

## Improving beach safety: The Science of the Surf (SOS) research project

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This research project aimed to develop, implement and evaluate an educational intervention aimed at reducing the risk of beach related drowning. The pre-campaign stage of the project sought to investigate beachgoers' knowledge about beach safety. We administered 376 structured interviews with beachgoers in two regional areas of New South Wales Australia over the 2007 Easter period. Results indicated a low recognition of, and a high intention to swim in, areas characterized by calm water between breaking waves, which is the most common visual characteristic of rip currents in this region. Eighty-five percent of respondents reported that they would swim between the red and yellow flags that signify an area patrolled by lifeguards and lifesavers. These findings are consistent with anecdotal media reports of beach drownings, and informed the development of our beach safety campaign.

One of the areas we had surveyed was exposed to the beach safety campaign. The key message of the campaign was a warning about rip currents that appear as calm water: 'Don't get sucked in by the rip – Don't be fooled by calm, flat sections in the surf, because these are often rips'. We reinforced peoples' motivation to swim between the flags by highlighting the difficulty of identifying rips. A media release and campaign launch achieved some exposure in local print, radio and television. A poster, conveying our key message, was displayed in most local retail outlets. The same image was distributed as a postcard, and on a colourful, image-based brochure. The brochure, distributed via retail outlets and rental accommodation agents, provided more scientific substance to our key messages and included a 'spot the rip quiz' to encourage reading, and to show rips in different surf conditions. The brochure also reinforced peoples' knowledge about what to do in a rip (shown in the pre-campaign stage to be high) and primed thoughts to prevent panic. In the post-campaign stage of the project, beachgoers were again interviewed about their knowledge of beach safety, and about the campaign, in the Intervention area [I] and a similar control area [C], immediately after the campaign (I: n=552; C: n=408).

Consenting post-campaign respondents were sent a follow-up questionnaire after approximately six months and 55% responded (I: n=222; C: n=161). Pre- vs post-campaign analysis compared beachgoers in control and intervention areas on a range of questions including their knowledge of rips and how to handle them. Analysis also compared post-campaign responses for beachgoers in the intervention area who reported that they had seen our campaign with those who did not report that they had seen it. Similar analysis was conducted using follow-up data to determine whether knowledge was maintained. In the intervention area, 28.8% of post-intervention respondents, and 57.2% of follow-up respondents, had seen our campaign. Following the intervention, respondents demonstrated improvement (relative to baseline) in intentions to avoid swimming in a calm-looking rip, ability and confidence identifying a rip, intention never to swim at unpatrolled beaches, and responses to being caught in a rip, compared with controls. Similar improvements were observed for intervention respondents who had seen our campaign compared with those who had not, and for intervention respondents compared with controls at follow-up. Thus, our relatively brief print-based campaign was effective in warning beachgoers about calm-looking rips, and is worth developing further.

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