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From browsing to buying: The ADHD impact on the pre-purchase and purchase stage of the online shopping journey

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Abstract

While online shopping has become a routine activity, its cognitive and emotional demands can present unique challenges for neurodivergent individuals. Therefore, this study investigates how individuals with Attention-Deficit/Hyperactivity Disorder experience the pre-purchase and purchase stage of the online shopping journey, and how these experiences differ from those without Attention-Deficit/Hyperactivity Disorder.

A qualitative approach was adopted, using a think aloud protocol and semi-structured interviews with 20 participants, 10 with ADHD and 10 without ADHD. Data were analyzed inductively using grounded theory to identify key themes and behavioral patterns.

Findings reveal that individuals with Attention-Deficit/Hyperactivity Disorder experience heightened cognitive overload, impulsivity, and time management difficulties during online shopping. They frequently exhibit hyperfocus, multitasking behavior, and reliance on coping strategies. In contrast, non-ADHD participants displayed more structured, goal-oriented and time efficient behaviors.

The study concludes that the online shopping journey is not universally experienced and highlights the need for more inclusive online retail environments. These insights contribute to both theory, by enriching existing literature on neurodiversity in consumer behavior, and practice, by offering concrete recommendations for more accessible online retail environments.

Keywords: Customer experience, online shopping journey, neurodiversity, Attention-Deficit/Hyperactivity Disorder

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1. Introduction

Shopping is a routine activity, which is a fundamental part of our lives, occurring on a regular, daily basis. Whether conducted in physical stores, through digital platforms, or mobile applications, shopping behavior reflect consumer preferences and market trends (Liu, 2024). Consumer shopping habits are not only routine but also vary significantly across different demographics and regions. For instance, Americans spend an average of 24 minutes daily purchasing goods and services (Horrigan, 2008), whereas 57,7% of Indonesian university students make one online transaction per month, 30,1% shops twice a month, and the remaining 12,2% engages in online shopping more than twice a month (Kuswanto et al., 2019). Also, Norway and Germany have been found to possess well-developed e-commerce industries, indicating the widespread adoption of digital shopping (Smith et al., 2013).

Shopping experiences can differ among individuals due to a range of different factors. Individual intentions and attitudes toward shopping are shaped by a combination of personal beliefs, subjective norms, and perceived control over the shopping process (Ajzen, 1991). These factors can contribute to varying shopping experiences across distinct consumer segments. Also, shopping experiences can be influenced by cognitive and psychological aspects. Both cognitive perception and personality traits impact individuals' attitudes towards online shopping (Wang, 2006). Cognitive factors include the ability to efficiently search for information online, as well as the perceived risk and self-efficacy, where self-efficacy is a person's confidence in their ability to use the internet effectively (Wang, 2006). These elements are particularly relevant when considering individuals with neurodevelopmental conditions such as Attention-Deficit/Hyperactivity Disorder (ADHD), since their experience is expected to differ from individuals without ADHD.

Attention-Deficit/Hyperactivity Disorder (ADHD) is widely recognized as a neurodevelopmental disorder characterized by difficulties in attention, executive functioning, impulsivity, and hyperactivity, which present across the lifespan. The already high number of ADHD diagnoses has been increasing significantly over recent years. For instance, in the United States, the occurrence of parent-reported ADHD diagnoses rose by 42% from 2003 to 2011, with a significant increase in medication treatment as well (Visser et al., 2014). Similarly, the ADHD diagnoses in the United Kingdom rose from 6.8% to 14.4% between 2005 and 2014 (Davidovitch et al., 2017).

Symptoms of Attention-Deficit/Hyperactivity Disorder, such as poor concentration, inattention, and impulsivity, create significant challenges for individuals with ADHD (Watters et al., 2017). These frequently interfere with daily responsibilities, hinder employment

opportunities and strain interpersonal relationships, intensifying the social and psychological challenges associated with the disorder. These findings demonstrate that Attention-Deficit/Hyperactivity disorder is a complex condition that requires a deeper understanding and adapted approaches to address its effects on different aspects of a person's daily experiences.

Despite the growing recognition of neurodiversity and the unique challenges faced by individuals with Attention-Deficit/Hyperactivity Disorder, no research has been done on how these individuals experience the online shopping journey and whether this differs from individuals without ADHD. Therefore, this research aims to fill that gap by examining how individuals with Attention-Deficit/Hyperactivity disorder navigate online retail spaces, what obstacles they encounter, and how these challenges influence their purchasing decisions.

To fill this gap, this research will seek to answer the following research question: *How do individuals with Attention-Deficit/Hyperactivity disorder experience the online shopping journey? And how does this differ from individuals without ADHD?*

From a theoretical perspective, this research enriches the existing literature on online shopping experiences and neurodiversity in marketing. Within the shopping experience literature, this study adds new findings into how individuals with Attention-Deficit/Hyperactivity Disorder navigate online retail environments, showing that common design elements can heighten cognitive load and hinder effective decision-making. In the context of neurodiversity in marketing, this study provides an empirical examination of how ADHD specific traits influence consumer behavior drawing the attention to the relevance of cognitive accessibility. By bridging these two areas, this research extends existing literature on how neurodevelopmental differences form the online shopping journey.

From a practical standpoint, and by examining these factors, this study provides insights into how ADHD influences consumer behavior and offers clear, and actionable guidance for online retailers aiming to create more inclusive and accessible online shopping experiences. Based on the findings, effective adaptations may include minimalist layouts to reduce clutter, distraction-free modes that hide promotional pop-ups, and flexible filtering tools to ease product overload. Moreover, integrating linear progress indicators can support clearer navigation. These features not only enhance usability for individuals with Attention-Deficit/hyperactivity Disorder but also increase inclusivity and strengthen customer satisfaction.

Furthermore, in terms of societal contribution, this study contributes to a broader dialogue on digital accessibility by highlighting the need to consider the cognitive dimensions of access within online retail environments. By acknowledging the diverse ways in which consumers engage with online retail platforms, this study stresses the importance of design

practices that accommodate neurodiversity and promote fair treatment across all consumer groups.

The first chapter presents the theoretical framework, providing an overview of the key concepts relevant to this study. The second chapter details the methodology, including the research design, data collection, analysis methods, and ethical considerations. This is followed by a presentation of the findings, a conclusion, and finally, a discussion consisting of the main contributions of the research, limitations and suggestions for future research.

2. Theoretical framework

2.1 Customer experience

Existing literature defines customer experience "as the internal and subjective response customers have to any direct or indirect contact with a company" (Meyer & Schwager, 2007, p.2). Direct contact can occur during purchase, use, and service encounters, while indirect contact arises through marketing communications, word of mouth recommendations, online reviews, and other representations of a brand. These interactions combined influence customers' perceptions and emotional connections to a business. Moreover, customer experience can also be defined as a multidimensional construct comprising cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings across various interactions (Verhoef et al., 2009). This research will be based on these definitions since analyzing customer experience through these responses provides the most comprehensive insight into how individuals interact with and perceive online shopping environments.

Customer experience is a continuous process determined by multiple touchpoints throughout the customer journey (Lemon & Verhoef, 2016). These touchpoints can be categorized into four key types. Brand-owned touchpoints include advertising and service interactions that are directly controlled by the company. Partner-owned touchpoints involve third-party distributors and collaborative channels. Customer-owned touchpoints encompass individual decision-making processes. Lastly, external, and social touchpoints arise from peer influence or online reviews (Lemon & Verhoef, 2016). Also, the customer journey can be conceptualized through three main stages (Lemon & Verhoef, 2016). The first stage is the pre-purchase stage. It involves customer interactions related to need recognition, information search, and brand evaluation. Customers engage with firms through various channels, for instance websites, advertisements, and social media, forming their perceptions before making a purchase decision. The purchase stage includes all activities related to the transaction itself, such as product selection, payment processes, and service interactions. The quality and ease of this experience can significantly impact customer satisfaction and brand loyalty. Finally, the post-purchase stage incorporates product usage, service support, and customer engagement (Lemon & Verhoef, 2016). Within this framework, the shopping experience plays a crucial role, particularly in the pre-purchase and purchase stages, where interactions with the brand, whether online or offline, directly influence perceptions and decision-making. Therefore, this research will only consider the pre-purchase and purchase stage of the customer journey.

2.2 The shopping experience as key component of customer experience

Previous research does not provide a single, universally accepted definition for the term "shopping experience" or "online shopping experience" (Rose et al., 2012; Verhoef et al., 2009). Traditionally, "shopping experience" has been conceptualized as the overall cognitive, affective, and behavioral responses of consumers during the purchase process, influenced by both personal and external factors (Gentile et al., 2007). Cognitive responses can be defined as cognitive evaluations when encountering numerical information, for instance budgets, prices, or ratings. Affective responses refer to the emotional reactions consumers may have during the customer journey. Finally, evaluations and choices are formed by these cognitive and affective responses (Gentile et al., 2007).

Since "online shopping experience" lacks a singular theoretical definition, it can be broadly understood as the interactions, behaviors, perceptions, and emotions that consumers undergo during their journey of searching, selecting, and purchasing products or services through digital platforms. "Online shopping experiences" can be constructed through the interplay of various factors, including website design, product presentation, user interface and interactive elements that influence consumer perceptions and engagement (Kawaf et al., 2017; Lemon & Verhoef, 2016; Rose et al., 2012).

As stated before, shopping experiences influence consumers' emotional and cognitive responses, this is also the case for online shopping experiences (Izogo et al., 2018). The affective experience can be impacted by playfulness, aesthetics, convenience, and usability (Izogo et al., 2018). Playfulness refers to the enjoyment associated with the online shopping experience and the aesthetics relate to the visual appeal of the website. Furthermore, convenience is characterized by the ease and efficiency with which consumers can navigate and make purchases online. Finally, the usability can be defined by the functional aspect of the website, for instance its user-friendliness. The cognitive experience is also affected by the online shopping experience (Izogo et al., 2018). This involves the features of the product, and the degree of reliability and assurance individuals feel regarding the e-retailer's credibility. Also, expertise, such as the perceived capability of customer support, and task management are part of the cognitive experience.

Both positive and negative online shopping experiences significantly impact consumers' emotional and cognitive responses (Barari et al., 2019). When an online shopping experience is considered positive, emotional responses, such as enjoyment have a major impact in driving positive word of mouth and customer loyalty. In contrast, when an online shopping experience is viewed as negative, cognitive evaluations become more dominant, leading to dissatisfaction

and negative word of mouth (Barari et al., 2019). Since online shopping experiences alter emotional and cognitive responses, individuals with Attention-Deficit/Hyperactivity disorder may perceive and react to them differently.

2.3 The symptoms of ADHD and their influence on decision-making

Attention-Deficit/Hyperactivity Disorder (ADHD) "is a lifelong neurodevelopmental disorder that causes difficulties with sustained attention, executive functioning, impulsivity, hyperactivity and/or emotional regulation" (Mierau, 2024, p.1). These cognitive and behavioral traits significantly impact various aspects of daily life, including decision-making processes in consumer behavior. The symptoms of ADHD are not static but fluctuate based on environmental demands and individual experiences, emphasizing the complexity of managing the condition (Mierau, 2024). Moreover, Attention-Deficit/Hyperactivity disorder typically starts in childhood, continues through adolescence, and endures into adulthood for over 60% of individuals (Ballard et al., 2025). This trajectory explains the enduring nature of the disorder, accentuating that is not a temporary condition, but rather one that can persist over time.

Individuals with ADHD have been found to exhibit higher levels of impulsivity, which can lead to difficulties in delaying gratification and managing financial decisions (Barkley, 2015; Nigg et al., 2005) and tend to make quicker purchasing decisions, often driven by immediate rewards rather than long-term planning (Solanto et al., 2001). As ADHD symptoms persist into adulthood (Ballard et al., 2025), this implies that individuals with Attention-Deficit/Hyperactivity disorder must continually manage impulsivity and distractibility (Song et al., 2021).

The challenges associated with ADHD can be further understood through the Cognitive Load Theory (Sweller, 1988). It explains that the cognitive capacity of an individual is limited. It focuses on how the cognitive resources of an individual are affected when they engage in complex tasks. Cognitive load can be divided into three types (Sweller, 1988). Intrinsic load is the mental effort required to process the inherent complexity of the task itself. It depends on both the task's difficulty and the individual's level of expertise. Extraneous load can be defined as the additional cognitive effort caused by the way information is presented or how the task is structured. Finally, germane load refers to the mental effort that contributes directly to learning or problem-solving, facilitating the development of schemas, such as mental frameworks to process information (Sweller, 1988). These concepts are particularly relevant in the context of Attention-Deficit/Hyperactivity Disorder, where individuals often experience heightened

intrinsic or extraneous load, affecting their ability to process information and complete tasks efficiently.

This sensory overload can manifest itself as both hyper-responsiveness, an exaggerated response to sensory stimuli, and hypo-responsiveness, a diminished or reduced response to sensory stimuli (Bijlenga et al., 2017). This atypical sensory processing is a significant feature of Attention-Deficit/Hyperactivity Disorder (Panagiotidi et al., 2018). Sensory overload for these individuals is characterized by difficulties in modulating sensory input, leading to challenges in various domains, such as auditory and activity levels (Pfeiffer et al., 2015). These sensory processing issues are not only prevalent in children, but also persist into adulthood, which affect daily functioning (Panagiotidi et al., 2018; Shimizu et al., 2014). Moreover, sensory over-responsivity is often linked with increased anxiety levels in children with ADHD, implying that sensory overload can aggravate emotional and behavioral difficulties (Reynolds et al., 2009; Lane et al., 2019). Therefore, as sensory overload becomes overwhelming, it may trigger stress responses, leading to increased irritability, difficulty focusing or withdrawal from certain environments. Particularly environments that are sensory-rich, such as online retail environments can as a result lead to sensory overload for individuals with Attention-Deficit/Hyperactivity disorder and disrupt their decision-making process.

2.4 ADHD within the online shopping experience

While customer experience has been widely explored in existing literature, little attention has been given to how individuals with Attention-Deficit/hyperactivity Disorder experience the online shopping journey. Given the known difficulties associated with ADHD, such as impulsivity, distractibility and sensory overload (Mierau, 2024; Bijlenga et al., 2017), it is reasonable to expect that their online shopping experiences may differ significantly from those of individuals without Attention-Deficit/Hyperactivity Disorder. These symptoms can interact with the cognitive and emotional demands of online environments, particularly during the pre-purchase and purchase stages of the customer journey. Cognitively, there is reason to believe that individuals with ADHD might struggle with information overload or quickly lose focus in visually dense environments. Emotionally, the online shopping journey is expected to be more intense or inconsistent. Finally, the behavioral aspect of the online shopping experience is likely to be influenced by elevated impulsivity, leading to more spontaneous purchasing behavior.

3. Methodology

The aim of this research is to investigate how individuals with Attention-Deficit/Hyperactivity Disorder experience the online shopping journey and how this differs from individuals without ADHD. Therefore, this study employed a qualitative approach as it allowed a better understanding of personal experiences, thought processes, emotional responses, and decision-making strategies, that cannot be fully captured through quantitative methods.

3.1 Sample

Participants were recruited using purposive sampling (Rai et al., 2015) to ensure the inclusion of individuals with and without Attention-Deficit/Hyperactivity Disorder. The recruitment of the participants was carried out through multiple channels. This included leveraging social media platforms, engaging with ADHD support groups, and utilizing university connections. These approaches aimed to increase the study's generalizability.

The study consisted of two groups. The first group only included individuals with Attention-Deficit/Hyperactivity disorder. The second group only included individuals without Attention-Deficit/Hyperactivity disorder. To determine which participants in this study, have ADHD and which do not have ADHD, the Adult ADHD Self-Report Scale (ASRS-v1.1) (Adler et al., n.d.) was used. For the purpose of this research, Only Part A of the checklist was administered. This section included six questions that were widely recognized as the most indicative of Attention-Deficit/Hyperactivity Disorder symptoms in adults and therefore recommended for use in initial screenings. If there were four or more checkmarks in the shaded boxes of Part A, the participant showed a high likelihood of having symptoms consistent with ADHD. Part A offered a quick yet effective method to identify individuals likely to meet the criteria of ADHD, while Part B served as a supplementary role by providing additional, but non diagnostic information. Given its high sensitivity and efficiency, Part A was considered sufficient for distinguishing between participants with and without ADHD in this study.

This study required a total of 20 participants, with an equal distribution of 10 individuals with ADHD and 10 individuals without ADHD. To ensure a diverse and representative sample, participants were selected from the age of eighteen and onward. Including only adults guarantees that the findings are relevant to individuals who independently navigate online retail environments. Furthermore, the sample included individuals of different gender identities and varying levels of online shopping frequency, allowing for a broad range of experiences to be compared across both Attention-Deficit/Hyperactivity Disorder participants and non-Attention-Deficit/Hyperactivity Disorder participants.

3.2 Data collection

To collect the data, two types of techniques were used. First, a think-aloud protocol (Séguinot, 1996) in the form of an online shopping experience was conducted. Then, a semi-structured interview (Adams, 2015) was held. These techniques allowed to obtain both the observable actions and the internal processes and motivations, providing a comprehensive understanding of the online shopping experience of both groups. During the first part, participants were asked to browse an online store and select a product they would consider purchasing. They verbalized their thoughts and emotions throughout the pre-purchase and purchase stages. Their decision-making process, challenges faced, and strategies used were noted. The semi-structured interview (appendix 1 & 2) was conducted right after the think-aloud protocol. Open ended questions were utilized to enable the participants to elaborate on their experience. The duration of the think aloud protocol and semi-structured interview lasted approximately 20 to 30 minutes per participant. However, this varied depending on the length of the think-aloud protocol during the first part of the data collection process.

A participant overview (table 1) specifying ADHD and non-ADHD status, the age and gender of the participants, and the length of the interview, can be found below.

Table 1: Participant overview

	ADHD participant	**Non-ADHD participant**	**Age**	**Gender**	**Length interview**
Participant 1	x		24	Male	30 minutes and 53 seconds
Participant 2	x		21	Female	19 minutes and 59 seconds
Participant 3		x	51	Female	18 minutes and 45 seconds
Participant 4	x		19	Female	16 minutes and 22 seconds
Participant 5	x		26	Female	11 minutes and 49 seconds
Participant 6		x	23	Female	10 minutes and 26 seconds

Participant 7	x		28	Male	30 minutes and 38 seconds
Participant 8		x	22	Female	17 minutes and 46 seconds
Participant 9	x		20	Female	35 minutes and 57 seconds
Participant 10	x		20	Male	9 minutes and 23 seconds
Participant 11	x		50	Female	10 minutes and 20 seconds
Participant 12		x	24	Female	8 minutes and 31 seconds
Participant 13		x	23	Female	11 minutes and 30 seconds
Participant 14		x	23	Female	21 minutes and 4 seconds
Participant 15		x	24	Female	10 minutes and 36 seconds
Participant 16		x	21	Female	9 minutes and 12 seconds
Participant 17	x		40	Female	16 minutes and 12 seconds
Participant 18		x	25	Male	11 minutes and 13 seconds
Participant 19	x		38	Female	14 minutes and 26 seconds
Participant 20		x	21	Female	10 minutes and 33 seconds

3.3 Data analysis

The semi-structured interviews (Adams, 2015) and the think-aloud protocol (Séguinot, 1996) were recorded and transcribed to secure that no relevant information was lost during the analysis phase. These transcripts and observations were then analyzed using an inductive grounded theory approach (Khan, 2014), which is particularly well suited for qualitative research aiming to develop theory from data rather than test pre-existing assumptions. This method allowed for themes and patterns to emerge organically, making it possible to uncover insights into the cognitive and emotional experiences during the online shopping journey of both the participants with Attention-Deficit/Hyperactivity Disorder and the participants without Attention-Deficit/Hyperactivity Disorder. Through constant comparison and iterative coding, the data was systematically examined to identify recurring concepts and behavioral tendencies. The code tree that resulted from this process can be found in the appendix (appendix 3).

3.4 Ethical considerations

Ethical considerations were prioritized to ensure the well-being of all participants. Before participation, a clear introduction to the purpose and structure was provided, allowing participants to make an informed decision about their involvement. Informed consent was obtained before data collection, explicitly including permission for audio recording of both the think-aloud session (Séguinot, 1996) and semi-structured interview (Adams, 2015). Furthermore, the consent form incorporated a confirmation that participants are eighteen years of age or older.

All data collected was anonymized and securely stored to protect participants' privacy. The think-aloud protocol (Séguinot, 1996) and semi-structured interviews (Adams, 2015) were conducted in Dutch to guarantee ease of understanding and efforts were made to create a safe and comfortable environment where participants felt at ease to share their experiences. Therefore, the experiment was conducted at a location of the participant's choice. Participants retained the right to withdraw from the study at any point without any negative consequences. Upon completion, the results were communicated in a clear, transparent and accessible manner.

4. Results

The findings of this qualitative study provide insight into how individuals with Attention-deficit/Hyperactivity Disorder experience the online shopping journey and how this differs from individuals without ADHD. An inductive grounded theory approach (Khan, 2014) is used to analyze the think aloud protocol (Séguinot, 1996) and the semi-structured interviews (Adams, 2015) and allow patterns and themes to emerge directly from the data collected, without relying on predefined frameworks. The results are presented according to the core themes identified through the analysis, which are cognitive and emotional responses, behavioral patterns, time perception and management, interface and design preferences, and finally, tools and coping mechanisms.

4.1 Cognitive and emotional responses

4.1.1 Overwhelm from too many choices

The online shopping journey often begins with an overwhelming variety of options. For participants with Attention Deficit/Hyperactivity Disorder, this initial stage was frequently marked by a strong sense of cognitive overload in response to the high volume of product options and stimuli in online retail environments. Multiple ADHD participants described feeling overwhelmed when confronted with extensive product lists. For instance, Participant 19 stated:

> "I have so many options that I don't even know what to search for." (Participant 19, ADHD, f, 38)

Similarly, Participant 1 noted that he often switches between websites and products due to the overwhelming number of choices, which disrupts his decision-making process.

> "I just go to bol.com… and then I see something else" (Participant 1, ADHD, m, 24)

> "That is when I move on to another website." (Participant 1, ADHD, m, 24)

This cognitive overload often led to indecision, where participants were unable to finalize a purchase because the overflow of products made it difficult to evaluate alternatives, weigh the available options carefully, or confidently commit to one single product out of many that were presented. The internal decisiveness is clearly reflected in the following examples, where the ADHD participant struggles to settle on a choice.

> "I see that you can choose a color. There are so many options. I think I'll just go with gold. Oh. Or white. No, I think I want white" (Participant 9, ADHD, f, 20)

> "I really like this kind of bracelet too. That green one is really nice. There are so many colors. All of these colors are really pretty." (Participant 9, ADHD, f, 20)

In contrast, participants without Attention-Deficit/Hyperactivity Disorder appeared to manage online retail environments with a high volume of product choices more efficiently. Their descriptions of the shopping process reflected a more intentional and structured approach. They described behaviors such as comparing few selected options, adhering to their original shopping intent and avoiding distractions. As Participant 8 stated:

> "But then I really did have a clear goal." (Participant 8, non-ADHD, f, 22)

> "Yes, if I feel like having something new, then I do know what I want to look for." (Participant 20, non-ADHD, f, 21)

This indicates a clear and focused approach to the online shopping task. It also suggests a greater ability to reduce the number of considered options and maintain focus throughout the shopping process, thereby minimizing cognitive overload. Unlike the participants with ADHD, these participants demonstrated a level of decisiveness that allowed them to navigate the online shopping environment with confidence and a sense of purpose.

4.1.2 Impulsive decision-making and regret

While the overwhelming number of options often led to indecision, it also appeared to amplify another recurring pattern among the ADHD participants. Rather than pausing to evaluate alternatives, they responded by acting quickly on sudden urges and made purchases based on emotional triggers. These decisions were unplanned and driven by excitement or urgency, rather

than a carefully considered need. Participant 1 described how his interest in a product can quickly intensify, leading to a series of unplanned purchases that he later questions.

> "It starts off really small, like you think, oh it would be fun to get twenty jars or so. But now I literally have 500 kilos of protein powder at home." (Participant 1, ADHD, m, 24)

Participant 9 shared a similar experience, stating:

> "Still, when I get the urge to have something, I just have to have it. I can't let it go. It gets stuck in my head. And afterwards I realize I didn't really need it at all." (Participant 9, ADHD, f, 20)

In contrast, non ADHD participants exhibited more controlled and reflective decision-making processes. They described their buying decisions as rational and deliberate.

> "I usually think about it for a moment, whether I really want it." (Participant 6, non-ADHD, f, 23)

> "And then I do not think it is worth it if I'm not a hundred percent sure about it." (Participant 20, non-ADHD, f, 21)

Also, impulsivity played a role in how participants responded to promotions, which affected the online shopping behavior of both ADHD and non-ADHD participants, although the nature and intensity of that influence varied between the groups. Promotional content, such as discounts and urgency labels caught the attention of both groups. While the participants with Attention-Deficit/Hyperactivity Disorder were more likely to describe a spontaneous reaction to such stimuli, the non-ADHD participants also acknowledged being influenced by promotional elements, in a more evaluative and controlled way. The promotional triggers tended to affect ADHD participants stronger, occasionally leading to impulsive clicks or interest shifts. Participant 19 and Participant 1 expressed:

> "I'm going online shopping on bol.com. And they are advertising that it is the "bol tiendaagse" sale. So, then I am already thinking, okay, what would be useful to buy?

> Well, that shampoo could come in handy. Maybe it is a bit too much. I don't really need that many. But I will add it to my shopping cart anyway." (Participant 19, ADHD, f, 38)

> "When it says it is almost sold out, then I sometimes catch myself thinking, okay maybe I should hurry up and buy it." (Participant 1, ADHD, m, 24)

But among the participants without ADHD, the process was more deliberate, as Participant 3 mentioned:

> "I am going to take a look at the discounts. And then I can filter by the highest discount. So, let's set it to 50% and up. Let's see what comes up. And whether it's worth it." (Participant 3, non-ADHD, f, 51)

This difference in decision-making speed and strategy demonstrates the influence of ADHD symptoms on purchasing behavior. For individuals with Attention-Deficit/Hyperactivity Disorder, impulsive choices often led to second-guessing, returns or cancelled orders. These fluctuations in commitment emphasize the challenges with impulse control, contributing to an inconsistent and sometimes frustrating online shopping experience.

4.1.3 Frustration and emotional comfort

The challenges in decision-making were closely related to the participants' emotional responses, revealing that the online shopping experience for individuals with ADHD was not only cognitively demanding but also emotionally complex. It was both a source of frustration and a source of enjoyment. Long and unstructured shopping processes often led to feelings of irritation, but shopping also provided comfort and a sense of purpose. Participant 1 and Participant 19 stated:

> "Sometimes it's kind of frustrating. But I just enjoy doing it." (Participant 1, ADHD, m, 24)

> "It gives me a sense of calm and makes me feel good. When I am online shopping, I always have something to focus on." (Participant 1, ADHD, m, 24)

> "My overall feeling is that it gives you a sense of euphoria" (Participant 19, ADHD, f,38)

These statements reflect how online shopping can function as a form of coping or a form of distraction for individuals with ADHD, giving a sense of focus or emotional relief. The online shopping may not always be goal-driven but is instead sometimes used to break boredom or seek stimulation. While other ADHD participants did not express this dynamic explicitly, several described online shopping as something they enjoy doing, despite the frustrations.

However, emotional engagement was less pronounced among the non-ADHD participants. Their descriptions of online shopping tended to emphasize efficiency rather than mood-related motivations.

> "I always have a few regular stores I go to, for example I go straight to the Costes website. I also open Guts & Gusto and Sting as well." (Participant 14, non-ADHD, f, 23)

> "I already know in advance which website I want to go to. I go directly to the website with a specific purpose." (Participant 12, non-ADHD, f, 24)

For these participants, online shopping was more often described as a task to be completed rather than a source of comfort or stimulation, characterized by a clear objective and minimal emotional involvement throughout the process.

4.1.4 Hyperfocus and whirlwind of thoughts

The search for focus and emotional regulation may also contribute to another consistent pattern observed among the participants with Attention-Deficit/Hyperactivity Disorder, which was a clear inclination to experience hyperfocus during the online shopping process. They expressed diving deeply into a specific topic or product.

> "I do get distracted easily, definitely. Or I can get completely caught up in it for hours." (Participant 19, ADHD, f, 38)

> "But I always have something I focus on completely. That's actually a kind of hyperfocus too." (Participant 1, ADHD, m, 24)

This was often accompanied by rapidly shifting thoughts, making the online shopping process both chaotic and immersive. From the observations it became clear that several participants described their minds as moving rapidly, jumping between ideas while intensively focused on a single product or topic. As Participant 2 stated:

> "So, then I think, oh can I pick a different color? But yeah, I'll get stains in this one, so I am not going to do that either. So then, yeah. Oh. This one was out of stock. Hmm which one did I just add? Oh, this is it. But should go for this one though?" (Participant 2, ADHD, f, 21)

> "No that is not the one. Sorry. Look. I am already all the way back in 2022. Well, no, I just think I bought it at WE, for the youngest one. No, I can't order that right now. I would have to go check his closet." (Participant 17, ADHD, f, 40)

However, Participants without ADHD exhibited a more intentional and structured approach. Their online shopping experience was often guided by predefined goals, which helped them avoid becoming overly absorbed in the process. This more deliberate strategy enabled them to pause return to the online shopping later if needed.

> "I usually add several items to my shopping cart. Then I usually think about it for another day." (Participant 13, non-ADHD, f, 23)

> "I also find it important to think it through carefully before buying it." (Participant 20, non-ADHD, f, 21)

4.2 Behavioral patterns

4.2.1Multitasking and distracted behavior

The emotional and cognitive dynamics of the online shopping experience for individuals with Attention-Deficit/Hyperactivity Disorder were strongly reflected in their observable behaviors. One of the most observed behaviors among the ADHD participants was their habit to multitask while shopping online, often switching between various products and tasks. It often resulted in

fragmented attention, making it harder to follow through on purchases. Participant 19 and Participant 2 expressed:

> "And then I get distracted by a message or by an email that comes in, or because the washing machine is done." (Participant 19, ADHD, f, 38)

> "So, when I am online shopping, I usually do something on the side, like watching a series for example." (Participant 2, ADHD, f, 21)

Whereas, as mentioned before, non ADHD participants demonstrated a more linear and streamlined strategy when it comes to online shopping. They were likely to stay focused on their goal and minimized distractions during the process.

> "My attention is fully on the shopping at that moment." (Participant 8, non-ADHD, f, 22)

> "I just click away anything that pops up or gets in the way while I am online shopping." (Participant 14, non-ADHD, f, 23)

4.2.2 Repetitive checking products and cart abandonment

In addition to multitasking and distracted behavior, participants with Attention-Deficit/Hyperactivity Disorder also showed a recurrent behavior to repeatedly revisit product pages, add items to the cart, then remove them or leave the online shopping process incomplete. This repetitive pattern was also regularly driven by postponement of decision and sudden changes in preferences. Participant 9 stated five times:

> "I'm going to remove that one." (Participant 9, ADHD, f, 20)

Also, Participant 1 expressed:

> "And then I canceled this one half an hour later. Because by then, I have already seen something else." (Participant 1, ADHD, m, 24)

These examples show how participants with Attention-Deficit/hyperactivity Disorder may use the shopping cart as a temporary space for reflection or as part of a fluctuating decision-making process. The shopping cart shifts from being a straightforward step in the online shopping process to a temporary holding space where uncertainty and indecision accumulate.

On the other hand, the shopping cart among non ADHD participants appeared to be more deliberate and conclusive. These individuals tended to add items in their shopping cart when they were close to making a final decision, using the shopping cart not as a temporary storing space but as a confirmation of their purchasing intent. This suggests a more confident and goal-oriented online shopping style with fewer interruptions due to doubt or impulsivity.

> "If I see something I really like, I tend to make a decision quickly. So now I also know that I would actually buy this one." (Participant 8, non-ADHD, f, 22)

> "I usually make a choice quickly because I do not like spending too much time shopping online. I also tend to know pretty quickly whether there is something I like or not." (Participant 20, non-ADHD, f, 21)

4.3 Time perception and management

The fluctuating decision-making process of the ADHD participants not only influenced how participants interacted with the shopping cart but also extended their perception and management of time. Multiple participants with Attention-Deficit/Hyperactivity Disorder described losing track of time while browsing, sometimes realizing hours had passed. In some cases, this loss of time awareness led to unintended consequences such as disrupted schedules and neglected responsibilities. Participants 11, 1 and 19 stated:

> "When I am shopping online, I get completely lost in it, that is when the hyperfocus kicks in. And suddenly, it's two or three hours later, and I realize, oh right, I need to sleep." (Participant 11, ADHD, f, 50)

> **"**But in the back of my mind, I am aware that I have other things to do. And that often gets in the way." (Participant 1, ADHD, m, 24)

> "And in the end, an hour has passed, and I do not really have anything concrete." (Participant 19, ADHD, f, 38)

While hyperfocus and multitasking were previously discussed, these also appeared to have an effect on the participants' perception of time, regularly contributing to a decreased awareness of how long they had been online shopping. ADHD participants became intensely absorbed in the online shopping process, leading them to lose track of time entirely. Also, switching between tabs, products, and even tasks like messaging or watching videos caused frequent interruptions in the online shopping process, leading to even less time awareness.

> "So, when I am online shopping, I usually do something on the side, like watching a series for example. Yes, I often do that at the same time." (Participant 2, ADHD, f, 21)

Conversely, non-ADHD participants maintained clearer temporal boundaries during online shopping. They reported being goal-driven and focused on making decisions quickly. Multiple participants described selecting an item when it met their criteria. This indicates a more structured and time-efficient online shopping approach.

> "I usually make up my mind pretty fast. Sometimes I already succeed at that point. Just from the first glance, by using a few filters." (Participant 8, non-ADHD, f, 22)

Furthermore, some non-ADHD participants emphasized the importance of minimizing time spent online shopping. They described preferring shorter sessions and efficient browsing. Participant 14 and Participant 20 explained:

> "I do not want to spend too much time on it. Online shopping feels like I am just wasting my time. So, I always try to get over it as quickly as possible. And I do not slow down, I try to maintain that same pace." (Participant 14, non-ADHD, f, 23)

> "I usually make a choice quickly because I do not like spending too much time shopping online." (Participant 20, non-ADHD, f, 21)

Besides that, observational data from the think aloud protocol further reported participants' self-reports. Overall, the duration of the think aloud sessions tended to be either significantly longer or notably shorter for participants with Attention-Deficit/Hyperactivity

Disorder compared to those without. This indicates a more variable and less consistent engagement pattern. Some ADHD participants spent a prolonged amount of time navigating the online shopping task, due to difficulties with decision-making. However, others disengaged quickly, showing signs of frustration or overstimulation. This suggests that their engagement is not only a matter of subjective perception but also observable in their behavior.

4.4 Interface and design preferences

4.4.1 Preference for simplicity and clarity

The disruptions in time perception were in many cases reinforced by the design of the online retail environment itself. Participants with ADHD frequently expressed a preference for websites that offered simplicity, clarity, and straightforward navigation. Interfaces that contained excessive visual elements, pop-up banners, flashing promotions or complex navigation structures were in many cases perceived as overwhelming and disruptive.

> "What I also find really annoying is when I hover over something with the mouse, and the photo immediately changes. I have no idea how to use the website. They make it unnecessarily difficult." (Participant 7, ADHD, m, 28)

> "A lot of images are popping up. It's not really clear where I am supposed to go." (Participant 5, ADHD, f, 26)

> "But what I actually want it just a clear overview of all the closets that they have" (Participant 1, ADHD, m, 24)

> "I really like this website because it lets me compare everything side by side, that is something I really appreciate". (Participant 2, ADHD, f, 21)

These statements indicate how visual overload can lead to disengagement among individuals with ADHD. The interfaces that require constant filtering and redirection can overwhelm the limited attentional capacity, leading back to frustration or task abandonment.

Participants without Attention-Deficit/Hyperactivity Disorder also occasionally expressed frustration with complex navigation, but to a much lesser extent. They generally

remained more tolerant of visual stimuli and exhibited a pattern to approach busy interfaces with more curiosity and acceptance rather than experiencing them as distracting.

> **“**There aren’t many distracting elements influencing me on this website.” (Participant 20, non-ADHD, f, 21)

4.4.2 Use of filters

As a response to visual overload, many participants turned to filtering tools. ADHD participants mentioned that filters helped reduce overwhelm and narrow down choices. Non-ADHD participants repeatedly described using filters early in the process to quickly arrive at relevant options. The use of filters during the online shopping journey is thus for different reasons. For the ADHD participants filters reduce cognitive overload. As Participant 5 stated:

> “You can also filter things quite well here. Even by fit and oversized styles. I find that really convenient. You can filter it in a way that keeps distracting or unwanted products out of view.” (Participant 5, ADHD, f, 26)

However, for non-ADHD participants, filters are being used to enhance efficiency and control. Participant 14 described:

> “I do the exact same thing. Clothing. Shirts. Filters are at the top. Then the colors, black, grey and brown. Then I go to products and click on back print.” (Participant 14, non-ADHD, f, 23)

> “I am going to apply a filter, because I like using filters. It gives me the results I need right away, so I do not have to scroll for hours.” (Participant 20, non-ADHD, f, 21)

4.4.3 Use of reviews

Where both groups also differed, was in the use of product reviews. ADHD participants tended to rely on them more sporadically or superficially, often skimming a few for quick reassurance rather than engaging in thorough research. As Participant 9 and Participant 4 noted:

> "An online store like Shein, I do sometimes take a quick look at reviews. And other than that, usually not really, to be honest. I don't really do any research." (Participant 9, ADHD, f, 20)

> "Then I take a quick look at the reviews to see what others think of it, but actually, I do not really care that much." (Participant 4, ADHD, f, 19)

Non-ADHD participants consistently mentioned reading reviews as core part of their decision-making process. They used them to verify product quality, compare alternatives and reduce the risk of purchase regret.

> "Then I check YouTube to see what videos are out there about it. And if I think, this is what I want, then I keep going. But if I see that it does not work at all, then I start looking for something else." (Participant 12, non-ADHD, f, 24)

> "I also take a quick look at the reviews. Because if for example one of them fits tighter or looser, that would be a reason for me to stop my online search for that specific product. If I see something that I really like, then I stop searching. Especially now that I have verified that these are good reviews." (Participant 8, non-ADHD, f, 22)

4.5 Tools and coping mechanisms

4.5.1 Avoidance of certain websites and strategies

Despite all the challenges experienced by ADHD participants during the online shopping journey, several described personal strategies or tools they used to regain control over their behavior. These included intentionally avoiding certain websites and categories or training themselves to avoid spending too much time by completing the task quickly to prevent it from becoming overwhelming.

> "Okay, I am going to the Stradivarius website, because I find the Zara website so complicated." (Participant 2, ADHD, f, 21)

> "Either I go to another website or switch to a different category." (Participant 5, ADHD, f, 26)

> "I train myself. You can do it by handling it quickly, within about fifteen minutes or so." (Participant 19, ADHD, f, 38)

These tactics demonstrate a level of self-awareness and intentionality. However, their effectiveness varied. Strategies like avoiding certain websites or training themselves to complete tasks quickly were not always useful, especially when distractions or cognitive overload were high, these tools were easily forgotten or abandoned.

> "But sometimes you are just tired and then you simply just do not do it." (Participant 19, ADHD, f, 38)

It is worth noting that, these kinds of self-imposed structures were rarely mentioned by non-ADHD participants. Most of them did not feel the need to regulate their behavior with additional tools or strategies. From the observations during the first part of the interview, where participants were asked to browse a product online and think aloud, it became clear that they used browser extensions not necessarily to limit distractions but to increase efficiency. It allowed them to move through the online shopping process quicker and with fewer interruptions. Rather than acting as self-regulatory mechanisms, they served as a functional role. Non-ADHD participants explained using browser extensions to avoid wasting time on irrelevant search results, which suggests a task-oriented strategy to stay on track. This points to a distinction in strategies while online shopping, where Attention- Deficit/Hyperactivity participants frequently used these strategies as coping mechanisms for managing cognitive overload or distractions, whereas non-ADHD participants mostly employed them to simplify an already focused process.

4.5.1 Fidgeting and physical restlessness

Moreover, as a way of coping with cognitive overload and maintaining focus, several participants with ADHD displayed physical restlessness during the online shopping process. These embodied behaviors included fidgeting, shifting posture, and frequent, sometimes erratic mouse movements. During the observational part of the interview, where participants were

asked to think aloud while navigating the online shops, such signs of restlessness became particularly evident. Participant 7 shared:

> "Usually, I am tapping my fingers or feet a bit." (Participant 7, ADHD, m, 28)

These physical cues often occurred alongside verbal expressions of indecision or overstimulation. Fidgeting served as a regulatory function for individuals with Attention-Deficit/Hyperactivity Disorder, helping them manage the attention or emotional tension while interacting with online retail environments. However, these signs of restlessness were less forthcoming during the online shopping journey of non-ADHD participants. Their posture remained relatively stable and their interaction with the interface appeared calmer and more deliberate.

5. Discussion

5.1 Conclusion

This study aimed to answer the following research question: *How do individuals with Attention-Deficit/Hyperactivity disorder experience the online shopping journey? And how does this differ from individuals without ADHD?* By using a qualitative approach, this research revealed significant differences in cognitive, emotional and behavioral responses of participants during the pre-purchase and purchase stage of the online shopping journey. To synthetize these findings a comparative overview was constructed (table 2). Table 2 provides a structured comparison across the five core themes identified during the data analysis. These themes, cognitive and emotional responses, behavioral patterns, time perception and management, interface and design preferences, and the use of tools and coping mechanisms, represent the way ADHD symptoms manifest in the online shopping journey. By contrasting these experiences, the overview highlights both the challenges and strategies unique to ADHD participants, while also reflecting the more goal-oriented and efficient approaches of non-ADHD participants.

Table 2: Comparative overview between ADHD participants and non-ADHD participants

Theme	**ADHD participants**	**Non-ADHD participants**
Cognitive and emotional responses	Experience cognitive overload, impulsivity, frustration, comfort seeking, hyperfocus and chaotic thoughts.	Show structured thinking, deliberate decisions, and rarely experience overload.
Behavioral patterns	Frequently multitask, show distracted behavior, abandon carts, revisit products repeatedly, procrastinating decisions, and display physical restlessness.	Maintain linear focus, use cart deliberately, rarely abandon products.
Time perception and management	Often lose track of time due to hyperfocus or distractions,	Manage time efficiently, rarely lose track of time, keep shopping purposeful.

	spend more time online shopping.	
Interface and design preferences	Prefer, clear and simple interfaces, easily overwhelmed by cluttered layouts and strong visual stimuli.	Tolerate complicated interfaces better, approach promotions and reviews in a reflective and evaluative way.
Tools and coping mechanisms	Use strategies to cope (avoiding certain websites, setting time limits, or physical restlessness), these tools serve as self-regulations mechanisms.	Rarely mention coping tools, use of browser extensions for efficiency, not for managing overload or distractions.

This comparative overview confirms that individuals with Attention-Deficit/Hyperactivity Disorder experience the online shopping journey differently from individuals without Attention-Deficit/Hyperactivity Disorder. Participants with ADHD expressed both a desire and struggle to navigate online retail environments. While online shopping can function as a coping mechanism for boredom or emotional regulation, it can also be a source of frustration due to overwhelming stimuli and impulsive tendencies. However, non-ADHD participants typically approached online shopping as a task to be completed, guided with intention, structure and rational processing. Their engagement with online retail environments was less emotionally charged and more time efficient, resulting in a more stable and goal-directed purchasing behavior. These findings correspond with the existing literature that positions customer experience as a multidimensional construct influenced by cognitive, emotional and behavioral responses (Verhoef et al., 2009). However, the observed emotional reactivity, cognitive overload and fluctuating behavioral patterns among the individuals with Attention-Deficit/Hyperactivity Disorder reflect how ADHD traits, such as sustained attention, impulsivity and emotional regulation (Mierau, 2024), form interactions across the pre-purchase and purchase stage of the online shopping journey.

5.2 Implications

This research extends existing literature by integrating insights from neurodiversity, particularly in the context of the online shopping journey. By introducing Attention-Deficit/Hyperactivity Disorder, this study enriches frameworks such as the Cognitive Load Theory (Sweller, 1988), showing how intrinsic and extraneous cognitive load disproportionally affect individuals with ADHD in online retail environments. This study also contributes to the broader literature on customer experience (Lemon & Verhoef, 2016) by demonstrating that customer journeys are not universally experienced and how cognitive, emotional and behavioral responses are determined by neurodevelopmental traits in the online shopping context. Even when online platforms are designed for general usability, neurodivergent individuals may struggle with fundamental elements, such as navigation, decision-making or information overload.

From a managerial perspective, online retailers have a clear opportunity and responsibility to accommodate neurodivergent individuals. This can be achieved through design features that simplify navigation, minimize unnecessary stimuli, and provide optional modes for individuals with different attention capacities. Examples include reducing clutter through minimalist layouts, providing distraction-free modes or switches to hide promotional pop-ups, enabling flexible filtering tools to reduce product overload and adding clear, linear progress indicators during the online shopping process. Moreover, online retailers should be cautious with urgency cues and countdown timers. While effective at prompting purchases, these can pressure individuals with Attention-Deficit/Hyperactivity Disorder, leading to purchase regret and higher return rates. Online retailers can also consider integrating optional tools, such as reminders to revisit the shopping cart or a “cooling off” period before purchase. These not only reduce regret driven returns but also enhance inclusivity and customer satisfaction.

From a societal perspective, this study promotes a broader dialogue on digital accessibility. It is crucial to design online retail environments that consider not just physical but cognitive access. Online shopping is a routine task, but for individuals with Attention-Deficit/Hyperactivity Disorder, it can fluctuate between a coping mechanism and a source of cognitive stress. Recognizing this duality encourages a more compassionate and inclusive approach to online shopping experiences.

5.3 Limitations

While this study gives insights into how individuals with ADHD experience the online shopping journey compared to individuals without ADHD, several limitations must be acknowledged. First, due to a lack of time, this study involved 20 participants, which could be considered as a relatively small sample size. While appropriate for qualitative research, larger or more varied samples could reveal additional patterns, especially across demographics, such as age or culture.

Then, Attention-Deficit/Hyperactivity Disorder was assessed using Part A of the Adult Self-Report Scale (ASRS-v1.1) (Adler et al., n.d.). While validated for screening purposes, it does not constitute a formal clinical diagnosis. Future studies could use clinically confirmed ADHD cases to increase diagnostic accuracy.

Furthermore, the think aloud protocol simulates real online shopping but cannot fully replicate the stakes or distractions of natural settings, such as budget constraints and time pressure. Participants may behave differently in a research setting where their decisions carry no consequences, potentially impacting the validity of the findings.

Finally, participants may have under- or over-reported behaviors, especially in verbalizing impulsive or emotional reactions, which are often difficult to convey and may also be influenced by social desirability bias. While the use of observational data during the think aloud sessions helped to mitigate this limitation by capturing real-time behaviors and verbal cues, it is likely that some unconscious processes or internal decision-making dynamics remained underrepresented.

5.4 Future research

To extend the current findings, several future research recommendations are suggested. First, quantitative validation through large scale surveys or behavioral analytics can test the prevalence and strength of the observed patterns, such as cart abandonment, impulsive purchases or even session duration.

Also, future research could test the impact of specific design changes, for instance distraction free modes or adjustable filters, on the satisfaction of individuals with Attention-Deficit/hyperactivity Disorder and purchasing, ideally by involving them directly in participatory design processes to ensure that solutions reflect lived experiences.

Moreover, it would be interesting to explore how other neurodivergent populations, such as individuals with autism or those with dyslexia, experience the online shopping journey, and whether similar or divergent challenges emerge.

Lastly, another direction would be to investigate whether individuals with ADHD are more susceptible to compulsive buying behaviors. Given the comfort-seeking motivations observed in this study, it is worth exploring how online shopping may serve as an emotional coping mechanism, potentially blurring the line between impulsive and compulsive purchasing.

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Appendix

1. Online shopping experience & semi-structured interview guide (English version)

"Thank you for your time and participation in this research. To start, I will provide a brief introduction to the study and its objectives. I'd also like to confirm your informed consent and permission for audio recording. Also, I want to assure you that your participation is completely voluntary, and your responses will remain confidential. All data that will be collected, including the audio recording, will be securely stored, and used solely for research purposes. Your identity will remain anonymous. If at any point you experience discomfort, have concerns, or wish to withdraw your participation, you are free to do so without any consequences."

"This session consists of two parts: first, you will engage in an online shopping experience using the Think-Aloud protocol, where you will share your thoughts and feelings aloud as you navigate the process. Afterward, we will proceed with a semi-structured interview to discuss your experience in more detail. Please note that there are no right or wrong answers. If you have any questions before we begin, please feel free to ask."

Section 1: The online shopping experience

"For the first part, imagine that you just realized you need a new [product] and you are beginning the shopping process online. Please go through the steps as you normally would, while sharing your thoughts and feelings aloud."

Section 2: Reflection on the first part of the session

Emotional experience during the shopping process

- What was your overall feeling during the process?
- What specific feelings did you have?
- Which ones stood out the most?
- How do you feel now?

Coping

- Were there any points where you got distracted or lost focus? If so, what happened?
- Did you do something when [specific negative emotion/sensation/thought] came up?
- Does this emotion often come up?
- What do you do to deal with this?

Shopping habits

- When you think back to the shopping experience you just had, is it similar to how you do online shopping experiences? If yes, in what way? If no, how was it different?

Decision-making

- If you want to shop online for a new product, how do you start the process?
- What are the typical things you do in between? Why?
- How do you decide which products to explore further?
- What factors influence whether you complete or abandon a purchase?

Conclusion

- Is there anything else you'd like to share about your online shopping experience that we haven't covered?
- Do you have any questions for me?

"Thank you for your time and answers during this session. If you are interested, the results can be shared with you once the research is complete. Feel free to reach out if you have any further questions."

2. Online shopping experience & semi-structured interview guide (Dutch version)

“Dank u wel voor uw tijd en deelname aan dit onderzoek. Om te beginnen zal ik een korte inleiding geven over dit onderzoek en de doelstellingen. Ik wil ook graag uw geïnformeerde toestemming, en toestemming voor de audioregistratie bevestigen. Daarnaast wil ik u verzekeren dat uw deelname volledig vrijwillig is en dat uw antwoorden vertrouwelijk zullen blijven. Alle verzamelde gegevens, inclusief de audioregistratie, worden veilig opgeslagen en uitsluitend voor onderzoeksdoeleinden gebruikt. Uw identiteit blijft anoniem. Als u zich op enig moment ongemakkelijk voelt, zorgen heeft of uw deelname wilt intrekken, kunt u dit zonder gevolgen doen.”

“Deze sessie bestaat uit twee delen: eerst zult u deelnemen aan een online winkelervaring met behulp van het Think-Aloud-protocol, waarbij u hardop uw gedachten en gevoelens deelt terwijl u het proces doorloopt. Daarna zullen we verdergaan met een semigestructureerd interview om uw ervaring in meer detail te bespreken. Er zijn geen goede of foute antwoorden. Als u vooraf vragen heeft, kunt u deze gerust stellen.”

Sectie 1: De online winkelervaring

“Voor het eerste deel, stel u voor dat u zojuist hebt bedacht dat u een nieuw [product] nodig hebt en het winkelproces online begint. Ga door de stappen zoals u normaal zou doen, terwijl u hardop uw gedachten en gevoelens deelt.”

Sectie 2: Reflectie op het eerste deel van de sessie

Emotionele ervaring tijdens het winkelproces

- Wat was uw algemene gevoel tijdens het proces?
- Welke specifieke gevoelens had u?
- Welke gevoelens vielen het meest op?
- Hoe voelt u zich nu?

Coping

- Waren er momenten waarop u afgeleid raakte of de focus verloor? Zo ja, wat gebeurde er?
- Heeft u iets gedaan toen die [specifieke negatieve emotie/sensatie/gedachte] opkwam?
- Komt deze emotie vaak voor?
- Wat doet u om hiermee om te gaan?

Winkelgewoonten

- Als u terugdenkt aan de winkelervaring die u net heeft gehad, is die dan vergelijkbaar met uw andere online winkelervaringen? Zo ja, op welke manier? Zo nee, hoe was het anders?

Besluitvorming

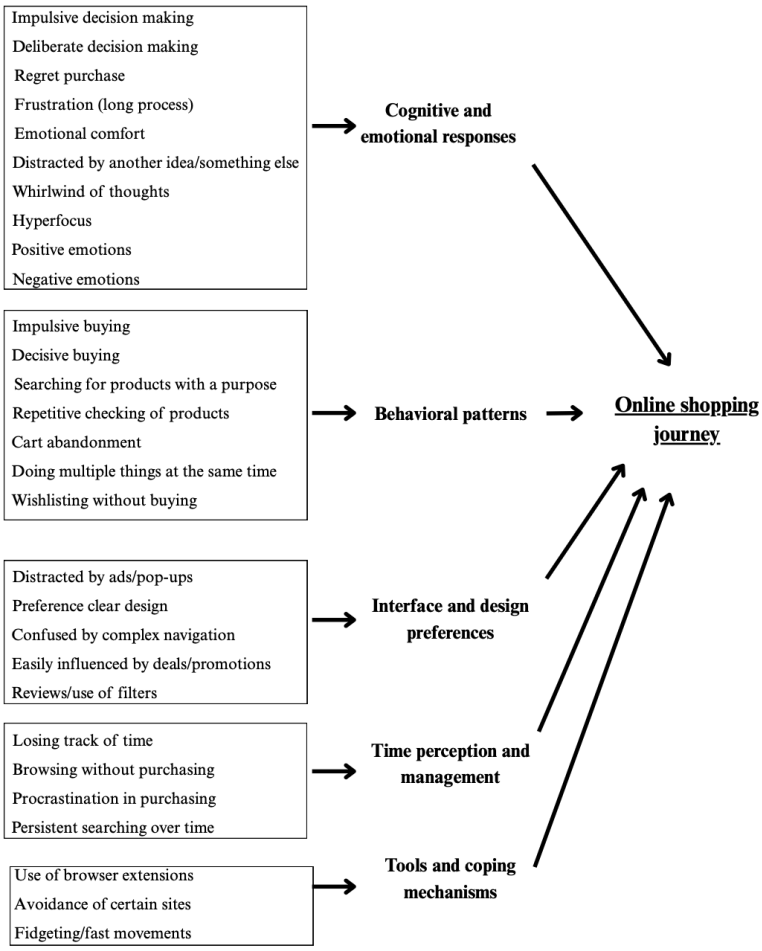
- Als u online wilt winkelen voor een nieuw product, hoe begint u het proces?
- Wat zijn de typische dingen die u ertussen doet? Waarom?
- Hoe beslist u welke producten u verder onderzoekt?
- Welke factoren beïnvloeden of u een aankoop voltooit of afbreekt?

Conclusie

- Is er nog iets anders dat u zou willen delen over uw online winkelervaring die we nog niet hebben besproken?
- Heeft u nog vragen voor mij?

“Dank u wel voor uw tijd en antwoorden tijdens deze sessie. Als u geïnteresseerd bent, kunnen de resultaten met u gedeeld worden zodra het onderzoek is voltooid. Mocht u nog vragen hebben kunt u altijd contact opnemen.”

3. Code tree


Impulsive decision making
Deliberate decision making
Regret purchase
Frustration (long process)
Emotional comfort
Distracted by another idea/something else
Whirlwind of thoughts
Hyperfocus
Positive emotions
Negative emotions
Cognitive and emotional responses
Impulsive buying
Decisive buying
Searching for products with a purpose
Repetitive checking of products
Cart abandonment
Doing multiple things at the same time
Wishlisting without buying
Behavioral patterns
Online shopping journey
Distracted by ads/pop-ups
Preference clear design
Confused by complex navigation
Easily influenced by deals/promotions
Reviews/use of filters
Interface and design preferences
Losing track of time
Browsing without purchasing
Procrastination in purchasing
Persistent searching over time
Time perception and management
Use of browser extensions
Avoidance of certain sites
Fidgeting/fast movements
Tools and coping mechanisms