

"What's the issue?"

- Norway achieves an impressive 92% recycling rate for plastic bottles in Europe (1)
- Yet, it also faces high consumption levels, contributing to pollution despite recycling efforts (2)
- This project urges consumers to reconsider plastic bottle use, aiming to reduce consumption through alternative solutions for a more sustainable lifestyle.

Intervention Idea

- Target audience:** Consumers of single-use plastic bottles normally located at a SIT cafeteria or kiosk
- Target Behaviour:** Consumption of single-use plastic bottles
- Intervention:** Reducing target behavior by a) awareness of microplastic in plastic bottles, and b) mapping willingness for behavior change and researching thoughts and barriers for using a more sustainable provided alternative: a soda fountain
- Upstream:** Picture 1: Coca-Cola Freestyle®

Our intervention idea is to reduce consumption of plastic bottles through providing awareness of microplastic in plastic bottles, and to nudge consumers towards choosing a refillable option out of personal health concerns.

The refillable option we wish to implement is a soda fountain with an alluring design, which can be used with own bottles or provided glasses instead of single-use plastic containers.

Theoretical background

Nudging: Interventions that alter aspects of environments with the intention of changing in this case health-related behavior. Such interventions are implemented in the environment where the target behavior is performed (3)

Fear messages: Fear appeals have been effective in influencing attitude and behaviours. It uses persuasive communication to induce fear by highlighting potential risks, motivating individuals to adopt suggested actions and influence their behavior (4)

Consumer engagement (CE): CE theory suggests that individuals' interaction and connection with a product influences behavior. In our project, we use fear-induced messages in the surveys and interviews to transparently engage consumers, aiming to raise awareness and promote behavior change towards the use of reusable options over single-use plastic bottles (5).

"RETHINK, REFILL, REVIVE:

A Sustainable Tomorrow, One Bottle at a Time"

Methods:

- The two surveys made in "Typeform" and were digitally and physically distributed to maximize outreach and remained identical in terms of content and scientific research which stated the amount of microplastic which have been found to be in plastic bottles (6). The only distinction was the inclusion of a fear message picture of a plastic bottle filled with black glitter in the intervention survey to visualize the microplastic.
- The purpose of the surveys was to investigate and map out potential barriers for implementation of the intervention while also obtaining information about consumer habits and their level of knowledge of microplastic in plastic bottles.
- Lastly, to create a broader understanding of perspectives, we interviewed SIT staff here at Dragvoll and e-mailed the SIT management to research the feasibility and potential barriers for implementation of the soda fountain.



Results:

- Figure 1 illustrates the awareness of microplastics in plastic bottles and compares it between the intervention group (n=50), and the control group (n=40).
- The control group showed a 21% greater awareness of microplastics in plastic bottles than the intervention group.

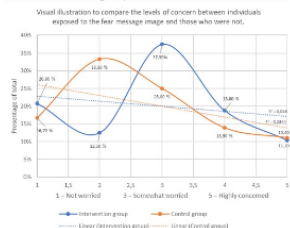


Figure 1: Comparison of awareness of microplastics in plastic bottles between the intervention and control groups.

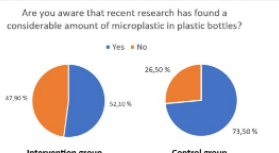


Figure 2: Comparison of awareness of microplastics in plastic bottles between the intervention and control groups.

- Figure 2 illustrates an area chart that visually compares levels of concern between the intervention group and the control group.
- The chart reveals a trend suggesting that the intervention group seems to display higher levels of concern compared to the control group.

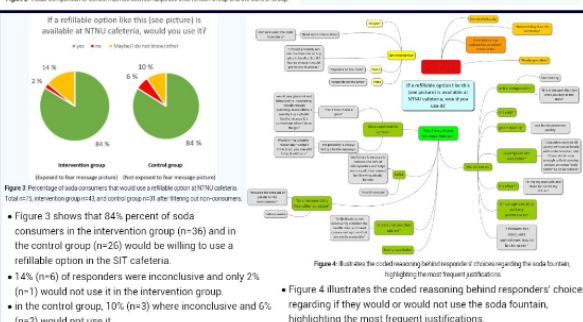


Figure 3: Comparison of awareness of microplastics in plastic bottles between the intervention and control groups.

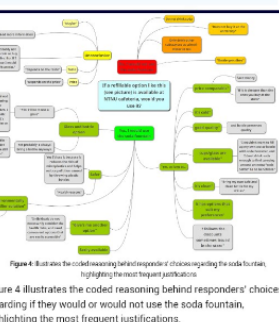


Figure 4: Comparison of awareness of microplastics in plastic bottles between the intervention and control groups.

Interview:



Figure 6: Mapping the main thoughts and barriers related to our project from the perspective of the SIT cafeteria leader at Dragvoll.

Discussion:

- The intervention group's higher concern levels in Figure 2 may result from the fear message picture, but figure 1 shows that the control group is more aware of microplastics, potentially influencing worry outcomes.
- Both groups expressed positivity toward a soda fountain in Figure 3. However, the constrained sample size and low number of participants rejecting the proposal (n=1 in the intervention group and n=2 in the control group) limit conclusions regarding the impact of the fear message on choice and openness to using the soda fountain.
- The reflections in figure 4 and 5 provide valuable insights for future soda fountain implementation considerations.

Value to society:

Participate in efforts toward achieving Sustainable Development Goals (SDG) (7)

Goal 3: Good health and well-being.

Goal 11: Sustainable cities and communities

Goal 12: Responsible consumption and production

Continuation of work:

1. Contacting SIT management to explore possibilities and barriers for implementation of intervention
2. Implement the soda fountain and retest the experiment, where the intervention group involves both bringing awareness and displaying a fear message poster, while the control group focuses solely on raising awareness. Assess whether this influences their physical choices and behaviors and if it coheres with our findings.

Interdisciplinarity:

- Marie (Movement Science): As a Sport Scientist, I contributed to survey design structuring, conducted data analysis, and created meaningful figures for the results.
- Håkon (Political science): Specialized in sustainable development and green energy initiatives.
- Birgit (Psychology and Neuroscience): Knowledge about human behavior and the human mind, contributing to development of intervention.
- Mical (Sociology background): I contributed to evaluating the social and environmental effects of proposed interventions, navigating my group through conflict situations, and compiled the report.
- Hanna (Biomedicine): With a biomedical background, my contribution extended to engaging in theoretical research and participating in the exploration of relevant concepts and methodologies.

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Figure 5: Mapping the main thoughts and barriers related to our project from the perspective of the SIT cafeteria leader at Dragvoll.

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