**PLATE**
Product Lifetimes And The Environment

# The influence of age, gender and income on Australians' expectations of clothing lifespan

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## Introduction

Extending clothing lifespans is a crucial step in advancing the transition to a circular economy. Past studies have highlighted the need to distinguish between social and technical lifespans of clothing (Laitala et al., 2018), as well as how/when to measure lifespan, whether in number of wears or number of years (Klepp et al., 2020). While research has been conducted on clothing lifespans in European contexts (WRAP 2019) and in Europe, Asia and the USA (Laitala & Klepp, 2020), this area remains underexplored in Australia, which presents a unique cultural and economic landscape. This paper investigates the expected lifespans of clothing in Australian households. Factors such as age, gender, and income can significantly impact how long consumers expect their clothing to last. By examining these variables, this research can provide insights into consumer behaviour and preferences, which can inform targeted interventions and educational campaigns to promote sustainable clothing practices.

## Theoretical framework

Social practice theory posits that an individual's actions are shaped by everyday practices that comprise of materials, competencies and meanings (Reckwitz, 2002; Shove et al. 2012). In the context of sustainable clothing consumption, extending the lifespan of clothing is a critical component to reduce waste, minimise negative environmental impact, and support sustainable development. A practice theory approach frames durability of clothing as not solely determined by the product's design and materials but also influenced by how they are worn, washed, cared for, and maintained over time.

## Methodology

This research presented in this paper draws from a larger study into the practices of Australians' clothing acquisition, use, and disposal (see Payne et al., 2024). The study employs a large-scale survey to generate robust, generalisable data on clothing lifespan, enabling longitudinal measurement over time (Klepp, Laitala & Wiedemann, 2020). The data was collected via an online survey in June 2024 by a market research agency. The survey sample was designed to be nationally representative of the Australian population across age, gender, and geographic location. In total, 3,080 valid responses were collected.

To measure clothing lifespan, two key survey questions were used. First, participants were asked to indicate the last time they acquired an item in each of nine different clothing categories. The nine clothing categories included t-shirts and short-sleeved tops, shirts and long-sleeved tops, jumpers, hoodies, and sweaters, underwear, socks, and hosiery, pyjamas and nightwear, smart bottoms for work, casual bottoms and jeans/denim, outdoor jackets and coats, and suits, ensembles, and dresses. For each category, participants were required to select a response indicating the number of years since acquisition, with options ranging from "less than 12 months" to the number of years (between 1-10), allowing for specific identification of the time elapsed. The second question asked participants to estimate how long they expected the acquired item to last. For this question, participants also chose a response from the same set of options, indicating how many years they expected the item to remain in use. These questions were adapted from consumer surveys conducted in the United Kingdom and Europe by WRAP (2019), allowing for international comparisons.

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## Findings

The results demonstrate that Australians expect to use their clothing for about four to eight years, with the average across all clothing products being 6.5 years. Expectedly, underwear, socks and hosiery have the shortest expected lifespan of 4.7 years; outdoor jackets and coats, and suits, ensembles and dresses both have the highest expected lifespan of 7.8 years. Compared to Europeans, Australians expect their clothing to last for longer. For example, Danish respondents had the longest expected longevity for their t-shirts at 4.4 years (WRAP 2019), and Australians expect this product category to last 6.1 years.

### Age

The Kruskal-Wallis test revealed significant differences in the mean rank lifespan across age groups: 18-34 (mean rank = 1448.67), 35-54 (mean rank = 1501.85), and 55+ (mean rank = 1646.97). The test statistic was H(2, n=3080) = 27.845, with a significant result (p = 0.001), indicating significant differences in average lifespan across age groups. Post-hoc pairwise comparison using Dunn-Bonferroni indicated that there was a significant difference between age groups 18-34 and 55+, and 35-54 and 55+, and age group 55+ have the highest mean rank (clothing lifespan) than that of 18-34, and 34-54 age groups, p<0.001.



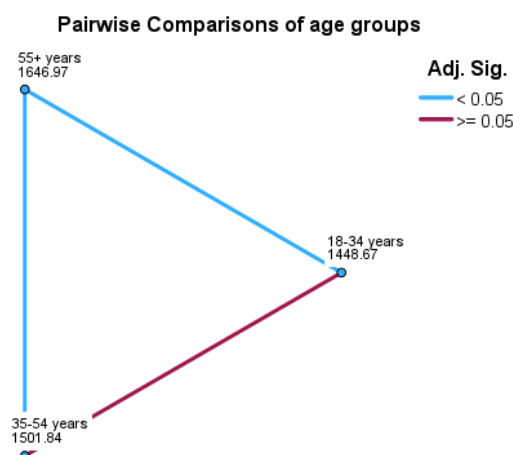**Figure 1 Pairwise Comparisons of Age Groups**

### Gender

A Mann-Whitney U test pairwise comparison was conducted, and there were statistically significant differences in comparing mean rank differences between average clothing lifespan across genders: female (mean rank=1459.88) and male (mean rank=1627.20). The post-hoc test statistics show H (1, n=3080) =27.224, and the mean rank for males is higher than for females. Post-hoc pairwise comparison (see Figure 2) using Dunn-Bonferroni indicated a significant difference between genders; males have a longer clothing lifespan than females.
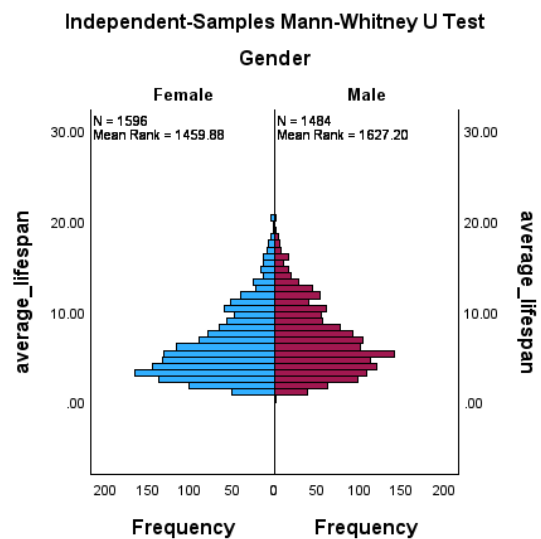


**Figure 2 Independent Samples Mann-Whitney U Test**

### Income

The Kruskal-Wallis test revealed significant differences in the mean rank lifespan across income brackets: Less than $33800 (mean rank = 1655.96), AU$33801-$62400 (mean rank = 1625.24), $62401-104000 (mean rank = 1578.82), AU$104001-$156000 (mean rank = 1444.27), more than $156001 (mean rank = 1334.96), prefer not to say (mean rank = 1525.30). The test statistic was H (5, n=3080) = 41.721, with a statistically significant result (p < 0.001). Figure 3 shows the post-hoc pairwise comparison with the Dunn- Bonferroni method, indicating that there was a significant difference. Household income of more than $156001 has the lowest mean rank of lifespan compared to people's household income of $62401-$104000, $33801-$62400, and less than $33800.
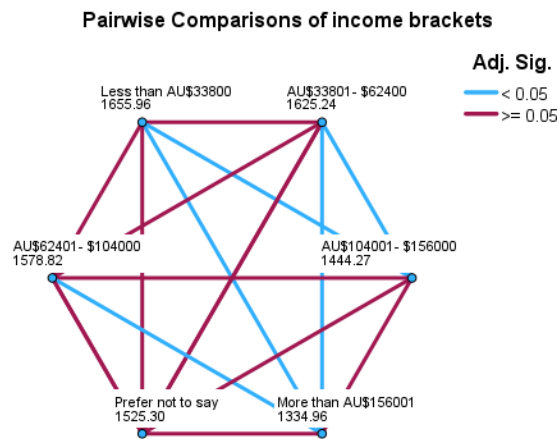
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**Figure 3 Pairwise Comparison Between Income Level**

## Acquisition and circular practices:

The relationships between average lifespan and demographic variables, Kendall's tau-b ($\tau$b) was conducted to examine the correlations between average lifespan and behavioural metrics, such as acquisition, washing practices, and circular activities.

**Acquisition**: There is a small negative correlation between monthly spending on new clothing and average lifespan, $\tau$b =-0.112, p<0.001.

**Disposal practices:** there is a positive small correlation between the disposal behaviour of no longer wanted yet still wearable clothing - 'I keep clothing even if I have not used it for many years' $\tau$b = 0.127, p<0.001. and 'I repair, reuse or repurpose the item at home' $\tau$b = 0.158, p<0.001.

**Repair frequency activities**: There is a small positive correlation between repair clothing frequency and average lifespan, $\tau$b = 0.127, p<0.001. There is a positive small correlation relationship between confidence in repairing activities and average lifespan, redesigning an item $\tau$b = 0.101, p<0.001, replacing a zip $\tau$b = 0.116, p<0.001, changing the fit/size $\tau$b = 0.101, p<0.001, and replacing a pocket $\tau$b = 0.115, p<0.001.

## Discussion and conclusions

The findings reveal that Australians expect their clothing to last an average of 6.5 years, with demographic factors such as age, gender, and income significantly influencing these expectations. Older consumers expect their clothing to last longer compared to younger age groups (18-34 and 35-54). Men report a longer expected clothing lifespan than women. Lower-income groups tend to report longer expected clothing lifespans compared to higher-income groups.

Additionally, there is a small negative correlation between monthly spending on new clothing and expected clothing lifespans, as well as a positive correlation between repair frequency and clothing longevity. The disposal behaviour of retaining wearable but no longer wanted clothing also positively correlates with longer clothing lifespans. These results emphasise the importance of considering demographic factors and clothing use practices in lifespan research. They also underscore how perceptions and expectations of clothing are shaped by individual identity and fashion practice.

The findings of this study contribute to the existing social practice theory studies by illustrating how demographic variables, i.e., age, gender and income, as well as clothing-related acquisition, use, and disposal practices influence the clothing lifespans, provide valuable insights for promoting sustainable practices to extend the lifespan of garments.

This study's findings also offer important practical implications for consumers, industry, and policymakers. One of the key challenges in extending clothing lifespans lies in equipping consumers with the necessary skills and knowledge to maintain and repair their garments. As such, targeted education campaigns and skill-building initiatives could play a crucial role in fostering more resourceful consumption habits. For fashion brands, these findings provide valuable insights into consumer expectations of durability. Understanding the perceived lifespan of different clothing categories can also help brands make informed decisions about material selection, design for longevity, and the provision of aftercare services such as repair, rental or resale programs. At a policy level, these insights could inform the development of durability-focused regulations and incentives.

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