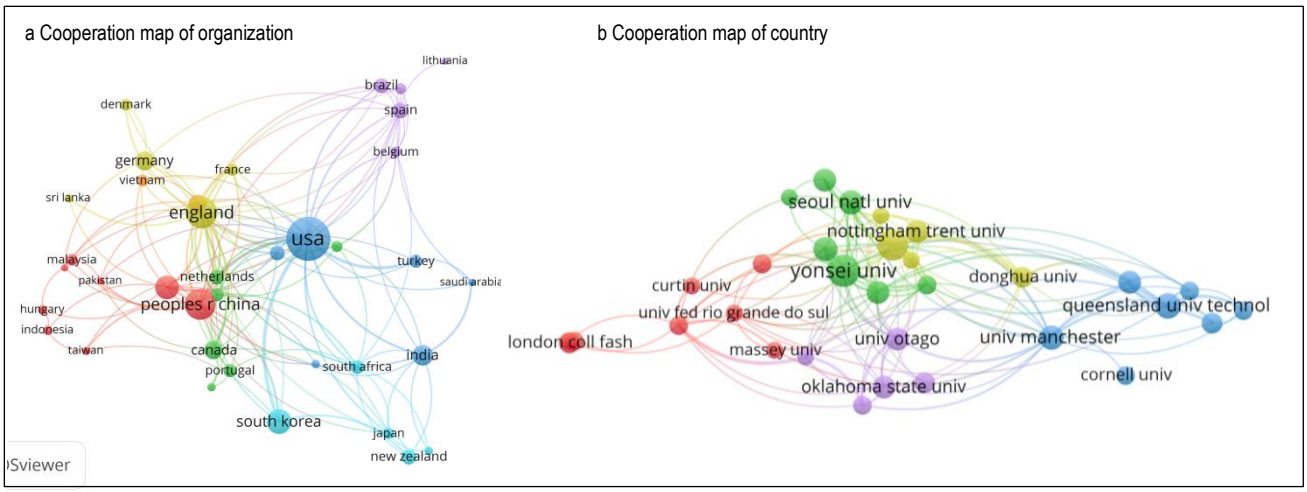


Fig. 2. Cooperation map of country/organization
(Source: Author's analysis)

Organization mapping of publications and collaborations visually presents the distribution of core organizations in this field and the distribution of collaborations among organizations, and the analysis principle is the same as that of national collaboration mapping. Within the search scope, there are 739 relevant organizations, among which the top ten organizations in terms of publication volume belong to universities: Yonsei University, Hong Kong Polytechnic University, University of Arts London, Queensland University of Technology (QUT), Aalto University, Seoul National University (SNU), Oklahoma State University - Stillwater, Toronto Metropolitan University, City University of Hong Kong, Oklahoma State University System, these ten organizations, as the core organizations, have become the main force of the organization's publication, with high publication volume and activity, and have made significant contributions to the progress of scientific research in this field (Fig. 2 and Table 1).

Table 1. Cooperation table of country/Organization

No	Country	Documents	Organization	Documents
1	USA	129	Yonsei University	14
2	ENGLAND	66	Hong Kong Polytechnic University	13
3	PEOPLES R CHINA	63	University of Arts London	12
4	SOUTH KOREA	40	Queensland University of Technology (QUT)	9
5	AUSTRALIA	38	Aalto University	8
6	INDIA	28	Seoul National University (SNU)	8
7	GERMANY	24	Oklahoma State University - Stillwater	7
8	CANADA	23	Toronto Metropolitan University	7
9	ITALY	22	City University of Hong Kong	7
10	SPAIN	17	Oklahoma State University System	7

(Source: Author's analysis)

4.3 Keywords analysis

According to bibliometric theory, keywords indicate hotspots and trends in the research field (Li et al., 2016; Zhang et al., 2023). Keyword analysis also provides a typical overview of research trends representing the journal as they reflect an article's or author's focus (Liu et al., 2012). Based on the keyword co-occurrence (Fig. 3), the most significant node is sustainable fashion, the same as the research topic.

Table 2. Distribution of high-frequency keywords with ≥18 frequency of sustainable fashion research

No	Keywords	Occurrences	Year of First	No	Keywords	Occurrences	Year of First
1	sustainable fashion	175	2008	14	consumer	20	2014
2	consumption	62	2014	15	strategy	20	2013
3	behavior	44	2008	16	industry	19	2018
4	green	36	2015	17	social media	19	2021
5	consumers	30	2015	18	supply chain	19	2014
6	fast fashion	28	2015	19	model	19	2016
7	circular economy	28	2017	20	sustainable consumption	19	2014
8	management	26	2001	21	impact	19	2003
9	ethical fashion	22	2014	22	design	18	2015
10	values	22	2017	23	sustainable fashion consumption	18	2018
11	perceptions	21	2014	24	knowledge	18	2015
12	fashion	21	2017	25	fashion industry	18	2012
13	framework	20	2014	26	products	18	2014

(Source: Author's analysis)

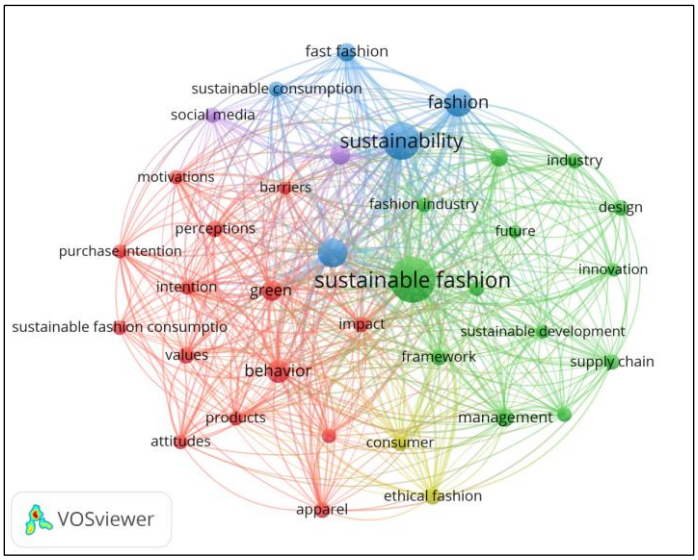


Fig. 3. Keywords map

(Source: Author's analysis)

4.4 Keywords with a Timeline

The keyword timeline analysis combines the keyword co-citation graph and the clustering graph. This is because the graph contains both the cluster labels and the clusters of similar keywords under that label. At the same time, the graph considers time so that the keyword clusters under each cluster can be arranged according to the keyword co-occurrence time. Thus, interpreting the keyword timeline graph (Fig. 4) can also be analysed from two perspectives.

From the point of view of the frequency of specific research topics, the research hotspots of sustainable fashion after 2012 are more concentrated, and there are more relatively macro research topics that grasp the overall direction, such as ethical fashion, sustainable

design, consumer behaviour, slow fashion, and green fashion. At the same time, many new research perspectives, techniques, and methodologies have emerged sustainably every year.

Keyword clustering can count and group the correlation between keywords to effectively reflect the research hotspots and field progress (Yang et al., 2022). From the analysis of Citespace clustering (Fig. 4), the research field of sustainable fashion from 1993 to 2023 can be categorized into the following eight research directions: (#0) ethical fashion, (#1) sustainable design, (#2) consumer behaviour, (#3) sustainable fashion, (#4) fashion supply chain, (#5) derivatives, (#6) circular economy, (#7) decision tree, (#8) degradation, (#9) lignocellulosic.

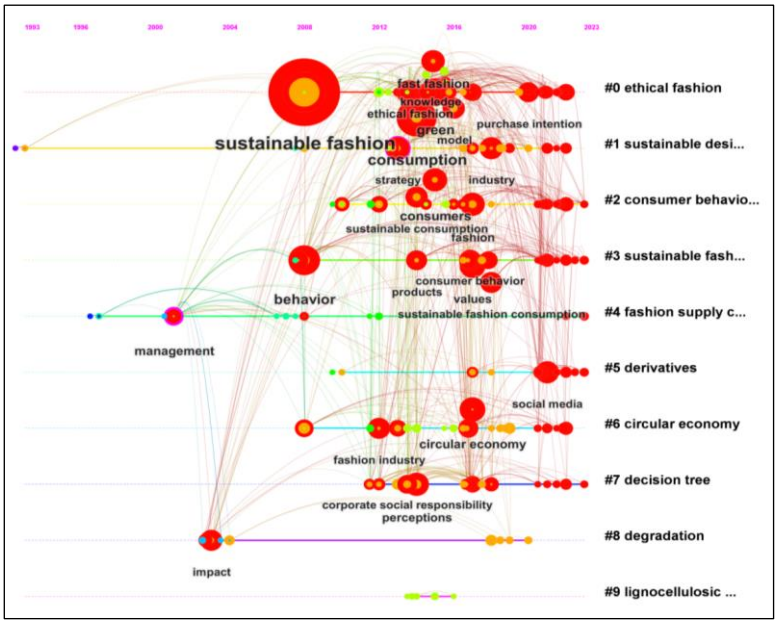
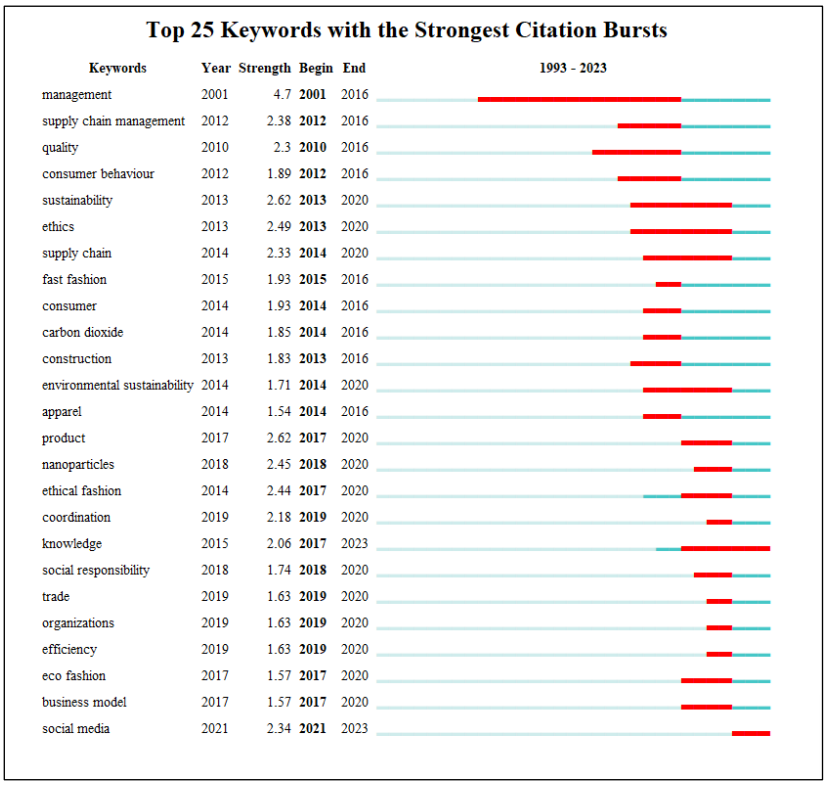


Fig. 4. Keywords timeline view
(Source: Author's analysis)

4.5 Keywords with citation bursts



Top 25 Keywords with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	1993 - 2023
management	2001	4.7	**2001**	2016	
supply chain management	2012	2.38	**2012**	2016	
quality	2010	2.3	**2010**	2016	
consumer behaviour	2012	1.89	**2012**	2016	
sustainability	2013	2.62	**2013**	2020	
ethics	2013	2.49	**2013**	2020	
supply chain	2014	2.33	**2014**	2020	
fast fashion	2015	1.93	**2015**	2016	
consumer	2014	1.93	**2014**	2016	
carbon dioxide	2014	1.85	**2014**	2016	
construction	2013	1.83	**2013**	2016	
environmental sustainability	2014	1.71	**2014**	2020	
apparel	2014	1.54	**2014**	2016	
product	2017	2.62	**2017**	2020	
nanoparticles	2018	2.45	**2018**	2020	
ethical fashion	2014	2.44	**2017**	2020	
coordination	2019	2.18	**2019**	2020	
knowledge	2015	2.06	**2017**	2023	
social responsibility	2018	1.74	**2018**	2020	
trade	2019	1.63	**2019**	2020	
organizations	2019	1.63	**2019**	2020	
efficiency	2019	1.63	**2019**	2020	
eco fashion	2017	1.57	**2017**	2020	
business model	2017	1.57	**2017**	2020	
social media	2021	2.34	**2021**	2023	

Fig. 5. Top 25 keywords with the strongest citation bursts
(Source: Author's analysis)

Keywords with citation bursts indicate that the keyword has a high citation rate over a given period, which can test whether a research area is widespread over a given period. The Top 25 keywords with the most robust citation bursts were analysed by CiteSpace, as shown in Fig. 5.

By looking at keywords such as management (strength, 4.7; Time, 2001-2016), supply chain management (strength, 2.38; Time, 2012-2006), quality (strength, 1.91; Time, 2004-2009), and consumer behaviour (strength, 2.3; Time, 2010-2016) were high-intensity emergent terms from 2001-2016, but then declined in intensity. More keywords emerged between 2017-2023: product (strength, 2.62; Time, 2017-2020), ethical fashion (strength, 1.57; Time, 2017-2020), knowledge (strength, 2.06; Time, 2017-2023), social responsibility (strength, 1.74; Time, 2017-2023), and social responsibility (strength, 1.74; Time, 2018-2020), eco fashion (strength, 1.57; Time, 2017-2020), social media (strength, 2.34; Time, 2021-2023), etc., but with shorter durations, reflecting the fact that the field of sustainable fashion is in a positive stage of development in this timeframe. The study of close knowledge and social media in sustainable fashion will remain at the forefront of research.

5.0 Discussion

Based on the keyword analysis, this study summarises the existing research directions on Sustainable fashion to provide a systematic understanding of sustainable fashion research and to inform future research directions. This study found that the current literature on sustainable fashion focuses on three main areas: sustainable fashion-related concepts, Sustainable fashion Production, and Sustainable fashion Sales.

5.1 Sustainable fashion-related concepts

Research on sustainable fashion encompasses many aspects and has spawned many concepts and content. Sustainable fashion is an environmentally and socially responsible fashion design and production approach.

Slow Fashion reflects and responds to the fast fashion model, emphasising sustainability, quality, good labour conditions, and consumer awareness (Domingos et al., 2022). Slow Fashion promotes the pursuit of a more sustainable, environmentally friendly, and socially responsible fashion industry by slowing down the pace of fashion production and consumption (Hall, 2018). Slow fashion designs often consider the repairability of garments to prolong their lifespan and reduce the number of instances where they are discarded due to damage. The concept of slow fashion aims to promote a more sustainable, responsible, and quality-conscious fashion industry. Although slow fashion is becoming more popular in some regions and among consumers, the fast fashion model still dominates the entire fashion industry. However, the rise of slow fashion demonstrates the need and desire for a more sustainable approach to fashion.

Ethical Fashion is a fashion concept that focuses on social responsibility, environmental sustainability, and labour rights (Bae & Yan, 2023). In contrast to traditional fashion, ethical fashion emphasizes ethical standards for the entire supply chain, including the sourcing of materials, the production process, labour conditions, and the life cycle of products. The concept promotes a more responsible and sustainable fashion industry (Moreira da Silva, 2020). The rise of ethical fashion reflects consumer demand for a more reliable and sustainable fashion industry. Brands and designers increasingly recognise that by focusing on social and environmental issues, they can meet consumer expectations and build a more sustainable and popular brand image in the marketplace.

Fast Fashion is a fashion model that responds quickly to fashion trends, mass-produces them at low cost, and brings them to market quickly (Niinimäki et al., 2020). The model is characterized by cycles of rapid design, production, market launch, and rapidly updated product lines that cater to consumer demand for trendy, inexpensive fashion (Kniazeva et al., 2023). However, fast fashion has also created various social and environmental problems. Despite its commercial success, fast fashion has also raised controversies and concerns, fuelling the exploration and development of more sustainable, responsible, and ethical fashion models. More and more consumers and brands are becoming concerned about sustainability, prompting the fashion industry to look for ways to develop more environmental and social responsibility.

Green Fashion is a fashion concept that focuses on environmental protection and sustainability and aims to reduce the fashion industry's negative impact on the environment (Tran & Uehara, 2023). Green Fashion covers the entire fashion lifecycle from design, production, and distribution to consumer use and disposal to ensure that the fashion industry is more sustainable economically, socially, and environmentally (Chuang & Chiu, 2017). Some sustainable fashion brands demonstrate that their products meet environmental and social responsibility standards by obtaining green certifications (Diekel et al., 2021). These certifications can be issued by third-party organisations such as GOTS (Global Organic Textile Standard). Green fashion aims to change the existing paradigm of the fashion industry to make it more sustainable, environmentally friendly, and socially responsible. More and more brands and consumers are joining the green fashion movement to drive the industry in a more sustainable direction.

5.2 Sustainable fashion production

Sustainable fashion production covers several aspects, including material selection, production process, social responsibility, and the life cycle of the final product. By analysing the keyword clustering, it was found that research on sustainable fashion production is currently focused on fashion supply chains, circular economy, and materials (degradation, lignocellulosic).

Sustainable material choices, using environmentally friendly, renewable, recyclable, or biodegradable materials. This includes organic cotton, hemp, bamboo fibre, recycled polyester, Tencel, etc., to reduce reliance on harmful chemicals and non-renewable resources (Palomino, 2020).

Circular economy design refers to using circular economy principles to design products so that they can be disassembled, recycled, and reused, thereby reducing waste of resources (Sehnem et al., 2023; Moorhouse & Moorhouse, 2017).

A sustainable fashion supply chain refers to the entire fashion product life cycle, from the acquisition of raw materials to the manufacturing, distribution, retailing, use, and final disposal of products, taking into account environmental protection, social responsibility, and economic sustainability factors (Hsu et al., 2021). By introducing sustainability concepts and practices at all stages of the supply chain, the fashion industry can progressively build a more sustainable supply chain system that mitigates negative impacts on the environment and promotes social responsibility and the protection of labour rights.

5.3 Sustainable fashion sales

Sustainable fashion sales research can cover several aspects to understand market demand, consumer preferences, and brand impacts. Keyword visualisation reveals that the main strength of current research on sustainable fashion is focused on sales, as can be seen from the fact that six of the top ten cited articles related to sustainable fashion research (Table 2) are related to sustainable consumption. Consumer behaviour research is now more frequent and focuses on analysing consumers' attitudes, shopping behaviour, and purchase motivations towards sustainable fashion. Understanding the factors they consider in their shopping decisions, such as material choice, brand reputation, price, and social responsibility, can help develop more effective marketing strategies (Blas Riesgo et al., 2023).

6.0 Conclusion& Recommendations

Scientometric analysis communicates information to the audience through images and diagrams, making the findings more accessible. This helps demonstrate sustainable fashion's importance and implementation to consumers, designers, manufacturers, and other stakeholders. Through visualisation, sustainable fashion research can present relevant information more intuitively and vividly, thus promoting the dissemination and practice of sustainable fashion concepts more effectively. The data for this study comes from the Core Collection database in WOS. Although many databases are available, the Core Collection database in WOS provides the highest quality sustainable fashion research results, making it ideal for bibliometric analyses. Although only the Core Collection database in WOS was used in this study, this platform contains a large amount of data to study the topic of sustainable fashion. Therefore, the results obtained here are highly credible. In addition, the data provided in this paper reveals trends in sustainable fashion research to guide other researchers sustainably. Although visualisation studies have many advantages in conveying sustainable fashion messages, they also have limitations. Visualisation presentations usually reflect the subjective choices and opinions of the researcher or designer. This can lead to a tendency to present information so that emotional factors influence the viewer's understanding of sustainable fashion. By selecting only the Core Collection database in WOS for this research, the visualisation study may have presented only partial or selective data without comprehensively considering all aspects of sustainable fashion. This may lead to a less comprehensive understanding of the whole field by the audience. Finally, as most of the current research on sustainable fashion focuses on sustainable consumption, this study suggests that subsequent research on sustainable fashion could increase the number of studies from the perspectives of sustainable fashion design and sustainable production.

Acknowledgement

Thanks to all the authors for their combined efforts.

Paper Contribution to Related Field of Study

This study contributes to the field of sustainable fashion research.

References

Bae, S. Y., & Yan, R. N. (2023). Promoting the right attitude: exploring the ethical fashion attitudes of fashion aficionados and materialists. Journal of Fashion Marketing and Management: An International Journal, (ahead-of-print).

Blas Riesgo, S., Lavanga, M., & Codina, M. (2023). Drivers and barriers for sustainable fashion consumption in Spain: A comparison between sustainable and non-sustainable consumers. International Journal of Fashion Design, Technology and Education, 16(1), 1-13.

Chen, C. (2006). CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature. Journal of the American Society for information Science and Technology, 57(3), 359-377.

Chuang, L. W., & Chiu, S. P. (2017, August). Encouraging knowledge sharing among green fashion communities. In 2017 International Conference on Green Informatics (ICGI) (pp. 141-144). IEEE.

Dhange, V. K., Landage, S. M., & Moog, G. M. (2022). Organic Cotton: Fibre to Fashion. In Sustainable Approaches in Textiles and Fashion: Fibres, Raw Materials and Product Development (pp. 275-306). Singapore: Springer Nature Singapore.

Domingos, M., Vale, V. T., & Faria, S. (2022). Slow fashion consumer behavior: A literature review. Sustainability, 14(5), 2860.

Hall, J. (2018). Digital kimono: fast fashion, slow fashion?. Fashion theory, 22(3), 283-307.

Jiang, M., Qi, Y., Liu, H., & Chen, Y. (2018). The role of nanomaterials and nanotechnologies in wastewater treatment: a bibliometric analysis. Nanoscale research letters, 13, 1-13.

Kniazeva, M., Aiello, G., Dasmi, C., Mazzoli, V., Nechaeva, O., & Syed, F. U. (2023). Why fashion brands enter the metaverse: Exploring the motivations of fast fashion and luxury fashion brands. Journal of Global Fashion Marketing, 1-28.

Lundblad, L., & Davies, I. A. (2016). The values and motivations behind sustainable fashion consumption. Journal of Consumer Behaviour, 15(2), 149-162.

Moed, H., De Bruin, R., & Van Leeuwen, T. H. (1995). New bibliometric tools for the assessment of national research performance: Database description, overview of indicators and first applications. Scientometrics, 33(3), 381-422.

Moorhouse, D., & Moorhouse, D. (2017). Sustainable design: circular economy in fashion and textiles. The Design Journal, 20(sup1), S1948-S1959.

Moreira da Silva, F. (2020, May). Sustainable Fashion is Ethical and Circular. In Meeting of Research in Music, Arts and Design (pp. 299-309). Cham: Springer International Publishing.

Mukendi, A., Davies, I., Glozer, S., & McDonagh, P. (2020). Sustainable fashion: current and future research directions. European Journal of Marketing, 54(11), 2873-2909.

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. Nature Reviews Earth & Environment, 1(4), 189-200.

Obregón, C. (2012). Sustainable Fashion: from Trend to Paradigm?.
Pal, R., & Jayarathne, A. (2022). Digitalization in the textiles and clothing sector. In The Digital Supply Chain (pp. 255-271). Elsevier.

Palomino, E. (2020). SDG 14 Life Below Water: Introducing fish skin as a sustainable raw material for fashion. Actioning the Global Goals for Local Impact: Towards Sustainability Science, Policy, Education and Practice, 229-246.

Park, H. J., & Lin, L. M. (2020). Exploring attitude–behavior gap in sustainable consumption: Comparison of recycled and upcycled fashion products. Journal of business research, 117, 623-628.

Powell, T. H., Kouropalatis, Y., Morgan, R. E., & Karhu, P. (2016). Mapping knowledge and innovation research themes: Using bibliometrics for classification, evolution, proliferation and determinism. International journal of entrepreneurship and innovation management, 20(3-4), 174-199.

Sehnem, S., Troiani, L., Lara, A. C., Guerreiro Crizel, M., Carvalho, L., & Rodrigues, V. P. (2023). Sustainable fashion: challenges and barriers for advancing the circular economy. Environment, Development and Sustainability, 1-22.

Shah, S. H. H., Lei, S., Ali, M., Doronin, D., & Hussain, S. T. (2020). Prosumption: bibliometric analysis using HistCite and VOSviewer. Kybernetes, 49(3), 1020-1045.

Tran, K. V., & Uehara, T. (2023). The influence of key opinion leaders on consumers' purchasing intention regarding green fashion products. Frontiers in Communication, 8, 1296174.

Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. scientometrics, 84(2), 523-538.

Wang, W., & Lu, C. (2020). Visualization analysis of big data research based on Citespace. Soft Computing, 24, 8173-8186.

Xie, L., Chen, Z., Wang, H., Zheng, C., & Jiang, J. (2020). Bibliometric and visualized analysis of scientific publications on atlantoaxial spine surgery based on Web of Science and VOSviewer. World neurosurgery, 137, 435-442.

Xu, D., Wang, Y. L., Wang, K. T., Wang, Y., Dong, X. R., Tang, J., & Cui, Y. L. (2021). A scientometrics analysis and visualization of depressive disorder. Current Neuropharmacology, 19(6), 766-786.