

Brands as drivers of social media fatigue and its effects on users' disengagement: the perspective of young consumers

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Abstract

Purpose – *Social media has become an inescapable part of our lives. However, recent research suggests that excessive use of social media may lead to fatigue and users' disengagement. This study aims to examine which brand-related factors contribute to social media fatigue (SMF) and its subsequent role on driving lurking behaviors, particularly among young consumers.*

Design/methodology/approach – *Based on survey data from 282 young users of social media, a holistic model of brand-related drivers and outcomes of SMF was tested, emphasizing the contribution of brands' social media presence to users' disengagement.*

Findings – *Research shows that branded content overload and irrelevance, as well as branded ads intrusiveness significantly impact SMF, which in turn plays a mediating role between brand-related drivers and lurking behaviors. The authors further conclude that the impact of SMF on lurking is stronger for users who follow a larger set of brands.*

Originality/value – *The study contributes to social media research by addressing its "dark side" and empirically validating the role of brands' social media presence in developing young users' fatigue and disengagement. The study further adds to the scant literature on SMF, which was mostly developed outside the branding field. Research also provides valuable insights to brands on how to improve their social media performance.*

Keywords *Young consumers, Social media fatigue, Brands, Social media engagement, Lurking, SOR theory*

Paper type *Research paper*

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1. Introduction

Social media has become ubiquitous. Social platforms are routinely used as tools for socializing, business, dating, politics and daily communication, continuing to transform the way people interact on a global scale (Dixon, 2022). By 2027, social media is expected to reach six billion people worldwide (Statista, 2022a). The most popular platform is Facebook, with almost three billion monthly active users worldwide, as well as the one most used among marketers, followed by Instagram. Marketers elect increased exposure and traffic as the main benefits of using social media, with the USA leading advertising expenditure, expecting to spend over US\$74bn by 2022 (eMarketer, 2022). The "bright side" of social media has been emphasized (Dwivedi *et al.*, 2018), as it enables real-time, large-scale and ubiquitous communication between brands and consumers (Dolan *et al.*, 2019).

However, over the past few years, the detrimental effects of these platforms on our lives – the so-called "dark side" of social media (Dhir *et al.*, 2021, p. 1373) – have been pushed to the forefront of public debate. Compulsive social media use can affect individual well-being (Wang and Deng, 2022) and mental health (Mirabito *et al.*, 2022), causing feelings of stress, anxiety and fatigue (Dhir *et al.*, 2018). Social media fatigue (SMF) can be conceptualized

as a mental health problem in the digital age resulting from excessive social media use, corresponding to a series of negative emotional responses associated with the use of social platforms, such as weariness or a lack of interest toward communication (Zheng and Ling, 2021). SMF became particularly evident in during the pandemic, when social media use was notoriously intensified (Wang and Deng, 2022) and heavily used to connect with others (Zheng and Ling, 2021).

Outcomes of SMF may be detrimental for both individuals and brands. For individuals, fatigue can affect well-being and trigger mental health problems (Baj-Rogowska, 2023). For brands, SMF is associated to a decrease in social media engagement, with users paying less attention to brand messages and becoming more selective about their media exposure, thus negatively impacting brands' performance. In fact, brand engagement levels seem to be declining: for instance, between 2020 and 2021, the two preferred platforms among brands – Instagram and Facebook – have witnessed a decrease of already low engagement rates (Statista, 2022b). Currently, only a small percentage of users actively engages with brands on social media, while a vast majority of inactive followers or *lurkers* (Dessart *et al.*, 2019) prefers to passively browse brand-related content. As Dessart and Veloutsou (2021, p. 362) point out, “the growing challenge associated with social media [...] is inactivity.” Brands themselves may be at least partially accountable for these high levels of passive engagement or even brand disengagement (Hollebeek and Macky, 2019). With the massive usage of social media by brands – constantly posting content and promoting their offers – users feel overwhelmed with excessive unsolicited information, and hence avoid any active interactions (Bright *et al.*, 2015; Fernandes and Inverneiro, 2021).

A young generation of digital natives may be particularly vulnerable to these effects, because they are avid users of social media (Hazzam, 2022; Sharma *et al.*, 2023; Pew Research Center, 2023). GlobalWebIndex (2018) reports that young adults browse social networks but do not post and are just logging in to see what's going on. These young consumers are particularly bored with social media and experience extreme fatigue (Goasduff and Pettey, 2011), leading to a decrease in the time dedicated to these platforms, active engagement and brand exposure.

Yet, the contribution of brands' presence on social media to users' fatigue and its detrimental effects on brand engagement have deserved little attention in the literature to date. Research examining the antecedents of SMF is scant, has been mostly developed outside the branding field and focuses on individual-level and relational-level drivers (Zheng and Ling, 2021), to the neglect of environmental-level drivers such as brand-related factors. The few studies examining environmental-level drivers focused on how the use of social networks in general (including system features, privacy issues, interpersonal interactions) elicits fatigue, but do not provide an integrated view of the specific role of brands' presence in those platforms (Appendix). Moreover, although prior studies have examined SMF impact on discontinuous social media usage (e.g. Adhikari and Panda, 2020; Pang and Ruan, 2023), the effects of SMF on brand-related outcomes such as disengagement have been largely ignored in the literature (Appendix), thus deserving further attention.

Given prior research limitations, this study aims to address the following research questions (RQs):

RQ1. Which brand-related factors drive SMF?

RQ2. What impact does SMF have on users' lurking behaviors while interacting with brands on social media?

RQ3. Is this process contingent to the number of brands followed by those users?

Drawing on the stimulus–organism–response (SOR) theory (Mehrabian and Russell, 1974), the study considers brands' presence in social media as an environmental stimulus, which triggers a psychological (organic) process (i.e. fatigue) and indirectly drives passive,

lurking behaviors (response). Through a survey-based approach aimed at young users of social media, research shows that brands' presence in these platforms significantly contributes to SMF, which in turn plays a mediating role between brand-related drivers and lurking behaviors. We further conclude that the impact of SMF on lurking is stronger for users following a larger set of brands.

Research contributions are significant and manifold. First, the study addresses recent calls to further examine "the dark side" of social media (Thaichon *et al.*, 2022; Nguyen *et al.*, 2020), focusing on young users' SMF. Second, while doing so, the study provides an alternative, previously unexplored path to passive engagement, caused by SMF and brands' online presence, which has not been empirically validated to date. Finally, the study adds to the scant literature on SMF, by adopting a new branding approach and revealing which brand-related factors significantly contribute to fatigue. Our research also has practical significance as it provides an integrative framework for a better understanding of how brands' social media activities may contribute to young users' disengagement and SMF, which can help marketers to better design their digital marketing strategies. Overall, we conclude that mitigating fatigue through a better management of social media activities should be a key priority for brands.

2. Theoretical background and research hypotheses

This study draws on the SOR theory (Mehrabian and Russell, 1974), which posits that all aspects of an environment can play a stimulating role and cause reactions in an organism. These internal processes would, in turn, directly impact subsequent behavioral responses. We believe the SOR framework to be well suited for this research as it is often used in the marketing domain to study consumers' behavioral responses, such as it happens with the behaviors of social media users (e.g. Muhammad *et al.*, 2024). Moreover, prior studies (e.g. Zhang *et al.*, 2016) show that, in a social media context, both the digital environment and psychological processes have a significant impact on users' behavior. Accordingly, we argue that brands' presence in social media (e.g. the content they share, the advertisements they publish) function as environmental factors (stimuli), which contribute to explain key inner psychological (organic) states, such as SMF, and indirectly drive lurking behaviors (response). This study thus relies on the SOR model as an overarching theoretical framework. The next sections present the constructs used in this study to operationalize key SOR components.

2.1 Brand presence in social media as environmental stimuli (S)

Social media became ubiquitous, and its usage has been continuously increasing. Across age groups, the average time spent on social media in 2022 ranged from as low as 3.3 h per day for users with more than 55 years old to as high as 6 h for young adults aged 18–29, with adults (30–49) spending on average 4 to 5 h per day on these platforms (Techjury, 2023). Social media is pervasive and offers seemingly endless benefits to both society and businesses. People browse their social media accounts regularly and feel more empowered to communicate directly with peers and organizations on a global scale, while companies promote their businesses, gain insights into individual preferences and benefit from real-time interactions with consumers (Dwivedi *et al.*, 2021). But, as these platforms continue to proliferate, an emerging field of research suggests that excessive social media usage may have adverse impacts on individuals' well-being and lead to feelings of stress, anxiety and fatigue, demonstrating that a "dark side" of social media also exists (Kefi and Perez, 2018). Similarly, fatigue can be detrimental for businesses and brands, as many users are pulling back from social media and/or becoming more selective regarding their social media exposure, paying increasingly less attention to the content that they see on their newsfeeds, including branded content (Dhir *et al.*, 2018). Although this "dark side" of social media has been largely overlooked so far (Nguyen *et al.*, 2020), the alarming increase in the use of

these platforms and its potentially undesirable consequences call for more research in the area (Bright *et al.*, 2022).

The concept of SMF was first established in occupational and clinical studies and has been later extended to a digital context. Viewed as a mental health problem resulting from excessive social media use, the term was conceptualized as a series of negative emotional responses associated with the use of social platforms, including weariness or a lack of interest toward communication (Zheng and Ling, 2021), which may result from individual, relational or environmental drivers; this will be the definition adopted in this study.

SMF seems to be consistently setting in, particularly among young, avid users of social media – a rapidly growing generation with large buying power, highly desirable for advertisers and brands (Fan *et al.*, 2023). A study by the Pew Research Center (2023) confirms that despite growing concerns about social media's impact on youth, they continue to use these platforms almost constantly, and admit it would be hard to give them up. Already back in 2011, while surveying more than 6,000 respondents, between the ages of 13 and 74, Gartner found signs of SMF among early adopters, with 31% of younger users revealing a sense of boredom toward their social networks (Goasduff and Pettey, 2011). In 2013, a Pew Research Center study focused on Facebook found out that fatigue was setting in, with 61% of users taking a break from the service for several weeks or more (Rainie *et al.*, 2013). The most common motivation was not having enough time for the site (21%), followed by a lack of interest in the content (10%). Recent evidence confirms this trend: in 2018, the “Meet Gen Z: The Social Generation” report surveyed 1,000 US consumers aged 18–24 and concluded that over 50% reduced their social media use, and 34% even stopped using these platforms (Origin, 2018). Some of the reasons for this phenomenon include “wasting too much time with it” (41%) or “not interested in the content” (26%). Moreover, 68% of respondents declared that social media sometimes or often makes them feel anxious, sad or bored/tired. Ultimately, fatigue is linked to declining engagement levels, thus reducing revenues for platforms, advertisers and organizations.

Against this background, SMF is gradually receiving more research attention (Baj-Rogowska, 2023). In their systematic review, Zheng and Ling (2021) have classified SMF drivers as individual, relational or environmental. Most studies have examined individual-level drivers, such as psychological stressors, personal attributes and behaviors (e.g. fear of missing out, self-efficacy). Several studies focus on relational-level drivers, which are factors identified between people and technology or between individuals (e.g. social comparison, cyberbullying). Finally, only a few studies discuss environmental-level drivers, which refer to external stimuli associated to social media platforms, with impact on SMF, such as brands' presence in social media, the focus of this study. The next sections will discuss how SMF may be caused by brand-related factors, such as branded content overload (Pang, 2021), branded content irrelevance (Pang and Ruan, 2023) and advertising intrusiveness (Bright and Logan, 2018).

2.1.1 Branded content overload. The information displayed in social media is overwhelming (Bright *et al.*, 2015). Because individuals have limited information processing capacity, excessive information will lead to information overload, i.e. the state created by informational levels that exceed the processing capability on an individual at a given time (Zhang *et al.*, 2016), resulting in perceptions of being overwhelmed (Kefi and Perez, 2018).

According to the limited capacity model (LCM) (Lang, 2000), the shortage of processing capacity may result either from the recipient (who does not allocate enough resources) or the message (which demands too many resources). Because users possess limited capacity to process information, they must make compromises, paying less attention to messages or retaining less information overall (Bright *et al.*, 2015). In social media, users may feel overwhelmed and thus do not dedicate enough resources for message processing, or the message itself may demand too many resources, leading to exhaustion

and fatigue (Guo *et al.*, 2020). Accordingly, information overload is recognized as an important feature of the “dark side” of social media (Kefi and Perez, 2018).

As avid users of these platforms, young adults may be particularly vulnerable to information overload (Sharma *et al.*, 2023). With the massive usage of social media by brands, users become overwhelmed with excessive unsolicited branded information. In 2021, 3.8 million sponsored/branded posts were published in Instagram, an increase of 27% as compared to the previous year (Statista, 2022c). Because fatigue has been associated to social media information overload (Bright *et al.*, 2022), and given that information overload is at least partially caused by brands, the following is hypothesized:

H1. Branded content overload positively influences users' SMF.

2.1.2 Branded content irrelevance. Social media is a great source of information, used daily by thousands of people; however, its popularity also translates into heavy amounts of irrelevant content being spread. First discussed in an IS context, relevance is a dimension of information quality and can be defined as the extent to which information can be used to perform and produce a quality outcome (Laumer *et al.*, 2017). In other words, relevant information contains valuable content, thus reflecting perceptions of utility and usefulness (Lin *et al.*, 2020). Extending this definition to a social media context, Guo *et al.* (2020) define information *irrelevance* as the extent to which information shared in these platforms is unimportant and inapplicable to users' needs.

When users receive irrelevant information, SMF is likely to occur, given the misfit between the environmental stimulus and their goals, values and needs (Guo *et al.*, 2020). For instance, it is hard for users to find what they really need or want on social media, and they must filter much irrelevant information while browsing irrelevant websites (Lin *et al.*, 2020). Brands are likely to contribute to this hardship, as branded content can ultimately turn into even more irrelevant clutter, triggering fatigue (Çelik *et al.*, 2023). Moreover, although content marketing strategies are expected to focus on creating valuable and relevant content – such as videos, audios, posts, tutorials – to engage social media users and ultimately drive profitable customer action (Hollebeek and Macky, 2019), several studies confirm that customers are tired of browsing irrelevant branded content. The “Meaningful Brands” report (Havas, 2017) concluded that 60% of the content produced by leading brands is “just clutter,” as it is deemed “poor, irrelevant or fails to deliver,” and has little impact on personal or collective well-being. A “lack of interest in the content” was reported by young people as one of the main reasons to reduce usage of, or even stop accessing, social media platforms (Origin, 2018), highlighting the importance of posting high-quality, targeted content on social channels (Riedel *et al.*, 2018; Li *et al.*, 2023). Against this background, the following is hypothesized:

H2. Branded content irrelevance positively influences users' SMF.

2.1.3 Brand advertising intrusiveness. Every year billions of dollars are spent on advertising on social media. After early pandemic declines, advertising surges are expected to continue in 2022, with the USA alone expected to spend over US\$74bn on social networks, an increase of 18.2% compared to 2021 (eMarketer, 2022). But although social media is attracting a great deal of advertising investment, consumer reactance associated to intrusiveness is increasingly becoming a concern for marketers (Çelik *et al.*, 2023).

Advertising intrusiveness has been defined as “the mechanism by which ads evoke negative emotional reactions, such as irritation or annoyance” (Li *et al.*, 2002, p. 39) or as the extent to which ads disturb a person's cognitive processes or task performance, disrupting his/her goals (Lim *et al.*, 2023). Intrusiveness elicits a psychological reactance, i.e. a motivational state that occurs when individuals' freedom is threatened (Huo *et al.*, 2020). As such, advertising intrusiveness is an indication that invasive ads are not welcomed, potentially harming its effectiveness as well as the likability of the brand itself (Li *et al.*, 2023).

Social media advertising has been recently defined as “a paid non-personal communication using social media as a channel to persuade or influence users,” including display, native and user-generated ads (Huo *et al.*, 2020, p. 823). If used correctly, social media ads can be very efficient in promoting high user engagement. But, intrusiveness soon became a major issue, as social media ads are being aggressively used by advertisers and brands. Accordingly, because most people use social media for enjoyment or to connect with their friends, these ads may engender negative reactions (e.g. annoyance, frustration) because they interrupt the “flow” of one’s use of social media (Dodoo and Wen, 2021). As a result, users who want to avoid or see fewer ads are increasingly adopting ad-blocking technologies, costing digital publishers billions of dollars in losses globally (Çelik *et al.*, 2023). A report by GlobalWebIndex (2019) shows that more than 700 million people worldwide – particularly young users (Statista, 2021) – are blocking ads on mobile or desktop devices. Additionally, consumers may avoid ads in a passive way (scrolling or ignoring) and thus do not even remember the information displayed in those intrusive ads (Riedel *et al.*, 2018), resulting in reduced effectiveness and purchase intention (van Doorn and Hoekstra, 2013).

Advertising intrusiveness may also lead to SMF. Viewed as an unpleasant feeling, fatigue can derive from several negative emotions, such as depression and anxiety (Dhir *et al.*, 2018). Similarly, one can expect that social media users may experience fatigue, given frustration feelings associated with advertising intrusiveness. Accordingly, Bright and Logan (2018) empirically validated that if a consumer finds social media advertising intrusive, he/she will likely experience SMF. As such, it is hypothesized that:

H3. Brand advertising intrusiveness positively influences users’ SMF.

2.2 Social media fatigue as organism (O) and lurking behaviors as response (R)

According to the SOR theory, the environment can stimulate behavioral responses (either positive or negative) in an organism. However, the SOR theory posits that environmental stimuli do not affect behavioral responses directly but rather indirectly through the mediating role of organism internal processes. For example, Lin *et al.* (2020) concluded that social media stimuli increase social media platforms discontinuance through the mediating role of fatigue. As an aversive state, SMF can thus lead to negative behavioral responses resulting from environmental factors. In our study, we argue that brands’ presence in those platforms (stimuli) may trigger a psychological (organic) process (i.e. fatigue) and indirectly drive users’ lurking behaviors (response) while engaging with brands on social media.

Users engage in various types of activities in social media, such as posting pictures and disclosing personal information in their profiles. These platforms are an ideal tool to develop engagement between users, as well as with brands and organizations. Social media brand engagement (SMBE) has been defined as customer’s behavioral manifestations toward a brand or a firm “that have a social media focus beyond purchase, resulting from motivational drivers” (Dolan *et al.*, 2019, p. 265). This definition refers to specific social media brand-related activities and is often adopted in studies developed in this context (Dolan *et al.*, 2019), given its dynamic and interactive nature.

Different types of brand-related activities may entail different levels of engagement, from low (passive) to high (active) intensity (Dolan *et al.*, 2019). Accordingly, Muntinga *et al.* (2011) classified these activities into three hierarchical dimensions: creation, the highest level of engagement, relates to actively producing brand-related content; contribution, the mid level of engagement, relates to sharing or commenting brand-related content, whereas consumption, the lowest level of engagement, includes “lurking” behaviors such as merely following brand-related content. Lurking is therefore a passive form of SMBE developed by users (or “lurkers”) who prefer to passively browse social media without developing any form of substantial contribution (Dolan *et al.*, 2019). These “lurking” behaviors have been identified, for instance, in the context of brand communities, where less active members take

no or limited action as they merely follow brand-related content but hardly ever contribute or participate (Dessart *et al.*, 2019).

Although passive participation has its merits, active engagement is particularly valuable, because it helps to foster consumer-brand relationships (Kefi and Maar, 2020). However, despite brands' heavy investments for active participation, engagement levels seem to be declining, challenging the common understanding that social media is the ideal place for consumers to actively engage with brands (Dessart and Veloutsou, 2021).

Although lurkers dominate the social media landscape, extant research has mostly examined active brand engagement (Dessart *et al.*, 2019). Only a few exceptions have examined drivers of lurking behaviors, focusing on e.g. content characteristics and gratifications sought (Dolan *et al.*, 2019; Kefi and Maar, 2020). This study follows a new approach and aims to examine SMF as a contributing factor to passive SMBE, particularly among young adults. Specifically, fatigue is expected to mediate the effects of brands' presence on social media on lurking behaviors, as postulated by the SOR theory. As it happens with discontinuous social media usage (Lin *et al.*, 2020), passive engagement or disengagement are key outcomes of fatigue (Choi *et al.*, 2018). When one is experiencing a negative state (such as fatigue) induced by certain stimuli, which are difficult to reduce or eliminate, one will likely follow a defensive coping strategy by simply avoiding or disengaging from the undesirable situation (Kim and So, 2018). Accordingly, people with fatigue are less motivated and will likely disengage from the task at hand, reducing one's effort to attain the desired goals rather than trying to solve the problem (Hopstaken *et al.*, 2015). Similarly, this study contends that, although users – namely young adults – keep following brands on social media mainly for information and entertainment purposes (GlobalWebIndex, 2018), the overload of branded content provided, along with its irrelevance, coupled with feelings of advertising intrusiveness, leads them to reduce their brand engagement to a minimum, to cope with SMF. Hence, it is hypothesized that:

H4. SMF positively influences users' lurking behaviors while engaging with brands on social media.

3. Research methodology

Drawing on the SOR theory, this study examines which brand-related factors contribute to SMF and its subsequent role on driving lurking behaviors, particularly among young consumers. Moreover, we use multigroup analysis to examine if this process is contingent to the number of brands followed by social media users.

An online survey of young social media users was conducted to validate the research hypotheses. Young adults were selected for this study, given its avid usage of social media, which makes them the most likely "victims" of fatigue. Almost 84% of young adults in the USA use any form of social media, being more likely than their older counterparts to use these platforms (Pew Research Center, 2021). On average, US young adults use four of these platforms, with the vast majority preferring Instagram: more than 70% visit the platform every day, and roughly half do so several times per day. More than half of social media users ages 18 to 24 (51%) say it would be hard to give up social media, a figure that drops significantly for older cohorts (Smith and Anderson, 2018). Yet, there is also an emerging but significant trend to seek "relief from social media" due to fatigue (Youn and Kim, 2019): 68% of young adults ages 18 to 24 have reported that social media sometimes or often makes them feel anxious, sad or bored/tired, and named "wasting time" or "irrelevant content" as some of the reasons to reduce their use of social media, or even to stop accessing these platforms (Origin, 2018). Accordingly, a purposive sample of social media users ages 18 to 24 were invited through mail, social media posts and online survey panels to participate.

Participation was voluntary, and respondents could terminate their participation at any point. In addition, informed consent was obtained, and participants were reassured about maintaining complete privacy and confidentiality. To ensure validity, screening questions were used to assess the eligibility of respondents. Respondents who used ad blockers, who had no social network account or did not follow any brands on those platforms were excluded from the study. The full questionnaire was made available through a web link, taking approximately 5 min to complete.

After a pretest, the final survey included 18 mandatory questions, selected following principles of brevity and simplicity and measured with a five-point Likert scale, ranging from “totally disagree” to “totally agree.” The measurement items and sources are presented in Table 1. Scales adapted from Bright *et al.* (2015), Gutierrez *et al.* (2019) and Adhikari and Panda (2020) were used to measure perceptions of branded content overload and privacy concerns while interacting with brands. Branded ads intrusiveness and branded content irrelevance were measured with items borrowed from Li *et al.* (2002) and McKinney *et al.* (2002), respectively. Three items borrowed from Zhang *et al.* (2016) and Adhikari and Panda (2020) were used to measure SMF. Finally, lurking behaviors were measured with a three-item scale adapted from Kefi and Maar (2020). Information on demographics and digital habits was also collected.

Partial least squares structural equation modeling (PLS-SEM) using the SmartPLS 3.0 software was used. PLS-SEM is a robust modeling technique, with few identification issues and well suited for assessing complex predictive models and for the theory building stages of an exploratory study (Hair *et al.*, 2016). Moreover, PLS-SEM enjoys increasing popularity, given its ability to model latent constructs even for conditions of non-normality and small- to medium-sized samples (Hair *et al.*, 2011). Additionally, PLS-SEM deals well with measurement errors and is better suited than covariance-based SEM for testing moderation effects (as it happens in this study by performing a multigroup analysis).

Table 1 Measurement scales statistics

Measures	Loadings	Means	α	CR (AVE)
<i>SMF: social media fatigue</i> (Zhang <i>et al.</i> , 2016; Adhikari and Panda, 2020)			0.839	0.903 (0.756)
Sometimes I feel bored and tired of using social media	0.886	4.10		
I am at times disinterested on whether something is happening on social media	0.903	3.94		
Sometimes I feel worn out from using social media	0.817	4.12		
<i>When it comes to brands' presence on social media...</i>				
<i>BCO: branded content overload</i> (Bright <i>et al.</i> , 2015; Adhikari and Panda, 2020)			0.766	0.866 (0.683)
I am likely to receive too much information on brands when using social media when I am using social media	0.795	3.82		
The amount of information on brands on social media is overwhelming	0.824	3.83		
I feel social media is cluttered with too much information, including on brands	0.859	3.87		
<i>BAI: brand advertising intrusiveness</i> (Bright and Logan, 2018; Li <i>et al.</i> , 2002)			0.824	0.895 (0.739)
When branded ads are shown on social media, I find them invasive	0.879	3.50		
When branded ads are shown on social media, I find them intrusive	0.838	3.51		
When branded ads are shown on social media, I find them interfering	0.862	3.59		
<i>BCI: branded content irrelevance</i> (McKinney <i>et al.</i> , 2002)			0.787	0.875 (0.700)
I feel that the brands' content on social media is not always applicable to me	0.877	4.10		
Brands' content on social media is often not related to my interest	0.832	3.91		
In general, brands' content on social media is irrelevant to me	0.799	3.84		
<i>LB: lurking behavior</i> (Kefi and Maar, 2020)			0.812	0.888 (0.726)
I browse posts published by brands, but I hardly ever comment	0.861	4.54		
I watch photos or videos published by brands, but I seldom share them	0.917	4.06		
I read comments of other followers about brand content, but I rarely post any	0.772	4.34		

Source: Authors' own work

4. Research findings

4.1 Sample

A total of 302 responses was received. After calculating the Mahalanobis distance and applying the relevant R code, outliers and low-quality responses (i.e. with continuously identical answers) were detected and subsequently removed from the data set. Following the data screening process, 282 responses were considered valid. The sample size is in accordance with the rule of ten times the number of measurement items when using SEM (Hair *et al.*, 2016). Most respondents were women (67%), who frequently use social media (94%) more than 2 h per day (48%), with 45% following ten or more brands on these platforms. All respondents elected Instagram as the platform they use the most, as expected: recent studies indicate this platform as the preferred one among young adults (Pew Research Center, 2021). Further, 76% of respondents were Caucasian, mainly from Europe (49%) and the USA (24%). Because most studies on fatigue were developed in Asian countries (mainly China), the sample used in this study offers a contribution to prior research.

4.2 Measurement model

Composite measures of identified factors were unidimensional and demonstrated good scale reliability according to accepted standards (Nunnally, 1978). Concerning the assessment of internal consistency, measures of composite reliability and Cronbach's alpha exceeded recommended thresholds of 0.70, suggesting a strong consistency across scales, and all average variance extracted (AVE) measures stood above 0.50 (Fornell and Larcker, 1981). Thus, all factors demonstrated high levels of convergence, supporting the reliability and validity of multiple item scales (Table 1).

Convergent and discriminant validity were demonstrated by factor loadings and correlations between model constructs and the square root of their AVE, respectively. All factor loadings for indicators measuring the same construct were statistically significant ($p < 0.01$), supporting convergent validity. Moreover (Table 2), estimated pair-wise correlations between factors did not exceed 0.85 and were significantly less than one (Bagozzi and Yi, 1988), and the square root of AVE for each construct was higher than the correlations between them, supporting discriminant validity (Anderson and Gerbing, 1988).

The degree of multicollinearity among model constructs was also examined. Values of the variance inflation factor vary from 1.315 to 1.918, below the cut-off threshold of 5 (Hair *et al.*, 2016), thereby suggesting that factors are not highly correlated to one another. Additionally, to reduce potential common method variance, we used existing scales and ensured respondents' anonymity (Podsakoff *et al.*, 2012). We have also examined common method bias (CMB) by performing Harman's single-factor test (Harman, 1976), which proved that none of the factors accounted for more than 50% of the covariance among items, thus accepting the data as valid (Podsakoff and Organ, 1986) Finally, the correlation matrix (Table 2) does not indicate any high correlated factors, whereas according to Pavlou *et al.* (2007), evidence of

Table 2 Discriminant validity

Construct	AVE	SMF	BOV	BAI	BCI	LB
SMF	0.756	0.837				
BOV	0.683	0.574	0.826			
BAI	0.739	0.489	0.585	0.860		
BCI	0.700	0.286	0.433	0.439	0.878	
LB	0.726	0.203	0.250	0.189	0.185	0.852

Notes: Diagonals are the AVE square root of each factor; remaining figures represent correlations

Source: Authors' own work

CMB should have resulted in extremely high correlations (> 0.9). Thereby, we consider CMB not to be a serious threat to our analyses.

4.3 Structural model

The structural model (Figure 1) was estimated based on PLS algorithm results. Regarding direct effects (i.e. without controlling for mediating effects), results provide support for *H1*, *H2* and *H3 (RQ1)*, with a significant positive effect of branded content overload ($\beta = 0.340$), branded content irrelevance ($\beta = 0.176$) and brand advertising intrusiveness ($\beta = 0.150$) on SMF. Support was also found for *H4 (RQ2)*, with a significant, positive relationship between SMF and lurking behaviors ($\beta = 0.472$). Furthermore, a bootstrapping procedure (Preacher and Hayes, 2004) based on 3,000 samples validates the indirect effects of branded content overload ($\beta = 0.159$; $p = 0.000$), branded content irrelevance ($\beta = 0.083$; $p = 0.002$) and brand advertising intrusiveness ($\beta = 0.070$; $p = 0.004$) on lurking behaviors. Considering that direct effects were non-significant ($\beta = 0.006$, $\beta = 0.036$ and $\beta = 0.014$, respectively), results support the role of SMF as a full mediator of these relationships. Regarding predictive validity, the full structural model explains 22.2% of the variance in SMF and 32.8% in lurking behaviors, values above the threshold proposed by Hair et al. (2011). In addition, the predictive relevance (Stone–Geisser’s Q^2) was calculated through the blindfolding procedure in PLS-SEM (Geisser, 1974; Stone, 1974). Both values were above zero, indicating that the model has predictive potential. Finally, the bootstrapped standardized root mean square residual (SRMR), frequently used to determine the goodness of fit while using PLS-SEM, was below the 0.08 threshold (SRMR = 0.062), suggesting that the global validity of the model is accepted (Hair et al., 2018).

4.4 Moderating effects

Additionally, and given that the model examines how brands contribute to users’ SMF and to its detrimental effects on brand engagement, the study further examines if this process is contingent to the number of brands followed by social media users (*RQ3*). Accordingly, a multigroup analysis was performed (Henseler et al., 2009). Separate models were estimated for each group (Group 1: respondents following a large set of brands vs Group 2: respondents following a limited set of brands) and then a multigroup comparison was performed to assess whether the group specific path coefficients differed significantly. Following Zhao et al. (2010), a median split procedure was used (Group 1: > 10 brands vs Group 2: 10 or less brands). Results (Table 3) show that a significant difference exists

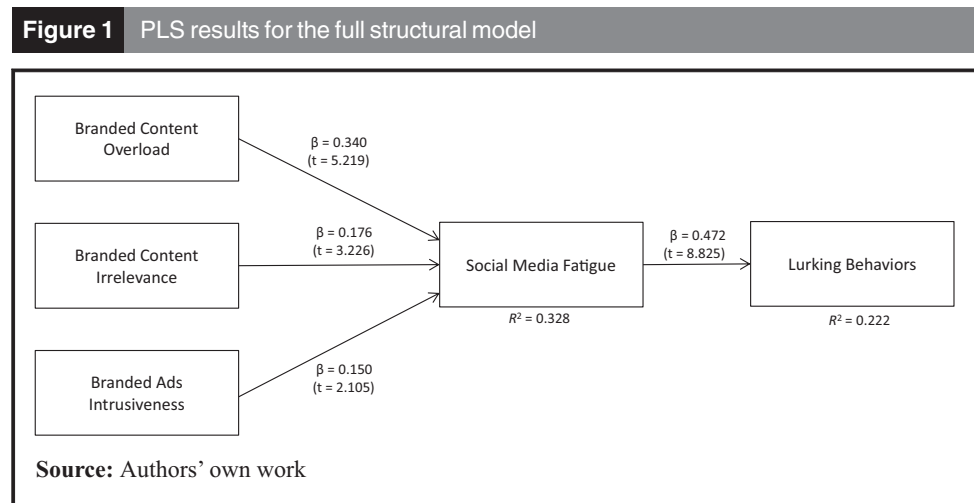


Table 3 PLS multigroup analysis

Determinants	Paths	Group 1 (n = 126)	Group 2 (n = 156)	Sig. diff.
Branded content overload	→ Social media fatigue	0.406	0.278	n.s.
Advertising intrusiveness	→ Social media fatigue	0.129	0.155	n.s.
Branded content irrelevance	→ Social media fatigue	0.139	0.211	n.s.
Social media fatigue	→ Lurking behavior	0.588	0.351	0.016*

Notes: (i) The column "Sig. Diff" shows whether the correspondent path coefficients significantly differ between groups (* $p < 0.05$); (ii) n.s. = non-significant path ($p > 0.05$)

Source: Authors' own work

regarding the effect of SMF on lurking behaviors ($p = 0.016$), which is stronger for Group 1 ($\beta = 0.588$) when compared with Group 2 ($\beta = 0.351$).

5. Discussion

Social media is a double-edged sword (Li *et al.*, 2023). Although its "bright side" and seemingly endless benefits to both society and businesses have been emphasized, a "dark side" also exists (Dwivedi *et al.*, 2018, 2021). This study focused a particular feature of this "dark side" – SMF – which may have detrimental effects not only on individuals' well-being but may also negatively impact brands' performance in social media. As such, this study set out to examine whether and how brands' presence on social media contributes to users' fatigue (RQ1) and its subsequent role on driving passive engagement behaviors (RQ2), particularly among young adults. Additionally, the study examines if this process is contingent to the number of brands followed by social media users (RQ3).

Overall, the findings show that branded content overload and irrelevance, as well as advertising intrusiveness, increase fatigue (RQ1). Branded content overload emerged as the most important brand-related determinant of fatigue. This was an expected result, as it corroborates prior studies with a more generic focus on information displayed in social media, suggesting that not only peers' content but also branded content overload drives fatigue (Guo *et al.*, 2020). Information or content overload is considered a key stressor resulting from a mismatch between environmental stimulus and the processing capability of individuals (Lang, 2000), leading to exhaustion and fatigue (Guo *et al.*, 2020). This study adopts a branding approach, focusing exclusively on the overload of content produced and shared by brands as an environmental stimulus. Brands use social media to massively broadcast brand-related content, heavily contributing to perceived overload and thus driving fatigue.

The results show that not only branded content overload but also its irrelevance are the main brand-related factors contributing to fatigue. Unlike content overload, content irrelevance and its impacts on fatigue have deserved little attention in the literature (Appendix). Yet, because this study adopts a branding perspective, studying content (ir)relevance is of value. Content marketing strategies increasingly adopted by brands are expected to focus on creating compelling and *relevant* content to engage social media users (Hollebeek and Macky, 2019). However, this study concludes that users do not always perceive it that way. Among brand-related factors considered in this study, branded content irrelevance scored the highest mean values (Table 1) and, together with content overload, contributes the most to SMF and lurking behaviors. Therefore, despite its potential, it looks like the overload and irrelevance of most firm-generated brand content is leading social media users to reduce their brand engagement to a minimum to cope with fatigue, instead of helping brands to stand out from the clutter and create engaging, long-term relationships with (prospective) customers.

The study further shows that, when perceived as intrusive, brand advertising also contributes to SMF. This result corroborates the limited number of prior studies (Appendix) that have empirically validated this relationship. Unlike branded content, advertising is explicitly designed to foster sales in the short run, *interrupting* consumers' activities (Hollebeek and Macky, 2019), i.e. advertising is not based on the premises of consumer consent, permission or opt-in. As such, consumers are inadvertently and involuntarily exposed to advertising messages, which they (sometimes only barely) tolerate. A potentially direct effect of the burgeoning social media usage among young adults is an increased exposure to intrusive ads, which can result in a higher level of annoyance (Dodoo and Wen, 2021) and, therefore, fatigue.

Additionally, SMF was proven to be a key psychological process to which brands' presence in social media contributes (RQ2). Importantly, the study reveals that SMF significantly increases users' disengagement when interacting with brands and acts as a mediator between environmental stimulus (brand-related drivers) and behavioral responses (lurking), in line with the SOR theory. This is particularly true for users following a considerable number of brands (RQ3) – and who are therefore expected to report higher levels of SMF given their increased exposure to brand-related content and ads. Prior studies found that lurking is essentially driven by informational and entertainment needs (Fernandes and Castro, 2020; Kefi and Maar, 2020). This study adopts an alternative approach and identifies SMF as a contributing factor to passive SMBE, particularly among young adults. When feeling fatigued, users may adjust their reactions to overcome the undesirable situation (Ravindran *et al.*, 2014). Accordingly, passively browsing brand-related content might be a defensive strategy that helps users to cope with SMF (Choi *et al.*, 2018), partially caused by brands themselves. Moreover, because a lack of interest is an attribute of SMF (Zhang *et al.*, 2016), users who experience SMF from brands' presence in social media will lack the willingness to actively interact with them, increasing the likelihood of exhibiting lurking behaviors.

6. Theoretical contributions

While making a timely effort to advance an emerging literature stream, this study adds to SMF, social media and branding research. First, the study addresses recent calls on the need to examine “the dark side” of social media (Thaichon *et al.*, 2022; Dhir *et al.*, 2021), which has been largely overlooked so far (Nguyen *et al.*, 2020). Prior research has mostly examined the positive implications of digital marketing for brands and consumers. Yet, as these platforms continue to proliferate, an emerging research field suggests that excessive use of social media – particularly among young adults – can affect individual well-being and mental health (Mirabito *et al.*, 2022), causing negative feelings such as fatigue, the focus of this study.

Second, the study adopts a branding multidisciplinary perspective, seldom developed in prior research on the topic (Zheng and Ling, 2021), and is among the first studies to empirically validate and provide an integrated view of the role that brands' presence in social media plays in developing users' fatigue. Although brands' social media activities allow them to promote their businesses and communicate with consumers through dynamic and real-time interactions (Dolan *et al.*, 2019), brands themselves may be at least partially accountable for the detrimental impacts of social media on both users and firms. To the best of the authors' knowledge, this study is one of the few to empirically validate the conjoint effect of branded content overload, content irrelevance and advertising intrusiveness on SMF, and its detrimental impact on SMBE. By adopting an integrated branding approach, this study allows not only to focus on the specific contribution of brands' social media presence to fatigue (unlike prior studies with a general focus on social media use), but also to understand the relative impact of each brand-related factor on SMF. While doing so, the study challenges prior findings regarding the “bright side” of social media marketing activities. When correctly used by brands, social media can be very

efficient in promoting high user engagement. Yet, the results of this study suggest that young users do not always perceive social media marketing activities in a positive way.

Third, while validating the effect of SMF on lurking behaviors, the study further contributes to social media research, which has mostly examined active brand engagement (Dessart *et al.*, 2019), and provides an alternative, previously unexplored path to passive engagement, which has not been empirically tested. Specifically, and to the best of our knowledge, this study is the first to empirically validate the mediating role of fatigue (organism) regarding the impact of brands' social media presence (stimulus) on lurking behaviors (response), as postulated by the SOR theory. Declining engagement levels are increasingly becoming a concern for marketers. Several reasons for this behavior have been suggested in the literature, but the role of SMF was yet to be explored. This study provides empirical evidence that social media users, particularly young avid ones, are reducing their brand engagement to a minimum to cope with SMF, for which the overload of brand-related content, along with its irrelevance, coupled with feelings of intrusiveness significantly contribute.

Finally, the study further adds to the scattered body of knowledge on SMF, which mainly looks at how the general use of social networking platforms elicits fatigue (instead of focusing on the specific role of brands' presence in those platforms) and has mostly examined individual-level and relational-level drivers (to the neglect of environmental-level drivers). Moreover, although prior studies have examined SMF impact on discontinuous social media usage (e.g. Pang and Ruan, 2023), the effects of SMF on brand-related outcomes such as disengagement have been largely ignored in the literature. This study adopts a new branding approach and reveals whether and which brand-related factors significantly contribute to SMF and validates fatigue as a driver of passive brand engagement. Finally, the study focuses on young adults, mostly from western countries, who are avid users of social media platforms, particularly Instagram, thus extending prior research on SMF, mainly developed in Asian countries (Baj-Rogowska, 2023), with a heavy focus on platforms such as WeChat (Zheng and Ling, 2021).

7. Managerial implications

Study findings are of practical value. Given the massive potential audience available on social media, marketers have embraced these platforms as a part of their digital strategies. But, although brand activities on social media are expected to play a positive role in brand building, these can also backfire (Huo *et al.*, 2020), causing users' reactance, avoidance, fatigue and disengagement. Despite brands' heavy incentives for active participation, most social media users, particularly young ones, prefer to spend their time passively lurking (Dessart *et al.*, 2019), ultimately reducing brands' revenues and performance. As effective approaches to users' engagement in social media remain a challenge for most brands (Bowden and Mirzaei, 2021), it is important that marketers critically evaluate their online presence. This study provides an integrative framework for a better understanding of how brands' social media activities may contribute to users' disengagement and fatigue that can help marketers to better design their digital marketing strategies.

First, the study identifies SMF as a contributing factor to lurking behaviors. While feeling fatigued by excessive social media use, users may adopt a defensive coping strategy by simply avoiding or disengaging from the undesirable situation. As brands significantly contribute to this state of exhaustion, young users may avoid to actively engage with them to cope with SMF. As such, instead of actively producing, sharing or commenting brand-related content, users may prefer to just lurk, without making any substantial contribution and failing to increase engagement metrics (Dessart and Veloutsou, 2021). As such, mitigating fatigue through a better management of social media activities should be a key priority for brands.

Second, the study indicates that branded content irrelevance and overload contribute the most to SMF, producing the strongest impacts on lurking behaviors. As such, marketers

should realize that sometimes “less is more” because users may feel overwhelmed with excessive unsolicited brand-related content, massively broadcasted on social media. Exposure to branded content should thus be kept at reasonable levels. Moreover, the results suggest that brands need to invest more on content quality (Youn and Kim, 2019), i.e. if “content is king” (Hollebeek and Macky, 2019), relevance seems to be “queen.” According to Bowden and Mirzaei (2021), following a more bottom-up communication strategy through the incorporation of user-generated content allows consumers to “own” the brand narrative and, thus, to perceive it as more relevant. For instance, the winning brand Fashion Nova, which posts roughly 30 times per day (Brandwatch, 2022) – a number that typically could prompt a swift unfollow – mostly reposts lifestyle photos of their community of fans wearing the brand, with the hashtag #NovaBabes. Similarly, the cosmetics brand Glossier mostly reposts their users’ pictures on their social media account. This works as an incentive for “Glossier Girls” to use their products and post them on their accounts in hopes that the brand would repost them, boosting customer engagement. Further, much of their content resonates with their demographics, including memes, GIFs and cute animal pictures, unlike other beauty brands, who’s content is more product-focused.

Third, this study shows that, when perceived as intrusive, brand advertising may also contribute to SMF and disengagement. Repetitive and annoying ads are perceived as intrusive and irritating as they interrupt the “flow” of one’s use of social media (Dodoo and Wen, 2021), potentially leading to fatigue and avoidance. As such, brands are advised to reduce perceptions of intrusiveness by avoiding pushing tactics such as enforced ad exposure (Youn and Kim, 2019) and by increasing the informational, interactive and entertaining value the ad provides (Bright *et al.*, 2022), based on users’ needs. Moreover, ads with skip-ad options can make consumers feel more autonomous and respected instead of deprived of their freedom, leaving proper control to users (Çelik *et al.*, 2023) and preventing them from feeling fatigued.

8. Limitations and future research directions

The study focused on a convenience sample of young social media users, including mainly women from Europe and the USA, who mostly use Instagram. Moreover, respondents were asked to report their general assessments of brands’ presence in social media without specifying content (e.g. hedonic or utilitarian) or ads (e.g. display or native) characteristics. Generalizations should thus be performed with care. Additionally, this is an exploratory research based on self-reported data, and therefore, the results require cautious interpretation.

Future research can further examine how SMF may vary among different generation cohorts and the differing implications for brands. Similarly, and despite the ubiquitous connectivity of social media platforms, future studies could compare how brand-related drivers and outcomes of fatigue behave in different research contexts (e.g. platforms). Extensions of this research could consider broader effects of brands’ presence on social media (e.g. on well-being) and a larger set of behavioral brand-related responses beyond lurking (such as avoiding or unfollowing brands). Moreover, prior research has identified privacy concerns as a contributing factor to SMF (Bright *et al.*, 2022; Baj-Rogowska, 2023) and as one of the main reasons for feelings of advertising intrusiveness (Youn and Kim, 2019). As such, ads may be perceived as intrusive not only because they interrupt the “flow” of social media activities (Dodoo and Wen, 2021) but also because they interfere with one’s right to privacy (Mpiganjira and Maduku, 2019; Fernandes and Pereira, 2021), thus engendering negative psychological reactions that lead to fatigue. Therefore, privacy fatigue (Choi *et al.*, 2018) on social media could also be a topic worth studying, particularly among young users, more likely to perceive data collection as a threat to their privacy (Bandara *et al.*, 2021). In addition, digital influencers may also play a role as drivers (or inhibitors) of SMF. As the influencer marketing industry is becoming increasingly oversaturated, “influencer fatigue” is a term used to describe when audiences get tired of seeing repetitive influencer content (Kemp, 2023). This may be particularly true among young adults, because a vast majority

(72%) follow these content creators (Pew Research Center, 2022). However, some authors (e.g. Seo et al., 2019) consider that the ability of influencers to promote parasocial relationships with their followers may help to overcome SMF challenges. This ongoing debate could lead to an interesting avenue for future research. Finally, it could also be useful to understand how young social media users look at different types of content (e.g. which do they consider more (ir)relevant) and different types of ads (e.g. which do they find more intrusive) and which drive fatigue and disengagement the most.

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Appendix

Table A1 Comparison with similar empirical studies on SMF

<i>Author(s)</i>	<i>Drivers of SMF</i>	<i>Outcomes of SMF</i>	<i>Research focus</i>	<i>Social media platform</i>
Adhikari and Panda (2020)	Social media ease of use Social media self-efficacy Social media usefulness Privacy concerns	Discontinuance usage intention	Social media providers	Facebook, Twitter or others
Bright et al. (2022)	Privacy concerns	n.a.	Social media providers	Facebook
Bright and Logan (2018)	FOMO Advertising intrusiveness Social media advertising	n.a.	Social media providers	Facebook
Bright et al. (2015)	Social media confidence Social media self-efficacy Social media helpfulness Privacy concerns	n.a.	Social media providers	Facebook
Lee et al. (2016)	Communication overload Information overload System feature overload	n.a.	Social media providers	Facebook or others
Lin et al. (2020)	Communication overload Information overload Social overload	Discontinuance intention	Social media providers	WeChat
Pang and Ruan (2023)	Communication overload Information overload Information irrelevance	Discontinuance intention	Social media providers	WeChat
Pang (2021)	Compulsive use of social media Information overload	Emotional stress Social anxiety	Social media providers	WeChat
THIS STUDY	Branded content overload Branded content irrelevance Advertising intrusiveness	Lurking behaviors	Brands	Instagram

Source: Authors' own work

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