Reliability of digital tags measuring clothing durability results in positive consumer attitudes

April 29 2021

Credit: CC0 Public Domain

The Sustainability Consortium released Wednesday, April 28, the report "Project WearEver: Demonstrating the Feasibility of Using Digital Tags

University, North Carolina State University and the U of A. The report
follows the 2019-2020 pilot project, called Project WearEver, that
concluded the following findings:

- Digital tags can measure the frequency and duration of clothing
  use with reasonable reliability.
- Participants' attitudes toward this idea were more positive after
  the trial study than before it.
- There are still many practical constraints before this idea could
  be scaled more broadly.

TSC's project goal is to demonstrate the feasibility of using digital
technology to track clothing use and identify appropriate metrics and
measurement protocols to enable communication between stakeholders.
The project was conceived to help create a market-based system that
would incentivize clothing manufacturers to make clothes that are used
more frequently, used longer and re-used. In addition, TSC looked to
incentivize retailers and to encourage consumers to show preference for
clothes that have superior emotional and physical utility and durability.

Adidas, KJUS and Prana/Renewal Workshop donated clothing for the
research pilot. Technology covered in the report includes QR tags, RFID
tags, Bluetooth sensors and phone apps.

"While fast fashion still has many followers, the 'slow fashion'
movement is gaining momentum with consumers—they are looking for
value in terms of not just cost, but cost per use," said Kevin Dooley,
chief scientist at TSC. "TSC wants to help build a system where
consumers and retailers can compare brands on trustworthy longevity
and use data to create market demand for more sustainable clothes."

In 2019, global clothing sales were estimated to be $1.87 trillion, yet

challenges in the [clothing industry](link) remain to reduce the impact of clothing production on people and the planet. Clothing that is durable, reused or recycled reduces sustainability issues that includes water and air pollution, unsafe working conditions and child labor. The report kick-starts efforts to create a pathway for consumers to understand the durability of clothing from brands and create ongoing communication between brands, retailers and consumers.

Karen Leonas, professor of textile and apparel, technology and management at North Carolina State University, said, "Clothing, its production and distribution, are generally highly resource intensive, requiring large quantities of water, energy, chemicals, labor and other natural resources while creating pollution in water ways, air and solid waste. The majority of textiles can be recycled reducing many of these natural resources demands.

"However, to do so, several things are crucial. Educating and encouraging consumers on alternate disposal methods is fundamental. However, once disposed of, for efficient handling through recycling and the creation of new products, the content and production processes used in the initial creation of the [clothing](link) is necessary. This technology will contribute to increased knowledge throughout the supply chain for manufacturers, consumers and recyclers."

  More information: This free report is available for download: [www.sustainabilityconsortium.o … easure-clothing-use/](link)

Provided by University of Arkansas