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Investigating the role of socioeconomic factors on attitudes and behaviours regarding shopping data donation in ALSPAC

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Introduction & Background

Supermarket shopping data is an emerging data source for researchers, which offers valuable insights into consumer behaviours, as well as health and lifestyle choices. Despite growing interest in its use for health research, much remains to be explored. A key challenge in using shopping transactions in research is obtaining informed consent and little is currently known about the sociodemographic characteristics or attitudes which influence an individual's willingness to donate their data. Understanding these is crucial for improving recruitment, retention and ensuring more representative datasets.

Objectives & Approach

The core objectives of this research are to establish the likelihood of public participation in shopping data research and identify which sociodemographic factors influence willingness to donate shopping data for research purposes, as well as explore potential motivations and concerns related to this. This study uses a mixed-methods approach and harnesses data collected from the Avon Longitudinal Study of Parents and Children (ALSPAC). Alongside demographic variables, our analysis is based on two primary sources: a 2018 survey addressing hypothetical willingness to consent and a 2023 survey in which participants were asked to donate their shopping data. Questions about loyalty card use, perceptions about acceptability of data-sharing and perspectives around privacy concerns were also analysed. Our analysis considers factors including sex, ethnicity, educational attainment and employment status as potential influencers of consent. We deploy a range of statistical methods including regression modelling and correlation tests.

Relevance to Digital Footprints

This project contributes to advancing our understanding of applying data linkage between digital footprints data and cohort studies inclusively and accessibly, providing an essential foundation for future research on important and wide-ranging health and societal challenges.

Results

3768 participants responded to the 2018 survey. In 2023, 511 participants provided consent to collect their shopping data (8.3% of those invited). Of these, over two-thirds (67.1%) were female, 38.9% indicated that their highest level of educational qualification was at Level 4 or above and 76.3% reported that they were in full or part-time work. 68.6% of participants indicated ownership of at least one loyalty card - Tesco (47.5%) and Boots (41.6%) were the most commonly owned. In 2018, most participants (60.7%) expressed willingness to share their supermarket data. There was a significant association between gender for both willingness to consent ($X^2 = 18.3$, $p < 0.001$) and actual consent ($X^2 = 13.2$, $p < 0.001$). There was no significant association with educational attainment, employment status or ethnicity. Willingness to consent may predict actual consent, although there are no significant demographic predictors.

Conclusions & Implications

Our findings will help to inform inclusive consent practices in digital footprints research, as well as identify potential barriers and motivators to consent, and contribute towards current discourse on the ethical applications of shopping data.

Keywords

shopping data, loyalty card, cohort study, privacy concerns, ethical research

