

A systematic literature review:
How does stress influence
consumer decision-making,
particularly regarding risk-
taking behaviour?

Maria Carolina Martins

Dissertation written under the supervision of Professor

Daniel Fernandes

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Abstract

English

This dissertation, authored by Maria Carolina Martins, explores the question: *"How does stress influence consumer decision-making, particularly regarding risk-taking behavior?"* The research analyzes academic literature to demonstrate the significant impact of stress on consumer behavior. Stress, in both short-term (acute) and long-term (chronic) contexts, affects emotional and physiological responses, leading consumers to make simpler, less risky decisions due to higher cognitive load. Stress also alters risk-taking behavior, pushing consumers to either rely on familiar brands (risk aversion) or engage in risk-seeking due to present bias and overconfidence.

The primary goal of this thesis is to prove a direct correlation between stress and various aspects of consumer decision-making. It provides businesses with insights to enhance marketing strategies and improve customer engagement, satisfaction, and loyalty. By understanding how stress shapes consumer behavior, organizations can develop approaches that account for consumers' psychological and emotional states, leading to more effective communication and decision-making support.

Keywords: Consumer behavior, stress, decision-making, risk-taking, cognitive load, marketing strategies.

Abstrato

Português

Esta dissertação, da autoria de Maria Carolina Martins, explora a questão: “Como é que o stress influencia a tomada de decisão do consumidor, nomeadamente no que diz respeito ao comportamento de risco e à carga cognitiva?” A investigação analisa a literatura académica para demonstrar o impacto significativo do stress no comportamento do consumidor. O stress, tanto em contextos de curto prazo (agudo) como de longo prazo (crónico), afecta as respostas emocionais e fisiológicas, levando os consumidores a tomar decisões mais simples e menos arriscadas devido a uma maior carga cognitiva. O stress também altera o comportamento de tomada de risco, levando os consumidores a confiar em marcas familiares (aversão ao risco) ou a procurar o risco devido a preconceitos presentes e excesso de confiança.

O principal objetivo desta tese é provar a existência de uma correlação direta entre o stress e vários aspectos da tomada de decisões dos consumidores. Esta tese fornece às empresas informações que permitem melhorar as estratégias de marketing e aumentar o envolvimento, a satisfação e a fidelidade dos clientes. Ao compreender como o stress molda o comportamento do consumidor, as organizações podem desenvolver abordagens que tenham em conta os estados psicológicos e emocionais dos consumidores, conduzindo a uma comunicação e a um apoio à tomada de decisões mais eficazes.

Palavras-chave: Comportamento do consumidor, stress, tomada de decisões, assunção de riscos, carga cognitiva, estratégias de marketing.

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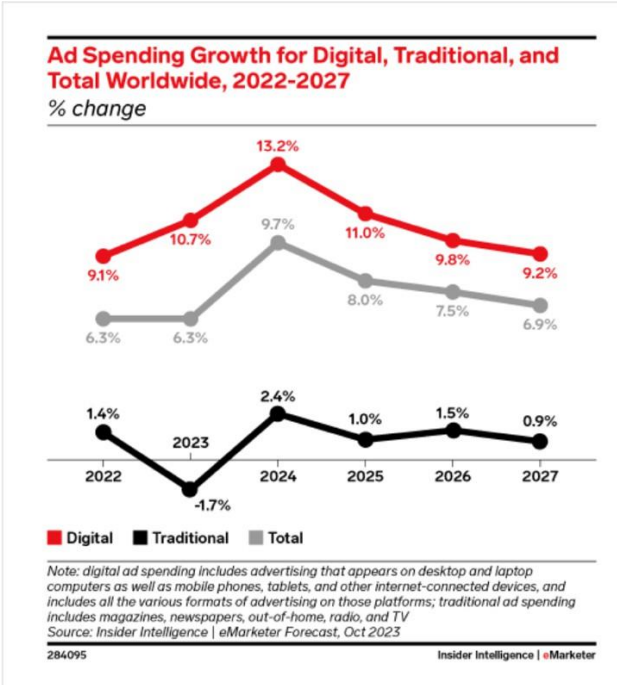
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1. Introduction

1.1 Relevance of the Theme

The market is more saturated than ever with information, ads, and promotions in the modern digital era. Marketing messages are thrown at consumers via various channels, including digital advertising, social media, and traditional media (Flores, 2024). Customers may experience "information overload," a condition when they are overloaded with information and find it difficult to comprehend it all (IxDF, 2024). This might happen because of their continuous exposure to promotional content. The fast-paced nature of modern life, where stress levels are already elevated because of numerous personal and professional responsibilities, exacerbates this state of overload.

This can be demonstrated in the eMarketer article (Cramer-Flood, 2024), which shows a significant increase in global digital ad spending, highlighting the intense competition for consumer attention. This trend is clearly visualized in the image presented below, which is sourced from the eMarketer article.



The manner in which organisations must currently function makes it clear how important it is to research how stress affects consumer behaviour. Businesses now must compete not just based on pricing or product quality, but also on how their marketing techniques influence and are influenced by their target audience (Shams, Chatterjee and Chaudhuri, 2024). Businesses must set themselves apart in the contemporary market not just by the caliber of their goods or services but also by their capacity to engage customers emotionally and on a deeper level (Kihlstrom, 2024). This relationship is especially important when consumers are stressed since stress can change how people perceive risks, make decisions, and behave in general.

Furthermore, the emergence of influencer marketing and social media has added new factors to the customer decision-making process. In addition to direct advertising, today's consumers are also impacted by the beliefs and actions of peers, influencers, and even complete strangers on social media platforms (Influencer Marketing Hub, 2024). So, because it offers information that can assist companies in navigating this complicated environment by adjusting their marketing strategies to the psychological demands of their target audience, this research is both pertinent and timely.

1.2 Objective of the Thesis

Under these circumstances, it is crucial to assess the impact of stress on consumer behaviour; thus, the primary objective of this thesis is to answer the research question “How does stress influence consumer decision-making, particularly regarding risk-taking behaviour?”. The main goal of this thesis is to prove that stress has a substantial impact on consumer behaviour by doing a thorough analysis of the body of academic research already in existence.

This study aims to demonstrate a direct correlation between stress and various aspects of consumer decision-making, showing that stress is a important influence on how consumers behave, think, and make decisions in the marketplace. Businesses looking to maximize their marketing and communication efforts must comprehend this relationship. Businesses can improve customer engagement, contentment, and loyalty by developing more effective strategies that resonate with their target audience by incorporating knowledge into how stress affects consumer behaviour. The purpose of this thesis is to give organisations a solid foundation of information that they can use to better understand their clients and adjust their strategies to take into consideration their psychological and emotional states.

1.3 Structure of the Thesis

This thesis' overall goal is to systematically explore and analyze the relationship between stress and consumer behavior. The Introduction presents an outline of the research goal, places the importance of the study in context, and defines important keywords. The Literature Review, which follows, dives into previous research on the topic, summarising important findings and pointing out knowledge gaps that this thesis aims to fill. To ensure a thorough and objective study, the Methodology describes the methodical process followed used to find, select, and categorise pertinent literature. The summarised results from the reviewed literature are presented in the Results and Discussion section, along with a discussion of the results' implications for marketing strategies and theories of consumer behaviour. Lastly, the Conclusion highlights the most important findings from the study, discusses the limitations of the present study, and offers possible lines of inquiry for further investigation.

1.4 Definitions of Stress, Consumer Behavior, and Risk-Taking

Before moving on to the body of the thesis, where the methodology and results will be exposed, it is crucial to establish the major concepts that will be utilised throughout this thesis to completely comprehend the relationship between stress and consumer behaviour.

The World Health Organisation (2023) defines stress as a complicated physiological and psychological reaction to external demands or threats that are greater than a person's capacity for coping. This reaction entails a state of increased arousal and awareness that affects mental functions, emotional moods, and general health. The idea emphasises the complex nature of stress by bringing attention to both its psychological and physiological aspects. It highlights how stress results from believing that demands are greater than one's capacity to handle them, which then has an impact on one's mental and emotional health.

The choices and actions people or groups take when choosing, acquiring, utilising, and discarding products, services, or experiences are collectively referred to as consumer behaviour. Numerous elements, such as psychological, social, and cultural influences, have an impact on it. According to Karen Jacobs, consumer behaviour entails examining the ways in which individuals interact with ideas, products, and services to satisfy their needs and aspirations (Jacobs, 2008). This idea emphasises how intricate consumer behaviour is, recognising the many psychological and social factors that influence the decisions that consumers make.

Risk-taking behavior is defined as “any consciously or non-consciously controlled behavior with a perceived uncertainty about its outcome, and/or about its possible benefits or costs for the physical, economic or psycho-social well-being of oneself or others” (Rüdiger, Page 9, 1994,). Individual variations in risk perception, heuristics for making decisions, and emotional reactions all have an impact on this behaviour (Kusev, et al, 2017). Recent research has highlighted the interaction between cognitive biases and physiological states, emphasizing how these factors shape risk-taking behavior by requiring individuals to navigate uncertain consequences (Mingming, Mian Sajid, Rabia, Muhammad, 2022)

These revised definitions offer a thorough and up-to-date understanding of risk-taking, consumer behaviour, and stress. This thesis seeks to investigate how stress affects consumers' risk preferences and decision-making processes by analysing these ideas in connection to one another.

The categories of stress, risk-taking, and consumer behaviour were chosen because they accurately reflected the most recent findings from academic research and were deemed relevant and accurate. The World Health Organization's (2023) definition of stress was selected because it provides a thorough explanation of stress as a physiological and psychological reaction, in line with contemporary views that suggest stress entails intricate interplay between mental and physical states. This modern perspective is crucial to comprehending how stress affects consumers' ability to make decisions. The definition of consumer behaviour (Jacobs, 2008) was chosen because it provides a thorough and nuanced explanation of the complex interaction between psychological, social, and cultural elements that influence consumer behaviour. This makes the definition essential for comprehending the topic in its entirety. Finally, the definition of risk-taking behaviour (Trimpop, 1994) was selected due to its focus on the unpredictability of results and the possible effects on wellbeing. This definition is consistent with current research on cognitive biases and emotional responses, providing a contemporary understanding of how these factors influence risk-taking behaviour. When taken as a whole, these sources offer a strong framework for investigating the dynamic relationship between stress and consumer behaviour, guaranteeing that the analysis is based on the most comprehensive and current scholarly viewpoints.

1. Literature review

2.1 Introduction to the Topic

In contemporary marketing, comprehending the relationship between stress and consumer behaviour has grown more and more important. The influence of stress on consumer decision-making is enormous in a society where consumers are continuously bombarded with options and information (Cramer-Flood, 2024). It has been demonstrated that stress, whether acute or chronic, has a substantial impact on a number of consumer behaviour traits, such as risk-taking, impulse buying, and financial decision-making (Rodrigues, Lopes and Varela, 2021). In order to investigate how stress affects consumer behaviour, this literature review summarises current findings from significant studies, with an emphasis on impulsive purchasing, risk-taking, and financial decision-making. This evaluation looks at these topics to find trends and gaps in the literature that can guide future studies and marketing plans.

2.2 Stress and Impulse Buying

Stress and impulsive purchasing have a well-established link, and new research is illuminating the psychological processes behind this behaviour. Rosa Rodrigues, Paula Lopes and Miguel Varela (2021) conclude that stress can heighten emotional responses, leading to increased impulsivity in purchasing decisions. According to the study, stressed consumers are more likely to engage in impulse buying as a coping mechanism, particularly in environments designed to exploit emotional triggers. For example, the study points out that internet shopping platforms foster stress-induced impulse buying because of their continual stream of tailored advertisements and time-limited deals.

Muhammad Arslan Sarwar et al's essay (2023) delves into the ways in which internet shopping settings heighten the likelihood of stress-induced impulsive purchases. It makes the case that consumers' stress levels may rise as a result of the speed and ease of online shopping, when paired with focused marketing tactics, and this could result in rash purchases. The study (Sarwar, Nassir, Hussain, Abbas, 2023) also looks at the influence of consumer innovation in this setting, speculating that because innovative customers are always exposed to new products and trends, they may be more prone to stress-induced impulse purchases.

All these results point to the fact that stress makes spontaneous purchases far more likely, especially when shopping online. These studies highlight how crucial it is to comprehend the

emotional triggers that push customers under stress to make impulsive purchases. This has important ramifications for marketers who want to tailor their tactics to appeal to consumers under stress.

2.3 Stress and Financial Decision-Making

Another important area where stress affects consumer behaviour is finance. A thorough examination of how financial stress affects consumer decision-making, particularly in relation to spending and saving habits, may be found in the “Relationship between time pressure and consumers' impulsive buying—Role of perceived value and emotions” (un, Binbin, Zhang, Zheng, 2023) article. According to the study, those who are experiencing financial hardship are more inclined to make prudent financial choices, such cutting back on discretionary spending and putting money away. Stressed customers tend to choose short-term financial security over long-term financial goals, a behaviour that is frequently motivated by a concern of future financial instability.

The article also covers how financial strain might cause people to make more illogical financial choices, including hoarding funds or investing impulsively without doing the necessary research. These actions are frequently motivated by an increased fear of taking risks, which can lead to consumers overestimating possible losses and underestimating possible profits. This is consistent with research published by Kristina Durante and Juliano Laran (Durante and Laran, 2016), which indicates that stress modifies consumers' risk preferences and, depending on the situation, causes individuals to either avoid or take on excessive risks.

These studies shed light on the nuanced ways that consumer behaviour is influenced by financial stress, which has important ramifications for marketers and financial institutions. By providing tools for financial planning or stress-relieving items that can lessen the consequences of financial stress, companies may better tailor their goods and services to the demands of anxious customers by understanding these behaviours.

2.4 Stress and Risk-Taking

One important topic of inquiry is how stress affects consumers' decision-making processes when it comes to taking risks. Kristina Durante and Juliano Laran (2016), offer insightful information about how stress affects risk preferences. It suggests that, depending on the decision-making context and the psychological state of the individual, stress may either increase

risk aversion or promote risk-seeking behaviour, which in turn can lead to more extreme risk-taking behaviour. According to the study (Durante, Laran 2016), stress frequently deteriorates cognitive function, which makes people rely more on heuristics and biases that might distort how they perceive danger and make decisions, those who are under stress are more prone to make impulsive purchases, especially if they think the item will help them feel less worried. The need for instant satisfaction is frequently the driving force behind this behaviour, which can result in careless spending and unstable finances.

All this research (Durante, Laran 2016) highlights how crucial it is to comprehend how stress affects consumers' propensity for taking risks when making decisions. With this information, marketers may create more successful marketing efforts that highlight the safety and security of their products or offer stress-relieving items in response to consumers' varying degrees of stress (Mckenzie, Mcfarland, 2023).

2.5 Synthesis and Identification of Gaps

In terms of synthesis and gap identification, the evaluated research offers a thorough grasp of the ways in which stress affects several facets of consumer behaviour, such as risk-taking, impulse buying, and financial decision-making (Yurou et al, 2023 ;Durante, Laran, 2016). Still, there are several gaps in the literature that require attention (Yurou et al, 2023; Oleksandr et al). Furthermore, the majority of research concentrates on elements at the individual level, paying less attention to the ways in which cultural and societal influences affect stress reactions and consumer behaviour (Oleksandr et al).

Moreover, more research is required to understand how various types of stress—such as acute versus chronic stress—affect various consumer behaviours (Yurou et al, 2023), even if the current body of literature offers insightful information about the link between stress and behaviour (Yurou et al, 2023; Oleksandr et al). Subsequent investigations may also examine the ways in which stress interacts with psychological variables, such as despair and anxiety, to impact customer behaviour (Oleksandr et al).

2.6 Implications for Future Research

Future studies should examine the long-term impacts of chronic stress on consumer behaviour in light of the limitations that have been found. Further study is also required to determine how cultural and sociological variables influence stress reactions and consumer behaviour. Researchers ought to look at the ways in which various types of stress combine with other psychological elements to affect consumer behaviour.

To sum up, this study of the literature offers a comprehensive understanding of how stress affects consumer behaviour. The results imply that stress has a substantial impact on a number of consumer behaviour traits, such as risk-taking, impulse purchasing, and financial decision-making. Nonetheless, there are still gaps in the literature that require attention, especially when it comes to the influence of cultural and societal elements and the long-term repercussions of chronic stress. Future studies can fill in these gaps and offer a more comprehensive understanding of the connection between stress and consumer behaviour, which can guide the development of financial products and marketing methods that are more successful.

2. Methodology

The methodological section describes the organised process used to carry out this systematic literature review on how stress affects consumer behaviour. The objective was to thoroughly locate, assess, and compile relevant studies in order to comprehend how stress affects consumers' decision-making processes. The methods utilised in this systematic literature review for search strategy, data extraction, research categorisation, and synthesis are outlined below.

3.1 Search strategy

The search engine Google Scholar was initially used to find relevant material due to its broad coverage of scholarly articles across various fields, essential for addressing the interdisciplinary nature of the topic. Keywords and search phrases such as "stress," "stress and risk-taking," "risk-taking behaviour in consumers," "stress impact on consumer choices," "stress and consumer risk preferences," and "consumer decision-making" guided the search strategy. To further enhance the research, Wiley Online Library, Sage Journals and Science Direct were also

consulted. These additional sources, alongside Google Scholar, were selected for their reliability and extensive information in the field. Utilizing all three resources contributed to a more diverse and comprehensive sample of articles for the thesis.

3.2 Inclusion and Exclusion Criteria

To ensure the review contained only the most pertinent papers, the inclusion and exclusion criteria were created. The study's direct relevance to the subject of stress and how it affects consumer behaviour served as the main inclusion criterion. This required choosing research that explicitly examined the connection between stress and purchasing choices, actions, and preferences. As the aim was to present a thorough overview of the available literature on the subject, there were no limitations on the kind of study (e.g., empirical research, theoretical papers) or the year of publication.

Studies that did not explicitly address the impact of stress on consumer behaviour or that did not answer the primary concerns of the research were subject to exclusion criteria. Twenty-nine articles were found to be potentially related following the first screening. Nevertheless, two articles were eliminated after more examination since their coverage of the relevant topics was insufficient. These exclusions were made after a careful review of the content to make sure the final pool of twenty-seven articles was both relevant and representative of the literature on the topic.

Initially, the titles and abstracts of the articles retrieved through the search strategy were reviewed to identify studies that were likely to be relevant. This first stage of screening was crucial in narrowing down the large number of search results to a manageable set of articles for full-text review.

The complete texts of the twenty-nine articles were carefully examined in the second phase. This required evaluating each article's content to determine how pertinent it was to the study topics. There were twenty-nine items in the final batch after 2 articles were eliminated at this stage for not meeting the review's goals. These articles were found in the first search, but were excluded because they did not address the effect of stress on consumer behaviour. This careful and systematic screening process ensured that only the most pertinent studies were included in the final analysis.

3.3 Data Extraction

A crucial step in the systematic review procedure was data extraction, which made it possible to synthesise the results from the chosen research. Key findings pertinent to the study questions were the data extraction procedure's focus.

Initially, we will discuss various forms of stress and their unique effects on individuals. We will then move on to identify various risk-taking behaviours and consumers' decision-making processes to gain a better understanding of these thought processes and the impact stress can have on them. We will then apply these concepts to specific contexts to see if people's reactions vary there. Finally, we will conclude by discussing the implications of age and gender differences and what implications all of this has on the marketing field.

The articles were organised into seven categories to facilitate a more structured analysis:

1. **Types of Stress in Consumer Decision-Making:** This category covered studies that differentiated between types of stress, such as acute vs. chronic stress and situational vs. enduring stress.
2. **Mechanisms of Stress Influence:** Articles in this category examined the mechanisms through which stress affects consumer behavior, including cognitive load, emotional responses, and physiological responses.
3. **Risk-Taking Behavior:** This category included studies that explored stress's impact on risk aversion vs. risk-seeking behavior, as well as the use of heuristics and biases under stress.
4. **Consumer Decision-Making Processes:** This category analyzed how stress affects the processes consumers use to make decisions, including information processing and choice overload.
5. **Consumer Behavior in Specific Contexts:** This category focuses on how stress influences consumer behavior in particular contexts, such as financial decisions, health-related decisions, and shopping behavior.
6. **Demographic and Psychographic Variations:** Articles were further categorized based on demographic factors like age and gender, as well as personality traits that might influence how stress affects decision-making.
7. **Interventions and Practical Implications:** This category included studies that examined interventions aimed at reducing stress and their implications for marketing strategies.

An Excel template that organised studies into these categories in a methodical manner made the task of extracting data easier. Rather than examining each study separately, this method allowed conclusions to be synthesised based on the aggregate insights from the articles within each category.

3.4 Study Categorization

The studies were categorised based on the themes and sub-themes that emerged from the data extraction procedure. The seven main categories—each with two to three subcategories—offered a structure for grouping the research and compiling the results. This method made it possible to analyse literature in a nuanced way, highlighting various aspects of the connection between stress and consumer behaviour.

Article Criteria	1. Types of Stress in Consumer Decision-Making		2. Mechanism of Stress Influence			3. Risk-Taking Behavior	
	Acute vs. Chronic Stress	Situational vs. Enduring stress	Cognitive load	Emotional Responses	Physiological Responses	Risk Aversion vs Risk seeking	Hueristics and Biases

Article Criteria	4. Consumer Decision-Making Processes		5. Consumer behaviour in specific contexts			6. Demographic and psychographic variations		7. Interventions and Practical Implications	
	Information Processing	Choice Overload	Financial Decisions	Health-Related Decisions	Shopping Behavior	Age and Gender difference	Personality Traits	Stress Reduction Interventions	Marketing Strategies

For example, within the "Types of Stress in Consumer Decision-Making" category, studies were further subdivided into acute and chronic stress, and situational and enduring stress (appendix 8.1 and 8.8.). Similarly, in the "Risk-Taking Behavior" category, studies were classified based on their focus on risk aversion vs. risk-seeking behavior, as well as the influence of heuristics and biases (appendixes 8.3 and 8.10).

This classification made it possible to analyse the material in a more sophisticated way and highlighted several aspects of the relationship between stress and consumer behaviour.

3.5 Data Synthesis

In order to integrate the results from the research into each of the seven categories and derive more general conclusions about the relationship between stress and consumer behaviour, data synthesis was done using a narrative technique. The emphasis was on synthesising qualitative

findings from the literature rather than performing a meta-analysis. The choice of the narrative synthesis approach was made because it made it possible to examine the themes and patterns that emerged from the literature in greater detail.

For it to provide a coherent knowledge of the subject, the synthesis process entailed combining findings and determining similarities and contrasts amongst investigations. The study combined the findings from the individual research for each category to give a thorough picture of how stress affects many facets of consumer behaviour. This method made it possible to evaluate the literature in a more comprehensive way and captured the nuanced nature of the interaction between stress and consumer decision-making.

3.6 Ethical Considerations

As this study only used data from other publications, there were no explicit ethical issues. To guarantee that all information sources were properly recognised and to comply with academic norms and copyright regulations, proper citation methods were scrupulously adhered to.

3. Results and Discussion

In this chapter, the findings of the study on the impact of stress on consumerism are presented and analysed. The goal here is to provide a comprehensive understanding of how stress influences consumerism, contributing valuable knowledge to the fields of marketing and consumer psychology. In order to do so, as covered in the methodology chapter, a sample of papers was analysed in light of a set of criteria that covered all the relevant issues to be considered. Each one of those criteria will now be analysed individually according to the findings of the papers, relating them to other reviews found in the literature.

4.1 Types of Stress in Consumer Decision-Making

Firstly, it is important to distinguish types of stress in consumer decision-making to understand in a more specific way how they are affecting consumerism-related decisions. Two perspectives were considered in this topic: acute / chronic stress and situational / enduring stress.

4.1.1 Acute and Chronic Stress

Starting with acute and chronic stress, acute stress is often triggered by immediate and short-term pressures, while chronic stress results from prolonged and persistent sources (Moschis, 2007) .

Acute stress, characterised by its immediate impact and short-term urgency (Inge et al., 2019), significantly influences consumer decision-making processes (Samson and Voyer, 201) . The sense of urgency associated with acute stress demands quick decision-making, often leading to more emotional reactions (Lin, Yen and Chuang, 2006) and impulsive purchases, especially in online contexts (Comegys, Hannula and Vaisanen, 2009). Moreover, acute stress is related to a higher susceptibility to immediate social influences and peer pressure (Dahl, 2013), as individuals seek to align their consumption behaviours with those of their peers to alleviate the stress of social conformity (Dahl, 2013).

In contrast, chronic stress exerts a more prolonged influence on consumer behaviour (Bell, 2011; Samson and Voyer, 2014), shaping long-term preferences and decision-making patterns (Schildberg-Hörisch, 2018). Consumers experiencing chronic stress, particularly those facing complex decisions regularly (Foxall, 2002) , may develop habituation to stress factors over time (Hartwig et al., 2022), which can lead to shifts in ethical consumer decisions (Shaw et al., 2005), as individuals are faced with the moral implications of their choices.

Furthermore, chronic stress especially affects deeply functionally illiterate consumers who struggle to navigate information and make informed decisions (Viswanathan et al., 2005). Social media also plays a dual role in the context of chronic stress, with excessive exposure to advertisements potentially increasing consumption tendencies (Hansen, Saridakis and Benson, 2018), while concerns about privacy and fear of targeted ads may discourage online purchases (Comegys, Hannula and Vaisanen, 2009).

Finally, social class can also be associated with chronic stress, with individuals from lower social/economic classes experiencing higher levels of stress that can significantly impact their consuming decisions (Kish-Gephart, 2017) . Moreover, chronic stress can lead to strong brand aversions (Diacon, 2005; Reham, Ebrahim,2013),experiences or change their standards and desires according to the situation that lead to their chronic stress.

On another note, it is also interesting to mention the differences between chronic and acute stress on m-commerce (mobile commerce involves using devices like cell phones and tablets

to conduct business transactions online, such as the purchase and sale of products, online banking, and bill payment. (Bloomenthal, 2024)). Chronic stress is suggested to be more related to ongoing technological changes and market dynamics, while acute stress is associated with immediate transactional pressures, both of them having impact on m-commerce decisions (Moutusy, 2010).

In summary, while acute stress prompts immediate and often impulsive decision-making under pressure, chronic stress shapes enduring consumer behaviours and preferences, influenced by factors ranging from social influences and ethical considerations to socio-economic status and media exposure.

4.1.2 Situational and Enduring stress

Another distinction when it comes to types of stress is between situational and enduring stress. Emergency purchasing is primarily linked to situational stress, which arises from specific, often unexpected, circumstances requiring immediate action. Unlike enduring stress, which is persistent and ongoing, situational stress is temporary but intense, affecting consumers' ability to make rational decisions (Moschis, 2007; Samson and Voyer, 2014). Situational stress usually comes from specific decision contexts, emotionally affecting decisions in the moment (Han, Lerner and Keltner, 2007; Bell, 2011), being linked to immediate, specific events (Hartwig et al., 2022), while enduring stress is more associated to consistent pressures due to market uncertainties or personal constraints (Xue and Jo, 2024), for example, and repeated decision-making scenarios (Foxall, 2002).

In fact, situational stress arises from specific, immediate pressures such as mating motives (Shanks et al., 2015) or self-construal priming, which temporarily shifts self-perception and influences decision-making processes (Mandel, 2015). Social influence is another significant situational stressor, particularly in public purchasing or group settings (Dahl, 2013). Financial events or investment decisions can also create situational stress, affecting consumer risk perception (Vlaev, Chater and Stewart, 2009).

On the other hand, enduring stress is associated with long-term pressures and expectations. Ethical decisions can induce enduring stress due to the persistent nature of value-based conflicts in consumer behaviour (Shaw et al., 2005). Cultural influences create lasting pressures that impact consumer behaviours over time (Soares, Farhangmehr and Shoham, 2003). Continuous evaluation of risk and trust in social media platforms affects consumer behaviour in the long

run (Hansen, Saridakis and Benson, 2018), as do long-term trust issues and perceived risks in online purchasing (Comegys, Hannula and Vaisanen, 2009). Social class continues to be a significant factor, with enduring stress levels affecting decision-making over time (Kish-Gephart, 2017). Economic stability and personal financial security issues (Diacon, 2005) also contribute to enduring stress, shaping consumers' willingness to take risks when purchasing luxury goods. Ongoing financial pressures influence long-term consumer financial behaviours (Durante and Laran, 2016), while prolonged life changes result in permanent alterations in brand loyalty (Mathur, Moschis and Lee, 2003; Reham, Ebrahim, 2013) perceptions (Dalli, Romani and Gistri, 2006). Additionally, while situational stress might arise from temporary pricing changes, enduring stress from long-term exposure to behaviour-based price discrimination strategies can lead to consumer frustration and brand aversion over time (Reham, Ebrahim, 2013).

To sum up, acute and situational stress cause a short-term decision-making under pressure, but chronic and enduring stress shape more long-term consumer behaviours and preferences. This indicates that individuals may become more risk-averse or risk-seeking depending on the duration and intensity of stress experienced. Understanding the various levels of stress is critical for organisations that want to effectively meet the demands of stressed customers.

4.2 Mechanisms of Stress Influence

After understanding the types of stress, it is important to address the mechanisms of stress influence associated. Cognitive load, emotional and physiological responses were analysed in the literature, allowing to come to the following findings.

4.2.1 Cognitive Load

Cognitive load refers to the mental effort that is required to process information and make decisions (in this case, purchasing decisions) (Sofi, Mir and Baba, 2020). There are many factors which can affect cognitive load in purchasing decisions.

As an example, in emergency purchases, high cognitive load is a major factor (Samson and Voyer, 2014). Additionally, stress affects emotional states, reducing our ability to make rational choices by impacting attention, memory, and decision processes (Han, Lerner and Keltner, 2007; Bell, 2011).

M-commerce increases cognitive load due to quick navigation, small screens, and multitasking, affecting decision efficiency (Moutusy, 2010). Evaluating trust and risk in online shopping also adds to cognitive load as consumers sift through a lot of information (Comegys, Hannula and Vaisanen, 2009). Additionally, cultural norms and values add extra considerations, boosting cognitive load and influencing decisions (Soares, Farghangmehr and Shoham, 2003). Social influence also raises cognitive load by making us think about others' opinions and judgments (Dahl, 2013).

Finally, financial stress also increases cognitive load, leading to more cautious luxury purchases (Diacon, 2005). Stress makes it harder to process brand information, often causing a preference for simpler, familiar brands (Reham, Ebrahim, 2013) Schildberg-Hörisch, 2018).

4.2.2 Emotional responses

There were 6 different emotional responses affecting purchasing decisions found in the literature, as follows:

- **Impulse Buying:** Strong emotional responses, whether positive (like excitement or pride) (Han, Lerner and Keltner, 2007) or negative (like anxiety or guilt) (Moschis, 2007; Moutusy, 2010; Samson and Voyer, 2014), can lead to impulsive buying behaviours. Consumers may make spontaneous purchases as a way to enhance positive feelings or alleviate negative ones.
- **Brand Loyalty and Trust:** Positive emotional experiences with a brand can foster loyalty and trust. Consumers who feel emotionally connected to a brand are more likely to remain loyal, even in the face of competitive offers or minor negative experiences (Mathur, Moschis and Lee, 2003; Dalli, Romani and Gistri, 2006; Esteves, Liu and Shuai, 2021).
- **Risk Perception:** Emotions influence how consumers perceive risk. Fear and anxiety can make consumers more risk-averse, leading them to prefer familiar, trusted brands or safer, more conservative choices. Conversely, positive emotions can make consumers more open to taking risks (Comegys, Hannula and Vaisanen, 2009).
- **Decision Simplification:** Emotions can simplify decision-making by providing a mental shortcut. For instance, a positive feeling towards a product can make the decision to purchase it quicker and easier, bypassing more detailed evaluation (Foxall, 2002; Schildberg-Hörisch, 2018).

- **Social Influence:** Emotions play a crucial role in how consumers respond to social influences. The desire to fit in, be accepted, or avoid negative judgment can drive purchasing decisions, especially in social settings or when influenced by peers and social media (Soares, Farghangmehr and Shoham, 2003; Viswanathan et al., 2005; Inge et al., 2019).
- **Post-Purchase Satisfaction:** Emotional responses also impact how consumers feel about their purchases after the fact. Positive emotions during the purchasing process can lead to higher satisfaction and reduced buyer's remorse, while negative emotions can have the opposite effect (Durante and Laran, 2016).

4.2.3 Physiological responses

Analogously, there could be identified 4 different physiological responses related to the impact of stress:

- **Enthusiasm Levels:** Enthusiasm levels, such as increased heart rate or heightened alertness, can make consumers more likely to engage in impulse buying (Foxall, 2002; Han, Lerner and Keltner, 2007; Samson and Voyer, 2014). When physically enthusiastic, consumers might make quicker, less considered purchases to match their heightened state.
- **Stress and Anxiety:** Physiological stress responses, like sweating or muscle tension, can lead to avoidance behavior (Inge et al., 2019; Viswanathan et al., 2005). Consumers experiencing high stress might steer clear of complex purchasing decisions, opting instead for simpler, more familiar products to reduce their anxiety.
- **Fatigue and Decision Fatigue:** Physical tiredness can impair cognitive function, leading to suboptimal purchasing decisions. Consumers may choose easier, more straightforward options or rely on habitual buying patterns when they are feeling tired (Moutusy, 2010; Kish-Gephart, 2017).
- **Fight-or-Flight Response:** This physiological reaction to perceived threats can influence buying behavior. In stressful shopping environments or high-pressure sales situations, consumers might make more impulsive decisions to escape the discomfort, potentially leading to buyer's remorse (Reham, Ebrahim, 2013).

To conclude this section, it is possible to state that cognitive load leads to simplified impulsive and often suboptimal purchasing decisions, with a preference for familiar brands and increased susceptibility to external influences. Emotional responses, which are deeply interconnected with physiological responses, significantly impact decisions, driving impulse buys, building brand loyalty, and influencing risk perception. Both cognitive load and emotional responses play crucial roles in shaping how stress impacts consumer decisions, highlighting the complex interplay between mental effort, emotions, and consumer behaviour.

4.3 Risk-Taking Behaviour

After covering some issues on stress, it is important to address the topic of decision-making more deeply. Decision-making is affected by uncertainty, which is amplified by stress, disrupting one's ability to process information and evaluate options clearly. Evidently, this is interconnected with the understanding of risk-taking behaviour and how this is influenced by stress. For that matter, this section contemplates exploring the shifts between risk aversion actions and risk seeking and covering heuristics and biases.

4.3.1 Risk aversion and Risk seeking

Risk aversion and risk-seeking attitudes in consumer decisions are influenced by various contexts (Foxall, 2002). Social context plays a crucial role; peer influence and social norms can significantly sway consumer behaviour (Dahl, 2013). Cultural factors also shape attitudes toward risk. Cultures with high uncertainty avoidance tend to be more risk-averse, as they prefer stability and predictability. These consumers often stick to well-known brands and products to minimise uncertainty. On the other hand, cultures that are more comfortable with uncertainty may foster risk-seeking behaviours, as consumers are more open to trying new and unfamiliar products (Soares, Farhangmehr and Shoham, 2003; Esteves, Liu and Shuai, 2021).

The mode of consumption, whether online or in-person, also affects risk attitudes. Online shopping can reduce perceived risk due to the availability of extensive reviews and information, thus encouraging more risk-seeking behaviour. However, the inability to physically inspect products can also heighten uncertainty for some consumers, leading to risk aversion (Comegys, Hannula and Vaisanen, 2009). Additionally, literacy levels also have an influence on one's risk profile: higher literacy enables better information processing and decision-making, often

leading to more calculated risks (Viswanathan et al., 2005). Emotional states are equally influential; stress and anxiety typically increase risk aversion, while positive emotions can boost confidence, encouraging risk-seeking behaviour (Han, Lerner and Keltner, 2007; Bell, 2011).

4.3.2 Heuristics and Biases

Regarding heuristics, the availability heuristic (Foxall, 2002; Moschis, 2007; Samson and Voyer, 2014) (1,4,20) is a mental shortcut where individuals estimate the likelihood of an event based on how easily examples come to mind. Under stress, consumers relying on the availability heuristic might make decisions based on recent or memorable experiences rather than objective analysis, leading to skewed perceptions of risk and benefit. Moral heuristics (Shaw et al., 2005) involve making quick judgments based on moral rules or values. When stressed, consumers might rely more heavily on these heuristics, making choices that align with their moral beliefs to reduce cognitive load, which can result in decisions that prioritise ethical considerations over practical or financial benefits. Affect heuristics (Bell, 2011) occur when emotions influence decision-making, stress heightens emotional responses, causing consumers to rely on affect heuristics more heavily. Positive or negative emotions can significantly impact their perceptions of products and brands, leading to decisions driven more by immediate emotional reactions than by rational evaluation (Lin, Yen and Chuang, 2006; Han, Lerner and Keltner, 2007). Brand familiarity, loyalty, and reputation serve as cognitive shortcuts to simplify decision-making (Comegys, Hannula and Vaisanen, 2009; Moutusy, 2010; Hansen, Saridakis and Benson, 2018; Xue and Jo, 2024). Stressed consumers are more likely to gravitate towards familiar and reputable brands, as this reduces uncertainty and the need for extensive information processing. Brand loyalty becomes a safe haven, providing comfort and perceived reliability, thus heavily influencing purchasing behavior under stress.

Moving on to the biases, anchoring (Samson and Voyer, 2014) is the cognitive bias where individuals rely heavily on the first piece of information they encounter (the "anchor") when making decisions. In the context of consumer behaviour under stress, anchoring can lead to skewed decisions, as stressed consumers may fixate on initial information and fail to adjust their judgments appropriately. Present bias (Durante and Laran, 2016; Inge et al., 2019), the tendency to prioritise immediate rewards over long-term benefits, is exacerbated by stress, since stressed consumers are more likely to focus on immediate gratification, neglecting the long-term consequences of their decisions. This can lead to impulsive purchasing and poor financial

planning. Overconfidence (Foxall, 2002; Han, Lerner and Keltner, 2007) involves an individual's belief in their own abilities or knowledge. Under stress, consumers may exhibit overconfidence, leading them to underestimate risks and overestimate their ability to make sound decisions, which can result in poorly considered purchases. Confirmation bias (Moschis, 2007) is the tendency to search for, interpret and remember information that confirms one's preexisting beliefs. When consumers are stressed, they are more likely to fall prey to confirmation bias, seeking out information that supports their immediate desires and ignoring contrary evidence. This can further impair their decision-making process.

To conclude, stress significantly influences consumer risk-taking behaviour, amplifying risk aversion in some cases by driving reliance on heuristics like brand familiarity and encouraging risk-seeking in others through present bias and overconfidence. Emotional and cognitive biases, such as affect heuristics and confirmation bias, further distort decision-making under stress, leading to impulsive or overly cautious choices. Having these concepts into consideration will help to better understand the influence of stress in consumers' decisions.

4.4 Consumer Decision-Making Process

Let us shift the focus of the analysis specifically to the consumer decision-making process. It is important to consider the effects of information processing and choice overload.

4.4.1 Information Processing

Under stress, consumers often prioritise speed over accuracy, focusing on the most immediately relevant information at the expense of a comprehensive evaluation (Samson and Voyer, 2014). This shift can lead to more impulsive or less optimal choices, as the capacity for detailed information processing is reduced.

Consumers engage in varying levels of information processing based on the complexity and importance of the decision at hand (Foxall, 2002) Emotional states further shape the depth and manner of this processing. Negative emotions, such as fear or anxiety, typically lead to more analytical processing, whereas positive emotions encourage more heuristic, less detailed processing (Han, Lerner and Keltner, 2007; Bell, 201). In fact, stress reduces the ability to process detailed information, compelling consumers to rely on simpler, less effortful decision strategies (Moschis, 2007) . Lower social class consumers, who may experience higher

cognitive loads and stress, tend to engage in less thorough information processing, relying more on heuristics and less on detailed evaluation (Kish-Gephart, 2017).

Moreover, consumers are more likely to remember negative information about disliked brands, reinforcing their negative perceptions and potentially leading to biased decisions (Dalli, Romani and Gistri, 2006). This selective attention further complicates the evaluation process, as consumers may dismiss potentially beneficial options due to entrenched negative biases.

Additionally, stress affects the ability to evaluate multiple brands thoroughly. Consumers under stress tend to simplify their decision-making processes, opting for easily recognisable brands (Reham, Ebrahim, 2013). This shift towards familiar options can limit the consideration of potentially better alternatives, as the effort required to evaluate less familiar brands becomes too much under stressful conditions.

4.4.2 Choice Overload

Similarly to information processing, choice overload can also be related with stress impacts on consumer's decision-making. Choice overload, where too many options overwhelm consumers, is intensified by stress, making decision-making even more difficult (Moschis, 2007; Samson and Voyer, 2014; Durante and Laran, 2016). Emotional states amplify decision complexity, with negative emotions driving more analytical processing and positive emotions leading to heuristic processing (Han, Lerner and Keltner, 2007; Bell, 2011).

Social influences add to choice overload by introducing conflicting opinions and additional options (Dahl, 2013). The need for cognition can help mitigate choice overload by enabling better information processing, but strong emotional responses often worsen it (Lin, Yen and Chuang, 2006). Online options also contribute to choice overload, especially when trust in retailers is low, increasing the cognitive burden (Comegys, Hannula and Vaisanen, 2009).

Lower social class consumers, facing higher stress and cognitive loads, rely more on heuristics and less on detailed evaluation, often leading to suboptimal decisions (Kish-Gephart, 2017). Overall, it is again reinforced that stress leads to simplified decision-making, selective attention

to negative information, and a preference for familiar brands (Dalli, Romani and Gistri, 2006; Reham, Ebrahim,2013).

It is only left to address the concept of decision paralysis. Decision paralysis occurs when consumers are unable to make a choice due to the overwhelming number of options or the complexity of the decision (Foxall, 2002).When faced with too many alternatives, especially under stressful conditions, consumers' cognitive capacity is taxed, leading to indecision and inaction. Emotional states further complicate this, as heightened sensitivity to potential outcomes can amplify the complexity of the decision (Han, Lerner and Keltner, 2007). Social influences, such as conflicting opinions from peers, add to the burden, making it even harder to choose (Kish-Gephart, 2017). This paralysis often results in missed opportunities or defaulting to the safest, most familiar options (Reham, Ebrahim,2013).

To sum up, stress greatly affects consumer decision-making by impairing detailed information processing and worsening choice overload. Under stress, consumers focus on quick, accessible information, often leading to impulsive or poor decisions. The abundance of options becomes overwhelming, making it difficult to choose wisely. Consequently, stressed consumers often experience decision paralysis or opt for familiar, low-risk choices to reduce anxiety.

4.5 Consumer behaviour in specific contexts

After exploring how the consumer decision-making process works, it is time to analyse the consumer behaviour in three specific contexts: financial decisions, health-related decisions and shopping behaviour.

4.5.1 Financial decisions

Throughout the analysis, some financial matters were already mentioned, but due to the amount of information available in the literature, it seemed appropriate to include a specific section for the topic.

Additionally, fear and excitement are particularly influential. Fear tends to lead to conservative choices, such as saving more or investing in low-risk assets. On the other hand, excitement can result in riskier investments as individuals chase higher returns (Lin, Yen and Chuang, 2006;

Han, Lerner and Keltner, 2007; Vlaev, Chater and Stewart, 2009; Schildberg-Hörisch, 2018; Hartwig et al., 2022). These emotional influences extend to risk tolerance, investment preferences, and overall attitudes towards saving and spending (Bell, 2011).

Stress significantly impacts financial decisions, leading to varied behaviours. Some individuals might adopt conservative spending habits to mitigate perceived financial threats. Nonetheless, stress can trigger impulsive financial behaviours, where spending acts as a form of relief (Moschis, 2007). Financial stress, particularly from life events, can also shift brand preferences, with consumers opting for budget-friendly brands during tough times or choosing premium brands as a form of self-reward during positive changes (Mathur, Moschis and Lee, 2003; Dalli, Romani and Gistri, 2006)

Many factors can be responsible for affecting financial decisions. Cultural pressure influences financial decisions, shaping risk preferences and dictating whether individuals lean towards saving, spending, or investing (Soares, Farhangmehr and Shoham, 2003). Social influence also plays a critical role, with trends like social investing and stress from peer comparisons affecting both investment choices and spending behaviours (Dahl, 2013). Ethical values are another important factor, guiding individuals to make financial decisions that have to align with their principles. For instance, some may choose socially responsible investments over potentially more profitable but unethical options (Foxall, 2002). Additionally, social class impacts financial behaviour, with lower social class individuals typically exhibiting more conservative financial behaviours to avoid potential losses, due to their added stress on this kind of decisions (Kish-Gephart, 2017).

4.5.2 Health-Related Decisions

Health-related decisions are also influenced by the levels of stress of the decision-maker. Heightened stress during health-related emergencies often leads consumers to make quick decisions about treatments or products without thoroughly evaluating alternatives or potential side effects. This immediate decision-making is often driven by a scarcity mindset, pushing consumers towards quick fixes rather than well-considered choices (Samson and Voyer, 2014). Stress impacts health-related decisions by influencing risk perceptions and preferences for immediate relief over long-term health benefits (Inge et al., 2019). Time pressure in urgent health situations can impact adherence to treatment plans, the selection of healthcare providers

and overall wellness behaviours (Mathur, Moschis and Lee, 2003; Dalli, Romani and Gistri, 2006).

Social and cultural factors are also to be considered. Social norms and peer behaviours significantly affect health-related choices, such as diet, exercise, and adherence to medical advice (Soares, Farhangmehr and Shoham, 2003). Cultural norms shape attitudes towards preventive care, treatment options, and health risk behaviours.

Consumers' ethical values influence their health-related decisions, such as choosing ethically produced health products like cruelty-free cosmetics, even if they are more expensive or harder to find (Foxall, 2002). Additionally, social class impacts health-related decisions, with lower social class individuals often avoiding preventative care due to cost concerns and perceived risks (Dahl, 2013).

4.5.3 Shopping Behaviour

Stress significantly impacts shopping behaviour, often driving consumers to prioritise availability and speed over cost or quality (Erzincanlı et al, 2024; Samson and Voyer, 2014; Xue and Jo, 2024). Emotional states heavily influence shopping behaviours, with positive emotions increasing impulse buying and negative emotions leading to more deliberate purchasing (Yurou et al, 2023). Stress, as a negative emotional state, can lead to either impulsive purchases as a form of emotional coping or more cautious, deliberative purchasing decisions (Durante, Laran, 2016; Schildberg-Hörisch, 2018). For instance, stress can cause consumers to shift their brand preferences, seeking products that offer emotional comfort or practical solutions to stress-related issues. This behaviour is evident when consumers, during stressful periods, increase their spending on comfort brands or explore new brands during positive life changes (Huang, Guo, 2023).

Moreover, the stress of life events significantly shapes shopping behaviour (Tarka, Kukar-Kinney, Harnish, 2022). Stressful life events can lead to increased spending on comfort brands, while positive changes may encourage exploration of new brands (Vlaev, Chater and Stewart, 2009). Brand dislike also shapes shopping behaviour, leading consumers to avoid certain brands, even if it means higher costs or inconvenience, to prevent negative experiences (Esteves, Liu and Shuai, 2021).

Cultural values and social factors also play a crucial role in shaping shopping behaviours (Katja et al 2023). Cultural norms influence preferences for novelty, brand loyalty, and the importance of social approval in purchasing decisions (Katja et al 2023). Social class further influences shopping patterns, where lower social class consumers tend to focus on necessities and value-for-money, while higher social class consumers may prioritise luxury and brand reputation (Katja et al 2023). Social factors, such as peer approval and validation, drive trends and herd behaviour in consumer markets (Dahl, 2013). For example, shopping behaviour in m-commerce is shaped by convenience expectations, personalised recommendations, and seamless payment experiences, which drive impulse purchases and repeat transactions (Moutusy, 2010; Hansen, Saridakis and Benson, 2018; Comegys, Hannula and Vaisanen, 2009).

Ethical values significantly impact shopping behaviour, driving consumers to support fair trade, organic, and environmentally friendly products (Aquino, Lins, 2023). These values often lead consumers to prioritise ethically produced goods, such as cruelty-free cosmetics, even if they are more expensive or harder to find.

Financial stress can alter shopping behaviour, especially in the context of luxury consumption (Wang, 2021). Consumers adjust their spending patterns and preferences to align with economic uncertainties and personal financial stability. For example, financial stress might cause consumers to delay or avoid luxury purchases, opting instead for familiar, low-risk products to reduce decision-making anxiety (Schildberg-Hörisch, 2018).

In short, it is important to state that stress deeply influences consumer behaviour across various contexts, including financial decisions, health-related choices and shopping habits. Although consumer behaviour may vary according to many factors, generally in financial decisions, stress often leads to conservative spending or impulsive financial actions as a form of relief. Health-related decisions under stress may result in quick, less-considered choices about treatments or products due to heightened anxiety. In shopping, stress can drive impulsive purchases, prioritising immediate availability over cost or quality, or lead to more cautious, familiar product choices to mitigate decision-making anxiety. Understanding these stress-induced behaviours helps businesses and professionals better address consumer needs and tailor their strategies accordingly.

4.6 Demographic and Psychographic Variations

It is also crucial to include in this analysis the impact of demographic and psychographic variations in the field of stress in consumer behaviour. On this analysis, age and gender difference and personality traits will be considered.

4.6.1 Age and gender Difference

Younger consumers tend to be more risk seekers compared to older consumers, who exhibit greater risk aversion (Samson and Voyer, 2014) and are more deliberative in their consumer decisions (Foxall, 2002). Younger individuals, particularly males, show a higher tolerance for rapid decision-making (Xue and Jo, 2024) and adaptability to stress (Durante and Laran, 2016). They are more inclined to embrace mobile technology for shopping, which offers them convenience and social validation (Moutusy, 2010). Additionally, younger consumers, especially females, are more likely to consider ethical and social factors in their purchasing decisions (Shaw et al., 2005; Dahl, 2013) and are more susceptible to emotional influences (Han, Lerner and Keltner, 2007). They are also more flexible, switching brands more easily and adapting to dynamic pricing strategies (Esteves, Liu and Shuai, 2021) .

4.6.2 Personality Traits

Personality traits significantly influence how stress affects consumer decision-making (Aquino.,Lins, 2023). Highly neurotic individuals experience stress more intensely, leading to risk-averse behaviour and preference for familiar brands (Farid, Dania Shakaib, Ali, 2028). Extraverts, being more resilient, often display risk-seeking tendencies under stress. Conscientious consumers cope by researching thoroughly, reducing impulsive buys, while open individuals seek novel products as stress relief. Agreeable individuals might align purchases with social norms, prioritising harmony, especially under stress (Yurou et al, 2023). Those with a high locus of control feel they can manage outcomes, resulting in more deliberate decisions (Aquino.,Lins, 2023). Understanding these traits helps marketers tailor strategies to different consumer segments, enhancing satisfaction and loyalty (Farid, Dania Shakaib, Ali, 2028).

Evidently, age, gender and personality traits significantly influence how stress impacts consumer decisions. Younger consumers tend to be more impulsive and adaptable, while older individuals are more deliberative and risk-averse. Gender differences show males often tolerate

rapid decisions better (Yurou et al, 2023. Personality traits shape stress responses, affecting risk preferences and decision-making styles (Aquino.,Lins, 2023).

4.7 Stress Reduction Actions and Marketing Strategies

To conclude this analysis, it is left to address the stress reduction interventions and the marketing strategies that literature suggests are appropriate to handle the influence of stress on consumer decisions.

4.7.1 Stress Reduction Actions

Interventions to manage this stress can be highly effective in improving consumer outcomes. For instance, educating consumers on stress management and providing clear, accessible information can help reduce stress (Inge et al., 2019). This approach empowers consumers to make more informed decisions without feeling overwhelmed by the pressure of limited resources.

Another important strategy is to offer clear information about the ethical attributes of products, which can simplify the decision-making process and alleviate stress (Shaw et al., 2005). When consumers understand the ethical implications of their purchases, they can make choices more confidently and with less emotional burden.

Mindfulness and stress management training are also valuable interventions. These techniques can enhance the quality of decision-making by reducing emotional stress (Han, Lerner and Keltner, 2007; Bell, 2011). When consumers are less emotionally affected, they are better equipped to evaluate their options logically and make decisions that align with their long-term goals.

For functionally illiterate consumers, providing clear, visually oriented information and personalised assistance can significantly reduce cognitive load and stress (Viswanathan et al., 2005; Moschis, 2007; Xue and Jo, 2024). This approach ensures that all consumers, regardless of their literacy levels, can access and understand essential information to make informed decisions.

Addressing stress from social influence is another critical area. Promoting individual decision-making confidence and offering tools to critically assess social information can help consumers navigate social pressures more effectively (Dahl, 2013).

Finally, improving customer service and addressing common complaints are practical interventions that can reduce consumer stress, mitigate brand dislike, and enhance overall brand perception (Dalli, Romani and Gistri, 2006; Esteves, Liu and Shuai, 2021; Schildberg-Hörisch, 2018). By ensuring that customers feel heard, and their issues are resolved, brands can foster a more positive and less stressful consumer experience. These interventions collectively underscore the importance of managing stress to facilitate better decision-making among consumers.

4.7.2 Marketing Strategies

Addressing the stress effects in consumers' decisions through targeted marketing and interventions can greatly improve consumer experiences and outcomes. One effective approach is providing clear, accessible information to mitigate stress (Inge et al., 2019), including information about the ethical attributes of products (Shaw et al., 2005). Marketers can leverage this by highlighting ethical practices and certifications to attract ethically conscious consumers, building brand loyalty (Shaw et al., 2005).

Regarding emotional states, marketing strategies that align with mindfulness include leveraging emotional appeals, personalised messaging and enhancing customer experience to foster positive decision outcomes (Han, Lerner and Keltner, 2007; Bell, 2011; Dahl, 2013). Simplifying information, highlighting key benefits and providing reassurances also help consumers make better decisions (Foxall, 2002; Viswanathan et al., 2005).

For functionally illiterate consumers, clear, visually-oriented information and personalised assistance can reduce cognitive load and stress (Viswanathan et al., 2005; Moschis, 2007; Xue and Jo, 2024). Marketers should focus on ease of use, trustworthiness and safe transaction processes to attract and retain consumers, particularly on social media platforms (Hansen, Saridakis and Benson, 2018).

Furthermore, addressing social influence stress also involves promoting individual decision-making confidence and tools to critically assess social information (Dahl, 2013). Marketing should consider time-sensitive promotions, personalised recommendations and responsive customer service to align with consumer time pressures, enhancing decision-making satisfaction (Xue and Jo, 2024). Additionally, transparent pricing policies, personalised promotions and responsive customer service build consumer trust and loyalty in competitive markets (Moutusy, 2010; Bell, 2011).

Cultural differences in risk preferences and decision-making processes should also be considered, using culturally resonant messages and appeals to engage consumers effectively (Soares, Farhangmehr and Shoham, 2003). Marketing strategies should also consider social class differences, offering value-driven products for lower social class consumers while highlighting unique features and luxury for higher social class consumers (Kish-Gephart, 2017).

Lastly, improving customer service and addressing common complaints reduce consumer stress, mitigating brand dislike and enhancing brand perception (Dalli, Romani and Gistri, 2006; Esteves, Liu and Shuai, 2021; Schildberg-Hörisch, 2018). Personalised discounts, loyalty rewards and, again, clear communication about pricing policies help build trust and reduce perceived unfairness (Dalli, Romani and Gistri, 2006; Esteves, Liu and Shuai, 2021; Schildberg-Hörisch, 2018).

On a nutshell, it is very important to consider stress reduction interventions and marketing strategies as a powerful tool against the impact of stress in consumer behaviour. Clear, personalised and visually oriented information are three pillars for proper marketing in this area (and in general).

4. Conclusion

To finish this thesis, it is important to consolidate the main ideas to give the reader a clear understanding of how stress influences consumer behaviour. This dissertation's goal is to investigate how stress influences consumer behaviour.

For that purpose, it analysed a sample of selected articles (through seven criteria). With this, it was possible to understand the various ways in which stress impacts consumer decisions, whether it was situational and acute stress, which impact decisions on the short-term, or enduring and chronic stress, which have a bigger impact on the long-term. Emotional and physiological responses came to corroborate that stress does indeed alter the decisions made by consumers, as well as the level of cognitive load required - higher cognitive load from stress results in choosing simpler, less risky options to cope with limited mental resources.

Additionally, it became clear that the decision-making process in consumerism is affected by the consumers' risk-taking behaviour, fluctuating between a more risk-adverse and risk-seeking profile. This fluctuation is directly affected by stress, pushing towards risk aversion in some cases by driving reliance on heuristics like brand familiarity and leading to risk-seeking attitudes in others, through present bias and overconfidence. The consumer decision-making process is also affected by information processing and choice overload, which are proved to be more difficult in stressful situations in many contexts, such as financial decisions, health-related contexts and shopping behaviour in general.

Furthermore, literature showed that age, gender and personality variables clearly determine how stress affects consumer decisions. Younger consumers are more impulsive and adaptive, whereas elderly people are more deliberate and risk averse, with males typically handling quick judgments better than females. Personality factors influence stress reactions, including risk preferences and decision-making styles.

Finally, and with great relevance, the stress reduction actions and marketing strategies

to handle the influence of stress in consumer behaviour were discussed, providing this dissertation with content for future studies and strategies. To effectively manage the impact of stress on consumer decisions, a multifaceted approach is required. Educating consumers about stress management and providing clear, accessible information can significantly reduce stress, helping them make more informed choices.

Techniques such as mindfulness and stress management training can improve decision quality by minimising emotional stress, allowing consumers to evaluate their options more rationally. For those with limited literacy, offering visually oriented information and personalised assistance helps reduce cognitive load and stress, making essential information more accessible. Addressing stress from social influence involves promoting individual decision-making confidence and providing tools for critical assessment of social pressures. Marketing techniques can also be adapted to address stress by giving clear, accessible information and emphasising ethical behaviours to attract conscientious customers. Emotional appeals, targeted communication, and a focus on client experience all contribute to successful decision-making outcomes. Brands may engage with varied consumer segments more effectively by ensuring simplicity of use and trustworthiness in communications, as well as taking cultural and social class variations into account. These combined efforts, stress reduction actions and marketing strategies, help consumers make better decisions and increase their general satisfaction.

5. Limitations and Future Research

We will now present the limitations of the current research. Due to time constraints, it was not possible to analyze a larger sample of articles, which would enrich the quality of the findings. It would have been interesting to explore how articles in the past viewed this matter, comparing it to the levels of stress of that moment.

Also, insights from companies to see how they adapted their marketing strategies in more stressful periods, such as the pandemic faced from 2020 to 2022. For those who intend to continue studies in the field, getting feedback from companies about these issues would be a major contribution.

Future research on consumer behavior and stress will likely explore how evolving digital environments and societal changes impact decision-making processes and stress levels. As consumers face increasing information overload and economic pressures, understanding the psychological mechanisms that drive purchasing behaviors under stress will be crucial. Research may focus on the role of technology in both exacerbating and alleviating stress, the influence of stress on brand loyalty, and how companies can better design products and marketing strategies that address consumer well-being. Additionally, cross-cultural studies could provide insights into how stress-related consumer behaviors vary globally, offering a more nuanced understanding of market dynamics as well as surveying representative samples of consumers about the impact of stress on their consumption behaviour, either by questionnaire or focus group interview.

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7. Appendix

8.1

Article Criteria		1. Types of Stress in Consumer Decision-Making	
		Acute vs. Chronic Stress	Situational vs. Enduring stress
A1	Emergency purchasing situations: Implications for consumer decision-making.	Acute stress situations demand quick decision-making due to time constraints and urgency, distinguishing them from chronic stress, which develops over a longer period and has a more prolonged impact on decision-making processes.	Emergency purchasing is primarily linked to situational stress, which arises from specific, often unexpected, circumstances requiring immediate action. Unlike enduring stress, which is persistent and ongoing, situational stress is temporary but intense, affecting consumers' ability to make rational decisions.

8.2

	Article	Criteria	2. Mechanism of Stress Influence		
			Cognitive Load	Emotional Responses	Physiological Responses
A1	Emergency purchasing situations: implications for consumer decision making	High cognitive load is a significant factor in emergency purchasing situations. The article explains that the urgent nature of these purchases increases cognitive demands, leading to reduced information processing capacity and potentially suboptimal decision-making.	The article highlights that emergency situations often elicit strong emotional responses, such as anxiety and fear. These emotions can cloud judgment and lead to impulsive decisions driven by the need to alleviate the immediate stressor.	Physiological responses, such as increased heart rate and adrenaline rush, are common in emergency purchasing situations. The article details how these physiological changes can heighten the sense of urgency and further impair cognitive functions, influencing decision outcomes.	
A2	Scarcity in retail: does it really extend to consumer decision making?	Scarcity increases cognitive load, reducing consumers' ability to process information and make thoughtful decisions.	Scarcity-induced leads to heightened anxiety and urgency, influencing impulsive and emotional decision-making.	Physiological responses include increased heart rate and stress hormones, which can impair cognitive function and decision quality.	
A3	An exploration of values in ethical consumer decision making	Ethical decision-making increases cognitive load as consumers weigh complex moral considerations alongside practical factors.	Ethical dilemmas evoke strong emotional responses, such as guilt and pride, influencing consumer choices.	Ethical decision-making can trigger physiological stress responses like tension and increased heart rate due to moral conflicts.	

8.3

	Article	Criteria	3. Risk-Taking Behavior	
			Risk Aversion vs Risk seeking	Heuristics and Biases
A1	Emergency purchase situations: Implications for consumer decision making		The article explores how consumers under acute stress in emergency situations may exhibit risk-averse behavior, preferring familiar and perceived safer options over new or uncertain choices. However, in some cases, the urgency might push consumers toward riskier decisions if they believe it will resolve the situation more quickly.	The article identifies common heuristics and biases, such as availability and anchoring, that consumers use during emergency purchases. These mental shortcuts help manage the high cognitive load but can result in systematic errors in judgment.
A2	A scarcity mindset alters neural processing underlying consumer decision making		Scarcity can lead to risk-seeking behavior as consumers might take more chances to secure limited	Common biases include a focus on immediate gains and neglect of long-term consequences, driven

8.4

8.5

8.4

	Article	4. Consumer Decision-Making Processes	
	Criteria	Information Processing	Choice Overload
A1	Emergency purchasing situations: Implications for consumer decision-making	In emergency situations, information processing is often shallow and hurried. The article describes how consumers may prioritize speed over accuracy, leading to a focus on the most immediately relevant information at the expense of a comprehensive evaluation.	The article suggests that choice overload can be particularly problematic in emergency purchasing scenarios. The stress of the situation can make it difficult for consumers to evaluate multiple options, potentially leading to decision fatigue and suboptimal choices.

8.5

	Article	Criteria	5. Consumer behaviour in specific contexts		
			Financial Decisions	Health-Related Decisions	Shopping Behavior
A1	Emergency purchasing situations: implications for consumer decision-making		Emergency financial decisions, such as those related to unexpected expenses, are influenced by acute stress. The article details how consumers might prioritize immediate financial relief over long-term financial planning, sometimes incurring higher costs or debt.	In health-related emergencies, the article notes that consumers often experience heightened stress, leading to quick decisions about treatments or products without thorough evaluation of alternatives or potential side effects.	The article discusses how emergency situations can alter typical shopping behavior, driving consumers to prioritize availability and speed over cost or quality. This shift can lead to impulsive purchases and increased spending on readily available products.
A2	A scarcity mindset alters neural processing underlying consumer decision-making		Scarcity mindset in financial decisions often leads to prioritizing immediate financial relief over strategic planning.	Scarcity impacts health-related decisions by pushing consumers towards quick fixes rather than well-considered choices.	Consumers under scarcity are more likely to make impulsive purchases, focusing on availability rather than cost or quality.
A3	An exploration of values in ethical consumer decision-making		Ethical values influence financial decisions, such as choosing socially responsible investments over potentially more profitable but unethical options.	Consumers may opt for ethically produced health products, such as cruelty-free cosmetics, even if they are more expensive or harder to find.	Ethical values impact shopping behavior, driving consumers to support fair trade, organic, and environmentally friendly products.

8.6

	Article / Criteria	6. Demographic and psychographic variations	
		Age and Gender difference	Personality Traits
A1	Emergency purchasing situations: implications for consumer decision making.	The article highlights variations in stress responses and decision-making under stress across different demographic groups. For instance, younger consumers might exhibit more risk-seeking behavior, while older consumers tend to be more risk-averse in emergency situations.	Personality traits, such as resilience and anxiety levels, influence how consumers handle emergency purchasing. The article suggests that individuals with higher resilience are better equipped to manage stress and make more rational decisions under pressure.
A2	A scarcity mindset alters neural processing underlying consumer decision making	Younger consumers may be more susceptible to scarcity-induced stress, while gender differences in response were not highlighted significantly.	Traits like impulsivity and anxiety can magnify the effects of a scarcity mindset on decision-making.

8.7

	Article Criteria	7. Interventions and Practical Implications	
		Stress Reduction Interventions	Marketing Strategies
A1	Emergency purchasing situations: Implications for consumer decision-making.	The article suggests several interventions to reduce stress in emergency purchasing, such as pre-planning and stress management techniques. These interventions aim to improve decision-making by lowering the acute stress experienced during emergencies.	From a marketing perspective, the article discusses strategies that can help consumers in emergency situations, such as clear and concise information, easy access to products, and customer support services. These strategies can enhance consumer experience and satisfaction during high-stress purchases.
A2	A scarcity mindset alters neural processing underlying consumer decision making	Interventions include educating consumers on stress management and providing clear, accessible information to reduce scarcity-induced stress.	Marketing strategies should aim to create a sense of abundance and provide reassurance to consumers to counteract scarcity effects.

	<div style="background-color: #555; color: white; padding: 5px;"> Article Criteria </div>	1. Types of Stress in Consumer Decision-Making	
		Acute vs. Chronic Stress	Situational vs. Enduring stress
A20	Stress and consumer behavior	The study examines both acute and chronic stress, highlighting how immediate stressors (e.g., time pressure) and enduring stressors (e.g., financial strain) affect consumer behavior.	Situational stress is caused by specific events or contexts, while enduring stress results from ongoing life circumstances. Both types of stress impact consumer decision-making.

	Article	Criteria	2. Mechanism of Stress Influence		
			Cognitive Load	Emotional Responses	Physiological Responses
A20	Stress and consumer behavior	Stress increases cognitive load, making it harder for consumers to process information and make optimal decisions. This often leads to simpler, more heuristic-based decision making.	Stress triggers emotional responses such as anxiety, frustration, and fear, which can influence consumer behavior by shifting preferences and risk tolerance.	Physiological responses to stress, such as increased heart rate and cortisol levels, can affect consumers' ability to focus and evaluate options effectively, leading to impulsive or avoidance behaviors.	
A21	Social class & risk preferences and behavior	Lower social class is associated with higher cognitive load due to limited resources and ongoing financial worries, making decision-making more challenging.	Emotional responses such as anxiety, fear, and insecurity are more prevalent in lower social classes, influencing their risk preferences and consumer behaviors.	Chronic stress linked to lower social class results in physiological responses such as elevated cortisol levels, which can impact decision-making processes.	
A22	Risk Preferences and the Consumption of Luxuries	High levels of financial stress increase cognitive load, making consumers more cautious in their luxury purchase decisions as they weigh risks and rewards carefully.	Emotional responses to financial stress, such as anxiety and fear of economic instability, impact consumers' luxury consumption behaviors by influencing risk perceptions.	Physiological responses to stress, such as increased cortisol levels, can affect decision-making processes related to luxury consumption, potentially leading to more conservative spending behaviors.	
A23	Responsibility of Risk Perception: Factors Affecting Consumer Understanding and Evaluation of Financial Risk	Discusses how stress affects consumers' cognitive load in understanding and evaluating financial risks, potentially leading to simplified decision-making processes or biases.	Examines emotional responses such as anxiety, fear, or confidence in relation to financial risks, and how these emotions influence risk perception and decision outcomes.	Considers physiological responses to financial stress, such as increased arousal levels or stress hormones, impacting consumer risk evaluation and decision-making abilities.	
A24	How Stress Can Change Our Decisions, Preferences, Stress-Induced Changes in the Brain	Stress increases cognitive load, affecting the brain's ability to process information efficiently. Over time, habituation to stress may lead to altered cognitive processing pathways, impacting consumer	Emotional responses to stress, such as anxiety and fear, initially shape consumer preferences. As stress habituation occurs, these emotional responses may diminish, leading to changes in long-term	Physiological responses to stress, such as changes in hormone levels and neural activity, play a crucial role in how stress habituation influences consumer preferences. The article discusses how the	

8.10

	Article	Criteria	3. Risk-Taking Behavior	
			Risk Aversion vs Risk seeking	Heuristics and Biases
A20	Stress and consumer behavior		Stress can either increase risk aversion, leading consumers to make safer choices, or, in some cases, increase risk-seeking behavior as a coping mechanism.	Stress heightens reliance on heuristics and biases, such as the availability heuristic and confirmation bias, as consumers look for quick and reassuring solutions.
A21	Social class & risk preferences and behavior		Lower social class individuals tend to exhibit more risk-averse behavior due to heightened sensitivity to potential losses, while higher social class individuals may display more risk-seeking behavior.	Social class influences reliance on heuristics and biases, with lower social class individuals more likely to use simple decision-making shortcuts due to limited cognitive resources.
A22	Risk Preferences and the Consumption of Luxuries		Higher levels of financial stress tend to increase risk aversion in luxury consumption, as consumers prioritize financial security over indulgent purchases.	Consumers under financial stress may rely on heuristics such as brand reputation or perceived value to mitigate perceived risk associated with luxury purchases.
A23	Dimensionality of Risk Perception: Factors Affecting Consumer Understanding and Evaluation of Financial Risk		Analyzes whether consumers under different stress conditions exhibit risk-averse or risk-seeking behaviors in financial decision-making, influenced by their perception of financial risks.	Examines cognitive shortcuts (heuristics) and biases consumers use in financial risk assessment, and how these may be influenced by stress-induced cognitive limitations.
A24	How Stress Can Change Our Deeper Preferences: Stress Habituation Explained Using the Free Energy Principle		Stress can initially increase risk aversion; however, with habituation, consumers may become more risk-seeking as their baseline tolerance for stress shifts.	The article explores how stress habituation might reduce reliance on heuristics and biases by making consumers more adaptable and resilient to stressors, thereby improving decision-making accuracy over time.
A25	The Effect of Stress on Consumer Saving and Spending		Stress can lead to increased risk aversion in saving decisions, with consumers preferring safe, low-yield savings options. Conversely, stress can also trigger risk-seeking behaviors in spending, such as splurging on luxury items for immediate relief.	Stress exacerbates reliance on heuristics and biases, such as the present bias, where consumers prioritize immediate rewards over future benefits, affecting their saving and spending patterns.
A26	Life events and brand preference changes		Life events can shift consumers' risk preferences. During stressful times, consumers may become more risk-averse, sticking to known brands. Conversely, positive life changes may increase risk-seeking behavior, prompting exploration of new brands.	Under stress from life events, consumers may rely more on heuristics and biases, such as brand loyalty or the availability heuristic, to simplify decision-making and reduce cognitive load.
A27	Brand Dislike: Representing the Negative Side of Consumer Preferences		Consumers experiencing stress-induced brand dislike may exhibit risk-averse behavior, avoiding the disliked brand altogether. Conversely, they may take risks by switching to unfamiliar brands in search of better experiences.	Stress heightens reliance on heuristics and biases, such as confirmation bias, where consumers focus on negative information about disliked brands and ignore positive aspects.
A28	Behavior-based price discrimination with nonuniform distribution of consumer preferences		Consumers may become risk-averse, sticking to brands or retailers with transparent pricing to avoid the uncertainty and stress of price discrimination. Alternatively, some consumers might engage in risk-seeking behavior by actively searching for better deals or manipulating their purchasing behavior to benefit from lower prices.	Consumers may rely on heuristics and biases, such as assuming higher prices indicate better quality or defaulting to familiar brands, to simplify decision-making under the stress of price discrimination.
A29	Are Risk Preferences Stable?		The stability of risk preferences under stress is examined, showing that stress can push individuals towards risk aversion or risk seeking, depending on their baseline preferences and the nature of the stressor.	Under stress, individuals may rely more heavily on heuristics and biases, such as the availability heuristic or status quo bias, to simplify decision-making and manage uncertainty, potentially altering their risk preferences.

	Article	Criteria	4. Consumer Decision-Making Processes	
			Information Processing	Choice Overload
A20	Stress and consumer behavior		Stress reduces the capacity for detailed information processing, leading consumers to rely on simpler, less effortful decision strategies.	Stress can exacerbate the effects of choice overload, making it harder for consumers to make decisions when faced with too many options.
A21	Social class & risk preferences and behavior		Lower social class consumers may engage in less thorough information processing due to higher cognitive load and stress, relying more on heuristics and less on detailed evaluation.	Choice overload can be more pronounced in lower social classes, where limited cognitive resources and higher stress levels make it difficult to handle multiple options.
A22	Risk Preferences and the Consumption of Luxuries		Financial stress can impair information processing abilities, causing consumers to rely on simplified decision-making strategies and overlook nuanced product information in luxury purchases.	Choice overload in luxury consumption is influenced by financial stress, with consumers feeling overwhelmed by options and opting for familiar or safer choices.

8.12

	Article	Criteria	5. Consumer behavior in specific contexts		
			Financial Decisions	Health-Related Decisions	Shopping Behavior
A20	Stress and consumer behavior		Stress significantly impacts financial decisions, often leading to more conservative spending or, conversely, to impulsive financial behaviors as a form of stress relief.	Stress affects health-related decisions by influencing risk perceptions and preferences for immediate relief over long-term health benefits.	Stress influences shopping behavior, potentially leading to more impulsive purchases as a way to cope with negative emotions or, alternatively, to more cautious and deliberate purchasing decisions.
A21	Social class & risk preferences and behavior		Social class significantly impacts financial decisions, with lower social class individuals exhibiting more conservative financial behaviors to avoid potential losses.	Health-related decisions are influenced by social class, with lower social class individuals often avoiding preventative care due to cost concerns and perceived risks.	Shopping behavior varies by social class, with lower social class consumers focusing on necessities and value for money, while higher social class consumers may prioritize luxury and brand reputation.
A22	Risk Preferences and the Consumption of Luxuries		Financial stress impacts luxury consumption by prompting consumers to prioritize essential expenses and allocate discretionary funds cautiously, affecting their willingness to indulge in luxury goods.	While not directly addressed, the principles may extend to health-related luxury decisions, where financial stress influences risk perceptions and spending behaviors.	Shopping behavior in luxury consumption is shaped by financial stress, with consumers adjusting their spending patterns and preferences to align with economic uncertainties and personal financial stability.
A23	Dimensionality of Risk Perception: Factors Affecting Consumer Understanding and Evaluation of Financial Risk		Focuses on how stress influences various financial decisions, such as savings, investments, or borrowing behaviors, shaped by consumer risk perceptions.	While not directly addressed, may draw parallels to health-related financial decisions influenced by stress and risk perceptions, such as insurance or healthcare investments.	Explores implications for consumer behavior in retail or consumption contexts where financial risk perception under stress affects spending patterns or purchase decisions.
A24	How Stress Can Change Our Demand Preferences: Stress Habituation Explained Using the Free Energy Principle		Stress habituation impacts financial decision-making by potentially increasing risk tolerance and altering long-term financial preferences and strategies.	In health-related contexts, habituation to stress can lead to changes in preferences for milder or more aggressive health interventions as consumers become more accustomed to stress.	Stress habituation may influence shopping behavior, making consumers more adaptable and potentially more open to trying new products or brands as their stress tolerance increases.
A25	The Effect of Stress on Consumer Spillover and Spillover		Stress influences financial decisions by skewing preferences towards immediate spending for stress relief and reducing the likelihood of consistent saving.	While primarily focused on financial behaviors, the article notes that stress-related financial strain can impact health-related decisions, such as delaying medical treatments to save money.	Stress leads to increased impulsive shopping as a form of emotional coping, often resulting in unplanned expenditures and reduced saving capacity.
A26	Life events and brand preference changes		Financial stress from life events affects brand preferences, with consumers possibly shifting towards more budget-friendly brands or, alternatively, choosing premium brands as a form of self-reward during positive life changes.	Health-related life events, such as illness or recovery, influence brand preferences in healthcare and wellness products, as consumers seek brands that promise quality and care worth the cost.	Life events shape shopping behavior, with consumers possibly increasing their spending on comfort brands during stressful periods or exploring new brands during positive life changes.
A27	Brand Dilution: Reexamining the Negative Side of Consumer Preference		Brand dilution influenced by financial stress can lead to consumers avoiding certain financial services or products associated with negative past experiences or perceptions.	Negative experiences with health-related brands (e.g., healthcare providers, pharmaceutical products) can result in brand dislike, affecting consumer health decisions and willingness to try alternative treatments.	Brand dilution shapes shopping behavior by leading consumers to avoid certain brands, even if it means higher costs or inconvenience, in order to prevent negative experiences.
A28	Behavioral price discrimination with uncertain distributions of consumer preferences		Behavioral price discrimination impacts financial decisions by requiring consumers to be more strategic about their purchases, potentially leading to changes in brand loyalty and spending habits.	While not explicitly covered, health-related decisions could be influenced if price discrimination extends to health-related products, causing consumers to alter their purchasing behavior to manage costs.	Shopping behavior is directly affected, as consumers may change their shopping patterns to avoid higher prices or take advantage of discounts, leading to shifts in brand loyalty and shopping frequency.

	Article	Criteria	6. Demographic and psychographic variations	
			Age and Gender Difference	Personality Traits
A20	Stress and consumer behavior		Age and gender differences in stress responses affect consumer behavior, with younger consumers and females often showing higher sensitivity to stress in decision-making contexts.	Personality traits such as neuroticism and conscientiousness moderate the effects of stress on consumer behavior, with higher neuroticism amplifying stress impacts and higher conscientiousness potentially mitigating them.
A21	Social class & risk preferences and behavior		Age and gender differences interact with social class to shape risk preferences and behaviors, with younger and female consumers in lower social classes often exhibiting higher risk aversion.	Personality traits such as risk tolerance and conscientiousness moderate the effects of social class on consumer behavior, with higher conscientiousness potentially reducing risk-taking in lower social classes.
A22	Risk Preferences and the Consumption of Luxuries		Age and gender differences interact with financial stress to influence risk preferences in luxury consumption, with younger consumers and females often exhibiting higher sensitivity to economic uncertainties.	Personality traits such as risk tolerance and conscientiousness moderate the impact of financial stress on luxury consumption, with higher conscientiousness potentially mitigating risk aversion in affluent spending.
...	Dimensionality of Risk Perception: Factors Affecting Consumer Understanding and Evaluation of		Considers how age, gender, or other demographic factors interact with stress-induced risk	Examines personality traits that moderate the relationship between stress, risk perception, and

	Article	Criteria	7. Interventions and Practical Implications	
			Stress Reduction Interventions	Marketing Strategies
A20	Stress and consumer behavior		Interventions to reduce consumer stress include providing clear and concise information, simplifying decision processes, and offering supportive customer service to alleviate stress-related decision-making difficulties.	Marketing strategies can be tailored to address consumer stress by highlighting product benefits that alleviate stress, offering stress-free purchasing experiences, and using reassuring messages to build consumer trust.
A21	Social class & risk preferences and behavior		Interventions to reduce stress in lower social classes include financial literacy programs, access to affordable resources, and policies aimed at reducing economic inequality.	Marketing strategies should consider social class differences, offering value-driven products for lower social class consumers and highlighting unique features and luxury for higher social class consumers.
A22	Risk Preferences and the Consumption of Luxuries		Interventions to alleviate financial stress include financial planning education, income stability initiatives, and targeted support programs that enhance consumer confidence and discretionary spending capacity in luxury markets.	Marketing strategies should acknowledge consumer sensitivity to financial stress, emphasizing value, exclusivity, and long-term benefits to attract and retain luxury consumers during economic uncertainties.
A23	Dimensionality of Risk Perception: Factors Affecting Consumer Understanding and Evaluation of Financial Risk		Discusses interventions or strategies to reduce stress among consumers, enhancing their ability to make informed financial decisions and manage risk perception.	Implications for marketers in understanding how stress impacts consumer behavior and tailoring strategies to address stress-induced risk perceptions in financial contexts.
A24	How Stress Can Change Our Deeper Preferences: Stress Habituation Explained Using the Free Energy Principle		Interventions aimed at reducing stress can help prevent negative changes in consumer preferences and decision-making processes, ensuring more stable and rational consumer behavior.	Marketers can leverage insights from stress habituation to develop strategies that cater to consumers' changing preferences, offering products and services that align with their evolved stress tolerance levels.
A25	The Effect of Stress on Consumer Saving and Spending		Interventions aimed at reducing financial stress, such as financial education and counseling, can help consumers develop better saving habits and control impulsive spending.	Marketers can tailor strategies to address consumers' stress-related financial behaviors, offering products and services that emphasize value and long-term benefits to appeal to stressed consumers.
A26	Life events and brand preference changes		Interventions aimed at reducing stress, such as targeted marketing campaigns or loyalty programs during major life events, can help maintain brand preferences and customer loyalty.	Marketers can develop strategies to address the impacts of life events on brand preferences, such as personalized marketing, emphasizing brand reliability, and creating emotionally resonant campaigns that align with consumers' life changes.
A27	Brand Dislike: Representing the Negative Side of Consumer Preferences		Interventions aimed at reducing consumer stress, such as improving customer service or addressing common complaints, can help mitigate brand dislike and improve overall brand perception.	Marketers can develop strategies to address brand dislike, such as rebranding, addressing negative feedback transparently, and creating positive brand experiences to counteract negative perceptions.
A28	Behavior-based price discrimination with nonuniform distribution of consumer preferences		Companies can implement stress reduction interventions, such as transparent pricing policies and customer education, to mitigate the negative impact of price discrimination on consumer stress and loyalty.	Marketers can develop strategies to address consumer stress by offering personalized discounts, loyalty rewards, and clear communication about pricing policies to build trust and reduce perceived unfairness.
A29	Are Risk Preferences Stable?		Interventions aimed at reducing stress, such as mindfulness training and stress management programs, can help stabilize risk preferences by improving individuals' ability to cope with stress.	Marketers can develop strategies that account for the impact of stress on risk preferences, such as providing clear, simple information and reducing decision complexity to appeal to stressed consumers.