

# Scroll, Share, Sustain: The Impact of Social Media on Social and Environmental Sustainability

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**Abstract:** Global development agendas such as the Sustainable Development Goals are focused on sustainability as a tool to improve the multi-faceted dimensions of human lives. Social media is one technology at the forefront of research into sustainability due to its social nature and ability to monitor human behaviour. Social media has become an integral part of society with a far-reaching impact that extends beyond our personal lives. Since its inception in the early 2000s, social media has grown exponentially and transformed in the variety of platforms available, usage and influence. It has become a powerful tool for sharing information, influencing behaviours and opinions and starting global movements. In this regard, these platforms are essential in shaping our understanding and actions around sustainability. However, there is a lack of comprehensive research on both the positive and negative impact of social media on sustainability and how exactly social media influences sustainability. This systematic literature review (SLR) paper aims to explore the impact of social media on social and environmental dimensions of sustainability, examining both the negative and positive implications of its pervasive use. The SLR assessed 70 studies using the *Web of Science* and *Science Direct* databases. The results of this study show the dual impact of social media on social and environmental sustainability. Positive impacts include promoting sustainable consumer behaviour, facilitating corporate social responsibility campaigns, improving brand perceptions and increasing engagement with sustainability topics. However, unintended consequences of social media can propagate issues like greenwashing, overconsumption, promotion of extremist views, and misinformation. The implications of this study might be used by digital policymakers, organisations and individuals who seek to exploit these platforms for sustainable development.

**Keywords:** Social Media; Sustainability; Social Media Impact; Social Media Effects; Environmental Sustainability; Social Sustainability

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## 1. Introduction

The Internet, and social media (SM) in particular, have evolved from simple networking platforms into influential channels for disseminating information (Alosaimi *et al.*, 2023). These platforms shape consumption patterns and play a crucial role in raising awareness about important social and environmental issues. SM platforms such as Facebook, Twitter, Instagram, YouTube, and TikTok have become instrumental in spreading information about topics like climate change and resource conservation, fostering greater public engagement (Zhang and Gong, 2023). Consequently, SM can drive collective action and inspire more sustainable behaviours by increasing awareness of environmental and social sustainability challenges. While fostering awareness, SM has the potential to significantly influence user behaviour by addressing all three pillars of sustainability: environmental, economic, and social (Hyan and Reilly, 2014).

*Sustainable development* is defined in the Brundtland Report (1987) as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Environmental sustainability, as described by Khan *et al.* (2021), emphasises the conservation of natural resources, the preservation of ecosystem health, and the assurance of long-term planetary well-being. Social sustainability can be understood as "a life-enhancing condition within communities and a process within communities that can achieve that condition" (McKenzie, 2004). In this context, platforms like Facebook, Instagram, and TikTok play a crucial role by providing a space for promoting sustainable lifestyles.

SM campaigns highlight ecological issues, promote conservation efforts, encourage eco-friendly behaviours, showcase sustainable businesses and responsible consumption, and foster economic growth while respecting environmental limits. Moreover, SM facilitates community engagement and raises awareness about social issues related to sustainability. Campaigns and influencers frequently serve as pivotal agents in the formation of consumer preferences and the promotion of environmentally conscious decision-making among individuals (Dekoninck and Schmuck, 2022; Severo *et al.*, 2023).

Nevertheless, SM's potential to promote sustainability is limited, as it can also reinforce negative behaviours (Dekoninck and Schmuck, 2022). For example, influencers' recommendations may lead users to purchase

products that are trendy but not genuinely sustainable. This can result in increased demand for products that encourage over-consumption (Apostol *et al.*, 2024). Another issue is greenwashing, whereby companies present products as environmentally friendly when they are not. These misleading marketing practices erode consumer confidence in genuinely sustainable products, causing confusion (Breves and Liebers, 2022).

Therefore, a comprehensive overview of SM’s influence on sustainability is essential. This paper provides such a review, aiming to clarify the various factors that shape consumer behaviour and their broader implications for environmental and social sustainability. The objective of this systematic literature review (SLR) is to collect and synthesise existing research findings on the effects of SM on environmental and social sustainability while excluding ecological considerations to maintain a more focused scope. To achieve this objective, research questions (RQs) have been formulated, as summarised in Table 1. The first question focuses on identifying the impact of existing SM applications on sustainability, while the second question aims to establish criteria for measuring this impact. To address these questions, a comprehensive literature review is conducted to evaluate the current state of knowledge in this field, and the findings are analysed accordingly.

**Table 1: Research questions**

| Id    | Research Question   |
|-------|---|
| RQ1   | What is the evidence of the impact of existing SM applications on sustainability? |
| RQ1.1 | What is the impact of existing SM applications on environmental sustainability?   |
| RQ1.2 | What is the impact of existing SM applications on social sustainability?          |
| RQ2   | What criteria can be employed to assess the impact of SM applications?            |

This paper will identify gaps in current research and highlight challenges that future studies must address. Furthermore, this SLR will serve as a basis for the development of a framework to assess the sustainability impact of SM apps, for which a comprehensive overview is essential.

## 2. Related Works

In recent years, research on SM and its influence on sustainable practices has gained attention. The following analysis presents five relevant studies that explore various aspects of the interaction between SM and sustainability. The studies were selected based on their insights into both the transformative potential of SM in advancing sustainable practices and the challenges it poses, such as maintaining measurement consistency and ensuring discourse integrity.

Vladimirova *et al.* (2023) analyse how SM has evolved from platforms for personal interactions to crucial channels that influence consumer behaviour and drive social change. Through a SLR, 92 relevant articles were identified from an initial selection of 422. The findings reveal that SM plays a significant role in shaping perceptions and behaviours related to sustainable fashion practices. Notably, direct brand communication and the influence of SM personalities help raise consumer awareness and engagement in sustainable consumption habits.

Similarly, Brennan *et al.* (2022) examine the effectiveness of SM in campaigns aimed at reducing food waste. The results highlight that while various strategies were employed, there is a lack of consistent methods to assess actual behaviour changes. This highlights the challenge of adequately measuring the effectiveness of SM in driving behavioural change.

Bjersér *et al.* (2023) examine how social bots on Twitter affect discussions on climate change and sustainability. Using an SLR based on Denver and Tranfield’s five-step approach, they analysed 14 studies on bot detection, impact assessment, and normative evaluations. It notes a lack of research on social bots in climate discussions. Existing studies primarily show that bots negatively influence discourse by spreading misinformation and increasing polarisation, which distorts scientific debates and skews public perception.

The work by Adenle *et al.* (2022) explores the integration of SM into current tools for assessing campus sustainability. This study comprises two phases: an extensive search of the Scopus database, and a detailed content analysis of selected campus sustainability appraisal (CSA) tools. The results show that SM is minimally used in these evaluation tools. The study suggests leveraging user-generated content to better align sustainability indicators with community needs, which could enhance the tool’s effectiveness.

The study by Zhao et al. (2023) analyses the relationship between sustainable luxury branding and consumer purchase intent. Through an SLR of relevant articles from 2000 to 2021, it highlights the importance of integrating sustainability promises into luxury brands' marketing strategies. The findings emphasise that brands can increase consumer loyalty by employing targeted marketing strategies and creating a strong connection between sustainable practices and brand identity. Notably, luxury brands should focus their marketing more on consumers' psychological needs and motivations rather than solely on charitable activities. The promotion of social responsibility and sustainability values by influencers enables brands to effectively navigate the tension between luxury and sustainability while simultaneously strengthening consumer loyalty.

In summary, these studies highlight the transformative potential of SM in promoting sustainable practices across a wide range of sectors, from fashion and food waste reduction to luxury branding. However, they also reveal important challenges in evaluating the effectiveness of SM, particularly concerning consistent measurement methods and the impact of social bots on discourse integrity. Engaging community perspectives through SM is considered crucial for strengthening the relevance and effectiveness of sustainability initiatives. Building on these findings, this paper conducts a comprehensive SLR to investigate the broader impact of SM on society and the environment.

### 3. Data and Methods

This paper employs a systematic methodology for conducting literature reviews, as outlined by Kitchenham and Charters (Kitchenham and Charters, 2007). This approach outlines three key steps for performing an SLR. In the *planning phase*, the research questions are defined, and a review protocol is developed. In the *conducting phase*, relevant studies are identified, primary studies are selected, quality criteria are applied, and relevant information is extracted. Finally, in the *reporting phase*, a review protocol is drafted and approved to ensure consistency in the review process. Furthermore, the methodology is enhanced by the PRISMA guidelines (Altman et al., 2011), which ensure a structured and transparent process that facilitates the comprehensive identification, evaluation, and analysis of relevant literature.

#### 3.1 Identification

To identify relevant studies, the databases *Web of Science* (WoS) and *Science Direct* (SD) were used as the primary sources of information. A search string was constructed using keywords such as "social media," "sustainability," "impact" and "environment". Due to the limitations of SD, which only allows eight operators, the final search term for each database was refined as shown in Table 2.

**Table 2: Search string and results**

| Database | Search String  | Results           |
|----------|--|-------------------|
| WoS      | TS = ("social media" OR "social networks" OR "social media app") AND TS = (sustain*) AND TS = (impact OR effect OR influence OR repercussions) AND TS = (environment*) | 587               |
| SD       | TITLE-ABS-KEY (("social media" OR "social networks" OR "social Media app") AND sustain AND (impact OR effect OR influence OR repercussions) AND (environment))         | 326               |
|          | <b>Total</b>   | <b><u>913</u></b> |

Initially, 587 results were identified in WoS and 326 in SD, with two duplicates. After removing duplicates, 911 studies entered the screening process. To ensure relevance, specific criteria were set, and studies not meeting the inclusion criteria in Table 3 were excluded.

#### 3.2 Screening

The screening process involved two stages. In the first stage, studies that did not examine the influence of SM on social or environmental sustainability (EC4) or focused on SM Analytics (EC5) were excluded. In the second stage, studies where the full text was not available (EC6) were excluded. Following the initial screening and exclusion criteria, 79 studies from WoS and 3 from SD were deemed eligible for further assessment (Eligibility Check). Studies that were literature reviews themselves were excluded at this stage (EC7), leading to the exclusion of 9 studies from WoS and 3 from SD. A total of 70 relevant studies were included for analysis, with results presented according to PRISMA guidelines and illustrated in Figure 1. No studies were excluded based on

EC1 to EC3, as a pre-filtering process in the utilised databases ensured that only English-language, peer-reviewed articles and studies published between 2018 and 2024 were included.\

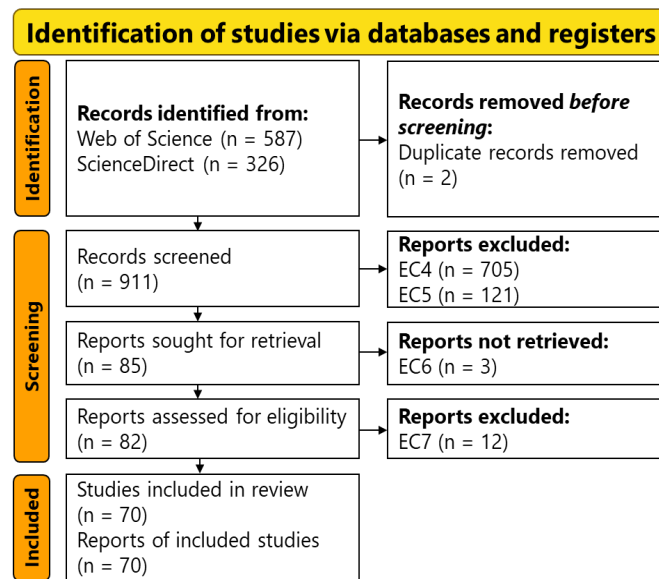


Figure 1: PRISMA flow diagram

Table 3: Inclusion Criteria and Exclusion ID

| ID  | Inclusion criteria   |
|-----|--|
| EC1 | Paper is written in English.   |
| EC2 | Published between 2018 - 2024.   |
| EC3 | Has been peer-reviewed.  |
| EC4 | Examine the influence of SM on social or environmental sustainability. |
| EC5 | Not focused on SM data analytics.                                      |
| EC6 | Full text is available.  |
| EC7 | Relates to a primary study only.                                       |

### 3.3 Quality Assessment

The quality assessment is part of the SLR methodology in the *conducting phase* to ensure that only methodologically valid and relevant studies were included in the analysis. Studies judged to be methodologically weak were excluded.

The papers were independently assessed by the three authors of this paper and discrepancies in the assessments were discussed until a consensus was reached. The final score was calculated as the mean of the three individual ratings, based on a scoring system on a set of 10 criteria, detailed in Table 4. These criteria were adapted from (Dermeval et al., 2014; Kitchenham and Charters, 2007), with some modifications to fit the scope of this SLR. Each criterion was scored on a scale of 0 (no) to 1 (yes), with a maximum quality score of 10 points per study. Higher scores indicated greater methodological rigour and relevance. The criteria covered aspects such as research design, data collection methods, quality of analysis and credibility of conclusions.

Five studies received a score below 6, indicating low quality according to the established evaluation criteria. Despite their low scores, these studies were not excluded from the analysis. The decision to include them was based on the need for a comprehensive exploration of the topic. For instance, Mohd, Azlan, and Yunos (2019) provide insights into terrorism, which no other study addressed. Similarly, while the other studies are methodologically limited, they contribute to a broader understanding of the research field, even if they do not offer new or substantial findings.

**Table 4: Study quality assessment criteria**

| #  | Quality Criteria  |
|----|---|
| 1  | Is there a clear statement of the goals?  |
| 2  | Is there an adequate description of the context and technology in which the research was carried out? |
| 3  | Is there evidence of attention to ethical issues?   |
| 4  | Are the data collection methods adequately described?   |
| 5  | Are the sample design/target selection of cases/documents well-defined?                               |
| 6  | Were the basic data and subjects adequately described?  |
| 7  | Was statistical significance assessed, or bias discussed?   |
| 8  | Are the assumptions/theoretical perspectives/values and output of the evaluation described clearly?   |
| 9  | Are the findings credible?  |
| 10 | Are the limitations of this study explicitly discussed?   |

### 3.4 Data Extraction and Synthesis

A systematic data extraction was conducted from the selected studies. The essential details, including context, research questions, methodology, significant findings, and scientific contributions, were collated and recorded in an Excel spreadsheet<sup>1</sup>. The classification of studies was based on their focus, as determined by whether the study directly examined the influence of SM on sustainability or addressed it as a secondary effect.

## 4. Results

This analysis addresses the research questions guiding this review by building on their key findings. The results will be discussed in terms of two main aspects: the impact of SM on both social and environmental sustainability and the criteria used to assess its effectiveness in influencing sustainable behaviour. The analysis incorporates the various influence factors of SM, as identified in the sources consulted, to provide a comprehensive overview of the subject matter.

### 4.1 Impact of SM on social and environmental sustainability (RQ1)

Building on the preceding overview, the subsequent analysis will focus on the six key sources of influence that have been identified in the relevant literature. It was determined that each source exerts influence over users with respect to awareness, behavioural change, attitude formation, and consumerism.

#### 4.1.1 Influencer

Influencers, particularly "greenfluencers" are playing an increasingly important role in promoting sustainable consumer behaviour. Through their credibility, they can significantly influence their followers' attitudes towards green products and their purchase intentions (Cavazos and Melchor-Ascencio, 2023). In sustainable tourism, influencers can also play a strategic role in promoting less competitive or rural destinations, thereby supporting local economic growth and encouraging the preservation of the environment, history and culture in these areas. Their ability to elevate such destinations makes them valuable assets in transforming the tourism industry toward sustainability (Palazzo *et al.*, 2021). Key factors like trustworthiness, credibility, and engagement of influencers strongly contribute to their followers' environmental involvement and ultimately guide purchasing behaviour towards sustainable products (Boerman *et al.*, 2022; Nazir and Wani, 2024). Influencers' self-disclosure and environmental awareness positively impact followers' willingness to buy sustainable food (Liu, Wu and Yang, 2023; Zorell, 2022). Followers with strong parasocial relationships with influencers tend to view them as more trustworthy, which in turn reinforces their intentions to purchase sustainable products (Breves and Liebers, 2022). Additionally, influencers can positively influence their followers' political and environmental behaviour by spreading pro-sustainability messages, fostering both online and offline engagement (Dekoninck

<sup>1</sup> <https://zenodo.org/records/14849738> contains the Excel spreadsheet

and Schmuck, 2022). These findings underscore that influencer, particularly those with a clear sustainability focus, play a key role in promoting green behaviour.

#### 4.1.2 Social Media Marketing

Social Media Marketing (SMM) has a significant impact on consumer behaviour by increasing environmental awareness and promoting the purchase of green products. It plays a key role in increasing product knowledge and crisis awareness, which, especially after the COVID-19 pandemic, have become crucial factors in influencing green purchasing decisions (Leng, Sun and Xiong, 2022). SMM also positively impacts both altruistic and egoistic motivations, leading to stronger intentions to buy sustainable products (Alam *et al.*, 2023). Additionally, it improves attitudes towards eco-friendly purchasing by increasing green product knowledge, which in turn boosts purchase intentions (Fekete-Farkas *et al.*, 2022). Furthermore, SMM strengthens brand loyalty and engagement, particularly when the content is perceived as credible and useful (Chuang and Chen, 2023). These effects highlight SMM's effectiveness in promoting sustainable consumption by shaping consumer attitudes and knowledge. Research also shows that SM priming and cause-related marketing (CRM) framing can influence sustainable consumer behaviour. Positive Instagram priming and CRM framing lead to more favourable hotel images, increasing booking intentions and willingness to pay more for environmentally responsible choices (Kim, Kim and Tanford, 2020). Similarly, informative and persuasive green SM campaigns positively impact consumer attitudes toward sustainable tourism, especially when environmental concerns are involved (Bashir *et al.*, 2023). This demonstrates that SMM can effectively drive both product purchases and sustainable tourism choices. Furthermore, the impact of sustainability communication on luxury and non-luxury brands differs. One study shows that sustainability messages on SM significantly improve brand perception and purchase intentions for non-luxury brands, particularly in cultures with a high level of sustainability awareness, such as Germany. For luxury brands, however, sustainability advertising can weaken brand image and reduce purchase intentions, especially when consumers feel that sustainability detracts from the exclusivity of luxury products (Kong, Ko and Witmaier, 2021). This highlights the need to tailor SMM strategies to market segments and cultural contexts.

#### 4.1.3 User Generated Content

User-generated content (UGC) on SM significantly influences travellers' environmental behaviour in coastal tourism. Cognitive triggers (information) and affective triggers (emotions) from UGC increase environmental concerns and attitudes, promoting more sustainable practices among travellers (Badulescu *et al.*, 2021). The discussion of environmentally relevant topics on SM can potentially enhance awareness and promote responsible behaviour in the context of coastal tourism. Furthermore, pro-environmental UGC activates personal and social norms, thereby reinforcing tourists' intentions to act in an environmentally conscious manner (Chong *et al.*, 2018). Another analysis of sustainable fashion on Instagram reveals that content under the hashtag #sustainablefashion often emphasises the sale and showcasing of sustainable fashion, identifying several key communities. This shows a growing demand for second-hand fashion and illustrates how UGC can guide consumers toward more sustainable purchases (Dorrian *et al.*, 2023). Moreover, a study shows that SM-centric consumption (SMCC), driven by the desire for social recognition and identity signalling, leads consumers to engage in activities primarily to post on SM.

#### 4.1.4 Social Networks

Social networks (SN) can both promote corporate social responsibility and raise awareness of sustainable consumer choices. However, they also risk spreading misinformation, which can diminish sustainability awareness among users (Simeone and Scarpato, 2020). A study of green SN (GSNs) found that features such as green self-identification and social endorsement enhance pro-environmental behaviour through collective intentions (Nivedhitha *et al.*, 2024). Additionally, SN amplify the link between personal concerns, such as environmental and political issues, and ethical consumption behaviour focused on eco-friendly products (Chi, 2022). SN also play a key role in promoting green innovation in agriculture by linking environmental awareness and technology diffusion, supporting sustainable development (Chi and Hien, 2023). Furthermore, research indicates that CEOs' SN positively impact corporate carbon performance. Well-connected leaders are more likely to adopt sustainability practices, especially under media scrutiny (Du *et al.*, 2023). Finally, SN contribute to household-level water conservation. An agent-based model (ABM) study found that peer support, social pressure, and encouragement significantly reduce water consumption (James and Rosenberg, 2022).

#### *4.1.5 Gamification*

A study focusing on the "Ant Forest" app in China illustrates how gamification elements can incentivise users to adopt sustainable behaviours. The results demonstrated that while gamification enhances enjoyment and intention to consume sustainably, excessive green advertising may disrupt the conversion of these intentions into actual sustainable behaviour. Although green advertising enhances the positive effect of gamification on perceived enjoyment, it does not effectively translate that enjoyment into sustainable consumption intentions (Huang et al., 2023). These results highlight the need for a balanced strategy, where gamification is paired with subtle green advertising to effectively drive sustainable behaviour.

#### *4.1.6 Corporate Social Responsibility*

Research on Corporate Social Responsibility (CSR) highlights significant impacts on consumer behaviour. One study found that sustainable CSR practices greatly enhance impulse buying intentions among university students in China. Notably, the use of SM advertising amplifies this effect concerning economic and environmental wellbeing (Akbar *et al.*, 2023). Another investigation focused on the effectiveness of prosocial native advertisements and found that high congruence between these advertisements and SM feeds leads to greater engagement, more favourable attitudes, and higher behavioural intentions (Huang and Yoon, 2022).

#### *4.1.7 Summary and Categorisation of Findings*

Overall, a 4-quadrant diagram was created to present the results of the synthesis. The studies were categorised according to whether they addressed environmental or social sustainability. In addition, the key findings and analyses of the studies were divided into positive and negative impacts according to their potential contribution to sustainable development. Figure 2 provides a presentation of the study results in the context of research questions 1.1 and 1.2.

| RQ 1.1 ENVIRONMENTAL SUSTAINABILITY  |  | Positive   | RQ 1.2 SOCIAL SUSTAINABILITY   |  |
|--|--|--|--|--|
| [22] [49] [25] [28] [55] [8] [21] [38]<br>Promotion of CSR communication and well-designed media campaigns can strengthen green values e.g. acceptance of waste separation.                        | [22] [34] [12] [7] [65]<br>Improved brand image and connection to environmental innovation.  | [3] [17] [18] [37] [36] [59] [5] [42]<br>Influence through recommendations, trust, and engagement can drive consumer behaviour and increases participation in environmental discussions. | [11] [44] [2] [30] [62] [61] [20]<br>Can positively influence green product purchase intentions.   |  |
| [56] [53] [57] [43] [14] [16] [27] [30] [63] [64] [70] [29] [33] [40] [46] [66] [4] [37]<br>Support for sustainable tourism, fashion, intention to book sustainable hotels and consumption habits. | [1] [3] [4] [9] [58] [15] [61] [19] [13] [14] [32] [34] [26] [28] [48] [51] [52] [68] [69] [19] [50] [38]<br>Promoting environmental awareness and sustainability by sharing knowledge about sustainable products and sustainable practices. | [11] [32] [45] [54] [39]<br>Promoting sustainable mindsets, achieving goals, and fostering collective action in social issues.   | [22] [23] [47] [60] [67] [7] [42]<br>Strengthening brand image and building long-term relationships with consumers, business partners, investors, and employees through sustainability.                              |  |
| [1] [24] [58]<br>Consumption-promoting content and Marketing strategies leading to higher consumption levels.  | [56] [57] [25]<br>Promotes overtourism.  | [31] [58] [6] [10]<br>Induced impulse buying and comparison-shopping behaviors, which ultimately lead to increased consumption.  | [35] [49] [41]<br>Exploitation of SM for illegal activities, propaganda, manipulation of youth, threats to public safety, and the spread of misleading information can negatively influence sustainability behavior. |  |
|  |  | [44] [59] [2]<br>Promotion of pseudo-green products and excessive green advertising can foster distrust, scepticism, and hinder translating intentions into sustainable behavior.        |  |  |

Figure 2: Categorisation of findings based on social and environmental sustainability

#### 4.2 Criteria for Assessing the Impact of SM (RQ2)

Assessing the impact of SM applications on consumer behaviour, particularly regarding sustainable practices, requires a nuanced analysis of various criteria. One key aspect is the existing awareness and knowledge about sustainability issues and how much SM platforms enhance this awareness. Platforms like Instagram and Twitter can be effectively utilised to disseminate information about eco-friendly products. However, it remains unclear to what extent this knowledge translates into actual behaviour change (Leng, Sun and Xiong, 2022). Many studies document an increased awareness, yet they struggle to measure tangible behaviour changes, indicating an often-absent direct correlation between knowledge and sustainable action (Huang et al., 2023). Another criterion is user engagement with content on SM. Likes, shares, and comments serve as indicators of users'

interest in specific topics. Finally, the quality of information shared on SM is critical (Simeone and Scarpato, 2020). Misinformation or distorted representations can negatively influence consumer behaviour and should therefore be considered a significant criterion. In this context, the spread of disinformation on digital platforms can also affect individuals' well-being and decision-making related to sustainability. Digital disinformation can undermine the quality of life (QoL), and misinformation on SM can reduce people's trust in sustainable initiatives and decisions (Bartak *et al.*, 2024). This highlights the importance of not only promoting accurate information but also addressing the harmful effects of false or misleading content online. Overall, the effectiveness of SM in influencing consumer behaviour toward sustainability can be evaluated through several criteria. These include awareness and knowledge, engagement with content, the translation of awareness into behaviour changes, and the quality of information shared. Each of these aspects provides valuable insights into how SM applications shape sustainable practices.

## 5. Discussion

The analysis has shown that SM not only provides a platform for promoting sustainable practices but also presents challenges regarding the visibility and perception of this content. A key issue to discuss is the impact of algorithms on the visibility of sustainability-related content. Algorithms prioritise content that generates high interactions, such as likes and shares, which can distort the visibility of sustainable practices. This underscores the need for more transparent algorithms that balance sustainability visibility.

While studies show increased awareness of sustainability, behavioural changes are often absent suggesting that knowledge does not always translate into action. (Huang *et al.*, 2023). This presents a significant challenge that must be addressed to maximise the effectiveness of SM in the field of sustainability. Similarly, while SM promotes knowledge about waste separation, it does not directly impact the perceived importance or intention to separate waste, indicating that its influence is largely indirect (Ai, Li and Wang, 2021). Additionally, two control variables, age and education, showed a significant correlation. Younger people demonstrated stronger pro-environmental intentions, and those with higher educational backgrounds expressed a greater sense of responsibility toward the environment (Chong *et al.*, 2018).

The results also confirm that the effectiveness of influencers and targeted marketing campaigns can be attributed to their specific targeting of emotional and cognitive triggers relevant to sustainable behaviour. The findings highlight the importance of factors such as trust, authenticity and engagement.

The reliability of the results is strengthened by the rigorous quality assessment of the studies included in the analysis. All selected sources demonstrate high methodological quality and relevance, providing a sound basis for the conclusions drawn. This ensures that the findings are credible, supporting the practical applicability of the results in promoting sustainability through SM.

## 6. Limitations

This paper identifies several limitations that may affect the results of the SLR. Construct validity may have been compromised by the inclusion criteria, such as restricting studies to English and those published between 2018 and 2024, potentially excluding valuable research. Internal validity was ensured by rigorous quality assessments, although the criteria may have excluded studies with less detailed reporting, potentially missing unique perspectives. External validity is limited by focusing on specific databases and a narrow time frame, which reduces generalisability across cultural contexts. The review also excludes the financial pillar of sustainability, which limits the scope of the findings.

## 7. Conclusion

The analysis highlights that SM plays a crucial role in influencing attitudes and behaviours related to sustainability. Regarding RQ1, evidence suggests that SM applications impact both environmental and social sustainability through several key sources, such as influencers, SMM, UGC, SN, gamification, and CSR. Specifically, influencers and targeted SMM drive consumer awareness and engagement, fostering more sustainable purchasing behaviours. In terms of environmental sustainability (RQ1.1), SM contributes by promoting eco-friendly practices, particularly in tourism and consumer choices. For social sustainability (RQ1.2), SM has enhanced awareness around social issues and supported CSR initiatives, although risks such as misinformation can hinder progress. In answer to RQ2, criteria identified for assessing the impact of SM applications include users' existing sustainability awareness, the level of engagement with sustainability-related

content, and the quality of information shared. These criteria help evaluate how SM influences sustainable practices by highlighting the extent to which awareness translates into tangible behaviour change. Future research should focus on developing appropriate measurement tools to accurately assess the strength of SM's influence on sustainable behaviour. This includes both quantitative and qualitative analyses of the interactions between SM, user behaviour, and sustainable practices. This will deepen understanding and support practical approaches to promoting sustainable decisions in society.

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