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Investigating Boredom in Social Commerce: Definition, Function, and Consequences

A thesis
submitted in fulfilment
of the requirements for the degree
of
Doctor of Philosophy in Management Systems
at
The University of Waikato
by
REBECCA ALI



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Abstract

Boredom is an important part of our existence as it invades all aspects of our lives, be it moral, social, or practical. It differentiates what's meaningful and interesting from what's not, thus contributing to our understanding of human existence. In the context of digital communications and business, extensive research has explored the ways in which this adverse sentiment influences the utilisation of digital technology. Previously, boredom has been studied in the context of smartphone usage, social media, the Internet, and online buying, but little research has been undertaken in the social commerce (s-commerce) context. Hence, current research falls short in providing sufficient insights for academics, policymakers, and marketers engaged in the field, especially those utilising social media platforms for commerce, to comprehend the dynamics of bored consumers.

The dissertation is composed of three studies, where study 2 and 3 empirically examine some aspects of study 1, which serves as the primary investigation. The goal of the first study is to assess knowledge on boredom in this context to answer the main research question: “What do we know about boredom in s-commerce?” Through a review of 103 studies using grounded theory, an inductive framework using five building blocks is built. From an individual’s perspective, the framework foregrounds that boredom is caused by individual, situational, and their mismatch factors. As a result of boredom’s self-regulatory function, individuals often search for internal and external stimulation from s-commerce (s-commerce), resulting in both positive and negative outcomes. The study emphasises boredom's dual role as a performance and health barrier; however, proper understanding and intervention tactics that utilise constructive alleviation strategies can lead to promising results in self-development. Furthermore, the findings

also indicate how regulated and unregulated boredom affects the market performance of s-commerce and how preventing and regulating this emotion can lead to sales.

In addition, boredom, characterised by low arousal, can lead to negative outcomes for s-commerce, like negative consumer attitude, dissatisfaction, lower usage, and participation. However, with appropriate stimulus from digital platforms, it can drive positive actions, like impulse buying. Nevertheless, rarely studies have examined the connection between boredom and impulse buying in the s-commerce context. The second study focuses on the interaction between boredom and impulse buying behaviour, two key consumer aspects that hold significant commercial potential within s-commerce. It also examined how consumer personality influenced boredom and how the external stimuli from s-commerce platforms affected behaviour. Data was collected (n= 243) from New Zealand consumers and SmartPLS structural equation modelling (PLS-SEM) was employed. Results provided support for boredom, guided by personality factors, leading to impulse buying. Interestingly, the results demonstrated that among stimulations, social value positively moderated boredom and impulse buying relation, atmosphere negatively moderated, and price offering was insignificant.

Furthermore, cyberbullying is a prevalent problem influencing individuals of all ages and genders, and with the proliferation of electronic communication platforms, consumer misbehaviour has raised concerns among brands. Based on preliminary studies, the possibility of its connection with boredom in the context of s-commerce presents an intriguing avenue for further exploration. Therefore, utilising the survey-based method the purpose of study 3 is to investigate boredom as a motivation that spurs the phenomenon of consumer brand-cyberbullying (CBCB). Furthermore, it explores the influence of consumer personality on boredom and examines how s-commerce platforms' stimuli affect boredom and the CBCB

relationship. Data was collected (n= 253) from New Zealand consumers and Smart PLS structural equation modelling (PLS-SEM) was employed. Results found that boredom, guided by personality factors, lead to CBCB behaviour. It also demonstrated that social and emotional s-commerce stimulation, such as social value and enjoyment, positively moderated boredom and CBCB behaviour relation.

Keywords: boredom, s-commerce, impulse buying, consumer brand cyberbullying, grounded theory, online buying, social media

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Chapter 1: Overview

1.1 Composition and Synopsis of Dissertation

The dissertation is composed of three studies as shown in Figure A. The first study is qualitative and investigated boredom in s-commerce using the grounded theory method. The second and third study extended the first study findings by quantitatively investigating two undermine issues, identified in the first study, which have been ignored in previous studies. The specific objectives for each study are outlined below:

Objective 1: Understanding boredom in s-commerce: Definition, phenomena, function, and theory.

Utilising the grounded theory method, the first study's purpose was to explore boredom literature related to the scope of s-commerce. One hundred and three published articles (Appendix C, in Chapter 2) were selected for analysing boredom literature in the s-commerce context. The development of boredom literature showed that its studies relating to digital technology have swiftly increased in the last decade, undertaking a variety of issues from consumer perspectives. It was found that boredom literature in digital technology and media has fairly adopted a balance approach and its focus is shifting to empirical foundations from theoretical or conceptual bases. However, their exploration of contexts and scenarios lacks depth and balance.

One of the prominent challenges in boredom literature was that its existing definitions faced one or more conceptual problems; therefore, it lacked a conceptual definition. In addition, it was noticed that prior studies have focused on boredom in either electronic commerce or social media, ignoring its impact in the s-commerce context. The aim of current study was to employ a grounded theory method to 1) reviewing a comprehensive body of literature on boredom in s-

commerce, 2) building a conceptual definition of boredom in s-commerce, and 3) offering future directions for research on boredom in s-commerce. As a result of the study, boredom was defined and presented as an inductive framework showcasing how it functions in s-commerce for future studies.

The second and third study aimed to explore the inductive framework of study 1 partially. These studies further extended the finding of the first study and dealt with the personality antecedents of boredom seeking s-commerce stimulation leading to impulse buying behaviour (study 2), and consumer brand cyberbullying behaviour (CBCB) (study 3). Drawing upon the uses and gratification theory (UGT), research models for both studies were developed from the part of the inductive framework of study 1 and empirically tested quantitatively.

Objective 2: Investigate the influence of boredom and personality traits on impulse buying in the context of s-commerce.

In study 2, results using the PLS method indicate that boredom, guided by personality factors, leads to impulse buying. Interestingly, results demonstrate that among stimulations social value positively moderated boredom and impulse buying relation, atmosphere negatively moderated, and price offering was insignificant.

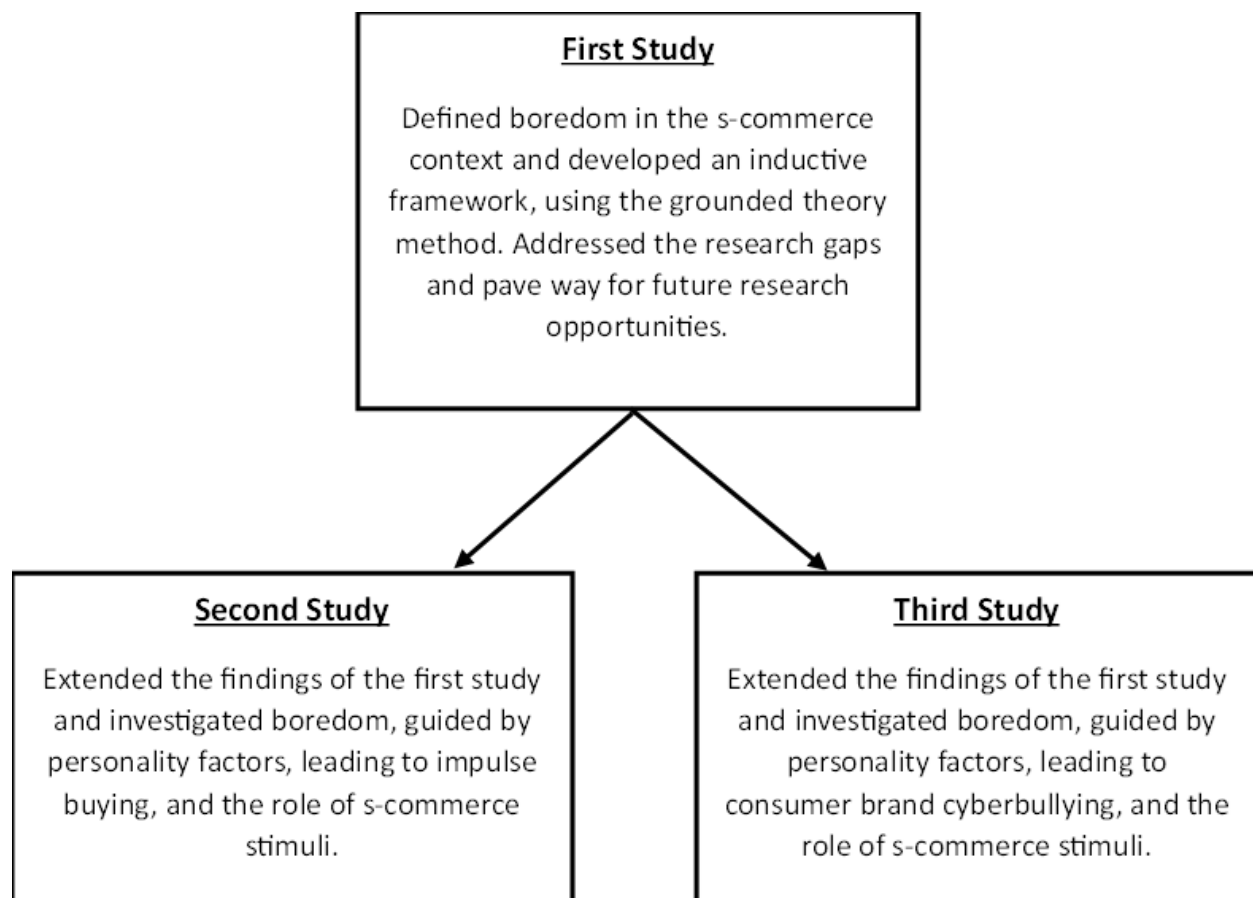
Objective 3: Investigate the influence of boredom and personality traits on Consumer Brand Cyberbullying in the context of s-commerce.

In study 3, results using the PLS method indicate that personality traits, such as narcissism, introversion, sensation seeking, and low self-esteem, were found to be factors contributing to an increased vulnerability to boredom. Moreover, boredom was positively related to CBCB from both consumer and brand perspectives and the study found the moderating effect of social and emotional stimulation within the Facebook environment on this relationship.

Implications for research and practice for boredom and its consequences in s-commerce are also discussed.

Figure A

Composition of Dissertation



1.2 Expected Contributions

This dissertation expects to contribute to boredom literature in a number of ways for both academicians' and practitioners' perspective.

Utilising grounded theory approach the first study analysed and defined boredom in s-commerce and explored strengths, limitations, and future directions for a balance growth of the literature. The inductive framework developed in study 1 identifies boredom's functional mechanism in s-commerce, unveiling potential antecedents, mediators, moderators, and consequences for consumers and the market. It bridges gaps in prior studies and provides insights into psychological traits impacting health and well-being, specific content consumption, and the types of stimulation individuals seek to alleviate boredom. Unlike previous studies, this study acknowledges both the negative outcomes and the positive aspects of boredom in the short and long term. Lastly, the study concludes by introducing a conceptual definition of boredom in the s-commerce context. The inductive framework serves as a pivotal reference for researchers, seeking an opportunity to explore the existing landscape of boredom literature and identifies the potential avenues for future research. The findings not only provide practical implications to elucidate boredom's risk factors but also propose implications for intervention development.

Similarly, the second and third studies made significant contributions to the literature on boredom through empirical research. Study 2 develops and explores a research model that illuminated the relationship between boredom and impulse buying. This investigation utilised a survey method, focusing on the personality antecedents of boredom leading to impulse buying behaviours that are drive by external s-commerce stimulations. Firstly, it contributes to boredom's function literature in the online context and provides insights into the psychological traits that underlie impulsive behaviours during boredom. It also extends the past findings by

exploring the specific content or features of s-commerce that trigger impulsive buying behaviours. The outcomes of this study hold substantial implications for marketers. The insights gained into the specific consumer profiles attracted to s-commerce stimulations during moments of boredom offer invaluable guidance. Marketers can utilise this knowledge to tailor their s-commerce platforms and marketing strategies, effectively boosting sales. Moreover, the findings of this study can aid in the development of intervention strategies. These interventions could address boredom in a constructive manner, enhancing consumers' well-being while potentially benefiting businesses in the long run.

Furthermore, several implications can be drawn from study 3, for both research and practice. Firstly, it contributed to boredom research by developing and testing an integrated research model using the UGT and cyberbullying literature to determine boredom's relation with CBCB in s-commerce. Secondly, this study, for the first time, examined boredom in relation to CBCB, thus contributed to CBCB literature. Thirdly, this study examined the phenomena of CBCB from two different perspectives – consumer and brand – which is rarely done in previous literature. Fourthly, the findings of this study will work as agenda setting for researchers interested in the field of consumer and brand misbehaviours. Finally, this study will broaden the understanding of the motives a consumer has for CBCB in s-commerce. This study also has implications for practitioners working in the field of cyberbullying and marketing. These findings may be useful while developing intervention strategies and handling consumer misbehaviours in s-commerce without compromising their business.

1.3. Thesis Structure and Outline

The thesis is divided into five chapters, with the current chapter serving as the overview. In this chapter, the composition and synopsis of the dissertation is presented, providing an

overview, and setting the stage for the rest of the thesis. Chapters 2 to 4 comprise of independent papers that hold to the standard academic structure, this includes an abstract, introduction, literature review, methodology, results, discussion, conclusion, and future research directions. Each chapter offers an investigation on specific research objectives and showcases original research. Following are the status of these papers:

- Chapter 2: Presented as extended abstract in a *Marketing Strategy and Policy conference (MSP2021)*. Currently, under 2nd review of a “A” ranking journal *Australasian Journal of Information Systems (AJIS)* as complete research article.
- Chapter 3: Submitted to “A” ranking journal *Internet Research*. Also submitted as short paper in *European Conference of Information Systems 2024*.
- Chapter 4: Submitted to a “A*” ranking journal *European Journal of Information Systems (EJIS)*. Also submitted as short paper in *European Conference of Information Systems 2024*.

Chapter 5 of the thesis summarize the research findings, draws conclusions, and provides a comprehensive overview of the entire thesis. This chapter additionally consolidates the future directions.

1.4. Ethical Approval

The ethical approval letter for conducting the research was obtained from the Waikato Management School Human Research Ethics Committee (See appendix 1 on page 424).

Chapter 2

Understanding Boredom in Social Commerce: Definition, Function, and Consequences

Abstract

Boredom is a ubiquitous emotion, whether in a moral, social, or practical sense. In the context of digital communications and business, extensive research has explored the ways in which this adverse sentiment influences the utilisation of digital technology. However, these studies have ignored this phenomenon in the context of social commerce (s-commerce). The present work aims to assess knowledge on boredom in this context to answer the main research question: “What do we know about boredom in s-commerce?” Through a review of 103 studies using grounded theory, an inductive framework using five building blocks is built. From an individual’s perspective, the framework foregrounds that boredom is caused by individual, situational, and their mismatch factors. As a result of boredom’s self-regulatory function, individuals often search for internal and external stimulation from s-commerce, resulting in both positive and negative outcomes. The findings of this study indicate that boredom is both a performance and a health barrier; however, proper understanding and intervention tactics that utilise constructive alleviation strategies can lead to promising results in self-development. Furthermore, the findings also indicate how regulated and unregulated boredom affects the market performance of s-commerce and how preventing and regulating this emotion can lead to sales.

Keywords: boredom, social commerce, social media, online buying, grounded theory, digital technology

1. Introduction

“It has been argued in the field of evolutionary biology, that without boredom, mankind could never have advanced further than other species. The avoidance of boredom is what ultimately sparked our ancestors to rub sticks together to create fire or create the wheel to carry heavy loads” (Whelan et al., 2020, p. 871)

The preceding quotation illustrates the significance of boredom for advancement in life. Being a functional emotion, it alerts us to any monotonous, meaningless, and unsatisfactory states and motivates us to do something about it. It keeps us in line with our desired interests and meaningful goals, leading towards life satisfaction and development.

The Covid-19 pandemic and lockdowns intensified boredom experiences. With limited social connections and outdoor activities, people shifted towards online platforms, like social media, for engagement to occupy themselves with this sudden free time (Catedrilla et al., 2020; Deng et al., 2020). Even though the pandemic caused unstable consumption leading to market vulnerability, online shopping thrived. This overconsumption occurred for two reasons: one was to reduce the risk of getting ill from going outdoors and the other was to alleviate boredom (Güngördü Belbağ, 2022). Overall, research findings recognise the development of unregulated online consumption and digital technology usage to evade boredom.

Boredom is generally defined as “the aversive experience of wanting, but being unable to engage in a stimulating and satisfying activity” (Fahlman et al., 2013, p. 69). It is associated with meaningless and monotonous experiences which cause dissatisfaction. Boredom’s affective, cognitive, and functional features contribute to its uniqueness, as it ensures that it is a self-regulatory emotion. It seeks to find alternatives when the current situation is unattractive,

unsatisfactory, or meaningless (Bench & Lench, 2013; Elpidorou, 2015; Pekrun et al, 2010; Van Tilburg & Igou, 2012). Boredom is different from other negative emotions. Its existential nature, inattention, and low arousal features make boredom distinctive. Among other negative emotions, boredom is characterised as having the least negative affective valence; for instance, it is only mildly unpleasant (Van Tilburg & Igou, 2017). Boredom matters not only because it affects a large percentage of our population but also because it teaches us how to embody ourselves in our worldly projects and social affairs. It matters because it keeps us in line with our goals and safeguards our interest by facilitating self-regulation (Elpidorou, 2015). Despite boredom's uniqueness, this "silent emotion" has received little attention compared to other negative emotions like anxiety, anger, depression, loneliness. (Eastwood et al., 2012).

Boredom is mostly understood as an informal term, and its relationship with its characteristics, consequences, and antecedents are poorly recognised (Raffaelli et al., 2018). How it affects people's thoughts, behaviour, and social environment is still being questioned (Fahlman et al., 2013). To date, an understanding of the nature of boredom has still not been fully achieved and there is no consensus on how to define it (Vodanovich & Watt, 2015). In fact, this affective state "remains a construct that is difficult to define" (Elpidorou, 2018, p. 2). In digital technology studies, boredom has been given definitions such as "a state of mental weariness and dissatisfaction produced by lack of interest or activity" (Blaszczynski et al., 1990, p. 36), a state of "under-stimulation, under-arousal, and lack of psychological involvement associated with dissatisfaction, [whereby] individuals try to cope with boredom by seeking additional stimulation" (Biolcati et al., 2018, p. 304), or as "cognitive changes in the direction of less differentiated and more homogeneous construing [that] give rise to a state of subjective monotony which induces, or perhaps even represents, the state" (Hill & Perkins, 1985, p. 231).

Circularity (incorporating antecedent and outcome variables and having hypothesis type statements such as homogeneity, less differentiation, and lack of interest cause/increase boredom) and unclear/ambiguous terminologies (i.e., not stating the kind of activity or stimulation) in these definitions hinders a conceptual clarity of boredom.

The topic of boredom opens several avenues for research, especially in consumer behaviour and technology usage. Understanding its influence on online buying decisions and well-being is crucial for marketers and policymakers. It is linked with modernism, as it enables self-regulation through the desire for technological change and usage, which can be for better or worse. Previously, boredom has been studied in the context of smartphone usage (Allaby & Shannon, 2020), social media (Drach et al., 2021; Throuvala et al., 2019), the internet (Wang, 2019), and online buying (Biolcati et al., 2018), but little research has been undertaken in the s-commerce context.

S-commerce is the latest technological advancement linking e-commerce with social media and is growing at a rapid rate. S-commerce, with its enhanced features, diverges from e-commerce in various aspects (see Table 1). Firstly, by combining Web 2.0 and social network tech, it addresses e-commerce's limitations with human and social elements (Liang & Turban 2011). Secondly, s-commerce fosters real-time community engagement via "like", comments, recommendations, and reviews (Liu et al., 2021), while e-commerce communication is unidirectional (Huang & Benyoucef, 2013). Also, brands on s-commerce have access to the social media profiles of their consumers, and they can personalise advertisements and recommendations according to what they like or view, whereas in e-commerce only past purchase data contributes to personalisation (Liébana-

Cabanillas & Alonso-Dos-Santos 2017). In summary, social media technologies, community interactions, and commercial activities are the main characteristics which distinguish s-commerce from e-commerce (Liang and Turban 2011). These unique features have attracted marketers and businesses and generated enormous economic value from them, for example, Facebook Marketplace (Instagram, 2018). To guarantee the profitability of Web 2.0 and social networking technology, it is important to understand its consumers and their behaviour. In 2022, worldwide, s-commerce revenue was valued at US\$724 billion and is expected to exceed six trillion U.S. dollars by 2030 (Yltävä, 2022). Most boredom studies appear to have overlooked the s-commerce context even though it has a remarkable consumer base and its prospects are proving a big attraction for marketers and businesses. Moreover, no conceptual definition of boredom exists in the s-commerce context (see Table A.1 of Appendix A). Previous studies have used either general or unclear definitions of boredom when attempting to understand it in the online context. The uniqueness of defining boredom in the s-commerce context is signification from three perspectives: research, businesses, and consumers. Firstly, as social media and e-commerce share similarities with s-commerce, a defined concept can be applied not only within its domain but also in broader multidisciplinary fields. Consequently, a good conceptual definition paves the way for future inquiries into boredom and its measurement that would otherwise not be possible, for instance, theory formulation (Wacker, 2004). Secondly, for businesses, researchers believe that boredom can lead to new paths towards value co-creation online (Sundström et al., 2019). A comprehensive understanding of this phenomenon is currently lacking, and there is a need for it to be defined in this context. For consumers, known for their negative consequences in online contexts (e.g., addiction,

uncivil behaviour) (Koban et al., 2018), defining boredom aids in understanding and devising ways to assess and mitigate it, promoting greater well-being. Before making recommendations, establishing an operational definition is imperative, determining when interventions should be applied. This definition will serve as a foundation for identifying empirically sound, technologically driven tool's usage for measuring and mitigating boredom in s-commerce settings. Hence, a literature gap exists that calls for a clear and concise definition of boredom in the s-commerce context.

This study recognises the gap in the literature and the need for boredom research in the s-commerce context. The present study aims to conduct a rigorous literature review of current knowledge on this topic to answer the research questions:

RQ1: What is the conceptual definition of boredom in the s-commerce context?

RQ2: What is the function of boredom in the s-commerce context?

- (a) What are boredom's antecedents in s-commerce?
- (b) What are boredom's alleviation strategies in s-commerce?
- (c) What are the consequences of boredom in the s-commerce context?

This study being the first of its kind examine boredom exclusively in the s-commerce context, thereby filling the gap in the literature. It offers an inductive framework (see Figure 2 in the Findings section) that proposes the potential antecedents, mediators, moderators, and outcomes of boredom in the s-commerce context to respond to future research queries on boredom. This research confirms the applicability of boredom theories in the s-commerce context, the study of which is absent in past literature. Lastly, this study has important implications related to constructively regulating boredom to improve the well-being of individuals and the profitability of associated businesses.

Consistent with the research questions, the present study adopted an inductive approach of using grounded theory methodology (Wolfswinkel et al., 2013) and reviewed 103 works on boredom in the social media, e-commerce, and online buying context (due to lack of s-commerce studies). Based on the literature analysis, this study discusses boredom from an individual's perspective as a common negative state conceptualised by individual and situational factors. It has a functional self-regulatory feature that encourages individuals to seek stimulation online, resulting in detrimental and beneficial well-being outcomes. Then it defines boredom in the s-commerce context from a functional point of view at an individual level, based on the guidelines of a good conceptual definition (Wacker, 2004; Suddaby, 2010) as *Boredom is an individual's perception based negative affective state and/or trait, having a self-regulatory function, with the aim to seek internal and external stimulation from s-commerce to relieve itself irrespective of its consequences (positive or negative) on one's well-being.* The study also provides insights into boredom's effect on businesses. It claims that boredom is an important emotion that calls for the research that contributes to its understanding for scholars, marketers (currently managing a s-commerce platform, planning a marketing campaign, or launching new products), and policymakers. Understanding the emotion of boredom can ultimately enhance an individual's well-being and productivity as well as business profitability.

In the forthcoming sections, this study presents the review methods, followed by the findings, inductive framework, and the definition of boredom. Finally, it discusses the findings in the light of existing boredom theories, provides the limitations of current work, and presents concluding remarks followed by implications.

1.1 Structural Outline

This study followed the guidelines of grounded theory for the structural outline. The first section is the introduction. The scope, brief background of key terms, research problem, aims, objectives, and questions have been discussed, followed by its significance. Section 2 is the literature review. Section 3 explained the adopted methodology in detail. The findings of the review are presented in section 4. Section 5 is the discussion, where interconnection of emerging concepts and practical and research implications are discussed. This section will also have a conclusion and the study's limitations, future direction, and implications (Wolfswinkel et al., 2013).

2. Literature Review

2.1 Boredom

Boredom is a negative and common emotion (Bozaci, 2020; Goolaup, 2018). Its affective, cognitive, and functional features contribute to its uniqueness, as they make it a self-regulatory emotion. It seeks to find alternatives when the current situation is unattractive, unsatisfactory, or meaningless (Bench & Lench, 2013; Elpidorou, 2014, 2015; Pekrun et al., 2010; Van Tilburg & Igou 2011, 2012). In a nutshell, boredom is a warning, stating that present activity is not what one desires, and it pushes to switch activities (Elpidorou, 2014). This self-regulatory function distinguishes boredom from other negative emotions like apathy, dislike, frustration, and depression.

Boredom has four distinct theories, and each explains why individuals fail to engage with the world satisfyingly. First is the existential boredom theory, which states an activity that is meaningless or purposeless causes boredom (Fisher, 1993). Situations perceived as meaningless fail to attract the subject and eventually result in his/her disengagement (Van Tilburg & Igou, 2012). Second, the psychodynamic theory states that monotony results from repressed desires. In a boredom state one looks for an alternative but is not sure what to look for (Eastwood et al., 2012). Arousal theory states that boredom is a result of a mismatch between environment stimulation and individual needs for arousal. That is, failure to engage in a stimulating activity causes boredom (Hebb, 1966). According to attentional theory, boredom is caused by inattention, which is a failure to focus and engage (Fisher, 1993).

2.1.1 Trait vs State boredom. Two main types of boredom are trait boredom and state boredom. Trait boredom is defined as “an individual’s susceptibility to experience boredom” (LePera, 2011, p.15). It is also known as prone to be bored. State boredom is “a state of relatively

low arousal and dissatisfaction, which is attributed to an inadequately stimulating situation" (Mikulas & Vodanovich, 1993, p. 3). Trait boredom and state boredom have independent effects on the experience of boredom, and it is imperative to recognise their distinction (Bench & Lench, 2013).

The difference between state and trait is that boredom in the state is continuous, while trait is not, meaning it is gap-free, and there can't be any breaks (Spielberger, 1972). State boredom is temporary and short-lived; compared to a trait that is long term (Fisher, 1993; Mikulas & Vodanovich, 1993). Trait boredom is determined by characteristics of internal psychological aspects, and state boredom is strongly determined by the external situational elements. Trait and state boredom have been studied as endogenous vs reactive boredom (boredom from within and boredom from the environment) and situational dependent and independent boredom (Todman, 2003).

Environment factors cause state boredom (activities which are monotonous, lack involvement and meaning) (Chin et al, 2017; Raffaelli et al, 2018; Van Tilburg & Igou, 2017). Trait boredom is caused by internal factors (like brain damage, attention deficit) (Malkovsky et al, 2012). The correlation strength between them is moderate. In a study, trait boredom was found to predict state boredom, stating that people having high boredom proneness are expected to experience more state boredom, proving that these two types are related but are a different construct (Fahlman et al, 2013).

2.1.2 Boredom and Other Negative Affects. Boredom has common features with other affective states, like being unpleasant is common in both boredom and sadness (Van Tilburg & Igou, 2012). It correlates with depression, apathy, and anhedonia in various degrees (Goldberg et al, 2011). Compared to all affective states, boredom has a stable set of feelings, cognitions, motivations, action tendencies, and expressions (Van Tilburg & Igou, 2012). Compared to anger, frustration, and sadness, boredom makes one feel unchallenged, and apart from other negative affects, it gives feelings of meaninglessness combined with cognitive disengagement (Eastwood et al, 2012; Van Tilburg & Igou, 2017). In terms of psychophysiological responses, heart rate and motor expressions differentiate it from other emotions (Merrifield & Danckert, 2014; Wallbott, 1998). In short, boredom resembles other emotions as affective components at face value, but it is a distinct emotion.

2.2 Social commerce

Social commerce (s-commerce) can be defined as the “exchange-related activities that occur in, or are influenced by, an individual’s social network in computer-mediated social environments, where the activities correspond to the need recognition, pre-purchase, purchase, and post-purchase stages of a focal exchange” (Yadav et al., 2013, p. 312). In this era of advanced communication technologies, s-commerce has made things very convenient for people. Momentous upgradation of traditional commerce has led to s-commerce. The commercial benefits of social media is vibrantly obvious to businesses (Zhang et al., 2014), and it resulted in the development of e-commerce to s-commerce. S-commerce is a communication hub for consumer interaction, which is its primary advantage today (Hajli, 2015). Having access to online stores, websites, and social media, people can easily gather information about products and services and seek instant gratification from the sensory attributes of both websites and online

applications (Lepik & Murumaa-Mengel, 2019; Brailovskaia et al., 2020; Orifah et al., 2017). Moreover, it's a gateway for consumers to experience positive emotions by taking a break from the real world and entering this virtual one to avoid boredom (Stašová et al., 2010).

In an online context (social media, Internet, and online buying), what consequences boredom brings and how it relates with different components of boredom, such as internal and external stimulation, needs exploration (Chou et al., 2018; Wang, 2019; Wang et al., 2020). It is important to uncover boredom's possible mediators, moderators, and predictors to construct targeted intervention strategies (Skues et al., 2016; Stockdale & Coyne, 2020; Altuwairiqi et al., 2019). Furthermore, smartphones, the Internet, and social media provide various activities, such as shopping and browsing,, and each has different characteristics and are subjected to different levels and types of pleasure. It will be imperative to investigate if boredom's associations with them are similar or different (Chou et al., 2018; Barr et al., 2015; Leung, 2020). Examining bored individual characteristics along with their internalising problems in an online context (Ksinan et al., 2021) and a large and diverse sample is directed by preliminary research to study boredom in this context, followed by a qualitative methodology to understand boredom and its intensity across different generations and cultures, especially net-geners. Net-geners are mostly online, and they generate content and share their views on social media, like Twitter, blogs, in their leisure time (Yazdanparast et al., 2015; Poon & Leung 2011). Moreover, s-commerce is also technically developing, for example, live streaming features, (Friedländer, 2017), so it is vital to study boredom in the s-commerce context first, then enhance its scope to further digital technological advancement's studies.

S-commerce is a subset and an evolution of e-commerce (Kim, 2013; Busalim & Hussin, 2016). This advancement comprises a blend of e-commerce and social media, and its facilitation

of online transactions is bonded with social media (Liang & Turban, 2011). S-commerce shares some similar characteristics with e-commerce and social media but some of them are dissimilar. Previously, boredom was studied in the context of smartphone usage, social media, Internet, and online buying. So it is important to study it in this context, as s-commerce is a growing phenomenon and where few studies exist. Also, it will be interesting to examine the similarities and differences in boredom in this context.

2.2.1 Characteristics of Tradition, Electronic and Social Commerce. Social commerce being an advancement shares characteristics similar to e-commerce and social media and some of them makes it distinct from them. Previously boredom is studied in the context of the tradition commerce, smartphones usage, social media, internet and online buying. Since, boredom and social commerce studies are rare, so it's crucial to emphasize their similarities in order to make boredom investigation applicable in s-commerce context.

Momentous upgradation of traditional commerce has led to the development of s-commerce. S-commerce is a fragment and the progression of e-commerce (Busalim & Hussin 2016). It is a new trend which comprises of both e-commerce and social media (Liang & Turban, 2011). Social commerce uses social media as a promotion tool to shape the decision-making and purchasing behaviour (Constantinides & Fountain, 2008). Here “social networking services (SNS) denote actors (people/organizations) and the connections among the actors indicating some relationship (friendship/affiliation/information exchange)” (Grabner Kräuter, 2009). The characteristics of traditional, electronic and social commerce discussed in this section can be seen in table 1.

2.2.1.1 Content. In traditional commerce, the content and message conveyed to the consumer can be actually experienced in the sense of sight, touch, smell, and hearing. Customers

can physically touch and check the products out. They can truly experience them both inside and outside the store. E-commerce provides pictures of products and services along with their descriptions and specifications on their website in detail. The company's purpose and history are also present (Choudhury & Choudhury, 2010). In s-commerce, content is generated by both the company and the consumers. The company provides product pictures and descriptions. They also display their promotions on social media and provide real-time information (Kim & Park, 2013; Phan et al., 2020). Consumer's generated content is their feedback and electronic word of mouth (EWOM) which helps other consumers in making satisfactory purchase decisions (Mikalef et al., 2017; Blazquez et al., 2019).

2.2.1.2 Community. S-commerce, using social media platforms, motivates social interactions among online communities, leading members to influence other members (Zhang et al., 2014). This characteristic of community building doesn't exist in traditional and e-commerce where the consumer interacts with the platform/store individually. Social commerce is defined as "a community that connects sellers and buyers and allows them to seek and share product information". (Busalim & Hussin, 2016, p. 1083). This sense of community building comes with its features of "like" and "follow" (Das et al., 2022). Community members share valuable information which provides social support both emotional and informational to all members (Liang et al., 2011). This helps them to dodge negative experiences and become confident about their purchase decision (Shin, 2013; Lin et al., 2020). Within a community members have a sense of closeness and emotional attachment, and they have the patience to overlook each other's mistakes (Lee et al., 2015). They have higher homophile and tie strength. Homophile is defined as "a group composition in terms of the similarity of members' characteristics which refer to social identities that are attached externally to individuals (e.g. gender, race or age) or internal

states concerning values, beliefs, or norms” (Phan et al., 2020; Park et al., 2014, p. 31) and tie strength is “the degree to which a person is willing to maintain some relationship with peers through some social media” (Phan et al., 2020; Park et al., 2014, p. 29). Furthermore, community members have similar tastes in shopping, while consumers in E-commerce have dissimilar preferences and values due to their independent nature. That’s why e-commerce is known to have lower homophily among its customers (Lu et al., 2010). S-commerce breaks free of this isolation thus, members have intimacy and bonds with one another (Kim & Srivastava, 2007).

2.2.1.3 Products. S-commerce and e-commerce feature a large variety of products within a huge online marketplace both locally and globally which is impossible in an offline scenario (Zhang, 2009; Wang & Tong, 2010).

2.2.1.4 Interactivity. In traditional commerce, location and workforce are the physical and social mediums to interact and connect with consumers (Kotler & Keller, 2006). Interaction during the transaction stage is between consumers and sales or store staff. Their communication is face-to-face or voice-to-voice. Bricks-and-mortar stores have the biggest advantage of providing actual shopping experiences to their customers. Interaction between customers themselves and customer to workforce in or around the outlet (Enders & Jelassi, 2000). In e-commerce, communication is also one way, consumers are independent of each other and rely on the vendor’s information (Kim & Srivastava, 2007; Huang & Benyoucef, 2013; Zhou et al., 2013). They can only generate and share content in the form of feedback which is preference based. The social factor of s-commerce is very significant in distinguishing it from e-commerce. With the combination of social media and electronic platforms, it creates an interactive environment that didn’t exist in traditional e-commerce (Zhang & Benyoucef, 2016; Sharma & Crossler, 2014; Sturiale & Scuderi, 2013). This socialization between consumers is “discovering

products through social networks and developing feelings of warmth and satisfaction” (Shen, 2012). Thus, s-commerce being on social media naturally brings social values for its customers along with entertainment and usefulness (Hu et al., 2016). Relations here are not limited to the traditional buyer-seller as it also includes the megatrend of peer-to-peer sharing (Busalim & Hussin, 2016). Its collaborative environment motivates consumers to generate content in the form of EWOM (Wu et al., 2015), react to messages, comments, referrals, recommendations, ratings, and feedback helping other consumers susceptible to more discounted deals and trends (Stephen & Toubia 2010; Hajli, 2015). Whereas e-commerce signifies one to one interactivity with its global consumers (Hajli et al., 2017; Laudon & Traver, 2008). Also, in s-commerce sharing behavior is in real-time, thus, info, options, and suggestions are exchanged by the customers during, before, or after buying.

2.2.1.5 Commerce. In traditional commerce, products and services have the same weightage. So it is important to complement good supporting services with the products to compete with competitors. Traditional commerce requires a physical location and its dealings are time specific. The social and physical atmosphere is very important in this type of commerce to attract customers (Enders & Jelassi, 2000; Kotler & Keller, 2006). It requires work force i.e. sales staff etc. who can communicate with the customers and help them with their purchases. Relationship building is very important, and it depends on the retailer’s ability to monitor consumers' buying patterns to satisfy them well (Sweeney et al., 1999). Traditional commerce has two marketing approaches i.e. external and internal marketing. Former is referred to as the process to attract customers and occurs between the firm and the customer. It involves marketing activities like promotional campaigns through various channels. Its communication model is one to many, where the company transmits its message through a medium to a large number of

consumers. This mass media strategy has three features one, medium is just to communicate or transmit the firm's message, two, consumers are homogenous and three, there is no interaction between the company and the consumer (Donna & Novak, 1997). Later is called the interactive marketing that happens between the front-line staff and the purchasers. This tactic creates a bond that influences customers' experience, resulting in customer loyalty or retention (Grönroos, 2007). Retailers in traditional commerce use stimulating tactics like playing music, scenting the air, and placing visually appealing promotions inside and outside the store e.g. billboards, brochures, and vouchers (Kotler & Keller, 2006).

Moreover, consumers in traditional commerce can see the products physically, its performance and quality is determined after its usage. Store environment and behavior of employees together can make a comfortable and enjoyable atmosphere which can affect the consumers' desire to buy. Such shopping experience in traditional commerce makes it distinct and gives it a competitive edge over online commerce. This shopping experience (physical and social) is as much important as buying products for the purchasers (Enders & Jelassi, 2000). In contrast, e-commerce and s-commerce are easily available anytime and everywhere. They both facilitates shopping from home and across cultural and national boundaries.

Commercial activities like buying and selling on social media are essential attributes of s-commerce (Liang & Turban, 2011; Chen & Shen, 2015). This commerce feature makes in distinct from social media. S-commerce profits rely on actual transactions, and all of its activities have commercial benefits, while not all activities of SNS are commercial. In s-commerce, the principle actor of sales is the user itself. Purchases occur on a social platform, where consumers socialize with each other (Liébana-Cabanillas & Alonso-Dos-Santos, 2017).

The bargaining power is shifted from the seller to the end consumer in s-commerce. They can like, compare, buy, and sell a large variety of products in the different virtual marketplaces (Kim, 2012; Zhou et al., 2013; Hajli & Sims, 2015). The collaborative environment that s-commerce offers affects their consumer's purchase decision (i.e. suggestions stating must-buy products by others) are crucial to promote sales (Liébana-Cabanillas & Alonso-Dos-Santos, 2017). It also offers a service to compare and share the content of products and services (Busalim & Hussin, 2016), therefore creating a new experience for its customers which strengthens customer relations ensuring sales and loyalty thus making an efficient shopping experience (Hajli, 2014; Chen & Shen, 2015). Whereas, e-commerce concentrates mainly on product categorization, preference-based recommendation systems, search engines, and shopping carts (Chen & Shen, 2015). S-commerce is distinct from e-commerce in terms of customization of product portfolio to the consumers. E-commerce retailers from the data of consumers' past purchases, can utilize the personalization feature allowing them to modify their products and services according to customers' preferences. This creates a personal bond between them, thus, creating market segmentations that will be easier to market (Laudon & Traver, 2008). Consumers nowadays are curious and desire innovation, and the right type of personalization potentially increases sales (Wang & Tong, 2010). Moreover, E-commerce is typically product-oriented while s-commerce is customer centred (Wigand et al., 2008). Former concerns about productive commerce and later focus primarily on info exchange, collaborating, socializing and secondly on shopping (Wang & Zhang, 2012). Moreover, s-commerce provides features like connectivity with peers, digital profiles, security, search, and transparency, which makes it distant from e-commerce. (Yin et al., 2004).

Brands on s-commerce can get a hold of thorough profiles of their consumers, what they like and what they don't. Therefore, companies can modify their offerings according to their customer's demands (Liébana-Cabanillas & Alonso-Dos-Santos, 2017). Consumers on s-commerce are influenced by various marketing tactics like scarcity (restricting products quantity or time) (Ju & Ahn, 2016), personalize ads (ads designed to target a specific group of consumers) (Phan et al., 2020), referral programs (rewarding consumers like discounts, samples, etc. who referred to new customers) (Lee & Choi, 2014), social ads (advertising on social media which direct to products e-commerce website) (Lee & Choi, 2014), discounted prices (Phan et al., 2020), same value and price (irrespective of store or platform) (Lee & Choi, 2014). S-commerce commercial characteristic creates an encouraging and enjoyable environment through personal recommendation in the form of ads updating consumers about the latest trends and new products (Mikalef et al., 2017), differentiation (vendors marketing product can't find elsewhere), communication in different languages (Yahia et al., 2018) and providing economic feasibility in form of discounts, coupons and reliable information exchange (Kim & Park, 2013; Kim et al., 2012) which induce a desire to buy.

2.2.1.6 Technology. In traditional commerce, there is a physical location and no electronic platform. (Enders & Jelassi, 2000; Kotler & Keller, 2006). Its reach is limited to people who can actually visit it (Shafiyah et al., 2013).

E-commerce having 1.0 technology enables (one way) browsing (Afrasiabi Rad & Benyoucef, 2011). It has made a technical advancement in improving the overall productivity of a business by lowering staff cost, transaction costs, better control over inventory, easy access to market research, and continuous organizational change (Freebairn, 2001). E-commerce permits retailers to create their content and gave them access to consumers globally. Its technology

facilitates retailers to personalize options, so they can market their target individuals' interests at a personal level. Compared to traditional stores, they enable consumers to have an intuitive understanding to choose and shop themselves. E-commerce offers cost transparency to the actual price of the products. It ensures its customers access free product-related information for comparison to mitigate the risk of bad purchases (Wang & Tong, 2010; Laudon & Traver, 2008). They make their shopping experience very convenient by making products readily available online to save time, when they don't even have to leave their home (Yu & Pan, 2012). E-commerce possesses a large data resource that is rapidly being updated and users can access a large variety of product information and businesses (Pan, 2011). E-commerce enables easy navigability, high-speed display, secure and authentic transaction globally, transactions trail, security to consumer's privacy (both transaction and information), and a personalized website design to acquire information at ease for certain groups e.g. website's appearance in different languages, content organization, layout, etc. Websites are limited to a few pages and some show visitor statistics to make a good impression on their customers. E-commerce technology gave access of advance payment facilities to small business which were owned previously by larger companies. Now users can make quickly multiple payments in real-time (Choudhury & Choudhury, 2010; Sengupta et al., 2005; Huang & Benyoucef, 2013).

Due to technological improvements of 2.0 technology feature, online interaction and user generated content is made possible (Lai, 2010; Shen & Eder, 2011; Busalim & Hussin, 2016). This feature provides additional gratification and supports the social aspect of online shopping. These advancements have made s-commerce accessible, easy to use and convenient. One can use it through multiple gadgets like smartphones, laptops, etc. (Liébana-Cabanillas & Alonso-Dos-

Santos, 2017). And using social media technology, s-commerce simplifies the user registration steps (Weijun & Lin, 2011).

With the integration of social media in s-commerce, marketers can access significant promotional features to practice Six Degrees of Separation and The Long Tail Theory to enlarge business effects. (Weijun & Lin, 2011). Six Degrees of Separation pointed out that “any two strangers would be able to recognize each other through no more than six people. The greatest contribution of this theory for social studies was to show that there must be some contact dimension between any two person exists” (Ke, 2010, p. 438). The Long Tail Theory states “that a larger number of unique products with relatively small quantities sold of each would have gained significant profits as much as the “hit products” could have made, in some cases the “niches” can contribute to the major profit. Amazon.com, Netflix, and iTunes as foremost examples of successful businesses applying this strategy.” (Anderson, 2006).

In terms of business model, s-commerce uses customer-centric platforms and e-commerce provides product-centric business. Owing to Web 2.0 technology, consumers in s-commerce experience more effective and efficient shopping due to their social networks (Rad & Benyoucef, 2011). Its feature of network communities offers its consumers complete authority over the system as compared to the general web, making its service interface design visually different from e-commerce (Huang & Benyoucef, 2013).

S-commerce users have the facility to access and browse a range of products online, which would be unattainable in an offline context (Liébana-Cabanillas & Alonso-Dos-Santos, 2017). S-commerce is driven by convergence, social media acts as a third-party platform that ensures fairness by making way for affordable and good quality products parallel with the expensive ones (Weijun & Lin, 2011). S-commerce services provide information attainment,

comparing and exchanging views on products or services consumed (Bürklin et al., 2019). This information transmission is very open and transparent among buyers and sellers (Weijun & Lin, 2011). In addition, S-commerce has lubricated the business entirely by reducing its cost (e.g. logistics, payment, manufacturing, etc.) And helps consumers make rational buying decisions (through use's suggestions) (Weijun & Lin, 2011)

S-commerce is facilitated by social media along with electronic platforms (Bürklin et al., 2019). It provides its users a network facility to share feedback and experience in a very smooth way (Hu et al., 2021). Here, consumers can choose between multiple mediums to shop from (Mikalef et al., 2017). The sociability feature in social commerce is supported by social media technologies which are its significant technical environmental characteristic (Liu et al., 2021). Technology development has created a participatory environment. Their reviews and recommendations are valuable for the companies as it helps in new product development (Busalim & Hussin, 2016). S-commerce's communication technology allows an environment design where interaction can happen in real time via hyperlinks, videos, chat rooms, etc. (Liu et al., 2021).

Users of s-commerce have their digital profiles and multi-user base (Yamakami, 2014). This has evolved the transaction process, as business interactions/transactions take place on different social media, in addition to the main website. In e-commerce, they can be performed only on the seller's website. S-commerce has advanced payment facilities on social media and provides transactions and related information with high-level security (Kim & Park, 2013; Liébana-Cabanillas & Alonso-Dos-Santos, 2017). Transaction safety here is defined as "the security level the website can provide in money and product transactions" (Cheng et al., 2017).

Social Commerce websites are consumed by a specific group of people. This grouping is called “User segmentation”. The natural way of classifying consumers makes communication active and makes information centralized (Weijun & Lin, 2011). This technically advance commerce can perform personalization by recommending products and services to a group of consumers having similar preferences based on their previous consumption (Liu et al., 2021).

Table 1

Characteristics Of Traditional Commerce Vs E-Commerce Vs Social Media Vs S-Commerce

Characteristics	Traditional commerce	E-commerce	S-commerce
Content	<ul style="list-style-type: none"> • Products are physically present 	<ul style="list-style-type: none"> • One-way creation of content (from business to consumers) 	<ul style="list-style-type: none"> • Two-way creation of content (business and users)
Interactivity	<ul style="list-style-type: none"> • Face-to-face, voice-to-voice interaction • Sales/store person and customer interaction • Location and workforce are a physical and social medium 	<ul style="list-style-type: none"> • Interaction is one-way (rely on the information given by the vendor). Create and share is preference-based (online reviews of customers) • No real-time interaction with the seller • Consumers are independent of each other 	<ul style="list-style-type: none"> • Collaborative environment (user-generated content, EWOM, reactions to messages, comments, referrals, recommendations, ratings, feedback) • Real-time interaction (B2C, C2C, and other stakeholders) • Consumers can create interpersonal relation

Community	<ul style="list-style-type: none"> • No community building 	<ul style="list-style-type: none"> • Lower homophile 	<ul style="list-style-type: none"> • Online community building (higher homophile, tie strength and social support)
Technology	<ul style="list-style-type: none"> • Have to visit the store physically, limited reachability 	<ul style="list-style-type: none"> • Web 1.0 (b2c) • Using electronic platforms • Commercial activities (product comparison facility, hyperlinks, visitor statistics) • Convenience and celerity • Facilitate personalisation • Product-centric platform 	<ul style="list-style-type: none"> • 2.0 technology • Facilitate transaction on social media and website • Commercial activities (comparing product, sharing info and experience, EWOM, UGC, co-creation) • Simplicity and easy access • Personalisation (advertisement, products & services, alternative mediums) • Consumer-centric platform. Consumers complete authority over the system • Global transaction • Digital profiles, multi-user base

		<ul style="list-style-type: none"> • Global transaction • Search engines 	<ul style="list-style-type: none"> • Sociability (real-time interaction, community building, transparent buyer-seller intercommunication)
Products	<ul style="list-style-type: none"> • Limited access and variety of products and services 	<ul style="list-style-type: none"> • Global and local commodities • Large access and variety of products and services 	<ul style="list-style-type: none"> • Global and local commodities • Large access and variety of products and services • New product development
Commerce	<ul style="list-style-type: none"> • Transaction via a physical store at specific time • Requires workforce • Market cues (the store has music, scents in the air) 	<ul style="list-style-type: none"> • Transaction through website • Product/services/business process-oriented business model 	<ul style="list-style-type: none"> • Transaction through SNS and website • Social and customer-oriented business model (Consumers have bargaining power) • Personal recommendation • Economic feasibility (coupons, discount) • Marketing tactics (scarcity, personalise ads, referral programmes)

- Marketing (one to many communication models, external and internal marketing, inside and outside the store, not personalised)
 - Store environment influence sale
 - Face-to-face and voice-to-voice communication
 - Customers can see the actual product
 - Product quality is determined after usage
 - Personalisation (according to buying history of consumers)
 - Price transparency
 - Engaging environment (emotionally arousing, enjoyable, hedonic, encouraging, communication is different language)
 - Easy target market
 - Transaction is influenced by other customers
-

3. Methodology

The current study's method utilised the grounded theory technique (mostly used in the information systems (IS) field) following the guidelines of Wolfswinkel et al. (2013). These guidelines are based on Strauss and Corbin's (1990, 1998) approach of rigorously reviewing literature. This consists of five steps which are broken down into 11 more tasks, as seen in Table 2. The initial four steps are discussed in the subsequent paragraphs, while the fifth is presented in the Findings section.

Table 2

Grounded Theory Steps for Literature Review (adapted from Wolfswinkel et al., 2013)

Step	Task(s)
Define	<ul style="list-style-type: none"> • Inclusion/exclusion criteria, identify fields of research and sources, establish search terms
Search	<ul style="list-style-type: none"> • Search for text by selecting search field and keywords
Select	<ul style="list-style-type: none"> • Refine the sample by applying the inclusion/exclusion criteria and identify additional sources to produce the final sample
Analyse	<ul style="list-style-type: none"> • Apply coding techniques: Open coding, axial coding, and selective coding
Present	<ul style="list-style-type: none"> • Write the review and present findings via figure • Define the structure of the review itself

According to Opie (2004), grounded theory is a method of gathering qualitative data and undertaking data analysis to create categories (a theory) in explaining the phenomenon of interest. Grounded theory involves of five stages and is iterative. The first stage is “Define”; here a suitable data set. is identified. In the second stage, “Search”, the actual search for the text is executed. The third stage, “Select”, the sample of selected studies is refined. The fourth stage, “Analyse”, shows how qualitative research methods, rooted in grounded theory, extract genuine value from the selected studies through the application of coding techniques. The fifth stage, “Present”, contains the two key steps in the writing of a coherent overview paper, which shows not only the findings and insights obtained but also the key decisions made during the review process.

3.1 Step 1 Define

3.1.1 Define Inclusion/Exclusion Criteria. The inclusion and exclusion criteria was defined to select articles or texts in the data set. Usually, peer-reviewed journal and conference articles and book chapters are considered suitable for scholarly review (Hart, 1998).

Initially, several queries were ran in online databases to acquire a good insight of the literature coverage in several fields and to make sure that the data size was manageable and adequate. Since no study was found on boredom and s-commerce, the inclusion criteria included published articles and conference papers on boredom from the perspective of Internet, social media, and online buying. This study excluded articles that were works in progress, not available in English translation, and papers where full text wasn't available.

3.1.2 Identify Fields of Research. A suitable field of research according to the nature of the study was selected. Here, this study covers a span of different disciplines

From SCOPUS. Social sciences, Psychology, Business, Management and Accounting, Multi-disciplinary, Arts and Humanities, Economics

Time duration: Added anytime–13th August, 2022

From Web of Science. Social science, Science, Arts and Humanities, Emerging science citation (All except chemical Index), All WOS Core Collection: Citation Index

Time duration: 1965-13th August, 2022

3.1.3 Identify Sources. Scopus and Web of Science were selected as research databases for the search of articles and conference papers, and the same query was generated in both databases. This was based on the inclusion and exclusion criteria and research fields.

3.1.4 Establish Search Terms. In this step, search terms were established. S-commerce is a combination of e-commerce and social media. Since no document was found matching the keywords “boredom” and “s-commerce” OR “social commerce”, this study broadened its context to social media, the Internet, and online shopping. Initial screening was done to identify common terms and keywords used in the field and from studies that had similar research questions in these contexts (Bozaci, 2020; Brown & Kuss, 2020; Sundström et al., 2019; Whelan et al., 2020). A list of keywords was established that represented the main concepts of the current research. Feedback was also taken from fellow scholars who were familiar with the concept and grounded theory methodology. All this aided in defining the search query, which was adapted to each database. Each keyword was also searched individually to confirm whether relevant papers appeared in the search results or not. The selected terms reflected the scope of this study. The selected databases allowed the operators of OR and AND. The final search criteria consisted of keywords:

(TITLE-ABS-KEY (“boredom” OR “bored” OR “state boredom” OR “trait boredom” OR “free time boredom” OR “leisure boredom”) AND TITLE-ABS-KEY (“Group

buying” OR “online shopping motivations” OR “internet shopping” OR “online buying” OR “online purchase” OR “electronic shopping” OR “E-Shopping” OR “online purchases” OR “online shopping” OR “social media” OR “social networking sites” OR “Internet use” OR “social media use” OR “social networking” OR “Facebook” OR “social media engagement” OR “Digital media” OR “Internet” OR “Social browsing” OR “social media platforms” OR “social commerce” OR “s-commerce”). The study excluded articles that were works in progress and not available in English translation.

3.2 Step 2 Search

After selecting the databases and keywords, an actual search was performed. In the “search” field of the databases “Article title, Abstract, Keywords” were selected. All the articles and conference papers in the search were exported to Endnote and then the option of finding full texts was used. Some of the full texts weren’t found, so they were downloaded separately by the library.

3.3 Step 3 Select

In this step, sample of texts were selected. After reading the title, abstract, and text, the duplicates and those not fitting the inclusive criteria were excluded.

The initial sample was 524 (Scopus 314+ WOS 210). After omitting duplicates, the sample was refined by reading the keywords, title, and abstract. This was further refined based on reading full texts of the article followed by backward and forward citations for the extraction of common citation information within each paper; five more articles were added. After applying the inclusion and exclusion criteria, the final sample was 103. Papers were taken out which did not fit the criteria. Moreover, to justify the selected articles, a “reviewer’s selection table” was organised and articles were listed on yearly basis in Appendix B (Table B.1).

3.4 Step 4 Analyse

By using grounded theory for literature reviewing, an advanced depth and breadth of an academic niche is reviewed. Grounded theory's inductive nature permits the salient concepts to emerge from the literature. It enables the key concepts to the surface, instead of being deductively derived beforehand; they emerge during the analytical process of substantive inquiry.

Following recommendations from Wolfswinkel et al. (2013), several pre-defined, descriptive elements of each paper were collected and summarised in Appendix C "initial coding".

Using Endnote, papers were picked out randomly, they were read and any word, sentence, or paragraph which seemed relevant to this study were highlighted. This highlighted part is called an "excerpt". All these papers were exported to NVIVO, where coding began. Three types of coding were applied to these excerpts: open coding, axial coding, and selective coding.

This open coding step is the first abstraction step. This analytical step of open coding is essential; it is done in order to identify, (re-)label and/or build a set of concepts and insights based on the excerpts supported by the papers. Axial coding is about finding the relationships between categories and their sub-categories. Selective coding is the process of identifying and developing relationships between the main categories. Table 3 (in the Findings chapter) shows the properties of all the selective codes and axial codes of this study.

3.5 Step 5 Review

The fifth stage, "Present" contains the writing of a coherent overview paper, which shows the findings and insights obtained during the review process. It is discussed in the next chapter, Findings.

4. Findings

Based on the coding techniques and their pattern recognition as underlined in the grounded theory methodology, Table 3 shows the properties of all the selective codes and axial codes of this study as high-level and low-level categories. On the basis of these higher and lower level categories, Figure 1 represents the literature sequential diagram and Figure 2 represents the inductive framework summarising current knowledge on boredom in s-commerce. This framework was built on relationships that emerged throughout the analysis across five overarching building blocks describing boredom as a negative self-regulatory functional emotion that is caused by situational and individual factors. Its self-regulatory function refers to the development of alleviation strategies (i.e., seeking s-commerce stimulations) that generate negative and positive outcomes. Descriptives of the study sample are available in Appendix D. Visual representation of coded themes in NVIVO are presented in Figure E.1 to E.5 of Appendix E. In addition, a glossary of variables/codes (presented in Figure 2) are available in Table F.1 of Appendix F, and conceptual foundations present in the current sample are available in Table G.1 in Appendix G.

Table 3.*High-Level and Low-Level Categories Generated During Data Analysis with Sample**Reference*

High Level Category and Description	Low Level Category and Sample References
Boredom's nature (<i>a temporary, emotional, motivational, and aversive state that is based on perception</i>)	<ul style="list-style-type: none"> • Negative affective state (<i>Wang et al., 2020</i>) • Motivational/functional state (<i>Watt & Vodanovich, 1992</i>)
Boredom's function (<i>boredom is self-aware and self-regulates from a negative to positive state</i>)	<ul style="list-style-type: none"> • Self-aware of the existence of boredom (<i>Greenson, 1953</i>) • Self regulates negative state to a positive one (<i>Biolcati, 2017; Mano, 1999; Sundström et al., 2019</i>)
Causes of boredom (<i>situational and individual factors and their mismatch that results in the experience of boredom</i>)	<ul style="list-style-type: none"> • External factors (<i>factors that lie outside the person such as task and environmental conditions [Fisher, 1993]</i>) • Internal factors (<i>factors that originate inside the person such as individual differences and personality traits [Fisher, 1993]</i>)

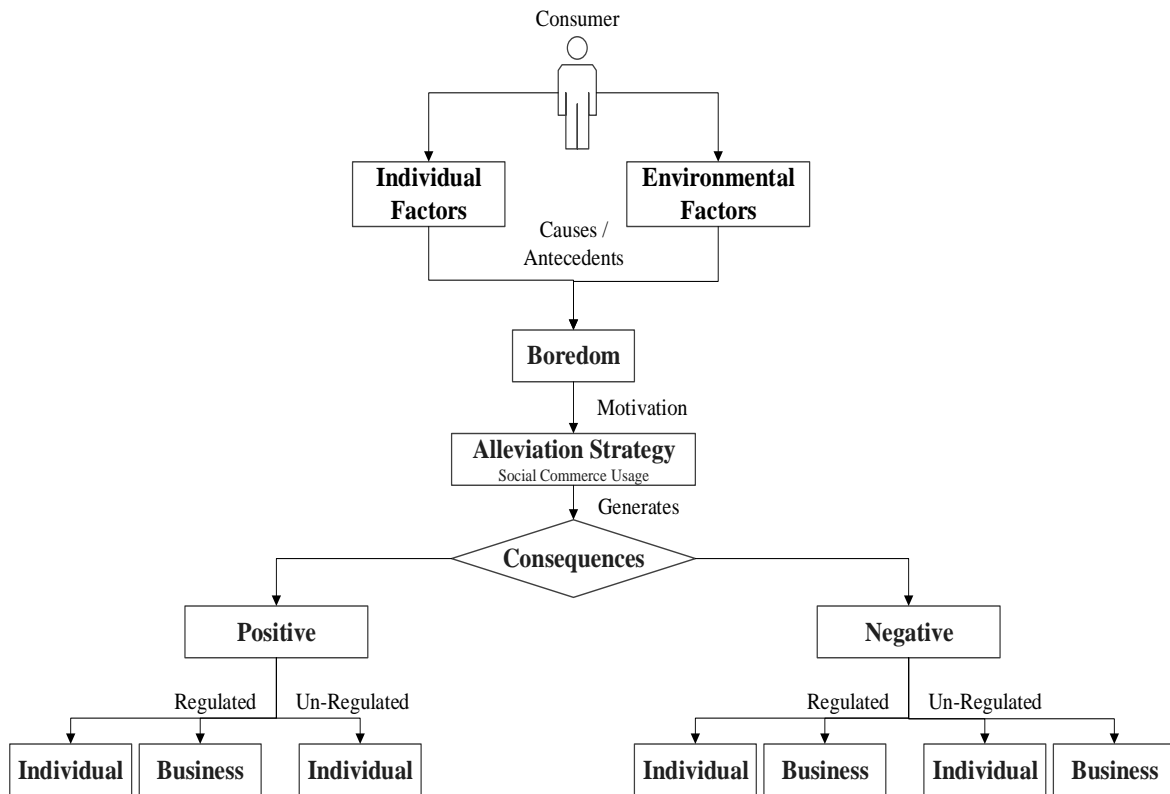
- Mismatch of internal and external factors (*the elements that derive from the fit between person and environment [Fisher, 1993]*)
- Alleviation or coping strategies of boredom (*using s-commerce as a coping strategy when seeking stimulation*)
- Internal stimulation (*individual's ability to identify and process their own feelings and thoughts and generate interesting activities [Harris, 2000; Vodanovich, 2003]*)
 1. Self-stimulation
 2. Mental stimulation
 3. Emotional stimulation
 4. Behavioral stimulation
 - External stimulation (*experiencing interest from daily activities and pleasure from leisure time [Vodanovich, 2003]*)
 1. Market stimulation
 2. Environmental stimulation
 3. Social stimulation
- Consequences of boredom (*beneficial and detrimental outcome of boredom for an individual and company*)
1. Positive
 1. Self-development (*includes creative thinking, redefining life goals and purposeful behaviour, improving social skills and escaping negative emotions [Bench & Lench, 2013; Van Tilburg &*
-

Igou, 2017; Poon & Leung, 2011; Biolcati et al., 2018]).

2. Good market performance (*boredom triggers impulse buying, frequent customer visits on platform and overall positive consumer attitude towards the companies providing a positive atmosphere [Mastro et al., 2002; Yazdanparast et al., 2015; Sundström et al., 2019])*

2. Negative

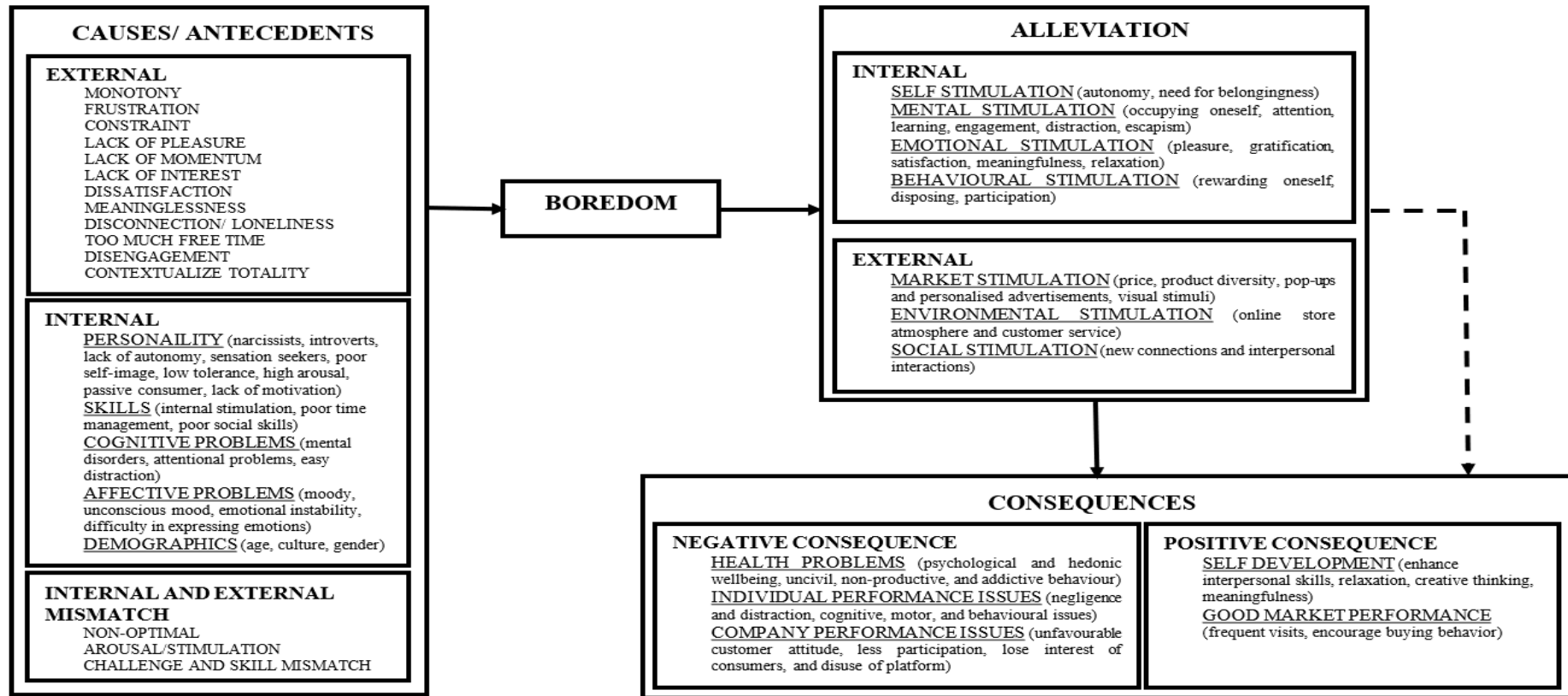
1. Health problems (*problematic behaviours and harms well-being [Stockdale & Coyne, 2020; Wegmann et al., 2018; Wang et al., 2020])*
 2. Poor performance of company and individual (*customers lose interest as company is unable to provide a good experience [Singh, 2016; Gerritsen et al. 2014])*
-

Figure 1*Literature Sequential Diagram*

Note: The arrows represent the flow of the literature review

Figure 2

Inductive Framework



Note: The arrows do not represent a statistical relationship, or the causality found in variance models. Rather, they detail an overarching sequence of relationships described by the literature on boredom in s-commerce. The dotted arrow depicts if s-commerce fails to regulate boredom and shows that it is also subject to positive and negative consequences.

4.1 Boredom's Nature

Boredom is conceptualised as a negative motivational emotion or an affective state (see Table 4 for sources) (34 sources). It is a very common yet important emotion (Biolcati et al., 2018), for it “ultimately sparked our ancestors to rub sticks together to create fire or create the wheel to carry heavy loads” (Whelan et al., 2020, p. 871), making it responsible for advancement in life (Eastwood et al., 2012). Boredom is a mundane experience and encountered throughout our lifetime based on our day-to-day activities and life orientation (Barbalet, 1999; Dal Mas & Wittmann, 2017; Ksinan et al., 2021; Skues et al., 2016). It is based on an individual's perception that a certain activity is perceived differently by an individual and causes different levels of boredom experience (Yazdanparast et al., 2015; Singh, 2016). It is conceptualised in the sample as a negative affective state of disengagement, inattention, slowness of time, lack of meaningful, mental, and physical involvement and unavailability of stimulating leisure activities (Leung, 2020; Wang et al., 2020). It is a feeling of unpleasantness, discomfort, hopelessness (“nothing means, nothing pleases, nothing matters” [Goodstein, 2005, p. 1]), monotony, low activation (making one unmotivated) and frustration (suppressing ones feeling, restlessness, fatigue, desire not fulfilled, tired, miserable) (18 sources). It is also conceptualised as a stressor and a risk factor, having negative consequences on health and well-being (Whelan et al., 2020; Regan et al., 2020; Kiss et al., 2020).

In the context of consumer behaviour, boredom is mostly used as an independent variable, especially in shopping behaviour studies (Sundström et al., 2019). It can influence and shape consumer behaviour and experiences (Hurlock, 1929; Fiske & Maddi, 1961; Bull, 1975; Studak & Workman, 2004) and triggers consumption to get rid of itself (Bozaci, 2020).

4.1.1 Types of Boredom. Three types of boredom have been highlighted in the context of s-commerce: trait, state, and leisure. State boredom has been described as an actual experience of boredom caused by external factors, such as environment and tasks (11 sources). In the sample it has been conceptualised as a state of low arousal, dissatisfaction, mismatch of challenge and skill, and inattention (e.g., mind wandering) caused by boring stimulus (Mikulas & Vodanovich, 1993; Iso-Ahola & Weissinger, 1990; Eastwood et al., 2012). For instance, boredom is aroused if a s-commerce platform is neither gratifying nor attractive; for example, it has dull colours, the multimedia is not appealing, or its products or content lack variety and novelty (Mori, 2014). Leisure boredom has been described as a consequence of having too much time available, where one is unable to handle it efficiently (spend optimally) or the leisure experiences and activities available are limited and not stimulating, engaging, novel, or exciting/pleasurable enough to engage in (Russell, 1996; Hill & Perkins, 1985; Iso-Ahola & Weissinger, 1990; Lin et al., 2009; Iso-Ahola, 1980). It is defined as the “subjective perception that available leisure experiences are not sufficient to instrumentally satisfy needs for optimal arousal ... leisure experiences are not sufficiently frequent, involving, exciting, varied or novel” (Iso-Ahola & Weissinger, 1990 pp. 4–5). S-commerce helps to occupy leisure time boredom by providing an unlimited number of fun-seeking activities, such as shopping, interactivity, and information seeking. Failure to provide adequately stimulating or captivating leisure opportunities will evoke further boredom (Leung, 2020). Leisure boredom has some similarities with trait boredom (Lepp et al., 2017). Trait boredom or boredom proneness is a personality trait. It’s the tendency or susceptibility to be bored easily (9 sources). In the sample it is conceptualised as a feeling of low satisfaction, uncomfortable, insufficient mental stimulation (Mikulas & Vodanovich, 1993), low tolerance for monotony (Rotunda et al., 2003), lack of interest, nothing to do in spare time (Greenon, 1953),

attentional and disinhibition difficulties (Struk et al., 2017). It is also known as a risk factor (confer negative mental and emotional states and addictions) and a stressor (using social media to alleviate boredom can cause information and communication overload) (Regan et al., 2020; Chou et al., 2018; Wegmann et al., 2018; Whelan et al., 2020). People with this psychological trait have high arousal levels and are easily prone to boredom. Such individuals are continuously seeking stimulation via social media and online shopping to cope with boredom (Sundström et al., 2019).

Table 4

Boredom's Nature

Code	Source
Boredom's Nature n=66	Allaby, & Shannon 2020; Barbalet, 1999; Barr et al., 2015; Biolcati et al., 2018; Bozaci, 2020; Brosseau & Frasson, 2015; Bryant & Zillmann, 1984; Bull, 1975; Catedrilla et al., 2020; Chou et al., 2018; Dal Mas & Wittmann, 2017; Diefenbach & Borrmann, 2019; Eastin et al., 2007; Eastwood et al., 2012; Elhai et al., 2018; Elpidorou, 2014; Fahlman et al., 2013; Farmer & Sundberg, 1986; Fenichel, 1953; Fisher, 1993; Fiske & Maddi, 1961; Fogel & Schneider, 2010; Gerritsen et al., 2014; Goodstein, 2005; Greenson, 1953; Hill & Perkins, 1985; Holte & Ferraro, 2020; Hurlock, 1929; Iso-Ahola & Weissinger, 1990; Iso- Ahola, 1980; Isacescu & Danckert, 2018; Jiang & Li, 2018; Ksinan et al., 2021; Kiss et al., 2020; Lee & Zelman,

2019; LePera, 2011; Leung, 2020; Lin et al., 2009; Mann & Robinson, 2009; Matic et al., 2015; Mikulas & Vodanovich, 1993; Orosz et al., 2016; Paasonen, 2018; Hill & Perkins, 1985; Poon & Leung, 2011; Ramachandiran & Jomhari 2013; Regan et al., 2020; Russell, 1996; Saleem & Iglesias, 2019; Skues et al., 2016; Singh, 2016; Siyez, 2014; Struk et al., 2017; Studak & Workman, 2004; Sundström et al., 2019; Tomczyk & Solecki, 2019; Vodanovich, 2003; Wang et al., 2020; Wang, 2019; Wang, 2018; Watt & Vodanovich, 1992; Whelan et al., 2020; Wegmann et al., 2018; Yazdanparast et al., 2015

4.2 Boredom's Function

In the current sample, the function of boredom is represented by the following steps (Table 5 for sources): (1) makes one self-aware of its feeling, (2) motivates to assess this feeling and find its root cause, (3) once it has been discovered, creates a desire to alleviate its root cause (which can be fulfilled by changing one's feeling by escaping it), and (4) changing or escaping means, finding alternatives that can transform this negative affect into a positive one.

Self-awareness advances alertness to inner and personal feelings and experiences (Govern & Marsch, 2001) and actuates the process of self-evaluation by comparing the current self to an ideal one (Wicklund & Duval, 1971). Bored individuals are usually aware of their feeling (Greenon, 1953; Bozaci, 2020), and they try to assess its source (Allaby & Shannon, 2020). Its root cause can either be from external factors (e.g., activities and environment being meaningless, monotonous, and failing to provide an optimal experience), or internal (e.g., attentional difficulties of an individual, etc.) (10 sources). Once this has been detected, boredom

triggers a strong desire or longingness (11 sources). This change or escape that boredom motivates one to have can be achieved by seeking alternatives, which are more stimulating, meaningful, and interesting (6 sources). Boredom promotes such behavioural change due to its self-regulatory function that makes it a functional emotion. A study observed that when participants were bored with page loading time due to slow Internet speed or no tabbed browsing option, they tried to have a conversation with others or listen to music to alleviate their boredom (Chen et al., 2010). This desire to escape from the unpleasant current activity or experience is so strong that the bored individual is willing to experience self-harming stimulations. A study reported 67% of male and 25% of female participants chose to give themselves electric shocks in a bored state when they were left in a room (Wilson et al., 2014; Holte & Ferraro, 2020). In the sample, particularly in an s-commerce context, the smartphones usage, social media, Internet, and online buying are the coping strategies or the alternatives that boredom motivates one to seek. These alternatives help in regulating the negative affect of boredom into a positive one.

Engaging in technology-related activities is very common for a bored person and, among them, a smartphone is the best alternative. Owing to its convenience (available anytime, anywhere), its habitual usage has become a common behavioural response to boredom. Accessing social media, the Internet and connectivity-related activities through it has become a common approach to dealing with boredom (10 sources). On average a person uses a smartphone 34 times a day (Oulasvirta et al., 2012). It's mostly used before going to bed, waiting time, and in solitude to relieve boredom (McNally & Harrington, 2017).

Boredom is a common cue to use the Internet. Its association with social or task-related commitments is a common emotional and situational motivation to go online (12 sources).

Social media usage is considered one of the modern alternatives to counter boredom (12 sources). It is popular because it's fast, easily available, and convenient. One can easily connect with the world and get access to unlimited exciting activities with just a push of a button on digital gadgets, and thus making its usage an automatic response to boredom (Alter, 2017; Brown & Kuss, 2020). The kinds of stimulation that social media provides, along with its convenience, has made its usage habitual in easing boredom (Brailovskaia et al., 2020). For instance, during the trial period of abstaining from social media, participants felt uncomfortably bored, as they were not used to its absence (Brown & Kuss, 2020).

Similarly, another important alternative is online buying, which helps to alleviate this negative state (Mano, 1999; Sundström et al., 2019; Faber et al., 1995). It is a stimulating activity which provides optimal arousal and satisfaction. People experiencing boredom have more shopping wishes and are more willing to do so (Mano, 1999). Moreover, it can anticipate and influence consumers' choice and evaluation of products or services (Bolton & Drew, 1991; Dal Mas & Wittmann, 2017; Bozaci, 2020). Boredom has motivated compulsive buyers to shop excessively (Miltenberger et al., 2003), and it's also the main reason behind impulsive buying (Guy & Banim, 2000; Bozaci, 2020; Dittmar & Drury, 2000; Geuens et al., 2004). In the s-commerce context, the product from whom consumers usually experience boredom are food and fashion apparel (Bozaci, 2020).

Table 5.*Boredom's Function*

Code	Source
Self-regulatory function n= 66	Allaby & Shannon, 2020; Alter, 2017; Barbalet, 1999; Bench & Lench, 2013; Biolcati, 2017; Biolcati et al., 2018; Bolton & Drew, 1991a, 1991b; Bozaci, 2020; Brailovskaia et al., 2020; Brown & Kuss, 2020; Catedrilla et al., 2020; Chen et al., 2010; Chou et al., 2018; Čičević et al., 2016; Dal Mas & Wittmann, 2017; Davis, 2001; Dittmar & Drury, 2000; Drach et al., 2021; Eastwood et al., 2012; Elhai et al., 2017; Fahlman et al., 2013; Faber et al., 1995; Friedländer, 2017; Dal Mas & Wittmann, 2017; Govern & Marsch, 2001; Greenson, 1953; Griffioen et al., 2020; Geuens et al., 2004; Guy & Banim, 2000; Kumar et al., 2020; Hickerson & Beggs, 2007; Holte & Ferraro, 2020; LaRose & Eastin, 2004; LePera, 2011; Leung, 2020; Li et al., 2015; Lin et al., 2009; Lin & Yu, 2008; Mano, 1999; Matic et al., 2015; Mastro et al., 2002; McNally & Harrington, 2017; Miltenberger et al., 2003; Mugon et al., 2018; Nalwa & Anand, 2003; Orosz et al., 2016; Oulasvirta et al., 2012; Pang et al., 2014; Panger, 2018; Pempek et al., 2009; Skues et al., 2016; Singh, 2016; Stockdale & Coyne 2020; Struk et al., 2017; Sundström et al., 2019; Tenzin et al., 2019; Throuvala et al., 2019; Tzavela et al., 2017; Wang et al., 2020; Wang, 2019; Wegmann et al., 2018; Whelan et al., 2020; Wicklund & Duval, 1971; Wilson et al., 2014; Yazdanparast et al., 2015

4.3 Causes of Boredom

Boredom is caused by either internal and external factors or their mismatch. In the current sample, individual (internal) and situational (external) causes of boredom are highlighted in the context of s-commerce (see Table 6 for sources).

4.3.1 External Characteristics. Boredom is a state that is caused by external factors, like situations, tasks, activities, and conditions. The nature of these external factors characterises boredom as well.

4.3.1.1 Monotony and Repetition. Boredom is a consequence of monotonous and repetitive situations, tasks, and experiences (8 sources). The repetition of content or reaching the end of a feed can act as a trigger for boredom on social media. This occurs because the uniformity and lack of freshness in social media events cause viewers to lose interest (Paasonen, 2018; Chou et al., 2018; Barkemeyer et al., 2020). Weinstein (2018) also observed that continuous scrolling for an hour led to boredom, highlighting the need for novel content. Similarly, in the shopping context, if the experience lacks variety or novelty, such as monotonous products or environments, consumers are prone to experiencing boredom (Studak & Workman, 2004).

4.3.1.2 Frustration. Frustration represents the affective component of boredom. Monotony to cause boredom is just not enough, it must be complemented with frustration (Hill & Perkins, 1985; Studak & Workman, 2004). In the context of online impulse buying, subjected monotony causes a frustrating need for change and novelty (depending on the product's engagement), hence, encouraging purchase. Similarly, complex marketing stimuli can be frustrating for consumers and increases boredom towards itself (Sundström et al., 2019).

4.3.1.3 Lack of Pleasure. Another cause of boredom is an experience that is lacking pleasure. As per uses and gratification theory (UGT), media is utilized for gratification and satisfaction, and their absence results in lower involvement in that media. If the experience of SNSs are not gratifying or pleasurable enough, its users will become bored and will position that SNS as boring (Yazdanparast, 2015; Singh, 2016). Same is the case if the web interface is not visually appealing. For instance, web interfaces with no appealing multimedia (images or videos), boring navigation elements (static effects, standard links, and buttons), dull colours (grey, silver, black), and visual characteristics (night, blurred, hazy, fog, rain, tears, dim) will contribute to the feeling of boredom (Mori, 2014). In today's world, dependency on technology has increased because it is an easy source of pleasure. When unwillingly separated from their smartphones and other devices, users may feel bored, as they have nothing at hand for entertainment and to give them pleasure (Hoffner et al., 2016). Furthermore, if the tasks at hand are utilitarian and not hedonic (entertaining or exciting) it will not only cause boredom but will make social media usage less attractive (Whelan et al., 2020; Leung, 2008; Panova & Lleras, 2016; Lin et al., 2019).

4.3.1.4 Lack of Interest. Boredom arises from disinterest and apathy towards one's surroundings. An unstimulating environment fails to provide satisfaction or diversity, thus resulting in boredom and reluctance to engage (Studak & Workman, 2004). An uninteresting SNS becomes linked with boredom, curtailing user participation, such as posting, liking or other social media actions (i.e., posting things or carrying out other social media behaviours) (22 sources).

4.3.1.5 Dissatisfaction. Boredom is known as a state or feeling of dissatisfaction (Yazdanparast et al., 2015; Singh, 2016). This arises due to a repetitive, monotonous, prolonged,

or inadequately stimulating environment and in situations of challenge and skill mismatch (17 sources). Dissatisfaction being an affective component of boredom is the negative evaluation of the experience with the product and services. If the experience of SNS (Facebook) is considered disappointing, it will be considered boring and will negatively impact the user's attitude and assessment towards it (Yazdanparast et al., 2015; Singh, 2016; Whelan et al., 2020).

4.3.1.6 Existential Suffering. Boredom can result from existential suffering. It is caused by activities, experiences, or routines having no purpose or meaning and it hinders engagement with them (knowing it is purposeless) (10 sources). Sometimes it's difficult to escape from such activities owing to obligatory constraints or individuals lacking certain skills (lack of leisure skills to spend leisure time effectively) (Iso-Ahola & Weissinger, 1990; Lin et al., 2009). Wasting time on smartphones or browsing on a social media platform that does not serve a meaningful purpose or interest will contribute to negative feelings of boredom (Weinstein, 2018; Ragheb & Merydith, 2001; Allaby & Shannon, 2020). Similarly, in an experimental study using an eye tracker, Li et al. (2009) found that visual searching online can cause boredom owing to floating ads. These ads are commercially driven and often deemed irrelevant and disregarded.

4.3.1.7 Loneliness/Disconnection. Situational loneliness ignites boredom (Van Tilburg & Igou, 2012). Solitary activities, such as watching TV or relaxing, are reported to be sources of boredom (Anusic et al., 2016). This is supported by a large-scale experience-sampling study where participants consistently reported elevated levels of boredom during alone time (Chin et al., 2017). Additionally, instances of loneliness have been connected to boredom and the initiation of smartphone usage (Smith, 2015; Diefenbach & Borrmann, 2019).

Heavy Internet users without access to the internet felt bored as they experienced a sense of being outcast and disconnected from the world, leading to a perceived void in their lives

(Kurniasih, 2017). Similarly, participants in a study who voluntarily abstained from smartphone or social media usage reported feelings of boredom, noting a sense of disconnection from friends and experiencing the fear of missing out (Stieger & Lewetz, 2018; Hoffner et al., 2016).

Additionally, quarantine restrictions on outdoor activities in the Philippines resulted in boredom among individuals, prompting increased social media usage as an alternative (Skues et al., 2016; Catedrilla et al., 2020).

4.3.1.7 Too Much Free Time. Having too much free time and limited or no leisure opportunities roots boredom. Individuals experiencing boredom have the perception of having too much time but lack novel, exciting, or sufficient range of free time experiences to satisfy themselves or fill that time (13 sources). For example, individuals may have more free time in the evenings but lack of meaningful activity to fill their time makes them bored (Sundström et al., 2019).

4.3.1.8 Disengagement. Boredom signifies disengagement (6 sources), where individuals are unable “to engage in a satisfying or stimulating activity” (Fahlman et al., 2013 p. 69) or “articulate a satisfying target for engagement” (Eastwood et al., 2012, p. 483; Gerritsen et al., 2014). It is a condition in which individuals are motivated but fail to engage with an activity or the world around them (Mugon et al., 2018). This often arises due to unengaging, unappealing, or repetitive experiences, lacking psychological involvement (Biolcati et al., 2018). For instance, lack of stimulation on Facebook correlated with decreased engagement, eventually linking boredom to the platform (Yazdanparast et al., 2015).

4.3.1.9 Contextualized Totality. Boredom as a contextualised totality states that it usually occurs at night time when one is calm but tired, lacking in energy, and winding down before going to sleep (e.g., turning off the TV, etc., and checking final things). Boredom interplays with

a contextualised totality, shapes the consumer, and gives feelings of meaninglessness (Sundström et al., 2019). Similarly, the use of social media to counter boredom is usually in places of waiting, or at night time (Brailovskaia et al., 2020). Also, impulse buying during boredom is carried out in the evening when one is alone or calm and using multi-screens at the same time (e.g., laptop, watching TV, phone) (Sundström et al., 2019).

4.3.2 Internal Characteristics of Boredom. Some individuals have certain characteristics that make them more susceptible to boredom. In the present sample, these characteristics are divided into individual and demographic categories.

4.3.2.1 Individual Characteristics. In personality, bored individuals exhibit lower motivation (Farmer & Sundberg, 1986; Watt & Vodanovich, 1992). They often lack interest in engaging hobbies that demand dedication and consistency, such as reading newspapers or outdoor activities, due to perceived laziness (Biolcati et al., 2018). Consequently, smartphones and social media become attractive alternatives, providing stimulation with minimal effort. Moreover, they have a low tolerance for the aversive environment (over or under-stimulation or waiting period or delays, like slow Internet speed) and monotony, have low or no autonomy, are sensation-seekers (they have a high level of dislike for boring people and situations), have a high arousal level and consider their self-image to be poor (10 sources). These people are narcissists (Lasch 1979; Kohut 1977; Ksinan et al., 2021) and tend to be introverted with limited social circles, potentially lacking friends for offline behavioural change (Li et al., 2015). In the online context, they are more of a consumer than a participator (Barnett & Klitzing, 2006; Ruiz Mafe & Sanz Blas, 2006; Al-Saggaf, 2020; Tzavela et al., 2017).

In terms of skills, these individuals are poor time managers, lack the skill to manage their free time, and fail to engage in stimulating activities in that free time, thus ending up intensifying

boredom (8 sources). Additionally, they may lack interpersonal skills (Ksinan et al., 2021) and internal stimulation (an inability to generate interesting activities and a low capacity to identify and process own feelings and thoughts), making them susceptible to easy boredom

From a psychological perspective, they have affective and cognitive deficits. They have more cognitive failures, are easily distracted, and face trouble focusing or paying attention to the tasks. They also report having mental disorders like Attention-deficit/hyperactivity disorder (ADHA) or physical damage, like a brain injury (20 sources). From an emotional perspective, these people are moody shoppers (Geuens et al., 2004), are passive interactors (usually browsing online with an unconscious mind), emotionally unstable (Barnett & Klitzing, 2006; Holte & Ferraro, 2020), and it is difficult for them to express or be aware of their emotions (Tzavela et al., 2017). Such individuals desire to be engaged however not knowing how, and they expect the solution will naturally come to them (Eastwood et al., 2012; Singh, 2016). They have high arousal levels and most likely become bored easily if they don't experience optimal arousal from their activities (Chou et al., 2018).

4.3.2.2 Demographic Level. At demographic level boredom varies between culture, gender, and age.

Boredom is ubiquitous and it's common to experience it across different cultures (Eastwood et al, 2012; Sundberg et al, 1991). It impacts individuals across various ages, genders, and cultures and manifests in diverse situations (8 sources). At the demographic level, boredom is seen as a culturally shared experience or knowledge that shares individual meanings (Sundström et al., 2019; Thompson et al., 1994; Goolaup, 2018). Boredom leading to screen activities is common in Asian collectivistic cultures (Lin et al., 2019).

From the perspective of gender, the current sample showed that both males and females go online to relieve boredom. They do this by seeking and browsing information, socialising and shopping (Biolcati et al., 2018; Sundström et al., 2019; Bozaci, 2020; Wang, 2019).

Examining the age factor reveals that youth are particularly susceptible to boredom (7 sources). Going online and using social media is part of youth culture. They get easily bored with it if the gratification sought is not enough for them. Studies have shown that the level of boredom associated with social media varies with age and it is inversely related to SNS boredom (Yazdanparast et al., 2015; Singh, 2016). Several factors contribute to the heightened susceptibility of this age group to boredom. Youth are often continuous sensation-seekers (they want to be entertained all the time)(Hongjun, 2006; Kiss et al., 2020), easy adaptors, and frequent users of technology (Poon & Leung, 2011; Tapscott, 2009; Harrison, 2005; Biolcati et al., 2018; Brown & Kuss, 2020), and are bored with earliest social media (e.g. Facebook) compared to their elders, as they are not gratifying enough (Yazdanparast et al., 2015; Singh, 2016). Moreover, young people are unskilled in managing their time effectively and seeking productive alternatives in an offline scenario to reduce boredom, which why they spend so much time on the Internet (Brailovskaia et al., 2020; Biolcati et al., 2018; Wang, 2019; Wegmann et al., 2018). They are usually in an emerging adulthood phase, where they are less monitored by their parents and peers and have more access to electronic gadgets and flexibility with time (Stockdale & Coyne, 2020; Lin et al., 2009). The newfound autonomy in structuring their time lacks the experience needed to effectively manage boredom (9 sources).

4.3.3 Mismatch Between Individual and Environment. Boredom is a result of a mismatch or discrepancy between the individual perception, need, or demand and the level of arousal and stimulation available in the environment (10 sources).

4.3.3.1 Non-optimal Arousal or Stimulation. Boredom is a state of non-optimal arousal or stimulation. Non-optimal arousal can be both external and internal. Lack or inadequate external stimulation causing boredom means that the environment is not stimulating. It means that the activity and environment fail to provide a satisfactory optimal experience and causes boredom (14 sources).

Non-optimal arousal or stimulation means there is either over- or under-stimulation. If it's the former, one's ability to be surprised or amazed is taken away by the excess of stimulation and, eventually, one disengages and becomes bored (Brosseau & Frasson 2015; Gerritsen et al., 2014). In the case of under-arousal or under-stimulation, the environment or activity is inadequately or insufficiently mentally or emotionally stimulating (17 sources).

4.3.3.2 Challenge and Skill Mismatch. Boredom emerges from the mismatch between the challenge level and the individual's skill set, indicating a scenario where the task or activity is too challenging, leading to a disparity between the available attentional resources and the demands of the task (7 sources). For instance, if the design of the online platform requires a lot of information or if its readable content is very long and time consuming it can make its user bored (Mori, 2014). According to the 4-Channel Model of Flow, if the task or activity is easy, one can become bored. Hence, both challenge and skill should be in an optimal position otherwise boredom will prevail (Csikszentmihalyi & Csikszentmihalyi, 1988; Guo & Klein, 2007).

Table 6*Causes of Boredom*

External Characteristics	
Code	Source
Monotony and repetition n= 13	Barkemeyer et al., 2020; Biolcati et al., 2018; Bozaci, 2020; Chou et al., 2018; Daschmann et al., 2011; Fisher, 1993; Iso-Ahola & Weissinger, 1990; Paasonen, 2018; Singh, 2016; Studak & Workman, 2004; Sundström et al., 2019; Weinstein, 2018; Yazdanparast et al., 2015
Frustration n= 3	Hill & Perkins, 1985; Studak, and Workman, 2004; Sundström et al., 2019
Constraint n=7	Iso-Ahola & Weissinger, 1990; Lee & Zelman, 2019; Lin et al., 2009; Fenichel, 1953; Steel, 2017; Studak, and Workman, 2004; Wang et al., 2020
Loneliness n=5	Anusic et al., 2016; Chin et al., 2017; Diefenbach & Borrmann, 2019; Smith, 2015; Van Tilburg & Igou, 2012
Lack of pleasure n=8	Hoffner et al., 2016; Leung, 2008; Lin et al., 2019; Mori, 2014; Panova & Lleras, 2016 ; Singh, 2016; Whelan et al., 2020;Yazdanparast, 2015
Lack of motion or momentum n=3	Elpidorou, 2018; Leung, 2020; Schwartz et al., 2013

- Lack of interest n=22 Anderson, 2004; Biolcati et al., 2018; Bozaci, 2020; Brosseau & Frasson, 2015; Catedrilla et al., 2020; Csikszentmihalyi, 1997; Eastin et al., 2007; Fisher, 1993, 1998; Farmer & Sundberg, 1986; Goodstein, 2005; Lee & Zelman, 2019; Martin et al., 2006; Paasonen, 2018; Poon & Leung, 2011; Singh, 2016; Studak & Workman, 2004; Sundström et al., 2019; Wang et al., 2020; Whelan et al., 2020; Yazdanparast et al., 2015
- Dissatisfaction n=19 Allaby & Shannon, 2020; Barbalet, 1999; Biolcati, 2017; Bolton and Drew, 1991a, 1991b; Bozaci, 2020; Brissett & Snow, 1993; Brosseau & Frasson, 2015; Chou et al., 2018; Diefenbach & Borrmann, 2019; Iso-Ahola & Weissinger, 1990; Ksinan et al., 2021; Larson & Richards, 1991; Leung, 2020; Mikulas & Vodanovich, 1993; Regan et al., 2020; Singh, 2016; Whelan et al., 2020; Yazdanparast et al., 2015
- Existential sufferings n=22 Allaby & Shannon, 2020; Bargdill, 2000; Biolcati et al., 2018; Bozaci, 2020; Daschmann et al., 2011; Fahlman et al., 2009; Fisher, 1993; Frankl, 2014; Greenson, 1951, 1953; Hunter & Csikszentmihalyi, 2003; Isacescu & Danckert, 2018; Iso-Ahola & Weissinger, 1990; Ksinan et al., 2021; Li et al., 2009; Lin et al., 2009; Ragheb & Merydith, 2001; Singh, 2016; Steel, 2017; Wang et al., 2020; Weinstein, 2018; Yazdanparast et al., 2015
- Disconnection n=5 Catedrilla et al., 2020; Hoffner et al., 2016; Kurniasih, 2017; Skues et al., 2016; Stieger & Lewetz, 2018

Too much free time n=14	Biolcati et al., 2018; Bozaci, 2020; Caldwell & Smith, 1995; Greenson, 1953; Iso-Ahola & Crowley, 1991; IsoAhola & Weissinger, 1990; Jiang & Li, 2018; Leung, 2008; Leung, 2020; Lin et al., 2019; Russell, 1996; Struk et al., 2017; Sundström et al., 2019; Wang, 2019
Disengagement n=14	Biolcati et al., 2018; Brissett & Snow, 1993; Eastwood et al., 2012; Fahlman et al., 2013; Gerritsen et al., 2014; Isacescu & Danckert, 2018; Iso-Ahola & Weissinger, 1990; Leung, 2020; Mann & Cadman, 2014; Mugon et al., 2018; Schwartz et al., 2013; Wang et al., 2020; Wegmann et al., 2018; Yazdanparast et al., 2015
Contextualised totality n=2	Brailovskaia et al., 2020; Sundström et al., 2019

Internal Characteristics of Boredom

Code	Source
Personality n=18	Al-Saggaf, 2020; Barnett & Klitzing, 2006; Biolcati et al., 2018; Chen et al., 2010; Farmer & Sundberg, 1986; Gerritsen et al., 2014; Kiss et al., 2020; Kohut 1977; Ksinan et al., 2021; Lasch 1979; Li et al., 2015; Mercer & Eastwood, 2010; Mercer-Lynn et al., 2013; Ruiz Maf~e & Sanz Blas, 2006; Rotunda et al., 2003; Siyez, 2014; Tzavela et al., 2017; Watt & Vodanovich, 1992;
Skills n=12	Barnett & Klitzing, 2006; Bozaci, 2020; Chou et al., 2018; Harris, 2000; Iso-Ahola, 1980; Iso-Ahola & Weissinger, 1990; Ksinan et

- al., 2021; Leung, 2020; Lin et al., 2009; Poon & Leung, 2011; Studak & Workman, 2004; Wang, 2019
- Affective and cognitive deficits n= 25
 Addington & Duchak, 1997; Barnett & Klitzing, 2006; Braff, 1993; Carriere et al., 2008; Chou et al., 2018; Damrad-Frye & Laird, 1989; Diamond, 2005; Eastwood et al., 2012; Elhai et al., 2018; Farmer & Fisher, 1998; Gerritsen et al., 2014; Geuens et al., 2004; Holte & Ferraro; 2020; Kass et al., 2010; Mikulas & Vodanovich, 1993; Panova and Lleras ,2016; Singh, 2016; Skues et al., 2016; Struk et al., 2017; Sundberg, 1986 ; Todman, 2003; Tzavela et al., 2017; Wallace et al., 2003; Whelan et al., 2020; Zentall, 1985
- Demographic Level (Culture/Gender/Age) n= 44
 Acee et al, 2010; Barnett, 2005; Biolcati, 2016; Biolcati et al., 2018; Bozaci, 2020; Brailovskaia et al., 2020; Britton & Shipley, 2010; Brown & Kuss, 2020; Caldwell et al., 1999; Caldwell et al., 1992; Chak & Leung, 2004; Eastwood et al, 2012; Fisher, 1993; Game, 2007; Goolaup, 2018; Grubb, 1975; Harrison, 2005; Hickerson & Beggs, 2007; Hongjun, 2006; Iso- Ahola & Weissinger ,1987; Killingsworth & Gilbert, 2010; Kiss et al., 2020; Klapp, 1986; Ksinan et al., 2021; Larson & Richards, 1991; Lin et al., 2009; Lin et al., 2019; Lin & Yu, 2008; Ng et al, 2015; Poon & Leung, 2011; Shaw et al., 1996; Singh, 2016; Spaeth et al., 2015; Stockdale & Coyne, 2020; Sundberg et al, 1991; Sundström et al., 2019; Tapscott, 2009; Thompson et al., 1994; Twenge et al., 2019; Wang, 2019; Wang et

al., 2012; Wegmann et al., 2018; Weinstein et al, 1995; Yazdanparast et al., 2015

Mismatch Between Individual And Environment

Code	Source
Challenge and skill mismatch n= 10	Allaby & Shannon, 2020; Csikszentmihalyi & Csikszentmihalyi, 1988; Eastwood et al., 2012; Elhai et al., 2018; Fisher, 1998; Gerritsen et al., 2014; Iso-Ahola & Weissinger, 1990; Larson & Richards, 1991; Mori, 2014 ; Guo & Klein, 2007
Non-optimal arousal or stimulation n=38	Allaby & Shannon, 2020; Biolcati et al., 2018; Bozaci, 2020; Brissett & Snow, 1993; Brosseau & Frasson 2015; Chou et al., 2018; Diefenbach & Borrmann, 2019; Eastwood et al., 2012; Fisher, 1993; Gerritsen et al., 2014; Harris, 2000; Hebb, 1966; IsoAhola & Weissinger, 1990; Jiang & Li, 2018; Kiss et al., 2020; Ksinan et al., 2021; LePera, 2011; Leung, 2020; Lin et al., 2019; Lin et al., 2009; Mano, 1999; Mikulas & Vodanovich, 1993; Panova & Lleras, 2016; Hill & Perkins, 1985; Piko et al., 2017; Regan et al., 2020; Singh, 2016; Siyez, 2014; Skues et al., 2016; Sundström et al., 2019; Vodanovich, 2003; Vodanovich & Kass, 1990; Wang, 2019; Wegmann et al., 2018; Weinstein, 2018; Whelan et al., 2020; Yazdanparast et al., 2015; Zuckerman, 1979

4.4 Alleviating Boredom through Stimulation

Boredom attempts to alleviate itself through its self-regulatory function. A bored individual is hungry for stimulation (Fahlman et al., 2013) and will often engage in novel and energising experiences, even if they are negative ones (Wilson et al., 2014). For that, s-commerce can reliably help manage negative moods as it provides different types of stimulation (Diefenbach & Borrmann, 2019). In the present sample, stimulations to reduce boredom are classified into internal and external categories in the context of s-commerce (see Table 7 for sources).

4.4.1 Internal Stimulation. Internal stimulation refers to “consumers’ self-feelings, moods, and emotional states” (Kuei Huang & Yang, 2008, p. 100). S-commerce provides it in the form of self, mental, emotional, and behaviour.

4.4.1.1 Self-Stimulation. Self-stimulation from practising autonomy and satisfying the need for belongingness can evade boredom.

4.4.1.1.1 **Autonomy.** Having autonomy eases boredom. For instance, having the authority to leave a boring shopping experience and having the freedom to make a decision can relieve the meaningless characteristic of boredom (Hill & Perkins, 1985; Studak & Workman, 2004).

4.4.1.1.2 **Satisfying Need for Belongingness.** During solitude, bored individuals turn to social media for shopping, and their focus shifts from the shopping activity itself to the challenge presented by social identity. Boredom in this context generates a sense of meaninglessness, prompting a desire to belong to a specific reference group and a reluctance to identify with their current self. To alleviate this boredom-induced need for belongingness, impulsive online buying becomes an immediate and compelling solution. Acquiring new clothes serves as a visual

expression of identity, offering a means to alleviate boredom by projecting a desired self-image (Sundström et al., 2019).

4.4.1.2 Mental Stimulation. The current sample highlighted the importance of mental stimulation in alleviating boredom.

4.4.1.2.1 Occupying Oneself. Bored people are drawn to mentally stimulating tasks (e.g., smartphone usage, social media, Internet, and online buying) rather than mentally exhausting ones to occupy themselves (Elhai et al., 2018). A smartphone is a great leisure tool for stimulation to pass time. Through it, individuals can access the Internet and social media, which are great way to pass the time for bored people when alone, riding or waiting for transport, medical appointments, meeting with a friend, or having nothing to do (19 sources). Before going on a road trip, boredom prone people either download content (movies) or use social media like Snapchat and YouTube (Allaby & Shannon, 2020). Moreover, they use social media sites to connect with friends and browse to get the latest information on global trends in governance, for educational research, and collaborative purpose, just to keep themselves engaged (Orifah et al., 2017). In the absence of social media, they engage in other online applications, such as Google, eBooks, and games, to fight boredom (Brown & Kuss, 2020). Similarly, during quarantine, where one had limited options, people engaged in social media applications like YouTube, Facebook, and Tik Tok to strengthen community, read books and sought information online to keep themselves busy to relieve their quarantine boredom (Toquero & Talidong, 2020). Consumers in an offline scenario shop to pass time in boredom (Mano, 1999). The same is the case in online. When consumers have nothing to do, they go online and buy products when they are exposed to advertisements like discounts, and sales (Sundström et al., 2019). A study reported that during quarantine in COVID, people were bored due to limited activities, which increased their

willingness to consume impulsively because they had nothing to do (Deng et al., 2020). They even engaged in overconsumption and stockpiling because they had nothing to do to occupy themselves and online shopping gave them a feeling of being outside their house, which at that time felt like being in a prison (Güngördü Belbağ, 2022).

4.4.1.2.2 Grabbing Attention. Entertaining and interesting content and activities on the Internet and social media are a source of mental stimulation, as it grabs consumers' attention and develops interest to quench their boredom. They disengage from their offline work to go online and browse social media (9 sources). Marketers and online shopping system designers ensure an engaging online environment and make content that is appealing enough for bored consumers to talk about and flatter their inner desires to ease boredom, which can also guarantee sales (Hongjun, 2006; Guo & Klein, 2007). For instance, fashion apparel is a multi-sensory imagery product, as it gives mental stimulation. A variety or new arrival of clothes grabs the attention of a bored consumer online. They get aroused and believe that by changing their wardrobe they can ease their negative mood. In this situation, they become impulsive and their buying decision is more emotional than rational (Park, 2015; Hjelm-Lidholm et al., 2017; Mano, 1999; Sundström et al., 2019; Bozaci, 2020; Hirschman & Holbrook, 1982). They are usually looking for a change or diversity to stimulate themselves. It's important to note that this upgradation of clothes is not extraordinary but at a mundane level. Also, bored individuals are drawn towards novel and fresh experiences to cope with boredom (Bull, 1975). Online there are many novel activities, which makes bored people go online in search of something fresh that grabs their attention.

4.4.1.2.3 Learning. Social media provides an effective means to discover and explore new things because of its endless glut of activities for mental stimulation, such as seeking new

information, contacts, multimedia, and latest news (Tzavela et al., 2017; Whelan et al., 2020), which can help offset the feeling of boredom.

4.4.1.2.4 Engagement. Bored individuals participate in high levels of surfing for seeking information on the Internet to be mentally engaged. The more they search, the more they get exposed to a variety of content which cognitively absorbs them. News and up-to-date information on social media is one way to engage (15 sources). Also, being mentally involved in the details and information of products in the shopping process can source mental incentive and reduce boredom (Polly et al., 1993; Studak & Workman, 2004).

4.4.1.2.5 Distraction. Distraction is a beneficial way to alleviate boredom. Smartphones and social media are regarded as effective tools for diversion from tedious tasks and social isolation. Bored individuals often turn to online platforms to take a break from monotonous activities (10 sources).

4.4.1.2.6 Escapism. Escapism means a way to escape reality. Online shopping to relieve boredom involves a consumer cognitively, and through a satisfying shopping experience, a bored consumer escapes reality and real-life problems (Sundström et al., 2019).

4.4.1.3 Emotional Stimulation. Boredom is an unpleasant feeling which can be cured through emotional stimulation. Emotional stimulations that a bored individual seeks for easing boredom are:

4.4.1.3.1 Pleasure. During utilitarian tasks, one experiences a cognitive pull to engage in something emotionally stimulating, and smartphone usage, social media, Internet and online buying are a source of hedonic benefits (Whelan et al., 2020). Similarly, in the situation of under-stimulation, it gives the feeling of liveliness to bored people. They go online for endless

entertaining and funny content which satisfies their sensation-seeking needs to achieve a pleasurable internal state (22 sources). This hunt for joy from browsing the Internet is to experience positive emotions in overcoming boredom (Mori et al., 2014; Sundström et al., 2019). Furthermore, online shopping for bored individuals is like a war of boredom vs pleasure. They shop online to improve their situation. Just filling the cart with the right products is stimulating for them, so they keep browsing products to continue this thrill of pleasure. For them, the price seems irrelevant, and they are ready to pay more to achieve contentment during boredom (Dal Mas & Witmann, 2017; Bozaci, 2020). Participants in a study expressed this feeling as “I was bored so it was worth the money” (Sundström et al., 2019, pp 153). All this seems wholesome as long as it makes them happy.

4.4.1.3.2 Gratification. Gratification in an online activity is “the satisfaction of needs for surveillance, personal identity, information learning, socialization, escape, entertainment and interaction” (Huang, 2008, p. 407). According to UGT, “gratifications [are] sought to explain individual media exposure” (Yazdanparast et al., 2015, pp. 470). Consumers are motivated to use SNSs that offer gratification because it can satisfy sensation-seeking needs to evade their boredom (Oulasvirta et al., 2012; Lin et al., 2019; Allaby & Shannon, 2020; Ksinan et al., 2021).

4.4.1.3.3 Satisfaction. Satisfaction is also a cure for boredom (Skues et al., 2016). Making online purchases of the right products serves as a reward for bored individuals, offering them instant satisfaction. Impulse buying becomes a means for them to find gratification in material possessions, helping them overcome negative feelings (Sundström et al., 2019).

4.4.1.3.4 Meaningfulness. Smartphones and social media usage makes one feel less meaninglessness. By finding and engaging in the right level of stimulating activity, bored individuals feel the time they spend is meaningful which consequently reduces the aversive feeling

of boredom, especially in leisure time (Lepik & Murumaa-Mengel, 2019; Leung, 2020). When a bored individual is browsing different social media at night or in solitude, they experience meaningfulness. At that time their focus is not on shopping, but they are being challenged by social identity. They buy new clothes to link themselves with a particular group and alleviate the impression of being unfit. Hence, their main motive to buy clothes online is to visually display their identity and reduce the feeling of meaningfulness which eases their boredom (Sundström et al., 2019).

4.4.1.3.5 Relaxation. Many people go online to relax and use it as a way to escape their problems. Bored individuals are expected to engage in soothing activities to suppress this feeling (Biolcati et al., 2018). Online activities can supply stimulation according to the user's demand and bored individuals seek low-arousal activities to relax. These activities serve as a boredom-reducing strategy to alleviate stress (8 sources).

4.4.1.4 Behavioural Stimulation. Current findings report that behavioural stimulation can ease boredom.

4.4.1.4.1 Rewarding Oneself. One way to alleviate boredom is to reward oneself. Boredom and shopping-related studies have reported that bored individuals shop online and ignore the price when they are rewarding themselves for the hard work or hard time they experienced in their daily life, for example stress from work (Sundström et al., 2019).

4.4.1.4.2 Participation. Another way is to participate online. Bored people have higher instances of “liking”, posting (selfies), content generating (reviews) on social media with the aim to attract attention and escape boredom (Biolcati & Passini, 2018; Orosz et al., 2016; Poon & Leung, 2011; Friedländer, 2017; Ksinan et al., 2021).

4.4.2 External Stimulation. External stimulation indicates stimuli from the environment. Here, three types of external stimulation are mentioned in our sample which alleviates boredom in the s-commerce context: market, environment, and social stimulation.

4.4.2.1 Market Stimulation. Market stimulation in s-commerce is like price, product, easy access, and ads. Boredom studies have shown that bored consumers have reacted more to these market stimuli to ease their boredom.

4.4.2.1.1 Price. The outlook of prices online and offline are different among consumers. Online prices somehow seem cheaper compared to the stores; in addition, online consumers have the opportunity to bargain (e.g., group buying). Attractive prices and offers stimulate a bored individual to online impulse buying behaviour. Consumers in this context make decisions influenced by boredom versus pleasure when exposed to marketing stimuli. They actively seek sales and promotions and feel a sense of urgency towards favourable pricing. So when they see a low-cost product or an offer of free shipping and return, they seize the moment and buy it immediately. Hence, price as a market stimuli easily triggers and motivates purchasing behaviour to get stimulated in avoiding boredom (Sundström et al., 2019; Bozaci, 2020; Piron, 1991; Kumar et al., 2020).

4.4.2.1.2 Product Diversity. Monotony causes boredom, and seeking innovation or novelty alleviates it. Similarly, product diversity stimulates bored consumers to make purchases online to alleviate their boredom and it also affects their preferences (Bozaci, 2020; Kumar et al., 2020).

4.4.2.1.3 Pop-ups and Personalised Advertisements. Pop-ups and personalised advertisements on social media also play a part in triggering impulse buying among bored consumers (Kumar et al., 2020). Pop-ups of cross- and up-selling influences consumer's buying

behaviour. Similarly, advertising activities acting on scarcity, like “available now” or “discount today” and offers like “free shipping” and “return”, stimulate them to make a purchase in boredom (Sundström et al., 2019).

4.4.2.1.4 Visual Stimuli. In an offline context, bored people use sensory modalities in purchasing fashion products (Studak & Workman, 2004). Similarly, in an online context, the visual content of a product is very important for purchase decisions. Visual stimuli of products on social media make consumers like the product easily. They get influenced and visit the website of a product by just seeing how great it looked in the picture of an online advertisement (Sundström et al., 2019).

4.4.2.2 Environmental Stimulation. Bored people favour a stimulating environment to improve their emotions. In an offline scenario, a pleasant shopping atmosphere, such as store outlook and customer service (helpful staff), matters a lot. They not only help consumers make shopping decisions but also manage their negative feelings. Hence, an engaging atmosphere giving positive vibes can trigger purchase behaviour and alleviate boredom (Mano, 1999; Lazarus, 1991; Fogel & Schneider, 2010; Studak & Workman, 2004). For instance, a bored passenger waiting at the airport is motivated to shop on impulse if the store gives them a pleasant, exotic, or exciting atmosphere (Geuens et al., 2004). The same goes for s-commerce. The online store environment can help individuals cope with boredom and trigger impulse buying. Bored people don't get the feeling of what to buy or not, it's the attractiveness of the online store or website that triggers browsing and eventually results in impulsive buying (Eroglu et al., 2003; Sundström et al., 2019; Kumar et al., 2020). The primary concern of marketers in online scenarios is to make the experience of their bored consumers' as comfortable and exciting

as possible because the platform's environment can influence consumers' buying preferences and behaviour (Bozaci, 2020).

4.4.2.3 Social Stimulation. S-commerce is also a source of social stimulation for bored individuals. S-commerce makes it easier to reach out to friends and family. It offers opportunities to build new connections and interpersonal interactions (Diefenbach & Borrmann, 2019). Bored people usually prefer not to be alone and engage in highly interactive sessions online for social stimulation and to relieve boredom (18 sources).

Table 7.

Alleviating Boredom

Internal stimulation	
Code	Sources
Mental Stimulation n= 51	Allaby & Shannon, 2020; Biolcati et al., 2018 ; Bozaci, 2020; Brailovskaia et al., 2020; Brandtzaeg & Heim, 2011; Brown & Kuss, 2020; Bryant & Zillmann, 1984; Bull, 1975; Cupchik, 2011; Deng et al., 2020; Diefenbach & Borrmann, 2019; Elhai et al., 2018; Fasae & Adegbilero-Iwari, 2016; Fisher, 1998; Friedländer, 2017; Gerritsen et al., 2014; Güngördü Belbağ, 2022; ; Hjelm-Lidholm et al., 2017; Hirschman & Holbrook, 1982; Hongjun, 2006; Jiang & Li, 2018; Lepik & Murumaa-Mengel, 2019; Li et al., 2015; Lin et al., 2019; Lin & Tsai, 2002; Leung, 2015; Leung, 2020; Mano, 1999; Mastro et al., 2002; Orifah et al., 2017; Orosz et al., 2016; Paasonen, 2018; Park,

	2015; Polly et al., 1993; Saleem & Iglesias, 2019; Schmitt et al., 2018; Siyez, 2014; Shi et al., 2011; Steel, 2017; Studak & Workman, 2004; Sundström et al., 2019; Tenzin et al., 2019; Throuvala et al., 2019; Toquero & Talidong, 2020; Twenge et al., 2019; ; Tzavela et al., 2017; Wang et al., 2020; Whelan et al., 2020; Van Deursen et al., 2015; Guo & Klein, 2007
Emotional Stimulation n= 33	Allaby & Shannon, 2020; Biolcati et al., 2018; Billieux et al., 2015; Bozaci, 2020; Brown & Kuss, 2020; Chou et al., 2018; Csikszentmihalyi, 1997; Dal Mas & Witmann, 2017;David et al., 2015; Diefenbach & Borrmann, 2019; Ebling, 2015; Elhai et al., 2018; Hoffner et al., 2016; Hormes, 2017; Huang, 2008; Iso-Ahola & Weissinger, 1990 ; Ksinan et al., 2021; Lepik & Murumaa-Mengel, 2019; Leung, 2020; Li et al., 2015; Lin et al., 2019; Lin et al., 2009; Mori et al., 2014; Oulasvirta et al., 2012; Paasonen, 2018; Skues et al., 2016; Sundström et al., 2019; Tzavela et al., 2017; Wang et al., 2020; Wang et al., 2020 Wegmann et al., 2018;; Whelan et al., 2020; Yazdanparast et al., 2015
Behavioural Stimulation n=6	Biolcati & Passini, 2018; Bozaci, 2020; Friedländer, 2017; Ksinan et al., 2021; Orosz et al., 2016; Poon & Leung, 2011
<hr/> External stimulation	
<hr/> Code	<hr/> Sources
<hr/>	

Market Stimulation n= 5	Bozaci, 2020; Kumar et al., 2020; Piron, 1991; Studak & Workman, 2004; Sundström et al., 2019
Environmental Stimulation n= 9	Bozaci, 2020; Eroglu et al., 2003; Lazarus, 1991; Fogel & Schneider, 2010; Geuens et al., 2004; Kumar et al., 2020; Mano, 1999; Studak & Workman, 2004; Sundström et al., 2019
Social Stimulation n= 19	Allaby & Shannon, 2020; Brailovskaia et al., 2020; Caldwell et al., 1999; Čičević et al., 2016; Diefenbach & Borrmann, 2019; Fasae & Adegbilero-Iwari, 2016; Larson et al., 1982; Leung, 2020; Li et al., 2015; Li et al., 2009; Mastro et al., 2002; Nicolescu, 2014; Oulasvirta et al., 2012; Pang et al., 2014; Poon & Leung, 2011; Steel, 2017; Stockdale & Coyne, 2020; Twenge et al., 2019; Whelan et al., 2020

4.5 Consequences of Boredom

Findings indicate that boredom is related to negative and positive outcomes (see Table 8 for sources). These are mentioned below.

4.5.1 Negative Consequences. Boredom is associated with various negative consequences, which is why it is conceptualised as a negative affective state. Following are the negative outcomes of boredom in a s-commerce context.

4.5.1.1 Health Problems. Boredom is associated with various health issues related to well-being and behaviour that is unproductive, uncivil, and addictive.

4.5.1.1.1 Eudaimonic and Hedonic Well-being. Boredom can harm one's well-being over time. If boredom isn't regulated or alleviated in a constructive way (e.g., utilitarian and social purpose), it can damage one's psychological well-being by producing existential problems (i.e.,

lack of motivations or sense of direction) (Biolcati et al., 2018; Hunter & Csikszentmihalyi, 2003). This feeling of meaninglessness triggers the need of belongingness, which leads to impulsive decisions (Sundström et al., 2019). Moreover, it makes it difficult for individuals to be expressive, and they often have poor self-image and social skills (Ksinan et al., 2021; Tzavela et al., 2017). All of these negatively affect positive development of an individual.

Similar is the case with hedonic well-being. Alleviating boredom online has led to adverse emotionality in youth (Tzavela, et al., 2017). It enhances the feelings of isolation and loneliness (Fenichel, 1953; Winnicott, 1961; Biolcati et al., 2018). According to bored housewives (who are at home and can't pursue their careers), being socially isolated at home, they experience the constraint and meaninglessness feature of boredom, which they counter through social media usage. It's an easy gateway to escape their problems, owing to its unlimited activities, which sources different stimulations to its users. But at the same time it makes things less manageable (Steel, 2017). Boredom is conceptualised as a stress factor in the social media context. It makes one irritated, pressured, sad, and uncomfortable (Whelan et al., 2020). This stress leads to strain in the form of information and communication overload. It happens when individual to avoid boredom continuously use social media but end up with social media fatigue or dissatisfaction from it (Whelan et al., 2020). Especially during the pandemic, this type of habitual unregulated social media usage in boredom became problematic for individuals' health (Skues et al., 2016; Catedrilla et al., 2020; Bench & Lench, 2013).

Internet addiction, a consequence of boredom, leads to aggression (Liu et al., 2011). Similarly, boredom is linked with anger, hostility, and verbal aggression (Dahlen et al., 2004; Piko et al., 2017). Other negative feelings associated with boredom are dissatisfaction (dissatisfaction with a product can halt its usage), depression and anxiety, conspiracy beliefs,

paranoia, frustration (boring shopping experience), awkwardness, emptiness and/or sadness (8 sources).

FOMO (fear of missing out) is a negative feeling generally known as fear of missing out on rewarding opportunities. In the context of social media, it's a threat of being left out from online activities. FOMO causes continuous use or checking on social media to an extent that it may become problematic. Boredom is linked to the fear of missing out as when one is not cognitively stimulated or entertained, one's mind wanders and ends up with FOMO (Przybylski et al., 2013; Holte & Ferraro, 2020). FOMO has reported more engagement with social media and has caused sleep deprivation due to staying up late at night, lack of motivation to carry out daytime tasks, and inattention.

4.5.1.1.2 Behavioural Problems. Experiencing negative affects is one thing but adverse behaviour that follows is another consequence. Several studies report that boredom negatively affects behaviour. Prolonged use of technology to alleviate it has reported several addictive and problematic kinds of behaviour (Catedrilla et al., 2020; Stockdale & Coyne, 2020; Eastin et al., 2007; Wegmann et al., 2018; Rotunda et al., 2003)

From a behavioural perspective, boredom has been responsible for various unproductive behaviours, like less involvement in hobbies (Biolcati et al., 2016) or mirroring uncivil responses or comments online (as aggressive and harsh online discussions seem entertaining) (Koban et al., 2018).

Similarly, bored people have indications of attention-deficit/hyperactivity disorder (ADHD) (behavioural disorder) (Malkovsky et al., 2012; Chou et al., 2018) and boredom among youth having ADHD leads to Internet addiction given its stimulating activities and easy access

(Ko et al., 2012). Moreover, boredom can lead to reduced self-control, prompting impulsive decisions like excessive buying. This behaviour often results in overspending and subsequent feelings of regret (Baumeister, 2002; Sundström et al., 2019)

In the context of s-commerce, boredom causes smartphone, social media, and Internet addiction. Countering boredom has led to Internet addiction, and the relationship is proven in many studies (32 sources). The reasons for this addiction among bored individuals are poor parental monitoring, having nothing to do in their free time, situational factors like failing to find meaningful alternatives, not having external stimulation like pleasure, interest, and excitement from daily activities and their social circle, poor free time management, having ADHD, and being a high sensation seeker (15 sources).

Another addiction which is a consequence of boredom is associated with social media (9 sources). If a bored individual goes online and fails to engage in activity which is not challenging, meaningful, or stimulating enough for their need, they will end up enhancing boredom and will continue using a smartphone or social media. A boredom cycle highlighted in the sample literature states that using social media to alleviate boredom can lead to more boredom. Its content, may it be novel or new, with time becomes repetitive and dull and leads to boredom again. For instance, engaging in online content too often can result in it becoming homogenous; content that may appear novel or new to start with will eventually become repetitive and dull, once more leading to boredom. Also, continuously engaging in unconstructive activities online (wasting time for hedonic benefits) can make it harder to feel stimulated and lead to further boredom and consequently further consumption (Paasonen, 2018).

Over time, these addictions can lead to the development of anxiety, depression, and stress. Therefore, the probability of having these addictions is higher in boredom (Paasonen,

2018). This usage can become problematic in the future (Weinstein, 2018). People who have had these addictions are seekers of sensational activities (Lin et al., 2019), habitual users of the smartphone (Wegmann et al., 2017), and have low self-regulation (Wegmann et al., 2018). Using social media in boredom not only leads to its problematic use initially but in the long term (2–3 years or more) users lose their self-control, leading to the development of negative emotions like anxiety, depression, and stress. Moreover, social media content is full of negativity, like cyberbullying, felonious behaviour, and lack of good role models or peer support, which are unsupportive of what young adults need currently in their life (Abell & Brewer, 2014; Straksrud et al., 2013; Stockdale & Coyne, 2020).

4.5.1.2 Company Level Performance. Bored people seek favourable shopping environments which impact their purchases (Mano, 1999; Fogel & Schneider, 2010). At a company level, if boredom is associated with their products, services, or even their image, they will face various problems and this could cost them their customers.

Firstly, there will be unfavourable customer attitude. Marketers failing to provide an attractive outlook on their platform or failing to make their platform user-friendly will result in consumers having a negative attitude towards them and their associations. For instance, the boredom around Facebook didn't harm just its brand but the advertisements on its platform were also viewed negatively by its users. Failing to provide gratification, Facebook lost its customers' interest (Yazdanparast et al., 2015; Singh, 2016; Panger, 2018).

Secondly, boredom can negatively influence customer participation on social media. When bored, individuals become passive users, and don't participate, only using social media for browsing jokes and memes. This consumption is absentminded, resulting in low engagement with the platform (Saleem & Iglesias, 2019).

Thirdly, in terms of content, if it's monotonous and lacks diversity, it won't capture its users' attention and eventually they will lose interest (Barkemeyer et al., 2020).

Fourthly, boredom can cause disuse of the online platform completely. Issues like social media fatigue affects the usage of social media. It is a feeling of burnout and being tired from using it too much (Ravindran et al., 2014). Bored people use social media for stimulation, excitement, and to pass the time (Ku et al., 2013; Whiting & Williams, 2013). But if they don't get the right amount of arousal from it they continue consuming it for longer periods and eventually such usage can turn into information (sites, content) and communication (social, interaction) overload. This causes users to become overwhelmed and stressed; therefore, they may decide to halt its usage (Zhang et al., 2016). This can negatively affect the profitability and goodwill of the company and its user base will decrease. In contrast, for individuals, it could prove to be healthy, as they have decided to take a break from being online and focus on other positive things (Whelan et al., 2020).

4.5.2 Positive Consequences. In the current sample, two positive consequences of boredom have emerged (see Table 8 for sources). One is self-development from the perspective of an individual and the other is a good market performance from the marketer's perspective.

4.5.2.1 Self-development. Being a negative affective state, boredom has reported positive influence on individuals, and self-development is a prominent one. Boredom can drive people towards a better quality of life, enhancing their skills and capabilities, omitting the negativity from their lives, and can inspire living.

4.5.2.1.1 Enhance Interpersonal Skills: Boredom improves one's interpersonal skills. Bored people participate more online. They update their profiles, share their point of view on forums, and interact with their friends via social and user-generated content features on social

media. Doing so not only alleviates boredom but also boosts their confidence and social skills (Poon & Leung, 2011; Leung, 2020). In a study of adolescents and online engagement, different typologies were generated. In the “killing boredom” typology, the individuals had the urge to fulfil their need for belongings and self-esteem (Tzavela et al., 2017). Boredom encouraging online participation also fulfils these needs.

4.5.2.1.2 Relaxation: Boredom helps to relieve stress. As a functional emotion boredom motivates one to seek optimal arousal in activities which are relaxing. Bored individuals are motivated to participate in screen activities for enjoyment and relaxation. This motivation extends to online shopping, which they find stimulating. As a result, these activities contribute to positive emotional regulation (Leung, 2015; Biolcati et al., 2018).

4.5.2.1.3 Subjective Well-being. Boredom leading to impulse buying of the right product contributes to subjective well-being (Sundström et al., 2019).

All these contribute to one’s self-development and even though boredom is a negative emotion it can be associated with positive and constructive consequences (Van Tilburg & Igou, 2017).

4.5.2.2 Market Performance. Bored individuals often turn to shopping activities as a means to shift from a negative mood to a positive one. They visit online stores in search of stimulation, pleasure, distraction, and engagement to counter this negative feeling. This behaviour presents a valuable opportunity for marketers. Creating an appealing store environment, offering excellent service, ensuring ease of use, providing a variety of goods, and introducing novelty can attract and influence the intentions of bored customers towards making purchases (Guo & Klein, 2009), as boredom triggers “must-have” cravings for shopping in these

circumstances (Sundström et al., 2019). Online platforms that are interesting or offer hedonic experiences can attract bored individuals as frequent visitors (Mastro et al., 2002; Fogel & Schneider, 2010). Additionally, engaging content online has the potential to create a positive attitude in bored consumers towards the platform or product. So marketers should keep in mind that their content should be exciting when posting their ads (Kim, 2000). In short, boredom has the potential to make consumers engage in actual shopping online, given that the marketers make their experience enjoyable and stimulating.

Table 8.

Consequences of Boredom

Positive Consequences	
Of Boredom	
Code	Sources
Self-development n=26	Bell, 2011; Biolcati et al., 2018; Diefenbach & Borrmann, 2019; Ebling, 2015; Elpidorou, 2015; Elpidorou, 2014; Greenberg et al., 2004; Heine et al., 2006; Leung, 2015; Leung, 2020; Lin et al., 2009; Mann & Cadman, 2014; McGregor & Little, 1998; Newsweek, 2009; Poon & Leung, 2011; Ryff, 1989; Sheldon & Kasser, 1995; Sheldon et al., 1996; Smallwood & Schooler, 2006; Smith, 1981; Throuvala et al., 2019; Van Tilburg & Igou, 2017; Toohey, 2011; Tzavela et al., 2017; Van Tilburg & Igou, 2012; Van Tilburg & Igou, 2011

Market Performance n= 5 Fogel & Schneider, 2010; Guo & Klein, 2009; Kim, 2000 ; Mastro et al., 2002 ; Sundström et al., 2019

Negative Consequences of Boredom

Health Problems

Code	Sources
Hedonic and Eudaimonic well-being n= 27	Berg et al., 2010; Biolcati et al., 2018; Bolton & Drew, 1991a, 1991b; Catedrilla et al., 2020; Dahlen et al., 2004; Eastwood et al., 2012; Elhai et al., 2018; Fenichel, 1953; Hayran & Anik, 2021; Holte & Ferraro, 2020; Hunter & Csikszentmihalyi, 2003; Ksinan et al., 2021; Lee & Zelman, 2019; Liu et al., 2011; Pereira et al., 2020; Piko et al., 2017; Przybylski et al., 2013; Skues et al., 2016; Steel, 2017; Studak & Workman, 2004; Sundström et al., 2019; Tzavela, et al., 2017; Wang et al., 2020; Whelan et al., 2020; Winnicott, 1961 ; Yazdanparast et al., 2015
Addictive/problematic/non-productive behaviours and disorders n= 81	Abell & Brewer, 2014; Bearden et al., 1989; Biolcati et al., 2016; Bozaci, 2020; Carroll & Huxley, 1994; Catedrilla et al., 2020; Cheek, 1973; Chou et al., 2018; Dahlen et al., 2005; David et al., 2015; Davis, 2001; Diefenbach & Borrmann, 2019; Drach et al., 2021; Eastin et al., 2007; Elhai et al., 2017; Elhai et al., 2018; Elhai et al., 2019; Ho, 1989; Iso-Ahola & Crowley, 1991; Iso-Ahola & Weissinger, 1987; Jiang & Li, 2018; Kardefelt-Winther, 2014; Kass & Vodanovich, 1990; Kiss et al., 2020; Ko et al., 2012; Koban et al.,

2018; Ksinan et al., 2021; Lampe et al., 2008; LaRose et al., 2003; Lepp et al., 2017; Leung, 2008; Leung, 2020; Lichner et al., 2014; Lin & Yu, 2008; Lin et al., 2009; Li et al., 2015; Lin et al., 2019; Malkovsky et al., 2012; Martínez-Vispo et al., 2019; Matic et al., 2015; Mercer & Eastwood, 2010; Moore, 2000; Orcutt, 1984; Nalwa & Anand, 2003; Oulasvirta et al., 2012; Orosz et al., 2016; Paasonen, 2018 ; Pempek et al., 2009; Poon & Leung, 2011; Rahman, 1992 ; Rahmani & Lavasani, 2011 ; Raman & Pramod, 2014; Roberts et al., 2014; Robinson & Berridge, 1993, 2001; Rotunda et al., 2003; Ruiz-Palmero et al., 2019; Seo et al., 2009; Siyez, 2014; Skues et al., 2016; Stieger & Lewetz, 2018; Stockdale & Coyne, 2020; Straksrud et al., 2013; Tao et al., 2010; Tenzin et al., 2019; Throuvala et al., 2019; Tomczyk & Solecki, 2019; Tzavela et al., 2017; Wang, 2019; Wang et al., 2020; Wegmann et al., 2018; Weinstein, 2018; Weybright et al., 2015; Whang et al., 2003; Whelan et al., 2020; Wolniewicz et al., 2020; Zhou, 2010; Zhou & Leung, 2012; Zuckerman et al., 1976

Performance	
Code	Source
Individual level	Asensio-Sánchez, 2014; Barkemeyer et al., 2020; Barmack, 1938;
Performance n=55	Billieux et al., 2015; Biolcati et al., 2018; Blunt & Pychyl, 1998 ; Bozaci, 2020; Brand et al., 2016; Carr, 2011; Cernovsky et al., 1997; Chambel & Curral, 2005 ; Chen et al., 2010; Chang et al., 2018;

	Conrad, 1997; Dal Mas & Wittmann, 2017; Drory, 1982; Eastin et al., 2007; Eastwood et al., 2012; Elhai et al., 2017; Elhai et al., 2018 ; Elhai et al., 2019; Fisher, 1993; Gerritsen et al., 2014; Hamilton, 1983; Holte & Ferraro, 2020; Isacescu et al., 2017; Kass et al., 2001; LePera, 2011; Lepik & Murumaa-Mengel, 2019; Leung, 2020; Li et al., 2015; Lin et al., 2019; Malkovsky et al., 2012; Martin et al., 2006; O’Hanlon, 1981; Pekrun, 1992; Pekrun et al., 2002; Rotunda et al., 2003; Salvucci & Taatgen, 2008; Skues et al., 2016; Singh, 2016; Smith, 1981; Struk et al., 2016; Struk et al., 2017 ; Studak & Workman, 2004; Sundström et al., 2019; Thackray et al., 1977; Tzavela et al., 2017; Vodanovich et al., 2001; Watt & Vodanovich,1992; Wang, 2020; Wegmann et al., 2018; Whelan et al., 2020; Wyatt, 1929; Yazdanparast et al., 2015
Company level	Barkemeyer et al., 2020; Fogel & Schneider, 2010; Ku et al., 2013;
Performance n= 14	Mano, 1999; Quan-Haase & Young, 2010; Panger, 2018; Ravindran et al., 2014; Saleem & Iglesias, 2019; Singh, 2016; Whelan et al., 2020; Whiting & Williams, 2013; Yazdanparast et al., 2015; Zhang et al., 2016

4.6 Defining Boredom

The conceptual definition of boredom in the s-commerce context using the steps of grounded theory mentioned in Table 2 comprised of five categories which emerged as a result of the analysis. These categories can be seen in Table 3, which also displays the lower or sub

categories. The key or core theme/category of this study's analysis was "boredom's function", so boredom is defined in this study from a functional perspective. Based on the inductive framework in Figure 2 and in the light of the rules and guidelines of a good conceptual definition in tables 9 and 10 (Wacker, 2004; Suddaby, 2010), boredom is defined as "an individual's perception based negative affective state and/or trait, having a self-regulatory function, with the aim to seek internal and external stimulation to relieve itself irrespective of its consequences (positive or negative) on one's wellbeing."

Table 9.

8 Rules for Conceptual Definitions (adapted from Wacker, 2004, p. 384)

-
- 1 "Definitions should be formally defined using primitives and derived terms."
 - 2 "Each concept should be uniquely defined."
 - 3 "Definitions should include only unambiguous and clear terms."
 - 4 "Definitions should have as few as possible terms."
 - 5 "Definitions should be consistent within [their] field."
 - 6 "Definitions should not make any term broader."
 - 7 "New hypotheses cannot be introduced in the definitions."
 - 8 "A statistical test for content validity must be performed after the terms are formally defined."
-

Table 10.

Guidelines for Conceptual Clarity (adapted from Suddaby, 2010, p. 347)

-
- 1 “Offer definitions of key terms and constructs.”
 - 2 “The definition should capture the essential properties and characteristics of the concept or phenomenon under consideration.”
 - 3 “A good definition should avoid tautology or circularity.”
 - 4 “A good definition should be parsimonious.”
-

This study’s definition of boredom follows rule of replacement; for instance, definiens (negative affective) can be substituted in any sentence for the definiendum (boredom) without changing the sentence’s meaning. All terms used in the definition are unique and no overlapping exists. Modifiers, such as the kind of stimulation and consequences, are used to free the definition from ambiguity and vagueness. This definition uses fewer terms are used to convey the essence of the concept and followed the rule of parsimony. Since the inductive framework was built on the context of s-commerce and this definition comprises its themes, it is therefore consistent with its field. It is not the expansion of any current definition and nor does it contain any new hypothesis (antecedents, outcomes) – instead of the words “increase” or “decrease”, “aims to” is used. This definition is free from circularity and unclear terminologies. It acknowledges that it is reliving itself as an expected outcome without guaranteeing its realisation.

5. Discussion

This study rigorously investigated boredom in the context of s-commerce using grounded theory methodology. This approach effectively identified and defined boredom within this context, uncovering new linkages among variables (indicated in Figure 2). The findings addressed research questions by highlighting boredom's nature, function, antecedents, alleviation strategies, and consequences. Moreover, it defined s-commerce-related boredom and offered future research directions for interested scholars.

5.1.1 Conceptual definition of boredom in the social commerce context

This refers to our RQ1. Boredom in current study is defined as: *an individual's perception based negative affective state and/or trait, having a self-regulatory function, with the aim to seek internal and external stimulation from s-commerce to relieve itself irrespective of its consequences (positive or negative) on one's well-being.*

5.1.2 Boredom is a functional emotion

The study's findings indicate that boredom is a negative affective state that is commonly experienced in our day-to-day activities. This experience is mundane and is based on an individual's perception. As Hill and Perkins (1985) point out in their model of boredom, the same stimuli can be inferred differently by individuals leading to different experiences and outcomes. The three types of boredom discussed in the s-commerce context are trait boredom, state boredom, and leisure or free-time boredom, each of which influences consumer behaviour.

Negative states have more influence on individuals than positive ones. For instance, negative moods foster in-depth information processing, impactful impressions, and a quest for meaning in adverse experiences (Baumeister et al., 2001). As a negative emotion, boredom wields influence over decision-making and preferences, driven by its self-regulatory

motivational function. This finding of the boredom function is in agreement with the statement that “boredom is both an informative and motivational state: it signals that we need to change something about ourselves or our environment and it motivates us to do so” (Elpidorou, 2018, p. 9). This change is not just a random physical, environmental, or mental alteration but also leads to something positive like satisfaction, meaningfulness, and pleasure.

Given this functional nature of boredom, it is vital to know what causes it, in what way to alleviate it, and what its aftermath is. In terms of its origin in the s-commerce context, this study highlights the possible situations and individual characteristics more prone to it by underlining the internal and external causes of boredom in different age groups and gender.

5.1.3 Boredom’s antecedents in social commerce: Individual and situational factors

The findings propose that bored consumers’ motivation to use s-commerce is influenced by environmental and individual factors and their mismatch. There are four theories of boredom and each help to explain current findings concerning what exactly causes it in the context of s-commerce. Hence, they are the answer to this study’s RQ2 (a).

According to psychodynamic theorists Mann and Cadman (2014, p. 165), “boredom stems from a situation where none of the possible things that a person can realistically do appeal to the person in question”. Current findings underline such experiences as unpleasurable, frustrating, and dissatisfying. Unappealing and homogenous activities or an environment lacking hedonic value fails to grab consumers’ attention and causes disengagement while also creating “a longing to engage in an unspecified satisfying activity” (Baratta & Spence, 2018, p. 478), which is a key predictor of boredom.

The existential theory of boredom defines it as “the aversive experience of inaction, emptiness, paralysis of will, and meaning not realized” (Eastwood et al., 2012, p. 484).

Therefore, experiences that feel meaningless cause boredom. According to attentional/cognitive theory, “boredom is caused by a failure of attentional processes resulting in an inability to focus or engage attention” (Fahlman et al., 2013, p. 69). Affirming this, present findings indicate that if experience lacks novelty, variety, or innovations, it will become monotonous and uninteresting over time and fail to easily capture consumers’ attention.

Current findings indicate that boredom occurs in times of loneliness, disconnection (not being online), and when there is a large amount of time on hand, but the opportunities for engagement that can provide optimal arousal are none or limited. Being disconnected and alone during the Covid-19 lockdowns meant people had a lot of free time with not much to do and they consequently experienced boredom more than ever. They were under obligatory restrictions to stay at home with no physical or social contact with friends and family and instead relied on digital technologies to a risky level (Deng et al., 2020). The theory of free time boredom states that an individual experiences boredom because of a lack of surrounding stimulation. This does not mean that individuals lacked leisure opportunities but rather the experiences available to them were not engaging, fun, appealing, or novel. This lack of psychological involvement caused boredom (Biolcati et al., 2018).

Internal causes of boredom include individual characteristics that make an individual more prone to boredom compared to others. Firstly, as stated by Vodanovich (2003), highly boredom-prone individuals have a lower intention to engage in civic activities and are mostly inactive. Present findings show that bored individuals are less motivated by life and are instead drawn to smartphones and social media as these provide stimulation with little effort. Such

individuals have low tolerance, low self-image, and autonomy but have high arousal levels and are sensation-seekers. They are usually introverts and narcissists. These claims are supported by a number of studies (Leong & Schneller, 1993; Watt & Vodanovich, 1999; Emmons, 1981; Vodanovich, 2003).

Secondly, according to psychodynamic theory, boredom results from repressed desires. In a state of boredom, an individual desires an alternative but is not sure what to look for (Eastwood et al., 2012). Such individuals lack the necessary skills and capabilities (time management, technical and interpersonal skills, internal stimulation) to seek activities with adequate stimulation to overcome their boredom.

Thirdly, these individuals have certain cognitive and affective defects which increase their tendency to be bored. From the cognitive perspective, the attentional theory of boredom states that boredom is a cause of failure to focus and engage. Present findings report that such individuals may have mental disorders like ADHD and brain injuries. From an affective perspective, the findings report such individuals as being emotionally unstable and unaware of their feelings. In accordance psychodynamic theory states that “uncertainty and vagueness about one’s own wishes ... characterizes boredom” and bored individuals “desire alternatives but are unable to find and looks to the world for possible solutions” (Lewinsky, 1943, p. 148; Baratta & Spence, 2018).

Boredom spans across cultures at the demographic level, yet within the s-commerce framework, individuals from Asian collectivistic cultures tend to report it more. This aligns with the conclusion of cross-cultural boredom studies (Sundberg et al, 1991; Ng et al, 2015). This is because Asian cultures generally have less challenging and interesting opportunities to engage in, and due to their internalised cultural values, individuals from Asian cultures have positive low

arousal compared to Western cultures that promote fun and excitement (Ng et al., 2015). Moreover, experiencing boredom is part of youth culture irrespective of gender. Young people heavily rely on technology for information, social interaction, and shopping. They exhibit sensation-seeking behaviours, struggle with time management, lack knowledge of constructive boredom remedies, and possess newfound autonomy, often with less monitoring. Consequently, they encounter greater boredom compared to older generations (Biolcati et al., 2018; Wang, 2019; Stockdale & Coyne, 2020).

Lastly, the third source of boredom is the discrepancy between internal and external stimulation. This is supported by the arousal theory of boredom that proposes that “boredom is caused by non-optimal arousal that ensues when there is a mismatch between an individual’s need for arousal and the availability of environmental stimulation (i.e., its degree of challenge, complexity, intensity, and variety” (Fahlman et al., 2013, p. 69). In a situation of overstimulation, consumers’ ability to be surprised or amazed is taken away by the excessive stimulation, and, eventually, they disengage and become bored (Gerritsen et al., 2014). In the case of under-arousal or under-stimulation, the environment or activity is inadequately mentally or emotionally stimulating. Similarly, a mismatch between challenge and skill causes boredom. According to the 4-Channel Model of Flow, if the task or activity is easy, the result can be boredom (Guo & Klein, 2007). Hence, a moderate level of arousal or stimulation and challenge is preferred, otherwise the result can be disengagement and inattention which triggers boredom.

To answer RQ2 (b), this study points out the alleviation strategies that this functional emotion seeks out in the s-commerce context, that are internal and external stimulation via s-commerce.

5.1.4 Boredom's alleviation strategies in social commerce: Boredom triggers seeking stimulation

The factors stated above trigger the experience of boredom in s-commerce and owing to its self-regulatory function, bored individuals seek alternatives. Bored users turn to digital technologies, as they are swift, convenient, and readily available. These technologies offer both internal and external stimulation, effectively countering negative states with minimal effort. Current study proposes that bored consumers' motivation to use s-commerce is to seek internal and external stimulation to relieve themselves from boredom.

According to media domestication theory, media and technology are closely connected to modern life. (Lepik & Murumaa, 2019). On average, a bored individual uses a smartphone 34 times a day to access the Internet and social media, and this response is habitual. Boredom and shopping are linked together because it feels like clicking the boredom away and escaping reality and stress, especially in the case of fashion products (Sundström et al., 2019; Bozaci, 2020; Kumar et al., 2020). S-commerce provides internal stimulation emotionally, mentally, behaviourally, and through self by providing opportunities for interactivity and community building, and giving consumers authority over the system, their digital profile, reference groups, gratification, and browsing information. Through its collaborative and entertaining features, it engages users to achieve a satisfying internal state (Whelan et al., 2020).

External stimulation includes the market, environment, and social stimulation. Market cues, like price, product diversity, the visual stimuli of products and pop-ups, free shipping, and delivery, make the product striking and give bored customers a feeling of benefit or value, which induces them to buy on impulse. Similarly, a pleasant, engaging atmosphere and a friendly high-quality service not only helps consumers in making shopping decisions but also helps them

manage their negative moods by triggering online impulse buying. S-commerce provides such stimulations owing to its technical and commercial characteristics like coupons, discounts, personalisation, and availability of global and local commodities, consumers' bargaining power, a personal recommendation system, and a hedonic environment that is arousing and enjoyable. Lastly, s-commerce characteristics like ratings, reviews, and recommendations from vendors and customers in real-time provide social stimulation (Stephen & Toubia, 2010). Through its collaborative environment, consumers can interact during the pre- and post-purchase phases in real-time, which lowers their loneliness and eventually eases boredom.

Even though these alleviation strategies can ease boredom, they are not without consequences. To answer RQ2 (c), regarding the aftermath of boredom in s-commerce, current findings indicate that it has both positive and negative outcomes. Boredom can be detrimental to well-being and productivity (individual and organisational) but can also lead to self-development and be an opportunity for good market performance.

5.1.5 Consequences of boredom in the social commerce context

5.1.5.1 Boredom is a detriment to health (well-being) and productivity. Numerous studies have found that this aversive emotion can lead to many negative outcomes. This study proposes that seeking non-optimal/ optimal but unconstructive stimulation on s-commerce is detrimental to an individual's health and performance as well as the company's performance.

In terms of health, boredom harms an individual's hedonic and eudaimonic well-being. "Hedonic well-being comprises of high positive affect and low negative affect" (Carruthers & Hood, 2004, p. 229). In contrast, boredom is linked to many negative effects, such as depression, anxiety, stress, FOMO, mind wandering, and dissatisfaction. In the s-commerce context, owing

to the irresistibility of the stimuli, a bored consumer buys on impulse; however, they may develop a negative feeling of regret for making an impulsive decision (Baumeister, 2002). Boredom leading to such negative effects can be harmful for hedonic well-being.

Similarly eudaimonic well-being is “having a sense of control over one’s fate, a feeling of purpose and belongingness, and a basic satisfaction with oneself and one’s existence” (Cowen, 1991, p. 404). Boredom in the s-commerce context creates a feeling of meaninglessness based on the need for belongingness and contributes to poor self-control when seeking to relieve itself through digital technologies. It also triggers impulsive behaviours, especially in online shopping, that can lead to overspending and overconsumption. A study with a similar finding reported that due to limited activities during the Covid-19 pandemic, bored people hunted for complex external stimuli (i.e., shopping) because their impulse-buying tendencies increased to seek satisfaction in that state (Deng et al., 2020). All these feelings and behaviours are harmful to an individual’s psychological well-being as they can hinder their personal growth and development.

According to the individual media dependency theory, achieving personal goals can foster reliance on specific media (Jiang & Li, 2018). This research affirms this by highlighting how using digital tech to counter boredom can lead to addictive and problematic behaviour. This aligns with the compensatory internet theory, which indicates excessive Internet use as a coping mechanism for negative emotions (Wang et al., 2020). Moreover, in the long term, such addictive behaviour can lead towards other negative states, like depression, stress, anxiety, aggression, frustration, and FOMO. During the Covid-19 pandemic, heightened social media usage due to boredom led to addiction (Stockdale & Coyne, 2020). Boredom-induced addiction often arises when bored individuals lack parental monitoring, have nothing to do in their free time, lack

stimulation and meaningfulness in their daily activities, and have lower self-control over digital technology usage.

At a business level, unregulated boredom associated with a company's products, services, or platform can tarnish its reputation and stakeholder relationships due to negative customer attitudes. According to the UGT, “consumers seek out media that help them achieve certain gratifications” and “the levels of engagement on social media vary based on the type of gratification users seek” (Saleem & Iglesias, 2019, pp. 68–69). As highlighted in this review, boredom arises when s-commerce platforms fail to deliver optimal gratification, resulting in reduced consumer interest, visits, and overall engagement.

5.1.5.2 Boredom can be fruitful too. This study proposes that seeking non-optimal/optimal stimulation on s-commerce sites will be fruitful to an individual’s health, well-being, and performance, as well as enhancing the company’s performance. Boredom as a negative emotion that leads to negative consequences has been studied in numerous studies (Elhai et al., 2018; Bozaci, 2020; Yazdanparast et al., 2015). The findings highlight the positive consequences of boredom – an aspect that has had little investigation in boredom research. Boredom, despite its negative nature, holds protective aspects, as it alerts individuals to monotonous, unsatisfactory situations, prompting action. It fosters skill development and self-confidence, contributing to personal growth. Its impact on subjective well-being varies, with potential adverse or beneficial outcomes. While utilising s-commerce during boredom might lead to negative emotions like regret, it can also elicit happiness. Consumers often report pleasure or happiness during and after their purchase experience. Shopping can therefore be a happy experience (Sundstrom et al., 2019).

Furthermore, bored individuals often turn to online platforms to elevate their mood, seeking engaging content to captivate them. This presents a lucrative opportunity for marketers to cater to the stimulation needs of these consumers. As stated in the arousal theory of boredom, resolving the discrepancy of the individual's demand and environmental supply of stimulation can evade boredom. Uses and gratification theory (UGT) also claims that "audience select media and media content to satisfy their social and psychological needs" (Leung, 2020, p. 131) and "benefits that accrue from using new media, such as information, identity, social integration and interaction, and entertainment" (Tomczyk & Solecki, 2019, p. 3). Hence, marketers should prioritise creating an engaging and enjoyable experience for bored consumers because a platform environment greatly impacts purchasing behaviour and preferences.

5.2 Future directions

The review underscores significant research contributions that have enhanced the comprehension of boredom in the s-commerce context. In this section avenues for future IS research on boredom is provided, followed by a table (Table 11) that offers a concise representation of the discussion featuring the outlined future research questions.

5.2.1 Boredom in market and business perspectives. The existing literature on boredom in this context predominantly centres around its influence on consumer behaviour, leaving its impact on the market/business relatively underexplored. Gaining insights into its adverse effects on market performance can empower marketers to comprehend the extent of its repercussions and formulate strategic approaches, such as leveraging impulse purchases to mitigate and manipulate its effects for their advantage.

5.2.2 Explore the roots: antecedents of boredom in the digital technology context.

From a consumer perspective, numerous major areas for future research are proposed. Initially,

the review pinpointed the typology of boredom, highlighting that specific traits contribute to susceptibility, except sensation seeking and narcissism, while others remain relatively understudied. Further exploration of these traits is advocated in conjunction with moderators such as age, culture, and gender. Moreover, the examination of boredom in terms of social, time, and self-stimulating skills remains limited. While the external, and mismatch causes, cognitive, and affective issues have been studied mostly in psychological contexts, there is a notable gap in exploring these aspects within the context of digital technology. This holistic approach has the potential to yield valuable insights into the nuanced dynamics of this phenomenon.

5.2.3 Examine specific types of boredom. This study examined boredom in general; however, future studies could examine a specific type of boredom in s-commerce, focusing on state, trait, or leisure, as each type is unique in terms of causes, alleviation, and consequences.

5.2.4. Connect alleviation strategies with consequences. The current review identified the types of stimulation that bored individuals actively seek on s-commerce platforms. Although studies on this aspect are burgeoning, there is a need for a more comprehensive understanding. It is recommended future researchers examine them with different consequences to pinpoint which stimulation leads to specific consequences.

5.2.5. Analyse problematic behaviour and unveil the positive dimensions of boredom. Boredom is a well-acknowledged, negative emotion, and the review emphasises that existing research has predominantly focused on online addiction, leaving other problematic behaviours, such as uncivil behaviour and cyberbullying, largely unexamined. Given the global increase in these behaviours (Howarth, 2023), there is a valuable opportunity for future studies to investigate and shed light on them. Additionally, the review uncovers some positive consequences of boredom that remain highly underexplored. Future research endeavours can

delve into these positive aspects, contributing to the development of intervention strategies dedicated to overall well-being.

This study presents an inductive framework, urging future research to explore its intricacies and directional relationships. These insights can be extended to emerging digital domains and interdisciplinary fields like the meta-verse and live streaming, offering valuable contributions to evolving research landscapes. This review can be discussed from the perspective of boredom theories, and future research can enhance this review by exploring the framework through different theories, such as UGT, and various Internet theories. Lastly, future researchers can consider the established definition of boredom in this study as foundational for theory development. They can use this conceptualisation as the building blocks for advancing theoretical frameworks related to boredom in the dynamic landscape of s-commerce and related disciplines.

The identified research avenues underscore the current gaps in the study of boredom in s-commerce. These areas offer promising opportunities for IS researchers to explore topics that are both academically intriguing and practically relevant. Future research in these avenues has the potential to enhance the theoretical understanding of the connections involving boredom in the context of s-commerce.

Table 11.*Research Questions for Future Studies*

No	Future questions
1	How does boredom influence market/business performance in the context of s-commerce? What strategic approaches, can marketers employ to mitigate and leverage the effects of boredom to their advantage?
2	What are the connections between environmental causes and susceptibility to boredom among consumers in s-commerce?
3	What are the connections between specific personality traits (introversion and low self-esteem) and susceptibility to boredom among consumers in s-commerce? How do skills (social, time), age, culture, and gender serve as potential moderators in understanding the interplay of these traits and boredom susceptibility?
4	How does a focused investigation into a specific type of boredom (e.g., state, trait, or leisure) within the context of s-commerce contribute to a deeper understanding of its dynamics and implications for consumers?
5	What are the distinct consequences associated with various types of stimulation sought by bored individuals on s-commerce platforms?
6	How does boredom contribute to problematic behaviours, such as uncivil behaviour and cyberbullying?
7	What are the positive consequences of boredom that contribute to consumer's well-being?

5.3 Limitations

Boredom is a trending topic in many disciplines and it may be possible that some of the avenues explored in this study are already being researched; however, this possibility would be considered a verification of the current study's findings. The approach regarded most suitable for this research was to choose breadth over depth; therefore, future studies could examine the relationships identified in present findings in more depth.

5.4 Implications

5.4.1. Theoretical Implications. Firstly, owing to the growing market and consumer usage, it is timely and significant to analyse consumer's motivation for s-commerce usage. This study undertook a review that integrates current knowledge on boredom in the s-commerce context, which is a neglected gap in the literature. Contrary to present studies, this study analysed boredom literature in a digital technology context relevant to s-commerce using the grounded theory approach. Using grounded theory, boredom in s-commerce was explored thoroughly and theoretically and presented the strengths, limitations, and future directions for a balanced growth of literature. The task of reviewing a portion of academic literature is important in every academic community but infrequently executed. Grounded theory helped retain transparency and offered clarity on how and why the particular literature sample was selected. This theory for the boredom review process not only enriched the value of this review but made it more valuable to the field as well as more replicable. It helped in explaining the fruitful new linkages among variables, as seen in the inductive framework (see Figures 1 and 2).

This inductive framework was developed to identify boredom's functional mechanism in s-commerce and highlight the emergence of potential antecedents, mediators, moderators, and consequences for both consumer and market perspectives, serving both as a comprehensive

reference point and offering prospective avenues for further scholarly exploration. It highlighted possible situations and introduced a nuanced boredom typology specific to the environment of s-commerce. By bridging gaps in prior studies (Chou et al., 2018; Elhai et al., 2018; Jiang & Li, 2018; Whelan et al., 2020), it provides insights into the psychological traits or personality characteristics that contribute to behaviours impacting health and well-being. Previously, studies focused on the intensity of digital technology use in relationship with boredom (Saleem & Iglesias, 2019; Whelan et al., 2020). This study goes further by delineating the specific content consumed and the type of stimulation individuals seek to ease boredom. Boredom being a negative emotion leads to negative outcomes, like addiction, and the review highlighted additional consequences that were ignored in the past studies (cyberbullying, uncivil behaviour) but hold reasonable weight to well-being. Moreover, in contrast to previous boredom studies, this research illuminates its positive side for both individuals and businesses in short and long-term scenarios. Finally, drawing from the findings of the grounded theory method, a conceptual definition of boredom in the s-commerce context was introduced. This clarification of the construct provides insights that may pave the way for a comprehensive development of the boredom theory in the future. The study's sample encompasses multiple disciplines, and due to the characteristics of s-commerce, this definition holds generalisability in related fields as well.

5.4.2. Practical Implications. The findings not only elucidate boredom's risk factors but also propose implications for intervention development. This study underscores how boredom can pose risks to health, well-being, and performance, while its intervention holds potential for personal growth (especially among vulnerable youth) and improved business performance.

Firstly, as revealed in the findings, youth are particularly susceptible to boredom. Hence, promoting leisure and media literacy education becomes vital to aid them in mitigating boredom.

While digital technology might appear appealing in moments of under-stimulation, the chosen activity's significance holds more weight. So healthcare providers, educators, and parents should pursue training initiatives that enhance young people's self-control and temper their responsiveness to technological stimuli.

Secondly, given boredom's link to sensation seeking and its potential to fuel excessive smartphone use, parents and educators must oversee children's smartphone usage, assessing the purpose behind it — whether self-driven or social, particularly during leisure moments. Children should be guided in setting goals and priorities for their free time and honing skills like decision-making, technical know-how, time management, and mindfulness to evade boredom. Encouraging interpersonal skills and engagement in social activities can divert their leisure time away from digital media. Thirdly, caution must be taken when using social media continuously to alleviate boredom. Users should take breaks during its usage or using a filter for incoming information and content to avoid social media fatigue.

The findings of this research also offer businesses an opportunity to detect customer boredom and provide possible solutions in the s-commerce context. The findings can help marketers understand this emotion and break the sales barriers it forms by catering to its situational and individual causes. Consumers use s-commerce to beat boredom and keep themselves occupied. Marketers should have an attractive outlook for their websites and apps. They should be visually appealing and gratifying, as this can attract bored consumers to engage and participate. Secondly, they should avoid complex marketing stimuli to protect their goodwill as this can be frustrating for consumers and increase their boredom. Thirdly, marketers should provide novel and diverse content and products to attract bored individuals. Fourthly, businesses should purge their platforms of purposeless elements, like floating ads that users typically shun.

Marketers should give control to their users regarding incoming information and provide them with content according to their priorities. This could help lessen users' exposure to social media overload and fatigue.

6. Conclusion

This study aimed to conduct a rigorous literature review using grounded theory to examine boredom in the s-commerce context. This review highlighted a substantial body of literature that contributes to forming a definition of boredom in s-commerce and understanding its nature, function, characteristics, potential antecedents, and alleviation strategies and their aftermath. This study proposes future research avenues and provides theoretical and practical contributions that enable researchers and policymakers to understand boredom and how to intervene for the betterment of an individual's well-being and business performance. Overall, this review is helpful for future researchers that wish to delve deeper into the nature and implications of this mundane emotion for the betterment of individuals, organisations, and society.

Appendices (Supplementary data)

Appendix A: Definitions of Boredom in the Sample

Table A.1.

Boredom Definitions

Year	Article name	Definition	Sample Source	Original Source	
1	1992	Relationship between boredom proneness and impulsivity	Boredom prone individual as one who experiences “varying degrees of depression, hopelessness, loneliness, and distractibility”	(Watt & Vodanovich, 1992, p. 688)	(Farmer & Sundberg, 1986, p. 14)
2	2014	I can’t get no satisfaction: Potential causes of boredom.	Difficult for boredom-prone individuals to “articulate a satisfying target for engagement”	(Gerritsen et al., 2014, p. 27)	(Eastwood et al., 2012, p. 483)
3	2014	Assessment of heterogeneity of	Defined as “a state of mental weariness and dissatisfaction produced by lack of interest or activity”	(Jung & Yi, 2014)	(Blaszczynski et al., 1990, p. 36)

compulsive buyers based
on affective antecedents
of buying lapses

- | | | | | | |
|---|------|---|---|---|----------------------------------|
| 4 | 2014 | I can't get no satisfaction:
Potential causes of
boredom | "Restlessness and entrapment, combined with
lethargy" | (Gerritsen et
al., 2014, p.
30) | (Martin et al.,
2006, p. 206) |
| 5 | 2015 | An investigation of
Facebook boredom
phenomenon among
college students | "Boredom is a feeling of un-pleasure arising out of a
conflict between a need for intense mental activity and
lack of incitement to it, or inability to be incited" | (Yazdanparast
et al., 2015, p.
470) | (Fenichel, 1953,
p. 292) |
| 6 | 2015 | An investigation of
Facebook boredom | Overall, different approaches to theorizing boredom
converge on the fact that "the central defining feature
of boredom is the aversive experience of wanting, but | (Yazdanparast
et al. 2015, p.
471) | (Fahlman et al.,
2013, p. 69) |

- phenomenon among college students being unable to engage in a stimulating and satisfying activity”
- 7 2016 Monotony of social networking among millennial and its effect on social advertisement: A challenge to digital marketers The definition of monotony (boredom) postulates that “boredom is a feeling of un-pleasure arising out of a conflict between a need for intense mental activity and lack of incitement to it, or inability to be incited” (Singh, 2016, p. 378) (Fenichel, 1953, p. 292)
- 8 2018 Affect, data, manipulation and price in social media Boredom as both the cause and effect of modernity: as “both the disaffection [...] that drives the search for change and as the malaise produced by living under a permanent speed-up” (Paasonen, 2018, p. 221) (Goodstein, 2005, p. 1)
- 9 2018

	Is it beneficial to use Internet-communication for escaping from boredom? Boredom proneness interacts with cue-induced craving and avoidance expectancies in explaining symptoms of Internet-communication disorder	Boredom as a state of “under-stimulation, under-arousal, and lack of psychological involvement associated with dissatisfaction, and individuals try to cope with boredom by seeking additional stimulation”	(Biolcati et al., 2018, p. 304; Wegmann et al., 2018, p. 3)	(Brissett & Snow, 1993)	
10	2018	Is it beneficial to use Internet-communication for escaping from boredom? Boredom proneness interacts with	The construct of boredom proneness is often “operationalized as an individual’s susceptibility to experience boredom”	(Wegmann et al., 2018, p. 3)	(LePera N, 2011, p.15)

cue-induced craving and
 avoidance expectancies in
 explaining symptoms of
 Internet-communication
 disorder

- 11 2018 Boredom proneness and
 its correlation with
 Internet addiction and
 Internet activities in
 adolescents with
 attention-
 deficit/hyperactivity
 disorder. “A state of relatively low arousal and dissatisfaction,
 which is attributed to an inadequately stimulating
 environment” (Chou et al.,
 2018, p. 468) (Mikulas &
 Vodanovich,
 1993, p. 3)

12 2018

- Boredom proneness and its correlation with Internet addiction and Internet activities in adolescents with attention-deficit/hyperactivity disorder.
- “Cognitive changes in the direction of less differentiated and more homogeneous construing give rise to a state of subjective monotony which induces, or perhaps even represents, the state”
- (Chou et al., 2018, p. 468) (Hill & Perkins, 1985, p. 231)
- 13 2019 Exploring the relationship among free-time management, leisure boredom, and internet addiction in undergraduates in Taiwan
- Leisure boredom is defined as the “subjective perception that available leisure experiences are not sufficient to instrumentally satisfy needs for optimal arousal”
- (Wang, 2019, p. 1653) (Iso Ahola & Weissinger, 1990, p. 4-5)

- | | | | | | |
|----|------|--|---|-------------------------------------|------------------------------------|
| 14 | 2019 | The smartphone as a pacifier and its consequences: Young adults' smartphone usage in moments of solitude and correlations to self-reflection | “Boredom is a state of relatively low arousal and dissatisfaction, which is attributed to an inadequately stimulating situation” | (Diefenbach & Borrmann, 2019, p. 5) | (Mikulas & Vodanovich, 1993, p. 3) |
| 15 | 2019 | Clicking the boredom away – Exploring impulse fashion buying behavior online | An individual level of boredom and a mundane experience is concurrent with a contextualised totality and is an interplay of influences that shapes the consumer | (Sundström et al., 2019, p. 151) | (Sundström et al., 2019, p. 151) |
| 16 | 2020 | Exploring the relationship between smartphone activities, flow | Boredom is defined as an “unpleasant, transient affective state” in which an individual is left with | (Leung, 2020, p. 132) | (Fisher, 1993, p.3) |

- experience, and boredom in free time nothing in particular to do and lacks interest in his or her surroundings (Iso-Ahola & Weissinger, 1990).
- 17 2020 Exploring the relationship between smartphone activities, flow experience, and boredom in free time Leisure boredom is conceptualised as “the subjective perception that available leisure experiences are not sufficient to instrumentally satisfy needs for optimal arousal... leisure experience are not sufficiently frequent, involving, exciting, varied or novel” (Leung, 2020, p. 132) (Iso-Ahola & Weissinger, 1990, p. 4)
- 18 2020 Is boredom proneness related to social media overload and fatigue? A stress–strain–outcome approach Boredom has been depicted as being due to both cognitive and attentional deficits (Fisher, 1998; Kass et al., 2010; Mikulas and Vodanovich, 1993), which usually emerges when “the individual feels a pervasive lack of interest in and difficulty concentrating on the current activity” (Whelan et al., 2020, p. 873) (Fisher, 1998, p. 396)
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Appendix B: Reviewer Selection Table

Table B.1.

Reviewer Selection Table

Year	Title	Author(s)	Journal	Reason(s) for its selection
1992	Relationship between boredom proneness and impulsivity	Watt, J. D. and S. J. Vodanovich	Psychological Reports	Variables discussed are relevant to my area of research
1999	The influence of pre-existing negative affect on store purchase intentions	Mano, H.	Journal of Retailing	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2000	Examination of emotional response to apparel brand advertisements	Kim, H. S.	Journal of Fashion Marketing and Management	Variables discussed are relevant to my area of research
2002	Internet search behaviors and mood alterations: A selective exposure approach.	Mastro, D. E., et al.	Media Psychology	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2003	Internet Addiction in Students: A Cause of Concern.	Nalwa, K. and A. P. Anand	Cyber psychology and Behavior	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2003	Internet use and misuse: Preliminary findings from a new assessment instrument	Rotunda, R. J., et al.	Behavior Modification	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research

2004	Developing a typology of airport shoppers	Geuens, M., et al.	Tourism Management	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is clearly relevant to my area of research
2004	Fashion groups, gender, and boredom proneness	Studak, C. M. and J. E. Workman	Fashion Design and Merchandising Program	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2006	Young consumers in Singapore	Hongjun, W.	Young Consumers	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2007	Psychology of communication technology use in the workplace	Eastin, M. S., et al.	Cyber psychology and Behavior	Article is relevant Variables discussed are relevant to my area of research
2007	Skills matter: A tale of the anxious online shopper. Lecture Notes in Computer Science	Guo & Klein, 2007	Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2008	Adolescent internet usage in Taiwan: Exploring gender differences.	Lin, C. H. and S. F. Yu	Adolescence	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2008	The role of metacognitions in problematic internet use	Spada, M. M., et al	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research

2009	Beyond the test of the four channel model of flow in the context of online shopping	Guo, Y. M. and B. D. Klein	Communications of the Association for Information Systems	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2009	The effect of information forms and floating advertisements for visual search on Web pages: An eye-tracking study	Li, M., et al.	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2009	The effects of parental monitoring and leisure boredom on adolescents' internet addiction	Lin, C. H., et al.	Adolescence	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2010	Comparing Web Interaction Models in Developing Regions.	Chen, J., et al.	Proceedings of the First Acm Symposium on Computing for Development	Article is relevant Variables discussed are relevant to my area of research
2010	Understanding designer clothing purchases over the internet	Fogel, J. and M. Schneider.	Journal of Fashion Marketing and Management	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2010	Internet social networks in the contemporary adolescents lives.	Stašová, L., et al.	International Conference on Applied Computer Science - Proceedings	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant

2010	Perceived stress, sensation seeking, and college students' abuse of the internet	Velezmoro, R., et al	Computers in Human Behavior	Variables discussed are relevant to my area of research
2011	The role of feeling in the entertainment=emotion formula	Cupchik, G. C.	Journal of Media Psychology-Theories Methods and Applications	Article is relevant Variables discussed are relevant to my area of research
2011	Effects of narcissism, leisure boredom, and gratifications sought on user-generated content among net-generation users.	Poon, D. C. H. and L. Leung	International Journal of Cyber Behavior, Psychology and Learning	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2011	The relationship between internet dependency with sensation seeking and personality	Rahmani, S. and M. G. Lavasani	Procedia - Social and Behavioral Sciences.	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2011	The comparison of sensation seeking and five big factors of personality between internet dependents and non-dependents.	Rahmani, S. and M. G. Lavasani	Procedia - Social and Behavioral Sciences	Variables discussed are relevant to my area of research
2013	Kansei engineering: Emotion exploration in blogs.	Ramachandiran, C. R. and N. Jomhari	Proceedings - 2013 International Conference on Biometrics and Kansei Engineering, ICBAKE 2013	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research

2013	Characterizing geographic variation in well-being using tweets	Schwartz, H. A., et al.	Proceedings of the 7th International Conference on Weblogs and Social Media, ICWSM 2013	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2014	Does time fly when you're having fun?	Asensio-Sánchez, V. M.	Archivos de la Sociedad Espanola de Oftalmologia	Article is relevant Theme of this article is relevant to my area of research Variables discussed are relevant to my area of research
2014	I can't get no satisfaction: Potential causes of boredom.	Gerritsen, C. J., et al.	Consciousness and Cognition	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2014	Assessment of heterogeneity of compulsive buyers based on affective antecedents of buying lapses	Jung, J. and S. Yi	Addiction Research and Theory	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2014	The correlates between internet addictive behavior and psychosocial variables of using the social networks among Slovak university students	Lichner, V., et al.	Psychology and Psychiatry, Sociology and Healthcare, Education	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2014	Design criteria for web applications adapted to emotions	Mori, G., et al.	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research

2014	Smartphone use by older adults in Singapore	Pang, N., et al.	Gerontechnology	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2014	Gender and sensation seeking as predictor variables of problematic internet use by high school students	Siyez, D. M	Addicta-the Turkish Journal on Addictions	Theme of this article is relevant to my area of research Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2015	The brain in your pocket: Evidence that smartphones are used to supplant thinking.	Barr, N., et al.	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research
2015	Does personal social media usage affect efficiency and well-being?	Brooks, S.	Computers in Human Behavior	Variables discussed are relevant to my area of research
2015	Creation of emotion-inducing scenarios using BDI	Brosseau, P. O. and C. Frasson	ICAART 2015 - 7th International Conference on Agents and Artificial Intelligence	Variables discussed are relevant to my area of research
2015	The importance of being... Bored.	Ebling, M. R.	IEEE Pervasive Computing	Article is relevant Variables discussed are relevant to my area of research

2015	Characteristics of internet addiction/pathological internet use in U.S. university students: A qualitative-method investigation.	Li, W., et al.	PLoS ONE	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2015	An investigation of Facebook boredom phenomenon among college students.	Yazdanparast, A., et al.	Young Consumers	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant Theory discussed is relevant to my area of research
2016	Exploring college students' generational differences in Facebook usage.	Čičević, S., et al.	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2016	Use of social media by science students in public universities in Southwest Nigeria	Fasae, J. K. and I. Adegbilero-Iwari	Electronic Library	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2016	“I miss my mobile phone!”: Self-expansion via mobile phone and responses to phone loss	Hoffner, C. A., et al.	New Media and Society	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2016	Four facets of Facebook intensity — The development of the multidimensional Facebook intensity scale.	Orosz, G., et al.	Personality and Individual Differences	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant

2016	Avoidance or boredom: Negative mental health outcomes associated with use of information and communication technologies depend on users' motivations	Panova, T. and A. Lleras	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2016	Exploration of technology use pattern among teenagers and its relationship with psychological variables	Rajanna, S. H., et al.	Asean Journal of Psychiatry	Variables discussed are relevant to my area of research
2016	Monotony of social networking among millennial and its effect on social advertisement: A challenge to digital marketers.	Singh, R	Young Consumers	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant Theory discussed is relevant to my area of research
2016	The effects of boredom, loneliness, and distress tolerance on problem internet use among university students	Skues, J., et al.	International Journal of Mental Health and Addiction	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2017	Avoiding boredom: Caudate and insula activity reflects boredom-elicited purchase bias	Dal Mas, D. E. and B. C. Wittmann	Department of Psychology	Article is relevant Theme of this article is relevant to my area of research Variables discussed are relevant to my area of research
2017	Streamer motives and user-generated content on social live-streaming services	Friedländer, M. B	Journal of Information Science Theory and Practice	Article is relevant Theme of this article is relevant to my area of research Variables discussed are relevant to my area of research

2017	Internet addiction, lifestyle or mental disorder? A phenomenological study on social media addiction in Indonesia	Kurniasih, N.	3rd International Conference on Social and Political Science	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2017	Use of social media by agricultural undergraduate students in selected universities in Nigeria	Orifah, M. O., et al	Journal of Agricultural Extension	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2017	Aggressive and stressed? Youth's aggressive behaviors in light of their internet use, sensation seeking, stress and social feelings	Piko, B. F., et al.	Children and Youth Services Review	Variables discussed are relevant to my area of research
2017	Personality traits, boredom, and loneliness as predictors of Facebook use in on-campus and online university students.	Skues, J., et al.	International Journal of Cyber Behavior, Psychology and Learning	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2017	Navigating (im)mobility: female entrepreneurship and social media in Khartoum	Steel, G.	Africa	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2017	Adolescent digital profiles: A process-based typology of highly engaged internet users	Tzavela, E. C., et al.	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research

2018	Proneness to boredom and risk behaviors during adolescents' free time.	Biolcati, R., et al.	Psychological Reports	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2018	Online advertorial attributions on consumer responses: Materialism as a moderator	Chang, H. H., et al.	Online Information Review	Article is relevant Variables discussed are relevant to my area of research
2018	Boredom proneness and its correlation with internet addiction and Internet activities in adolescents with attention-deficit/hyperactivity disorder.	Chou, W. J., et al.	Kaohsiung Journal of Medical Sciences	Article is relevant Variables discussed are relevant to my area of research
2018	Fear of missing out: Testing relationships with negative affectivity, online social engagement, and problematic smartphone use.	Elhai, J. D., et al.	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research
2018	Proneness to boredom mediates relationships between problematic smartphone use with depression and anxiety severity	Elhai, J. D., et al.	Social Science Computer Review	Article is relevant Variables discussed are relevant to my area of research
2018	Factors affecting smartphone dependency among the young in China	Jiang, Q. L. and Y. Li	Asian Journal of Communication	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research

2018	Quid pro quo in Web 2.0. Connecting personality traits and Facebook usage intensity to uncivil commenting intentions in public online discussions	Koban, K., et al.	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2018	Affect, data, manipulation and price in social media	Paasonen, S.	Distinktion	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research
2018	People tend to wind down, not up, when they browse social media	Panger, G	Proceedings of the ACM on Human-Computer Interaction 2(CSCW)	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2018	A week without using social media: Results from an ecological momentary intervention study using smartphones	Stieger, S. and D. Lewetz	Cyberpsychology, Behavior, and Social Networking	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2018	Is it beneficial to use Internet-communication for escaping from boredom? Boredom proneness interacts with cue-induced craving and avoidance expectancies in explaining symptoms of Internet-communication disorder.	Wegmann, E., et al	PLoS ONE	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research

2018	The social media see-saw: Positive and negative influences on adolescents' affective well-being	Weinstein, E.	New Media and Society	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2019	Problematic attachment to social media: Five behavioural archetypes	Altuwairiqi, M., et al.	International Journal of Environmental Research and Public Health	Article is relevant Variables discussed are relevant to my area of research Methodology is relevant to my area of research Context is relevant
2019	The smartphone as a pacifier and its consequences: Young adults' smartphone usage in moments of solitude and correlations to self-reflection.	Diefenbach, S. and K. Borrmann	Conference on Human Factors in Computing Systems - Proceedings.	Article is relevant Variables discussed are relevant to my area of research
2019	Disrupted daily activities from interruptive smartphone notifications: Relations with depression and anxiety severity and the mediating role of boredom proneness	Elhai, J. D., et al.	Social Science Computer Review	Article is relevant Variables discussed are relevant to my area of research
2021	Swiping away the moments that make up a dull day: Narcissism, boredom, and compulsive smartphone use	Ksinan, A. J., et al.	Current Psychology	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2019	Students on a social media 'detox': Disrupting the everyday practices of social media use	Lepik, K. and M. Murumaa-Mengel	Communications in Computer and Information Science	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant

2019	Screen addiction and media multitasking among American and Taiwanese users	Lin, T. T. C., et al.	Journal of Computer Information Systems	Article is relevant Variables discussed are relevant to my area of research Methodology is relevant to my area of research Theme of this article is relevant to my area of research
2019	Future teachers' smartphone uses and dependence	Ruiz-Palmero, J., et al.	Education Sciences	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2019	Mobile phone addiction among children and adolescents: A systematic review	Sahu, M., et al.	Journal of Addictions Nursing	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2019	Exploring the motivation of affect management in fostering social media engagement and related insights for branding	Saleem, F. Z. and O. Iglesias	Internet Research	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant Theory discussed is relevant to my area of research
2019	Clicking the boredom away – Exploring impulse fashion buying behavior online	Sundström, M., et al.	Journal of Retailing and Consumer Services	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2019	Internet addiction among secondary school adolescents: A mixed methods study	Tenzin, K., et al.	Journal of Nepal Medical Association	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2019	Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study	Throuvala, M. A., et al.	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant

2019	Problematic internet use and protective factors related to family and free time activities among young people.	Tomczyk, Ł. and R. Solecki	Educational Sciences: Theory and Practice	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2019	Exploring the relationship among free-time management, leisure boredom, and internet addiction in undergraduates in Taiwan	Wang, W. C.	Psychological Reports	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2020	I just want to keep in touch”: Adolescents’ experiences with leisure-related smartphone use	Allaby, M. and C. S. Shannon	Journal of Leisure Research	Article is relevant Theme of this article is relevant to my area of research Variables discussed are relevant to my area of research
2020	Expression of feelings in Twitter: A decision tree approach	Al-Saggaf, Y.	Advances in Intelligent Systems and Computing.	Variables discussed are relevant to my area of research
2020	Media attention to large-scale corporate scandals: Hype and boredom in the age of social media.	Barkemeyer, R., et al.	Journal of Business Research	Variables discussed are relevant to my area of research
2020	The effect of boredom proneness on smartphone addiction and impulse purchasing: A field study with young consumers in Turkey	Bozaci, I.	Journal of Asian Finance Economics and Business	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant

2020	Tell me why are you using social media (SM)! Relationship between reasons for use of SM, SM flow, daily stress, depression, anxiety, and addictive SM use – An exploratory investigation of young adults in Germany	Brailovskaia, J., et al	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2020	Fear of missing out, mental wellbeing, and social connectedness: A seven-day social media abstinence trial.	Brown, L. and D. J. Kuss	International Journal of Environmental Research and Public Health	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Methodology is relevant to my area of research
2020	Loneliness, boredom and information anxiety on problematic use of social media during the COVID-19 pandemic.	Catedrilla, J., et al.	Proceedings of the 28th International Conference on Computers in Education. Asia-Pacific Society for Computers in Education	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2020	A stimulated recall method for the improved assessment of quantity and quality of social media use	Griffioen, N., et al.	Journal of Medical Internet Research	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2020	A qualitative insight into the personal factors impacting online impulse behavior	Kumar, K., et al.	Strategies and Tools for Managing Connected Consumers	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research

2020	Anxious, bored, and (maybe) missing out: Evaluation of anxiety attachment, boredom proneness, and fear of missing out (FoMO)	Holte, A. J. and F. R. Ferraro	Computers in Human Behavior	Article is relevant Variables discussed are relevant to my area of research
2020	Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions	Imran, N., et al.	Pakistan Journal of Medical Sciences	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2020	The digital divide: Risk and protective factors and the differences in problematic use of digital devices among Hungarian youth	Kiss, H., et al.	Children and Youth Services Review	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2020	Exploring the relationship between smartphone activities, flow experience, and boredom in free time	Leung, L	Computers in Human Behavior	Article is relevant Theme of this article is relevant to my area of research Variables discussed are relevant to my area of research
2020	Does mindfulness reduce the effects of risk factors for problematic smartphone use? Comparing frequency of use versus self-reported addiction	Regan, T., et al.	Addictive Behaviors	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research

2020	Bored and online: Reasons for using social media, problematic social networking site use, and behavioral outcomes across the transition from adolescence to emerging adulthood	Stockdale, L. A. and S. M. Coyne	Journal of Adolescence	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2020	Socio-educational implications of technology use during COVID-19: A case study in General Santos City, Philippines	Toquero, C. M. D. and K. J. B. Talidong	Human Behavior and Emerging Technologies	Article is relevant
2020	Boredom proneness and rumination mediate relationships between depression and anxiety with problematic smartphone use severity	Wang, Y., et al.	Current Psychology	Article is relevant Variables discussed are relevant to my area of research Theme of this article is relevant to my area of research
2020	Relationships among boredom proneness, sensation seeking and smartphone addiction among Chinese college students: Mediating roles of pastime, flow experience and self-regulation	Wang, Z. P., et al.	Technology in Society	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Theme of this article is relevant to my area of research
2020	So last year: Combating stakeholder boredom with social media	Direction, S	Strategic Direction	Article is relevant Theme of this article is relevant to my area of research

2020	Is boredom proneness related to social media overload and fatigue? A stress-strain-outcome approach	Whelan, E., et al	Internet Research	Article is relevant Variables discussed are relevant to my area of research Literature is relevant to my area of research Context is relevant
2021	The emotion regulatory function of online social networking: Preliminary experimental evidence	Drach, R. D., et al.	Addictive Behaviors	Article is relevant Theme of this article is relevant to my area of research
2022	Impacts of Covid-19 pandemic on consumer behavior in Turkey: A qualitative study	Güngördü Belbağ, A. (2022)	Journal of Consumer Affairs	Article is relevant Theme of this article is relevant to my area of research

Appendix C: Initial Coding

Table C.1

Initial Coding

Year	Title	Author(s)	Publication Outlet	Type	Sector / Industry	Conceptual Foundation	Methods	Level	Sample information	Boredom Definition
1. 1992	Relationship between boredom proneness and impulsivity	Watt, J. D. and S. J. Vodanovich	Psychological Reports	Research - empirical	Emotions	N/A	Survey	Individual	381 participants	✓
2. 1999	The influence of pre-existing negative affect on store purchase intentions	Mano, H.	Journal of Retailing	Research - empirical	Retailing	environment-affect-shopping framework, Lazarus' (1991) model of goal directed emotion-focused and problem-focused coping	Multi method design, Survey + experiment	Individual	151 undergraduates participated	NA
3. 2000	Examination of emotional response to apparel brand advertisements	Kim, H. S.	Journal of Fashion Marketing and Management	Research - empirical	Fashion marketing	aggregate-level communication model	Secondary data	Advertisements	90 advertisements representing 56 different brands and 24 judges	N/A
4. 2002	Internet search behaviors and mood alterations: A	Mastro, D. E., et al.	Media Psychology	Research - empirical	Internet	selective exposure theory	Experiment	Individual	124 undergraduate	N/A

		selective exposure approach.									
5.	2003	Internet addiction in students: A cause of concern.	Nalwa, K. and A. P. Anand	Cyber Psychology and Behavior	Research - empirical	Internet	N/A	Survey	Individual	100 students	N/A
6.	2003	Internet use and misuse: Preliminary findings from a new assessment instrument	Rotunda, R. J., et al.	Behavior Modification	Research - empirical	Internet	N/A	Survey	Individual	393 students	N/A
7.	2004	Developing a typology of airport shoppers.	Geuens, M., et al.	Tourism Management	Research - empirical	Travel	N/A	Survey	Individual	236 participated	N/A
8.	2004	Fashion groups, gender, and boredom proneness.	Studak, C. M. and J. E. Workman	Fashion Design and Merchandising Program	Research - empirical	Fashion marketing	Hill and Perkins model of boredom	Survey	Individual	256 students	NA
9.	2006	Young consumers in Singapore.	Hongjun, W.	Young Consumers	Practitioner	Youth	N/A	N/A	N/A	Young consumers in Singapore	N/A
10.	2007	Psychology of communication technology use in the workplace	Eastin, M. S., et al.	Cyber Psychology and Behavior	Research - empirical	Non-profit organization	N/A	Survey	Individual	220 employees	N/A
11.	2007	Skills matter: A tale of the anxious online shopper. Lecture Notes in Computer Science	Guo & Klein, 2007	including subseries Lecture Notes in Artificial Intelligence	Research - empirical	Human-computer interaction	theory of flow	Survey	Individual	354 subjects	N/A

			and Lecture Notes in Bioinformatics								
12.	2008	Adolescent internet usage in Taiwan: Exploring gender differences.	Lin, C. H. and S. F. Yu	Adolescence	Research - empirical	Internet	N/A	Experimental	Individual	100 participants	N/A
13.	2008	The role of metacognitions in problematic Internet use	Spada, M. M., et al	Computers in Human Behavior	Research - empirical	Computers in human behaviour	metacognitive theory	Survey	Individual	97 university students	N/A
14.	2009	Beyond the test of the four channel model of flow in the context of online shopping	Guo, Y. M. and B. D. Klein	Communications of the Association for Information Systems	Research - empirical	online shopping systems	flow theory, a four channel model of flow	Survey	Individual	354 university students	N/A
15.	2009	The effect of information forms and floating advertisements for visual search on Web pages: An eye-tracking study	Li, M., et al.	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	Research - empirical	Internet	N/A	Survey	Individual	100 university students	N/A

16.	2009	The effects of parental monitoring and leisure boredom on adolescents' internet addiction	Lin, C. H., et al.	Adolescence	Research - empirical	Internet	N/A	Survey	Individual	1,289 adolescents	N/A
17.	2010	Comparing web interaction models in developing regions	Chen, J., et al.	Proceedings of the First Acm Symposium on Computing for Development	Research - empirical	Internet	asynchronous queueing model	Multi method design, Experiment, Survey, Semi-structured interview	Individual	20 participants	N/A
18.	2010	Understanding designer clothing purchases over the internet	Fogel, J. and M. Schneider.	Journal of Fashion Marketing and Management	Research - empirical	Fashion	theory of planned behavior	Survey	Individual	527 undergraduate students	N/A
19.	2010	Internet social networks in the contemporary adolescents lives	Stašová, L., et al.	International Conference on Applied Computer Science - Proceedings	Research – empirical	Social networks	N/A	Survey	Individual	708 respondents	N/A
20.	2010	Perceived stress, sensation seeking, and college students' abuse of theInternet	Velezmo, R., et al	Computers in Human Behavior	Research – empirical	Internet	Sensation seeking theory	Survey	Individual	College students 140	N/A
21.	2011	The role of feeling in the	Cupchik, G. C.	Journal of Media Psychology-	Conceptual	Media Psychology	reactive model of media involvement	N/A	N/A	N/A	N/A

		entertainment=emotion formula		Theories Methods and Applications							
22.	2011	Effects of narcissism, leisure boredom, and gratifications sought on user-generated content among net-generation users	Poon, D. C. H. and L. Leung	International Journal of Cyber Behavior, Psychology and Learning	Research - empirical	Internet	U & G	Survey	Individual	334 participants	N/A
23.	2011	The relationship between internet dependency with sensation seeking and personality	Rahmani, S. and M. G. Lavasani	Procedia - Social and Behavioral Sciences.	Research - empirical	Internet	N/A	Survey	University	179 participants	N/A
24.	2011	The comparison of sensation seeking and five big factors of personality between internet dependents and non-dependents	Rahmani, S. and M. G. Lavasani	Procedia - Social and Behavioral Sciences	Research - empirical	Internet	N/A	Survey	University	179 undergraduate students	N/A
25.	2013	Kansei engineering: Emotion exploration in blogs	Ramachandiran, C. R. and N. Jomhari	Proceedings - 2013 International Conference on Biometrics and Kansei Engineering, ICBAKE 2013	Research - empirical	Consumer emotions	N/A	Kansei Measurement Process	Individual	43 undergraduate students	N/A

26.	2013	Characterizing geographic variation in well-being using tweets	Schwartz, H. A., et al.	Proceedings of the 7th International Conference on Weblogs and Social Media, ICWSM 2013	Research - empirical	Social networks	psychological theory, well-being theory	Differential language analysis	Country	1,293 counties	N/A
27.	2014	Does time fly when you're having fun?	Asensio - Sánchez, V. M.	Archivos de la Sociedad Espanola de Oftalmologia	Letter	N/A	N/A	N/A	N/A	N/A	N/A
28.	2014	I can't get no satisfaction: Potential causes of boredom	Gerritsen, C. J., et al.	Consciousness and Cognition	Research - empirical	N/A	theories of boredom	Survey	Individual	131 participants	✓
29.	2014	Assessment of heterogeneity of compulsive buyers based on affective antecedents of buying lapses	Jung, J. and S. Yi	Addiction Research and Theory	Research - empirical	Marketing & Consumer	escape theory, drug theory of money, baseline model	Survey	Individual	419 participants	N/A
30.	2014	The correlates between internet addictive behavior and psychosocial variables of using the social networks among slovak university students	Lichner, V., et al.	Psychology and Psychiatry, Sociology and Healthcare, Education	Research - empirical	Social networks	N/A	Survey	Individual	306 Slovak university students	N/A

31.	2014	Design criteria for web applications adapted to emotions	Mori, G., et al.	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	Research - empirical	Web application	N/A	Survey	Individual	Survey 1: 57 participants Survey 2: 50 different users	N/A
32.	2014	Smartphone use by older adults in Singapore	Pang, N., et al.	Gerontechnology	Research - empirical	Smartphone	technology acceptance model (TAM)	Semi-structured interviews	Individual	nine recipients	N/A
33.	2014	Gender and sensation seeking as predictor variables of problematic internet use by high school students	Siyez, D. M	Addicta-the Turkish Journal on Addictions	Research - empirical	Academic, Internet	screening model, David's cognitive behavioral approach model, theory of free-time boredom	Survey	Individual	458 students	N/A
34.	2015	The brain in your pocket: Evidence that smartphones are used to supplant thinking	Barr, N., et al.	Computers in Human Behavior	Research - empirical	Smartphone technology	information processing frameworks	Survey	Individual	Study 1: 190 Study 2: 204 Study 3: 262 participants	N/A
35.	2015	Does personal social media usage affect efficiency and well-being?	Brooks, S.	Computers in Human Behavior	Research - empirical	Information systems	distraction-conflict theory, efficiency model hypothesis development,	Survey	Individual	209 students	N/A

						attentional control (ATC)					
36.	2015	Creation of emotion-inducing scenarios using BDI	Brosseau, P. O. and C. Frasson	ICAART 2015 - 7th International Conference on Agents and Artificial Intelligence	Research - empirical	Agents and artificial intelligence	belief-desire-intention (BDI) model	Experiment	Individual	30 participant	N/A
37.	2015	The importance of being... Bored	Ebling, M. R.	IEEE Pervasive Computing	Editorial	N/A	N/A	N/A	N/A	N/A	N/A
38.	2015	Characteristics of internet addiction/pathological internet use in U.S. university students: A qualitative-method investigation	Li, W., et al.	PLoS ONE	Research - empirical	N/A	N/A	Focus group	Individual	27 students	N/A
39.	2015	An investigation of Facebook boredom phenomenon among college students	Yazdanparast, A., et al.	Young Consumers	Research - empirical	Social networks	theories of boredom, uses and gratification theory, social cognitive theory	Survey	Individual	279 participant	✓
40.	2016	Exploring college students' generational differences in Facebook usage	Čičević, S., et al.	Computers in Human Behavior	Research - empirical	Social networks	N/A	Mixed method, interview, Survey	Individual	200 participants	N/A
41.	2016	Use of social media by science students in public universities in Southwest Nigeria	Fasae, J. K. and I. Adegbil	Electronic Library	Research - empirical	Social networks	N/A	Descriptive design	Individual	138 students	N/A

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42.	2016	“I miss my mobile phone!”: Self-expansion via mobile phone and responses to phone loss	Hoffner, C. A., et al.	New Media and Society	Research - empirical	Smart phones	self-expansion theory	Survey	Individual	272 smart phone users	N/A
43.	2016	Four facets of Facebook intensity — The development of the multidimensional Facebook intensity scale	Orosz, G., et al.	Personality and Individual Differences	Research - empirical	Social networks	N/A	Multi method design, Study 1: exploratory structural equation modeling 45559 Study 2: CFA Study 3: convergent validity Study 4: incremental validity	Individual	Study 1 (N = 512) Study 2 (N = 566) Study 3 (N = 531) Study 4 (N= study 1)	N/A
44.	2016	Avoidance or boredom: Negative mental health outcomes associated with use of information and communication technologies depend on users' motivations	Panova, T. and A. Lleras	Computers in Human Behavior	Research - empirical	Communication technologies	N/A	Multi method design Study 1: questionnaire study Study 2: experiment	Individual	Study 1: 375 Study 2: 84	N/A

45.	2016	Exploration of technology use pattern among teenagers and its relationship with psychological variables	Rajanna, S. H., et al.	Asean Journal of Psychiatry	Research - empirical	Youth and technology	N/A	Semi structured Interview	Individual	200 adolescents	N/A
46.	2016	Monotony of social networking among millennial and its effect on social advertisement: a challenge to digital marketers.	Singh, R	Young Consumers	Research - empirical	Social networks	theory of uses and gratifications, social-cognitive theory and theories on monotony	Survey	Individual	410 participant	✓
47.	2016	The effects of boredom, loneliness, and distress tolerance on problem internet use among university students	Skues, J., et al.	International Journal of Mental Health and Addiction	Research - empirical	Internet	social-cognitive model, cognitive behavioural model of PIU, self-regulation model	Survey	Individual	164 students	N/A
48.	2017	Avoiding boredom: Caudate and insula activity reflects boredom-elicited purchase bias	Dal Mas, D. E. and B. C. Wittmann	Department of Psychology	Research - empirical	Mood and emotions	N/A	Experiment	Individual	Thirty-five participants	N/A
49.	2017	Streamer motives and user-generated content on social live-streaming services	Friedländer, M. B	Journal of Information Science Theory and Practice	Research - empirical	Information science	N/A	Content analysis	Individual	4548 participant	N/A

50.	2017	Internet addiction, lifestyle or mental disorder? A phenomenological study on social media addiction in Indonesia	Kurniasih, N.	3rd International Conference on Social and Political Science	Research - empirical	Communication and information	social exchange theory	Multi method design, in-depth interview, observation, and direct interaction	Individual	9 informants and one psychology expert	N/A
51.	2017	Use of social media by agricultural undergraduate students in selected universities in Nigeria	Orifah, M. O., et al	Journal of Agricultural Extension	Research - empirical	Agricultural Economics	N/A	Survey	Individual	425 undergraduate agricultural students	N/A
52.	2017	Aggressive and stressed? Youth's aggressive behaviors in light of their internet use, sensation seeking, stress and social feelings	Piko, B. F., et al.	Children and Youth Services Review	Research - empirical	Internet	N/A	Survey	Individual	408 participant	N/A
53.	2017	Personality traits, boredom, and loneliness as predictors of Facebook use in on-campus and online university students	Skues, J., et al.	International Journal of Cyber Behavior, Psychology and Learning	Research - empirical	Social networks	five factor personality models	Survey	Individual	205 participants	N/A
54.	2017	Navigating (im)mobility: Female entrepreneurship and social media in Khartoum	Steel, G.	Africa	Research - empirical	Social networks	N/A	Fieldwork	Individual	forty-five Muslim Sudanese women	N/A

55.	2017	Adolescent digital profiles: A process-based typology of highly engaged internet users	Tzavela, E. C., et al.	Computers in Human Behavior	Research - empirical	Digital use	grounded theory, internet addiction theory	Interviews	Individual	72 adolescents	N/A
56.	2018	Proneness to boredom and risk behaviors during adolescents' free time	Biolcati, R., et al.	Psychological Reports	Research - empirical	N/A	N/A	Survey	Individual	478 Italian adolescents	✓
57.	2018	Online advertorial attributions on consumer responses: materialism as a moderator	Chang, H. H., et al.	Online Information Review	Research - empirical	Advertisement	S-O-R framework, Mehrabian-Russell (M-R) environment psychology model, appraisal theory	Survey	Individual	421 consumers	N/A
58.	2018	Boredom proneness and its correlation with Internet addiction and internet activities in adolescents with attention-deficit/hyperactivity disorder	Chou, W. J., et al.	Kaohsiung Journal of Medical Sciences	Research - empirical	Internet	N/A	Survey	Individual	300 adolescents	✓
59.	2018	Fear of missing out: Testing relationships with negative affectivity, online social engagement, and problematic smartphone use.	Elhai, J. D., et al.	Computers in Human Behavior	Research - empirical	Technology	FOMO model, self-determination theory (SDT), compensatory internet use theory (CIUT), emotion theory	Survey	Individual	n=227	✓

60.	2018	Proneness to boredom mediates relationships between problematic smartphone use with depression and anxiety severity	Elhai, J. D., et al.	Social Science Computer Review	Research - empirical	Emotions and smartphone usage	uses and gratifications theory	Survey	Individual	n=298	N/A
61.	2018	Factors affecting smartphone dependency among the young in China	Jiang, Q. L. and Y. Li	Asian Journal of Communication	Research - empirical	Smartphones, youth	individual media dependency (IMD) theory	Survey	Individual	584 participant	N/A
62.	2018	Quid pro quo in Web 2.0. Connecting personality traits and Facebook usage intensity to uncivil commenting intentions in public online discussions	Koban, K., et al.	Computers in Human Behavior	Research - empirical	Social networks	theory of planned behaviour, five factor model,	Survey	Individual	256 Facebook users	N/A
63.	2018	Affect, data, manipulation and price in social media	Paasonen, S.	Distinktion	Conceptual	Attention economy of social media	autonomist theory	N/A	N/A	N/A	✓
64.	2018	People tend to wind down, not up, when they browse social media	Panger, G	Proceedings of the ACM on Human-Computer Interaction 2(CSCW)	Research - empirical	Social media	original theory, basic emotions theory, psychological construction theory, theory of emotional contagion	Survey	Individual	Facebook (N = 362) and Twitter (N = 416)	N/A

65.	2018	A week without using social media: Results from an ecological momentary intervention study using smartphones	Stieger, S. and D. Lewetz	Cyberpsychology, Behavior, and Social Networking	Research - empirical	Social media	fear of missing out, Technology Integration Model	Ecological momentary intervention	Individual	152 participant	N/A
66.	2018	Is it beneficial to use internet-communication for escaping from boredom? Boredom proneness interacts with cue-induced craving and avoidance expectancies in explaining symptoms of Internet-communication disorder	Wegmann, E., et al	PLoS ONE	Research - empirical	Internet-communication	affect-cognition-execution (I-PACE) model	Survey	Individual	148 participant	✓
67.	2018	The social media seesaw: Positive and negative influences on adolescents' affective well-being	Weinstein, E.	New Media and Society	Research - empirical	Media and health	“either/or” model, “both/and” model	Mixed method, survey and in-depth interviews	Individual	568 participant, Sub-scale: 26 participant	N/A
68.	2019	Problematic attachment to social media: Five behavioural archetypes	Altuwairiqi, M., et al.	International Journal of Environmental Research and Public Health	Research - empirical	Internet	the big five model, Parrott's framework, attachment theory, identity theory, social identity theory, self-presentation theory, social role theory, and self-concept theory	Qualitative study: behavioural archetypes creation and validation	Individual	18 participants Phase 4: 51 participants	N/A

69.	2019	The smartphone as a pacifier and its consequences: Young adults' smartphone usage in moments of solitude and correlations to self-reflection	Diefenbach, S. and K. Borrmann	Conference on Human Factors in Computing Systems - Proceedings.	Research - empirical	Smartphone use	psychological theory, influential theory of attachment	Mixed method, focus group and survey	Individual	399 participant	✓
70.	2019	Disrupted daily activities from interruptive smartphone notifications: Relations with depression and anxiety severity and the mediating role of boredom proneness	Elhai, J. D., et al.	Social Science Computer Review	Research - empirical	Smartphone use	theory on flow experiences, I-PACE	Survey	Individual	N= 316	N/A
71.	2021	Swiping away the moments that make up a dull day: Narcissism, boredom, and compulsive smartphone use	Ksinan, A. J., et al.	Current Psychology	Research - empirical	Smartphone use	five-factor model of personality	Survey	Individual	532 participant	N/A
72.	2019	Students on a social media 'detox': Disrupting the everyday practices of social media use	Lepik, K. and M. Muruma-Mengel	Communications in Computer and Information Science	Research - empirical	Information society and new media	framework of the information behaviour, social constructivist framework, uses and gratifications theory, media domestication theory, social acceleration of time	Multi Method Design, thematic qualitative text analysis and experiential nature	Individual	42 students	N/A

73.	2019	screen addiction and media multitasking among American and Taiwanese users	Lin, T. T. C., et al.	Journal of Computer Information Systems	Research - empirical	Social networks	N/A	Survey	Individual	United States (N = 798) and Taiwan (N = 834)	✓
74.	2019	Future teachers' smartphone uses and dependence	Ruiz-Palmero, J., et al.	Education Sciences	Research - empirical	Education and smartphone	N/A	Survey	Individual	453 students	N/A
75.	2019	Mobile phone addiction among children and adolescents: A systematic review	Sahu, M., et al.	Journal of addictions nursing	Research -Review	Smartphone	N/A	N/A	N/A	N/A	N/A
76.	2019	Exploring the motivation of affect management in fostering social media engagement and related insights for branding	Saleem, F. Z. and O. Iglesias	Internet Research	Research - empirical	Social networks	U&G theory, mood management theory, Mood adjustment theory (MAT)	Multi Method Design, interviews online observation of the Facebook profiles	Individual	15 participant	N/A
77.	2019	Clicking the boredom away – Exploring impulse fashion buying behavior online.	Sundström, M., et al.	Journal of Retailing and Consumer Services	Research - empirical	Fashion	grounded theory	Interviews face-to-face	Individual	14 young Swedish consumers	✓
78.	2019	Internet addiction among secondary school adolescents: A mixed methods study	Tenzin, K., et al.	Journal of Nepal Medical Association	Research - empirical	Internet, adolescents:	N/A	Descriptive cross-sectional quan-qual sequential mixed method design	Individual	721 adolescents	N/A

79.	2019	Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study	Throuvalla, M. A., et al.	Computers in Human Behavior	Research - empirical	Social media	Uses and gratifications theory and self-determination theory, perceptual control theory social compensation theory social enhancement hypothesis, sociometer theory	Focus groups	Individual	42 adolescent students	N/A
80.	2019	Problematic internet use and protective factors related to family and free time activities among young people.	Tomczyk, Ł. and R. Solecki	Educational Sciences: Theory and Practice	Research - empirical	Internet	usage and gratification	Survey	Individual	663 school students	N/A
81.	2019	Exploring the relationship among free-time management, leisure boredom, and internet addiction in undergraduates in Taiwan	Wang, W. C.	Psychological Reports	Research - empirical	Internet	Flow Theory	Survey	Individual	446 participants	✓
82.	2020	I just want to keep in touch”: Adolescents’ experiences with leisure-related smartphone use	Allaby, M. and C. S. Shannon	Journal of Leisure Research	Research - empirical	Adolescents and smartphones	N/A	Interviews	Individual	9 participants	N/A

83.	2020	Expression of feelings in Twitter: A decision tree approach	Al-Saggaf, Y.	Advances in Intelligent Systems and Computing.	Research - empirical	Social media use	N/A	Data mining approach	Individual	147 users	N/A
84.	2020	Media attention to large-scale corporate scandals: Hype and boredom in the age of social media	Barkemeyer, R., et al.	Journal of Business Research	Research - empirical	Corporate and social media	N/A	Secondary data	Corporate	123 major corporate scandals	N/A
85.	2020	The effect of boredom proneness on smartphone addiction and impulse purchasing: A field study with young consumers in Turkey	Bozaci, I.	Journal of Asian Finance Economics and Business	Research - empirical	Asian finance, economics and business (consumption)	N/A	Survey	Individual	313 students	N/A
86.	2020	Tell me why are you using social media (SM)! Relationship between reasons for use of SM, SM flow, daily stress, depression, anxiety, and addictive SM use – An exploratory investigation of young adults in Germany	Brailovskaia, J., et al	Computers in Human Behavior	Research - empirical	Young adults and social media	N/A	Mixed-methods approach, inductive qualitative content analysis and survey	Individual	485 participant	N/A
87.	2020	Fear of missing out, mental wellbeing, and social connectedness: A seven-day social	Brown, L. and D. J. Kuss	International Journal of Environmental Research	Research - empirical	Social media use	self-determination and uses and gratifications theory, social cognitive theory, model of computer-	Mixed methods approach, gathering both	Individual	61 participant	N/A

		media abstinence trial.		and Public Health		mediated communication		quantitative and qualitative data.			
88.	2020	Loneliness, boredom and information anxiety on problematic use of social media during the COVID-19 pandemic.	Catedrala, J., et al.	Proceedings of the 28th International Conference on Computers in Education. Asia-Pacific Society for Computers in Education	Research - empirical	Social media use	flow theory	Survey	Individual	257 participants	N/A
89.	2020	A stimulated recall method for the improved assessment of quantity and quality of social media use	Griffioen, N., et al.	Journal of Medical Internet Research	Research - empirical	Social networks	N/A	Interview	Individual	53 participant	N/A
90.	2020	A qualitative insight into the personal factors impacting online impulse behavior	Kumar, K., et al.	Strategies and Tools for Managing Connected Consumers	Research - empirical	Consumer behavior	N/A	Interview	Individual	12 participant	N/A
91.	2020	Anxious, bored, and (maybe) missing out: Evaluation of anxiety attachment, boredom proneness, and fear	Holte, A. J. and F. R. Ferraro	Computers in Human Behavior	Research - empirical	Computers in human behavior	attachment theory	Survey	Individual	450 adults	N/A

		of missing out (FoMO)								
92.	2020	Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions.	Imran, N., et al.	Pakistan Journal of Medical Sciences	Research - other (literature review)	Psychological sociological framework,	Review	N/A	10 studies	N/A
93.	2020	The digital divide: Risk and protective factors and the differences in problematic use of digital devices among Hungarian youth	Kiss, H., et al.	Children and Youth Services Review	Research - empirical	Digital devices risk and protection model	Survey	Individual	249 participant	N/A
94.	2020	Exploring the relationship between smartphone activities, flow experience, and boredom in free time	Leung, L	Computers in Human Behavior	Research - empirical	Smartphone use uses and gratifications (U&G) theory	Telephone Survey	Individual	653 smartphone users	✓
95.	2020	Does mindfulness reduce the effects of risk factors for problematic smartphone use? Comparing frequency of use versus self-reported addiction	Regan, T., et al.	Addictive Behaviors	Research - empirical	Smartphone use two-factor theory, person-affect-cognition-execution (I-PACE) model	Survey	Individual	135 participant	N/A

96.	2020	Bored and online: Reasons for using social media, problematic social networking site use, and behavioral outcomes across the transition from adolescence to emerging adulthood	Stockdale, L. A. and S. M. Coyne	Journal of Adolescence	Research - empirical	Social media and adolescence	N/A	Survey	Individual	385 participant	N/A
97.	2020	Socio-educational implications of technology use during COVID-19: A case study in General Santos City, Philippines	Toquero, C. M. D. and K. J. B. Talidong	Human Behavior and Emerging Technologies	Practitioner	Technology	N/A	Case study	community	community	N/A
98.	2020	Boredom proneness and rumination mediate relationships between depression and anxiety with problematic smartphone use severity	Wang, Y., et al.	Current Psychology	Research - empirical	Smartphone	compensatory internet use theory (CIUT), interaction of person-affect-cognition-execution (I-PACE) model	Survey	Individual	1097 Chinese university students	✓
99.	2020	Relationships among boredom proneness, sensation seeking and smartphone addiction among Chinese college students: Mediating roles of pastime, flow	Wang, Z. P., et al.	Technology in Society	Research - empirical	Smartphone	flow theory	Survey	Individual	442 participant	✓

		experience and self-regulation									
100	2020	Is boredom proneness related to social media overload and fatigue? A stress-strain-outcome approach	Whelan, E., et al	Internet Research	Research - empirical	Social media	stress-strain-outcome framework, cybernetic theory of stress, uses and gratifications theory	Survey	Individual	286 participant	✓
101	2020	So last year: Combating stakeholder boredom with social media	Direction, S	Strategic Direction	Review	Social networks	N/A	N/A	N/A	N/A	N/A
102	2021	The emotion regulatory function of online social networking: Preliminary experimental evidence	Drach, R. D., et al.	Addictive Behaviors	Research - empirical	Social networks	I-PACE framework	Experimental	Individual	139 undergraduate students	N/A
103	2022	Impacts of Covid-19 pandemic on consumer behavior in Turkey: A qualitative study	Güngördü Belbağ, A. (2022)	Journal of Consumer Affairs	Research - empirical	Consumer behavior	stimulus-organism response framework and constant comparative methods	Interview	Individual	78 Turkish consumers	N/A

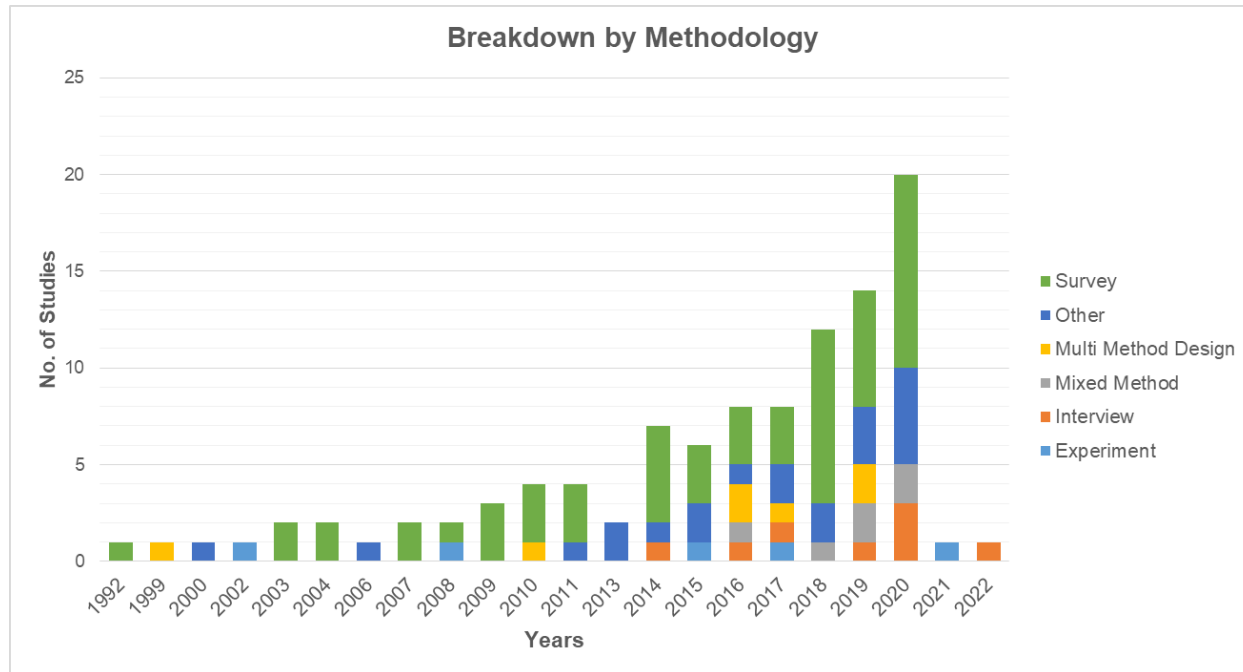
Appendix D: Descriptive Data

Figures D.1 and D.2 provide descriptive statistics with regard to the review sample. In Appendix C, above, the complete list of the sample's sources are also provided, which served to generate this information.

Figure D.1 provides a count of source by year, broken down according to the five main types of sources reviewed: survey, interview, experiment, mix method, and multi method design. The total sample size for Figure D.1 is $n = 103$ (56 survey; 21 others, 7 multi method, 6 mixed method, 8 interviews and 5 experiment). Figure D.2 presents each method in percentage.

Figure D.1.

Breakdown of Sources by Methodology Type (n = 103)



Note: Others include methodology where the number is less than 2 in the sample They are Behavioural archetypes creation and validation, Case study, Content analysis, Data mining approach, Descriptive design, Differential language analysis, Ecological momentary intervention, Fieldwork, Kansei measurement process, Review, Focus group, Secondary data.

Figure D.2

Breakdown of Methodology Type in Percentage (n = 103)

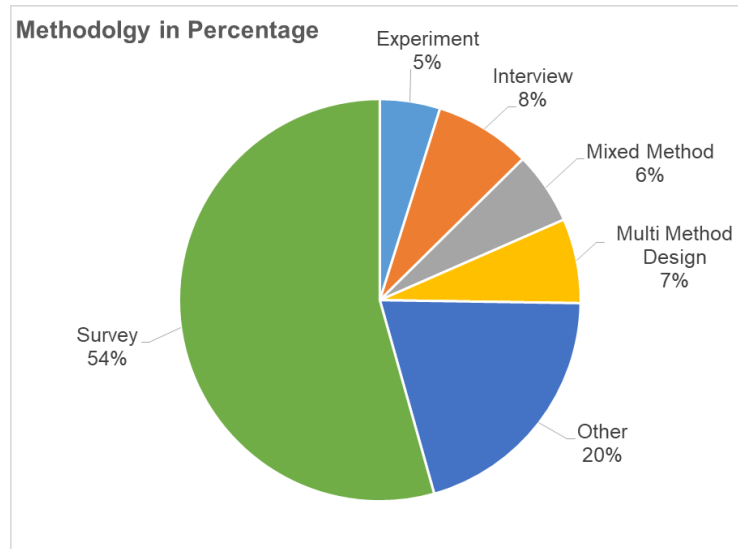
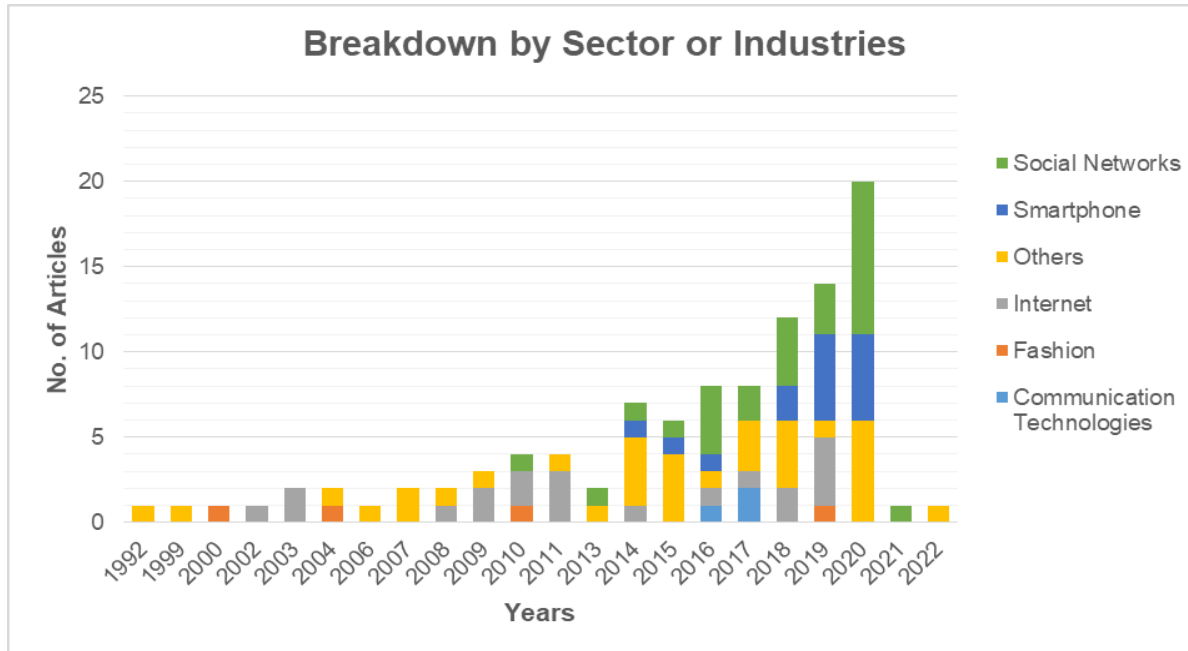


Figure D.3 provides a count of source by year, broken down according to the five main sectors: social networks, smartphones, internet, fashion, and communication technologies and the rest are others. The total sample size for Figure D.2 is $n = 103$ (27social networks; 15 smartphones, 20 Internet, 4 fashion, 3 communication technologies, and 34 others). Figure D.4 presents each sector in percentage.

Figure D.3

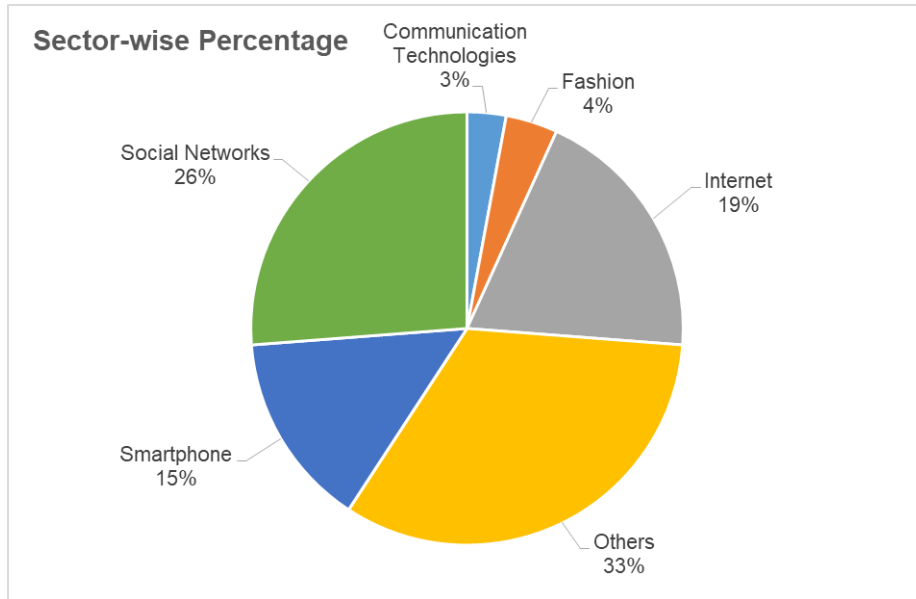
Breakdown of Sources by Sectors and Industries Type (n = 103)



Note: Others include sectors where the number is less than 2 in the sample. They are Advertisement, Agents and artificial intelligence, Agricultural economics, Communication and information, Computers in human behaviour, Consumer behaviour, Digital technology, Educational and Internet, Emotions, Human-computer interaction, Information society and new media, Marketing & consumer, Media and health, Media psychology, Mood and emotions, Non-profit Organisation, Online shopping systems, Psychological, Retailing, Technology , Travel, Web application, Youth, Youth and technology, Communication technologies.

Figure D.4

Breakdown of Sector Type in Percentage (n = 103)



Appendix E: Visual representation of themes and subthemes in NVIVO

Figures E.1 to E.5 provide the visual representation of main themes along with their subthemes which emerged in the analysis with regard to the review sample in NVIVO.

Figure E.1.

Visual Representation of Connection Between Main Themes and Their Subthemes

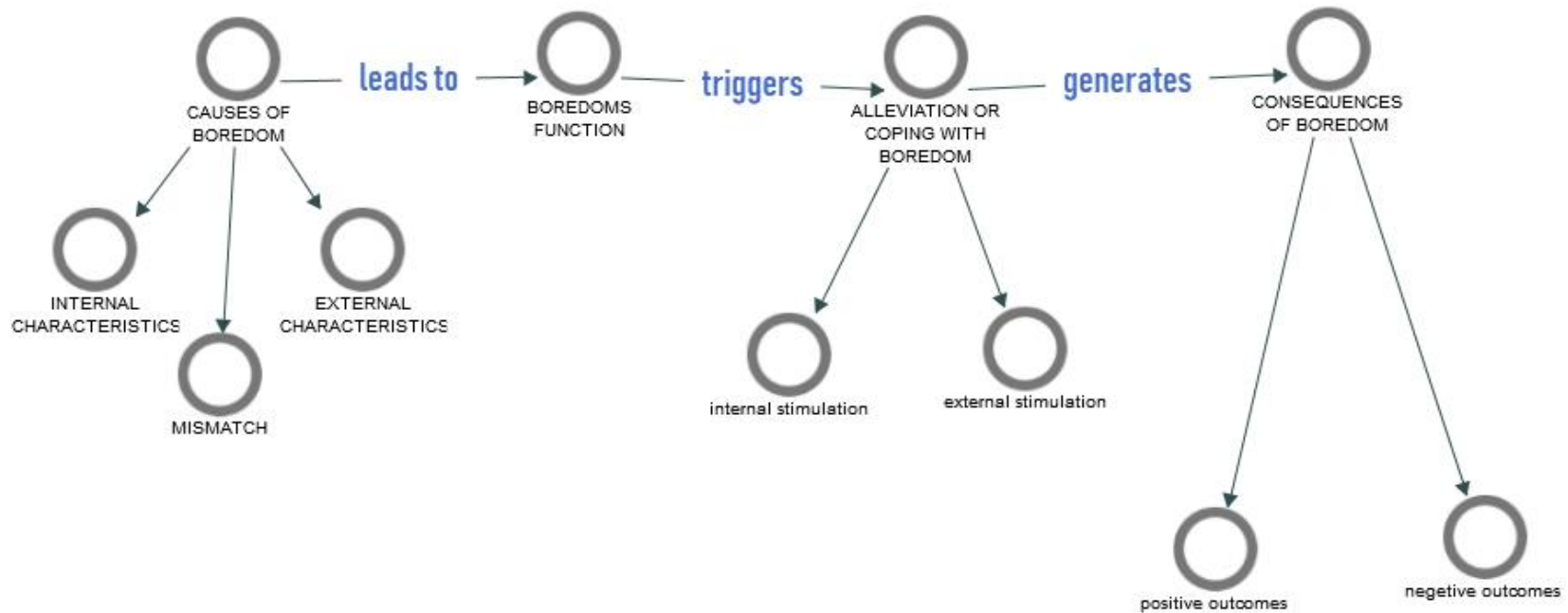


Figure E.2

Visual Representation of Theme “Boredom’s Function” and Its Subthemes

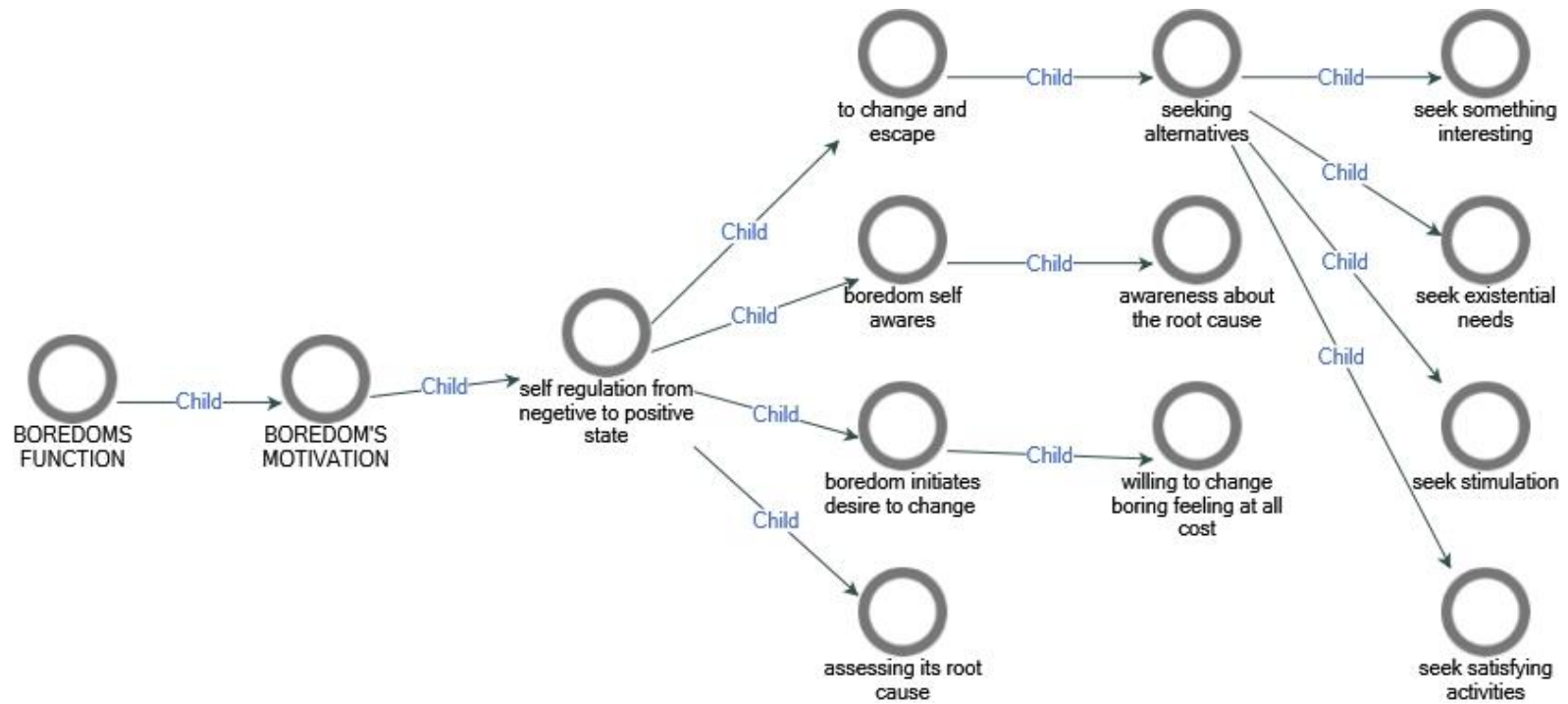


Figure E.3

Visual Representation of Theme “Causes of Boredom” and Its Subthemes

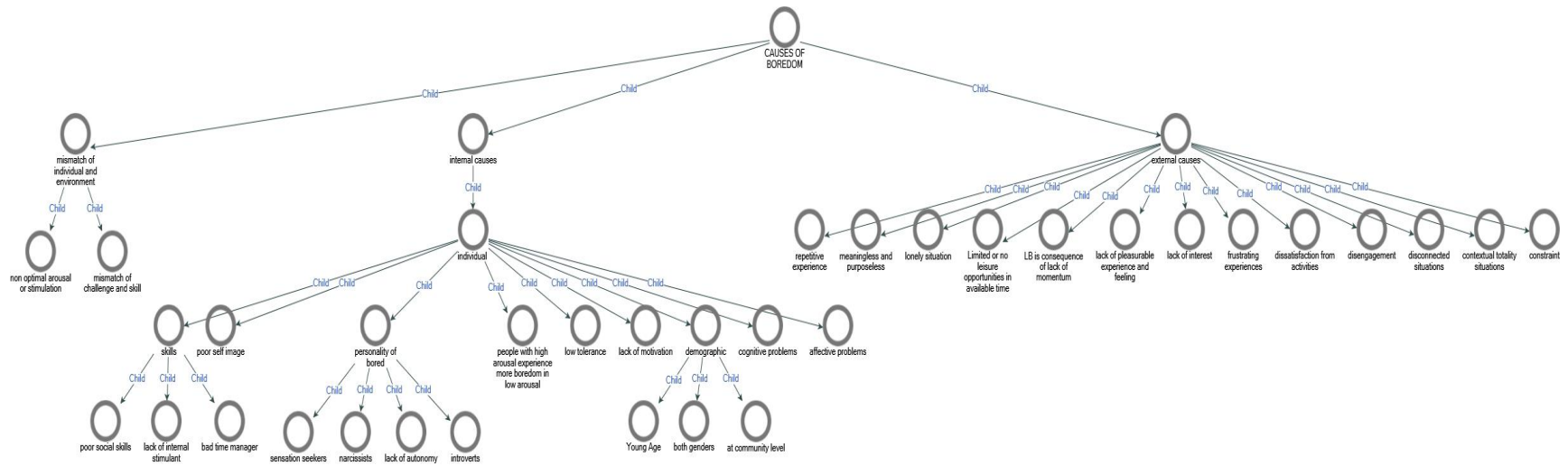


Figure E.4

Visual Representation of Theme “Alleviation Strategies” and Its Subthemes

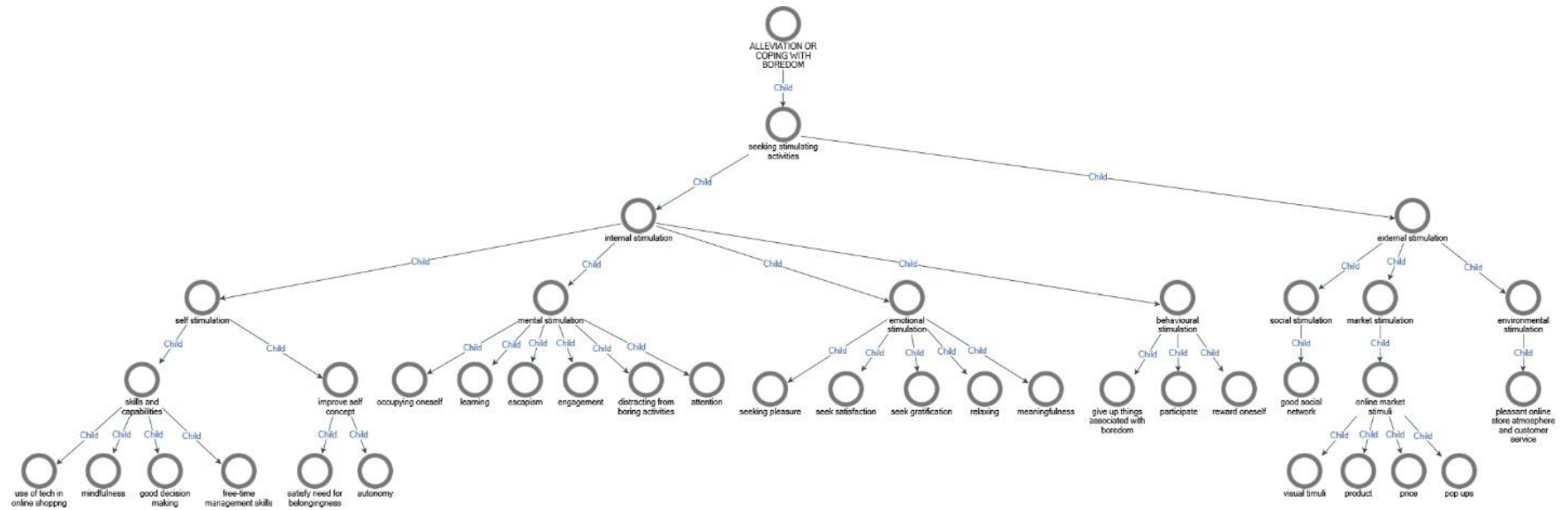
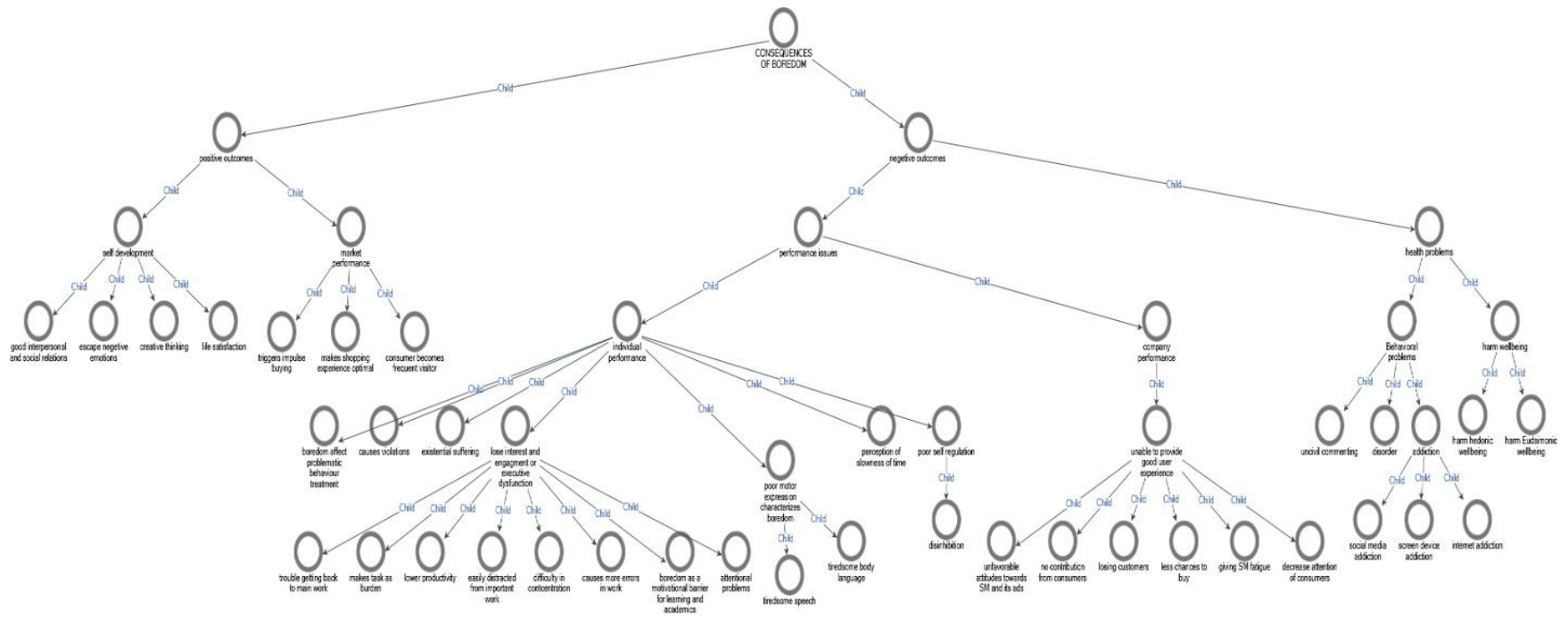


Figure E.5

Visual Representation of Theme “Consequences of Boredom” and Its Subthemes



Appendix F: Glossary of Variables in Framework

Table F.1.

Variables Definition

Name	Definition	Source
Affect	'Affect' is a general term used to describe a 'feeling state', and emotions are specific examples of feelings. Affect refers to pleasant and unpleasant moods and emotions”.	(Kim, 2000, p. 304; Weinstein, 2018, p. 3600)
Attention deficit	Refers to difficulties in inhibiting behavior, inattention and difficulty of staying focused on a specific task.	(Dalvi-Esfahani et al., 2019, p. 2)
Arousal	Arousal reflects to what degree an atmosphere can influence stimulation.	(Zhao et al., 2021, p. 6)
Attention deficit hyperactivity disorder ADHD	ADHD is characterized by three behavioral components: attention deficits, hyperactivity, and impulsivity. Adolescents with attention deficits often experience difficulties in completing tasks that require a long attention span, because they easily become distracted. Adolescents with hyperactive behavior typically show physical	(Boer et al., 2020, p. 854)

restlessness. Impulsive adolescents tend to have a strong preference for immediate rewards over delayed rewards, and often act without deliberate forethought.

Autonomy	Autonomy refers to the decision latitude, influence, freedom, discretion, or (potential) control that people have over when and how tasks are done	(Van Hooft and Van Hooff, 2018, p. 932)
Behavioural stimulation	“Behave” by converting sensory inputs to decisions, emotions, or actions, is the essence of behavioral simulation	(Macal & Kaligotla, 2017, p. 315)
Constraint	“Arises when we must not do what we want to do, or must do what we do not want to do”	(Mikulas & Vodanovich, 1953, p. 359).
Coping	“The cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands, along with the conflicts among them.”	(Lu et al., 2012, p. 226)
Day dreaming	“A shift of attention away from an ongoing physical or mental task or from a perceptual response to external stimulation toward some	(Singer, 1966, p. 3)

internal stimulus”. Daydreaming defines spontaneous thoughts that are characterized by a marked imaginative nature.

Dissatisfaction

Dissatisfaction has three key components: it is an affective response; (Cho et al., 2003, p. 638; Lu et al., 2012, p. 225)
(just for literature, the main article is also downloaded)

Dissatisfaction is defined as resulting from contemplating what falls short of one’s wishes or expectations. Dissatisfaction concludes that a discrepancy between perceived product performance and the consumer’s expectation of performance leads to dissatisfaction.

Dissatisfaction is “a state of cognitive/affective discomfort caused by an insufficient return relative to the resources spent by the consumer at any stage of the purchase/consumption process”.

Therefore, dissatisfaction includes the cognitive process and the affective process.

Disengagement

Disengagement, defined as a complete lack of engagement, effort, (Pawlak et al., 2020, p. 2).
interest, enthusiasm and/or prosocial conduct, which entails an

	individual's total non-commitment and withdrawal from what others do with involvement and/or enjoyment.	
E-commerce	Electronic commerce (e-commerce), which is described as the buying and selling of goods and products, services and funds through computer networks, especially the internet.	(Shemi & Procter, 2018, p. 501)
Emotional/affective stimulation	Pursuit of the immediate gratification ... to change or manage emotions or mood states.	(Youn & Faber, 2000, 179)
Environmental stimulation	Environmental stimulation included external stimuli, environment of the store and visual merchandising.	(Mohammad & Mostafa, 2011, p. 13058)
Eudaimonic wellbeing	<p>“Well-being” in terms of the extent to which a person is fully functioning and capable of realizing his/her true potential.</p> <p>Eudaimonic wellbeing is based on the view that people achieve betterment if they experience utilisation of their full potential, which means they experience life purpose and are appropriately challenged.</p>	<p>(Jiang et al., 2018, p. 530; Sharma & Rao Hill, 2017, p. 5)</p>

External stimulation	External stimulation is arousal from the external environment.	(Kuei Huang & Yang, 2008, p. 100)
FOMO	Defined as a “pervasive apprehension that others might be having rewarding experiences from which one is absent”	(Brown & Kuss, 2020, p. 2)
Free time boredom/ leisure boredom	Free time boredom is a subjective feeling characterized as a sensory deficit, failing to reach an optimal level of flow or arousal, originating from underload due to lack of pleasant rewards obtained from physical and mental stimulation, social isolation, affective, and environmental settings during a person’s free time.	(Ragheb & Merydith, 2001, p. 45)
Frustration	“feeling or expressing distress and annoyance resulting from an inability to change or achieve something”	(Van Hooft & Van Hooff, 2018, p. 932)
Gratification	Gratification in online activity is the satisfaction of needs for surveillance, personal identity, information learning, socialization, escape, entertainment and interaction	(Huang, 2008, p. 407)
Hedonic wellbeing	Hedonism holds that well-being is a happy experience and is strongly connected to subjective wellbeing.	(Zhou et al., 2020, p. 631)

	The hedonic aspect of well-being, is founded on the concept of sensory pleasure and happiness that affects quality of life.	(Sharma & Rao Hill, 2017, p. 5)
Impulse buying	Impulse-based consumer purchases are those that have not been planned completely or partially before entering a store	(Bozaci, 2020, p. 511)
Interest	"a feeling that accompanies or causes special attention to an object or class of objects"	(Webster, 1989, p. 741)
Internal stimulation	Internal cues refer to consumers' self-feelings, moods, and emotional states. Internal stimulation including physiological, emotional, and cognitive arousals Moreover, as part of internal factors, factors related to individuals' emotions or mood (this is just to prove that emotional comes under internal ... research says it can be external like marketers can induce it too but in my research individual is using SM to stimulate that's why all this is internal)	(Youn & Faber, 2000, p.180; Kuei Huang & Yang, 2008, p. 100).

Internet addiction	<p>Problematic Internet use (PIU) can be defined as “use of the Internet that creates psychological, social, school and/or work difficulties in a person’s life”.</p> <p>“Internet Addiction” or “Internet Dependency”, defined as the “inability to control one’s use of the Internet which leads to negative consequences in daily life”</p>	<p>(Spada et al., 2008, p. 2326; Beard & Wolf, 2001, p. 378; Li et al., 2015, p. 2)</p>
Introvert	<p>Introversion, as a personality trait, refers to the individual difference in the inclinations toward the inner and outer world introversion can also be defined as low Extraversion. Adjectives traditionally associated with introversion include “inhibited,” “reserved,” and “undemonstrative,” while those associated with extraversion include “outgoing,” “friendly,” and “enthusiastic”.</p>	<p>(Tuovinen et al., 2020, p. 2; Wei, 2020, p. 2).</p>
Life satisfaction	<p>“Cognitive assessment of a person’s subjective well-being”</p>	<p>(Lemmens et al., 2015, p. 3)</p>
Loneliness	<p>“An unpleasant experience that derives from important deficiencies in a person’s network of social relationships”.</p>	<p>(Lemmens et al., 2015, p. 3)</p>

Market stimulation	<p>Marketing cues or stimuli that are placed and controlled by the marketer in an attempt to lure consumers into purchase behavior</p> <p>The greater the discount, or the more convincing the sales personnel and experts sound, the more likely consumers will be to purchase on impulse.</p>	<p>(Youn & Faber, 2000, p. 180)</p> <p>(Chen & Yao, 2018, p. 1252)</p>
Meaningfulness	<p>Meaning is the possession of a unique purpose or function to fulfill.</p> <p>When discussing meaning, we usually refer to a sense of coherence or understanding of our existence, as well as a sense of purpose or function towards which we can aim.</p> <p>This construct is defined as "the cognizance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment".</p>	<p>(Mascaro & Rosen, 2008, p. 578; Reker, 2000, p. 41)</p>
Meaninglessness	<p>"An affliction he refers to as an existential vacuum". When this condition remains unresolved, individuals are said to "lack the awareness of a meaning worth living for. They are haunted by the experience of their inner emptiness, a void within themselves".</p>	<p>(Fahlman, et al., 2009, p. 309)</p>

	Furthermore, "the existential vacuum manifests itself mainly in a state of boredom".	
Mental / cognitive stimulation	Mental stimulation (MS) refers to interventions that promote participation in intellectually stimulating activities. Cognitive stimulation needs through the acquisition of consumption-relevant knowledge out of curiosity. Cognitive stimulation seeking motivated by an intrinsic curiosity about consumption-relevant information.	(Sánchez-Nieto et al., 2008, p. 1; Baumgartner & Steenkamp, 1996, p. 123).
Mental wellbeing (MWB)	"The individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community".	(Brown & Kuss, 2020, P. 2)
Mindfulness	Mindfulness is the practice of self-regulating one's attention, alongside adopting an accepting, curious, and open orientation of one's experiences in the present moment.	(Regan et al., 2020, p. 2)
Mind Wandering	"Shift of attention away from a primary task toward internal information"	(Smallwood & Schooler, 2006, p. 946)

Monotony	Monotony and boredom interchange-ably to designate the experience which arises from the continued performance of an activity which is perceived as either uniform or repetitive, and which also induces a desire for change or variety.	(Smith, 1955, p. 322)
Motivation	Motivation ‘refers to the process that leads consumers to behave as they do’.	(Blazquez et al., 2019, p. 103)
Motor expressions	The motor expressions of an emotion include its facial, vocal, and bodily expressions.	(Elpidorou, 2018, p. 15)
Narcissists	Narcissism is entitled as self-importance. In other words, narcissistic individuals are those who view their own needs and goals as more significant than others’ and exhibit an inflated sense of importance and deservingness	(Krizan & Herlache, 2018, p. 4)
Negative emotion	Negative emotion refers to “the extent to which a person feels distressed, irritated, and disturbed”.	(Zhao et al., 2021, p. 6)

Pleasure	Pleasure refers to “the hedonic valence of the affective response to a stimulus”. More specifically, it measures “the degree to which a person feels happy and joyful when subject to a stimulus”.	(Zhao et al., 2021, p. 6)
Positive emotion	Positive emotion refers to “the extent to which a person feels enthusiastic, excited, and inspired”.	(Zhao et al., 2021, p. 6)
S-commerce	S-commerce can be defined as the “exchange-related activities that occur in, or are influenced by, an individual’s social network in computer mediated social environments, where the activities correspond to the need recognition, pre-purchase, purchase, and post-purchase stages of a focal exchange”.	(Brusch & Rappel, 2020, p. 2)
Self	Timothy Owens’s sociologically-minded definition of the self as ‘an organized and interactive system of thoughts, feelings, identities, and motives that (1) is born of self-reflexivity and language, (2) [that] people attribute to themselves, and (3) [that] characterize specific human beings’	(Owens 2003, p. 206)

Self-awareness	Self-awareness is a form of consciousness that enables the self to become an object of evaluation to oneself.	(Moynihan et al., 2017, p. 7)
Self-development	In the context of management education, self-development is a term for a growing family of approaches which give the learner control over the processes and tasks of his/her own development.	(Pedler, 1988, P. 19).
Self-esteem	“An evaluation of one’s self-concept, heavily dependent on reflected appraisals, social comparisons, and self-attributions”.	(Dalvi-Esfahani et al, 2019, p. 2)
Self-regulation	“Self-regulation relates to the ability to manage one’s goal-directed activities, every effort to change one’s own internal states and responses may be regarded as a sign of self-regulation”.	(Wang, et al., 2020, p. 4)
Self-stimulation	The act or process of inducing or increasing the level of arousal in oneself. It can be observed in various situations; for example, infants who are under stimulated may explore their surroundings or babble to themselves.	(APA Dictionary)

Sensation-seekers	Sensation seeking is “a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience”.	(Velezmoro et al., 2010)
Social media	Social networking sites (SNSs) are a kind of virtual platform where individuals present themselves, articulate their social networks and develop and maintain long-term relationships with others. Social media are a group of Internet-based applications that allow the creation and exchange of user generated content (UGC). Social networking sites are modern interactive communication channels through which people connect to one another, interact, share ideas, experiences, pictures, messages, information of interest and collaborate	(Singh, 2016, p. 376; Brooks, 2015, p. 27; Orifah, et al., 2017, p. 121)
Social media addiction	It is defined as “social media addiction as being too worried about social networking sites, driven by a strong incentive to enter or use social networking sites, and devoting enormous time and effort to	(Dalvi-Esfahani et al., 2019, p. 3)

	social networking sites that interfere with other social activities, studies/work, interpersonal relationships, or mental health and wellbeing”.	
Social media fatigue	“A subjective, multidimensional user experience comprising feelings, such as tiredness, annoyance, anger, disappointment, guardedness, loss of interest, or reduced need/motivation associated with various aspects of social media use and interactions”	(Ravindran et al., 2014, p. 2317).
Social media flow	SM flow was defined as a “multidimensional construct reflected by ‘concentration’, ‘time-distortion’, ‘telepresence’, ‘enjoyment’, and ‘curiosity’ as they relate to the SNS interaction”.	(Brailovskaia et al., 2020, p. 2)
Smartphone addiction	PSU is often defined as involving excessive smartphone use accompanied by symptoms of addiction, typical in substance use disorders, such as withdrawal and continued use despite health effects, along with functional impairment related to these symptoms.	(Elhai, et al., 2018, p. 708; Regan et al., 2020, p. 1)

	Problematic smartphone use defined as “an inability to regulate one’s use of the mobile phone, which eventually involves negative consequences in daily life”	
Social commerce	Social commerce is a subset of electronic commerce that uses social media, online media that supports social interaction and user contributions, to enhance the online purchase experience.	(Kim & Park, 2013, p 319)
Social stimulation	Social stimulation is to “interact” with each other, and behave collectively as a group.	(Macal & Kaligotla, 2017, p. 315)
State boredom	Boredom as a state of “under-stimulation, under-arousal, and lack of psychological involvement associated with dissatisfaction, and individuals try to cope with boredom by seeking additional stimulation”	(Biolcati et al., 2017, p. 304)
Store environment	Store environment consists of ambient factors such as lighting, scent, and music; design factors such as layout and assortment; and social factors such as the presence and effectiveness of salespersons. Layout refers to the way in which products, shopping carts, and	(Mohan et al., 2013, p. 4).

aisles are arranged; the size and shape of those items, and the spatial relationships among them. Product assortment is the total set of items offered by a retailer. Social factors refer to the people such as other shopper and salespeople.

Trait boredom/ boredom proneness	The construct of boredom proneness is often “operationalized as an individual’s susceptibility to experience boredom.	(LePera, 2011, p.15)
Uncivil commenting	Online behavior such as insults, ridicule, attacks on character or competence, name-calling, vulgarity, and disrespect have been defined as uncivil. Online commenters expressing themselves with “rude language, anger, hatred, even threats”. Uncivil commenting is generalizing and blatant comments on public SNS pages.	(Koban et al., 2018, p. 4)
User generated content	UGC, which describes the various forms of media content created by end-users outside of a professional context and is publicly available.	(Brooks, 2015, p. 27)
Wellbeing	Well-being, which concerns “optimal psychological experience and functioning”	(Weinstein, 2018, p. 3598).

Appendix G: Conceptual Foundations in Research Articles

Table G.1.

Conceptual Foundations Table

Name	Explanation	Source
Affect-dependent theory	Affect-dependent theory was developed, which identifies that individuals choose media based on the effect it will have on their current emotional state	(Saleem & Iglesias, 2019, p. 70)
A four channel model of flow	A four channel model of flow was developed to highlight the fit between perceptions of task challenge and the level of skill brought to the task.	(Guo & Klein, 2009, p. 838)
Aggregate-level communication model	This approach asks questions about what kinds of affects are produced by apparel brand advertisements on a group of people.	(Kim, 2000, p .304)
Appraisal theory	According to the appraisal theory, positive emotions relate to pleasant experiences and will lead individuals to approach the object that arouses these emotions.	(Chang et al., 2018, p. 703)
Arousal theories of boredom	Arousal theories of boredom propose that non-optimal arousal, due to a mismatch between individuals' needs for arousal and the availability of environmental stimulation, is the source of boredom. Thus, boredom is experienced when the	(Yazdanparast et al., 2015, p. 470)

individual cannot achieve an optimal level of arousal through engagement with the environment

Attachment theory	As such, attachment theory describes the emotional bonds individuals form with others.	(Holte & Ferraro, 2020, p. 2; Altuwairiqi et al., 2019, p. 2)
Basic emotions theory	Basic emotions theory proposes a small set of distinct emotions defined as automatic, coordinated responses to specific regularities of the evolutionary environment, such as the need to escape from a predator (i.e. fear) or expel an impurity (i.e. disgust). While negative emotions are believed to narrow the thoughts and actions that come to mind to allow for decisive action in threatening situations, such as the association of anger with the urge to attack, positive emotions like interest and pride emerge in non-threatening situations and are believed to broaden the thoughts and actions that come to mind, enabling us to build our personal and social resources.	(Panger, 2018, p. 132)

Belief-desire-intention (BDI) model	The Belief-Desire-Intention (BDI) model is a well-known model in the agent community which is often used as its structure is close to the human reasoning pattern. This pattern is known as practical reasoning: using a set of beliefs we decide what we want to achieve (desire), then we decide how to do it (intentions).	(Brosseau & Frasson, 2015, p. 523)
Cognitive behavioural model of PIU	<ol style="list-style-type: none"> <li>1. Davis (2001) argued for a cognitive behavioural model of PIU in which maladaptive cognitions and/or social isolation predict generalised PIU. In particular, internet users who experience a lack of relatedness with family and friends, or people who use technology to procrastinate and avoid their responsibilities may develop PIU <li>2. Davis cognitive behavioral approach model (2001), a theory created to explain Internet addiction, the key factor in continuation of Internet activities is the reinforcement the individual finds in the activity. In other words, if a positive outcome is obtained when an individual tries a new Internet feature, then the individual's activity continues 	(Skues et al., 2016, p. 169; Siyez, 2014, p. 89)
Cognitive theory of boredom	Cognitive approach to boredom recognizes the importance of individuals' perception of their environment in causing boredom and argues that when	(Yazdanparast, et al., 2015, p. 471)

individuals perceive the environment to be monotonous and empty of satisfying opportunities and activities, they will be bored.

- | | | |
|---|--|---|
| Compensatory
internet use theory
(CIUT) | <ol style="list-style-type: none"> 1. Theory of compensatory internet use where negative life situations can give rise to a motivation to go online to alleviate negative feelings. The basic tenet of the theory of compensatory internet use is that the locus of the problem is a reaction by the individual to his negative life situation, facilitated by an internet application. 2. CIUT hypothesizes that overuse of the internet (e.g., PSU) is an unhealthy attempt to relieve negative emotion and satisfy social needs. 3. 3) Compensatory Internet Use Theory (CIUT) aims to understand the motivations for engaging in excessive internet use. CIUT conceptualizes the use (and problematic use) of internet technology as a means by which some people regulate their negative emotion in modern times. CIUT is careful not to over pathologize the compensatory use of technology; rather, such use is viewed as a coping skill aimed at alleviating psychopathology. | (Wang et al., 2020, p. 2; Elhai et al., 2018, p. 290) |
|---|--|---|

Cybernetic theory of stress	Cybernetic theory of stress, people will alter their environment to limit the effects of the stressor	(Whelan et al., 2020, p. 872)
Distraction–conflict theory	Distraction–Conflict Theory (DCT) provides a theoretical lens for understanding the effect that distractions and interruptions have on performance. The distraction–conflict model can be broken down into three causal steps: (1) others are distracting, (2) distraction can lead to attentional conflict, and (3) attentional conflict elevates drive. This elevated drive leads to impaired performance and motor behavior on complex tasks. DCT provides insight into evaluating social media as a technological “other” that distracts individuals from their primary tasks.	(Brooks, 2015, p. 27)
Existential theory of boredom	A lack of life meaning or purpose can cause boredom.	(Yazdanparast et al., 2015, p. 471)
Fear of missing out	This theory assumes that social media users have a desire to stay continually connected with friends. If this desire is not fulfilled by, for example, not being able to connect, a FOMO emerges	(Stieger & Lewetz, 2018, p. 622)

Hill and Perkins model of boredom	According to Hill and Perkins, two individuals exposed to the same stimuli may interpret the stimuli differently and consequently experience different outcomes.	(Studak & Workman, 2004, p. 66)
Individual media dependency (IMD) theory	The IMD approach sees individuals as active and developing dependency relations with media as means of attaining personal goals	(Jiang & Li, 2018, p. 510)
Internet addiction theory	Internet addiction theory makes the assumption that there is such a thing as Internet addiction. This assumption holds that prior to the development of the Internet, or with people to whom the Internet is not available, the disorder is latent. If the Internet is available, the Internet addict will display a form of maladaptive behavior, for instance, using the Internet compulsively for long periods of time.	(Stern 1999, p. 422)
Interaction of person-affect cognition-execution (I-PACE) model	Interaction of Person-Affect-Cognition-Execution (I-PACE) model of specific Internet-use disorders. The I-PACE model suggests problematic internet use, including smartphones, results from interactions between predisposing factors, moderators of risk, and contextual mediators. The Interaction of Person-Affect Cognitive-Execution model proposes that PIU is influenced by personal factors, which includes genomic, biological, temperament,	(Regan et al., 2020, p. 6; Elhai et al., 2019, p. 4; Wegmann et al., 2018, p. 2)

cognition, psychopathology, and Internet use motivations. I-PACE also proposes that PIU is influenced by affective and cognitive reactions such as Internet use beliefs, cognitive and attention bias, disinhibition, coping, and craving

Interaction of PersonAffect-Cognition-Execution (I-PACE) model, which summarizes potential mechanisms of the development and maintenance of specific Internet-use disorders, such as ICD. The I-PACE model illustrates the interaction of person's core characteristics as well as affective, cognitive, and executive components.

Media domestication theory	Media domestication theory which describes “how media and communication technologies are becoming increasingly interwoven in users’ lives”	(Lepik & Murumaa-Mengel, 2019, p. 62)
Mehrabian–Russell (M–R) environment Psychology model,	Mehrabian–Russell (M–R) environment psychology model, an environmental stimulus can predict individual behavior through emotional states, which is commonly explained as a stimulus–organism–response (S–O–R) model, where the emotional state (i.e. pleasure, arousal and dominance (PAD)) can be stimulated by environmental elements.	(Chang et al., 2018, p. 698)

Metacognitive theory	According to the metacognitive theoretical tenet metacognitions are fundamental in predisposing individuals to develop response patterns to thoughts and internal events that are characterised by heightened self-focused attention, recyclic thinking patterns, avoidance and thought suppression, and maladaptive behaviors.	(Spada et al., 2009, p. 2326)
Model of computer-mediated communication	Model of computer-mediated communication supports components of SM contribute to a sense of identity, serving components such as self-representation.	(Brown & Kuss, 2020, p. 12)
Mood management theory	The theory posits that media choice is a function of the current affective state of media users and follows the principle of mood optimization.	(Reinecke, 2017, p. 2).
Optimum stimulation level theory	OSL theory postulates that individual behavior is influenced by the intrinsically motivated desire to accomplish a specific level of stimulation, termed “optimum stimulation level”.	(Orth & Bourrain, 2005, p. 613)
Perceptual control theory	According to PCT, all behaviours are driven by individuals' need to control their perceptual experience. Perceptual Control Theory states, all behaviours are driven	(Throuvala et al., 2019, p. 171)

by individuals' need to control their perceptual experience. Behaviour is therefore organized around the control of individuals' own perceptions and the reduction of the discrepancy that potentially arises. Discrepancy occurs when two competing goals are conflicting or may be mutually exclusive. This causes conflict that leads to distress and the behaviour is then continually re-adjusted to reduce that discrepancy. According to this model, which acts on perception, comparison and action providing a feedback loop, it could be hypothesized that adolescents are motivated to behave on social media in a way that is consistent with their perceptions and through peer comparison leads their actions and constantly re-organizes their behaviour to reduce distress.

Psychodynamic theory of boredom	Boredom is caused by threatening desires that are repressed. According to this theory, bored individual yearns for activity, but is not aware of what exactly he/she desires and looks for the world to solve the impasse.	Yazdanparast et al., 2015, p. 470)
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Psychological construction theory	Psychological construction theory embraces a wide variety of emotions by decoupling the conscious, subjective experience of an emotion like fear from automatic processes like freezing in the presence of a threat, each of which can	(Panger, 2018, p. 132)
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occur absent the other. Instead, emotions are defined as cognitions or conceptual acts that allow us to interpret patterns of sensation from within and outside our bodies

- Reactive model of media involvement According to a reactive model of media involvement, a person selects stimuli that modulate feelings of pleasure or excitement. Thus, someone in a nostalgic mood might choose a romantic film that elicits warm and pleasurable feelings. Another person who is bored and in need of stimulation might prefer action films, which foster an energized experience of dramatic uncertainty. (Cupchik, 2011, p. 7)
- Selective exposure theory Selective exposure theory suggests that individuals tend to engage in communication material that is in line with their existing interests and opinions and avoid that which is not (Mastro et al., 2002, p. 70)
- Self-determination Self-determination theory (SDT) is a macro theory of human motivation, personality development, and wellbeing. The theory focuses especially on volitional or self-determined behaviour and the social and cultural conditions that promote it. SDT also postulates a set of basic and universal psychological needs, namely those for autonomy, competence and relatedness, the fulfilment of which is (Ryan, 2009, p. 822)

considered necessary and essential to vital, healthy human functioning regardless of culture or stage of development.

Social cognitive theory	A social-cognitive model in which the internet provides the stimulus for a spectrum of problems ranging from lapses of control to excessive internet use for persons with deficient self-regulation processes.	(Skues et al., 2016, P. 169)
Social compensation theory	Social compensation theory claims that online communication is likely to be used for social compensation and social facilitation in order to offset lack of social skills or difficulties with peer face-to-face interactions and peer disengagement	(Throuvala et al., 2019, p. 165)
Social enhancement hypothesis	The social enhancement hypothesis (or ‘rich get richer’) proposes that individuals with larger offline social networks engage in more extensive online network building to strengthen relationships	(Throuvala et al., 2019, p. 165)
Social exchange theory	This theory elaborates on how interpersonal relationship as if a trade transaction where each transaction is affected by reward, cost, and profit. In this case, someone tends to repeat the same behavior or change the behavior when the value or result is gained proportionally or even more than the investment itself.	(Kurniasih, 2017, p. 141)

Social identity theory	Social identity theory defined a group as a collection of people who categorize themselves as belonging to the same social category and internalize the category's social identity-defining attributes to define and evaluate themselves—attributes that capture and accentuate intragroup similarities and intergroup differences.	(Altuwairiqi et al., 2019, p. 5)
Sociometer theory	Sociometer Theory, self-esteem is a function of the relational value and the degree of social acceptance within a social environment.	(Throuvala et al., 2019, p. 165)
Social role theory	Social role theory argues that widely shared gender stereotypes develop from the gender division of labor that characterizes a society.	(Altuwairiqi et al., 2019, p. 5)
S–O–R framework	The S–O–R framework suggests that when consumers encounter a stimulus (stimulus), a cognitive and emotional state (organism) will be aroused, which, in turn, determines behavioral responses involving approach or avoidance (response).	(Chang et al., 2018, p. 698).
Stress–strain–outcome framework	S–S–O framework links stressors with outcomes and places strain as the mediating factor.	(Whelan et al., 2020, p.870)
Technology integration model	Technology Integration Model, which represents a new theory of technology use integrating several other models. This model proposes that technology use is	(Stieger & Lewetz, 2018, p. 623)

shaped by two predictors: the cost-benefit decision (e.g., technology extension and intrinsic and extrinsic motivation) and the situational context.

The Technology Integration Model. TIM proposes that they are two direct predictors of technology use, which are, a cost-benefit decision (R1) and situation context (R2). This is because when the decision to use a technology becomes less conscious, use is prompted by contextual cues. Over time it is proposed that the more a technology becomes habitual through repeated use, situational context will become more predictive of technology use, and the cost/benefit decision will become less predictive of technology use. This allows us to understand how technology use can become habitual.

Technology acceptance model (TAM)	Technology Acceptance Model (TAM) has been one of the most influential models of technology acceptance, with two primary factors influencing an individual's intention to use new technology: perceived ease of use and perceived usefulness.	(Pang et al., 2014, p. 132)
The big five model	The Big Five model is based on the concept that the personality of an individual can be described in terms of scores for the following five factors:	(Altuwairiqi et al., 2019, p. 4)

conscientiousness; extraversion; openness to experience; agreeableness; and neuroticism.

- Theory of flow Humans can enter into a state of “flow” in which they are in a state of intense concentration and experience a shift in their perception of control over the activity. They also feel a mergence of their conscious awareness and the activity in which they are engaged. (Guo & Klein, 2007, p. 32)
- Theory on flow experiences Theory on flow experiences is also pertinent here. The state of “flow” has been described as the experience individuals have when fully consumed by specific tasks in which they are engaged, losing track of time and space around them, and being more productive and happy in the moment. (Elhai et al., 2019, p. 4)
- Theory of free time boredom According to the theory of free time boredom, an individual’s interest in risky behaviors results from non-fulfillment of the need for thrill and challenge seeking in appropriate or acceptable social circles (Siyez, 2014, p. 89)
- Theory of planned behavior The Theory of Planned Behavior (TPB) is used to understand the relationship of intentions to performing a behavior. These intentions are influenced by attitudes towards the behavior, the social pressure to perform this behavior which is known (Fogel & Schneider, 2010, p. 370; Koban et al., 2018, p. 15)

as subjective norms, and control over the behavior which is referred to as behavioral control

Two-factor theory	Two-factor theory of risk for problematic social network/online communication application use. The theory describes some individuals as fear-driven, who have real-life social deficits and use social media as a compensatory communication strategy, and others as reward-driven, with high social competencies driven through positive reinforcement potentials.	(Regan et al., 2020, p. 6; Wegmann & Brand, 2019, p. 407)
Uses and gratification theory	<ol style="list-style-type: none"> 1. The uses and gratifications (U&G) approach studies the underlying motivations and goals of an audience as it engages in various forms of media. U&G assumes that a particular audience actively chooses mass media to fulfill its own needs and that the process is goal-directed, it is concluded that users' needs are based on their social and psychological origins. If their expectations on the media grow, their engagement with the media is affected. After using the media, gratifications, expected or unexpected, are obtained. 	<ol style="list-style-type: none"> 1. (Poon & Leung, 2011, p. 3) 2. (Yazdanparast, et al., 2015, p. 470) 3. (Leung, 2020, p. 131)

2. U&G is a useful theory for explaining how and why people use media, following a basic proposition that gratifications sought explain individual media exposure.
3. Uses and gratifications (U&G) theory assumes that audience members seek out mass media, fulfill expectations, and select media and media content to satisfy their social and psychological needs. The most important assumption of this approach is that the audience is active and that media use is goal-directed.
4. Uses and gratifications theory, where reinforcements and rewards, in the form of SM notifications and validation through 'likes', explain the continual and habitual nature of SMU.
5. The theory of usage and gratification also includes the thesis that individuals use media to meet certain needs. In this context the benefits that accrue from using new media, such as information, identity, social integration and interaction, and entertainment.
4. (Brown & Kuss, 2020, p. 2)
5. (Tomczyk & Solecki, 2019, p. 3)
6. (Saleem & Iglesias, 2019, p. 68, 69)
7. (Elhai et al., 2018, p. 709)

6. (U&G) theory, which adopts a social and psychological approach to postulate that consumers seek out media that help them achieve certain gratifications. The gratifications can include information seeking through the consumption of news stories, socialising achievements through participating in Facebook groups, and status-seeking and entertainment through sharing photos online. U&G theory views users as active goal-oriented individuals who seek out media and content for gratifications. 6
(b) U&G theory is the predominant view used in the literature to explain social media engagement. According to the U&G theory, the levels of engagement on social media clearly vary based on the type of gratification users seek.
7. In UGT, people are thought to satisfy their needs by utilizing specific types of gratifying media-based activities, such as those provided by particular smartphone features. Furthermore, individual differences predict why people use one type of media/ feature over another.

Well-being theory WBT five aspects that people around the world pursue because they find them (Coffey, 2016, p. 189)
naturally rewarding (i.e., intrinsically motivating): positive emotions, engagement,
relationships meaning, and achievement (a.k.a. PERMA)

Chapter 3

Boredom in social commerce: investigating the factors contributing to impulse buying

Abstract

Boredom, characterised by low arousal and can lead to negative outcomes for social commerce (s-commerce), like negative consumer attitude, dissatisfaction, lower usage, and participation. However, with appropriate stimulus from digital platforms, it can drive positive actions, like impulse buying. Nevertheless, there is limited research exploring the connection between boredom and impulse buying within the context of s-commerce. This study focused on the interaction between boredom and impulse buying behaviour, two key consumer aspects that hold significant commercial potential within s-commerce. It also examined how consumer personality influenced boredom and how the external stimuli from s-commerce platforms affected behaviour. Data was collected from 243 consumers in New Zealand and a SmartPLS structural equation modelling (PLS-SEM) was employed. Results provided support for boredom, guided by personality factors, leading to impulse buying. Interestingly, the results demonstrated that among stimulations, social value positively moderated boredom and impulse buying relation; atmosphere negatively moderated; and price offering was insignificant. The findings provide s-commerce firms with insights to manage consumer emotions for positive behaviours and contribute to the strategic advancement of s-commerce practices by leveraging consumer sentiment manipulation for constructive purchasing habits.

Keywords: social commerce, online impulse buying, boredom, human behaviour, information system

1. Introduction

Boredom is a detrimental motivational emotion that drives individuals to seek alternatives when faced with monotonous, unsatisfying, or meaningless situations. It enables self-regulation through the desire for technological change and usage, to ease itself (Elpidorou, 2015). In the context of information systems/technologies, the significance of boredom in shaping consumer behaviour has been widely acknowledged. Such studies delve into how boredom as an adverse sentiment influences consumption patterns and, if left unaddressed, its potential to yield unfavourable outcomes, such as negative consumer attitudes (Yazdanparast et al., 2015), discontent (Biolcati et al., 2018), and low engagement and participation (Whelan et al. 2020), thus impacting market performance. However, previous research has focused on boredom in the context of smartphone usage (Allaby & Shannon, 2020), social media use (Throuvala et al., 2019), the Internet (Wang, 2019), and e-commerce (Biolcati et al., 2018), and little research has been undertaken exploring the link between boredom and social commerce (s-commerce). S-commerce is essentially the merger of e-commerce and social media and is growing at a rapid rate. S-commerce buying and selling activities are a combination of Web 2.0 with social network technology which addresses the weakness of e-commerce by infusing it with human and social elements (Liang & Turban, 2011). Evidently, in 2022, worldwide s-commerce revenue was valued at US\$724 billion and is expected to exceed six trillion U.S. dollars by 2030 (Yltävä, 2022). To guarantee the profitability of Web 2.0 and social networking technology, it is important to understand its consumers and their behaviour.

Boredom has been recognised as a prominent driving force behind the emergence of unregulated digital technology usage and online consumption (Catedrilla et al., 2020; Güngördü Belbağ, 2022). Boredom is defined as “an individual’s perception based negative affective state and/or trait, having a self-regulatory function, with the aim to seek internal

and external stimulation to relieve itself irrespective of its consequences (positive or negative) on one's wellbeing". Within this context, impulsive buying, a prevalent behaviour often catalysed by negative emotional states (Aruna & Santhi, 2016), has garnered significant attention. The growth of s-commerce has significantly influenced businesses, leading to the development of marketing strategies such as targeted advertising, product innovation, and price discounts to attract consumers. These strategies not only boost consumer interest but also encourage impulsive buying. Empirical evidence from previous studies confirms that s-commerce platforms increase the likelihood of impulse purchases among digital consumers, primarily due to the convenience and wide variety they offer (Putri et al., 2024). In light of this, the present study posits that the combination of technical, commercial, and social attributes of s-commerce may present more occasions for eliciting impulsive buying tendencies among bored consumers. Furthermore, previous studies conducted within the context of information technologies, such as smartphones, social media, Internet usage, and online shopping, have unveiled certain personality traits that exhibit a higher propensity for experiencing boredom compared to others. Noteworthy among these traits are narcissism (Ksinan et al., 2021), introversion (Al-Saggad, 2020), sensation seeking (Zhang et al., 2022), and individuals with low self-esteem (Hartman et al., 2022). Given the absence of prior investigations specifically addressing the link between boredom and s-commerce, this study has extrapolated insights from related contexts and used them to develop a research model (Figure 1). These identified personality traits, characterised by a higher propensity to boredom, are surmised to engender a greater likelihood of experiencing boredom and, consequently, responding more pronouncedly to s-commerce stimuli, ultimately fostering impulsive buying behaviour.

To unlock the economic potential of s-commerce, understanding the triggers for boredom and, subsequently, impulsive buying behaviour is pivotal. This quantitative study

will thus empirically examine the interplay between consumer intrinsic traits (personality) and their propensity to boredom, which consequently motivates them towards impulsive purchasing behaviour, and the role of s-commerce stimuli in this relationship. Following are the research questions of this study:

RQ1 Does personality-driven boredom motivates impulse buying on s-commerce?

RQ2 Does external stimulations from s-commerce (as boredom's alleviation strategy) strengthen this impulse buying and boredom relation?

This research will provide a valuable addition to the literature on s-commerce and impulse buying by elucidating the mechanisms influenced by individual characteristics and technical designs of s-commerce that drive consumers' impulsive purchasing behaviours. It provides recommendations on how businesses should bolster specific features (stimulations price, atmosphere, and social aspect) within s-commerce platforms to capitalise on the boredom and impulse buying relationship. Its findings contribute to the strategic evolution of s-commerce practices, illuminating how consumer emotions can be influenced and profitable purchasing habits can be nurtured. Overall, this research contributes to the s-commerce literature by integrating boredom and providing insights into consumers' online impulse buying behaviour.

2. Literature review

2.1. Uses and Gratification Theory

Uses and gratifications theory (UGT) develops its foundation from needs and motivational theory. According to UGT, “gratifications” are the fulfillment of needs through media consumption. This theory helps in understanding the psychological and social needs that affect individuals’ choices and involvement in specific media or communities to gratify themselves (Sundar & Limperos, 2013).

UGT has received attention in s-commerce and social shopping research in investigating what motivates customers to engage in s-commerce platforms. Studies based on UGT identified several gratifications that an individual achieves from using social media, resulting in gratifications relevant to the s-commerce context (Yang & Li, 2014). For instance, Papacharissi and Mendelson's (2011) study on Facebook use behaviour led to nine separate motives: information sharing, habitual pass time, relaxing entertainment, escapism, cool and new trends, companionship, professional advancement, social interaction, and meeting new people. Other researchers have led to similar uses and gratifications of social media, such as affection, coordination, disclosure, entertainment, escape, immediate access, relaxation, stylishness, leisure, social presence, following fashion, demonstrating sociability, and improving social knowledge (Papacharissi & Mendelson, 2011; Phua et al., 2017; Smock et al., 2011; Whiting & Williams, 2013; Xu et al., 2012). Jahn and Kunz (2012) have examined three categories of gratifications that customers are seeking when they are engaging in brand fan pages. The results show that hedonic value, functional value, brand interaction value, and self-concept value positively influence fan page usage intensity and fan page engagement.

UGT operates through a structured mechanism. Specific personality traits act as catalysts to motivate individuals to behave in distinct ways. These individuals, fully cognizant of their motivations, consciously opt for certain behaviours. Finally, by behaving in a certain manner, individuals obtain the gratifications they aim at in advance. More specifically, UGT posits that individuals are (a) active users of communication media, (b) acutely aware of their motives and needs, (c) purposeful in selecting communication channels to fulfill these needs, and (d) personality traits influence the motives/needs which then affect the gratifications attained from a behaviour (Alonzo & Aiken, 2004; Conway & Rubin, 1991; Ruggiero, 2000).

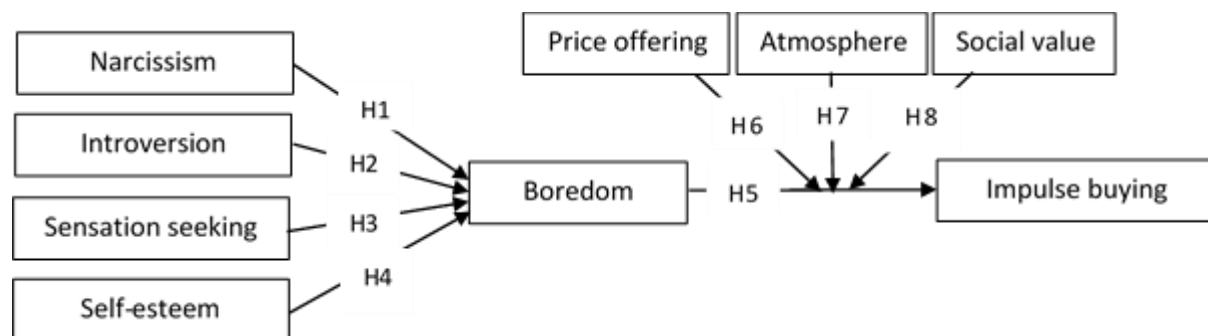
Based on boredom and s-commerce literature, the current study theoretically supported by UGT examines that people with certain personalities (narcissism, introversion, sensation seeking, and low self-esteem) will consume s-commerce to obtain gratification to satisfy their needs. This study states that to escape boredom consumers will use s-commerce for impulse buying to get stimulations, like market, social, and environmental. This study examines boredom from a consumer's perspective and explores its relationship with individual personality traits in the context of s-commerce. This study yields a broad picture of individuals who are more likely to be bored and use s-commerce as a coping strategy through seeking external stimulations. Figure 1 represents the framework of the current study.

2.2 Proposed Research Model

Based on the UGT, this study developed the proposed research model (see Figure 1). In this model, personality traits such as narcissism, introversion, sensation seeking, and self-esteem act as antecedents to boredom. Impulse buying is considered the dependent variable with boredom as its independent variable. Furthermore, price offering, s-commerce atmosphere, and social value are introduced as moderators influencing the relationship between boredom and impulse buying.

Figure 1

Research Model



2.3 Consumer personality and boredom

Boredom is generally defined as “the aversive experience of wanting, but being unable to engage in a stimulating and satisfying activity” (Fahlman et al., 2013, p. 69). Boredom matters not only because it affects a large percentage of our population but also because it teaches us how to embody ourselves in our worldly projects and social affairs by facilitating self-regulation. It is linked with modernism for it enables self-regulation through the desire for technological change and usage, which can be for better or worse (Elpidorou,

2015). To grasp its implications within the context of s-commerce, a comprehensive understanding of its antecedents, alleviation strategies, and behavioural outcome is essential. Certain internal factors can trigger boredom, among them is personality. The boredom experience level is not the same for everyone because this experience is based on an individual's perception (Elpidorou, 2015). As Hill and Perkins (1985) point out in their model of boredom, the same stimuli can be inferred differently by individuals leading to different experiences and outcomes. For the same reason, certain personality characteristics make an individual more susceptible to boredom than others. Within the scope of this study, four such personalities were found, that are narcissism, introversion, self-esteem and sensation seeking.

2.3.1 Narcissism. Narcissism is a “strong focus on the self, accompanied by a lack of empathy, a need for admiration, and fantasies of omnipotence and grandiosity” (American Psychiatric Association, 2000). Narcissists are posers and attention seekers and are highly anxious about their physical looks (Vazire et al., 2008). On the contrary, boredom is characterized as a state of low activation, dissatisfaction and discomfort due to inadequately stimulating environment (Mikulas & Vodanovich, 1993). Feelings of boredom are specifically common for narcissists (Ksinan et al., 2021), and research suggests that narcissism contributes to feelings of boredom (Kohut, 1977; Lasch, 1979; Capps, 1993). According to arousal theory, boredom arises from the mismatch between challenge and skill (Fahlman et al., 2013). For narcissistic individuals, this mismatch occurs between their actual competencies and their unrealistic, narcissistically inspired goals. When these goals inevitably lead to failure, narcissists are left unsatisfied and unfulfilled, resulting in a feeling of boredom (Ksinan et al., 2021; Seligman, 2002; Švrakić, 1985; Wink and Donahue, 1997). Additionally, when narcissists achieve a desired goal or purpose, they also become bored;

for instance, once they have obtained the desired attention from people, they get bored of them (Emmons, 1981). Hence, it is proposed:

H1: Narcissism will score high on levels of boredom proneness.

2.3.2 Introverts. Various studies suggest that individuals with lower sociability, weakened interpersonal connections, and feelings of alienation are more prone to boredom (Leong & Schneller, 1993; Tolor, 1989). Similarly, introversion, as a personality trait, refers to “the individual difference in the inclinations toward the inner and outer world, introversion can also be defined as low Extraversion. Adjectives traditionally associated with introversion include inhibited, reserved and undemonstrative” (Tuovinen et al., 2020, p. 2). Introverts lack social skills, are less talkative and outgoing, and have fewer or no friends at all to aid in behavioural change offline. This lack of desire to be social makes them more prone to boredom (Barnett & Klitzing, 2006; Bachner-Melman & Zohar, 2014; Li et al., 2015; Tzavela et al., 2017). Moreover, they have a suspicious and distrustful view of others and make fewer information disclosures, which is rated as boring (Leary et al., 1986). Damrad-Frye and Laird (1989) studied the attributions of boredom in individuals performing a listening task and reported that introverts compared to extroverts can easily become bored. Leong and Schneller (1993) found that less social individuals are more prone to boredom, as they don’t like social interactions, so they lack interpersonal skills which stops them seeking social stimulation. Al-Saggadf (2020) also supported these claims and stated that there is a 52% chance that having a smaller group of friends results in feeling bored. Hence, it is proposed:

H2: Introverts will score high on levels of boredom proneness.

2.3.3 Sensation Seekers. Sensation-seeking is a common characteristic among adolescents. The data from a study involving 5000 participants across 11 countries revealed

that this trait is most pronounced during the adolescent stage compared to other stages (Steinberg, 2018). Sensation-seeking is defined as “a trait by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experience” (Zuckerman, 2014, p. 10). Inversely, boredom is a troublesome emotion characterised by a perceived lack of stimuli in the activity (Harris, 2000). It reflects an individual's aversion to repetitive, dull, and unexciting people or situations (Siyez, 2014). Sensation-seeking is positively correlated with state boredom (Dahlen et al., 2004). Despite being a stable trait, long-term boredom can drive individuals with high sensation-seeking tendencies to actively seek complex external stimulation (Reisenzein, 2017). Trait activation theory suggests that situational cues can influence the expression of personality traits (Tett & Burnett, 2003), and boredom resulting from a lack of stimulating activities and constraints can heighten the expression of sensation seeking. Based on theory of optimal levels of stimulation and arousal, Zuckerman (2014) argues that people having higher levels of sensation seeking require a greater level of stimulation compared to people with lower levels. If external stimulus is monotonous, high sensation-seekers are more prone to be bored because boredom is caused by repetition and lack of stimulation in the environment. Additionally, Zhang et al. (2022) also claims that the increase in boredom experience is due to high sensation-seeking traits and such individuals require novel, diverse, and risky experiences to overcome it. Hence, it is proposed:

H3: Sensation-seekers will score high on levels of boredom proneness.

2.3.4 Poor Self-Esteem. Self-esteem is defined as "the evaluation which the individual makes and customarily maintains with regard to the self" (Coopersmith, 1967, pp 4–5). Low self-esteem is a part of the unwillingness to communicate syndrome. Individuals who have low self-esteem communicate less because they assume they will be negatively perceived by others owing to their negative concept of self. Also, they lack self-confidence

and expect to fail (Infante, 1976). According to existential theory, boredom stems from a lack of socially meaningful leisure activities (Sundström et al., 2019), leading to a negative correlation between leisure boredom and self-esteem. For instance, Iso-Ahola and Weissinger (1990) found that perceived leisure boredom increases with a corresponding decrease in perceived self-esteem perception. Passmore (2001) states that boredom in leisure means that one has nothing stimulating to do; on the contrary, constructive leisure opportunities, which are social and achievement-oriented, contribute to positive psychological health, which includes self-esteem. Yang and Guo (2011) also studied self-esteem and boredom relations among university students and found that students who had positive self-esteem were less likely to be bored in leisure. Furthermore, Hartman et al. (2022) confirmed this connection in their study, grouping participants based on free time perception. Those with high awareness of leisure activities experienced less boredom and higher self-esteem. In contrast, participants with less awareness felt more boredom and had lower self-esteem during their free time. Hence, it is proposed:

H4: Poor self-esteem will score high on levels of boredom proneness.

2.4. Boredom and Impulse Buying

Abdelsalam et al. (2020) argued that the online shopping environment is more conducive to impulsive buying behavior (IBB) than its offline counterpart, as it removes constraints such as inconvenient store locations, limited operating hours, and social pressures from staff and other consumers. The advancements in Web 2.0, coupled with the rise of social media and social networking sites, have further enhanced this environment by creating numerous S-commerce platforms, which prioritize social interaction over products or services.

Halim et al. (2022) suggest that impulse buying is driven more by consumer emotions and feelings than by rational thinking, with boredom being one of the key emotions influencing such behavior. Shopping can be seen as a means to alleviate boredom, and research indicates that individuals prone to boredom are more likely to have frequent shopping desires, seek variety, and use shopping as a way to lift their mood (Mano, 1999).

Impulse buying, as a source of hedonic value, can act as a remedy for boredom by providing excitement and pleasure (Guy & Banim, 2000). Filling an online shopping cart or acquiring the right product has been shown to generate happiness and thrill, making it an effective response to feelings of boredom (Sundström et al., 2019). Hence, it is proposed:

H5: Boredom proneness has a positive influence on online impulse buying.

2.5 Moderation

2.5.1 External Stimulation, Boredom, and Impulse Buying. Impulsive purchase means an unplanned and unreflected purchase when exposed to certain stimuli (Beatty & Ferrell, 1998). Impulse buying related to boredom is driven by external stimulation (i.e., stimuli from the environment) (Hjelm-Lidholm et al., 2017). Digital technology (i.e., social media, e-commerce) literature highlights three types of external stimulations to alleviate boredom: market, environment, and social. Research suggests that these stimulations are the key determinants of online impulse buying. For instance, marketing cues or stimuli are placed and controlled by the marketer in an attempt to lure consumers into purchase behaviour and bored consumers react more to them when buying on impulse (Kumar et al., 2020). Sundström et al. (2019) found that bored consumers often search for fashion sales and promotions and they feel drawn to the price. So when they see a low-cost product or an offer of free shipping and return they seize the moment and buy it immediately. Such price offerings make bored people buy more than what they had planned (Kumar et al., 2020).

Consequently, a variety of low-cost product promotions acting on scarcity with headings such as “available now” or “discount today” and offers such as “free shipping” and “return” stimulate bored individuals to seize the moment and make an impulse purchase online (Sundström et al., 2019). Thus, it is presumed that willingness to buy on impulse in boredom is bounded by discount or low-price offerings, and this can strengthen the relationship between boredom and impulse buying. Hence, it is proposed:

H6: Price offerings positively moderate the relationship between boredom proneness and online impulse buying.

Environmental stimulation includes “external stimuli like the environment of the store and visual merchandising” (Mohammad & Mostafa, 2011, p. 13058). Bored people favour a stimulating environment to improve their emotions. Rather than setting out with the aim of buying a particular product, it is the attractiveness of the online platform or website that can trigger impulsive buying (Kumar et al., 2020). Online marketers try to make the experience of their bored consumers' as comfortable and exciting as possible because the platform's environment can influence their buying behaviour (Bozaci, 2020). Therefore, a platform's attractive atmosphere can strengthen the relationship between boredom and impulse buying. Hence, it is proposed:

H7: S-commerce atmosphere positively moderates the relationship between boredom proneness and online impulse buying.

“Social stimulation is to ‘interact’ with each other, and behave collectively as a group” (Macal & Kaligotla, 2017, p. 315). Social media makes it convenient for bored people to build new connections and reach out to friends and family. They prefer not to be alone and try to engage in highly interactive online sessions (Allaby & Shannon, 2020). Indeed, s-commerce characteristics like ratings, reviews, and recommendations from

vendors and customers in real-time provide social stimulation. Through its collaborative environment, consumers can interact during the pre-and post-purchase phases in real-time, which lowers their loneliness (Stephen & Toubia, 2010). Social stimulations, like social value, refer to “the utility derived from the product’s ability to enhance social self-concept” (Sweeney & Soutar, 2001, p. 211). The primary motivation for shoppers is the social connection established during the shopping process, with many consumers cherishing the time spent with family and friends. Additionally, social recognition is gained through interactions when people shop together at the same place (Arnold & Reynolds, 2003). In the contemporary context, the trend of netizens sharing their buying experiences online has become commonplace, contributing to increased socialisation (Wolfenbarger & Gilly, 2001). Numerous studies (Akram et al., 2017, 2018; Wolfenbarger & Gilly, 2001) have demonstrated a significant and positive influence of social shopping on online impulse buying. Furthermore, Abdelsalam et al. (2020) argue that s-commerce enables social relations among consumers, emphasising the substantial role of social-related factors in consumer behaviour within this interactive platform. Given that boredom is a source of loneliness and social connections alleviate it (Catedrilla et al., 2020), this study posits that the social value derived from s-commerce can enhance online impulse buying during periods of boredom. Hence, it is proposed:

H8: Social value positively moderates the relationship between boredom proneness and online impulse buying.

3. Methodology

3.1 Instrument Development

A survey instrument consisting of 52 items was developed. Measurement scales were adopted from related studies but were modified to fit the context of the study. Narcissism was measured using Narcissistic Personality Inventory – NP-16 (Ames et al., 2006). This unidimensional measure is a shorter version of Narcissistic Personality Inventory or NPI-40. In this study, 8 items of NP-16 (e.g., “I like having authority over people”) were used. The decision to delete some entries was based on their close similarity and redundant content. This action was undertaken with consideration for the guidance and oversight of supervisors. Items to measure introversion were adopted from McCrae and John (1992) and Tuovinen et al. (2020). It consisted of 4 items (e.g., “I am reserved”). Sensation-seeking was measured using the Brief Sensation Seeking Scale (BSSS) from Hoyle et al. (2002). This brief scale has the same basic content as Zuckerman et al.’s. (1978) Sensation Seeking Scale (SSS-V). It has four dimensions: Experience seeking (ES), Boredom susceptibility (BS), Thrill and adventure seeking (TA), and Disinhibition (DI). Each dimension is represented by 2 items, making it an 8-item scale (e.g., “I would like to explore strange places.”) (Hoyle et al. 2002). The Rosenberg self-esteem scale was used to measure self-esteem (Rosenberg, 1965). It was measured using 5 items (e.g. “Sometimes I think I am no good at all”) (Tuovinen et al., 2020). The short Boredom Proneness Scale was adopted having 8 items. This is a unidimensional scale and is more reliable (having good internal consistency and construct validity) than the full version of the Boredom proneness scale (BPS) (e.g., “I often find myself at ‘loose ends’, not knowing what to do”) (Struk et al., 2017). Price offering consisted of 3 items (e.g., “S-commerce offers discounts”) (Blut, 2016; Holloway & Beatty, 2008). S-commerce atmosphere consisted of 3 items (e.g., “S-commerce's atmosphere is fun.”) (Badrinarayanan et al., 2014; Ganesh et al., 2010). Social value was measured by 4

items (e.g., “I can connect with friends on this s-commerce platform.”) (Yen, 2013). Impulse buying was measured by 4 items (e.g., “I buy products on s-commerce that I don’t really need.”) (Sneath et al., 2009; Rook & Hoch, 1985). The instrument incorporated 7-point Likert scales with “1” indicating “Strongly disagree” and “7” indicating “Strongly agree”. Structural equation modelling (SEM) and the smart partial least square method (PLS) were used for data analysis. All these constructs are defined in Appendix A. Survey items are shown in Appendix B and the final items used in our study are shown in Appendix C.

3.2 Participants and Data Collection

The participants of this study were 1) s-commerce users, 2) students over 18 years, and 3) those who identified as New Zealanders.

The reason this study selected students is because they constitute the young population of New Zealand. Being frequent users of s-commerce (Poon & Leung, 2011; Tapscott, 2009; Harrison, 2005; Biolcati et al., 2018; Brown & Kuss, 2020), this age group is particularly susceptible to experiencing boredom on a regular basis (Brailovskaia et al., 2020; Wang, 2019; Wegmann et al., 2018). These characteristics align with objectives of the current study, making them valuable participants.

The respondents were selected through a random sampling method. This data collection procedure was initially approved by the ethical committee of the University of Waikato. After approval, New Zealand Union of Students' Associations (NZUSA) was approached to post the current study’s survey on their Facebook page. NZUSA is composed of member student associations across Aotearoa New Zealand, and they represent students in universities and polytechnics across New Zealand. Additionally, Facebook is the most suitable example of online social networking for conducting this research because it has been widely adopted in New Zealand (Napoleon cat, 2023) and has become one of the most significant daily online activities in the country (Shewale, 2023).

Once their approval was granted, a post encouraging student to participate was published on NZUSA's Facebook platform, inviting interested individuals to contact me via email for participation. Once a respondent expressed their interest, I personally shared the survey link via email along with an information sheet and consent form to maintain privacy and exclusivity. The interested participants were asked to click on online survey link created with Qualtrics (an online survey tool) send via an invitational e-mail message. To ensure that all respondents could meaningfully respond to items related to s-commerce, the first page of the survey mentioned the aim of the research. The survey took about an average time of seven minutes to complete. The total number of participants was 243, with no missing values. This number qualifies for the minimum sample size requirement for PLS, i.e. sample size should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model (Hair et al., 2016).

4. Data Analysis

In this chapter, the structural equation modelling results using Smart PLS 4 are reported. First the measurement model is analysed to measure the reliability and validity of the constructs, followed by the hypothesis testing accessed by structural model.

4.1 Descriptive Statistics

For estimating the proposed research model individuals using s-commerce were contacted and invited to participate in an online survey on Qualtrics via social media groups. Table 1 shows the demographic characteristics and s-commerce usage characteristics of these 243 individuals. The survey was taken by 53% males and 46% females. About 70% of the participants were under 35 years of age. Facebook was the most used s-commerce platform with a 72.4% score followed by Trade Me at 55.6%, Instagram at 39%, TikTok at 26.7%, Snapchat at 11.9%, and Twitter 13.6%, and 2.5% including WhatsApp and Afterpay. Most of the participants had around 1–5 years of experience with the s-commerce and 26% of the time they would buy more than once in a month and 28% once in many months.

Table 1.*Demographics*

Demographics	Gender (in percentage)	Male	53.1
		Female	46.1
		Prefer not to say	0.8
	Age (in percentage)	20 and below	8.2
		Between 21 – 25	18.5
		Between 26 – 30	17.3
		Between 31 – 35	22.6
		Between 36 – 40	15.6
		Between 41 – 45	15.2
		46 and above	2.5
S-commerce characteristics	Type of s-commerce (Percent of Cases)	Facebook	72.4%
		Instagram	39.1%
		Trade Me	55.6%
		TikTok	26.7%
		Snapchat	11.9%
		Twitter	13.6%
		Other	2.5%
		Usage experience (in percentage)	less than 12 months
	1 to 5 years		43.2
	5-10 years		29.2
	More than 10 years		15.6
	Buying experience (in percentage)	More than once a week	14.0
		Once in a week	15.6
More than once in a month		25.9	
Once in a month		16.5	
Once in many months		28.0	

4.2 Common Method Bias

The common bias method was accessed through the Variance Inflation Factor (VIF) values of the inner model. In the current study (see table 2), all VIF values are lower than 3.33, the model can be considered free from common method bias (Kock 2015).

Table 2.

Common method bias

	VIF
AT -> IMB	1.904
BP -> IMB	1.09
INRT_ -> BP	1.123
NAR_ -> BP	1.133
PO -> IMB	1.665
SEF -> BP	1.19
SS -> BP	1.257
SV -> IMB	1.617
SV x BP -> IMB	2.424
PO x BP -> IMB	2.269
AT x BP -> IMB	3.317

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value

4.3 Measurement Model

In the measurement model the reliability and validity of constructs and their dimensions is confirmed, following the guidelines of Hair (2006). It involved indicator reliability, composite reliability, convergent validity, and discriminant validity.

4.3.1 Indicator Reliability. High outer loadings for a construct suggest a substantial shared variance among indicators, contributing to indicator reliability. An outer loading that falls within the range of 0.40 to 0.70 is deemed weak, and its removal is considered if that enhances the composite reliability and construct validity. However, the decision to retain

such indicators may be influenced by their impact on content validity (Bagozzi, Yi, & Philipps, 1991; Hair et al., 2011).

To assess the indicator reliability, factor loadings were examined (see Appendix D, Table D.1). Consistent with the Hulland (1999) and Hair et al. (2010) suggestions, items with factor loading below 0.50 were removed. These were two items of Narcissism NAR 7, NAR 8, and one item of Self-efficacy SEF3 reported factors loadings below 0.50 (i.e., 0.306, 0.233, and 0.309 respectively). Table 3 demonstrates indicator reliability, by reflecting the factor loadings of all the remaining reflective indicators above 0.50.

4.3.2 Internal Consistency Reliability. Given the limitations of Cronbach's alpha, which tends to underestimate internal consistency reliability and is sensitive to scale item numbers, the current study employs a different measure known as composite reliability (Hair et al., 2016).

The composite reliability ranges from 0 to 1, where higher values indicate higher levels of reliability. Specifically, values of 0.60 to 0.70 are acceptable and regarded as satisfactory (Hair et al., 2016). Table 3 demonstrates the composite reliability of all the latent constructs above 0.80.

4.3.3 Convergent Validity. Average variance extracted (AVE) is a common measure to establish construct level convergent validity. It is defined as “the grand mean value of the squared loadings of the indicators associated with the construct (i.e., the sum of the squared loadings divided by the number of indicators). Therefore, the AVE is equivalent to the communality of a construct” (Hair et al., 2016, p. 138). An AVE value of 0.50 or higher indicates that, on average, the construct explains more than half of the variance of its indicators. Conversely, less than 0.50 AVE implies that, more variance remains in the error of the items than in the variance explained by the construct (Hair et al., 2016). Similarly,

Table 3 demonstrates that the average variance extracted (AVE) for all the constructs is equal to or exceeds the threshold value of 0.50.

Table 3.*Indicator Reliability, Composite Reliability, and Convergent Validity*

Constructs	Indicators	Indicator reliability (Outer Loadings)	Convergent Validity (AVE)	Internal Consistency Reliability (CR)
NAR	NAR_1	0.713	0.558	0.881
	NAR_2	0.857		
	NAR_3	0.629		
	NAR_4	0.562		
	NAR_5	0.821		
	NAR_6	0.85		
INRT	INRT_1	0.721	0.63	0.872
	INRT_2	0.819		
	INRT_3	0.8		
	INRT_4	0.831		
SS_ES	SS_1	0.806	0.759	0.863
	SS_2	0.932		
SS_BS	SS_3	0.866	0.72	0.837
	SS_4	0.83		
SS_TA	SS_5	0.958	0.789	0.881
	SS_6	0.812		
SS_DI	SS_7	0.808	0.762	0.865
	SS_8	0.934		
SEF	SEF_1	0.908	0.546	0.821
	SEF_2	0.857		
	SEF_4	0.537		
	SEF_5	0.58		
BP	BP_1	0.711	0.629	0.931
	BP_2	0.841		
	BP_3	0.668		
	BP_4	0.778		
	BP_5	0.862		

	BP_6	0.866		
	BP_7	0.837		
	BP_8	0.758		
IMB	IMB_1	0.861	0.71	0.907
	IMB_2	0.84		
	IMB_3	0.849		
	IMB_4	0.82		
PO	PO_1	0.827	0.718	0.884
	PO_2	0.88		
	PO_3	0.834		
AT	AT_1	0.906	0.831	0.936
	AT_2	0.924		
	AT_3	0.904		
SV	SV_1	0.857	0.729	0.915
	SV_2	0.855		
	SV_3	0.875		
	SV_4	0.827		

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value, loadings < .40 are not shown.

4.3.4 Discriminant Validity. Discriminant validity is “the extent to which a construct is truly distinct from other constructs by empirical standards. Thus, establishing discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model” (Hair et al., 2016, p. 138).

Cross-loadings is the primary method for assessing the discriminant validity of indicators. An indicator's outer loading on its intended construct should be higher than the other construct's cross loadings (correlations) (Hair et al., 2016). As can be seen in Table 4, the loadings always exceed the cross-loadings. For instance, AT 1, 2, and 3 loads high on its corresponding construct AT (0.906, 0.924 and 0.904) but much lower on other constructs, like NAR and INRT. Hence, discriminant validity has been established.

Table 4.*Cross Loading*

	NAR	INRT	SS_ES	SS_BS	SS_TA	SS_DI	SEF	BP	IMB	PO	AT	SV
AT_1	0.256	0.086	0.19	0.219	0.133	0.14	-0.12	0.145	0.29	0.53	0.906	0.556
AT_2	0.196	0.168	0.187	0.197	0.133	0.125	-0.093	0.192	0.342	0.475	0.924	0.507
AT_3	0.24	0.187	0.183	0.218	0.196	0.178	-0.12	0.191	0.299	0.512	0.904	0.538
BP_1	0.211	0.348	0.175	0.308	0.176	0.22	0.401	0.711	0.491	0.123	0.259	0.163
BP_2	0.274	0.367	0.255	0.454	0.265	0.303	0.502	0.841	0.509	0.177	0.147	0.147
BP_3	0.219	0.325	0.237	0.283	0.173	0.177	0.455	0.668	0.408	0.166	0.127	0.069
BP_4	0.304	0.299	0.388	0.457	0.212	0.278	0.408	0.778	0.393	0.257	0.294	0.206
BP_5	0.237	0.453	0.358	0.355	0.178	0.222	0.534	0.862	0.452	0.192	0.136	0.082
BP_6	0.214	0.389	0.311	0.415	0.226	0.269	0.522	0.866	0.465	0.192	0.108	0.096
BP_7	0.306	0.465	0.341	0.416	0.291	0.319	0.469	0.837	0.486	0.156	0.136	0.121
BP_8	0.388	0.31	0.385	0.496	0.431	0.427	0.429	0.758	0.411	0.227	0.047	0.144
IMB_1	0.3	0.26	0.231	0.277	0.229	0.274	0.349	0.495	0.861	0.295	0.315	0.26
IMB_2	0.317	0.242	0.35	0.298	0.282	0.286	0.225	0.447	0.84	0.371	0.347	0.389
IMB_3	0.356	0.22	0.232	0.384	0.247	0.322	0.354	0.546	0.849	0.207	0.218	0.243
IMB_4	0.304	0.171	0.288	0.334	0.259	0.329	0.33	0.431	0.82	0.233	0.271	0.27
INRT_1	0.179	0.721	0.064	0.006	-0.01	-0.001	0.107	0.266	0.191	0.19	0.216	0.209
INRT_2	-0.021	0.819	0.159	0.107	-0.002	-0.016	0.328	0.406	0.221	0.187	0.184	0.181
INRT_3	0.154	0.8	0.186	0.196	0.082	0.06	0.189	0.357	0.194	0.098	0.13	0.14
INRT_4	0.199	0.831	0.164	0.101	0.031	0.043	0.305	0.427	0.237	0.066	0.025	0.012
NAR_1	0.713	0.152	0.169	0.206	0.254	0.243	-0.059	0.126	0.199	0.172	0.223	0.198
NAR_2	0.857	0.024	0.089	0.266	0.324	0.469	0.024	0.261	0.279	0.203	0.229	0.234
NAR_3	0.629	0.043	0.223	0.219	0.302	0.271	-0.208	0.102	0.193	0.316	0.302	0.378
NAR_4	0.562	0.09	0.096	0.126	0.14	0.239	-0.179	0.073	0.117	0.3	0.294	0.307
NAR_5	0.821	0.205	0.177	0.251	0.343	0.495	0.183	0.362	0.348	0.173	0.174	0.216
NAR_6	0.85	0.13	0.191	0.323	0.301	0.499	0.153	0.327	0.381	0.226	0.142	0.187
PO_1	0.219	0.144	0.247	0.204	0.167	0.184	-0.099	0.198	0.279	0.827	0.519	0.412
PO_2	0.204	0.149	0.288	0.157	0.139	0.074	0.019	0.194	0.297	0.88	0.481	0.381
PO_3	0.259	0.118	0.253	0.18	0.233	0.199	-0.021	0.205	0.26	0.834	0.4	0.323
SEF_1	0.196	0.361	0.274	0.278	0.119	0.245	0.908	0.616	0.427	0.062	-0.013	0.003
SEF_2	0.167	0.326	0.226	0.249	0.1	0.292	0.857	0.508	0.377	0.098	0.042	-0.025
SEF_4	-0.256	-0.052	-0.151	-0.167	-0.238	-0.137	0.537	0.173	-0.027	-0.368	-0.445	-0.418
SEF_5	-0.307	-0.033	-0.076	-0.089	-0.209	-0.096	0.58	0.206	-0.002	-0.344	-0.399	-0.388
SS_ES1	0.213	0.11	0.806	0.403	0.423	0.262	0.125	0.246	0.281	0.283	0.225	0.163
SS_ES2	0.158	0.2	0.932	0.525	0.449	0.319	0.209	0.402	0.293	0.27	0.153	0.147
SS_BS	0.203	0.097	0.404	0.866	0.462	0.336	0.261	0.45	0.282	0.094	0.11	0.128

3

SS_BS 4	0.359	0.136	0.522	0.83	0.521	0.485	0.081	0.403	0.374	0.277	0.293	0.274
SS_TA 5	0.359	0.081	0.505	0.565	0.958	0.533	0.069	0.339	0.293	0.158	0.114	0.184
SS_TA 6	0.326	-0.072	0.343	0.444	0.812	0.489	-0.048	0.166	0.236	0.259	0.232	0.227
SS_DI7	0.506	-0.064	0.272	0.492	0.537	0.808	0.075	0.222	0.306	0.199	0.241	0.214
SS_DI8	0.467	0.079	0.314	0.383	0.485	0.934	0.256	0.366	0.325	0.13	0.083	0.131
SV_1	0.202	0.131	0.097	0.147	0.11	0.141	-0.11	0.133	0.307	0.399	0.554	0.857
SV_2	0.2	0.142	0.169	0.192	0.173	0.088	-0.107	0.142	0.314	0.401	0.549	0.855
SV_3	0.276	0.134	0.161	0.194	0.235	0.221	-0.156	0.139	0.279	0.363	0.499	0.875
SV_4	0.317	0.131	0.165	0.265	0.236	0.187	-0.09	0.136	0.277	0.333	0.377	0.827

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value.

The Fornell-Larcker criterion is “the second approach to assessing discriminant validity. It compares the square root of the AVE values with the latent variable correlations.

Specifically, the square root of each construct’s AVE should be greater than its highest correlation with any other construct” (Hair et al., 2016, p. 139).

Moreover, Table 5 exhibits that discriminant validity, assessed through Fornell and Larcker's (1981) criteria, is established.

Table 5.*Fornell-Larcker Criterion*

	NAR	INRT	SS_ES	SS_BS	SS_TA	SS_DI	SEF	BP	IMB	PO	AT	SV
NAR	0.747											
INRT	0.154	0.794										
SS_ES	0.202	0.187	0.871									
SS_BS	0.325	0.136	0.541	0.848								
SS_TA	0.382	0.034	0.497	0.577	0.888							
SS_DI	0.544	0.028	0.336	0.478	0.57	0.873						
SEF	0.081	0.308	0.2	0.208	0.033	0.212	0.739					
BP	0.34	0.469	0.387	0.504	0.31	0.352	0.588	0.793				
IMB	0.379	0.267	0.326	0.383	0.302	0.358	0.372	0.571	0.843			
PO	0.267	0.162	0.311	0.212	0.209	0.177	-0.039	0.234	0.33	0.848		
AT	0.251	0.163	0.204	0.231	0.168	0.161	-0.121	0.194	0.342	0.553	0.911	
SV	0.288	0.158	0.173	0.231	0.218	0.183	-0.135	0.161	0.346	0.44	0.584	0.854

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value, Values on diagonal are square root of AVE.

Heterotrait Monotrait (HTMT) is “the ratio of the between-trait correlations to the within-trait correlations. HTMT is the mean of all correlations of indicators across constructs measuring different constructs (i.e., the heterotrait-heteromethod correlations) relative to the (geometric) mean of the average correlations of indicators measuring the same construct (i.e., the monotrait-heteromethod correlations)” (Hair et al., 2016, p. 140).

According to Henseler et al. (2015), discriminant validity is established when the HTMT ratio is less than or equal to 0.90. In this study, using the threshold level of 0.85, Table 6 shows that the HTMT values for all pairs of constructs are below the threshold value. Hence, discriminant validity is attained (see Table 6).

Table 6.*Heterotrait-Monotrait (HTMT)*

	NAR	INRT	SS_ES	SS_BS	SS_TA	SS_DI	SEF	BP	IMB	PO	AT	SV
NAR												
INRT	0.22											
SS_ES	0.28	0.228										
SS_BS	0.428	0.191	0.816									
SS_TA	0.456	0.108	0.652	0.829								
SS_DI	0.645	0.106	0.468	0.766	0.799							
SEF_	0.429	0.37	0.361	0.399	0.283	0.346						
BP	0.313	0.533	0.463	0.672	0.336	0.415	0.589					
IMB	0.386	0.315	0.422	0.532	0.364	0.462	0.368	0.642				
PO	0.369	0.21	0.42	0.312	0.3	0.254	0.363	0.275	0.393			
AT	0.343	0.209	0.273	0.321	0.235	0.233	0.359	0.219	0.386	0.651		
SV	0.388	0.216	0.226	0.325	0.284	0.254	0.344	0.182	0.395	0.521	0.656	

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS=

Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP=

Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value.

4.3.5 Validating Higher Order Construct. Sensation seeking (SS) is the higher-order formative construct having four lower-order reflective constructs (ES, BS, AT, DI). Variance Inflation Factor (VIF) values to assess the multi-collinearity were used to validate the higher-order formative construct. VIF values less than or equal to 5 suggest no multicollinearity issues (Hair et al., 2021). Table 7 demonstrates that all VIF values are less than 5, thus there is no collinearity threat. Next, the statistical significance and outer weights were assessed (Sarstedt et al., 2019). Except for TA, the outer weights were found significant. Further, outer loadings were found significant and greater than 0.5 for each indicator forming SS (Sarstedt et al., 2019). Hence, the higher-order construct was validated.

Table 7.*Validation of Higher-order Construct*

Higher order construct	Lower order construct	VIF	Outer Weights	T-statistics	P-value	Outer Loadings	P-value
SS	SS_ES	1.524	0.312	2.610	0.005	0.720	0.000
	SS_BS	1.802	0.722	6.259	0.000	0.937	0.000
	SS_TA	1.920	-0.165	1.119	0.132	0.576	0.000
	SS_DI	1.558	0.297	2.223	0.013	0.653	0.000

Notes: SS= Sensation seeking, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition.

4.4 Structural Model

The second step in the analysis involves the evaluation of the structural model. Table 8 and Figure 2 present the assessment of path coefficients and significance levels for the hypothesized relationships in the research model. The bootstrap resampling technique, with 5000 resamples, was employed to analytically test the hypotheses, determining p-values and their estimated standard errors (Hair et al., 2016). Furthermore, the study assessed the coefficient of determination (R^2) (Chin, 1998). This study used a two-stage moderation approach because “neither the product indicator approach nor the orthogonalizing approach is applicable when the exogenous construct and/or the moderator have a formative measurement model. Therefore, when formative measures are involved, the two-stage approach must be used”; it also “exhibits a higher level of statistical power” (Hair et al., 2016, p. 252).

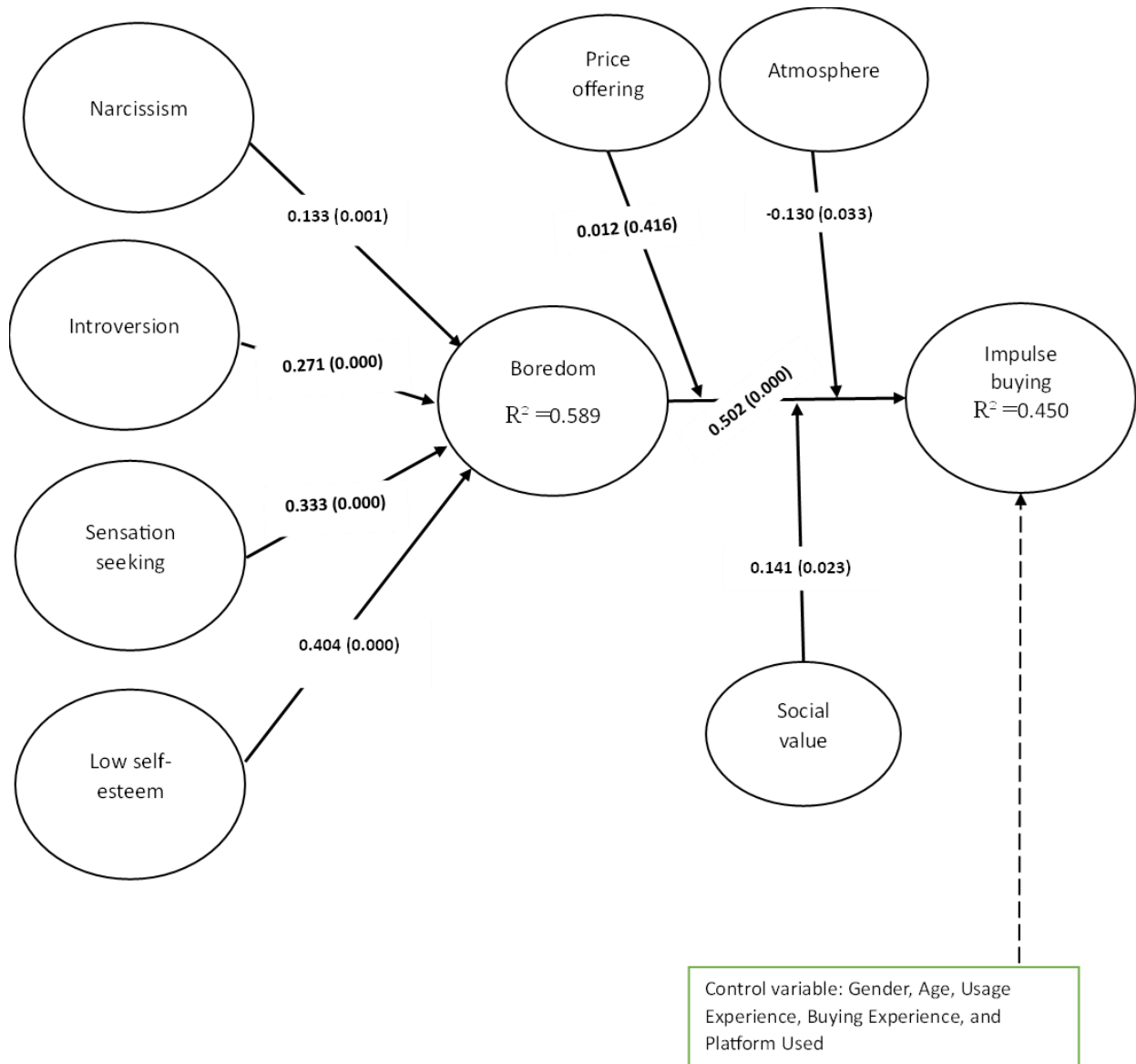
Table 8.*Path Coefficients*

Independent Variable	Dependent Variable	Moderator	R ²	b	SE	t-Statistics	p-value	
Narcissism (NAR)	Boredom proneness (BP)		0.589	0.133	0.042	3.152	0.001	Hypothesis 1 supported
Introversion (INRT)				0.271	0.05	5.392	0.000	Hypothesis 2 supported
Sensation seeking (SS)				0.333	0.05	6.644	0.000	Hypothesis 3 supported
Self-esteem (SE)				0.404	0.05	8.039	0.000	Hypothesis 4 supported
Boredom proneness (BP)	Impulse buying (IMB)		0.450	0.502	0.053	9.457	0.000	Hypothesis 5 supported
Boredom proneness (BP)		Price offering (PO)		0.012	0.057	0.213	0.416	Hypothesis 5 not supported
Boredom proneness (BP)		Atmosphere (AT)		-0.13	0.071	1.846	0.033	Hypothesis 5 supported
Boredom proneness (BP)		Social value (SV)		0.141	0.07	1.999	0.023	Hypothesis 5 supported

Notes: R²= R square, b = beta co-efficient, SE = standard deviation, p-value= significance value less than 0.05.

Figure 2

PLS Results for the Structural Model



Note: Values between arrows are beta-coefficient, and values inside the shapes are R-sq.

Gender, age, buying experience, s-commerce usage experience and platform used were controlled. Except for buying behaviour and platform 6 all control variables were insignificant. The results reveal a substantial positive influence of NAR on BP ($\beta = 0.133$, $p = 0.001$). Therefore, H1 was supported. H2: INT \rightarrow BP ($\beta = 0.271$, $p = 0.000$) was significant. H3: SS \rightarrow BP ($\beta = 0.333$, $p = 0.000$) was significant. H4: SEF \rightarrow BP ($\beta = 0.404$, $p = 0.000$) was significant. This implies that individuals possessing narcissistic, introverted, sensation-seeking, and low self-esteem personalities experience higher levels of boredom.

Boredom was found to have a positive relationship with impulse buying, H5: BP \rightarrow IMB ($\beta = 0.505$, $p = 0.000$) was significant.

The findings demonstrate a positive impact of social value on boredom and impulse buying in s-commerce. H8: SV x BP \rightarrow IMB ($\beta = 0.141$, $p = 0.023$) was significant. However, a negative influence of AT on boredom and impulse buying was revealed. H7: AT x BP \rightarrow IMB ($\beta = -0.13$, $p = 0.033$). Lastly, a nonsignificant relation of price offering on boredom and impulse buying was found, H6: OP x BP \rightarrow IMB ($\beta = 0.012$, $p = 0.416$).

This means that consumers prone to boredom, react more to social value features on s-commerce. The more bored consumers seek social value, the more they will be triggered towards impulse buying. Hence, social value contributes to bored consumers making impulsive purchases. Additionally, seeking a pleasant atmosphere on s-commerce, weakens the relationship between boredom and impulse buying. This suggests that creating a pleasant environment on s-commerce platforms does not prompt consumers to make impulse purchases. Lastly, for price offerings, no significant impact was found on boredom and impulse buying. Moderation has been represented via slope analysis. In Figure 3 (OP x BP \rightarrow IMB) all three lines are parallel which represents no moderating effect. In Figure 4 (AT x BP \rightarrow IMB) the steeper red line represents the lower atmosphere. The steeper red slope

represents that the positive relationship between boredom and impulse buying is dampened/weakened because of the increase in atmosphere. In Figure 5 (SV x BP \rightarrow IMB) the steeper green line represents the higher social value. The figure states that the positive relationship between boredom and impulse buying is amplified because of increased social value.

Figure 3.

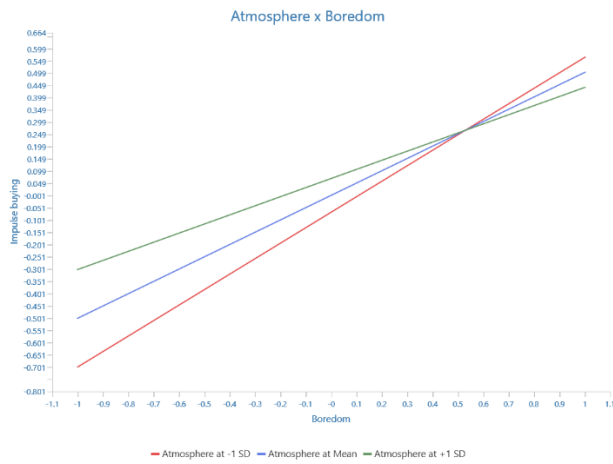
Slope Analysis of Price Offering x Boredom and Impulse Buying



Note: Green line: high price offerings; Red line: low price offerings.

Figure 4.

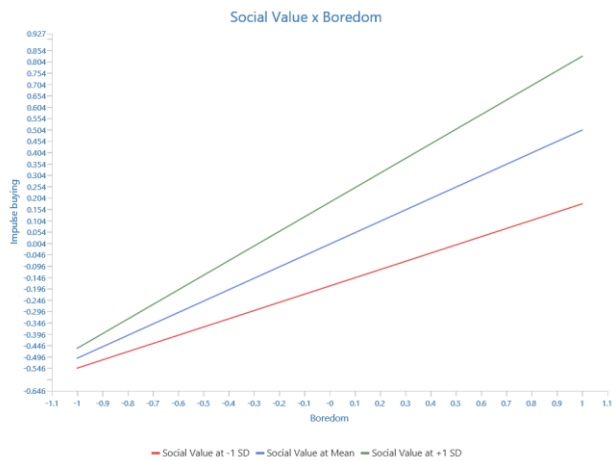
Slope Analysis of Atmosphere x Boredom and Impulse Buying



Note: Green line: high atmosphere seeking; Red line: low atmosphere seeking.

Figure 5.

Slope Analysis of Social Value x Boredom and Impulse Buying



Note: Green line: high social value; Red line: low social value.

4.4.1 R-square. The coefficient of determination (R^2 value) is the most employed measure for assessing the structural model. R^2 represents “the amount of variance in the endogenous constructs explained by all of the exogenous constructs linked to it” (Hair et al., 2016, p. 209). As a rule of thumb, the R^2 value of 0.75 is considered strong, 0.50 is moderate and 0.25 is weak (Hair et al., 2011). The study’s endogenous variables boredom and impulse buying have R-Sq values of 0.589 and 0.420 respectively (Table 8). Overall, the personalities (NAR, INT, SS, and SEF) reported for 58.9% of the variance in boredom proneness (BP). BP and moderators (OP, AT, and SV) reported for 45% variance in impulse buying respectively. The R-sq values can be described as moderate in this study.

5. Discussion

The primary objective of this empirical study was to investigate the relationship between consumer intrinsic traits, particularly personality, and its susceptibility to boredom, resulting in impulsive purchasing behaviour within the s-commerce context. Additionally, the research explored the moderating impact of external stimulations in the s-commerce environment on the connection between boredom and impulse buying. Grounded in the Uses and Gratifications Theory (UGT), the study revealed that specific personality traits motivate individuals to engage in s-commerce and subsequently indulge in impulse buying. This behaviour is driven by the desire to seek gratification and stimulation to fulfil the inherent need to escape boredom. The current findings provide valuable insights for s-commerce firms seeking to elevate their business models through effective consumer emotion management, and consequently developing positive behaviours. Ultimately, it contributes to the strategic evolution of s-commerce practices, illuminating how consumer emotions can be influenced and profitable purchasing habits can be nurtured.

This study found that people having certain personality traits (like narcissism, introversion, sensation-seeking, and low self-esteem) are more prone to boredom. This finding is in support of past studies. For instance, Barnett and Klitzing (2006) asserted in their study that individuals with high boredom proneness are often introverted, likely due to having a small or non-existent social circle. Even in online environments, they tend to assume a more passive role as consumers rather than active participants (Tzavela et al., 2017). Chin et al. (2017) argue that experiencing solitude and social disconnection significantly contributes to the onset of boredom. Extending this perspective, several studies have consistently highlighted that a key motivating factor for people engaging in online activities is their restricted social network size or complete lack of friends. The absence of peer or social support during moments of boredom drives individuals to find comfort and engagement online (Li et al., 2015; Al-Saggaf, 2020; Tzavela et al., 2017). Similar is the case with low self-esteem and narcissism. Individuals with low self-esteem communicate less, anticipating negative reactions from others due to their unfavourable self-perception (Infante, 1976). Narcissists, apart from having less adaptive social behaviours, experience boredom due to the awareness of their fragile self-image and poor social skills. This emptiness, manifested as bouts of boredom, often drives them to digital tools as a convenient means of addressing these feelings (Ksinan et al., 2021). Sensation-seekers are continuously looking for new, varied, and risky experiences. According to the arousal theory of boredom, when there is a mismatch of internal and external arousal/stimulation, boredom comes into existence (Hebb, 1966). This means that because of the sensation-seeker's high arousal levels, they can easily become bored if they fail to get adequate stimulation from the environment. This mismatch of demand and supply of arousal results in boredom.

This study found a positive relationship between boredom and impulse buying. This finding is because boredom is a functional emotion, and through its self-regulatory function

it tries to alleviate itself (Elpidorou, 2015). In the context of s-commerce, bored individuals use s-commerce as they are reliable for managing negative moods and is a good mood repair strategy (Diefenbach & Borrmann, 2019; Lazarus, 1991; Mano, 1999; Griffiths, 2013). That is why bored individuals go online to replace the negative affect of boredom with something positive, such as pleasure (Harrison, 2005). During boredom, consumers are inclined to buy on impulse to break the normal pattern. They want to seek novelty or do something new to improve their boring situation, which is why they make impulsive purchases online to avoid the negative feelings of boredom (Sundström et al. 2019).

This study verified the moderating effect of social value on boredom and impulse buying relation, which is consistent with the results of the study of other researchers (e.g., Sundström et al. 2019; Barbalet, 1999; Van Tilburg & Igou, 2011). The correlation between boredom and impulse buying varied as a function of the level of social value. With an increasing level of socialisation, the correlation between boredom and impulse buying becomes stronger. This result verifies the viewpoint proposed by Sundström et al. (2019), who argued that boredom facilitates impulse buying during socialising. They found that most of the time bored consumers make impulse purchases in the company of others (i.e., friends and family) without clear intent of shopping. During such instances, their focus is not on shopping per se but rather on navigating their social identity through interactions on social media platforms. The authors further articulated that, in states of boredom, consumers experience a heightened need for a sense of belonging, motivating them to make impulsive clothing purchases as a means of identifying with specific reference groups. Within the context of boredom, seeking social value from s-commerce intensifies the urgency of impulse buying as a means to visually demonstrate the identity through clothes.

Another interesting finding was that atmosphere shows a negative significant influence on boredom and impulse buying relationships. This supports the findings of

Parsad et al. (2019), who, in their study of exploring the effect of store environment on post impulse purchase, stated that regret followed by the impulse buying can lower the tendency of impulsive purchases in future. Their findings indicate that stimuli in an attractive store environment can motivate impulse buying. Nevertheless, post-purchase, these shoppers might experience regret because they feel that this unplanned buying has resulted in monetary and social loss for them (Rook & Hoch, 1985). These regretful feelings refrained them from shopping. Another reason is explained by Sundström et al. (2019), who claimed that browsing around websites is a hunt for pleasure which can motivate impulse purchases or become a source of instant satisfaction. They found that the act of filling a shopping cart, even without completing the purchase, can provide a sense of stimulation. This suggests that for bored consumers it is very common to browse products, get stimulated and satisfied at this point, and never actually buy anything.

The study findings for price offering construct show insignificant effect on boredom and impulse buying relationship. This supports the findings of Sundström et al. (2019), who stated that during boredom the lack of planning in online buying is evident, and consumers occasionally prioritize qualitative values, such as pleasure, over the monetary price. They expressed that during moments of boredom, their impulse buying was considered worthwhile to alleviate the negative feelings. Also, sometimes the feeling of rewarding oneself becomes an excuse to buy on impulse. In such situation's, bored consumers are willing to pay more for impulsive purchases just to reward themselves. Furthermore, studies also reported that the consumer makes impulse purchases, both for expensive and inexpensive product categories (Rook, 1987; Dittmar et al., 1995). According to Badgaiyan and Verma, 2015, consumers look for a combination of overall shopping benefits (e.g., quality, engagement, atmosphere, etc.), and price is not the main reason which triggers impulse purchase.

5.1 Implications

Several theoretical implications can be drawn from this study (see Table 8). This study yields a broad picture of individuals who are more likely to be bored and will use s-commerce to buy on impulse as a coping strategy. It is an evident contribution to the s-commerce and impulse-buying literature (see Table 8). Firstly, it highlighted the mechanism via which individual characteristics and technical designs induce consumers' impulse buying behaviour. It also addressed the gaps in previous studies (Jiang & Li, 2018; Whelan et al., 2020) and offers an understanding of the psychological traits that underlie impulsive behaviours during boredom, which were previously explored within the contexts of e-commerce. Furthermore, prior studies have primarily focused on gauging the intensity of digital technology usage in relation to boredom (Whelan et al., 2020). This study extended these findings by specifying the type of content or features that trigger impulsive buying behaviours. It tests all three external stimulations of s-commerce as moderators. This study contributed to s-commerce literature by integrating it with boredom to investigate consumers' impulse buying behaviour online.

This study has important implications for practitioners to develop successful s-commerce platforms. Its findings provide recommendations to enhance the features and design of s-commerce platforms, thereby alleviating sales barriers linked to boredom-induced disengagement. Given current findings, it seems social stimulations have more weightage on boredom and impulse-buying relationships. S-commerce platforms should focus on enhancing social features to leverage the positive influence of socialisation on impulse buying during boredom. Incorporating interactive elements and facilitating social connections within the platform can be a valuable strategy. Acknowledging the negative influence of the atmosphere, businesses should consider strategies to regulate post-purchase regret. Emphasising the benefits of impulse buying in a pleasant environment without

inducing regret could encourage continued engagement. Moreover, the insignificant influence of price offerings on the boredom-impulse buying relationship challenges the conventional focus on discounts and pricing strategies. Businesses may need to explore alternative approaches, emphasising overall shopping benefits and experiences.

5.2 Limitations

One limitation of this study is that it did not take cultural aspects into account, which could have influenced the findings. Additionally, being a cross-sectional study, it cannot track patterns of variables over time, which is a powerful method for exploring cause-and-effect relationships. Furthermore, the study employed short scales for variables such as narcissism and boredom proneness, which may have limited the depth and accuracy of the data collected.

5.3 Future Direction

This study identifies numerous potential directions for future research (Table 9). Firstly, future researchers can take into account state boredom in the current research model. Trait boredom and state boredom have independent effects on the experience of boredom, and it is imperative to recognise their distinction (Fahlman et al, 2011; Bench & Lench, 2013). Among them, trait boredom has a predominant number of studies, while apart from some experimental work, state boredom is overlooked (Bench & Lench, 2013). Scholars have proposed to take validated measures of state boredom into trait boredom studies (Chan et al, 2018; Hunter et al, 2015). Secondly, future studies should investigate the moderating effect of other s-commerce stimulations (i.e., both internal and external), like enjoyment, participation, personalisation, and visual display on boredom and impulse buying. This exploration can significantly contribute to our comprehension of boredom within the realm of s-commerce. Moreover, future research initiatives could delve into the outcomes of impulse buying arising from boredom, including but not limited to feelings of regret and

subjective well-being. Approaching this from a marketing perspective, researchers may also examine the broader framework of how boredom in s-commerce influences factors like continued usage or disuse of platform and attitude. Additionally, to enrich our understanding, future researchers should conduct similar studies across diverse cultural contexts. Boredom proneness varies across cultures, with collectivistic cultures, for instance, exhibiting different boredom experiences compared to individualistic cultures (Ng et al., 2015). An exploration of boredom in the context of s-commerce within various cultural settings can provide valuable insights and deepen our understanding of this phenomenon.

Table 9.*Future Directions*

Current Findings	Future directions
<p>This study stands as one of the pioneering efforts to investigate the relationship between boredom and impulse buying in the context of s-commerce. It establishes a positive relationship between boredom and impulse buying, emphasising boredom as a functional emotion that self-regulates consumers to engage in impulse buying for alleviation, thus, contributing to boredom literature in the online context.</p>	<ul style="list-style-type: none"> • To examine impulse buying in relation to other types of boredom i.e., leisure boredom and state boredom. • To investigate the outcomes of impulse buying arising from boredom on both consumers and the market, including but not limited to feelings of regret and subjective well-being. • To investigate the current research model on a specific platform (e.g., Instagram, Trade Me, etc.) and within diverse cultural contexts, considering that boredom is perceived differently among cultures (Ng et al., 2015).
<p>This study validates the moderating effect of three external stimulations (market, environment, and social factors) in the context of s-commerce on the relationship</p>	<ul style="list-style-type: none"> • To explore the moderating impact of various s-commerce stimulations, both internal and external, such as enjoyment, participation,

between boredom and impulse buying. This study addresses gaps in prior literature, which mainly focused on the intensity of digital technology usage in relation to boredom. It extends these findings by exploring the specific content or features that trigger impulsive buying behaviours.

The study provides insights into the psychological traits that underlie impulsive behaviours during boredom.

personalisation, visual display, etc., on the relationship between boredom and impulse buying.

- Additionally, to investigate the influence of boredom and these stimulations on other outcomes, including well-being (Biolcati et al., 2018), cyberbullying (Koban et al., 2018), online addiction (Wegmann et al., 2018), etc.
- To investigate additional traits of online consumers, such as emotional instability (Barnett & Klitzing, 2006; Holte & Ferraro, 2020; Tzavela et al., 2017) and amotivation (Watt & Vodanovich, 1992), within the context of boredom and s-commerce.

6. Conclusion

In conclusion, this empirical study has delved into the intricate relationship between consumer intrinsic traits, particularly personality characteristics and their susceptibility to boredom, ultimately influencing impulsive purchasing behaviour within the context of s-commerce. Notably, personality traits such as narcissism, introversion, sensation-seeking, and low self-esteem were identified as factors contributing to an increased vulnerability to boredom. Moreover, boredom was positively related to impulse buying and the study explored the moderating effect of external stimulations within the s-commerce environment on this relationship. Social value emerged as a significant moderator, with an increasing level of socialisation strengthening the correlation between boredom and impulsive buying. This emphasises the role of social interactions in facilitating impulsive purchases during states of boredom. Surprisingly, the study found a negative influence of atmosphere on the relationship between boredom and impulse buying. This suggests that a pleasant s-commerce platform while stimulating engagement, may not necessarily lead to impulsive buying during moments of boredom. The study aligns with previous research emphasising the importance of post-purchase regret and the nuanced impact of store environment factors on impulsive buying. In contrast, the influence of price offerings on the relationship between boredom and impulse buying was found to be insignificant. Overall, the insights gained from this study provide a foundation for refining s-commerce strategies, acknowledging the diverse needs and responses of consumers to boredom, and enhancing the overall consumer experience in the digital marketplace.

Appendices

Appendix A

Table A.1.

Definition of Research Variables

Variable	Definition
Independent Variables	
Narcissism	Strong focus on the self, accompanied by a lack of empathy, a need for admiration, and fantasies of omnipotence and grandiosity (American Psychiatric Association, 2000).
Introversion	The individual difference in the inclinations toward the inner and outer world introversion can also be defined as low Extraversion. Adjectives traditionally associated with introversion include inhibited reserved and undemonstrative (Tuovinen et al., 2020, p. 2).
Sensation-seeking	A trait by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experience (Zuckerman, 2014, p. 10).
Self-esteem	The evaluation which the individual makes and customarily maintains with regard to the self" (Coopersmith, 1967, pp 4-5).
Dependent Variables	
Boredom	The aversive experience of wanting, but being unable to engage in a stimulating and satisfying activity (Fahlman et al., 2013, p. 69).
Impulsive purchase	Impulsive purchase means an unplanned and unreflected purchase when exposed to certain stimuli (Beatty and Ferrell, 1998).
Moderating Variables	

Price of offerings	Some sort of discount or free shipping involved with purchase (Holloway & Beatty, 2008, p. 354).
Atmosphere	Store atmosphere is the atmosphere or state of the store that is planned and adjusted to the target which aims to attract consumers to make purchases (Lutfiatin & Rahardjo, 2023, p. 51).
Social value	Social stimulations like social value refers to “the utility derived from the product’s ability to enhance social self-concept (Sweeney and Soutar, 2001, p. 211).

Appendix B

The questionnaire employed in the study comprises two sections. Section 1 encompasses the constructs (see Table B.1), while Section 2 includes items related to demographics and S-commerce experience (refer to Table B.2).

Table B.1.

Survey Items

SD	D	SWD	N	SWA	A	SA				
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree				
1	2	3	4	5	6	7				
Survey Items				SD	D	SWD	N	SWA	A	SA
Narcissism										
NAR1	I like having authority over people.			1	2	3	4	5	6	7
NAR2	I really like to be the centre of attention.			1	2	3	4	5	6	7
NAR3	I am an extraordinary person.			1	2	3	4	5	6	7
NAR4	Everybody likes to hear my stories.			1	2	3	4	5	6	7
NAR5	I find it easy to manipulate people.			1	2	3	4	5	6	7
NAR6	I am apt to show off if I get the chance.			1	2	3	4	5	6	7
NAR7	I always know what I am doing			1	2	3	4	5	6	7
NAR8	I am going to be a great person			1	2	3	4	5	6	7
Introversion										
INRT1	I am reserved.			1	2	3	4	5	6	7
INRT2	I am sometimes shy, inhibited.			1	2	3	4	5	6	7
INRT3	I am talkative.			1	2	3	4	5	6	7
INRT4	I am not outgoing, sociable.			1	2	3	4	5	6	7
Sensation Seeking										

SS1	I would like to explore strange places.	1	2	3	4	5	6	7
SS2	I would like to take off on a trip with no pre-planned routes or timetables.	1	2	3	4	5	6	7
SS3	I get restless when I spend too much time at home.	1	2	3	4	5	6	7
SS4	I prefer friends who are excitingly unpredictable.	1	2	3	4	5	6	7
SS5	I like to do frightening things.	1	2	3	4	5	6	7
SS6	I would like to try bungee jumping.	1	2	3	4	5	6	7
SS7	I like wild parties.	1	2	3	4	5	6	7
SS8	I would love to have new and exciting experiences, even if they are illegal.	1	2	3	4	5	6	7
Self-esteem								
SEF1	Sometimes I think I am no good at all.	1	2	3	4	5	6	7
SEF2	I wish I could respect myself more.	1	2	3	4	5	6	7
SEF3	I feel I have a number of good qualities	1	2	3	4	5	6	7
SEF4	All in all I am satisfied with myself.	1	2	3	4	5	6	7
SEF5	I take a positive attitude toward myself.	1	2	3	4	5	6	7
Boredom proneness								
BP1	I often find myself at "loose ends," not knowing what to do.	1	2	3	4	5	6	7
BP2	I find it hard to entertain myself.	1	2	3	4	5	6	7
BP3	Many things I have to do are repetitive and monotonous.	1	2	3	4	5	6	7
BP4	It takes more stimulation to get me going than most people.	1	2	3	4	5	6	7
BP5	I don't feel motivated by most things that I do.	1	2	3	4	5	6	7
BP6	In most situations, it is hard for me to find something to do or see to keep me interested.	1	2	3	4	5	6	7
BP7	Much of the time, I just sit around doing nothing.	1	2	3	4	5	6	7
BP8	Unless I am doing something exciting, even dangerous, I feel half-dead and dull.	1	2	3	4	5	6	7
Impulse Buying								

IMB1	I buy products on s-commerce that I don't really need.	1	2	3	4	5	6	7
IMB2	I purchase thing on s-commerce that I wouldn't normally purchase.	1	2	3	4	5	6	7
IMB3	I purchase things on s-commerce that I don't know why I bought them after buying them.	1	2	3	4	5	6	7
IMB4	I buy things on s-commerce that I don't plan to purchase.	1	2	3	4	5	6	7
Price Offering								
PO1	S-commerce offers discounts.	1	2	3	4	5	6	7
PO2	S-commerce has low prices.	1	2	3	4	5	6	7
PO3	S-commerce has lower prices than offline stores.	1	2	3	4	5	6	7
Atmosphere								
AT1	S-commerce's atmosphere is fun.	1	2	3	4	5	6	7
AT2	S-commerce's atmosphere is attractive.	1	2	3	4	5	6	7
AT3	S-commerce's atmosphere is pleasurable.	1	2	3	4	5	6	7
Social Value								
SV1	I can connect with friends on this s-commerce platform.	1	2	3	4	5	6	7
SV2	I can share experiences with others on this s-commerce platform.	1	2	3	4	5	6	7
SV3	I can develop friendships with other users on this s-commerce platform.	1	2	3	4	5	6	7
SV4	I can extend personal relationships on this s-commerce platform.	1	2	3	4	5	6	7

Table B.2*Demographics and S-commerce experience items*

Gender (in percentage)	Male
	Female
	Prefer not to say
Age (in percentage)	20 and below
	Between 21 – 25
	Between 26 – 30
	Between 31 – 35
	Between 36 – 40
	Between 41 – 45
	46 and above
Type of s-commerce (Percent of Cases)	Facebook
	Instagram
	Trade Me
	TikTok
	Snapchat
	Twitter
	Other
Usage experience (in percentage)	less than 12 months
	1 to 5 years
	5-10 years
	More than 10 years
Buying experience (in percentage)	More than once a week
	Once in a week
	More than once in a month
	Once in a month
	Once in many months

Appendix C

The table C.1 shows the indicators of all the constructs in the study.

Table C.1.

Indicators of Constructs

Constructs	Indicators	Indicator reliability (Outer Loadings)
NAR	NAR1	I like having authority over people.
	NAR2	I really like to be the centre of attention.
	NAR3	I am an extraordinary person.
	NAR4	Everybody likes to hear my stories.
	NAR5	I find it easy to manipulate people.
	NAR6	I am apt to show off if I get the chance.
INRT	INRT1	I am reserved.
	INRT2	I am sometimes shy, inhibited.
	INRT3	I am talkative.
	INRT4	I am not outgoing, sociable.
SS_ES	SS1	I would like to explore strange places.
	SS2	I would like to take off on a trip with no pre-planned routes or timetables.
SS_BS	SS3	I get restless when I spend too much time at home.
	SS4	I prefer friends who are excitingly unpredictable.

SS_TA	SS5	I like to do frightening things.
	SS6	I would like to try bungee jumping.
SS_DI	SS7	I like wild parties.
	SS8	I would love to have new and exciting experiences, even if they are illegal.
SEF	SEF1	Sometimes I think I am no good at all.
	SEF2	I wish I could respect myself more.
	SEF4	All in all I am satisfied with myself.
	SEF5	I take a positive attitude toward myself.
	BP	BP1
	BP2	I find it hard to entertain myself.
	BP3	Many things I have to do are repetitive and monotonous.
	BP4	It takes more stimulation to get me going than most people.
	BP5	I don't feel motivated by most things that I do.
	BP6	In most situations, it is hard for me to find something to do or see to keep me interested.
	BP7	Much of the time, I just sit around doing nothing.
	BP8	Unless I am doing something exciting, even dangerous, I feel half-dead and dull.
IMB	IMB1	I buy products on s-commerce that I don't really need.

	IMB2	I purchase thing on s-commerce that I wouldn't normally purchase.
	IMB3	I purchase things on s-commerce that I don't know why I bought them after buying them.
	IMB4	I buy things on s-commerce that I don't plan to purchase.
PO	PO1	S-commerce offers discounts.
	PO2	S-commerce has low prices.
	PO3	S-commerce has lower prices than offline stores.
AT	AT1	S-commerce's atmosphere is fun.
	AT2	S-commerce's atmosphere is attractive.
	AT3	S-commerce's atmosphere is pleasurable.
SV	SV1	I can connect with friends on this s-commerce platform.
	SV2	I can share experiences with others on this s-commerce platform.
	SV3	I can develop friendships with other users on this s-commerce platform.
	SV4	I can extend personal relationships on this s-commerce platform.

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value, loadings < .40 are not shown.

Appendix D

The table D.1 shows the outer loading of indicators of all the constructs.

Table D.1

Indicator Reliability

	Outer loadings
AT1 <- AT	0.906
AT2 <- AT	0.924
AT3 <- AT	0.904
BP1 <- BP	0.711
BP2 <- BP	0.841
BP3 <- BP	0.667
BP4 <- BP	0.778
BP5 <- BP	0.862
BP6 <- BP	0.866
BP7 <- BP	0.837
BP8 <- BP	0.758
IMB1 <- IMB	0.861
IMB2 <- IMB	0.84
IMB3 <- IMB	0.849

IMB4 <- IMB	0.82
INRT1 <- INRT	0.721
INRT2 <- INRT	0.819
INRT3 <- INRT	0.8
INRT4 <- INRT	0.831
NAR1 <- NAR	0.707
NAR2 <- NAR	0.858
NAR3 <- NAR	0.58
NAR4 <- NAR	0.513
NAR5 <- NAR	0.824
NAR6 <- NAR	0.849
NAR7 <- NAR	0.306
NAR8 <- NAR	0.233
PO1 <- PO	0.827
PO2 <- PO	0.88
PO3 <- PO	0.834
SEF1 <- SEF	0.898
SEF2 <- SEF	0.842
SEF3 <- SEF	0.309

SEF4 <- SEF	0.569
SEF_5 <- SEF	0.608
SS1 <- SS_ES	0.806
SS2 <- SS_ES	0.932
SS3 <- SS_BS	0.866
SS4 <- SS_BS	0.83
SS5 <- SS_TA	0.958
SS6 <- SS_TA	0.812
SS7 <- SS_D	0.808
SS8 <- SS_D	0.934
SV1 <- SV	0.857
SV2 <- SV	0.855
SV3 <- SV	0.875
SV4 <- SV	0.827

Notes: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, PO= price offering, AT= Atmosphere, SV= Social value.

Chapter 4

Consumer Brand Cyberbullying and Social Commerce: The Role of Boredom and Personality Traits

Abstract

Cyberbullying is a prevalent problem influencing individuals of all ages and genders and with the proliferation of electronic communication platforms, consumer misbehaviour has raised growing concerns among brands. Based on preliminary studies, the possibility of its connection with boredom in the context of social commerce (s-commerce) presents an intriguing avenue for further exploration. This study offered the first survey-based investigation on boredom as a motivation that spurs the phenomenon of Consumer Brand-Cyberbullying (CBCB). Furthermore, it explored the influence of consumer personality on boredom and examined how s-commerce platforms' stimuli affect boredom and CBCB relationships. Data was collected from 253 consumers in New Zealand and SmartPLS structural equation modelling (PLS-SEM) was employed. Results provided support for boredom, guided by personality factors, lead to CBCB behaviour. Interestingly, the results demonstrated that social and emotional s-commerce stimulation (i.e. social value and enjoyment) positively moderated boredom and CBCB behaviour relation. Understanding this phenomenon is crucial given New Zealand's cyberbullying statistics. This study shed new light on the multifaceted dynamics of cyberbullying, ultimately enhancing efforts to prevent and address this issue effectively.

Keywords: consumer brand cyberbullying, boredom, s-commerce, Facebook, enjoyment, social value

1. Introduction

Cyberbullying is a prevalent problem affecting individuals of all ages and genders, both at home and in various settings. Troubling statistics from a New Zealand attitudes and values study highlight the issue's gravity. In their study, Steiner-Fox et al. (2016) examined around 15,000 people to discover that three out of five women in their late teens have been targets of cyberbullying. Additional findings showed one in ten people between 30 and 59, one in twenty individuals in their late 20s, and 46% of women aged 18–19 have experienced cyberbullying. Unfortunately, the statistics get darker. Another global study among nine-year-olds across 35 countries ranked New Zealand as the second-highest in bullying rates (Internet Safety Statistics, 2023). Hence, understanding this phenomenon of cyberbullying is crucial, given its alarming impact on the well-being of New Zealand's citizens.

Previously information science and digital media studies concentrated on cyberbullying from the perspective of individuals' race, gender, social norms, political opinions, physical attributes, or personality dispositions (Herring et al., 2002; Moon et al., 2018; Rodkin et al., 2015); however, they so far overlooked the likelihood that it can also happen with consumers and brands in the s-commerce context.

The term consumer brand cyberbullying behaviour" (CBCB) is relatively new and has garnered limited attention in research. Even within its existing studies, only consumer-to-consumer cyberbullying concerning brands has been predominantly concentrated on, therefore leaving a significant gap in understanding the broader context of consumer-brand interaction (Breitsohl et al., 2018, 2022). Understanding CBCB is crucial due to its far-reaching consequences. Firstly, it disrupts consumer brand engagement for both existing and potential customers (Muniz & Hamer, 2001; Sibai et al., 2015). Cyberbullying brands can inflict damage on a business's image and jeopardise its sustainability (Breitsohl et al., 2022).

Secondly, to be bullied concerning a brand holds the same negative consequences as to being cyberbullied individually in terms of gender and physical appearance. As consumers identify and express themselves through the value and worth of their brands, it can be detrimental to their wellbeing (Isaksen & Roper 2016; Ferraro et al., 2011). Thirdly, CBCB is unregulated, as companies mostly choose not to intervene with aggressive conversations in brand communities (Dineva et al., 2017). Since social media has millions of users, it amplifies the impact of CBCB. New Zealand boasts 4.24 million social media users as of January 2023, encompassing 81.4% of the total population (Kemp, 2023). Given that a significant portion of cyberbullying occurs on social networks (Facebook bullying page blasted by parents, students, 2011; Internet Safety Statistics, 2023), it is important to investigate this within this context.

Boredom, as a negative and motivational affect, has garnered significant attention due to its detrimental impact on individual well-being, as highlighted by various scholars (Deng et al., 2020; Brooks, 2017; Paasonen, 2018; Wegmann et al., 2018). Boredom is linked with adverse outcomes, such as incivility (Orosz et al., 2016), aggression (Zhao et al., 2015), anger, hostility, impulsivity, and cyberbullying (Fahlman et al., 2013; Isacescu et al., 2017), and online deviant behaviour (Ksinan et al., 2021). While existing researches have investigated boredom in the contexts of social media (Tanrikulu & Campbell, 2015), online incivility (Orosz et al., 2016), peer violence (Nocera, 2019), and education (Compton et al., 2014; Thornberg & Knutsen, 2011), a notable research gap exists concerning its association with CBCB behaviour in s-commerce. Furthermore, research in this domain emphasises the need to explore diverse constructs like personality traits to comprehend individuals' motivations for engaging in CBCB (Breitsohl et al., 2022).

The persistence of cyberbullying among New Zealand's emerging adult population is evident, and the possibility of its connection with boredom in the context of s-commerce

appears promising. It is important to do research in this relatively novel area to comprehensively grasp the nature of cyberbullying. The objective is not only to diminish its prevalence but to offer findings that can help to alleviate its detrimental effects. Given that social networking sites (SNS) serve as the primary platform for cyberbullying in New Zealand, a thorough understanding of the CBCB phenomenon with boredom is essential. This study focuses on boredom and its associated personality traits with consumers' Facebook usage (a famous s-commerce platform) and their engagement in CBCB behaviour. Current study aims to investigate the concept of CBCB and make a significant contribution to its existent body of literature. Based on the CBCB definition (Breitsohl et al., 2018) and related literature (Luedicke et al., 2010; Husemann et al., 2015; Laroche et al., 2012; Hollebeek & Chen, 2014; Chalmers et al., 2013; Willard, 2007), this study extended CBCB and investigated this phenomenon from two perspectives: brand cyberbullying (where consumer bullies the brand) and consumer to consumer cyberbullying (consumer bullying other consumers to defend a brand). Additionally, it stands as a pioneering effort for being the first study of its kind, to my knowledge, to investigate how boredom functions in the s-commerce context (i.e., its antecedents and alleviation strategies) to result in this negative consequence of cyberbullying. The current study's research questions are:

RQ1 Does personality-driven boredom motivates consumer brand cyberbullying on Facebook?

RQ2 Does social and emotional stimulations from Facebook (as boredom's alleviation strategy) strengthen this consumer brand cyberbullying and boredom relation?

Understanding these dynamics is crucial for developing effective strategies to address the growing concern of cyberbullying on social networking sites in New Zealand

and enabling the formulation of prevention and intervention measures to tackle this problem.

2. Literature Review

2.1 Background

2.1.1 Cyberbullying in New Zealand. In New Zealand Cyberbullying is considered a criminal offence. It can be in the form of text, images, social media posts or other online or mobile methods. Cyberbullying impacts individuals of all ages, gender, and culture. Any person can become its victim and with insufficient education or information about its nature and prevention, victims may suffer mentally and/or physically from the abuse (Internet Safety Statistics, 2023). In New Zealand, there is an alarming rise in cyberbullying that threatens the mental health of young New Zealanders. This rise is linked to severe consequences, including low self-esteem, depression, isolation and, tragically, instances of suicide. Respected professionals, including academics, educationalists, and the Justice Minister, warn about the dreadful consequences of cyberbullying on the victim and their family (Ward, 2016). For example, in 2015, a 13-year-old girl attempted suicide in response to cyberbullying. Luckily, she survived. Her mother advises people not to "like" any bullying comments on Facebook (Internet Safety Statistics, 2023).

In a study, Carson (2014) emphasised the significant problem of cyberbullying in New Zealand. According to the findings, a staggering 98% of adolescents engage in cyberbullying behaviours almost every other day. Written verbal via phone call or texts was the most general type of cyberbullying, which is designed to shame, threaten, or disgrace others. Similarly, Phizacklea and Sargisson (2018) reported that a substantial 94.9% of their respondents had experienced cyberbullying, and approximately 82% admitted to perpetrating such behaviour. The authors stated that this higher-than-average rate of cyberbullying in New Zealand is due to technological advancements and high Internet

usage. In another comprehensive study, Houkamau et al. (2021) explored cyberbullying within a large national indigenous sample in New Zealand, contributing further valuable insights into this concerning issue. New Zealand among 29 other countries is third-worst for cyberbullying of youth and adolescents, in their study authors examined differences in reports of cyberbullying among Māori adults in accordance with gender, age etc. They found, on average, 19.3% of participants disclosed facing cyberbullying, and 4.1% reported experiencing it within the past month. Participants identifying as Māori as one of their multiple ethnicities reported higher rates of cyberbullying than those who identified as Māori only. Also, cyberbullying is most widespread among the youngest age group (18–25 years), with 40.5% reporting suffering it in their lifetime.

These results resonate in the context of high cyberbullying rates in New Zealand, as highlighted in the international comparison report (Ipsos Public Affairs, 2018). In countries like New Zealand, where freedom and self-expression are valued, there might be a perception that saying anything is acceptable, especially online. However, as Houkamau et al. (2021) emphasised, the ability to say certain things online doesn't imply that it is appropriate, particularly when it crosses the line into bullying or hostility. It is essential to promote responsible communication both online and offline, fostering a respectful and inclusive society.

2.1.2 Facebook in New Zealand. In this study, Facebook was selected as the focus for investigating cyberbullying due to its global prevalence. As the most widely used social networking site globally, Facebook (FB) serves as an initial indicator for access to digital tools (Fatehkia et al., 2018; Garcia et al., 2018). it's the most popular platform of year 2023 having over 3.03 billion monthly active users. Its user base positions more than the combined population of the United States, Canada, and Mexico. Every day 2.064 billion FB users (approx. 68.11% of total users) log in to Facebook. In terms of demographics, it has

56.6% male users and 43.4% female. 30% of its users belong to the age group of 25 to 34-year-olds. every month, its official website gets around 17 billion visits on average. It has a registered revenue of US\$116.6 billion in the year 2022. From a business perspective, Facebook shows no signs of slowing down, and giving marketer access to reach 2.11 billion Facebook users through marketing. The most popular usage of Facebook is to seek social stimulation (e.g., to contact friends and family). Up to 71.3% of Facebook users claim that they use it to network with their loved ones. Followed by 64.5% for sharing data, 60.1% for keeping updated with news, 55.7% for following brands and products, and 55.1% for entertainment and enjoyment (Shewale, 2023).

In New Zealand, there were approximately 4,497,900 Facebook users in August 2023, making it the most popular social media site in the country. This number accounts for 88.2% of its entire population. The majority of its users are women (approximately 54.1%). Its largest user group age is 25 to 34 years old (which is approximately 1,046,100 people) (Napoleon cat, 2023).

2.1.3 Facebook Bullying. Facebook, undoubtedly a powerful tool for expanding social networks and maintaining relationships, has inadvertently become a conduit for bullying, extending its reach from schools into the sanctity of one's home. The study by Kwan and Skoric (2013) sheds light on the prevalence of bullying on Facebook. Among their respondents, a staggering 59.4% of Facebook users (n = 1493) stated being subjected to some form of bullying in the past year. Even more alarming was the fact that 56.9% Facebook users confessed to engaging in at least one form of Facebook bullying. Additional findings from Rachoene and Oyedemi's (2015) study on Facebook bullying among South African youth provide insights into the different forms it can manifest. Attacks on intelligence and physical appearance, sexting, outings, insults, and threats were identified as common types of bullying. Particularly concerning was the prevalence of sexting and

outing, involving the use of sexually explicit pictures, highlighting the urgency of addressing these specific issues within this population. It is evident that while Facebook provides a platform for connection, it also necessitates vigilant efforts to curb the dark side of online interactions, ensuring a safer digital environment for all users.

2.2 Uses and Gratification Theory

The Barlett Gentile Cyberbullying Model (Barlett et al., 2017), General Strain Theory (Paez, 2018), and Theory of Planned Behaviour (Pabian & Vandebosch, 2014) have provided valuable insights into the motivations behind engaging in cyberbullying perpetration. However, these theories have traditionally overlooked the role of individual personalities in this context. Fanti and Henrich (2015) have pointed out that cyberbullies often exhibit distinct personality traits. Therefore, it becomes evident that personality characteristics can significantly contribute to the understanding of cyberbullying.

Recognising the interplay between personality and cyberbullying is crucial for advancing both theoretical and practical knowledge in the realm of cyberbullying prevention. In this regard, the current study adopts the Uses and Gratification Theory (UGT) as a framework to unravel the intricate relationship between personality traits and cyberbullying perpetration within the context of s-commerce. This approach promises to shed new light on the multifaceted dynamics of cyberbullying, ultimately enhancing our efforts to prevent and address this issue effectively.

The UGT operates through a structured mechanism. Specific personality traits act as catalysts to motivate individuals to behave in distinct ways. These individuals, fully cognizant of their motivations, consciously opt for certain behaviours. By behaving in a certain manner, people acquire the gratifications they go after in advance. More specifically, UGT theorises that individuals are (a) active users of communication media, (b) acutely aware of their motives and needs, (c) purposeful in selecting communication channels to

fulfil these needs, and (d) personality traits influence the motives/needs which then affect the gratifications attained from a behaviour (Alonzo & Aiken, 2004; Ruggiero, 2000).

To frame cyberbullying perpetration within the context of the UGT, existing research on cyberbullying motives and the personality traits associated with cyberbullies is examined. Entertainment (Rafferty & Vander Ven, 2014), a desire for dominance (Vandebosch & Van Cleemput, 2008), seeking vengeance and causing harm (Fluck, 2014), the ease of perpetration and anonymity (Compton et al., 2014), as well as personal dislike towards the victim (Zhou et al., 2013) are consistently reported motivations behind cyberbullying perpetration. In addition, cyberbullies are motivated by a myriad of factors including social problems (Akbulut & Erişti, 2011), the anonymity that comes with not knowing the victim and avoiding adult penalty (Compton et al., 2014), the desire to be recognized within a social group (Gradinger et al., 2012), seeking security or defence against feelings of inferiority (Johnston et al., 2014), showcasing technical prowess (Vandebosch & Van Cleemput, 2008), social status (Yaman & Peker, 2012), and the need to attract attention and maintain a cool image (Zhou et al., 2013).

Like these motives, studies grounded in the UGT have delineated numerous gratifications individuals derive from social media usage, with many of these findings proving pertinent in the context of s-commerce (Yang & Li, 2014). Indeed, studies such as Papacharissi and Mendelson (2011) have highlighted various motivations behind Facebook usage, including information sharing, relaxation, companionship, social relations, and knowing new people. Additionally, motivations encompass disclosure, entertainment, social presence, keeping up with trends, representing sociability, and enhancing social learning, as noted in research by Papacharissi and Mendelson (2011), Phua et al. (2017), Smock et al. (2011), Whiting and Williams (2013), and Xu et al. (2012). These gratifications are akin to

the motives behind cyberbullying. Consequently, it is argued that in s-commerce context, cyberbullying will likely seek similar stimulations and gratifications.

While extensive literature has focused on the motives and personality traits of cyberbullies, the potential linkages between traits and motives for cyberbullying behavior remain underexplored within a structural equation model (SEM) framework. Understanding these associations could enable the early identification of individuals with specific personality traits, facilitating the provision of professional assistance to deter them from engaging in cyberbullying. This preventive approach holds the potential to reduce cyber victimisation and mitigate the adverse consequences of cyberbullying on a broader scale. Current study's aim is to investigate the influence of personality traits as antecedents of boredom on cyberbullying perpetration motives in s-commerce context and presented a research framework (Figure 1). Employing a SEM approach, the present research empirically examines these relationships.

Given the wide array of motives and personality traits linked with cyberbullying, it was essential to focus on the ones specific to this study. The selection of cyberbullying motives in this study followed the UGT principle, where personality activates motives (Alonzo & Aiken, 2004). Nonetheless, there were numerous motives previously reported, but this research studied motives and personality traits based on the context of boredom in s-commerce. Hence, drawing from the UGT, it is evident that specific personality traits, such as boredom proneness followed by its antecedents; sensation-seeking tendencies, introversion, narcissism, or low self-esteem, can act as triggers, motivating individuals to engage in harmful behaviour to seek gratifications. In this context, individuals may be conscious of their motives (i.e., seek emotional and social gratification) that are influenced by personality and recognise how to seek these stimulations. The ultimate aim for these individuals is to achieve the gratifications/stimulation to alleviate boredom, thus

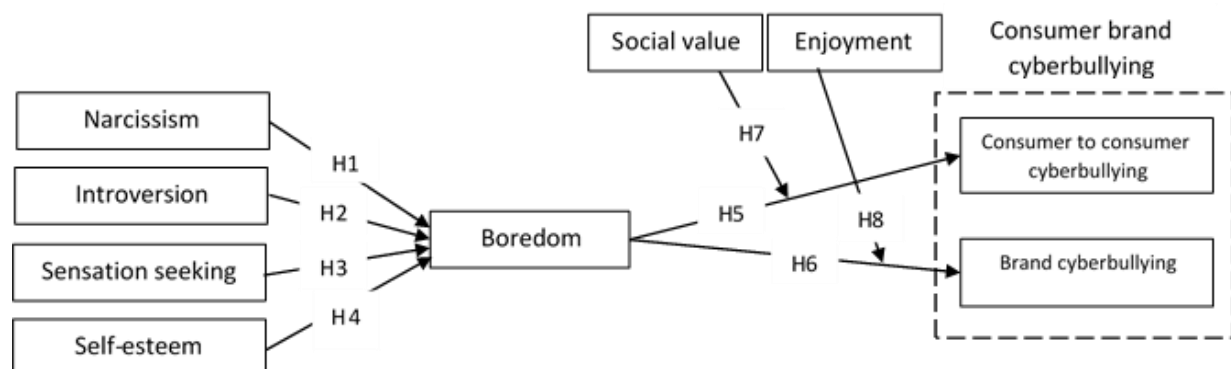
highlighting the complex interplay between personality, motivation, and cyberbullying in the s-commerce context.

2.3 Proposed Research Model

Based on the UGT, this study developed the proposed research model (see Figure 1). In this model, personality traits such as narcissism, introversion, sensation-seeking, and self-esteem act as antecedents to boredom. CBCB (consumer to consumer and consumer to brand) is considered the dependent variable with boredom as its independent variable. Furthermore, enjoyment and social value are introduced as moderators influencing the relationship between boredom and consumer brand cyberbullying.

Figure 1

Research Model



2.4 Consumer Personality and Boredom

Boredom is generally defined as “the aversive experience of wanting, but being unable to engage in a stimulating and satisfying activity” (Fahlman et al., 2013, p. 69). It is

significant because it teaches us self-regulation in our endeavours and social interactions. Linked with modernism, it drives the desire for technological change, which can have both positive and negative implications (Elpidorou, 2015). To grasp its implications within the context of s-commerce, a comprehensive understanding of its antecedents, alleviation strategies, and behavioural outcomes is essential. Certain internal factors, like personality, can trigger varying levels of boredom due to individual perception (Elpidorou, 2015). Hill and Perkins (1985) emphasise that identical stimuli can lead to diverse outcomes, making specific personality traits more susceptible to boredom. In the current study, four distinct personalities in the s-commerce context were identified.

2.4.1 Narcissism. Narcissists, characterised as posers and attention seekers, often exhibit high anxiety about their physical appearance (Vazire et al., 2008). Whereas boredom is described as a state of low activation accompanied by dissatisfaction (Mikulas & Vodanovich, 1993). Research suggests that narcissism indeed contributes to feelings of boredom (Capps, 1993). According to arousal theory, boredom arises from the mismatch between challenge and skill (Fahlman et al., 2013). For narcissistic individuals, this mismatch occurs between their actual competencies and their unrealistic, narcissistically inspired goals. When these goals inevitably lead to failure, narcissists are left unsatisfied and unfulfilled, resulting in a feeling of boredom (Ksinan et al., 2021). Hence, it is proposed:

H1: Narcissism is positively related to boredom proneness.

2.4.2 Introversion. Introversion, as a personality trait, is referred to as low extraversion. “Adjectives traditionally associated with introversion include inhibited, reserved and undemonstrative” (Tuovinen et al., 2020, p. 2). Introverts lack good social skills, are less talkative and outgoing, and have fewer or no friends at all to aid in behavioural change offline. This lack of desire to be social makes them more prone to boredom (Barnett & Klitzing, 2006). Al-Saggadf (2020) found that there is a 52% chance

that having a smaller group of friends results in feeling more bored. Moreover, existential theory states that boredom is caused by meaninglessness and purposelessness (Fisher, 1993). Likewise, Sundström et al. (2019) affirm that situations or activities that are not socially oriented are associated with meaningless feelings. Hence:

H2: Introversion is positively related to boredom proneness.

2.4.3 Sensation-seeking. Sensation-seeking is defined as “a trait by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experience” (Zuckerman, 2014, p. 10). Based on the theory of optimal levels of stimulation and arousal, Zuckerman (2014) argues that people having higher sensation-seeking levels require a greater level of stimulation compared to people with lower levels. If external stimulus is monotonous, high sensation-seekers are more prone to be bored because boredom is a cause of repetition and lack of stimulation in the environment. Additionally, Zhang et al. (2022) also claim that being more prone to boredom is due to high sensation-seeking traits and such individuals require novel, diverse, and risky experiences to overcome it. Hence, it is proposed:

H3: Sensation-seeking is positively related to boredom proneness.

2.4.4 Poor Self-esteem. Self-esteem is defined as "the evaluation which the individual makes and customarily maintains with regard to the self" (Coopersmith, 1967, p. 4). Low self-esteem is linked to the “unwillingness to communicate syndrome” (Leung, 2008, p. 9). According to existential theory, boredom stems from a lack of socially meaningful leisure activities (Sundström et al., 2019), leading to a negative correlation between leisure boredom and self-esteem. For instance, Passmore (2001) states that boredom in leisure means that one has nothing stimulating to do; on the contrary, constructive leisure opportunities which are social and achievement-oriented contribute to

positive psychological health which includes self-esteem. Hartman et al. (2022) confirmed this connection in their study, grouping participants based on free time perception. Those with high awareness of leisure activities experienced less boredom and higher self-esteem. In contrast, participants with less awareness felt more boredom and had lower self-esteem during their free time. Hence, it is proposed:

H4: Poor self-esteem is positively related to boredom proneness.

2.5 Cyberbullying

Because of the proliferation of electronic communication methods, such as social media, customers can anonymously engage with individuals worldwide with remarkable ease. This removal of eye-contact in virtual interactions, makes consumers feel less social pressure and are more prone to harmful online behaviours (Lapidot-Lefler and Barak, 2012). Hiding behind smartphone and computer screens has allowed consumers to use bold language and be more confrontational compared to face-to-face interaction (Suler, 2016). They may use this uncivil form of communication on social media platforms for things they don't agree with (Rösner et al., 2016). Here, perpetrators can remain anonymous, and one time act of aggression may lead to unintended consequences. These factors have collectively expanded the scale of cyberbullying beyond that of traditional bullying as the accessibility of social media and the Internet has enabled its reach to a global audience (Veiga-Simao et al., 2018).

Smith et al. (2008) defines cyberbullying as “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself” (p. 376). Cyberbullying involves intended and repeated aggressive acts in an electronic context against a person who is unable to defend themselves. (Feinberg & Robey, 2009). The construct of cyberbullying

includes four components: “(a) intentional aggressive behavior that is, (b) carried out repeatedly, (c) occurs between a perpetrator and victim who are unequal in power, and (d) occurs through electronic technologies” (Kowalski et al., 2014, p. 37).

2.5.1 Cyberbullying vs Traditional Bullying. Several studies consider cyberbullying as an extension of traditional bullying (Görzig & Machackova, 2015; Gradinger et al., 2009; Hase et al., 2015; Iranzo et al., 2019; Kowalski et al., 2014; Modecki et al., 2014). These studies propose that individuals who are victims or perpetrators of traditional bullying are more likely to be involved in cyberbullying as well. They also suggest that the antecedents (Kim et al., 2017) and outcomes (Thomas et al., 2015) of these two bullying types are the same. In a qualitative study, Ševčíková et al. (2013) claimed cyberbullying as an extension of traditional bullying. They found online attacks to be more harmful when the victim and perpetrator know each other offline. These attacks, when linked to the offline environment, led researchers to conclude that cyberbullying is a direct continuation of traditional bullying. These researchers also advocate for the consideration of cyberbullying as a form of bullying by the public, practitioners, policymakers, and academia.

Conversely, certain studies argue that cyberbullying is distinct from traditional bullying. The information and communication technology like smartphones, and social media have become an influential part of people’s daily lives (Hinduja & Patchin, 2015). Their convenience has made cyberbullying a pervasive issue, as it allows it to happen any time and any place, therefore extending beyond traditional bullying, which primarily occurs in face-to-face situations. Now, due to technological progress, perpetrators can target victims even within the sanctuary of their homes. Victims of cyberbullying can also be exposed continually to the initial attack, as one post or one photo can be viewed or shared by large audiences, which may result in mass humiliation for the victim (Law et al., 2012;

Sticca & Perren, 2013). That is the reason cyberbullying is known as “non-stop bullying”, facilitated by advancements in technology (Mishna et al., 2009). These technologies also facilitate anonymity, as cyberbullies can create fake profiles and attack victims and have a low risk of getting caught (Barlett et al., 2018).

In short, the distinctive features of cyberbullying from traditional bullying include “technological expertise, potential for anonymity, relative distance, complex bystander roles, status gained/proved indirectly, and difficulty in escaping from harassment” (Smith, 2012, p. 94). Also, in contrast to traditional bullying, “cyberbullying’s impact is magnified by the invasion of the private domain” (Price & Dalgleish, 2010, p. 51) and seems inescapable. It “follows you home from school” (Tokunaga, 2010, p. 277). These characteristics, backed by digital technologies, have led researchers to believe that cyberbullying conceptually is different from traditional bullying (Campbell & Bauman, 2018; Kofoed & Staksrud, 2019).

2.5.2 Types of Cyberbullying. Research has used plenty of diverse names for behaviour that resembles cyberbullying which include electronic bullying (Asher et al., 2017; Raskauskas, & Stoltz, 2007), online harassment (Finkelhor et al., 2000), online bullying (Canty et al., 2016; Mishna et al., 2009), cyber aggression (Pornarni & Wood, 2010) and internet bullying (Law et al., 2012). In their metaanalysis study, Kowalski et al. (2014) identified different types of cyberbullying behaviours which often overlap with each other, including name-calling (Rivers & Noret, 2010), provocation (Herring et al., 2002), harassment (Moore et al., 2012), bothering (Wolak et al., 2007), threats (Dillon & Bushman, 2015), online aggression (Law et al., 2012), ostracism (Fenaughty and Harré, 2013), teasing (Vandebosch & Van Cleemput, 2009), masquerade (Li, 2008), flaming (Lee, 2005), spamming (Moore et al., 2012), outing (Schenk & Fremouw, 2012), and denigration (Pieschl et al., 2015). Willard (2007) also proposes his classification of cyberbullying as

teasing (a humorous remark about someone), exclusion (purposefully ignoring someone), harassment (one-sided messages that offend), impersonation (pretending to be the victim and posting inappropriate content), trickery (sharing personal information without someone's required consent), cyberstalking (intervening in someone's online privacy against their will), and sexting (distributing nude images of an individual without his/her consent).

2.5.3 Causes of Cyberbullying. The two main causes of cyberbullying are anonymity and disinhibition (Herring, 1999; Ybarra & Mitchell, 2004; Sheridan & Grant, 2007; Bhat, 2008; Mishna et al., 2010; Erdur-Baker, 2010).

Online disinhibition suggests that individuals engaging in cyberbullying may temporarily lose their ability to distinguish right from wrong, which facilitates him/her to communicate uncivilly. Additionally, online environments often provide anonymity, making individuals partially or fully anonymous during interactions (Suler, 2004). This dissociative anonymity, coupled with the absence of social cues and social presence, can increase the likelihood of uncivil and antisocial behaviour, as it ensures less probability of getting caught or held accountable (Suler & Phillips, 1998).

2.6 Customer Brand Cyberbullying

Consumer misbehaviour has raised growing concerns among brands (Fisk et al., 2010; Johnson & Lowe, 2015), as they are interfering with the consumer brand engagement of existing and potential consumers (Muniz & Hamer, 2001; Sibai et al., 2015). These instances of social dispute can inflict damage on the image of the business and jeopardise its sustainability (Chang et al., 2013; Dineva et al., 2017). While cyberbullying has been highly investigated from the race, gender, social norms, political beliefs, physical features, and personality perspectives (Herring et al., 2002; Moon et al., 2018; Rodkin et al., 2015), there remains a research gap concerning its presence within the realm of consumer and brands.

Breitsohl et al. (2018) introduced the term CBCB, which is defined as “a consumer interaction process about a brand during which one consumer harasses or is perceived to harass another consumer or the brand itself” (p. 292). This kind of cyberbullying does not target corporate remedy or their representative rather it targets brands and their consumers to provoke or harm them. It is important to note that this term addresses two types of cyberbullying, one targeting other consumers related to a brand, and the other directed at the brand itself.

Consumer cyberbullying a brand means the objective to damage, provoke, or personally condemn a brand online. This is motivated by various factors, such as fun (Tanrikulu & Erdur-Baker, 2021), self-image (Wang & Ngai, 2022), and what that brand represents (Husemann et al., 2015). Whereas, when consumers cyberbullying other consumers, they do so to defend their beloved brand. Luedicke et al. (2010) state that consumer cyberbullying happens when consumers consider their brands sacred and this ideology due to consumers assigning sacralised meanings to brands, fosters critical concerns towards other consumers (Chalmers et al., 2013). Hickman and Ward (2007) also elaborated that online consumer communities socially identify themselves with brands and provoke inter-group stereotyping. They also experience feelings of *schadenfreude* when a rival brand fails. Willard (2007) used the term flaming while Breitsohl et al. (2018) referred to these mirrored hostilities as reciprocated harassments, describing the ongoing hostile interactions among consumers related to a brand. This multifaceted perspective underscores the complexity of CBCB and highlights the need for a nuanced exploration of these behaviours. The current study will examine CBCB from both perspectives: consumer to consumer to defend a brand (C2C) and consumer to brand (C2B).

2.6.1 Boredom and Cyberbullying. During boredom, an individual seeks stimulating activities and the easiest and most convenient way is to engage in online media

(Biolcati et al., 2018). Nowadays, social media and the Internet are prominent leisure activities for alleviating free time boredom (Bozaci, 2020), and people spend a substantial portion of their time on it to get stimulated. McCoy (2016) highlighted those adolescents, faced with boredom, often turn to digital technology for various activities, including interaction, browsing, and gaming. However, the use of digital technology to alleviate boredom is not consistently constructive. According to psychodynamic theory, boredom is a repressed psychological feeling that intensifies the desire to express oneself to the external world. While aggressive behaviour is believed to be driven by suppressed internal drives (Fenichel, 1953), adolescents experiencing boredom may opt for aggressive actions, such as cyberbullying, as a means to release their repressed psychological state. This claim is supported by previous studies that identify boredom as a motivating factor for cyberbullying (Koban et al., 2018; Varjas et al., 2010; Tanrikulu & Erdur-Baker, 2021). It has been linked to feelings of anger, hostility, and aggression (Fahlman et al., 2013; Isacescu et al., 2017), which can help explain its connection to peer violence, as these emotions are also associated with such behaviours (Nocera, 2019). Additionally, bored consumers are found to participate in aggressive and harsh online discussions for stimulation (Koban et al., 2018), this reinforces the notion that boredom can lead to negative online interactions. Beyond individual behaviours, boredom significantly influences online consumers, shaping their negative attitudes and engagement with products and platforms (Saleem & Iglesias, 2019; Yazdanparast et al., 2015). Furthermore, it extends its impact to overall usage experiences and behaviours (Zhang et al., 2016). Considering boredom's influence on consumer engagement online and cyberbullying as its consequence, it is proposed:

H5: Boredom proneness is positively related to consumer brand cyberbullying (C2C to defend a brand).

H6: Boredom proneness is positively related to consumer brand cyberbullying (B2C).

2.7 Moderation

2.7.1 Social Stimulation, Boredom and Cyberbullying. Individuals experiencing boredom exhibit a preference for highly interactive online sessions to seek social stimulation (Mastro et al., 2002). Through smartphones, the internet, and social media they interact with each other and this engagement eases their boredom. The characteristics of s-commerce, including real-time ratings, reviews, and recommendations from both vendors and customers, contribute significantly to such social stimulation (Stephen & Toubia, 2010). The collaborative online environment allows consumers to interact seamlessly during pre- and post-purchase phases, mitigating loneliness and, consequently, easing boredom (Poon & Leung, 2011). Hence, it can be stated that boredom and social stimulation correlate.

Furthermore, parents and educators have an influence on young people when making decisions and choices. They impact their actions by shaping their attitudes (Simons et al., 2005). Social norms theory suggests that adolescents' engagement in problematic behaviour can be influenced by their peers (Berkowitz, 2005). This influence is shaped by the adolescents' perceptions of the prevailing norms within their peer group. These norms not only guide their behaviour but also set expectations regarding which media to consume and how such media can impact their friends' attitudes and actions. (Sasson & Mesch, 2014). In the context of online communication, Hinduja and Patchin (2013) found that individuals' involvement in cyberbullying is associated with the involvement of their peers in such behavior. Gofin and Avitzour (2012) examining students in Israel, reported the likelihood of teenagers becoming bullies is greater when their peers encourage them to engage in risky behaviour compared to those who aren't influenced in this way.

In the social media context, Balakrishnan et al. (2019) claimed that people who engage in social media platforms for social interaction and interpersonal relations have a higher probability of engaging in cyberbullying. Varjas et al. (2010) stated that impressing

friends is one of the motives of cyberbullies. One of their respondents stated that cyberbullies “want attention. They crave attention, which is why they are arguing over something so little and petty like that. In my opinion I guess it’s making them feel better to hear their friends’ opinions” (Varjas et al., 2010, p. 271). Nilan et al. (2015) also shared the same view that young people to strengthen and build their social capital with friends and peers explicitly or implicitly defended their online teasing behaviors. They think it’s easy and fun and makes them look good in the public eye. However, cyberbullies demand social support from their virtual friends while giving less in return (Carpenter, 2012). Solomontos-Kountouri et al. (2021) supported this claim in their study where they found that immigrant adolescents to be accepted by and to feel affiliated with their peer use cyberbullying as a strategy. They do this mainly to be powerful and to a much lesser extent be accepted by their peers.

Cyberbullying is easy, as the perpetrator is anonymous and there is very little to no accountability. It can also be learned via mechanisms like observation or successful trials. For instance, a potential cyberbully may observe how his/her friend utilises social media to cyberbully someone and may adopt the same method to cyberbully someone else, hence signifying the importance of one's social circle (i.e. family, friends, institutions, and society) in influencing cyberbullying perpetration (Barlett et al., 2014). Therefore, people in one’s social circle are believed to have a strong influence on the likelihood that one will or will not engage in socially deviant behaviour, such as cyberbullying, and consumers often tease other consumers to strengthen their relations with their social circle (Alexander et al., 2012).

Moreover, social media facilitates interaction not only with the brands but also with other customers. Being a member of a brand community, the individual can develop social identification with the brand (Hickman & Ward, 2007). This brand loyalty can lead to oppositional loyalty (e.g., brand rivalry), which expresses hostility towards the rival brand

or its supporters (Thompson & Sinha, 2008; Ewing et al., 2013; Chalmers et al., 2013).

When they see consumers harassing their socially identified brand they step in to defend the brand, usually reciprocating incivility against the harassing consumers (Colliander & Hauge Wien, 2013), and during boredom, this mirrored incivility is considered stimulating (Koban et al., 2018). Willard (2007) uses the term “flaming” for this reciprocated harassment, which is an ongoing hostile interaction among online consumers. In short, social media empowers consumers to attack other consumers for contradicting things, so they engage in pro-brand activities and defend brands against other consumers devaluing them (Colliander & Hauge Wien, 2013; Hassan & Ariño, 2016). Given the pursuit of social stimulation by bored consumers and its potential correlation with consumer cyberbullying, it is proposed:

H7: On Facebook, seeking social value moderates the relationship between boredom and consumer brand cyberbullying (C2C).

2.7.2 Pleasure, Boredom and Cyberbullying. Some adolescents engage in cyberbullying to gain satisfaction or pleasure from hurting their victims (Kowalski, 2008), while some may engage in cyberbullying purely "for fun" (Lee, 2007; Raskauskas & Stoltz, 2007). One of the main and strongest predictors of cyberbullying perpetration is to seek entertainment or it is for the sake of enjoyment (Balakrishnan & Norman, 2020; Balakrishnan, 2017; Smith et al., 2008; Wang et al., 2019; Wong & McBride, 2018). Enjoyment refers to “an emotional motivation correlated with consumers’ logic, which lets them decide their likings while shopping” (Hart et al., 2007, p. 7). Park et al. (2014) found that online information and entertainment content, such as online shopping; surfing/browsing the Internet; posting or replying to messages; watching movies, TV shows, animation, or video clips; playing games; listening to music, podcasts, or other audio files, are positively related to cyberbullying perpetration. This enjoyment-seeking perspective on

cyberbullying is shared by many cyberbullies, non-cyberbullies, and bystanders as well (Huang & Chou, 2010; Smith et al., 2004).

Numerous studies claim that cyberbullying, driven by the pursuit of immediate affective rewards, is nothing more than perceived as a form of humour and entertainment (Englander & Muldowney, 2007; Mishna et al., 2010; Wang & Ngai, 2022). This motivation is distinct from deriving pleasure through hurting others because those who cyberbully for entertainment may not be concerned about whether their targets are hurt. Their focus tends to be on the gratification derived from external sources, leading them to engage in cyberbullying (Ayas, 2016). Rafferty and Vander Ven (2014) stated that trolling as a type of cyberbullying in the Internet community is “defined as the attempt to hurt, humiliate, annoy, or provoke in order to elicit an emotional response for one’s own enjoyment” (p. 372). Here, for cyberbullies, there is no clear benefit except enjoyment. In their study, Rafferty and Vander Ven (2014) also supported that there is no clear aim under this motive, as cyberbullies are not trying to attain a resource or to stop a particular behaviour; this is done purely for pleasure and entertainment. In such cases, anonymity plays a pivotal role. In their study of cyberbullying comments on information communication technology (ICT), Hamuddin et al. (2019, 2020) found that more than 70% of the time cyberbullies’ motive is to have fun, with no intention to hurt anyone. This is because, unlike traditional face-to-face bullying, cyberbullies cannot see the victim or the immediate consequences of their actions, which often leads them to perceive cyberbullying as a form of a joke (Dragoslavić & Bilić, 2021).

In the context of online brands, Breitsohl et al. (2018), pointed out that online users engage in “teasing”, a humour-based non-hostile form of consumer brand bullying behaviour. Here, consumers make fun of brands with no intention of offence (Sinkeviciute, 2014). They do this to invite others to laugh about an incident or attribute relating to a brand

(Wooten, 2006). However, sometimes consumers get carried away. This humour-based teasing also carries a risk of offence and can become embarrassing and disrespectful to brands (Bollmer et al., 2003). Therefore, it can be said that seeking enjoyment triggers brand cyberbullying.

Furthermore, during utilitarian tasks, one experiences a cognitive pull to engage in something emotionally stimulating, and smartphone usage, social media, Internet, and online buying are a source of hedonic benefits at that time (Whelan et al., 2020). Similarly, in the situation of under-stimulation, they give the feeling of liveliness to bored people. Bored people go online for endless entertaining and funny content that satisfies their sensation-seeking needs to achieve a pleasurable internal state (Biolcati et al., 2018; Bozaci, 2020; Brown & Kuss, 2020). This hunt for joy from browsing around the Internet is to experience positive emotions in overcoming boredom (Mori et al., 2014; Sundström et al., 2019). Hence, it can be assumed that boredom correlates with fun and enjoyment. Moreover, in Compton et al.'s (2014) focus group study, they examined the views of teachers, parents, and students as the cyberbullying motivation. In their findings, the theme "fun and to relieve boredom" came out as a strong motivator for cyberbullying from both parents and students. They believe that cyberbullying gives cyberbullies something to occupy themselves in boredom. Cross et al. (2009) and Thornberg and Knutsen (2011) also support this claim that boredom is the motivation for cyberbullying for fun. Given the pursuit of enjoyment by bored consumers and its potential correlation with consumer cyberbullying, it is proposed:

H8: On Facebook, seeking enjoyment moderates the relationship between boredom and consumer brand cyberbullying (C2B).

3. Methodology

3.1 Instrument Development

A survey instrument consisting of 56 items was developed. Measurement scales were adopted from related studies but were modified to fit the context of the study. Narcissism (NAR) was measured using Narcissistic Personality Inventory – NP-16 (Ames et al. 2006). This unidimensional measure is a shorter version of Narcissistic Personality Inventory or NPI-40. In this study, 8 items of NP-16 were used (e.g., “I like having authority over people”). The decision to delete some entries was based on their close similarity and redundant content. This action was taken with consideration for the guidance and oversight of experienced academics. Items to measure introversion (INRT) were adopted from McCrae and John (1992) and Tuovinen et al. (2020). It consisted of 4 items (e.g. “I am reserved”). Sensation-seeking (SS) was measured using Brief Sensation Seeking Scale (BSSS) from Hoyle et al. (2002). This brief scale has the same basic content as the Zuckerman et al. (1978) Sensation Seeking Scale (SSS-V). It has four dimensions: Experience seeking (ES), Boredom susceptibility (BS), Thrill and adventure seeking (TA), and Disinhibition (DI). Each dimension is represented by 2 items, making it an 8-item scale (e.g., “I would like to explore strange places.”) (Hoyle et al. 2002). The Rosenberg self-esteem scale was used to measure self-esteem (SEF) (Rosenberg, 1965). It was measured using 5 items (e.g. “Sometimes I think I am no good at all”) (Tuovinen et al. 2020). The short Boredom Proneness Scale was adopted having 8 items to measure boredom (BP). This is a unidimensional scale and it is more reliable (having good internal consistency and construct validity) than the full version of Boredom proneness scale (BPS) (e.g., “I often find myself at “loose ends”, not knowing what to do”) (Struk et al. 2017). Social value (SV) was measured by 4 items (e.g., “I can connect with friends on this s-commerce platform.”) (Yen, 2013). Enjoyment (ENJ) was measured using 3 items (e.g., “I think buying via s-

commerce is enjoyable”) (Saprikis, 2018). Malice subscale of the Cyberbullying Experiences Survey was used to measure consumer brand cyberbullying by 6 items each (e.g., “Have you sent a rude message to a brand on s-commerce?” and “Have you sent a rude message to someone on s-commerce?”) (Doane et al., 2014). Our instrument incorporated 7-point Likert scales with 1 indicating “Strongly disagree” and 7 indicating “Strongly agree”. Structural equation modelling (SEM) and the Smart partial least square method (PLS) were used for data analysis. All these constructs are defined in Appendix A. Survey items are shown in Appendix B and constructs and their indicators selected for analysis can be seen in Appendix C, Table C.1.

3.2. Participants and Data Collection

The participants of this study were 1) Facebook users, 2) students above 18 years, and 3) those who identified as New Zealanders.

The reason this study selected students was because they constitute the young population of New Zealand. Being the frequent users of s-commerce (Poon & Leung, 2011; Tapscott, 2009; Harrison, 2005; Biolcati et al., 2018; Brown & Kuss, 2020), this age group is particularly susceptible to experiencing boredom on a regular basis (Brailovskaia et al., 2020; Wang, 2019; Wegmann et al., 2018). These characteristics align with objectives of the current study, making them valuable participants.

The respondents were selected through a random sampling method. The data collection procedure was initially approved by the ethical committee of the University of Waikato. After approval, New Zealand Union of Students' Associations (NZUSA) was approached to post the current study's survey on their Facebook page. NZUSA is composed of member student associations across Aotearoa New Zealand. and they represent students in universities and polytechnics across New Zealand. Additionally, Facebook is the most suitable example of online social networking for conducting this research because it has

been widely adopted in New Zealand (Napoleon cat, 2023) and has become one of the most significant daily online activities in the country (Shewale, 2023).

Once their approval was granted, a post encouraging consumer to participate was published on NZUSA's Facebook platform, inviting interested individuals to contact me via email for participation. Once a respondent expressed their interest, I personally shared the survey link via email along with an information sheet and consent form to maintain privacy and exclusivity. The interested participants were asked to click on online survey link created with Qualtrics (an online survey tool) send via an invitational e-mail message. To ensure that all respondents could meaningfully respond to items related to s-commerce, the first page of the survey mentioned the aim of the research. The average time to complete the survey was seven minutes. The total number of participants was 253, with no missing values. This number qualifies for the minimum sample size requirement for PLS, that is it should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model (Hair et al., 2016).

4. Data analysis

In this chapter, the structural equation modelling results using Smart PLS 4 are reported. First the measurement model is analysed to measure the reliability and validity of the constructs, followed by the hypothesis testing accessed by structural model.

4.1 Descriptive Statistics

To gather data for estimating the proposed research model, individuals using Facebook were contacted and invited to participate in an online survey on Qualtrics via social media groups. Table 1 shows the demographic characteristics and Facebook usage characteristics of these 253 individuals. The survey was taken by 38% males and 61% females. Twenty-two per cent of the participants were aged 31–35 years, 21% were 36–40 years old and approximately 16% were 26–30 years old. Fifty-three per cent of the

participants had around more than 10 years of experience with Facebook and 43% of the time they bought once in many months, followed by 18.5% who bought more than once in a month and 15% who bought more than once a week.

Table 1.*Demographics in Percentage*

Demographics	Gender (in percentage)	Male	38.2
		Female	61.4
		Prefer not to say	0.4
	Age (in percentage)	20 and below	5.9
		Between 21 – 25	13.8
		Between 26 – 30	15.7
		Between 31 – 35	22.0
		Between 36 – 40	21.3
		Between 41 – 45	12.2
		46 and above	9.1
Facebook usage characteristics	Usage experience (in percentage)	less than 12 months	2.0
		1 to 5 years	18.9
		5-10 years	26.0
		more than 10 years	53.1
		less than 12 months	2.0
	Buying experience (in percentage)	More than once a week	15.0
		Once in a week	8.7
		More than once in a month	18.5
		Once in a month	14.2
		Once in many months	43.7

4.2 Common Method Bias

The common bias method was accessed through the Variance Inflation Factor (VIF) values of the inner model. In the current study (see table 2), all VIF values are lower than 3.33, the model can be considered free from common method bias (Kock 2015).

Table 2.*Common method bias*

	VIF
BP_ -> CBCB (C2B)	1.1
BP_ -> CBCB (C2C)	1.071
ENJ_ -> CBCB (C2B)	1.129
INRT_ -> BP	1.053
NAR_ -> BP	1.14
SEF_ -> BP	1.08
SS_ -> BP	1.126
SV_ -> CBCB (C2C)	1.061
ENJ_ x BP_ -> CBCB (C2B)	1.055
SV_ x BP_ -> CBCB (C2C)	1.027

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS= Sensation seeking, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment.

4.3 Measurement Model

The initial assessment of the measurement model focused on confirming the reliability and validity of constructs and their dimensions, following the guidelines of Hair (2006). This evaluation encompassed indicator reliability, composite reliability, convergent validity, and discriminant validity.

4.3.1 Indicator Reliability. High outer loadings for a construct suggest a substantial shared variance among indicators, contributing to indicator reliability. An outer loading falling within the range of 0.40 to 0.70 is deemed weak, and its removal is considered if enhancing composite reliability and construct validity. However, the decision to retain such indicators may be influenced by their impact on content validity (Bagozzi, Yi, & Philipps, 1991; Hair et al., 2011). To assess the indicator reliability, factor loadings were examined (see Appendix D, Table D.1). Following the recommendations of Hulland (1999) and Hair et

al. (2010), items with factor loadings below 0.40 were removed for consistency. The two items of narcissism NAR 7, NAR 8, and one item of introversion INRT3 reported factors loadings below 0.40 (i.e., 0.111,-0.234, and -0.293 respectively). The results given in Table 3 reflect that factor loadings of all the remaining reflective indicators (except INRT4 and SV1) are above 0.40, satisfying the condition of indicator reliability. INRT4 and SV1 were kept since the AVE of introversion and social value were above 0.5 (Hair et al., 2016).

4.3.2 Internal Consistency Reliability. Given the limitations of Cronbach's alpha, which tends to underestimate internal consistency reliability and is sensitive to scale item numbers, the current study employs a different measure known as composite reliability (Hair et al., 2016).

The composite reliability ranges from 0 to 1, where higher values indicate higher levels of reliability. Specifically, values of 0.60 to 0.70 are acceptable and regarded as satisfactory (Hair et al., 2016). Table 3 demonstrates the composite reliability of all the latent constructs above 0.70.

4.3.3 Convergent Validity. The average variance extracted (AVE) is a common metric used to establish convergent validity at the construct level. This criterion is defined as “the grand mean value of the squared loadings of the indicators associated with the construct (i.e., the sum of the squared loadings divided by the number of indicators). Therefore, the AVE is equivalent to the communality of a construct” (Hair et al., 2016, p. 138). An Average Variance Extracted (AVE) value of 0.50 or higher indicates that, on average, the construct explains more than half of the variance of its indicators. Conversely, an AVE of less than 0.50 suggests that, on average, more variance remains in the error of the items than in the variance explained by the construct (Hair et al., 2016). In this study, all constructs

demonstrated AVE values surpassing the recommended threshold of 0.50, as presented in Table 3.

Table 3.*Indicator Reliability, Composite Reliability, and Convergent Validity*

Construct	Indicators	OL	AVE	CR
NAR	NAR1	0.760	0.525	0.865
	NAR2	0.847		
	NAR3	0.473		
	NAR4	0.592		
	NAR5	0.775		
	NAR6	0.825		
INRT	INRT1	0.804	0.524	0.741
	INRT2	0.913		
	INRT4	0.304		
SS_ES	SS_ES1	0.832	0.805	0.892
	SS_ES2	0.958		
SS_BS	SS_BS1	0.858	0.738	0.849
	SS_BS2	0.860		
SS_TA	SS_TA1	0.966	0.788	0.88
	SS_TA2	0.801		
SS_DI	SS_DI1	0.867	0.797	0.887
	SS_DI2	0.918		
SEF	SEF1	0.820	0.539	0.852
	SEF2	0.704		
	SEF3	0.577		
	SEF4	0.786		
	SEF5	0.759		
BP	BP1	0.729	0.614	0.927
	BP2	0.761		
	BP3	0.682		
	BP4	0.782		
	BP5	0.816		
	BP6	0.861		

	BP7		0.819	
	BP8		0.806	
BCB	BCB 1		0.837	0.834
	BCB 2		0.908	
	BCB 3		0.940	
	BCB 4		0.947	
	BCB 5		0.934	
	BCB 6		0.907	
CCB	CCB1		0.917	0.874
	CCB2		0.950	
	CCB3		0.938	
	CCB4		0.956	
	CCB5		0.913	
	CCB6		0.935	
ENJ	ENJ1		0.903	0.84
	ENJ2		0.932	
	ENJ3		0.915	
SV	SV1		0.352	0.526
	SV2		0.660	
	SV3		0.936	
	SV4		0.817	

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment, loadings < .40 are not shown except INRT4 and SV1.

4.3.4 Discriminant Validity. Discriminant validity is “the extent to which a construct is truly distinct from other constructs by empirical standards. Thus, establishing discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model” (Hair et al., 2016, p. 138).

Cross-loadings is the primary method for assessing the discriminant validity of indicators. an indicator's outer loading on its intended construct should be higher than the other construct's cross loadings (correlations) (Hair et al., 2016). As can be seen in Table 4, the loadings always exceed the cross-loadings. For instance, ENJ 1, 2, and 3 loads high on its corresponding construct (0.903, 0.932 and 0.915) but much lower on other constructs like, for example, NAR, INRT. Hence, discriminant validity has been established.

Table 4.*Cross Loading*

	NAR	INRT	SS_E S	SS_B S	SS_T A	SS_DI	SEF	BP	CBCB (C2C)	CBCB (C2B)	ENJ	SV
BP1	0.151	0.222	0.168	0.224	0.151	0.235	0.457	0.729	0.213	0.19	0.19	0.138
BP2	0.172	0.164	0.154	0.256	0.131	0.271	0.49	0.761	0.323	0.267	0.208	0.154
BP3	0.159	0.243	0.135	0.258	0.188	0.236	0.361	0.682	0.171	0.151	0.183	0.152
BP4	0.224	0.156	0.237	0.395	0.179	0.324	0.41	0.782	0.323	0.279	0.229	0.149
BP5	0.18	0.206	0.115	0.218	0.154	0.286	0.513	0.816	0.31	0.296	0.162	0.195
BP6	0.153	0.15	0.061	0.223	0.161	0.287	0.516	0.861	0.362	0.31	0.199	0.12
BP7	0.22	0.101	0.122	0.364	0.228	0.355	0.439	0.819	0.354	0.286	0.215	0.16
BP8	0.262	0.025	0.095	0.414	0.318	0.44	0.442	0.806	0.476	0.387	0.285	0.263
CBCB (C2B)1	0.363	0.026	0.108	0.093	0.246	0.293	0.183	0.319	0.694	0.917	0.172	0.054
CBCB (C2B)2	0.343	0.048	0.135	0.157	0.268	0.34	0.148	0.346	0.724	0.95	0.161	0.106
CBCB (C2B)3	0.384	0.058	0.127	0.114	0.322	0.337	0.108	0.313	0.732	0.938	0.147	0.147
CBCB (C2B)4	0.434	0.055	0.1	0.14	0.289	0.37	0.157	0.333	0.781	0.956	0.183	0.146
CBCB (C2B)5	0.385	0.012	0.086	0.14	0.201	0.329	0.149	0.323	0.741	0.913	0.185	0.132
CBCB (C2B)6	0.398	0.018	0.091	0.141	0.288	0.352	0.171	0.358	0.779	0.935	0.136	0.09
CBCB (C2C)1	0.378	0.018	0.116	0.23	0.289	0.348	0.19	0.341	0.837	0.632	0.26	0.257
CBCB (C2C)2	0.416	0.057	0.102	0.193	0.308	0.393	0.23	0.415	0.908	0.673	0.259	0.227
CBCB (C2C)3	0.432	0.03	0.102	0.209	0.317	0.404	0.178	0.378	0.94	0.744	0.249	0.253
CBCB (C2C)4	0.452	0.016	0.108	0.173	0.337	0.404	0.168	0.391	0.947	0.797	0.237	0.203
CBCB (C2C)5	0.451	0.007	0.124	0.2	0.275	0.407	0.181	0.401	0.934	0.755	0.212	0.242
CBCB (C2C)6	0.397	0.026	0.095	0.17	0.298	0.415	0.169	0.353	0.907	0.749	0.214	0.177
ENJ1	0.172	-0.038	0.16	0.283	0.307	0.348	0.073	0.229	0.213	0.145	0.903	0.441
ENJ2	0.264	0.003	0.091	0.239	0.261	0.314	0.079	0.23	0.26	0.175	0.932	0.399
ENJ3	0.263	0.056	0.137	0.279	0.255	0.306	0.065	0.283	0.242	0.159	0.915	0.438
INRT1	-0.014	0.804	0.032	0.068	-0.01	-0.045	0.087	0.13	0.017	0.058	0.006	0.063
INRT2	-0.012	0.913	-0.007	0.115	0.033	0.015	0.223	0.193	0.056	0.042	0.041	0.019
INRT4	-0.342	0.304	-0.316	-0.281	-0.329	-0.314	0.262	0.032	-0.15	-0.141	-0.191	-0.251
NAR1	0.76	-0.008	0.055	0.179	0.242	0.302	-0.051	0.151	0.323	0.284	0.155	0.194
NAR2	0.847	-0.061	0.178	0.255	0.318	0.366	0.01	0.266	0.37	0.33	0.246	0.307
NAR3	0.473	-0.073	0.093	0.2	0.392	0.243	-0.337	0.034	0.22	0.195	0.135	0.166
NAR4	0.592	0.015	0.206	0.236	0.284	0.333	-0.223	0.06	0.25	0.22	0.226	0.212
NAR5	0.775	-0.013	0.014	0.122	0.216	0.287	0.038	0.189	0.416	0.37	0.162	0.123
NAR6	0.825	-0.076	0.09	0.178	0.275	0.38	0.021	0.196	0.383	0.345	0.216	0.191
SEF1	0.04	0.258	0.068	0.149	0.071	0.169	0.82	0.559	0.261	0.235	0.185	0.119
SEF2	0.105	0.162	0.084	0.184	0.055	0.106	0.704	0.464	0.198	0.178	0.161	0.152
SEF3	-0.066	0.029	-0.199	-0.117	-0.069	0.022	0.577	0.294	0.095	0.071	-0.043	-0.02
SEF4	-0.142	0.17	-0.104	-0.098	-0.109	-0.048	0.786	0.395	0.073	0.03	-0.081	-0.054
SEF5	-0.11	0.099	-0.107	-0.099	-0.143	-0.004	0.759	0.325	0.046	0.004	-0.044	-0.025
SS_ES 1	0.165	0.015	0.832	0.398	0.364	0.292	-0.098	0.095	0.046	0.069	0.14	0.116

SS_ES 2	0.096	-0.043	0.958	0.433	0.288	0.313	-0.002	0.186	0.14	0.124	0.12	0.09
SS_BS 1	0.161	0.071	0.339	0.858	0.278	0.364	0.078	0.326	0.144	0.059	0.19	0.07
SS_BS 2	0.265	0.06	0.451	0.86	0.532	0.54	-0.007	0.328	0.224	0.182	0.307	0.209
SS_TA 1	0.373	0.01	0.34	0.479	0.966	0.533	-0.026	0.271	0.345	0.282	0.291	0.188
SS_TA 2	0.204	-0.079	0.254	0.325	0.801	0.454	-0.03	0.117	0.213	0.22	0.228	0.191
SS_DI 1	0.395	-0.083	0.291	0.513	0.525	0.867	0.038	0.31	0.386	0.348	0.376	0.309
SS_DI 2	0.374	-0.005	0.306	0.438	0.475	0.918	0.108	0.389	0.388	0.303	0.264	0.196
SV1	-0.026	0.046	0.208	0.258	0.108	0.054	-0.019	0.048	-0.071	-0.068	0.313	0.352
SV2	0.124	-0.035	0.161	0.212	0.089	0.095	0.037	0.088	0.056	-0.005	0.402	0.66
SV3	0.211	0.019	0.105	0.155	0.196	0.223	0.057	0.188	0.245	0.126	0.412	0.936
SV4	0.255	0.035	0.129	0.185	0.199	0.293	0.048	0.207	0.148	0.054	0.448	0.817

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment.

The Fornell-Larcker criterion is “the second approach to assessing discriminant validity. It compares the square root of the AVE values with the latent variable correlations. Specifically, the square root of each construct’s AVE should be greater than its highest correlation with any other construct” (Hair et al., 2016, p. 139).

Moreover, Table 5 exhibits that discriminant validity, assessed through Fornell and Larcker's (1981) criteria, is established.

Table 5.*Fornell-Larcker Criterion*

	NAR	INRT	SS_ES	SS_BS	SS_TA	SS_DI	SEF	BP	CBCB(C2C)	CBCB(C2B)	ENJ	SV
NAR	0.725											
INRT	-0.052	0.724										
SS_ES	0.13	-0.025	0.897									
SS_BS	0.248	0.076	0.46	0.859								
SS_TA	0.352	-0.018	0.343	0.472	0.887							
SS_DI	0.428	-0.045	0.334	0.527	0.556	0.892						
SEF	-0.027	0.216	-0.038	0.042	-0.03	0.086	0.734					
BP	0.246	0.19	0.169	0.381	0.245	0.396	0.579	0.784				
CBCB(C2C)	0.462	0.028	0.118	0.215	0.333	0.433	0.205	0.417	0.913			
CBCB(C2B)	0.411	0.038	0.115	0.141	0.288	0.361	0.164	0.356	0.794	0.935		
ENJ	0.257	0.009	0.138	0.289	0.297	0.351	0.079	0.27	0.261	0.175	0.917	
SV	0.271	0.013	0.108	0.163	0.206	0.275	0.067	0.216	0.249	0.12	0.463	0.725

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment Values on diagonal are square root of AVE.

Heterotrait Monotrait (HTMT) is the ratio of the between-trait correlations to the within-trait correlations. HTMT is the mean of all correlations of indicators across constructs measuring different constructs (i.e., the heterotrait-heteromethod correlations) relative to the (geometric) mean of the average correlations of indicators measuring the same construct (i.e., the monotrait-heteromethod correlations) (Hair et al., 2016, p. 140).

According to Henseler et al. (2015), discriminant validity is established when the HTMT ratio is less than or equal to 0.90. In this study, using the threshold level of 0.85, Table 6 shows that the HTMT values for all pairs of constructs are below the threshold value. Hence, discriminant validity is attained (see Table 6).

Table 6.*Heterotrait Monotrait (HTMT)*

	NAR	INRT	SS_ES	SS_BS	SS_TA	SS_DI	SEF	BP	CBCB(C2C)	CBCB(C2B)	ENJ	SV
NAR												
INRT	0.348											
SS_ES	0.202	0.276										
SS_BS	0.362	0.361	0.648									
SS_TA	0.451	0.297	0.453	0.636								
SS_DI	0.55	0.29	0.438	0.766	0.732							
SEF	0.27	0.412	0.211	0.247	0.144	0.152						
BP	0.241	0.272	0.194	0.49	0.254	0.466	0.653					
CBCB(C2C)	0.497	0.146	0.119	0.273	0.362	0.512	0.21	0.431				
CBCB(C2B)	0.439	0.153	0.123	0.177	0.324	0.427	0.169	0.367	0.823			
ENJ	0.295	0.183	0.174	0.381	0.349	0.437	0.166	0.294	0.279	0.186		
SV	0.244	0.301	0.256	0.349	0.24	0.275	0.206	0.202	0.183	0.094	0.575	

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment.

4.3.5 Validating Higher Order Construct. Sensation-seeking (SS) is the higher-order formative construct having four lower-order reflective constructs (ES, BS, AT, DI). To validate the higher-order formative construct, multi-collinearity was assessed through the variance inflation factor (VIF). VIF values less than or equal to 5 (Hair et al., 2021) indicate the absence of multicollinearity issues. In the present study, collinearity did not pose any threat, as the VIF values were less than 5 (Table 7). Next, the statistical significance and relevance of outer weights were assessed (Sarstedt et al., 2019). BA and DI outer loadings were found significant, and ES and TA were not significant. Further, outer loadings were found significant for each indicator forming SS (Sarstedt et al., 2019). Thus, the higher-order construct has been validated.

Table 7.

Validation of Higher-order Construct

Higher order construct	Lower order construct	VIF	Outer Weights	T-statistics	P-value	Outer Loadings	P-value
SS	SS_ES	1.307	-0.083	0.508	0.306	0.379	0.004
	SS_BS	1.648	0.579	3.839	0.000	0.852	0.000
	SS_TA	1.57	-0.051	0.333	0.37	0.549	0.000
	SS_DI	1.67	0.638	4.194	0.000	0.887	0.000

Notes: SS= Sensation seeking, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition.

4.4 Structural Model

The second step in the analysis involves the evaluation of the structural model. Table 8 and Figure 2 present the assessment of path coefficients and significance levels for the hypothesized relationships in the research model. The bootstrap resampling technique, with 5000 resamples, was employed to analytically test the hypotheses, determining p-values and their estimated standard errors (Hair et al., 2016). Furthermore, the study assessed the coefficient of determination (R^2) (Chin, 1998). This study used a two-stage moderation approach because “neither the product indicator approach nor the orthogonalizing approach is applicable when the exogenous construct and/or the moderator have a formative measurement model. Therefore, when formative measures are involved, the two-stage approach must be used”; it also “exhibits a higher level of statistical power” (Hair et al., 2016, p. 252).

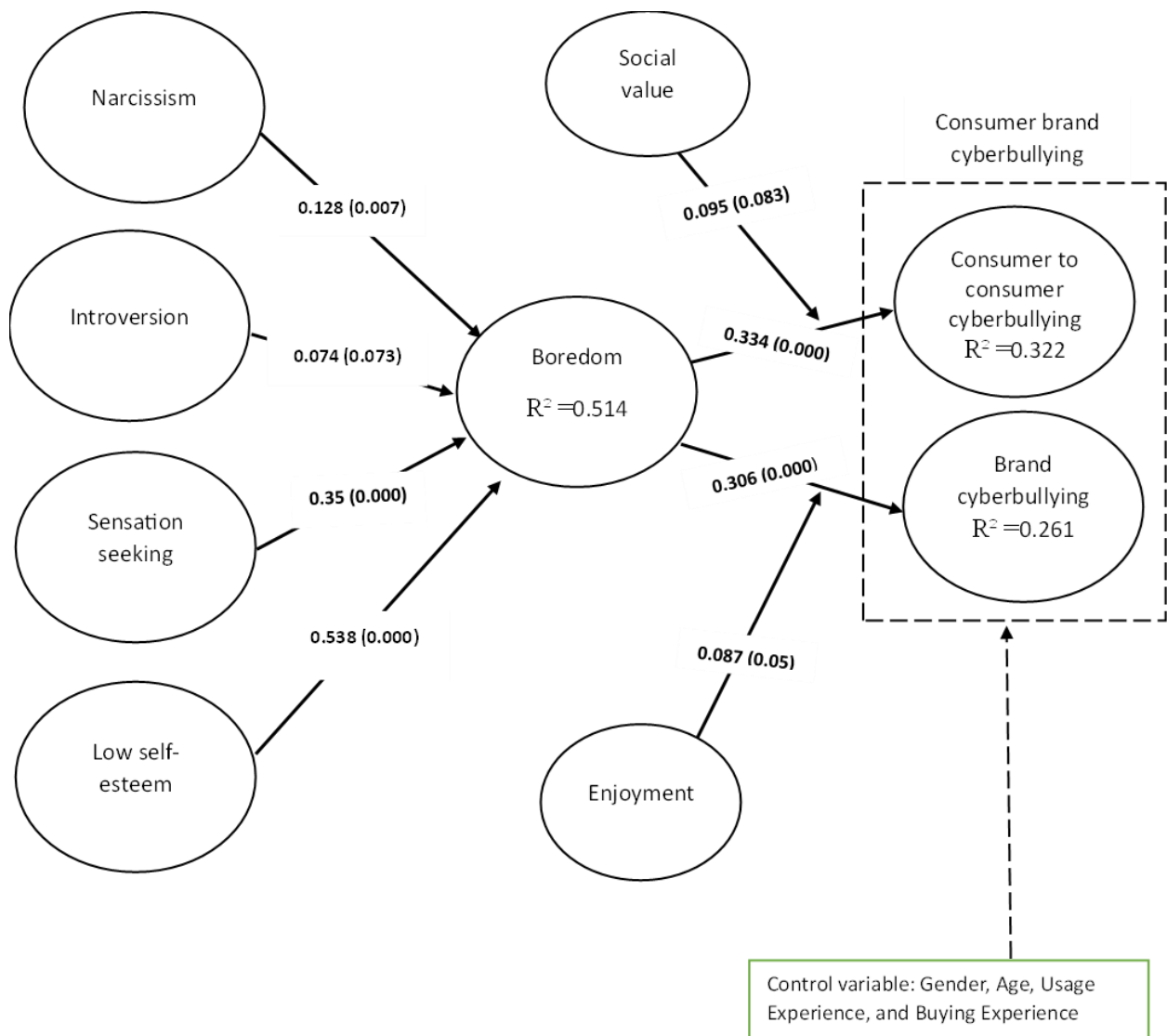
Table 8.*Path Coefficients*

Independent Variable	Dependent Variable	Moderator	R ²	b	SE	t-Statistics	p-value	
Narcissism (NAR)	Boredom proneness (BP)		0.514	0.128	0.052	2.461	0.007*	Hypothesis 1 supported
Introversion (INRT)				0.074	0.051	1.454	0.073**	Hypothesis 2 supported
Sensation seeking (SS)				0.35	0.057	6.145	0.000*	Hypothesis 3 supported
Self-esteem (SE)				0.538	0.039	13.613	0.000*	Hypothesis 4 supported
Boredom proneness (BP)	Consumer brand cyberbullying (CBCB-C2C)		0.322	0.334	0.054	6.326	0.000*	Hypothesis 5 supported
Boredom proneness (BP)		Social Value (SV)		0.095	0.069	1.384	0.083**	Hypothesis 6 supported
Boredom proneness (BP)	Consumer brand cyberbullying (CBCB-C2B)		0.261	0.306	0.055	5.515	0.000*	Hypothesis 7 supported
Boredom proneness (BP)		Enjoyment (ENJ)		0.087	0.053	1.646	0.05*	Hypothesis 8 supported

Notes: R²= R square, b = beta co-efficient, SE = standard deviation, p-value= significance value less than 0.05* and 0.10**.

Figure 2.

PLS Results for the Structural Model



Note: Values between arrows are beta-coefficient, inside brackets are p-values and values inside the shapes are R-sq.

Gender, age, buying experience, and s-commerce usage experience were controlled. Except for s-commerce usage experience all control variables were insignificant. The results reveal a substantial positive influence of NAR on BP ($\beta = 0.128, p = 0.007$). Therefore, H1 was supported. H2: INT \rightarrow BP ($\beta = 0.074, p = 0.073$) was significant. H3: SS \rightarrow BP ($\beta = 0.35, p = 0.000$) was significant. H4: SEF \rightarrow BP ($\beta = 0.538, p = 0.000$) was significant. This implies that individuals possessing narcissistic, introverted, sensation-seeking, and low self-esteem personalities experience higher levels of boredom.

Boredom was found to have a positive relationship with consumer brand cyberbullying. H5: BP \rightarrow CBCB (C2C) ($\beta = 0.334, p = 0.000$) and H6: BP \rightarrow CBCB (C2B) ($\beta = 0.306, p = 0.000$) were significant.

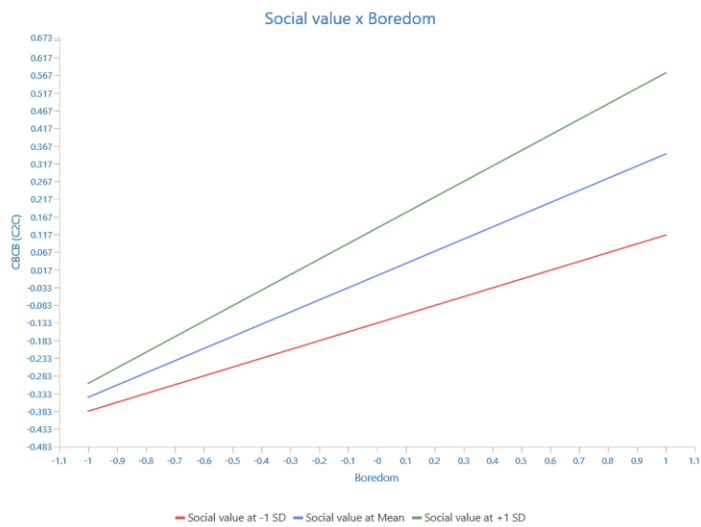
The findings demonstrate a positive impact of social value and enjoyment on boredom and consumer brand cyberbullying in s-commerce. H7: SV x BP \rightarrow CBCB (C2C) ($\beta = 0.095, p = 0.83$) and H8: ENJ x BP \rightarrow CBCB (C2B) ($\beta = 0.087, p = 0.05$) were significant.

This means that consumers prone to boredom, react more to emotional and social features on s-commerce. The more bored consumers seek social value and enjoyment the more they will be triggered towards consumer brand cyberbullying. Hence, social value and enjoyment trigger bored consumers to cyberbullying behaviour. Moderation has been represented via slope analysis. In Figure 3 (SV x BP \rightarrow CBCB (C2C)) the steeper green line represents the higher social value seeking. The figure states that the positive relation between boredom and consumer brand cyberbullying (consumer to consumer) is amplified because of increased social value. In Figure 4 (ENJ x BP \rightarrow CBCB (C2B)) the steeper green line represents the higher enjoyment seeking. The figure states that the positive relation

between boredom and consumer brand cyberbullying (consumer to brand) is amplified because of increased enjoyment.

Figure 3.

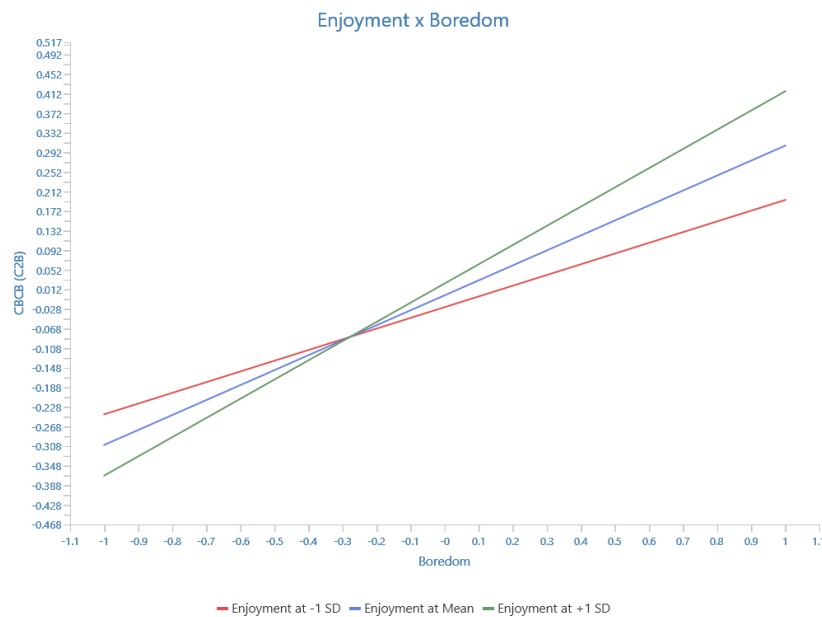
Slope Analysis of Social Value x Boredom and Consumer Brand Cyberbullying (Consumer to Consumer)



Note: Green line: high social value seeking; Red line: low social value seeking.

Figure 4.

Slope Analysis of Enjoyment x Boredom and Consumer Brand Cyberbullying (Consumer to Brand)



Note: Green line: high enjoyment seeking; Red line: low enjoyment seeking.

4.4.1 R-square. The coefficient of determination (R^2 value) is the most employed measure for assessing the structural model. R^2 represents “the amount of variance in the endogenous constructs explained by all of the exogenous constructs linked to it” (Hair et al., 2016, p. 209). As a rule of thumb, the R^2 value of 0.75 is considered strong, 0.50 is moderate and 0.25 is weak (Hair et al., 2011). The R^2 values for the endogenous variables boredom, consumer brand cyberbullying (consumer to consumer), and consumer brand cyberbullying (consumer to brand) are 0.514, 0.322, and 0.261 respectively (Table 8). Overall, the personalities (NAR, INT, SS, and SEF) accounted for 51% of variance in boredom proneness (BP). BP and SV accounted for a 32% variance in consumer brand

cyberbullying (C2C). BP and ENJ accounted for a 26% variance in consumer brand cyberbullying (C2B). The R-sq values can be described as moderate in this study.

5. Discussion

The primary objective of this empirical study was to investigate the relationship between consumer intrinsic traits, particularly personality, and their susceptibility to boredom, resulting in consumer brand cyberbullying within the Facebook context. Additionally, the research explored the moderating impact of social and emotional stimulation in the Facebook environment on the connection between boredom and consumer brand cyberbullying. Grounded in the Uses and Gratifications Theory (UGT), the study revealed that specific personality traits motivate individuals to engage in Facebook and subsequently indulge in consumer brand cyberbullying. This behaviour is driven by the desire to seek gratification and stimulation to fulfil the inherent need to escape boredom.

Findings suggest that people having certain personality traits (like narcissism, introversion, sensation seeking, and low self-esteem) are more prone to boredom. This finding is in support of past studies. For instance, Barnett and Klitzing (2006) asserted in their study that individuals with high boredom proneness are often introverted and likely due to having a small or non-existent social circle. Even in online environments, they tend to assume a more passive role as consumers rather than active participants (Tzavela et al., 2017). Chin et al. (2017) argued that experiencing solitude and social disconnection significantly contributes to the onset of boredom. Extending this perspective, several studies have consistently highlighted that a key motivating factor for people engaging in online activities is their restricted social network size or complete lack of friends. The absence of peer or social support during moments of boredom drives individuals to find comfort and engagement online (Li et al., 2015; Al-Saggaf, 2020; Tzavela et al., 2017). Similar is the case with low self-esteem and narcissists. Individuals with low self-esteem communicate

less, anticipating negative reactions from others due to their unfavourable self-perception (Infante, 1976). Narcissists, apart from having less adaptive social behaviours, experience boredom due to the awareness of their fragile self-image and poor social skills. This emptiness, manifested as bouts of boredom, often drives them to digital tools as a convenient means of addressing these feelings (Ksinan et al., 2021). Sensation-seekers are continuously looking for new, varied, and risky experiences. According to the arousal theory of boredom, when there is a mismatch of internal and external arousal/stimulation, boredom comes into existence (Hebb, 1966). This means that because of sensation-seekers' high arousal levels, they can easily become bored if they fail to get adequate stimulation from the environment. This mismatch of demand and supply of arousal results in boredom.

This study found a positive relationship between boredom and consumer brand cyberbullying. According to psychodynamic theories, a suppressed internal state contributes to aggressive behaviour (Zhang et al., 2022). When bored individuals seek external stimuli for satisfaction, a sense of deprivation may arise if the external world fails to meet their needs. Boredom, in this context, can be viewed as a concealed, repressed internal state that may culminate in aggressive behaviour. Similarly, the findings of Dahlen et al. (2004) support this theory, suggesting that boredom arising from a lack of external stimulation predicts an individual's aggression levels. Considering that bullying falls within the spectrum of aggressive behaviours (Olweus & Hart, 1993), cyberbullying can be construed as an extension of bullying within the framework of the Internet. This finding is supported in several studies (Varjas et al., 2010; Westgate & Wilson, 2018). Orosz et al. (2016) stated that individuals with a greater inclination toward boredom are more likely to respond uncivilly to online incivility. This is attributed to the passive browsing behaviour of bored individuals on social media, which influences their inclination to mimic the uncivil style of commenting rather than engaging in constructive conversations.

This study verified the moderating effect of social value on boredom and consumer brand cyberbullying (C2C) relation. Rewards play a significant role in cyberbullying, and individuals engaging in cyberbullying typically have specific goals in mind, such as obtaining rewards or resources (Roland & Idsøe, 2001; Gradinger et al., 2012). Among them, social dominance is the most significant (Volk et al., 2014). Bored consumers actively seek social stimulation to uplift their moods (Poon & Leung, 2011). For the sake of enhancing their social status, garnering affection, capturing public attention, and fostering interactions, these bored consumers may exhibit less concern regarding the potential harm caused by their actions (Van Geel et al., 2017). They believe that participating in such behaviour will bolster their popularity within their social networks, thereby generating happiness and satisfaction, ultimately boosting their confidence to persist in these behaviours (Steffgen et al., 2011). The desire for popularity and admiration is also likely to contribute to CBCB. Several studies on harmful peer interaction (Isaksen & Roper, 2012) and hate speech (Sobkowicz & Sobkowicz, 2010) found that verbal aggression is employed as a social tool to garner admiration from others. The jealousy stemming from a sense of being less popular drives online users to engage in cyberbullying against those they perceive as enviable (Appel et al., 2015; Banerjee & Dittmar, 2008). Arguably, individuals within online brand communities might satisfy their desire for recognition by targeting offensive comments at fellow consumers who have either violated community norms or expressed criticism of the brand (Breitsohl et al., 2018).

Moreover, this study found the moderating effect of enjoyment on boredom and consumer brand cyberbullying relation (C2B). This is because boredom is characterised as an unsatisfactory state (Yazdanparast et al., 2015), and when cyberbullies are not happy or satisfied with certain things they cyberbully, in terms of teasing just for the sake of fun and pleasure (Otchere et al., 2021). This finding aligns with the outcomes reported in studies

conducted by other researchers. Lee (2010) stated that fun-seeking tendency was a common characteristic among bullying behaviours. Cyberbullies, through fun and entertainment, express anger and rage while harming and dominating victims (Tanrikulu & Erdur-Baker, 2021). They believe that being involved in such behaviour will make them seem funny in their social networks. This makes them happy and satisfied and increases their confidence to continue this behaviour (Mishna et al., 2010). They often justify their behaviour, like calling names and criticising comments, as harmless jokes (Ging & O'Higgins Norman, 2016).

In summary, this study shed light on individuals prone to boredom engaging in Facebook cyberbullying. It pioneers research on CBCB, a unique phenomenon, by examining it from two unexplored perspectives and delves into the boredom mechanism, elucidating how individual traits and s-commerce technical designs induce it. Ultimately, the study's insights offer valuable recommendations for the effective prevention and management of this issue.

5.1 Implications

Several theoretical implications can be drawn from this study (see Table 8). Firstly, the study contributed to cyberbullying literature, by developing and validating an integrated model using UGT, consumer boredom, and s-commerce (Facebook) brand literature. Secondly, while the marketing and branding literature has largely overlooked cyberbullying in studies related to consumers and most of the studies in information science and digital media studies focused on individual attributes like race, gender, and political opinions in cyberbullying (Ramasubramanian, 2016). This survey-based research examined the motivations behind CBCB, demonstrating the link between boredom and CBCB and focused on cyberbullying from a consumer and brand perspective. It found that boredom is responsible for triggering CBCB on Facebook. Thirdly, it offered fresh insights into CBCB from two perspectives (consumer and brand) with boredom and its personality antecedents

as well as the moderating effect of Facebook stimulations. It found that Facebook's emotional and social stimulation strengthened the association between boredom and CBCB. Lastly, boredom is a well-acknowledged negative emotion and its existing literature in the online context has predominantly focused on online addiction (Chou et al., 2018; Jiang & Li, 2018), leaving other problematic behaviours, such as uncivil behaviour and cyberbullying, largely under examined. The current study contributed to this gap by investigating boredom as consumer motivations for cyberbullying influenced in the context of Facebook in New Zealand.

This study provides implications for policymakers and online commerce marketing practitioners. Constructively spending leisure time to have a pleasant experience can save one from boredom and risky behaviours. Facebook users should have an understanding of which activities are meaningful and which are not in such situations. Hence, promoting leisure and media literacy education becomes vital to aid them in mitigating boredom. While digital technology might appear appealing in moments of under-stimulation, the chosen activity's significance holds more weight. So healthcare providers, educators, and parents should pursue training initiatives that enhance young people's self-control and temper their responsiveness to technological stimuli. In the current research framework, marketers can leverage the identified antecedents and moderators to gain a deeper understanding of the factors that prompt customers to exhibit uncivil behavior on s-commerce platforms. Thus, many companies and online businesses should consider incorporating these factors to enhance the effectiveness of s-commerce websites. This study highlights the need for marketers and companies to address cyberbullying in s-commerce brand communities. Past studies state that uncivil consumer communication can result in consumers feeling emotionally unwell (Slonje et al. 2013), losing trust in the company (Laroche et al. 2012), and ultimately exiting a community without the intent to return (Chalmers et al. 2013).

Moreover, consumer brand bullying may adversely impact a silent mass of consumers who share similar emotional involvement (Schlosser, 2005) and are not on the corporate radar, yet hold significant commercial value. Companies should consider appointing a CBCB manager, whose core responsibility is to position their companies as responsible participants in the marketplace. This role could involve overseeing the company's corporate social responsibility and philanthropic activities aimed at contributing to the improvement of social well-being. Considering the present findings, it is recommended that consumer brand bullying require corporate intervention. It suggests initiating intervention strategies to mitigate cyberbullying effects, aligning with corporate social responsibility efforts to protect consumers and brands. Consumer criticism towards a brand is solution-focused, and consumers appreciate brand manager involvement, seeing the company as the ultimate authority (Healy & McDonagh, 2013). However, when consumers criticise each other within the same brand, manager involvement becomes necessary to prevent potential hostile interactions that can negatively affect their brand engagement.

5.2 Limitations

One limitation of this study is that it did not take cultural aspects into account, which could have influenced the findings. Additionally, being a cross-sectional study, it cannot track patterns of variables over time, which is a powerful method for exploring cause-and-effect relationships. Furthermore, the study employed short scales for variables such as narcissism and boredom proneness, which may have limited the depth and accuracy of the data collected.

5.3 Future Directions

This study identifies numerous potential directions for future research (Table 9). The current study explored boredom and CBCB relations in the context of Facebook. However, this area requires further exploration. Initially, the study examines CBCB from two angles:

branding cyberbullying and consumer cyberbullying in defence of a brand. Future research could extend this exploration by considering the perspective of consumers bullying other consumers because of the brand they like. Hickman and Ward (2007) elaborated that online consumer communities socially identify themselves with brands and provoke inter-group stereotyping as well as expressed feelings of *schadenfreude* when a rival brand fails. Therefore, future researchers could investigate this additional perspective for a more comprehensive understanding. The current study examined social value and enjoyment as moderators in boredom and CBCB relations. A significant venue for further research is to examine the moderating role of other s-commerce stimulation, like escapism, the need for belongingness (Sundström et al., 2019), attention seeking (Studak & Workman, 2004), and self-image (Wang & Ngai, 2022), on boredom and CBCB in s-commerce. This examination can contribute to a better understanding of what strengthens or weakens this behaviour for future intervention purposes.

Additionally, the present study treated CBCB as a broader phenomenon. Future researchers could enhance understanding by exploring boredom in relation to specific cyberbullying types, such as teasing, trolling, harassment, ostracism, and camouflage, as suggested by Breitsohl et al. (2018). Additionally, investigating these relationships on various platforms (e.g., Instagram, Trade Me, etc.) and within diverse cultural contexts would contribute to a more comprehensive understanding, considering that cyberbullying is a global issue.

Furthermore, in future investigations, it is imperative to consider diverse perspectives in the examination of cyberbullying, encompassing roles such as victims, defenders, bystanders, and peacemakers, as suggested by Van Cleemput et al. (2014). Additionally, researchers should explore the ramifications of cyberbullying on both individual victims and the market. From the individual perspective, while certain studies

emphasise the adverse consequences of cyberbullying, resulting in victims' misfortune and helplessness (Dyrel, 2021; Topcu et al., 2013; Raskauskas & Stoltz, 2007) others posit that cyberbullying for the sake of fun and entertainment don't harm anyone and it is less likely that it will cause any seriously negative affect (Hamuddin et al., 2020; Yoon & Koo 2019). In this scenario, the victim does not face negative comments and they are aware that these comments mean nothing (Navarro & Serna, 2015; Utami, 2014). It will be interesting to discover CBCB outcomes in relation to boredom. Furthermore, the impact on marketers and their platforms is a crucial aspect to consider. Studies suggest that cyberbullying in online communities can lead to a loss of consumer trust in a company (Laroche et al., 2012), resulting in customers leaving without the intention of returning (Chalmers et al., 2013). Investigating the outcomes stemming from CBCB in connection with boredom is essential for gaining a comprehensive understanding of its effects in future studies.

Lastly, this study examined boredom in general; however, future studies could examine a specific type of boredom in s-commerce, focusing on state, trait, or leisure, as each type is unique in terms of causes, alleviation, and consequences.

Table 9.*Future Directions*

Current Findings	Future directions
<p>This study made a significant contribution to the cyberbullying literature by developing and validating an integrated model that incorporates the Uses and Gratifications Theory (UGT), consumer boredom, and the literature on s-commerce brands, specifically focusing on Facebook.</p>	<ul style="list-style-type: none"> • To investigate the current research model on other platforms (e.g., Instagram, Trade Me, etc.) and within diverse cultural contexts, considering that cyberbullying is a global issue. • To examine CBCB in relation to other types of boredom i.e., leisure boredom and state boredom.
<p>This survey-based research explored the motivations behind Consumer Brand Cyberbullying (CBCB), establishing a connection between boredom and CBCB. It uniquely focused on cyberbullying from both consumer and brand perspectives, addressing a gap in previous research.</p>	<ul style="list-style-type: none"> • To examine the effect of boredom on CBCB from the perspective of consumers bullying other consumers due to the brand they support/ love (Breitsohl et al., 2018). • To explore boredom in relation to specific CBCB type such as teasing, trolling, harassment, ostracism, and camouflage, as suggested by Breitsohl et al. (2018). • To consider diverse perspectives in the examination of cyberbullying, by encompassing roles such as victims, defenders, bystanders, and peacemakers.

It investigated the emotional and social stimulation provided by Facebook and its influence on the relationship between boredom and Consumer Brand Cyberbullying (CBCB). The study revealed that these factors indeed strengthen the association between boredom and CBCB.

It explored the impact of boredom on problematic behaviours beyond addiction, with a specific focus on Consumer Brand Cyberbullying (CBCB), making it the first study of its kind.

- To investigate the moderating role of other s-commerce stimulations, such as escapism, the need for belongingness (Sundström et al., 2019), attention seeking (Studak & Workman, 2004), self-image (Wang & Ngai, 2022), etc., in relation to boredom and consumer brand cyberbullying in Facebook.
- To examine the potential consequences of consumer brand cyberbullying (CBCB) on both consumers and the associated brand or business i.e. discontinue usage, negative attitude etc.

6. Conclusion

In conclusion, this empirical study has delved into the intricate relationship between consumer intrinsic traits, particularly personality characteristics, and their susceptibility to boredom, ultimately influencing consumer brand cyberbullying within the context of Facebook. Notably, personality traits such as narcissism, introversion, sensation-seeking, and low self-esteem were identified as factors contributing to an increased vulnerability to boredom. Moreover, boredom was positively related to CBCB from both consumer and brand perspectives, and the study found the moderating effect of social and emotional stimulation within the Facebook environment on this relationship. Seeking social value and enjoyment emerged as a significant moderator, with an increasing level of social value and

enjoyment strengthening the correlation between boredom and CBCB. The present findings recommend that consumer brand bullying requires corporate intervention. It suggests initiating intervention strategies to mitigate cyberbullying effects, aligning with corporate social responsibility efforts to protect consumers and brands.

Appendices

Appendix A

Table A.1

Definition Of Research Variables

Variable	Definition
Independent Variables	
Narcissism	Strong focus on the self, accompanied by a lack of empathy, a need for admiration, and fantasies of omnipotence and grandiosity (American Psychiatric Association, 2000)
Introversion	The individual difference in the inclinations toward the inner and outer world introversion can also be defined as low Extraversion. Adjectives traditionally associated with introversion include inhibited reserved and undemonstrative (Tuovinen et al., 2020, p. 2)
Sensation seeking	A trait by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experience (Zuckerman, 2014, p. 10).
Self-esteem	The evaluation which the individual makes and customarily maintains with regard to the self" (Coopersmith, 1967, pp 4-5).
Dependent Variables	
Boredom	The aversive experience of wanting, but being unable to engage in a stimulating and satisfying activity (Fahlman et al., 2013, p. 69)

Consumer brand cyberbullying A consumer interaction process about a brand during which one consumer harasses or is perceived to harass another consumer or the brand itself (Breitsohl et al., 2018, p. 292).

Moderating Variables

Social value Social stimulations like social value refers to “the utility derived from the product’s ability to enhance social self-concept (Sweeney and Soutar, 2001, p. 211).

Enjoyment An emotional motivation correlated with consumers’ logic, which lets them decide their likings while shopping (Hart et al., 2007, p. 7).

Appendix B

The questionnaire employed in the study comprises two sections. Section 1 encompasses the constructs (see Table B.1), while Section 2 includes items related to demographics and S-commerce experience (refer to Table B.2).

Table B.1.

Survey Items

Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree				
SD	D	SWD	N	SWA	A	SA				
1	2	3	4	5	6	7				
Survey Items										
Narcissism										
NAR1	I like having authority over people.			1	2	3	4	5	6	7
NAR2	I really like to be the centre of attention.			1	2	3	4	5	6	7
NAR3	I am an extraordinary person.			1	2	3	4	5	6	7
NAR4	Everybody likes to hear my stories.			1	2	3	4	5	6	7
NAR5	I find it easy to manipulate people.			1	2	3	4	5	6	7
NAR6	I am apt to show off if I get the chance.			1	2	3	4	5	6	7
NAR7	I always know what I am doing			1	2	3	4	5	6	7
NAR8	I am going to be a great person			1	2	3	4	5	6	7
Introversion										
INRT1	I am reserved.			1	2	3	4	5	6	7
INRT2	I am sometimes shy, inhibited.			1	2	3	4	5	6	7
INRT3	I am talkative.			1	2	3	4	5	6	7
INRT4	I am not outgoing, sociable.			1	2	3	4	5	6	7

Sensation Seeking							
SS1	I would like to explore strange places.	1	2	3	4	5	6 7
SS2	I would like to take off on a trip with no pre-planned routes or timetables.	1	2	3	4	5	6 7
SS3	I get restless when I spend too much time at home.	1	2	3	4	5	6 7
SS4	I prefer friends who are excitingly unpredictable.	1	2	3	4	5	6 7
SS5	I like to do frightening things.	1	2	3	4	5	6 7
SS6	I would like to try bungee jumping.	1	2	3	4	5	6 7
SS7	I like wild parties.	1	2	3	4	5	6 7
SS8	I would love to have new and exciting experiences, even if they are illegal.	1	2	3	4	5	6 7
Self-esteem							
SEF1	Sometimes I think I am no good at all.	1	2	3	4	5	6 7
SEF2	I wish I could respect myself more.	1	2	3	4	5	6 7
SEF3	I feel I have a number of good qualities	1	2	3	4	5	6 7
SEF4	All in all I am satisfied with myself.	1	2	3	4	5	6 7
SEF5	I take a positive attitude toward myself.	1	2	3	4	5	6 7
Boredom proneness							
BP1	I often find myself at "loose ends," not knowing what to do.	1	2	3	4	5	6 7
BP2	I find it hard to entertain myself.	1	2	3	4	5	6 7
BP3	Many things I have to do are repetitive and monotonous.	1	2	3	4	5	6 7
BP4	It takes more stimulation to get me going than most people.	1	2	3	4	5	6 7
BP5	I don't feel motivated by most things that I do.	1	2	3	4	5	6 7
BP6	In most situations, it is hard for me to find something to do or see to keep me interested.	1	2	3	4	5	6 7
BP7	Much of the time, I just sit around doing nothing.	1	2	3	4	5	6 7
BP8	Unless I am doing something exciting, even dangerous, I feel half-dead and dull.	1	2	3	4	5	6 7

Social Value								
SV1	I can connect with friends on this s-commerce platform.	1	2	3	4	5	6	7
SV2	I can share experiences with others on this s-commerce platform.	1	2	3	4	5	6	7
SV3	I can develop friendships with other users on this s-commerce platform.	1	2	3	4	5	6	7
SV4	I can extend personal relationships on this s-commerce platform.	1	2	3	4	5	6	7
Enjoyment								
ENJ1	I buy on Facebook because it is enjoyable	1	2	3	4	5	6	7
ENJ2	I buy on Facebook because it is a pleasure process	1	2	3	4	5	6	7
ENJ3	I buy on Facebook because it is fun	1	2	3	4	5	6	7
Consumer brand cyberbullying (consumer to consumer)								
CBCB (C2C)1	Be rude to someone.	1	2	3	4	5	6	7
CBCB (C2C)2	Tease someone.	1	2	3	4	5	6	7
CBCB (C2C)3	Be mean to someone.	1	2	3	4	5	6	7
CBCB (C2C)4	Call someone mean names.	1	2	3	4	5	6	7
CBCB (C2C)5	To make fun of someone.	1	2	3	4	5	6	7
CBCB (C2C)6	Curse someone.	1	2	3	4	5	6	7
Consumer brand cyberbullying (consumer to brand)								
CBCB (C2B)1	Been rude to a brand.	1	2	3	4	5	6	7
CBCB (C2B)2	Teased a brand.	1	2	3	4	5	6	7
CBCB (C2B)3	Been mean to a brand.	1	2	3	4	5	6	7
CBCB (C2B)4	Called a brand by mean names.	1	2	3	4	5	6	7

CBCB Made fun of a brand.
(C2B)5

1 2 3 4 5 6 7

CBCB Cursed at a brand.
(C2B)6

1 2 3 4 5 6 7

Table B.2*Demographics and S-commerce experience items*

Gender (in percentage)	Male
	Female
	Prefer not to say
Age (in percentage)	20 and below
	Between 21 – 25
	Between 26 – 30
	Between 31 – 35
	Between 36 – 40
	Between 41 – 45
	46 and above
Usage experience (in percentage)	less than 12 months
	1 to 5 years
	5-10 years
	More than 10 years
Buying experience (in percentage)	More than once a week
	Once in a week
	More than once in a month
	Once in a month
	Once in many months

Appendix C

The table C.1 shows the indicators of all the constructs.

Table C.1.

Indicators Of Constructs

Constructs	Indicators	Indicator reliability (Outer Loadings)
NAR	NAR1	I like having authority over people
	NAR2	I really like to be the center of attention
	NAR3	I am an extraordinary person
	NAR4	Everybody likes to hear my stories
	NAR5	I find it easy to manipulate people
	NAR6	I am apt to show off if I get the chance
INRT	INRT1	I am reserved
	INRT2	I am sometimes shy, inhibited
	INRT4	I am not outgoing, sociable
SS_ES	SS1	I would like to explore strange places.
	SS2	I would like to take off on a trip with no pre-planned routes or timetables.
SS_BS	SS3	I get restless when I spend too much time at home.
	SS4	I prefer friends who are excitingly unpredictable.
SS_TA	SS5	I like to do frightening things.

	SS6	I would like to try bungee jumping.
SS_DI	SS7	I like wild parties.
	SS8	I would love to have new and exciting experiences, even if they are illegal.
SEF	SEF1	Sometimes I think I am no good at all
	SEF2	I wish I could respect myself more
	SEF3	I feel I have a number of good qualities.
	SEF4	All in all I am satisfied with myself
	SEF5	I take a positive attitude toward myself
BP	BP1	I often find myself at “loose ends,” not knowing what to do
	BP2	I find it hard to entertain myself.
	BP3	Many things I have to do are repetitive and monotonous.
	BP4	It takes more stimulation to get me going than most people.
	BP5	I don’t feel motivated by most things that I do.
	BP6	In most situations, it is hard for me to find something to do or see to keep me interested.
	BP7	Much of the time, I just sit around doing nothing.
	BP8	Unless I am doing something exciting, even dangerous, I feel half-dead and dull.
	CBCB (C2C)1	Be rude to someone.

	CBCB (C2C)2	Tease someone.
CBCB (C2C)	CBCB (C2C)3	Be mean to someone.
	CBCB (C2C)4	Call someone mean names.
	CBCB (C2C)5	To make fun of someone.
	CBCB (C2C)6	Curse someone.
CBCB (C2B)	CBCB (C2B)1	Been rude to a brand.
	CBCB (C2B)2	Teased a brand.
	CBCB (C2B)3	Been mean to a brand.
	CBCB (C2B)4	Called a brand by mean names.
	CBCB (C2B)5	Made fun of a brand.
	CBCB (C2B)6	Cursed at a brand.
SV	SV1	I can contact with friends on this s-commerce platform.
	SV2	I can share experiences with others on this s-commerce platform.
	SV3	I can develop friendships with other users on this s-commerce platform.
	SV4	I can extend personal relationship on this s-commerce platform.
ENJ	ENJ1	I buy on Facebook because it is enjoyable
	ENJ2	I buy on Facebook because it is a pleasure process

ENJ3

I buy on Facebook because it is fun

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment

Appendix D

The table D.1 shows the outer loading of indicators of all the constructs.

Table D.1

Indicator Reliability

	Outer loadings
BP1 <- BP	0.731
BP2 <- BP	0.762
BP3 <- BP	0.683
BP4 <- BP	0.781
BP5 <- BP	0.816
BP6 <- BP	0.861
BP7 <- BP	0.818
BP8 <- BP	0.805
CBCB (C2B)1 <- CBCB (C2B)	0.917
CBCB (C2B)2 <- CBCB (C2B)	0.950
CBCB (C2B)3 <- CBCB (C2B)	0.938
CBCB (C2B)4 <- CBCB (C2B)	0.956
CBCB (C2B)5 <- CBCB (C2B)	0.913
CBCB (C2B)6 <- CBCB (C2B)	0.935
CBCB (C2C)1 <- CBCB (C2C)	0.837
CBCB (C2C)2 <- CBCB (C2C)	0.908
CBCB (C2C)3 <- CBCB (C2C)	0.940
CBCB (C2C)4 <- CBCB (C2C)	0.947
CBCB (C2C)5 <- CBCB (C2C)	0.934

CBCB (C2C)6 <- CBCB (C2C)	0.907
ENJ1 <- ENJ	0.903
ENJ2 <- ENJ	0.932
ENJ3 <- ENJ	0.915
INRT1 <- INRT	0.697
INRT2 <- INRT	0.849
INRT3 <- INRT	-0.293
INRT4 <- INRT	0.018
NAR1 <- NAR	0.661
NAR2 <- NAR	0.774
NAR3 <- NAR	0.227
NAR4 <- NAR	0.398
NAR5 <- NAR	0.712
NAR6 <- NAR	0.762
NAR7 <- NAR	0.111
NAR8 <- NAR	-0.234
SEF1 <- SEF	0.820
SEF2 <- SEF	0.704
SEF3 <- SEF	0.577
SEF4 <- SEF	0.786
SEF5 <- SEF	0.759
SS1 <- SS_ES	0.832
SS2 <- SS_ES	0.958
SS3 <- SS_BS	0.858
SS4 <- SS_BS	0.860

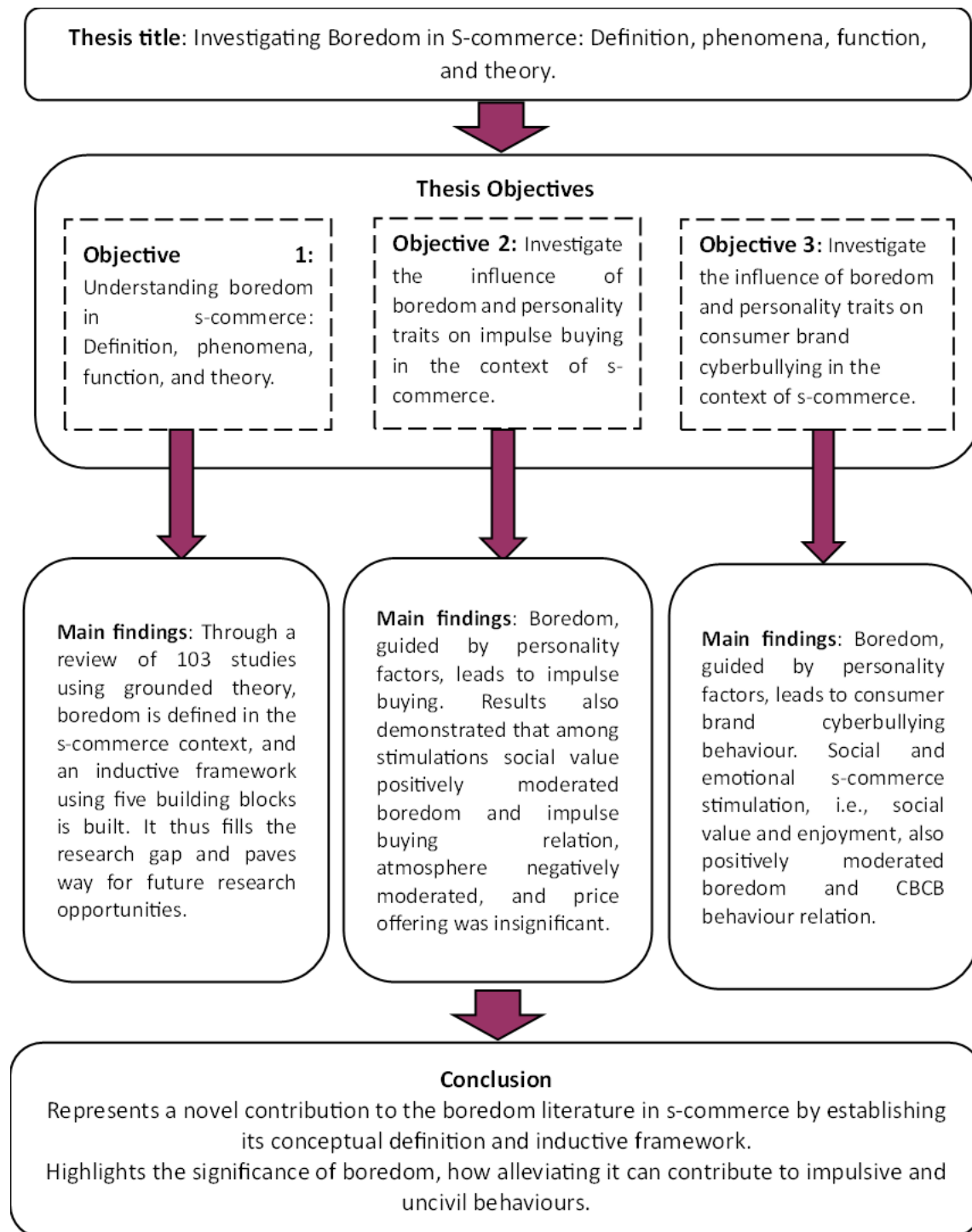
SS5 <- SS_TA	0.966
SS6 <- SS_TA	0.801
SS7 <- SS_DI	0.867
SS8 <- SS_DI	0.918
SV1 <- SV	0.352
SV2 <- SV	0.660
SV3 <- SV	0.936
SV4 <- SV	0.817

Note: NAR= Narcissism, INRT= Introversion, SS_ES= Experience seeking, SS_BS= Boredom susceptibility, SS_TA= Thrill and adventure seeking, SS_DI= Disinhibition, BP= Boredom proneness, CBCB (C2C) = Consumer brand cyberbullying (consumer to consumer), CBCB (C2B) = Consumer brand cyberbullying (consumer to brand), SV= Social value, ENJ= Enjoyment

Chapter 5: Concluding Remarks

The aim of this dissertation was to investigate boredom in s-commerce, which has been widely underexamined and ignored in past studies. The research introduces a comprehensive theoretical construct and practical framework to provide fresh perspectives and insights into this phenomenon. Employing the grounded theory methodology, the study defined boredom in s-commerce. It highlighted its self-regulatory function, identified potential causes, proposed alleviation strategies, and delineated both positive and negative consequences of boredom in the context of s-commerce. Additionally, the dissertation conducted a quantitative examination of boredom, exploring its relationship with impulse buying and consumer brand cyberbullying behaviour.

This thesis expects to contribute to boredom and s-commerce literature in a number of ways, both for academics and practitioners. The findings indicate that boredom, despite being considered a mundane emotion, possesses the capacity to yield both negative and positive effects on both consumers and the market. Individuals are advised to take precautions to redirect boredom towards constructive activities to prevent potential harm to their well-being. For marketers, understanding and addressing consumer boredom is crucial, as it can impact profitability and consumer engagement. Therefore, the design of s-commerce platforms should be strategic in leveraging this emotion for monetary advantages. Figure 5.1 summarises the main findings and conclusions from three chapters and illustrates how they align with the thesis objectives.

Figure 5.1*PhD Thesis Overview*

5.1. Understanding Boredom in Social Commerce: Definition, Phenomena, Function, and Theory

Summary

The objective of the first study was to address a research gap in past literature, revealing a scarcity of studies on boredom in s-commerce. The study also identified a lack of conceptual definition of the boredom construct, as the existing definitions have one or more conceptual issues. Utilising grounded theory, the study reviewed a sample of 103 articles to define and investigate boredom's function in s-commerce. In the context of s-commerce, the study provided a clear and defined definition of boredom, following the rules of conceptual clarity and definition and its self-regulatory function, potential causes, alleviation strategies, and positive and negative consequences.

Contribution

This study provides several contributions. Firstly, using grounded theory methodology, the study undertook a review that integrates current knowledge on boredom with the s-commerce context – a neglected gap in the literature. It explored the strengths, limitations, new linkages, and future directions for a balance growth of the literature. Secondly, it provides a conceptual definition of boredom in the s-commerce context, offering insights that may contribute to the comprehensive development of the boredom theory in the future. Thirdly, it developed an inductive framework that identifies boredom's functional mechanism in s-commerce, highlighting potential antecedents, mediators, moderators, and consequences for consumers and the market. This framework serves as a comprehensive reference point and suggests avenues for further scholarly exploration. Fourthly, it introduces a nuanced boredom typology specific to the s-commerce environment, bridging gaps in prior studies and offering insights into psychological traits

impacting health and well-being. Fifthly, unlike previous studies which focused on the intensity of digital technology use, this research delves into specific content consumption and the type of stimulation individuals seek to alleviate boredom. In addition, it highlights the overlooked consequences of boredom, such as cyberbullying and uncivil behaviour. Lastly, this study recognises the positive side of boredom for both individuals and businesses in short and long-term scenarios. Furthermore, this study underscores how boredom can pose risks to health, well-being, and performance, while its intervention holds potential for personal growth (especially among vulnerable youth) and improved business performance.

Limitations and Future Direction

Despite its valuable contributions, the study has certain limitations that pave the way for future research avenues (Table 5.1 of this chapter). This study provides a comprehensive roadmap for future research, outlined in Table 9 in Chapter 2. Key avenues for exploration include researchers discussing the framework from various theoretical perspectives and utilising the established definition of boredom as a foundation for theory development. The study recommends thorough investigations into the types of stimulation sought by bored individuals on s-commerce platforms, exploring overlooked dimensions of problematic behaviour and uncovering positive aspects of boredom. Furthermore, it underscores the importance of exploring boredom's impact on market and business perspectives, offering marketers valuable insights for strategic approaches.

5.2. Boredom in social commerce: investigating the factors contributing to impulse buying

Summary

The second study builds upon certain findings from the first study, investigating them quantitatively. It introduces a research model aimed at investigating boredom, supported by personality antecedents, which in turn leads to impulse buying in the context of s-commerce. The relationship between boredom and impulse buying is further examined, incorporating moderation by external stimulation within s-commerce. Conducted on a sample of New Zealand consumers (n=243), the quantitative study employed Smart PLS for data analysis. The results indicate that specific personality traits are more susceptible to boredom and boredom contributes to impulse buying. However, it was observed that not all s-commerce stimulations reinforce this relationship.

Contributions

This study stands as a pioneering effort in examining the link between boredom and impulse buying within the context of s-commerce. It establishes a positive relationship between boredom and impulse buying, highlighting boredom as a functional emotion that self-regulates consumers, prompting them to engage in impulse buying for alleviation. This contribution adds to the existing literature on boredom, particularly in the online context. Secondly, this study validates the moderating effect of three external stimulations (market, environment, and social factors) in the context of s-commerce on the relationship between boredom and impulse buying. By addressing gaps in prior literature, which primarily concentrated on the intensity of digital technology usage in relation to boredom, this research extends these findings. It goes further by exploring the specific content or features that trigger impulsive buying behaviours within the s-commerce environment. Lastly, the

study provides valuable insights into the psychological traits that underlie impulsive behaviours during moments of boredom. Furthermore, this study offers crucial insights for practitioners aiming to optimise s-commerce platforms. It suggests enhancing platform features and design to mitigate sales barriers tied to boredom-induced disengagement. It emphasises the substantial impact of social stimulations on boredom and impulse buying, suggesting a focus on bolstering social features within s-commerce platforms. The incorporation of interactive elements and the facilitation of social connections are identified as effective strategies. Additionally, to mitigate post-purchase regret, businesses are encouraged to implement strategies emphasising the positive aspects of impulse buying within a favourable environment. Notably, the study challenges the conventional emphasis on price offerings, suggesting a need for businesses to explore alternative approaches centred on overall shopping benefits and experiences.

Limitations and Future Direction

The study has certain limitations that pave the way for future research avenues (Table 5.1). The study explores the relationship between boredom and impulse buying, and it recommends that future researchers delve into the outcomes of impulse buying resulting from boredom, considering its impact on both consumers and the market, including but not limited to feelings of regret and subjective well-being. While the current study focused on the moderating effect of external s-commerce stimulations, it suggests that future studies could extend this inquiry to include other s-commerce stimulations outlined in the inductive framework of study 1. Additionally, the study only examined boredom proneness, and it suggests that future research should expand its scope to investigate impulse buying in relation to other types of boredom, such as leisure boredom and state boredom.

5.3. Consumer brand cyberbullying and social commerce: the role of boredom and personality traits

Summary

The third study, an extension of the first study, specifically analysed another consequences of boredom using quantitative methods. A research model was introduced to investigate the link between boredom and consumer brand cyberbullying (CBCB). CBCB, an emerging phenomenon, was examined from both the consumer and brand perspectives. The study further explored this relationship in moderation with internal and external s-commerce stimulations. Utilising Smart PLS, data from New Zealand consumers (n= 253) was analysed. The findings revealed that boredom contributes to both consumer and brand cyberbullying in the context of s-commerce, and s-commerce stimulations amplify this relationship.

Contribution

This study provides several contributions. Firstly, this study made a significant contribution to the cyberbullying literature by developing and validating an integrated model that incorporates the Uses and Gratifications Theory (UGT), consumer boredom, and the literature on s-commerce brands, specifically focusing on Facebook. Secondly, it explored the impact of boredom on problematic behaviours beyond addiction, specifically focusing on CBCB, positioning itself as a pioneering effort in this realm. Thirdly, this survey-based research established a connection between boredom and CBCB, uniquely focusing on cyberbullying from both consumer and brand perspectives, addressing a gap in previous research. Finally, the study examined the emotional and social stimulation of Facebook and its impact on the relationship between boredom and CBCB. The findings revealed that these factors indeed strengthen the association between boredom and CBCB.

Furthermore, the present findings recommend that consumer brand bullying requires corporate intervention. It suggests initiating intervention strategies to mitigate cyberbullying effects, aligning with corporate social responsibility efforts to protect consumers and brands.

Limitations and Future Direction

While the study has made valuable contributions, it also has some limitations that pave the way for future research avenues (Table 5.1). The study examines CBCB from two perspectives; however, there is another perspective that was highlighted in its literature, which was consumer to consumer cyberbullying, where consumers attack other consumers because of their brand preference. So future researchers should investigate the effect of boredom on CBCB from the perspective of consumers bullying other consumers due to the brand they support/love. The current study being the pioneer contributed to the understanding of boredom leading to CBCB; however, CBCB was studied in general. Future researchers should explore boredom in relation to specific CBCB types, such as teasing, trolling, harassment, ostracism, and camouflage. They should also consider diverse perspectives in the examination of cyberbullying, by encompassing roles such as victims, defenders, bystanders, and peacemakers. The current study examined the moderating effect of two types of s-commerce stimulations. Future studies can consider other s-commerce stimulations mentioned in the inductive framework of study 1, such as escapism, the need for belongingness, attention seeking, self-image etc. This study solely explored boredom proneness. Therefore, future studies should investigate CBCB in relation to other types of boredom, such as leisure boredom and state boredom. Lastly, future researchers can examine the potential consequences of CBCB on both consumers and the associated brand or business (i.e., discontinue usage, negative attitude etc.), as this would contribute to extending the findings of the current study.

Table 5.1.*Summary of Thesis Opportunities and Research Directions (3 Studies)*

Potential future research questions
Study 1: Understanding boredom in social commerce: Definition, phenomena, function, and theory
<ul style="list-style-type: none"> • How does boredom influence market/business performance in the context of s-commerce? What strategic approaches, can marketers employ to mitigate and leverage the effects of boredom to their advantage? • What are the connections between environmental causes and susceptibility to boredom among consumers in s-commerce? • What are the connections between specific personality traits (introversion and low self-esteem) and susceptibility to boredom among consumers in s-commerce? How do skills (social, time), age, culture, and gender serve as potential moderators in understanding the interplay of these traits and boredom susceptibility? • How does a focused investigation into a specific type of boredom (e.g., state, trait, or leisure) within the context of s-commerce contribute to a deeper understanding of its dynamics and implications for consumers? • What are the distinct consequences associated with various types of stimulation sought by bored individuals on s-commerce platforms? • How does boredom contribute to problematic behaviours such as uncivil behaviour and cyberbullying? • What are the positive consequences of boredom that contribute to consumer's well-being?

Study 2: Boredom in social commerce: investigating the factors contributing to impulse buying

- What is the relation of impulse buying and other types of boredom i.e., leisure boredom and state boredom.
- What are the outcomes of impulse buying arising from boredom on both consumers and the market, including but not limited to feelings of regret and subjective well-being.
- What will be the findings of investigating the current research model on a specific platform (e.g., Instagram, Trade Me, etc.) and within diverse cultural contexts, considering that boredom is perceived differently among cultures (Ng et al., 2015).
- What will be the moderating impact of various s-commerce stimulations, both internal and external, such as enjoyment, participation, personalisation, visual display, etc., on the relationship between boredom and impulse buying.
- Additionally, what will be the influence of boredom and these stimulations on other outcomes, including well-being (Biolcati et al., 2018), cyberbullying (Koban et al., 2018), online addiction (Wegmann et al., 2018), etc.
- To investigate additional traits of online consumers, such as emotional instability (Barnett & Klitzing, 2006; Holte & Ferraro, 2020; Tzavela et al., 2017) and amotivation (Watt & Vodanovich, 1992), within the context of boredom and s-commerce.

Study 3: Consumer brand cyberbullying and social commerce: the role of boredom and personality traits

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- What will be the findings of investigating the current research model on other platforms (e.g., Instagram, Trade Me, etc.) and within diverse cultural contexts, considering that cyberbullying is a global issue.
 - What will be the findings of investigating CBCB in relation to other types of boredom i.e., leisure boredom and state boredom.
 - What will be the findings of examining the effect of boredom on CBCB from the perspective of consumers bullying other consumers due to the brand they support/ love (Breitsohl et al., 2018).
 - To explore boredom in relation to specific CBCB type such as teasing, trolling, harassment, ostracism, and camouflage, as suggested by Breitsohl et al. (2018).
 - To consider diverse perspectives in the examination of cyberbullying, by encompassing roles such as victims, defenders, bystanders, and peacemakers.
 - What will be the findings of investigating the moderating role of other s-commerce stimulations, such as escapism, the need for belongingness (Sundström et al., 2019), attention seeking (Studak & Workman, 2004), self-image (Wang & Ngai, 2022), etc., in relation to boredom and consumer brand cyberbullying in Facebook
 - To examine the potential consequences of consumer brand cyberbullying (CBCB) on both consumers and the associated brand or business i.e., discontinue usage, negative attitude etc.
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Appendix 1. Ethical Approval Letter

WAIKATO MANAGEMENT SCHOOL
TE RAUPAPA

Waikato Management School
The University of Waikato
Private Bag 3105
Hamilton 3240
New Zealand

Amanda Sircombe
Research and Postgraduate Manager
Phone +64 7 838 4378
Email amandas@waikato.ac.nz
www.management.ac.nz/research



Rebecca Ali
By email: hamidrezakordd@gmail.com

2 February 2024

Dear Rebecca

***Ethics Application WMS 23/132
Consumer Brand Cyberbullying and Social Commerce: The Role of boredom and
Personality Traits***

The above research project, as outlined in your submitted application, has been granted Ethical Approval for Research by the Waikato Management School Human Research Ethics Committee.

Please note: should you make changes to the project outlined in the approved ethics application, you may need to reapply for ethics approval.

Best wishes for your research.

Kind regards,

Amanda Sircombe

Amanda Sircombe
WMS Research and Postgraduate Manager

Appendix 2. Co-Authorship Form



Co-Authorship Form

Postgraduate Studies Office
 Student and Academic Services Division
 Wahanga Rāroanga Mātauranga Aroanga
 The University of Waikato
 Private Bag 3105
 Hamilton 3240, New Zealand
 Phone +64 7 838 4439
 Website: <http://www.waikato.ac.nz/sasd/postgraduate/>

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Chapter 2 of thesis
 Investigating Boredom In Social Commerce: Definition, Function, And Consequences
 • Paper under review for 2nd round in Australasian Journal of Information System (AJIS)
 • Accepted and presented at in Marketing Strategy and Policy (MSP2021)

Nature of contribution
 by PhD candidate

Collaboration on developing research idea, data collection, analysis, findings, interpretation, and manuscript writing.

Extent of contribution
 by PhD candidate (%)

70

CO-AUTHORS

Name	Nature of Contribution
Dr. Gohar F. Khan	Collaboration on developing research idea, data analysis and interpretation
Dr William Wang	Offered advice throughout the research, and commented on the final manuscript

Certification by Co-Authors

The undersigned hereby certify that:

- ❖ the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and

Name	Signature	Date
Dr, Gohar F. Khan		2/13/2024
Dr William Wang		13/Feb/2024

July 2015



Co-Authorship Form

Postgraduate Studies Office
Student and Academic Services Division
Wahanga Ratonga Matauranga Akonga
The University of Waikato
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Chapter 3 of thesis
Boredom in social commerce: investigating the factors contributing to impulse buying.
• Paper submitted to Journal Internet Research.
• Submitted in European conference of information system (ECIS 2024) as short paper

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Chapter 4 of thesis
Consumer Brand Cyberbullying and Social Commerce: The Role of Boredom and Personality Traits
• Paper submitted in European Journal of Information System (EJIS)
• Submitted in European conference of information system (ECIS 2024) as short paper

Nature of contribution
by PhD candidate

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