

The Care and Repair Guide: Reducing Environmental Impact and Addressing Skills Gaps in Responsible Wardrobe Management

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Abstract: This research explores the critical relationship between consumers, brands and the charity retail sector regarding garment care, repair and second-life ownership to encourage responsible wardrobe management. It acknowledges the importance of considered and active garment maintenance practices to ensure the longevity of a garment and retain value to prevent the purchasing of new, replacement garments. A qualitative methodology was informed by an extensive literature review, highlighting the identified problem space and creating a focus on critical gaps in knowledge. The core concepts of care and repair were explored through participatory workshops with charity retail sector volunteers and consumers to gain vital knowledge and skills in sustainable use behaviors. Collaborating with North-East based St. Oswald's Hospice within the charity retail sector, the project empowers stakeholders to facilitate sustainable clothing behaviors intended to extend the lifetime of clothing. Key insights generated include the critical requirements of resource, skills and knowledge, and motivation to ensure holistic engagement with garment maintenance and care. Moreover, these factors need to be underpinned by an individual's attachment of value to a garment, to rationalize the investment of time and effort in care and repair practices.

Introduction

Clothing has increasingly become a disposable commodity aligned with the extractive, linear 'take, make and dispose' mentality, exacerbated by excess production from the fast fashion sector. In Europe, clothing has the fourth highest impact on the environment, is the third highest area of consumption for water and land use and the fifth highest for use of primary raw materials and greenhouse gas emissions (EU, 2022). UK consumers wear an item less than twice on average, with £30 billion of unused clothing residing in wardrobes, and an estimated £140 million of clothing annually ending up in landfill, with only 1% of clothing being recycled into new products (WRAP, 2020). Of the 11.5 thousand UK charity shops between ten and 30 per cent of second-hand donations are resold in store, with many garments entering this waste stream or being diverted to landfill simply because they need repairing, typically because of stains, tears, pilling, broken seams and missing buttons. Increased garment care and repair practices will increasingly become a major requirement for brands, charities and consumers, yet current

initiatives are uncoordinated or inaccessible for many stakeholders.

A coordinated response is needed to change how clothing is managed and consumed to extend product lifetimes and minimize waste by supporting enhanced clothing care and mindful wardrobe management. Resource reduction relating to production and consumption is dependent on restricting acquisition rates and extending garment longevity through careful post-consumption clothing management, repair, renovation, renewal and upcycling. The direct correlation between responsible garment care and resulting environmental impact of carbon emissions was reported to have been reduced in the UK by 700,000 tons from 2012-2016 due to minimizing ironing, tumble drying and washing temperatures, for example (WRAP, 2021). The worn life of clothing can be significantly extended via repair, with the Ellen MacArthur Foundation recently estimating that garment repairs can

increase usage by 75% and reduce associated emissions by 30%.

This research aims to i) gain insight into current understanding of garment care (washing, use and maintenance) and repair and, ii) to empower stakeholders with skills and knowledge to action responsible wardrobe management practices. The aims will be addressed by working in collaboration with North-East based charity St. Oswald's Hospice through the implementation following objectives:

- To analyse the relationship between consumer understanding of environmental impact and care practices by engaging with consumer groups;
- To enable St. Oswald's Hospice to divert damaged donations from rag/landfill by upskilling staff to repair damaged donations;
- To prevent damaged clothing being donated to the charity retail sector by engaging citizens in clothing repair practices.

Literature Review

Care and Circularity

The influence of consumer behavior is acknowledged within current sustainability discourse as an important driver in transitioning towards a circular economy for the fashion and textiles industries (Ellen Macarthur Foundation, 2019; Patwary et al., 2022). However, compared to other product lifecycle stages like production, there is relatively less robust data about the consumer use phase (Daystar et al., 2019; Mutambo et al., 2024). In particular, the role played by post-purchase 'care, maintenance and repair has been under-explored in wider narratives on fashion and sustainability' (Dubé, 2023, p.4). This dearth in research is also acknowledged by Tölg & Fuentes (2024) and Laitala et al. (2018). Implementing and achieving ambitious aims such as those set by the British Fashion Council (Hetherington et al., 2021), by WRAP in their Textiles 2030 plan (WRAP, 2021) or the EU under their Green Deal (European

Commission, 2023), closing the loop, optimizing product lifetimes and reducing waste in the fashion systems will require major shifts in consumer behavior. Responding to the relatively low levels of action towards this end requires interventions grounded by a deeper understanding of how consumers care for their clothing (Laitala & Klepp, 2020).

Within the context of wardrobe management, the term care commonly encompasses a range of processes and activities undertaken by consumers to maintain clothing. These include storage, laundering (washing, ironing, drying), repair and use. In addition to adverse impacts on the environment through resource, energy and water use, consumer care practices have the potential to influence product longevity and the second life potential of clothing which ultimately impacts the amount of clothing entering waste streams (Klepp et al., 2020; Laitala et al., 2018; Laitala & Klepp, 2020). Similarly to ecologically driven acquisition (Lundblad & Davies, 2016; Niinimäki, 2010), the factors which influence care practices and decisions are varied, including values, education and knowledge, social economic factors, culture, geography and beliefs (Kant Hvass, 2014; Patwary et al., 2022).

Framing care as a part of 'mindful clothing consumption' Patwary et al. (2022) recommends measures like reduced washing, using a full load at lower temperatures, and the use of liquid detergent as a means of engaging in responsible care. Additionally, some theorists have framed notion of care beyond literal garment maintenance, extending it to care for the environment and future generations (Tölg & Fuentes, 2024). Drawing from feminist theory espousing ethics of care, Tölg & Fuentes propose the notion of 'care-in-practice' (2024, p.2) contending that 'most forms of circular consumption involve and are enabled and shaped by enactments of care' (2024, p.3). This theorization of care helpfully posits the need for an awareness of a deficit of care and a sense of responsibility as requisite to acts of caring. Moreover, the authors contend that *care problems* arise when there is lack of resources and when multiple care needs are in competition. In essence this speaks to the affective and practical barriers and enablers of care. Focusing on the role of repair within the second-hand retail sector, our research

examines how responsible care practices can be supported.

Repair for longevity and second life

Damage has been noted as a leading reason why garments are disposed of by consumers (Laitala et al., 2014). A study by Degenstein et al. (2020) revealed that in addition to factors like perceived garment quality (luxury vs. fast fashion), garment type and damage level influence care and disposal decisions. Furthermore, consumers are more likely to repair lightly damaged garments.

While repair is a care strategy that has potential to extend product lifetimes and reduce waste (McQueen et al., 2023; Niinimäki, 2018), there are a number of common barriers, which include a lack of resources such as time, finances, equipment and skills (De Castro, 2021; McLaren & McLauchlan, 2015). Notably the skills gap has been attributed in part to changes of curricula within early education (Allsop & Cassidy, 2019). Additionally, the relatively lower price of clothing has disincentivized engagement by consumers in repair (Twigger-Holroyd, 2016). Palmer (2024) points to the need to educate consumer about garment quality and repair, while Niinimäki and Durrani (2020) advocate repair events and pop-up cafes as avenues for consumers to acquire skills from their peers while fostering a sense of community and social cohesion (Treggiden, 2023). As such, greater effort is needed to support the development of repair skills among consumers and other stakeholders.

In addition to its impact within the domain of responsible consumer use, repair has the potential to impact the charity retail sector. Donating garments to a second-hand retailer is categorized as an 'eco-conscious disposal' option (Patwary et al., 2022, p.2) as there is value in diverting clothing from landfill, however this paper argues that such action can only be considered as responsible if garments are in an adequate condition for re-use. In addition to maximizing product lifetimes during use, repair skills are essential to mitigating post-consumer waste by maximizing potential re-use of garments. For instance, a study exploring common reasons for garment failure examined over 1000 garments donated to UK second-

hand retailers to reveal that at least 29% of clothing had accidental damage including rips and stains, while 14% had holes in seams and 8% had a trim (i.e. buttons, zips, beads etc.) failure (Cooper & Claxton, 2022). While the authors suggested solutions to address these issues during the design phase, acknowledging the potential of mitigation during and after consumer use, this research builds on these findings to explore how repair can be deployed by consumers and second-hand retailers to reduce that share of garments that end up in landfill.

Garment lifetimes are determined by a combination of inherent physical and functional properties of products and the care they receive during use (Cox et al., 2013; Laitala et al., 2020). Moreover, caring for the environment, others and products requires resources as well emotional and cognitive capacities (Tölg & Fuentes, 2024). Consequently, in addition to measures to improve garment quality (Piippo et al., 2022), there is a need to support and promote longevity during and after consumer use. This research aims to add to this area of inquiry and action by exploring the critical relationship between consumers, brands and the charity retail sector regarding garment care, repair and second-life ownership.

Methodology

This externally funded project explored the concepts of care and repair through an understanding, action and communication lens. These two distinct, but closely interrelated concepts are studied through the implementation of a qualitative methodology in collaboration with St. Oswald's Hospice Charity in Newcastle upon Tyne to understand consumer care practices and enable skills exchange in garment repair practices. This series of stakeholder interactions focused on the sharing and up-skilling of individuals to facilitate their engagement with repair practices and encourage positive repeat behaviors.

An extensive literature has informed the design of the methodology, identifying gaps in knowledge and critical areas which have been previously under-researched. This secondary scoping resulted in the framing of a unique problem space which directed stakeholder

engagement and insights into potential intervention points.

Working collaboratively with St. Oswald's Hospice, four 3-hour repair workshops were conducted between January and March 2025. Key skills taught during these sessions included visible and invisible mending, in particular darning and Sashiko (Japanese decorative embroidery technique). Workshops one and two focused on upskilling individuals in the skills and knowledge required for the repair and maintenance of garments. These sessions worked with staff and volunteers within the donation sorting depot in St. Oswald's Hospice to determine the role repair practices could play in diverting damaged donations from landfill and rag. Workshops three and four were open to members of the public and facilitated an opportunity for participants from the first two workshops to share their newly developed skills with a larger group. Participants across the workshops were aged between 18 to 65+, with a steady attendance of 8-10 staff and volunteers in workshops one and two, and 25 – 30 members of the public in workshops three and four. Participants were recruited through internal and external advertisement at the charity retail premises of the charity, alongside social media promotion. Data collected included a short questionnaire at the start and end of the event, observational notes and audio recorded, facilitated group discussions.

All data was analysed using the general inductive method (Thomas, 2006), which involves a close reading and rereading of data to synthesise key themes.

Findings & Discussion

The data generated during the four repair workshops provided a breadth of insights to address the aims of the study. The qualitative findings were categorised into four thematic areas: value, skills and knowledge, resources and caring.

Value

The concept of value emerged across all workshops as a key theme, with participants expressing varied perceptions of how it shaped their care practices. It was detailed that increased access to cheap clothing had contributed to lower engagement in care, with

participants also discussing how an expectation of lower garment quality (in the case of fast fashion) made people less likely to value their clothes. In essence, some participants did not see the point of investing time and resource in a cheap garment. A lack of awareness about the labour and skill involved in making garments was referenced with some participants saying that engaging in repair during the workshops had helped them to gain a greater value for clothing in general.

Discussions with staff and volunteers also revealed differing views on the commercial value of repaired donated items, with some doubtful of the commercial viability of visibly repaired garments, especially with new cheaper garments being readily available. There was a generational divide evidenced as some older participants pointed to the associations to poverty, while younger participants argued that visible repairs could be viewed and marketed as unique. Interestingly, negative views of visible repair did shift for a few as they continued to attend workshop sessions. The generational divide also extended to experiences of valuing as some participants noted how clothing used to be valued (and consequently cared for) more because it was too expensive to replace them. In contrast, others pointed to their experience of following ever-changing trends.

Skills and Knowledge

A key theme, identified as an enabler of care, was skills and knowledge. Conversations with staff and volunteers highlighted the lack of specialised skills required to embed care and repair within the charity retail sector. Aside from the basic knowledge of things like embroidery, stain removal or darning, participants pointed to a need for greater knowledge and skill in differentiating fabric types and determining whether an item was even worth the effort of care. This relates back to the notion of value, with the sorting of donations being a subjective process that relies on individuals to be able to recognise the commercial potential of a garment. Similarly, participants in workshops three and four referenced a perceived lack of care and repair skills. This, some argued, was compounded by the diminishing value of clothing as well as a lack of opportunities to learn in formal educational and communal

contexts. Therefore, the workshops were viewed by many as a valuable opportunity and safe space to learn new skills from the research team and other community members who had varying levels of knowledge and experience. Finally, while skills and knowledge of care practices were identified as key to supporting garment longevity, it was acknowledged that resources and motivation also played significant roles in the engagement with responsible wardrobe management.

Resources

An additional emerging theme from the data was the role that resources played in shaping care and repair practices. The limited amount of time available in the charity retail sector was repeatedly referenced in workshop one and two. Although there was a high-level of enthusiasm expressed by the staff and volunteers about repairing and caring for (laundering, removing stains, etc.) donated items, they also acknowledged how time constraints circumscribed their ability to action these desires. While a few volunteers involved in sorting donations shared experiences of taking the initiative to repair or clean a few garments at home, many deemed it unfeasible to add that level of work to their current sortation workflow. Citing the sheer volume and variety of donations they received; staffing capacity was also recognised as a limiting factor making it difficult for consistent garment care work to take place within the charity. Creating a specialised garment care role was suggested as solution to this, however the realities of funding constraints across the charity sector made this option unlikely.

The resource of physical space at the sorting location was also discussed, as some pointed to the lack of dedicated space for care activities to take place. The consumer perspective on resources, similarly, referenced limits of time as shaping care practice. Furthermore, ownership or access to care tools like a dryer, pilling comb, airing racks for example, influenced how and if consumers enacted garment care. Lastly the resource of information emerged in discussions. Access to care information in the form of physical garment labels and online guides/ tutorials was referenced with participants expressing varied engagement. From those claiming to always use such

information, to those that never consulted them, relying instead on tacit know-how, there was a spectrum of reasons cited. These included the desire to extend garment lifetimes, maintain fit or save time. Moreover, many expressed a lack of awareness about online care information from brands, pointing to a need for further engagement from brands through effective communication channels. Interestingly, care information was also referenced as a driver of acquisition decisions, with some participants detailing that they limited their purchase of clothes to items which could be laundered at a specific temperature.

Motivation

The last theme from the data was regarding motivational behaviour for engaging in care and repair practices. While environmental and broader sustainable and ethical concerns were referenced by many during the workshops (especially in relation to fast fashion and over consumption), discussions centred specifically on garment care revealed the nuanced and sometimes competing motivations driving actual care practice. For instance, for some, care (for the planet and others) was an important yet secondary concern to factors such as cost saving, convenience, or the desire to maintain the functionality of a technical garment like a waterproof jacket. Therefore, furthering our understanding of the breadth of concerns and motives shaping care and how it is enacted, is essential. Moreover, limited engagement with care communication reported by consumers emphasises the need for key stakeholders like brands to consider the most effective approaches of disseminating care information to consumers. Aside from insights regarding the drivers and enablers of care, this study highlights general lack of awareness that consumers have about the fate of the garments they donate into the second-hand supply chain. Better education about this may encourage greater care to optimise product second lifetimes.

Conclusions

All four workshops provided insights into the appetite and potential for wide-scale uptake of garment maintenance and repair to be implemented to divert damaged clothing

donations going directly to landfill or rag. Discussions both with the charity retail workers and the public featured enthusiasm for learning about and engaging in care practices in communal and personal contexts. Indeed, many participants saw the potential of care and repair practices to reduce waste and support longevity. However, from both a charity retail and consumer perspective, motivations to engage were largely dependent on the knowledge, skills and resources. In summary, responsible wardrobe management relies on the perceived value, both in terms of time as a resource, but also the investment of this time into garments.

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