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Beach User Perceptions of the Rip Current Hazard on the Great Lakes

Summer Locknick

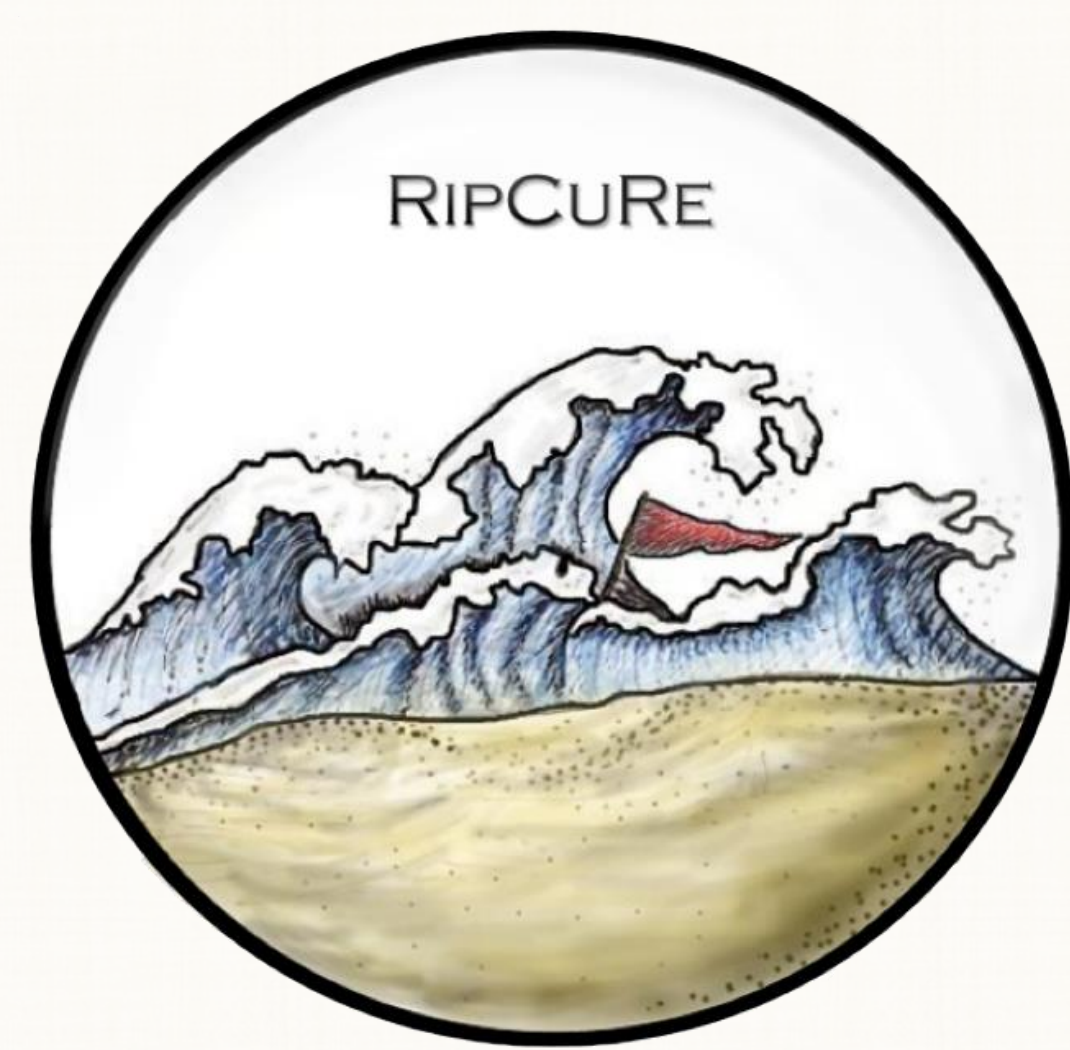
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Beach User Perceptions of the Rip Current Hazard on the Great Lakes



University
of Windsor

UWill Discover!

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Abstract: With 47 recorded drownings in the Great Lakes this year (2016), rip currents and other surf hazards are a public health issue in both Canada and the United States. Preliminary evidence suggests that the public has limited knowledge of rip currents, and are therefore not making informed decisions, which puts them at risk every time they go to the beach. This study attempts to quantify the vulnerability of potential beach users to be caught in a rip current on the Great Lakes. Specifically, the survey examines how beach users make decisions on the beach including: what beach they visit, what they do at these locations, how they pick a site at the beach, and what influences people to enter the water or not. The survey was administered to both potential beach users as well as lifeguards and lifesavers from Canada and the United States. In order to gain an understanding of people's perception on rip currents, the online survey consists of beach photographs, scenarios, and general knowledge of rip currents. The results of the survey will be used to improve education about rip currents, as well as creating awareness on the beaches of the Great Lakes. The goal is to aid in the development of new management strategies to influence beach user behaviour, in the hopes of reducing the number of drownings and rescues on the Great Lakes.

Introduction:

With 47 recorded drownings in 2016 on beaches of the Great Lakes, rip currents pose a significant health risk to potential beach users in Canada and the United States. In order to gain an understanding of peoples perception on rip currents, a survey was administered to the public about beach locations, influences, site preferences, scenarios, and general knowledge of the participants and rip currents.

The survey has two primary focuses: lifeguards/lifesavers and beach users. This allows us to gain an understanding of rip currents based on personal experience in their field and experience.

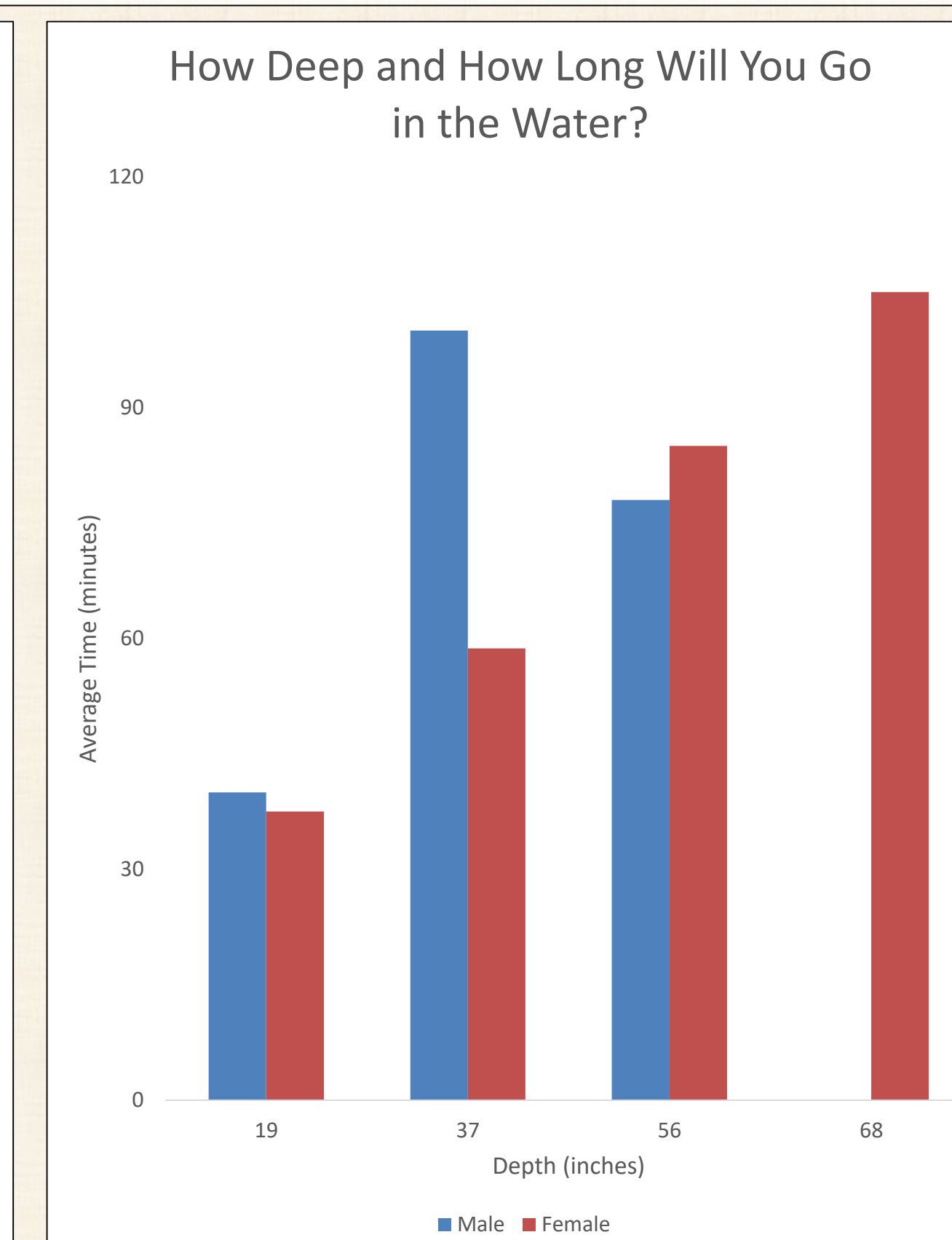
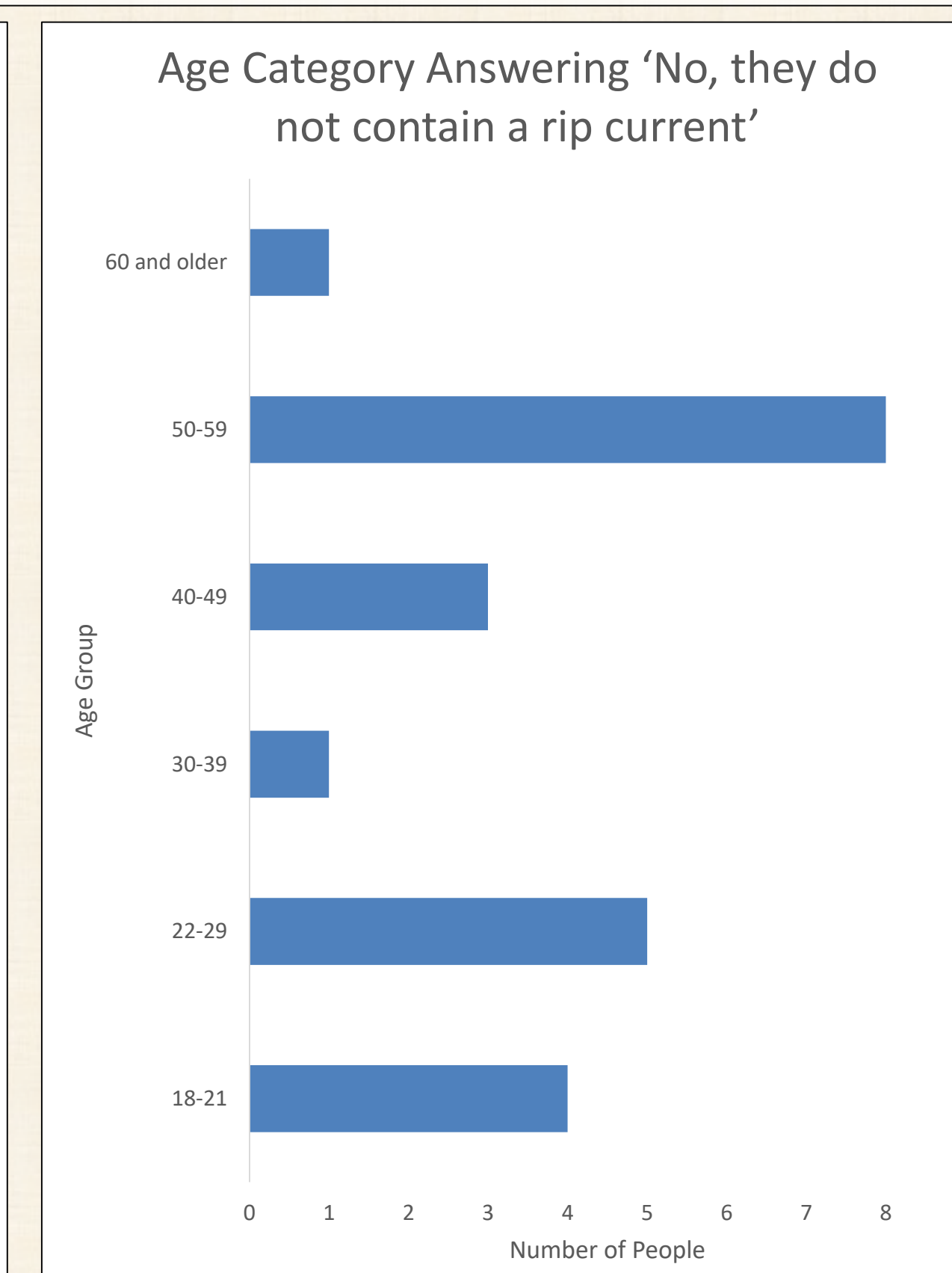
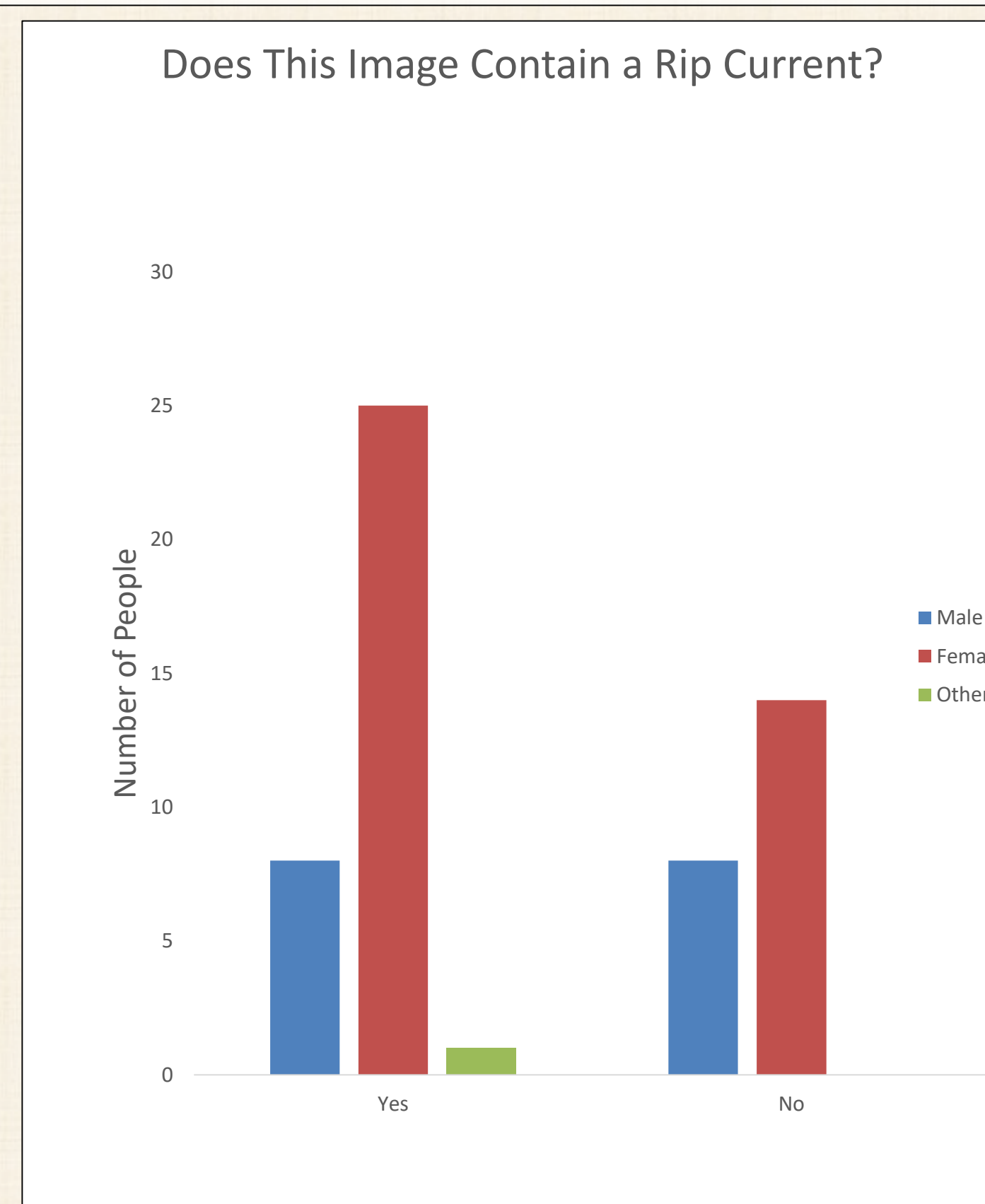
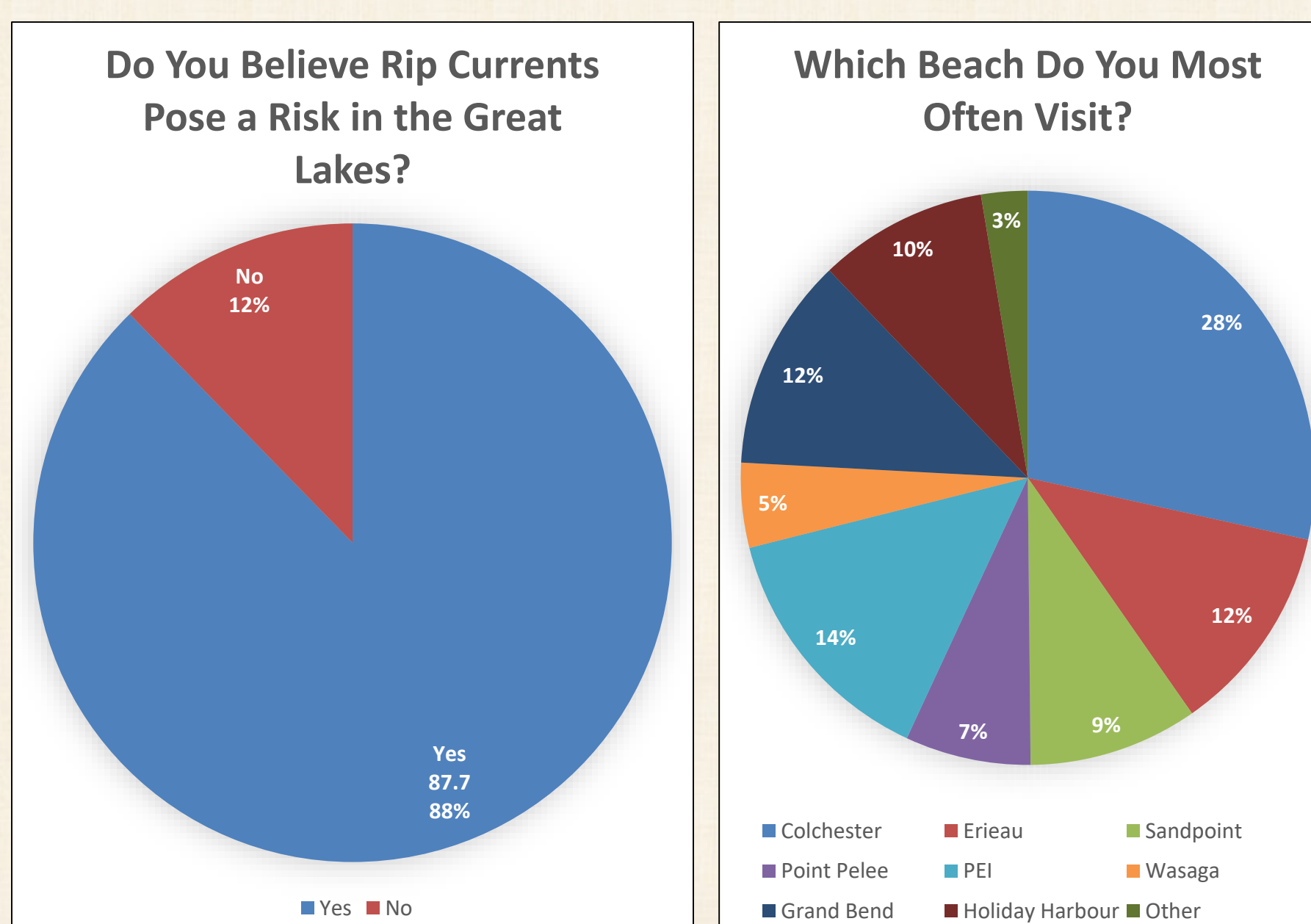
Methods:

The primary research method is a survey conducted with Fluid Survey. The survey consisted of questions pertaining general information of the survey taker, knowledge of rip currents, and possible beach hazards. Some of the imperative questions focused on in the survey were:

- 1) Do you believe rip currents pose a threat in the Great Lakes?
- 2) Did either image contain a rip current? Is so, which one?
- 3) Have you ever been caught in a rip current? If so, where?
- 4) Have you, or will you ever, enter the water alone with no one around?
- 5) How likely are you to enter the water when your peers enter, on scale from 1-5.

Acknowledgements:

This survey was conducted under the REB number 33815



Conclusions:

A total of 65 beach users were surveyed, with 64.6% of participants claiming female, 26.2% claiming male, 1.5% claiming other, and 7.7% leaving blank gender data. Of the 65 participants, 43.08% claim they live or have lived near a beach or coastal area.

With 40% of participants claiming they know what a rip current is, 42.3% of those participants correctly identified the rip currents in the images. Because of this we can conclude that only 16.9% of participants know what a rip current is and can correctly identify them. Of the 65 beach user participants, 38.46% of females could not correctly identify the rip current, while 41.18% of males could not. This concludes that women are slightly more likely to be unaware of rip currents than men are.

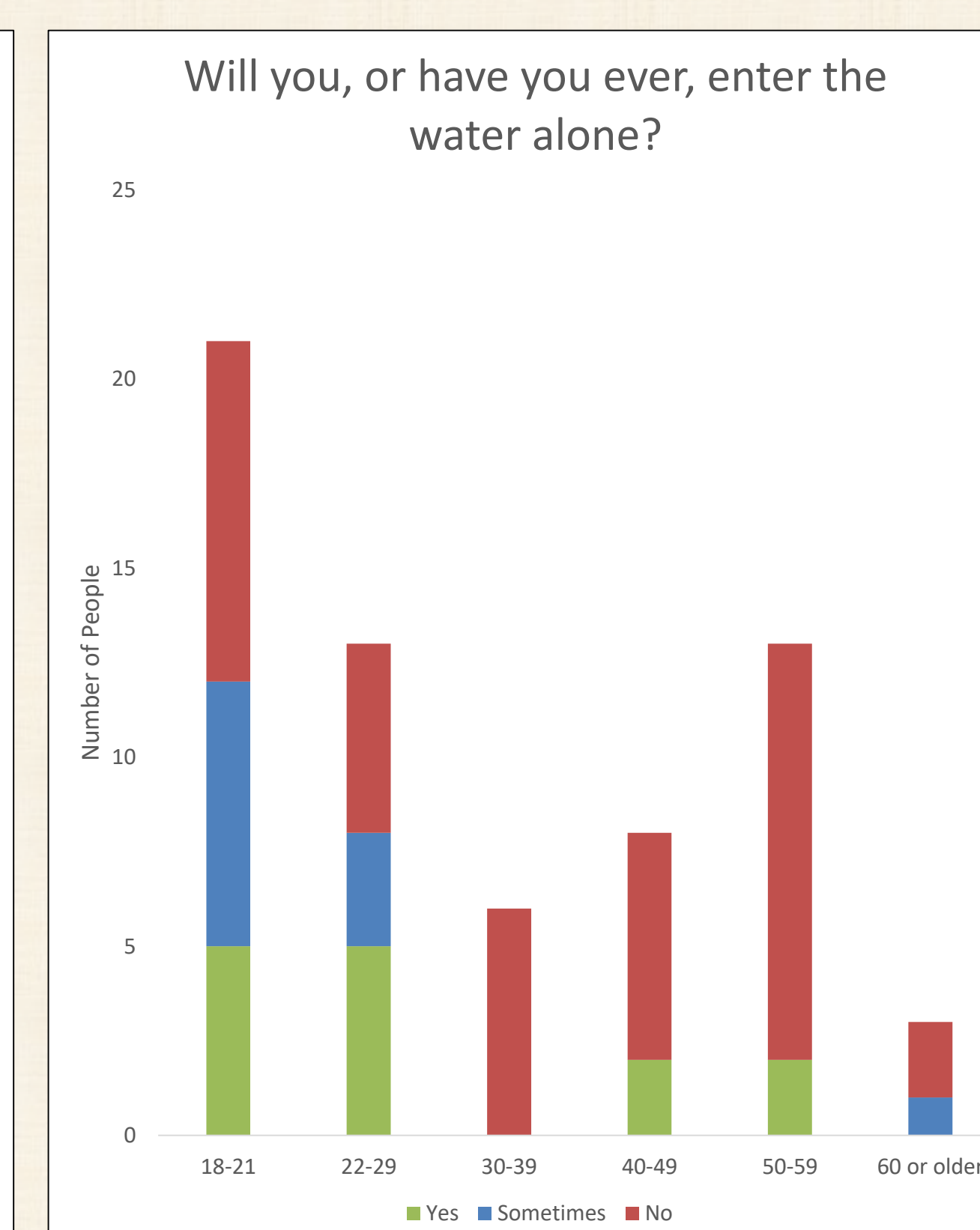
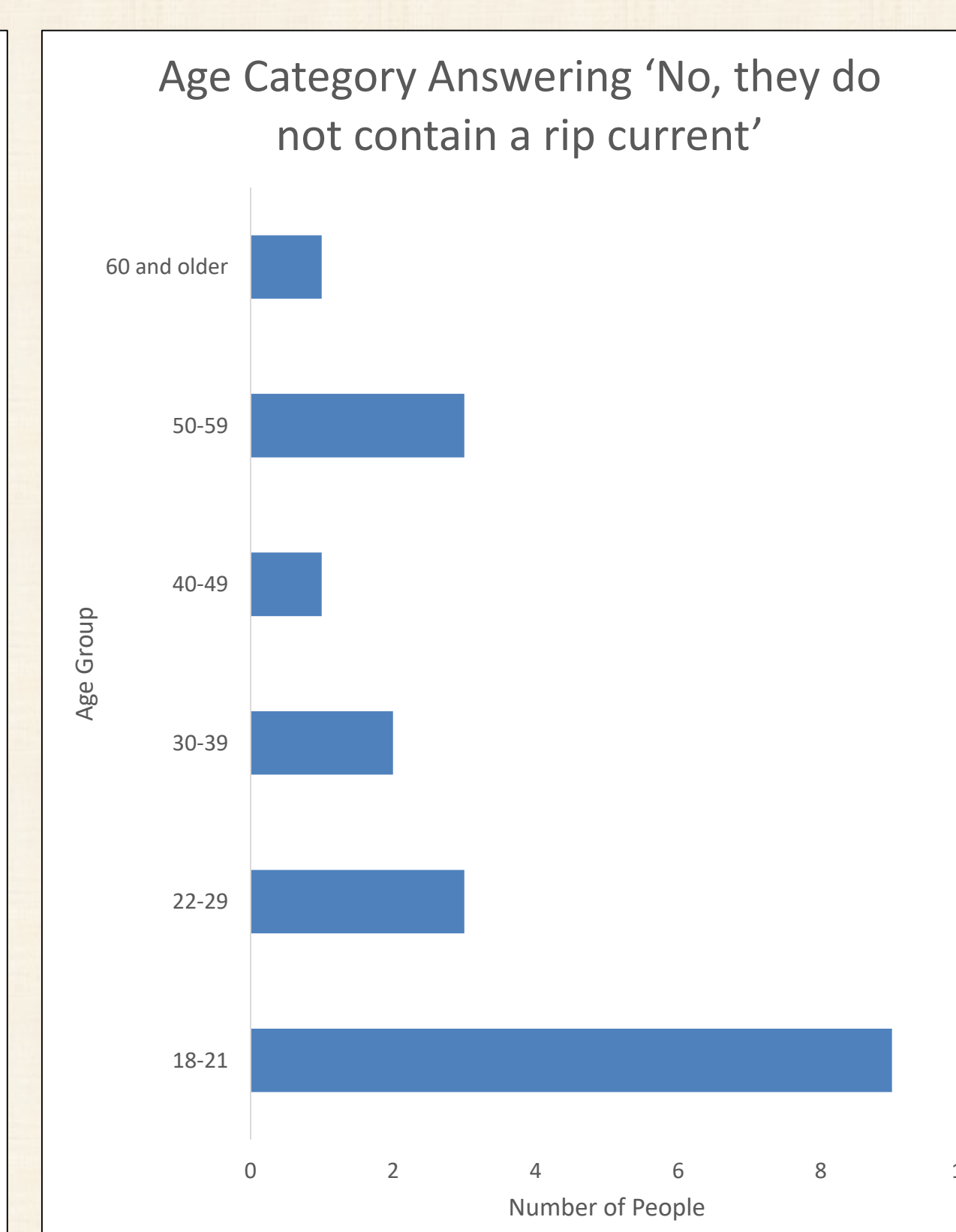
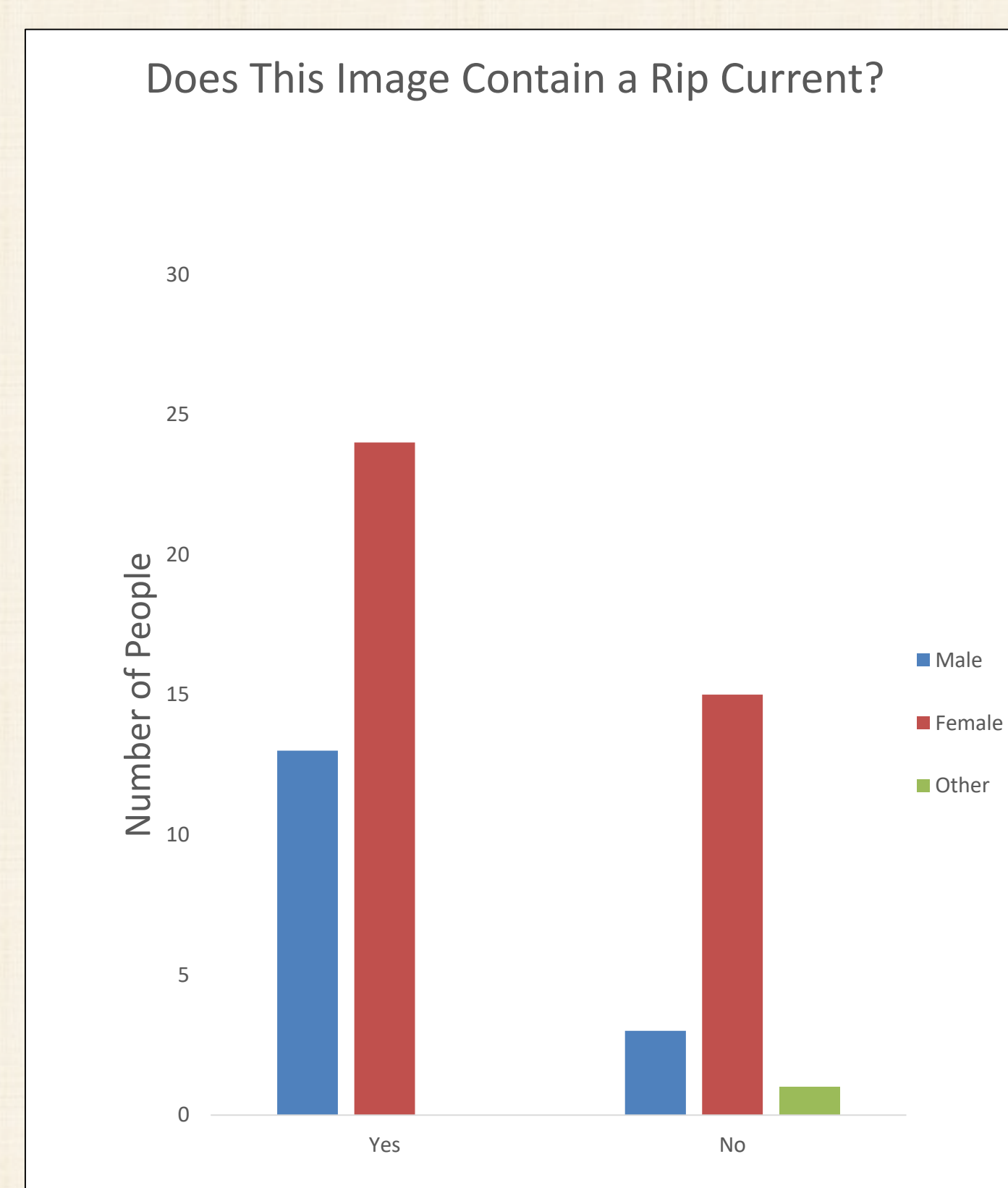
The most common report of the open ended question "Is there anything else you would like to say about rip currents", was that rip current knowledge should be taught in grade schools. This acknowledges that participants believe rip currents should be talked about in grade school and high school, reducing the chances of drownings and rescues in the great lakes. When asking these participants "Are you usually travelling with children under the age of 12? If so, are you confident in their swimming abilities?", 90.4% of participants that were travelling with these children were not confident in their swimming abilities.

With 13.85% of the participants naming Colchester Beach the most visited beach, it is worthy that researchers focus on this area. Effects from presenting rip warnings on this beach will increase the awareness of this hazard, and expectantly reduce the number of drownings and rescues in the Great Lakes.

Take Our Survey!



uwindsor.fluidsurveys.com/s/RipCuResurvey



Results:

A total of 71 people participated in the survey from December 5, 2016 to March 13, 2017.

- The primary results showed that 40% of the participants claimed they knew what a rip current was, yet of that 40% only 42.3% correctly identified them in the images.
- Lifeguards and lifesavers were found that 66.7% claimed they knew what a rip current was, but only 33.4% of that 66.7% could correctly identify a rip current in the images provided.
- The most common misconception of the definition of a rip current, was that people believed they were undertows. A total of 10% of participants claimed they were undertows.
- The most common beach visited is Colchester Beach, with 13.85% of the participants naming it the beach most often visited.
- 18.5% of participants claim they have been caught in a rip current, but 41.67% of those participants claim they do not know what a rip current is or incorrectly defined one.
- 87.7% of participants acknowledge that rip currents pose a health risk in the Great Lakes, but only 20% are aware of the warning signs.
- 64.62% of participants admit that they would swim at a beach with no lifeguard present, 24.61% claim that they would 'sometimes', and only 9.23% claim they would not.
- The most common beach visits included: travelling on Saturday, with 3-4 family members from 12:00pm-2:00pm.