

Help! Microfibre pollution (MFP) – Can nudging induce learning and action?

Songyi Yan

University of Manchester, UK

Claudia Henninger

University of Manchester, UK

Celina Jones

University of Manchester, UK

Abstract

Research surrounding microfibre pollution (MFP) has centred on scientific and technical textiles, such as developing analytical methods for measuring microfibre shedding rates, and how they differ depending on varying textile properties. However, research lacks to provide consumer behavioural insights addressing the issue of MFP, especially from a quantitative point of view. Education about MFP and its existing initiatives are of great importance given the role synthetic fibres play in our everyday life (e.g. garments) (Yan et al., 2020). Although microfibre catching devices such as the Cora Ball, and Guppy Friend Bag are already marketed to tackle MFP, Yan et al. (2020) indicated that consumers' awareness and knowledge addressing the issue of MFP and its associated commercial initiatives are fairly low. Previous research also argued that potential microfibre mitigation strategies are not always implemented as these potential solutions and their required related knowledge may not be readily available and accessible to consumers (Han et al., 2017; Laitala et al., 2018; Yan et al., 2020). In addressing these gaps, we pose the following questions:

1. If knowledge and solutions are available and accessible, would consumers be willing to purchase (WTP) the mitigation solution and be willing to learn (WTL) about the issue of MFP?
2. Could their WTP and WTL be enhanced through nudging messages?

The complex nature of MFP requires policy makers to tackle it from multiple levels and sectors (Somers, 2020). Nudging is seen as one subtle, productive, and non-coercive approach to inform, guide, and motivate consumers to make more sustainable choices (Benartzi et al., 2017; Grebitus et al., 2020). It is a useful strategy for inducing changes in context-specific behaviour, which has helped policy makers in different

sectors to more systematically integrate behavioural insights into policy design and implementation (e.g., single use plastic bags) (Lehner et al., 2016). Thus, it can be adapted to change attitudes and behavioural intention towards microplastics/synthetic microfibres, as seen in consumers' support for industry action to reduce microbeads in personal care products (Komyakova et al., 2020). Nudging tools include using warnings of various kinds, changing layouts and features of different environments, reminding people about their choices, drawing attention to social norms, and simplifying and framing information in a way that is easily understood in order to change behaviour (Sunstein, 2014; Lehner et al., 2016; Gössling et al., 2019). Nudging tools/approaches have been studied in consumption domains of energy use, and most recently in sustainable fashion consumption (Lehner et al., 2016; Lee et al., 2020). Within the sustainable fashion consumption domain, it is suggested that green logos (i.e., symbolic persuasion tactic) and framing of environmental messages can increase consumers' preference for sustainable fashion products (Lee et al., 2020). Nudging approaches vary based on the context and on the types of behaviour targeted, past research suggests future research can explore nudging in different consumption contexts (Lehner et al., 2016; Grebitus et al., 2020). Therefore, this research investigates nudging in the context of MFP and aims to provide consumer behavioural insights addressing the issue.

This research applies a mixed methods approach by conducting sandpits first, and follows these up with an online survey experiment.

Stage 1 - qualitative study: Data will be collected by facilitating two sessions of online sandpits with key stakeholders to determine: nudging tools to examine WTP and WTL, the modality and content of nudging messages to examine WTP and WTL. The results from the sandpits will inform next stage.

Stage 2 - quantitative study: Online survey experiments will be conducted to examine differences in consumers' WTP and WTL based on nudging messages. Data will be collected from a total of four groupings – two control groups, and two that have nudging messages to either indicate WTP or WTL.

For the sample selection for the qualitative study, a database was created identifying key stakeholders addressing MFP; participants will be selected based on purposive and snowball sampling techniques. We will adopt a grounded analysis approach to analyse the collected data, which allows us to look for themes, yet also provides flexibility to see patterns emerge. The quantitative study will see data collected from a representative sample of UK consumers. The survey will be designed to have participants randomly allocated to either the control group or the group that receives nudging messages in relation to WTP or WTL. Data will be analysed using SPSS and follows common practices, by determining validity and reliability, as well as multiple regression analysis.

We anticipate the findings will provide insight on whether nudging can induce individuals to purchase the mitigation solution and/or learn about the issue of MFP. This research is novel because it is the first research

to test nudging as a tool to foster learning and actions addressing MFP. Analyses of WTP for the microfibre catching devices under different conditions can inform the design of marketing strategies and policy implementation. Analyses of WTL under different conditions can also inform the design of marketing strategies, it further sheds light on the movement of marketing out of its current position to enable it address sustainability, through integrating the role of education of sustainability within marketing.

Keywords: microfibre pollution, nudging, behavioural insights, sustainability, marketing

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