



Collectivism, Theory of Planned Behavior, & Responses to Ocean-Based Plastic Pollution PSA



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Introduction

Plastic pollution in the ocean has become a global concern and a high priority for policymakers (Severin, 2023). To date, the United States is the second largest exporter of plastic scrap and has produced the most amount of plastic waste among other countries in the world (Brooks et al., 2018; Law et al., 2020). Although people are more aware of the negative impacts of ocean-based plastic pollution, such pollution has not yet been effectively reduced. One strategy to increase awareness and to spark change is through the use of ocean-based plastic pollution messages.

Communication campaigns are one of the most effective ways to reach large audiences, raise public awareness, and help build individuals' self-efficacy of environmental risks (Ramírez et al 2019). However, the U.S. population – and by extension media audiences – continues to become increasingly diverse.. Thus, the question becomes how do campaign messages effectively communicate ocean-based plastic pollution issues across different populations and cultures?

This Honors in The Major thesis will therefore examine how individuals who vary in cultural differences, specifically in high versus low collectivistic values, respond to ocean-based plastic pollution messages.

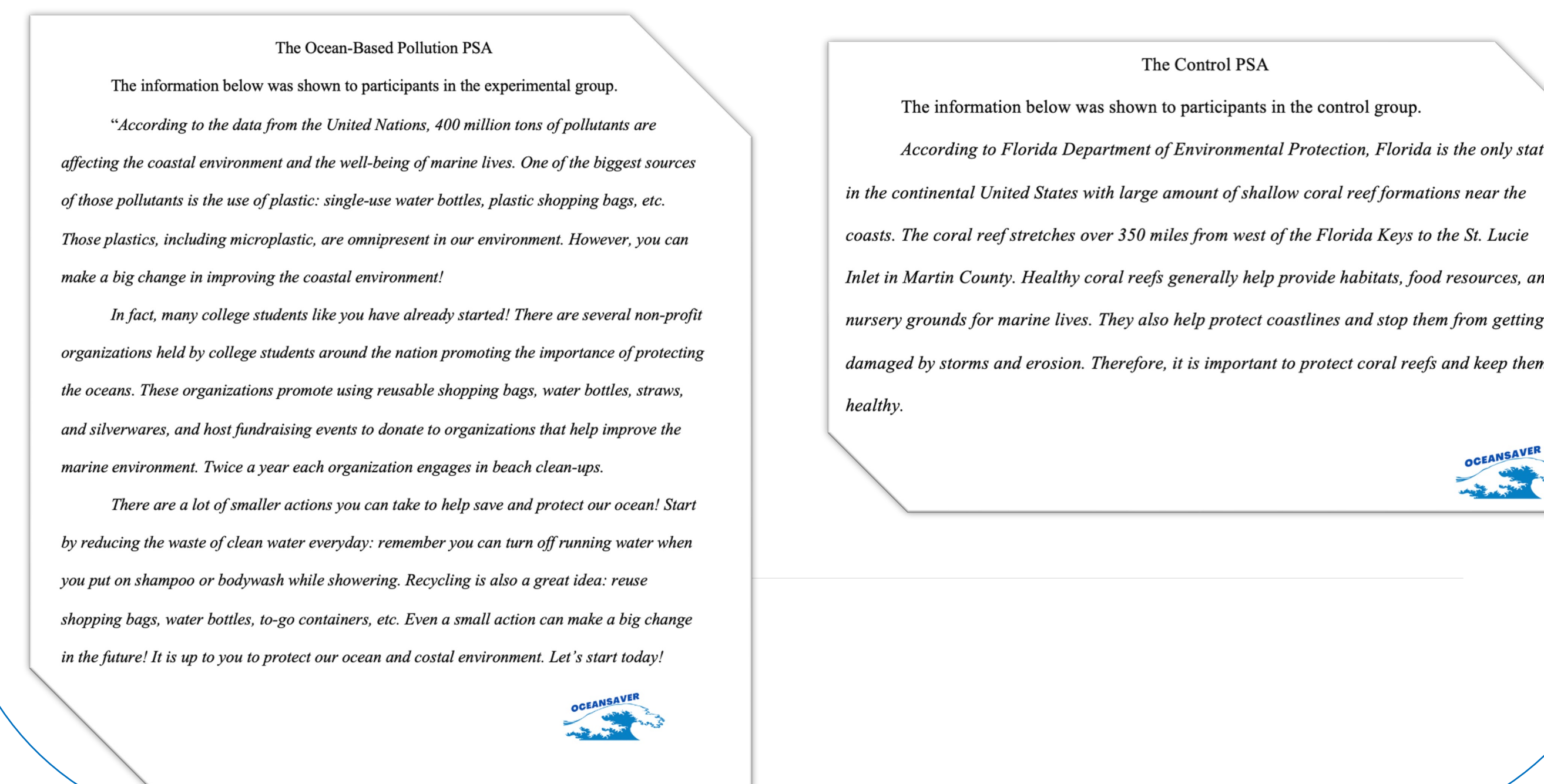
Hypothesis

❖ **Hypothesis 1:** An ocean-based plastic pollution reduction public service announcement (PSA) that reinforces audiences' (a) positive attitudes, (b) subjective norms, and (c) perceived behavioral control will be associated with greater behavioral intentions to reduce their pollution behavior versus a control PSA.

❖ **Hypothesis 2a-d:** Participants who identify as more collectivistic will report greater (H2a) positive attitudes, (H2b) subjective norms, and (H2c) perceived behavioral control, and (H2d) behavioral intentions in response to the presented ocean-based plastic pollution reduction PSA than those who identify low in collectivism.

Methods

- ❖ Utilized a 2 (condition: ocean-based plastic pollution reduction PSA vs. neutral PSA) x 2 (collectivism: high vs. low) **between-subjects experimental design.**
- ❖ 240 Participants, aged 18-22, fluent English speakers, undergraduate students from the School of Communication, FSU.
- ❖ Participants read text-based PSAs about ocean-based plastic pollution, responded to an online survey examining attitudes, subjective norms, perceived behavioral controls, behavioral intentions, and level of collectivism.
- ❖ **Experiment Group (N=120) vs. Control Group (N=120)**



Results

Table 1

Means (M) and Standard Deviations (SDs) for Both Message Conditions.

Self-Reported Dependent Variables	t-statistic	Experimental Condition (N = 120)	Control Condition (N = 122)
Attitudes	0.55	6.40 (0.55) ^a	6.35 (0.80) ^a
Subjective norms	1.05	5.61 (0.98) ^a	5.48 (0.94) ^a
Perceived behavioral control	3.03	5.26 (1.16) ^a	4.82 (1.11) ^b
Behavioral intentions	1.42	5.67 (1.02) ^a	5.49 (0.96) ^a

Note. Means which statistically differ going across columns do not share the same superscript.

Table 2

Means (M) and Standard Deviations (SDs) for high vs low collectivism within the experimental condition.

Self-Reported Dependent Variables	t-statistic	High Collectivism (N = 66)	Low Collectivism (N = 54)
Attitudes	2.91	6.53 (.50) ^a	6.24 (.58) ^b
Subjective norms	3.48	5.88 (.98) ^a	5.28 (.87) ^b
Perceived behavioral control	3.92	5.62 (1.08) ^a	4.83 (1.12) ^b
Behavioral intentions	3.64	5.97 (.95) ^a	5.31 (1.0) ^b

Note. Means which statistically differ going across columns do not share the same superscript.

Summary

- ❖ Participants randomly assigned to the ocean-based plastic pollution PSA self-reported greater perceived behavioral control than participants in the control PSA.
- ❖ Participants high in collectivism (versus low in collectivism) self-reported a significant increase in positive attitudes, subjective norms, perceived behavioral control, and behavioral intentions after the exposure to the ocean-based plastic pollution PSA.
- ❖ Overall, participants are more likely to comply with an environmental message when they are high in collectivism and when the message reinforces positive attitudes, subjective norms, and perceived behavioral control.
- ❖ The current study reveals the critical role of cultural values in media processing and provides important guidance for public message designers to more effectively reach a diverse population.
- ❖ Future research is recommended to investigate different cultural values/dimensions (e.g., race/ethnicity, social classes, etc.), through different media channels (e.g., visual, audio, etc.), and in different public crisis context (e.g., air pollution, severe weathers, etc.).
- ❖ A larger and more diverse sample is also recommended for future research.

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