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Design strategies to facilitate second-hand clothing acquisition

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Abstract

Extensive research found many barriers and drivers in second-hand clothing (SHC) acquisition. This study explores their relationships and the role of design in enhancing SHC experiences. 16 semi-structured interviews revealed insights into personal experiences and emotions. Customer journey mapping highlighted 5 design interventions: a. effective branding and marketing, b. appealing clothing presentation, c. facilitating garment search, d. aiding quality inspection, and e. optimizing price-quality balance. Future, quantitative, research is needed to confirm the findings for a wider public.

Keywords: second-hand clothing, purchase behaviour, behavioural design, user experience, circular economy

1. Introduction

In an era defined by relentless consumption and rapidly changing fashion trends, the fashion industry stands at a crossroads where slowing down our consumption rate holds key to a more sustainable future (Koszewska, 2018). Infamous for its large water and air pollution (McKinsey, 2020), social issues (Mukherjee, 2015), and enormous waste (Ellen Macarthur Foundation, 2017; Marques *et al.*, 2020), the fashion industry has a giant negative impact on our environment (Niinimäki *et al.*, 2020). According to The Waste and Resources Action Programme, an increase of 10% in second-hand sales can save 3% of carbon emissions, 4% of water and 1% of waste per tonne of clothing. In the context of an active life extension through hire and repair, 30-60 million m3 and 80-160.000 tonnes of CO_2 can be saved (WRAP, 2017). Many new initiatives such as second-hand (e.g. RE-ssentiel, the second-hand platform of Belgian Brand Essentiel Antwerp) (Essentiel Antwerp, 2023), clothing rental (e.g. Dressr, an online platform where you can rent clothing) (Dressr, 2023), and clothing swapping (Camacho-Otero *et al.*, 2020) help to prolong the lifespan of clothing. In 2027, second-hand clothing is estimated to be worth 351 billion dollars (ThredUP, 2023). Moreover, the Ellen McArthur Foundation posits that in aiming for a more circular system, the user phase is crucial. Here, the purchase of second-hand clothing can play a crucial role in keeping clothing longer in the life cycle. Users, however, still face a lot of barriers with the purchase of second-hand clothing to pursue this goal (Hur, 2020). This paper will focus on the barriers and motivations consumers experience when buying second-hand clothing and aims to define design drivers and interventions that will facilitate the purchase of second-hand clothing and elevate the act of embracing second-hand fashion.

1.1. Framing barriers and motivators towards second-hand clothing

By learning the history of second-hand clothing (SHC) and fast fashion (for an overview see eg. Reed, 2020; SANVT Journal, 2022) we can already identify a few barriers. First, we see the image of SHC and its association with poverty (Wang *et al.*, 2022). Second, the rise of fast fashion appears

together with consumers' desire for cheap clothing so they can fit in with the current micro trend (Bhardwaj and Fairhurst, 2010). These cheap, hyper-stylish garments will barely find their way to the second-hand store where they are perceived as low-quality and out-of-fashion (Laitala and Klepp, 2018; Pippo et al., 2022). A study among Flemish consumers indicates that 70% don't buy SHC because they simply prefer new clothing. They think SHC is unhygienic (46%), takes too much time and effort (33%), has a bad smell (20%), has quality concerns (16%), is associated with poverty (10%), and has a negative image (10%). Lastly, the lack of service (8%) hinders their SHC acquisition (Takens et al., 2023). In research among Chinese consumers, the same results show up. Concerns about poverty associations and sanitation conditions are the main barriers they experience to SHC acquisition (Laitala and Klepp, 2018; Wang et al., 2022). In their comprehensive study on the acquisition of SHC, Laitala and Klepp (2018) classified barriers and motivations into nine categories: economic, quality, hygiene, environmental concerns, shop experience, fashion, intimacy, and social reputation.

The current research seeks to integrate these insights into a well-established framework that delves into the possibilities of elongating the user phase. Terzioğlu's (2021) Repair Motivation and Barriers model (RMB-model) depicts the relationship between users, products, and repair activity. It does so by clustering 19 underlying drivers (see Table 1) into three clusters of motivations and barriers: technical aspects, emotional aspects, and value aspects (Terzioğlu, 2021). In the current research, we look at technical, emotional and value aspects to structure our insights in a SHC context. As for concrete drivers eg. Laitala and Klepp (2018) inspire us for a deeper understanding. Moreover, we dig deeper into one of the clustered drivers: emotions. The standard S-O-R considers positive emotions as a stimulus for customer reactions and purchase decisions (Jung Chang et al., 2014). Previous research from Niinimäki (2017) also recognises the role of emotions in product attachment (Niinimäki, 2017). Therefore, our research takes a closer look at the emotions throughout the customer journey (Lemon and Verhoef, 2016). As emotions are sometimes difficult to communicate, we rely on the wheel of Plutchik (1980) to help people express their emotions. In this wheel, he predefined eight primary emotional categories (anger, anticipation, joy, trust, fear, surprise, sadness, and disgust) with their opposites and visualized them along their intensity and valance. Following previous insights (McNeill and Moore, 2015) we acknowledge that barriers and motivators may vary between different segments of fashion consumers. The segmentations vary in different studies. Ferraro et al., (2016) and Hur (2020) studied the differences between consumers regarding second-hand. Their cluster analysis identified respectively three and eight segments. Using a literature review, Zaman et al. (2019) identified six consumer orientations. In our study, we rely on insights from these studies and take a variety of second-hand consumers with different levels of experience into consideration.

1.2. Scope

Rather than only identifying barriers and motivations, the current research aims to gain more knowledge on how these different drivers can help design behavioural interventions which leads us to the main question: How can barriers that occur when buying SHC be removed, and drivers be strengthened to create a better experience of second-hand acquisition. This question is further divided into three sub-questions:

RQ1 – What are the main barriers and motivations towards SHC, based on the RMB-model?

RQ2 - What emotions are triggered during the SHC acquisition process, and how do they evolve across later stages of the customer journey?

RQ3 – What (design) intervention opportunities can we identify to facilitate the purchase of SHC?

2. Method

To answer the research question, semi-structured interviews were conducted to obtain qualitative information. To attain rich and differentiated information, four personas of different types of shoppers were constructed, based on previous research (Ferraro et al., 2016; Hur, 2020; Zaman et al., 2019). For the current research, during a brainstorm session, three researchers combined previous consumer types and orientations and decided on the design of four personas to focus on persona 1 (P1) represents the

ones who are creative, have a passion for shopping and have an insatiable desire for novelty. Persona 2 (P2) represents the ones who are resourceful and limit their purchase of new clothes whether it's due to budget constraints or a commitment to environmental sustainability. Persona 3 (P3) stands for those who prioritize quality over quantity. They search for materials, craftsmanship and brand reputation to ensure they make informed clothing purchases. Lastly, Persona 4 (P4) consists of those who don't indulge in frequent shopping sprees and prioritize comfort and functionality over style. Seeking for a variance of respondents, for each persona four participants were recruited (n=16) via social media (Instagram). This platform serves as a tool to reach a wide variety of profiles, and it is easy to express interest. When interested in participating, the person received an email with practical information (eg. scheduling appointment, consent) and the request to complete an online questionnaire (demographics, inclusion criteria; eleven 5-point Likert-scales). Based on this questionnaire, participants were allocated to one of the four personas and contacted to engage in an interview. In what follows participants will be referred to by a code PXRX (persona 1 to 4 and respondent 1 to 4). The interviews were held with 12 Flemish women and four Flemish men between 21 and 51 years old. Half of them obtained a master's degree and one third a bachelor's degree and two finished high school. Thirteen participants have a working status while one is unemployed and two are students. Fourteen participants have experience with buying SHC. The interviews took place online via Microsoft Teams or at the University campus and the average duration was about one hour. For the online interviews, Miro, an online collaboration platform, was used to brainstorm and complete the used tools. The interview consisted of three parts and was built up along the principles of guiding an interview (Mortelmans, 2007). The goal of the first part was to identify barriers and motivations associated with SHC. The interviewees were asked to introduce themselves in terms of their shopping behaviour. After this warming-up section, they were asked to share anecdotes, experiences, and struggles related to buying SHC. Then, a moodboard with pictures from thrift stores was presented to the interviewee to help identify barriers and drivers they might encounter. Barriers and motivations were captured on post-its which were used in the second part to rank them along their importance. Moreover, deeper insights into the emotions experienced when confronted with their barriers and drivers towards SHC were gained by using Plutchik's Wheel of Emotions (Plutchik, 1980). In the last part, the ideal second-hand shopping experience of the interviewee is identified with the Empathy Map technique which facilitates the visualization of future scenarios. This technique delves into users' perspectives by visually capturing thoughts ("think", "say"), feelings ("feel"), and actions ("do") about a given scenario. It helps designers craft solutions that genuinely relate to user needs and preferences (Gibbons, 2018). The interview was wrapped up with a question that enables identifying elements to lower barriers and enhance motivations for second-hand shopping: 'If you had a magic wand, what would your ideal second-hand shopping experience look like?'. The interviews were recorded, transcribed, and then analysed using NVivo software. The initial codes that guide our analysis are based on Terzioğlu's RMB-model. To analyse the data at a second level, a customer journey map was created (Lemon and Verhoef, 2016) to help understand the complex relations between the motivations and barriers that were mentioned throughout the whole shopping experience. For the different interaction touchpoints, emotions, needs and wants are registered, aiming to gain insights into possible intervention points and design opportunities.

3. Results

3.1. Barriers and motivations (RQ1)

Table 1 provides an overview of how the aspects of the RMB-model (see section 1.1) were interpreted in a second-hand context. Codes were created in NVivo for each of the aspects. This code tree was used for the allocation of references made by the participants. In the first level analyses, the number of references allocated to the topics of the RMB-model was used to understand the important themes mentioned by the participants. This shows that value aspects are most frequently mentioned, followed by technical aspects and emotional aspects.

Table 1. First level analyses: RMB topics

TECHNICAL ASPECTS 333 references	VALUE ASPECTS 659 references	EMOTIONAL ASPECTS 223 references
Required skills	**Aesthetic value**	**Environmental concerns**
Skills that are (perceived) necessary to participate in SHC acquisition	The look and style of SHC and if it fits within the consumer's style.	Awareness on environmental issues in general or specific to the fashion industry.
Required knowledge	**Financial factors**	**Emotional attachment**
Knowledge that is (perceived) necessary to participate in SHC acquisition.	All aspects related to the price of clothing. This can be SHC, new clothing or services (such as repair).	Products that have a special meaning to the user.
Endurance	**Functional value**	**Perceived interest**
How long a person stays in the second-hand store.	Is the garment useful to the consumer who (intends to) buy it?	Interest in SHC acquisition.
Reversibility	**Condition of the product**	**Perceived pleasure**
The possibility to restore the product to its original state.	The state and quality perception of SHC.	Positive feelings experienced related to SHC acquisition.
Accessibility of materials and methods	**Symbolic value**	**Negative stigma**
The accessibility of second-hand stores; possibility to find things and return in an online environment.	SHC as a sign of activism and creation of awareness.	Negative perceptions related to SHC (such as poverty) or fast fashion.
Design related problems		**Lack of confidence**
Problems related to the design of the store or clothes.		The feeling the consumers lacks confidence in participating in SHC acquisition.
Required time and effort		**Perceived negative feelings**
Time and effort that is required from people to find suitable SHC.		Negative feelings or experiences related to SHC acquisition

3.1.1. Value aspects

The topic mentioned the most is the **condition of the product** (referenced 311 times). Opinions on whether SHC is of lesser quality than new clothes vary, reflecting a mix of high- and low-quality options. Participants mention seeking garments that look new and durable, assessing materials, brand, and factors such as tears, fading colours, and pilling. Most participants mention hygiene to be crucial which could be influenced by the presentation of garments (P3R3). Second-hand stores are perceived as less hygienic than stores that sell new clothing. Questions such as: 'Has this garment already been washed?' (P3R3, P1R2, P4R2) and 'Can I properly clean it?' (P3R4, P2R2, P2R, P3R4, P1R2, P4R1) arise during second-hand shopping. The closer to the skin (e.g., underwear, shoes, and t-shirts), the bigger this concern (n=14). Interviewees express concern regarding the durability of SHC (n=8). They often compare the price of SHC with their retail counterparts and note that sometimes, for a slight additional cost, they can purchase the item new (n=10). The **financial factors** of SHC are referenced 175 times. Second-hand provides the opportunity to buy unique, high-quality garments at significantly lower prices. This is a primary motivator for over half of the participants (P1R2, P1R4, P2R1, P2R3, P2R4, P3R1, P3R3, P4R1, P4R2, P4R4). Four participants mentioned that SHC allows them to buy more exclusive, otherwise not affordable brands (P2R1, P2R3, P3R1, P3R2). Furthermore, consumers tend to be more satisfied when there's a greater gap between the selling and the original retail price (P1R4, P4R4). The low price of SHC can also compensate for feelings of guilt if a recently bought item gets dirty or damaged (P2R1, P2R2). Less referred to is **aesthetic value** (referenced 74 times). Participants emphasized the importance of style, fit, and appearance when selecting SHC, expressing a preference for items that resonate with their tastes and personality (n= 6). Denim and leather garments are highlighted for their appeal as these materials develop a unique character and value over time compared to new retail. Clothes also have **functional value** (referenced 91 times). Participants point out that they

want their clothes to fit properly and have a hard time finding them in second-hand stores (n=13). Getting SHC tailored requires skills, time, effort and money serving as a barrier for most respondents (P1R3, P2R1, P3R3). This is also confirmed by Niinimäki and Durrani (2020). However, two participants (P4R3, P4R4) see SHC as an affordable opportunity to create costumes. Lastly, **symbolic value** (referenced 8 times) touches on the topic of buying SHC to oppose fast fashion companies and their pollution. In total, six participants (P1R3, P1R3, P1R4, P2R2, P3R2, P3R3, P4R1) brought this up in their motivations for SHC acquisition.

3.1.2. Technical aspects

In the topic of **design-related problems** (referenced 144 times), participants emphasize the significance of easily accessible second-hand stores that ignite interest and inspiration. Problems can be divided into two categories: (1) problems related to the design of the store and (2) problems related to the garments. First, participants prioritize the store's design and clothing presentation favouring a categorization by clothing type (P1R4, P3R3, P4R2, P4R4), size (P1R2, P1R4 P2R2, P2R3, P3R4, P4R1) or by colour (P2R3, P3R3, P3R4, P4R1, P4R2). Additionally, four participants mentioned that they can spend hours on Vinted, an online platform, which is well structured (P1R1, P1R2, P1R4, P2R1). Second, participants mention that SHC are old-fashioned and not trendy (P1R2, P2R3, P2R4). The abundance of different styles makes it challenging for participants to find items they like, particularly when they lack a clear personal style vision. One respondent (P1R3) notes the difficulty in finding basic pieces like plain t-shirts. Additionally, the unstructured nature of second-hand stores contributes to the **required time and effort** (referenced 90 times) to acquire suitable SHC. Participants seek nice, unique pieces, but prefer minimal time and effort as possible in finding them. They desire instant visibility of store offerings to quickly assess compatibility with their preferences (P1R2, P2R4, P3R1, P3R3, R3P4, P3R2, P4R3). Online shopping simplifies the search process by enabling filtering by clothing category, brand, colour and size. It also provides more time to browse and the opportunity to communicate with the seller (P1R4, P4R2). However, participants experience risks with online second-hand shopping such as uncertainty about returns, and inadequate garment descriptions and pictures. The **required knowledge** (referenced 47 times) on the garment helps to evaluate personal style, fit and garment quality. The information gap resulting from not being able to use all senses makes interviewees cautious and longing for additional reassurance. Information could also be related to the previous owner, previous use and reasons for discarding. Furthermore, participants seek information on locating second-hand stores offering quality clothes that align with their personal style. Lastly, a need for knowledge of clothing is mentioned, particularly related to quality assessment, such as understanding terms like 'good material' or 'good construction' (P2R1, P3R3, P4R2,). Less referred to are **required skills** (reference 23 times), **accessibility of materials and methods** (referenced 15 times) and **endurance** (referenced 14 times).

3.1.3. Emotional aspects

The perceived negative feelings (referenced 85 times) are associated with the cramped and crowded organization of second-hand stores, leading to overwhelmed feelings. (P1R1, P1R3, P3R3, P4R2, P4R4). Next, 13 participants bring up the musty smell (P1R1, P1R2, P1R3, P1R4, P2R2, P2R4, P3R1, P3R2, P3R3, P3R4, P3R2, P4R3, P4R4). On the other hand, they also **perceive pleasure** (referenced 50 times) when buying SHC. This is often derived from treasure hunting or anticipating the enjoyment of wearing nice and comfortable clothing. Two respondents regularly visit second-hand stores to check if they have interesting new pieces (P1R3, P3R2) and one participant mentions second-hand shopping triggers her creativity (P4R2). **Environmental concern** (referenced 42 times), often categorized as a reflective emotion, touches the topics of ethical consumption and avoiding waste. Participants mention SHC is better for the environment and avoids waste (P1R4, P1R3, P2R1, P2R2, P2R3, P2R4, P3R1, P3R2, P3R3, P4R1), helps to avoid fast fashion companies (P1R4, P1R3, P2R4, P3R3) and sweatshops (P1R3, P2R4, P3R3). One participant only buys second-hand leather products in opposition to the leather production industry (P3R3). The negative image of fast fashion is also brought up within **stigma** (references 27 times) and is mentioned by three participants (P1R1, P2R2, P3R3), while no negative stigma on SHC is brought up. Whether SHC acquisition is encouraged or not depends on the participant's social circle. One participant indicates disparities between friend groups regarding attitudes toward

second-hand shopping, with one group endorsing it while the other group is more hesitant (P1R3). Less referenced are **emotional attachments** (referenced 8 times**), perceived interest** (referenced 7 times) and **lack of confidence** (referenced 5 times).

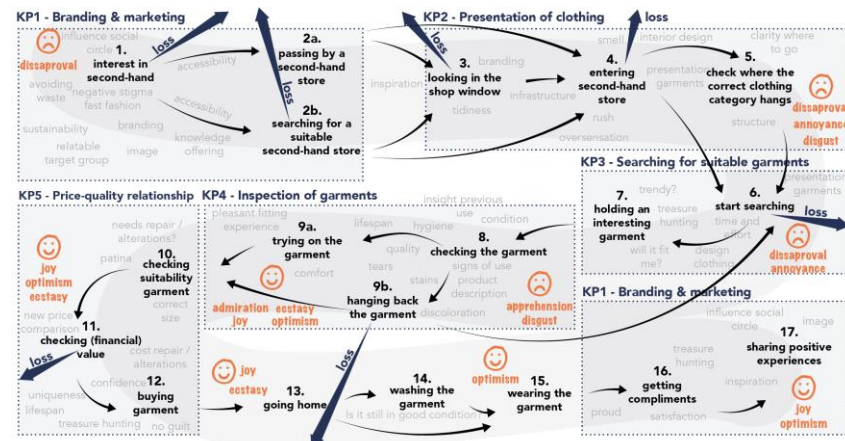## 3.2. Emotions that arise during the SHC acquisition process (RQ2)

Figure 1. User journey made for analysis

A customer journey map (figure 1) was created to analyse these findings into meaningful insights (second-order analyses). First, the different stages (17 steps) of SHC acquisition were mapped (bold text) and linked with the aforementioned aspects of the RMB-model (light grey text). Next, different moments where customers might lose interest in SHC are marked (blue arrows) and lastly, the most referenced emotions were indicated (orange smileys) to create a visual overview of positive and negative related events. We found that most negative feelings arise at the start of the customer journey and positive ones towards the end. This aligns with findings from Cervellon and Vigreux (2018), who studied the emotions during the purchase of second-hand luxury items (Cervellon and Vigreux, 2018). The first impression of second-hand stores evokes disapproval, and annoyance due to clutter and lack of structure (P2R1, P2R33, P4R2). Inadequate store layouts, cramped and poorly lit spaces, hinder movement and combined with an absence of a clear starting point for the search, participants feel overwhelmed and leave stores early in the customer journey. Feelings of disgust are often evoked by concerns regarding the cleanliness and hygiene of the clothing. Especially for garments worn close to the body like underwear and socks. The musty smell of second-hand stores is also mentioned to enhance this feeling. Positive emotions towards the end of the customer journey stem from the prospect of discovering unique items and engaging in treasure hunting. Additionally, satisfaction arises from acquiring low-cost clothing and purchasing garments from premium brands. Furthermore, participants indicate deriving joy from talking about their second-hand discoveries, their sustainability efforts, and attempts to reduce waste.

4. Discussion

By going through the steps of the customer journey, we could identify five key points (KP) (marked in blue frames) to answer RQ3 "What (design) interventions can we identify to facilitate the purchase of SHC?". In the continuation of this discussion, we want to dive into these five key points, discuss the barriers and motivators, and reason on the solutions that were mentioned by the participants.

4.1. KP1: Branding and marketing

At the beginning of the customer journey, branding and marketing play a crucial role in creating attention, establishing awareness, and shaping a positive image to foster consumer orientation towards SHC, particularly for those less familiar with second-hand acquisition. We identified the following strategies to support branding and marketing efforts:

- **Employing a coherent house style**: maintaining a consistent brand identity, as well as a consistent active social media presence to boost second-hand store appeal. Providing accurate window displays and point-of-sales communication materials to establish a clear store identity with which one can identify is appealing and simplifies enacting in a shopping process reducing product-personal identity incongruence.
- **Growing a sense of community:** Word-of-mouth referrals, influencer endorsements, and admired figures' recommendations motivate consumers to engage in second-hand shopping. Social circles influence perceptions, with compliments on second-hand purchases and shared recommendations fostering a sense of belongingness to a community.
- **Emphasizing the eco-conscious nature of SHC** counters negative stereotypes, promotes responsible consumption, and creates joy among shoppers as they proudly showcase their commitment to eco-friendliness through SHC. Brands can showcase their engagement in sustainability initiatives, potentially contributing to counter the negative impact of the fashion industry and contributing to a behaviour shift.
- **Create a positive image** to target customers with little to no experience with second-hand shopping to dissolve negative perceptions these customers might have.

4.2. KP2: Presentation of clothing

Garment presentation and store interior design are crucial aspects that form the initial impression for customers visiting both physical and online second-hand stores. Attention to these details is essential for attracting and retaining customers, and encouraging engagement with the store. Customers desire a well-organized and clutter-free environment, mirroring the appearance of conventional retail stores. Identified strategies to improve the shopping experience:

- **Minimize sensory overstimulation** (visual, smells, noise), provide open and well-lit spaces, and consider additional features like coffee bars (with the smell of coffee and freshly baked goods) or creative workshops to allow customers to trigger inspiration and prolong the customer's presence in a store.
- **Simplify navigation** for customers by effective display strategies, including clear indications for garment types, colours, sizes, and brands,
- **Generously sized fitting rooms** with favourable lighting and well-placed mirrors enhance the try-on process and customer satisfaction.
- **Lower hygiene and quality concerns** through the positioning of garments on racks instead of in bins as these are considered less hygienic and qualitative.
- **Enhancing initial consumer interaction** with the second-hand store to target customers who exhibit a willingness to explore SHC acquisition but lack the experience. These hold promise for enhancing their familiarity and comfort, potentially providing a heightened adoption rate of SHC practices.

4.3. KP 3: Searching for suitable garments

The goal of second-hand shopping is to efficiently find suitable, unique pieces at bargain prices. However, the overwhelming store environment can hinder this search leading to disappointment, annoyance, and disinterest. Consequently, shoppers may abandon the search altogether. Nonetheless, the discovery of unique pieces can spark feelings of ecstasy and joy, like the joy of 'treasure hunting'. Following strategies were identified to support this treasure hunt experience:

- **Search efficiency**: online second-hand shopping is preferred for its efficient filtering options by garment, type, brand, colour, and condition. It should be considered how this can be translated into a physical store environment, using identifiable sections for specific styles, clothing categories, or curated quality selections.
- **Specific stores or sections** could help inexperienced shoppers to search for high-quality garments in good condition. Better guidance and information provision facilitate their initial engagement with second-hand retail environments. However, the impact of curated selections on customer satisfaction requires further research.

- **Salespeople** in physical stores can guide customers, provide information, and personalize the shopping experience. However, it is essential that their assistance remains non-intrusive.
- **Enhancing the search experience** can help customers across varying experience levels. It could motivate those with limited familiarity and facilitate seamless transitions for experienced shoppers, potentially substituting first-hand clothing purchases with second-hand alternatives.

4.4. KP 4: Inspection of garments

All second-hand garments undergo an inspection to ensure satisfactory purchase. However, sizing presents a notable challenge, particularly with items like jeans and trousers, as second-hand stores often offer unique pieces with limited size availability. This scarcity makes it challenging for customers, especially those with non-standard measurements, to determine the fit, leading to frustration and disappointment. Nonetheless, feelings of joy are evoked when a garment does fit. Another challenge lies in finding high-quality garments in good condition. Aspects such as brand reputation play an important role in this inspection process. Next to that, the perception of hygiene predominates in this key point. Thus, we propose the following strategies:

- **Clear size labelling and categorization** can make the selection process easier for customers.
- **Tailoring services** at second-hand stores to optimize fit and style, if at a reasonable cost. However, future research is necessary to determine the price point of this service.
- **Clarify the quality:** quality control includes checking for signs of wear, stains, loose seams, and pilling. Well-educated salespeople could assist with this assessment. Consumers prefer items in good condition for extended usability, but some wear and tear can be appealing for specific items. Stains on a garment can significantly impact its hygiene perception.
- **Providing more information about a garment's history** (prior use, reasons for disposal) and its connection to the previous owner can positively influence hygiene perception, potentially through tags or QR codes. The digital product passport, soon to be implemented in the European Union, can be a useful information carrier for these details.
- **Providing more product information or style/fit alterations** can show both in- and experienced customers the potential of SHC despite initial fit or style. This could encourage their participation in SHC acquisition.

4.5. KP5: Price-quality relationship

As previously discussed, customers desire SHC to look as new as possible, while being priced affordably. Finding high-quality pieces or prestigious brands at reduced cost evokes feelings of joy, satisfaction, optimism, admiration and even ecstasy. Consumers compare the original retail price with the resale price, considering the product's condition. SHC, even with the original tag and never-worn status, are not expected to be priced the same as new items. Factors such as the rapid turnover of fashion trends and hygiene perceptions contribute to the difficulty in maintaining the retail value of garments. It was mentioned multiple times that if the price for SHC is too high, customers may opt to purchase a similar new garment instead. SHC is perceived to be priced as low as possible given their prior use, and therefore should not exceed the price of new clothing. The following strategies were found to restore the value of SHC:

- **Transparency and quality assurance** and the value SHC offers could help improve the negative perceptions of SHC and attract new (inexperienced) second-hand shoppers.
- **Highlighting unique features**, vintage or intricate details, limited-edition designs, or signs of wear can create a perception of exclusivity and attract buyers.
- **Offering different prices for the same garment in varying conditions**, especially in an online context, allows customers to make informed choices based on their preferences and budgets.

5. Conclusion

This research aims to identify how barriers that occur when buying second-hand clothing can be removed and drivers be strengthened to create a better experience of second-hand and stimulate adoption

intention. Based on 16 semi-structured interviews, we could answer the three proposed research questions:

RQ1: It was found that the RMB-model demonstrates adaptability beyond its original context by effectively structuring motivations and barriers in the context of SHC acquisition. Visualised in a customer journey map, we found that out of the three aspects of the RMB-model, the value aspect is the most important to customers. Given the pre-owned nature of clothing, customers prioritize longevity and cost-effectiveness, seeking assurance that their purchase will endure and provide value over time.

RQ2: Both negative and positive feelings are triggered during SHC acquisition. Most referenced emotions are joy, annoyance, and disgust. In addition to these three emotional responses, participants express secondary feelings, such as optimism, ecstasy, admiration, apprehension, disapproval, and even boredom. Notably, positive emotions tend to occur towards the end of the customer journey, characterized by the thrill of discovery and satisfaction of receiving compliments or discussing their second-hand finds. These positive experiences serve as potential mitigators for negative emotions, often encountered earlier in the journey, particularly concerning the perceptions of SHC.

RQ3: Based on the Customer Journey map, five key points could be identified to designerly facilitate the purchase of SHC: (i) branding and marketing to attract customers, (ii) presentation of clothing to motivate search and increase quality, (iii) encouraging the search for suitable garments, (iv) supporting inspection of garments for quality perception, and (v) improving the prize-quality relationship. Different key points can target customers with different levers of experience in SHC acquisition.

6. Limitations and future research

Given the limitations inherent in our sampling methodology, future research should aim to enhance research rigour by integrating convenience sampling with complementary methods, such as quantitative research. This would enable a more nuanced understanding of persona types and diverse experiences regarding SHC acquisition. Acknowledging the non-representative nature of our current sample, caution must be exercised in drawing broad generalizations. However, similarities with prior research lend credence to the relevance of our findings. Next, future research on the viability of curated and design-focused second-hand stores, particularly considering their potentially higher price point is essential to explore. Exploring the existence of a substantial market and identifying target audiences who value this proposition is crucial. Lastly, real-life tests and/or quantitative (survey) research are needed to measure the actual influence of smells, visual organisations and presentation on quality and hygiene perception, intention to buy and willingness to pay.

References

Bhardwaj, V. and Fairhurst, A. (2010), "Fast fashion: response to changes in the fashion industry", *The International Review of Retail, Distribution and Consumer Research*, Vol. 20 No. 1, pp. 165–173, https://dx.doi.org/10.1080/09593960903498300.

Camacho-Otero, J., Pettersen, I.N. and Boks, C. (2020), "Consumer engagement in the circular economy: Exploring clothes swapping in emerging economies from a social practice perspective", *Sustainable Development*, John Wiley and Sons Ltd, Vol. 28 No. 1, pp. 279–293, https://dx.doi.org/10.1002/sd.2002.

Cervellon, M.-C. and Vigreux, E. (2018), "Narrative and Emotional Accounts of Secondhand Luxury Purchases Along the Customer Journey", pp. 79–95, https://dx.doi.org/10.1007/978-3-319-71985-6_6.

Dressr. (2023), "Dressr", available at: https://dressr.be/ (accessed 22 September 2023).

Ellen Macarthur Foundation. (2017), *A New Textiles Economy: Redesigning Fashion's Future*.

Essentiel Antwerp. (2023), "RE-SSENTIEL", available at: https://re-ssentiel.com/nl/?gclid=Cj0KCQjwj_ajBhCqARIsAA37s0zDF_lsGMb-anPRd7GuV3Y8cCWuBbERN-BQrVluRYuzOzPzar9vGyUaAnOpEALw_wcB (accessed 5 June 2023).

Ferraro, C., Sands, S. and Brace-Govan, J. (2016), "The role of fashionability in second-hand shopping motivations", *Journal of Retailing and Consumer Services*, Elsevier Ltd, Vol. 32, pp. 262–268, https://dx.doi.org/10.1016/j.jretconser.2016.07.006.

Gibbons, S. (2018), "Empathy Mapping: The First Step in Design Thinking", *Nielsen Norman Group*, 14 January, available at: https://www.nngroup.com/articles/empathy-mapping/#:~:text=Definition%3A%20An%20mpathy%20map%20is,empathy%20mapping%20and%20its%20uses (accessed 18 September 2023).

Hur, E. (2020), "Rebirth fashion: Secondhand clothing consumption values and perceived risks", *Journal of Cleaner Production*, Elsevier Ltd, Vol. 273, https://dx.doi.org/10.1016/j.jclepro.2020.122951.

Jung Chang, H., Yan, R.-N. and Eckman, M. (2014), "Moderating effects of situational characteristics on impulse buying", *International Journal of Retail & Distribution Management*, Vol. 42 No. 4, pp. 298–314, https://dx.doi.org/10.1108/IJRDM-04-2013-0074.

Koszewska, M. (2018), "Circular Economy - Challenges for the Textile and Clothing Industry", *Autex Research Journal*, Sciendo, Vol. 18 No. 4, pp. 337–347, https://dx.doi.org/10.1515/aut-2018-0023.

Laitala, K. and Klepp, I.G. (2018), "Motivations for and against second-hand clothing acquisition", *Clothing Cultures*, Intellect, Vol. 5 No. 2, pp. 247–262, https://dx.doi.org/10.1386/cc.5.2.247_1.

Lemon, K.N. and Verhoef, P.C. (2016), "Understanding Customer Experience Throughout the Customer Journey", *Journal of Marketing*, Vol. 80 No. 6, pp. 69–96, https://dx.doi.org/10.1509/jm.15.0420.

Marques, A.D., Marques, A. and Ferreira, F. (2020), "Homo Sustentabilis: circular economy and new business models in fashion industry", *SN Applied Sciences*, Springer Nature, Vol. 2 No. 2, https://dx.doi.org/10.1007/s42452-020-2094-8.

McKinsey. (2020), *Fashion On Climate: How the Fashion Industry Can Urgently Act to Recude Its Greenhouse Gas Emissions*.

McNeill, L. and Moore, R. (2015), "Sustainable fashion consumption and the fast fashion conundrum: fashionable consumers and attitudes to sustainability in clothing choice", *International Journal of Consumer Studies*, Vol. 39 No. 3, pp. 212–222, https://dx.doi.org/10.1111/ijcs.12169.

Mortelmans, D. (2007), *Handboek Kwalitatieve Onderzoeksmethoden*, Acco.

Mukherjee, S. (2015), *Environmental and Social Impact of Fashion: Towards an Eco-Friendly, Ethical Fashion*, *International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS)*, Vol. 2.

Niinimäki, K. (2017), "Fashion in a Circular Economy", *Sustainability in Fashion*, Springer International Publishing, Cham, pp. 151–169, https://dx.doi.org/10.1007/978-3-319-51253-2_8.

Niinimäki, K. and Durrani, M. (2020), "Repairing Fashion Cultures: From Disposable to Repairable", *Transitioning to Responsible Consumption and Production*, pp. 153–167, https://doi.org/10.3390/books978-3-03897-873-2-8.

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T. and Gwilt, A. (2020), "The environmental price of fast fashion", *Nature Reviews Earth and Environment*, Springer Nature, 1 April, https://dx.doi.org/10.1038/s43017-020-0039-9.

Plutchik, R. (1980), "A General Psychoevolutionary Theory of Emotion", *Theories of Emotion*, Elsevier, pp. 3–33, https://dx.doi.org/10.1016/b978-0-12-558701-3.50007-7.

Reed, K. (2020), "The Then and Now of Second-Hand Shopping", *The Courtauld*, 20 November, available at: https://sites.courtauld.ac.uk/documentingfashion/2020/11/20/the-then-and-now-of-second-hand-shopping/ (accessed 12 September 2023).

SANVT Journal. (2022), "The meaning & history of fast fashion", *SANVT Journal*, 9 May, available at: https://sanvt.com/blogs/journal/fast-fashion-explained-meaning-and-history (accessed 12 September 2023).

Takens, J., Brants, M., Lenaerts, M., Smet, K., Spaeper, V. and Talboom, S. (2023), *De Duurzame Modemonitor*, Mechelen.

Terzioğlu, N. (2021), "Repair motivation and barriers model: Investigating user perspectives related to product repair towards a circular economy", *Journal of Cleaner Production*, Elsevier Ltd, Vol. 289, https://dx.doi.org/10.1016/j.jclepro.2020.125644.

ThredUP. (2023), *Resale Report*.

Wang, B., Fu, Y. and Li, Y. (2022), "Young consumers' motivations and barriers to the purchase of second-hand clothes: An empirical study of China", *Waste Management*, Elsevier Ltd, Vol. 143, pp. 157–167, https://dx.doi.org/10.1016/j.wasman.2022.02.019.

WRAP. (2017), *Valuing Our Clothes: The Cost of UK Fashion*.

Zaman, M., Park, H., Kim, Y.K. and Park, S.H. (2019), "Consumer orientations of second-hand clothing shoppers", *Journal of Global Fashion Marketing*, Routledge, Vol. 10 No. 2, pp. 163–176, https://dx.doi.org/10.1080/20932685.2019.1576060.