Memes and Motion: How Stereotype-Related Images Influence Physical Performance

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BACKGROUND

- Stereotype Threat: a situational concern of confirming a negative stereotype about one's ingroup.
- Stereotype threat research has focus largely on cognitive tasks, with limited research exploring its effects on physical activity or motor tasks, that become more routine through practice.
- Research on memes finds they have the ability to influence audiences in casual settings and even on major political opinions.
- Accelerometers allow for more fine-grained, continuous physical activity measures that provide valuable insights into participants task performance.

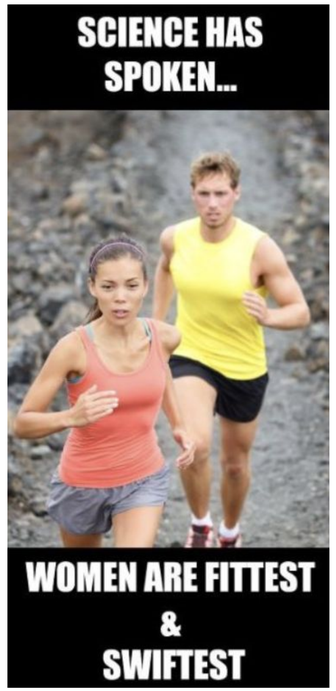
STUDY

- N = 280 participants (144 women and 136 men)
- Pre-Survey -> Task -> Post-Survey
- Participants were randomly exposed to 1 of 3 conditions (Threat, Lift, and Control)
- Task: Perform treadmill stress test with progressively increasing levels of difficulty

METHODS

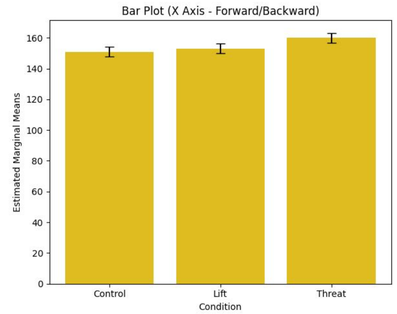
- Conducted a multiple linear regression analysis to examine how accelerometer derived movement data—X (forward-backward motion), Y (vertical/up-down motion), and Z (lateral sway)—relate to gender and experimental conditions (Threat, Lift, Control).

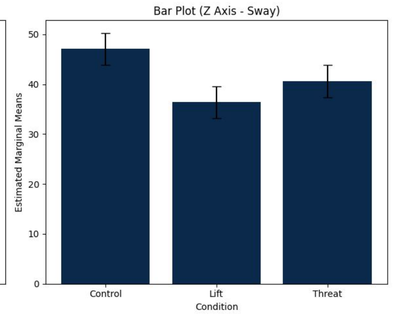
Experimental Stimuli

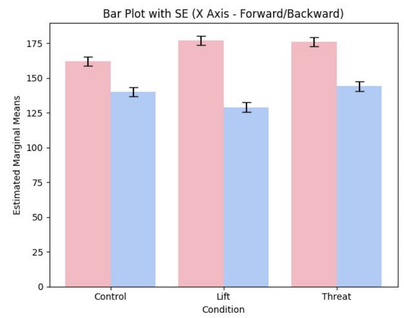


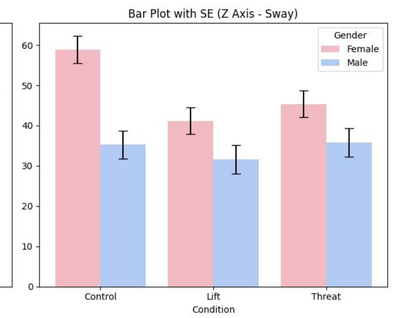
To increase experimental consistency, the stereotype threat message shown to women was also used in the stereotype lift condition for men. Conversely, the stereotype lift message shown to women was used in the stereotype threat condition for men

RESULTS









DISCUSSION

- Our study explores how stereotype-based messages—like memes—can influence physical activity by tapping into well-known social and psychological processes.
- Including physiological data gives us a fuller picture of the mental processes behind stereotype threat and lift.