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From excess to essential – Exploring the Potential of Adopting Smaller Wardrobes

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Abstract: The overproduction and overconsumption of clothing have substantial environmental impacts. Shifting to smaller wardrobes containing fewer, durable, and frequently used garments is a key strategy in transitioning to a sustainable system. Understanding the size and composition of wardrobes is an essential first step to assess the potential of adopting smaller wardrobes. This study maps the current size of individuals' wardrobes, the fraction actively used, and the fraction individuals deemed essential to meet their needs. It moreover investigates the characteristics of essential garments and identifies barriers to adopting an essential wardrobe. To examine this, participants' wardrobes were first audited and then reduced to only those items deemed essential to meet their needs for the coming year. The wardrobe audit of 30 individuals in Flanders (Belgium) reveals that participants owned, on average, 169 garments, of which 138 were used in the past year (81%), and 90 were considered essential (53%). Participants' perceived essential clothing needs varied strongly, ranging from 36 to 275 garments, or alternatively, 28% to 98% of their current wardrobe. Combinability emerged as the most important criterion for selecting essential garments. Both practical (i.e., shortages) and emotional considerations (i.e., loss of joy) were anticipated as obstacles to adopting an essential wardrobe. This study highlights the considerable variation in how individuals meet their clothing needs and what they deem essential. Our findings provide an initial range for the minimum number of garments required to meet clothing needs and offer valuable insights for establishing sufficiency thresholds in apparel consumption.

Introduction

The clothing value chain has become increasingly scrutinized for its adverse environmental impacts (Niinimäki et al., 2020). In response, governments and companies are taking action to address this, such as the European Union Strategy for Sustainable and Circular Textiles. However, most proposed initiatives focus on innovations in the clothing value chain's beginning (production) or end (waste management), with little attention paid to the use phase (Bardey et al., 2022; Maguire & Fahy, 2023). Yet, more intensive and longer use of garments in the use phase holds significant potential to slow the flow of garments, reducing the adverse environmental impacts associated with production and waste treatment processes (Roos et al., 2017).
Shifting to smaller wardrobes containing fewer, long-lasting, and intensely used garments is proposed as a key strategy in the transition towards a more sustainable system (Rhee & Johnson, 2019; Vladimirova, 2021). However, despite the importance of understanding consumer behavior in shaping sustainable practices (Piontek et al., 2019; Polizzi di Sorrentino et al., 2016), there is a scarcity of studies that delve into wardrobe dynamics at the individual level. Insight into the relation between the size of individuals' wardrobes, the fraction of the wardrobe actively used, and the fraction required to meet personal needs is necessary to assess the true potential of wardrobe reduction as a sustainable strategy. Such bottom-up research facilitates a more comprehensive and holistic understanding of clothing needs. This is required in sufficiency-oriented frameworks, such as consumption corridors, to determine lower-bound limits to apparel consumption (Vladimirova, 2021).
This paper first gives background information on what is known about wardrobe size, garment use, and wardrobe reduction. Next, the methods are outlined. The results are reported

and discussed with regard to (i) wardrobe size, (ii) the characteristics of essential garments, and (iii) the barriers to adopting essential wardrobes. The paper finishes with a general conclusion.

Background

Wardrobe Size and Use of Garments

There is a lack of systematic, empirical research on individuals' clothing stock, as well as, on how, when or why clothes enter, remain in, and leave wardrobes (Maldini et al., 2023). Few studies provide representative results, and methodological disparities complicate comparisons and generalizations (Vermeyen et al., 2025). Yet, wardrobe size seems to vary strongly between individuals. For example, Vermeyen et al. (2025) found wardrobe sizes ranging from 44 to 434 among 156 Belgian individuals. Similarly, de Wagenaar et al. (2022) observed a wide range from 30 to 713 garments in a global sample of 520 individuals. In studies differentiating between genders, the general observation is that, on average, women own more garments than men (de Wagenaar et al., 2022; Maldini et al., 2017; Vermeyen et al., 2025). The findings related to age and wardrobe size are inconsistent (de Wagenaar et al., 2022; Maldini et al., 2017; Vermeyen et al., 2025). The above underscore the need for further research to better understand the size of individuals' wardrobes and the factors that influence this variation.

There is also limited understanding of how individuals use the garments in their wardrobes. Tracking clothing lifespans is challenging since most garments lack identifiers like serial numbers to trace their production date. Moreover, the lifetime of a product should be linked to its actual use, as dormant garments provide no functional benefit (Corona et al., 2019). Existing quantitative research on wardrobe size typically focuses on the proportion of a wardrobe that has not been used in the past 12 months—i.e., dormant garments. Early studies suggest that roughly one-fourth of an individual's wardrobe remains dormant (de Wagenaar et al., 2022; Maldini et al., 2017; Vermeyen et al., 2025; WRAP, 2022). These garments are retained primarily because individuals believe they will still prove useful in the future (Vermeyen et al., 2025; WRAP, 2022).

The results above suggest clothing needs are inefficiently met, with many garments remaining underused. Consequently, wardrobe reduction seems a viable strategy for addressing clothing needs more sustainably, reducing resource consumption and waste generation.

Wardrobe Reduction

Wardrobe reduction could begin by eliminating dormant garments from wardrobes. A change in ownership – for instance, through gifting, resale, or donation - can find new users for garments no longer suited to the current owner. Further, access to temporary ownership – for instance, through rental or clothing libraries - can eliminate the need to keep garments only worn on scarce occasions. Successful implementation of these strategies could reduce the total flow of garments, as suggested by Coscieme et al. (2022).

However, it is worth investigating whether wardrobe reduction can go beyond simply eliminating dormant garments. Concepts such as minimalism or sufficiency are gaining traction as deeper solutions to overproduction and overconsumption in affluent societies. One manifestation of this is slow fashion, which aims to reduce the negative environmental and societal impacts of fast fashion by encouraging mindful consumption and production practices (Štefko & Steffek, 2018). The focus is on creating and consuming long-lasting clothes, emphasizing durability and timeless design. The concept of a capsule wardrobe takes this further by embracing the minimalist idea of owning only what is deemed essential (Bardey et al., 2022). The Cambridge Dictionary defines a capsule wardrobe as "a small collection of clothes that can be put together in different ways and includes everything you would normally need to wear.". There is no prescribed size for a capsule wardrobe, with the ideal size differing from person to person due to individual preferences, lifestyle choices, and personal needs (Bardey et al., 2022; Vladimirova, 2021). The goal is not just to minimize the wardrobe's size, but to maximize the use of each item and reduce the need for new purchases. To support the transition to a smaller wardrobe, specific selection criteria such as quality, comfort, timelessness, and combinability are recommended (Bardey et al., 2022). However, even with these guidelines, the shift to a smaller wardrobe can be challenging. Martin-Woodhead (2023) identified several drawbacks people experienced when reducing their wardrobe, such as boredom with the limited selection of clothing, not having the right outfit

for specific occasions, and the high initial cost of high-quality garments.

The existing research on wardrobe reduction tends to be centered around (voluntary) participation in minimal fashion challenges (Bardey et al., 2022; Martindale & Lee, 2019; Martin-Woodhead, 2023; Rhee & Johnson, 2019; Ruppert-Stroescu et al., 2015; Vladimirova, 2021; Wu et al., 2013). These challenges entail an extreme form of wardrobe reduction with the adoption of a capsule wardrobe of 30 to 55 items per season (Bardey et al., 2022; Vladimirova, 2021). However, individuals in affluent societies are unlikely to embrace such a drastic reduction. Vladimirova (2021) notes that bottom-up research on the minimum levels of apparel consumption is currently lacking, yet is essential for identifying the need for apparel. The present study, therefore, flips the script by asking participants to identify the minimum number of garments they consider necessary. This approach offers deeper insights into individuals' varying (perceived) clothing needs. Additionally, no research has explored the composition of smaller wardrobes and what criteria participants consider when composing their reduced wardrobes. In this context three research questions are addressed: (i) 'What number of garments do individuals perceive as essential to meet their clothing need?', (ii) 'What are the characteristics of essential garments?', and (iii) 'What are the main barriers individuals perceive when adopting an essential wardrobe?'.

Method

To address these questions, a two-step method was used: Firstly, a wardrobe audit was conducted to quantify the total wardrobe size and dormant fraction. Secondly, participants were guided through an exercise to downsize their wardrobes to include only essential pieces. An overview of the sample with respect to gender and age is given in Table 1. All the data was collected between January and March 2024 in either Flanders, the northern region of Belgium, or the capital region of Brussels.

Wardrobe Audit

A wardrobe audit is a type of wardrobe study, which uses quantitative or qualitative methods to systematically analyze the content of individuals' wardrobes (Maldini et al., 2023). In this study, the wardrobe audit consisted of a systematic count of all the garments within the scope of the study at the participant's home with a researcher present to guide the process. Per garment type, the researcher noted the total amount of garments, as well as the number of active/dormant garments (i.e. used/unused in the last 12 months). Underwear, swimwear, and accessories such as gloves, scarves, hats, bags, and shoes are outside the scope of this study. The wardrobe audits discussed in this manuscript were part of a broader audit conducted by Vermeyen et al. (2025), a detailed description of the methodology and general results can be found there. This manuscript only discusses the 30 audits of the participants who also took part in the wardrobe reduction exercise.

men	16-34	8
	35-54	3
	55+	4
women	16-34	5
	35-54	5
	55+	5

Table 1. number of participants by gender and age

Wardrobe reduction Exercise

Following the wardrobe audit, participants were asked to assess which garments in their wardrobes they considered essential to meet their clothing needs for the coming year. After an initial selection of garments for their essential wardrobe, participants were asked to consider whether they had accounted for all seasons and specific occasions. This allowed participants to reflect on their decisions and make final adjustments. The composition of the resulting essential wardrobe was recorded by clothing category.

Next, participants were asked to identify the factors they considered when selecting garments. Initially, they were encouraged to freely mention any relevant aspects, allowing for a broad range of answers. Subsequently, participants were asked to rate the importance given to four key criteria commonly associated with garments in capsule wardrobes: quality, comfort, timelessness, and combinability.

Finally, participants were asked: "Imagine that this is now your real wardrobe for a whole year, and you are not allowed to buy anything else for an entire year. What do you think would be some of the difficulties that might arise during that year?" This question aimed to provide insights into the barriers to adopting an essential wardrobe.

Results and Discussion

Wardrobe Size: Total – Active - Essential

Figure 1 shows the quantitative results of the wardrobe audit and wardrobe reduction exercise. The total wardrobe size of participants in the subsample spans from 44 to 315 garments, with an average of 169 and a median of 160. The active wardrobe size ranges from 36 to 275 garments, with an average of 138 and median of 134. Lastly, the essential wardrobe size ranges from 36 to 275 garments, with an average of 90 and median of 77.

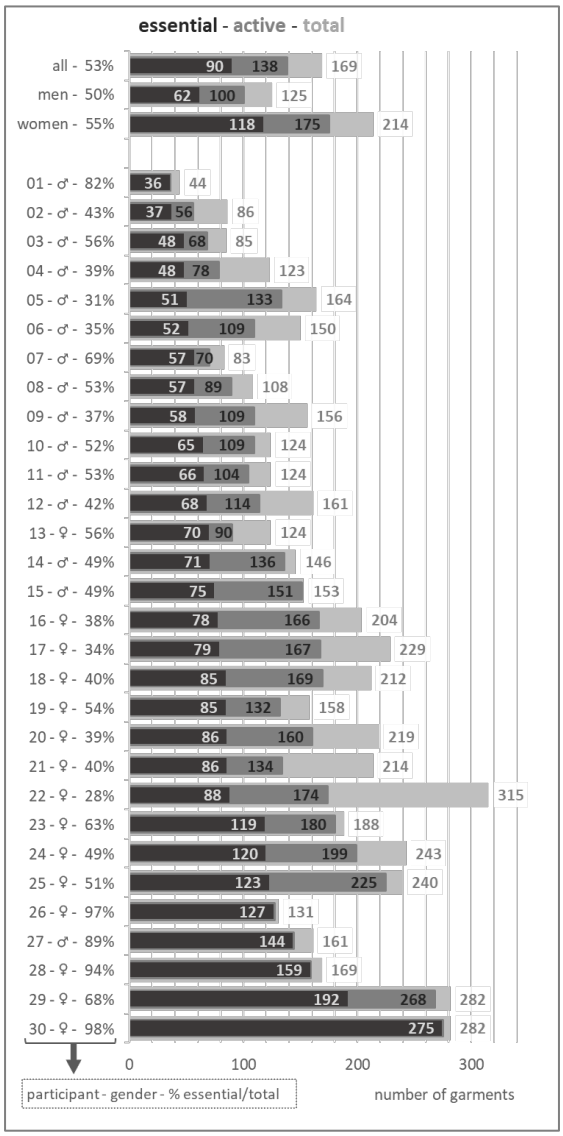

Figure 1. Number of garments in essential, active, and total wardrobe, and percentage essential (n=30).

For all three, indicators, women's wardrobe size is notably larger than men's. Hence, women seem to possess more clothing, use more pieces actively, and consider more pieces essential. However, all gender related findings warrant some caution due to the limited sample size.

The fraction of the wardrobe that individuals actively use varies between 55% to 98%, with an average of 81% and a median of 82%. The fraction of the wardrobe deemed essential ranges from 28% to 98%, with an average of 54% and a median of 50%. This means only half of the garments in wardrobes were deemed essential. Men and women consider a similar percentage to be essential. This is interesting, as it indicates that both genders need a comparable proportion of their total wardrobe to meet their essential needs.

Figure 2 shows the average wardrobe disaggregated by garment category and gender. The active and essential fraction is quite consistent across the different garment categories and between genders.

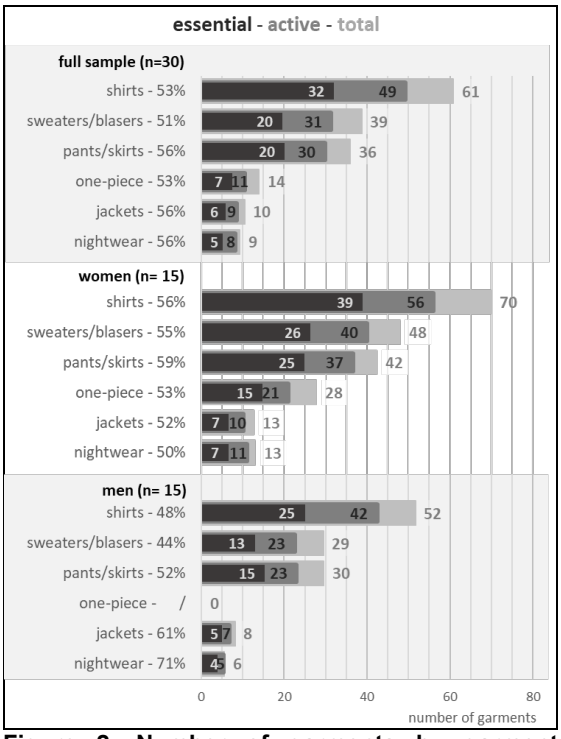

Figure 2. Number of garments by garment category and gender in average essential, active, and total wardrobe, and percentage essential (n=30).

Yet, substantial differences are observed between individual participants (Figure 1). Five of the 30 participants did not see the possibility of reducing their wardrobe size beyond their active wardrobe (participant 1, 26, 27, 28, and 30 in Figure 1). Participant 1 already had the sample's smallest total and active wardrobe, comprising 44 and 36 garments respectively. Hence, his unwillingness can be attributed to him already possessing a limited number of garments. Conversely, the remaining four participants have relatively extensive total and active wardrobes. Their reluctance to further reduce stemmed from a desire for a diverse range of clothing options and the habit of regularly varying outfits, as is reflected in the low share of dormant clothing in their wardrobes. When looking at the other extreme, three of the 30 participants concluded it would be possible to meet their needs with only a third or less of their current wardrobe (participant 5, 17, and 22 in Figure 1).
The results in this section are an initial step to a broader understanding of the potential of wardrobe reduction in society. The findings shed light on the difference between (groups) of individuals, underscoring the importance of considering the varying (perceived) needs of groups across society when designing interventions.

Characteristics of essential garments

The 25 participants who reduced their wardrobe beyond their active wardrobe were asked to indicate to what extent they considered combinability, comfort, timelessness, and quality of garments when selecting items for their essential wardrobe. Figure 3 shows the distribution for each criteria.

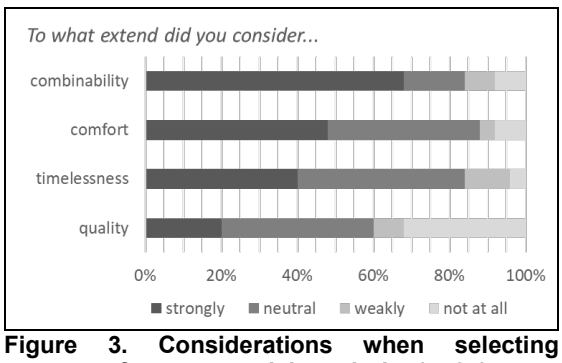

Figure 3. Considerations when selecting garments for an essential wardrobe (n=25).

Combinability stands out as the most important factor, with nearly 70% of participants giving it strong consideration when selecting garments. This suggests that people highly value easily mix-and-matchable garments as essential pieces in their wardrobe. Quality emerged as the least prioritized selection criterion.
Additionally, the open-ended question about the factors participants considered revealed that all of them focused on selecting their favorite pieces. This demonstrates the importance of a strong emotional connection in ensuring active garment use. Further, four participants mentioned excluding garments resembling each other, indicating that one such garment is sufficient. This implies that these participants prioritize garments that offer distinct styling options, enhancing the versatility of their essential wardrobe. Furthermore, two participants emphasized the importance of choosing garments that do not require extensive ironing. Lastly, two participants indicated they selected their most expensive garments.

Barriers to adopting essential wardrobes

Finally, the 25 participants who reduced their wardrobe were asked to describe potential obstacles they anticipated encountering if they would transition to their essential wardrobe. Three participants stated they saw no issues. All three are men and indicated that clothing was unimportant to them. After screening the responses of the remaining 22 participants, the anticipated barriers could be categorized into two main groups: ‘practical barriers’ and ‘emotional barriers’.
13 Participants mentioned at least one practical barrier. These were mainly related to worries about shortages. Participants expressed concerns about not having access to garments due to a defect (n=8), a poor fit due to changing bodies (n=3), or garments being in the laundry (n=2). Hence, the size of current wardrobes can likely be partly explained by individuals wishing to have a buffer so that when garments become defective, are in the laundry, or no longer fit, alternatives are readily available.
18 Participants mentioned at least one emotional barrier. These barriers related mainly to a loss of joy. This can take on various forms, such as a thwarted desire for newness (n=9), frustrations from being unable to keep up with trends or change style (n=6), loss of shopping as a joyful activity (n=5), or boredom with current pieces (n=4). One participant mentioned anticipating social pressure to change outfits regularly.

Rhee & Johnson (2019) observed similar apprehensions amongst students which had to participate in a minimalist wardrobe challenge. However, initial negative feelings shifted over the course of the challenge, with most participants ultimately reflecting positively on the experience. This suggests that some concerns may be unfounded. The real challenge then lies in encouraging the general public to let go of unwarranted beliefs rooted in consumer culture.

Limitations of the study

The present paper presents a pilot study based on a relatively small sample, aimed at providing initial insights into the little-researched topic of wardrobe reduction. This study explores the potential of wardrobe studies as a methodology to investigate the feasibility of wardrobe reduction in a diverse sample of individuals. The findings offer preliminary insights that can serve as a foundation for further research.

When evaluating the current methodology, it is important to note that while the initial count of total wardrobe size can be measured objectively, the subsequent steps rely on participants' subjective judgments. For determining the active fraction of the wardrobe, issues related to poor recall may arise. Additionally, when defining their essential wardrobe, participants may struggle to accurately assess what they will truly need or anticipate the challenges they might face. An interesting extension to address this would be to ask participants to use only their selected essential wardrobe over a period of time. However, finding a diverse sample of participants willing to commit to such a study may prove difficult.

Conclusion

Addressing the environmental impact of the clothing value chain requires a system-wide transformation. Strategies focused on the use phase should receive due attention as clothing is currently used inefficiently. This study offers initial insights into the relationship between total wardrobe size, active wardrobe (i.e., garments used in the past 12 months), and essential wardrobe (i.e., the minimum amount required to meet the participant's needs in the coming year). Among the 30 participants, we found that the average wardrobe contained 169 garments, of which 138 were active, and 90 were deemed essential. Hence, on average, one-fifth of garments were not used in the past year and approximately half were considered non-essential to meeting the minimum clothing needs. Our findings indicate that significant wardrobe reduction is likely feasible in affluent societies. However, substantial variation exists between individuals in the way they meet their need for clothing, as well as, in what they consider as essential, highlighting the importance of considering diverse perspectives in developing sustainable wardrobe practices.

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