Running head: promote swimming between the flags

Targets to promote swimming between the flags among Australian beachgoers

Abstract

Objectives: Visiting the beach is a popular activity but the risk of drowning is real. Drownings are preventable and swimming between the patrol flags can save lives. The aim of the current study is to understand the beliefs people hold in relation to this important water safety behaviour. **Method:** Participants (N=514; females=58%, males=42%) who were residents of/visitors to coastal areas in South-East Queensland, Australia completed a theory of planned behaviour belief-based questionnaire. The survey was designed to measure behavioural, normative, and control beliefs guiding beachgoers intentions to swim between the patrol flags. **Results:** Controlling for age, gender, and swimming ability, four critical beliefs (along with self-reported swimming ability) were identified as independently predicting intention. Specifically, the benefits of feeling safe and the cost of feeling limited in choice of where to swim; the social approval from partners; and the inhibitor belief about better waves being outside the flags predicted intentions to swim between the flags. **Conclusions and Implications:** The current study provides an understanding of the beliefs underlying Australian beachgoers intentions to swim between the patrol flags. Attention to these targeted beliefs may assist in promoting more regular performance of this beach safety behaviour, thereby combating the increasing rates of drownings and surf rescues.

Keywords: swimming, patrol flags, drownings, theory of planned behaviour, beliefs

With approximately 11,915 beaches surrounding the Island continent of Australia (Surf lifesaving Australia, 2015), visiting the beach is one of the most popular activities that Australians and international visitors to Australia participate in (Tourism Research Australia, 2009). Despite the popularity of this recreational activity, the risk of drowning is a real issue. Between July 1st 2012 and June 30th 2013, 291 people drowned in Australian waterways, of which 22% occurred in beach locations (Royal Life Saving Society, 2013). This figure represents a 5% increase in drowning deaths from the previous year and, although alarming, also concerning is that the figures do not consider all non-fatal drownings and surf rescues. For example, in the 2012/13 period, surf rescues that required first aid accounted for 64,645 cases and the use of resuscitation was applied to 11,533 cases (Surf Life Saving Australia, 2013). Research has confirmed that swimmers who stay between the patrol flags and find themselves in need of assistance are most likely to be successfully rescued (Wilks, de Nardi, & Wodarski, 2007), likely due to these areas being constantly supervised by trained surf and rescue personnel. However, empirical evidence from Australian rescue and drowning data has also confirmed that the common belief that swimming in close proximity to the flags will provide the same benefits if assistance is required is a popular misconception (Wilks et al., 2007). Given drownings are preventable deaths and swimming between the flags can save lives, it is important to understand the beliefs people hold in relation to this important water safety behaviour so that key messages can target such misbeliefs and, hopefully, change people's behaviour.

In trying to understand the water safety actions of individuals to swim between the flags, we draw on a well-validated model of decision-making, the Theory of Planned Behaviour (TPB; Ajzen, 1991). According to the model, intention is the most proximal determinant of people's behaviour with intention predicted by people's attitudes, perceptions of social pressure (subjective norm), and perceived behavioural control (perceptions of

control over performing the behaviour, also believed to impact on behaviour). An important feature of the TPB is its suggestion that the antecedents of attitude, subjective norms, and perceived behavioural control are corresponding salient behavioural, normative, and control beliefs, respectively, reflecting the systems of beliefs that underpin an individual's intention and behaviour (Ajzen, 1991). Behavioural beliefs represent the perceived consequences of the behaviour and the evaluation of that outcome. Normative beliefs represent the perceptions of significant others' approval or disapproval of engaging in the target behaviour and the individual's motivation to comply with these significant others. Control beliefs represent the perceived factors likely to inhibit or facilitate performing the behaviour.

Armitage and Conner (2001) suggest that the TPB is efficacious in predicting intentions and behaviour although the variance explained is moderate (39% and 27%, respectively). Although the model has received considerable attention and support in the literature to date, its shortcomings and limitations have been well documented (Sniehotta et al., 2014). Despite current criticisms, the model is a useful framework to adopt as a starting point in the pursuit of a better understanding of human behaviour (Ajzen, 2014; Armitage, 2014). The model has been utilised successfully as the basis of many studies of health and injury prevention behaviours including water safety behaviours (Hamilton & Schmidt, 2014; Pearson & Hamilton, 2014) and, more specifically, behaviours related to swimming between the flags (White & Hyde, 2010). Furthermore, the TPB has been used as a theoretical basis for the creation of health messages (Epton, Norman, Harris, Webb, Snowsill, & Sheeran, 2014; French & Cooke, 2012; Spinks & Hamilton, 2015) and successfully applied to the design of health behaviour change interventions (Darker, French, Eves, & Sniehotta, 2010; White, Hyde, O'Connor, Naumann, & Hawkes, 2010). Thus, adopting a theoretical approach to identifying key beliefs underpinning people's behaviour can provide critical targets for tailored interventions that are potentially more effective in changing people's behaviour

(Fishbein, von Haeften, & Appleyard, 2001). The use of the TPB as a basis for exploring the beliefs underpinning people's decisions to swim between the flags will, therefore, allow the creation of theoretically-based and empirically-driven messages that can inform future interventions to increase the likelihood of the intervention being efficacious (Epton et al., 2014).

A number of studies have assessed people's knowledge, attitudes, and beliefs of beach safety in Australia. Ballantyne, Carr, and Hughes (2005) investigated university students' (*N*=176) behaviour and knowledge of beach safety and found a significant proportion (32%) did not swim between the flags. Furthermore, only 62% of the sample claimed to know what a rip current (powerful, narrow channels of fast-moving water) was but the majority of this group (64%) were unable to explain how they would recognise one. Williamson, Hatfield, Sherker, Brander, and Hayden (2012) found similar results in that, although most beachgoers were aware that swimming between the patrol flags was the safe swimming option, a large proportion chose not to swim there. In another study of beachgoers' (*N*=376) beliefs and behaviours in relation to swimming between the patrol flags, it was found that swimmers aged 30-49 years were less likely to choose to swim between the patrol flags than other swimmers and that those with more confidence in their ability to identify a rip current were less likely to swim between the flags than those with less confidence (Sherker, Williamson, Hatfield, Brander, & Hayden, 2010). These findings suggest that swimming between the patrol flags may be linked with age and experience.

While these studies provide a basis for understanding beach safety, to date, no research has investigated using a theoretically-based approach people's beliefs underpinning their decisions to swim between the flags. The aim of the current research is to identify the key beliefs that guide people's intentions to swim between the patrol flags. The current study adopts a TPB belief-based approach to identify behavioural, normative, and control beliefs

underpinning individuals' intentions to engage in this important water safety behaviour. Such key beliefs can be further tested to determine their efficacy in changing people's behaviour and, thus, assist in the design of future interventions to promote swimming between the flags to ultimately prevent drownings and save lives.

Method

Participants and Procedure

Participants were 514 (females=298, 58%) residents of/visitors to coastal areas in South-East Queensland, Australia. The target population comprised individuals aged over 18 years and who were able to read/speak English, an Australian resident or visiting Australia for more than 3 months, able to swim, and planning to visit a patrolled beach in the next fortnight. Participants ranged in age from 18 to 84 years (M=41.35, SD=13.77) and the majority (n=440, 85.6%) were Australian citizens. Ethical approval was granted from the university's human research ethics committee.

Pilot Study. Prior to data collection for the main study, an elicitation study was conducted on a representative sample of the target population ($N = 32$; 10 males, 22 females; Age $M = 24.35$ years; $SD = 9.43$, range = 18 to 61 years). Respondents received an AUD$1 instant lottery ticket containing the chance to win money as compensation for their time. The study comprised open-ended questions as outlined by Fishbein and Ajzen (1975) to identify participants' personally accessible behavioural, normative, and control beliefs. Content analysis was undertaken to construct a list of modal accessible beliefs (i.e., the most commonly held beliefs in the target population) to each of the TPB belief-based questions, choosing beliefs that exceeded a 10% frequency cutoff. These beliefs were then used to form the belief-based TPB measures in the main questionnaire. To elicit behavioural beliefs, participants were required to list the advantages and disadvantages of swimming between the patrol flags. Five modal salient behavioural beliefs were elicited (e.g., "feeling safe", "feeling

limited in my choice of where to swim"). To elicit normative beliefs, participants were asked to list, in the order of importance, any individuals or groups who would approve or disapprove of them swimming between the patrol flags. Four modal salient normative beliefs were elicited (e.g., "partner", "friends"). To elicit control beliefs, participants were requested to identify factors or circumstances that might discourage or encourage them to swim between the patrol flags. Eight modal salient control beliefs were elicited (e.g., "absence of patrol flags", "better waves outside the patrol flags"). Refer to Table 1.

Main Study. Data for the main questionnaire were collected by a team of research assistants at beachside markets (with permissions from markets' managers) in South-East Queensland, Australia. Participants were approached by one of the research assistants and asked some initial questions to determine eligibility to the study (18 years of age and over, able to read/speak English, an Australian resident or visiting Australia for more than 3 months, able to swim, and planning to visit a patrolled beach in the next fortnight). If deemed eligible, participants were then informed about the study and invited to complete the questionnaire. To thank respondents for completing the survey, all participants received an AUD$5 instant lottery ticket containing the chance to win money. The main questionnaire assessed the direct TPB predictors of attitude, subjective norms, and perceived behavioural control), along with the indirect TPB predictors (Ajzen, 1991). These indirect TPB predictors (i.e., the underlying beliefs of attitude, subjective norm, and perceived behavioural control namely behavioural, normative, and control beliefs, respectively) are the focus of this paper.

Measures

Target behaviour. In the questionnaire, TPB belief and intention items were worded in relation to the target behaviour of swimming between the flags which was defined as "swimming between the patrol flags at a beach in the next 2 weeks". Participants were

informed that the patrol flags referred to the "red and yellow flags that identify the area where is it safe to swim at the beach".

Main questionnaire. The main questionnaire was formulated of items measuring belief-based TPB constructs related to the target behaviour. TPB belief items were measured on 7-point Likert scales from [1] *extremely unlikely* to [7] *extremely likely*. Higher scores on a scale represented a more positive response on the construct.

Intention. Participants' intentions to swim between the patrol flags at a beach in the next 2 weeks was assessed using 2 items, "I intend to swim between the patrol flags at a beach in the next 2 weeks"; "It is likely that I will swim between the patrol flags at a beach in the next 2 weeks". The average of these two items produced a reliable scale, $r(507) = .75$, $p < .001$. Responses ranged from [1] *strongly disagree* to [7] *strongly agree*.

Behavioural beliefs. Behavioural beliefs were measured by assessing the five behavioural beliefs elicited from the pilot study. Participants were requested to rate how likely the costs (e.g., "feeling limited in my choice of where to swim") and benefits (e.g., "feeling safe") would result if they were to swim between the patrol flags.

Normative beliefs. Normative beliefs were measured using the normative beliefs pertaining to the four socially relevant individuals or groups of people (e.g., "partners", "surf lifesavers") obtained in the pilot study. Participants were asked to rate how likely these individuals or groups would approve of them swimming between the patrol flags.

Control beliefs. Control beliefs were assessed by the seven control beliefs elicited from the pilot study. Participants were asked to rate how likely various barriers and motivators (e.g., "laziness", "better waves outside the patrol flags") were to prevent or discourage them from swimming between the patrol flags.

Demographic factors. A number of demographic details were collected including participants' age in years and gender (scored [1] *male*, [2] *female*). A measure of swimming

ability was also obtained by averaging the scores on two indicators. For the first indicator, participants rated their swimming ability from [1] *poor* to [7] *excellent*. For the second indicator, participants rated how many lengths of a 25 metre swimming pool they could currently swim without stopping or touching the bottom on a response scale from up to [1] *up to 1 length (less than 25 metres)* to [5] *more than 16 lengths (more than 400 metres)* (McCool, Moran, O'Connor, 2006). The two items were significantly correlated, $r(522) = .66, p < .001$.

Statistical Analysis

Guidelines as specified by von Haeften, Fishbein, Kasprzyk, and Montano (2001) were adopted to identify the critical beliefs for people's intentions to swim between the patrol flags. First, the Pearson product-moment correlation matrix was analysed to identify those beliefs that significantly correlated with participants' intentions. To identify those beliefs that make independent contributions to intentions, within each belief-based measure, the significant key beliefs were entered in a stepwise multiple regression analysis. Finally, all key beliefs that made an independent contribution to the prediction of intentions were entered into a final regression. Given that demographic factors may impact on a person's decision to swim between the flags (Sherker et al., 2010), participant age, gender, and swimming ability were also entered into the final regression model.

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Results

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Overall, participants indicated strong intentions to swim between the patrol flags ($M = 6.02$, $SD = 1.52$). As evidenced in Table 1, individual correlational analyses showed 4 of the 5 behavioural beliefs, all of the normative beliefs, and 7 of the 8 control beliefs were significantly correlated with intention. A regression analysis on the significant behavioural beliefs revealed "feeling safe" ($\beta = .32$) and "feeling limited in my choice of where to swim" ($\beta = -.17$) as independent contributors to the prediction of intention. A regression analysis on

the significant normative beliefs revealed "friends" (β = .18) and "partner" (β = .19) as

independent predictors of intention. Regression analysis on the significant control beliefs

revealed "absence of patrol flags" (β = .10) and "better waves outside the patrol flag" (β = -

.26) as predictors of intention. To identify the critical beliefs, the 6 individual belief

predictors identified above were entered into a final regression analysis with participant age,

gender, and swimming ability controlled for in Step 1 and the 6 beliefs entered at Step 2. As

shown in Figure 1, in the final model, four critical beliefs along with participant swimming

ability were identified as independently contributing to the prediction of intention, with the

final model explaining 24% (adjusted R^2 = .23) of the variance in people's intentions to swim

between the patrol flags.

Discussion

We aimed to investigate using a TPB belief-based approach the critical beliefs that

underlie beachgoers' intentions to swim between the patrol flags, an investigation not yet

undertaken comprehensively. Support was provided for salient beliefs guiding decisions in

this context in that various behavioural, normative, and controls beliefs were identified as

making an independent contribution to intention. The findings of the current study support

that of previous research where the role of beliefs in guiding people's decisions has been

noted in the prediction of other water safety behaviours (Hamilton & Schmidt, 2013). This

study fills an empirical gap in the water safety literature by investigating a popular aquatic

activity currently under-investigated and using a well-validated theoretical framework to

identify the critical beliefs that guide Australian beachgoers' decisions to swim between the

patrol flags.

The results of the current study provide the basis for the development of theory-based

messages to promote beachgoers' motivation to swim between the flags. First, the

behavioural beliefs suggest it may beneficial to foster more positive attitudes to swimming

between the flags by emphasising the benefits (e.g., feeling safe - a finding supported by previous research; Williamson et al., 2012) and minimising the costs (e.g., feeling limited in choice of where to swim) of engaging in such action. Persuasive messages, therefore, could highlight the importance of such a water safety behaviour and emphasize that swimmers who stay between the flags are more likely to feel safe given their greater chances of being rescued (Wilks et al., 2007). Such messages should also challenge the belief that, although one may feel their choice of swimming location is limited, swimming even in close proximity to the flags will not provide the same benefits as swimming between the flags if assistance is required (Wilks et al., 2007).

The findings suggest also that normative beliefs are associated with the intention to swim between the patrol flags. Thus, campaigns should consider highlighting the perceptions of others', in particular partners', approval for safe swimming and their disapproval of swimmers outside of the patrolled area. The finding that more proximal supportive networks rather than more distal networks (e.g., surf lifesavers) are important suggests that it may be relevant to instill norms of social support and encouragement among beachgoers and their intimate networks (who perhaps have a greater vested interest in their safety), rather than focusing on broader community groups.

Finally, inspection of the control beliefs revealed the inhibitor belief about better waves being outside the flags as an independent predictor of intentions to swim between the patrol flags. Although the waves outside the flagged area may encourage swimming away from the patrolled boundaries because, for example, the popular surface water sport of bodysurfing may be better experienced with better waves, the potential of swimming into a rip current is a real danger that may have fatal consequences. Given that many individuals are unable to recognise a rip current (Williamson et al., 2012), messages should encourage

people when weighing up their options of swimming between the flags or not in favour of swimming in an area that has better waves to think about the potential risks involved.

Overall, a number of critical beliefs were identified as key to guiding beachgoers' intentions to swim between the patrol flags; as a group, they explained 24% of the variance in people's intentions. These beliefs may serve as effective targets for future interventions. An additional noteworthy finding in this context is that one's swimming ability predicted intentions. This finding is worrisome as it suggests that those with less swimming ability may be less likely to form an intention to swim between the flags. This finding may reflect the beliefs of some tourists who report lower estimates of swimming ability (Williamson et al., 2012) but are more likely to engage in risky behaviour at the beach (Ballantyne et al., 2005). The finding could also reflect that those who perceive they have a stronger swimming ability and, thus, more likely to intend to swim between the flags have a greater awareness for water safety practices than those with less perceived ability to swim. These suggestions, however, require further research to support their validity.

Strengths and Limitations

The current study has the strengths of investigating in a large community sample a water safety behaviour that is under-researched yet has substantial safety concerns for many beachgoers and did so via the application of a rigorous theoretical approach. A number of limitations of the current study also exist. First, self-report measures, which are prone to social desirability bias, may have led to an under or over-reporting of socially undesirable beliefs in this context. Second, the current study relates to the sampling population who represent beachgoers from only a small proportion of Australia's vast coastline. It is possible that people's beliefs for beach safety may differ across different coastal geographical locations and for different sub-groups of the community. For example, Williamson et al. (2012) found that rural residents, compared to Australian beachgoers in general, were more

likely to make safe choices about where to swim in the presence of flags. In another study,

Sherker et al. (2010) found that swimming between the flags is an especially attractive option

to parents and carers of young children. As the current study was not able to investigate if

differences in beliefs exist for people who reside in different geographical locations or for

different sub-sections of the population, further research is needed in this area. Third, the

majority of the sample indicated they were an Australian citizen with approx 15% identified

as a non-Australian citizen. Given the small number of non-Australian citizens and that we

were unable to determine how long these participants resided in Australia (other than greater

than 3 months), a limitation of the current study, we again were limited in investigating if any

differences in beliefs exit between different cultural groups. Furthermore, given patrolled

beaches in populated areas of Australia are common and although websites and beach safety

apps for mobile phones are available to help people locate patrolled beaches (Surf Life

Saving Australia, 2015), international tourists may not be aware of such places due to

patrolled beaches being uncommon in their own country of residence. Thus, the findings may

not generalise to other groups. Investigating differences in beliefs among various cultural

groups is an important line of future research given that international tourists, for example,

are more likely to engage in risky behaviour at the beach and be less aware of beach safety

practices then their domestic counterparts (Ballantyne et al., 2010; Williamson et al., 2012).

Finally, people's beliefs in this context only accounted for 24% of the variance in intentions.

Other factors such as perceiving regret if one were to undertake the behaviour and perceiving

the actions of close others as engaging in the behaviour that have been found to influence

people's motivations for risky water-related behaviours (see Hamilton & Schmidt, 2014) may

also play a role in this context and, thus, additional, theoretically important constructs for this

particular water safety behaviour warrants further investigation. In addition, people's

intention and not their actual behaviour was assessed. Further examination of the relationship

between these beliefs and behavioural performance may allow for a more comprehensive understanding of people's decisions to swim between the patrol flags. In addition, although this study provides the basis for the beliefs to target in resultant interventions to change people's behaviour, future research is needed to test the efficacy of such interventions in actually changing people's behaviour to swim between the patrol flags.

Overall, the current study provides an understanding of the beliefs underpinning Australian beachgoers' intentions to swim between the patrol flags. Visiting the beach is a popular activity and, to the authors' knowledge, this is the first study to investigate the beliefs of beachgoers in relation to swimming between the patrol flags from a sound theoretical basis. Our findings suggest that attention to addressing people's attitudinal beliefs about feeling safe and limited in their choice of where to swim, considering the social approval of their partner, and tackling the key barrier to swimming between the patrol flags of better waves being outside this area may assist in promoting more regular performance of this beach safety behaviour, thereby combating the increasing rates of drownings and surf rescues.

References

Ajzen I. (e-pub ahead of print). The theory of planned behaviour is alive and well, and not ready to retire: A commentary on Sniehotta, Presseau,and Araújo-Soares. *Health Psychol Rev*, 12 Febuary, 2014: 10.1080/17437199.2014.883474

Ajzen, I.(1991). The theory of planned behaviour. *Organ Behav Hum Dec*, 50, 179-211.

Armitage, CJ. (e-pub ahead of print). Time to retire the theory of planned behaviour? A commentary on Sniehotta, Presseau and Araújo-Soares. *Health Psychol Rev*, 28 Febuary, 2014: 10.1080/17437199.2014.892148

Armitage CJ, and Conner M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *Br J Soc Psychol*, 40, 471-499.

Ballantyne, R., Carr, N., and Hughes, K. (2005). Between the flags: An assessment of domestic and international university students' knowledge of beach safety in Australia. *Tourism Manage*, 26, 617-622.

Darker, CD., French, DP., Eves, FF., and Sniehotta FF. (2010). An intervention to promote walking amongst the general population based on an 'extended' theory of planned behaviour: A waiting list randomised controlled trial. *Psychol Health*, 25, 71-88.

Epton T, Norman P, Harris P, Webb T, Snowsill FA, Sheeran P. (e-pub ahead of print). Development of theory-based health messages: Three-phase programme of formative research. *Health Promot Int*, 05 Febuary, 2014: 10.1093/heapro/dau005

Fishbein, M., and Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley; 1975.

Fishbein, M., von Haeften, I., and Appleyard, J. (2001). The role of theory in developing effective interventions: Implications from Project SAFER. *Psychol Health Med*, 6, 223-238.

French, DP., and Cooke, R. (2012). Using the theory of planned behaviour to understand binge drinking: The importance of beliefs for developing interventions. *Br J Health Psychol*, 17, 1-17.

Hamilton, K., and Schmidt, H. (2014). Drinking and swimming: Investigating young Australian males' intentions to engage in recreational swimming while under the influence of alcohol. *J Commun Health*, 39, 139-147.

Hamilton, K., and Schmidt, H. (2013). Critical beliefs underlying young Australian males' intentions to drink and swim. *SAGE Open*, 3, 1-7.

McCool, J., Moran, K., and O'Connor, K. (2006). *Auckland Beach-goers perceptions of beach swimming behaviours and perceptions of their risk of drowning. Prepared for Accident Compensation Corporation*. Auckland: Auckland UniServices Limited, The University of Auckland.

Pearson, M., and Hamilton, K. (2014). Investigating driver willingness to drive through flooded roads. *Accident Analysis & Prevention*, 72, 382-390.

Royal Life Saving Society. (2013). *Royal Life Saving Annual Report 2012/2013. RLSS; 2013*. Available from http://www.royallifesaving.com.au/__data/assets/pdf_file/0005/9968/Final-RLS_AnnualReport2013LR.pdf

Sherker, S., Williamson, A., Hatfield, J., Brander, R., and Hayden, A. (2010). Beachgoers' beliefs and behaviours in relation to beach flags and rip currents. *Accid Anal Prev*, 42, 1785-1804.

Sniehotta FF, Presseau J, and Araujo-Soares V. (2014). Time to retire the theory of planned behaviour. *Health Psychol Rev*, 8, 1-7.

Spinks T, and Hamilton K. (2015). Investigating key beliefs guiding mothers' dietary decisions for their 2-3 year old. *Appetite, 89*, 167-174.

Surf Life Saving Australia. (Accessed May 27th 2015). Beachsafe. Available from

http://www.beachsafe.org.au/

Surf Life Saving Australia. (2013). *Surf Life Saving Australia Annual Report 2012/2013*.

Available from

http://sls.com.au/sites/sls.com.au/files/slsa_annualreport_201213.pdf

Tourism Research Australia. (2009). *Activities Fact Sheet – Year Ending Jun 2009*. Canberra,

Australia: Department of Resources, Energy and Tourism.

von Haeften, I., Fishbein, M., Kasprzyk, D., and Montano, D. (2001). Analyzing data to

obtain information to design targeted interventions. *Psychol Health Med*, 6, 151-164.

White, KM., and Hyde, MK. (2010). Swimming between the flags: A preliminary exploration

of the influences on Australians' intentions to swim between the flags at patrolled

beaches. *Accid Anal Prev,* 42, 1831-1838.

White, KM., Hyde, MK., O'Connor, EL., Naumann, L., and Hawkes, AL. (2010). Testing a

belief-based intervention encouraging sun-safety among adolescents in a high risk

area. *Prev Med*, 51, 325-328.

Wilks J, de Nardi M, and Wodarski R. (2007). Close is not close enough: Drowning and

rescues outside flagged beach patrol areas in Australia. *Tourism in Marine

Environments*, 4, 57-62.

Williamson, A., Hatfield, J., Sherker, S., Brander, R., and Hayden A. (2012). A comparison

of attitudes and knowledge of beach safety in Australia for beachgoers, rural residents

and international tourists. *Aust N Z J Public Health*, 36, 385-391.

Table 1.

Means and Standard Deviations of the Individual Behavioural, Normative, and Control Beliefs, and Correlations with Intention.

|	M	SD	r
Intention	6.02	1.52	
Beliefs			
Behavioural beliefs			
Advantages:			
Feeling safe	6.39	1.07	.35***
Having someone to look out for my safety	6.65	0.92	.21***
Swimming in a safer area (e.g., no rip currents, sharks)	6.31	1.17	.14**
Disadvantages:			
Being crowded	5.65	1.35	-.01
Feeling limited in my choice of where to swim	4.27	2.02	-.20***
Normative beliefs			
Family members	5.98	2.00	.28***
Partner	5.75	2.20	.31***
Friends	5.82	1.95	.30***
Surf lifesavers	6.36	1.67	.24***
Control beliefs			
Barriers:			
Absence of patrol flags	5.13	2.16	.11*
Lack of knowledge about the location of the nearest patrolled beach	4.09	2.22	.02
Having to travel a long distance to a beach with patrol flags	3.73	2.11	-.10*
Motivators:			
Planning to swim for a short time only	3.58	2.07	-.13**
Planning to swim close to the shore	3.86	2.10	-.14**
Laziness	3.25	2.03	-.17***
Better waves outside the patrol flags	2.87	1.99	-.25***
Calm water conditions outside the patrol flags	2.98	1.96	-.12*

* $p < .05$, ** $p < .01$, $p < .001$
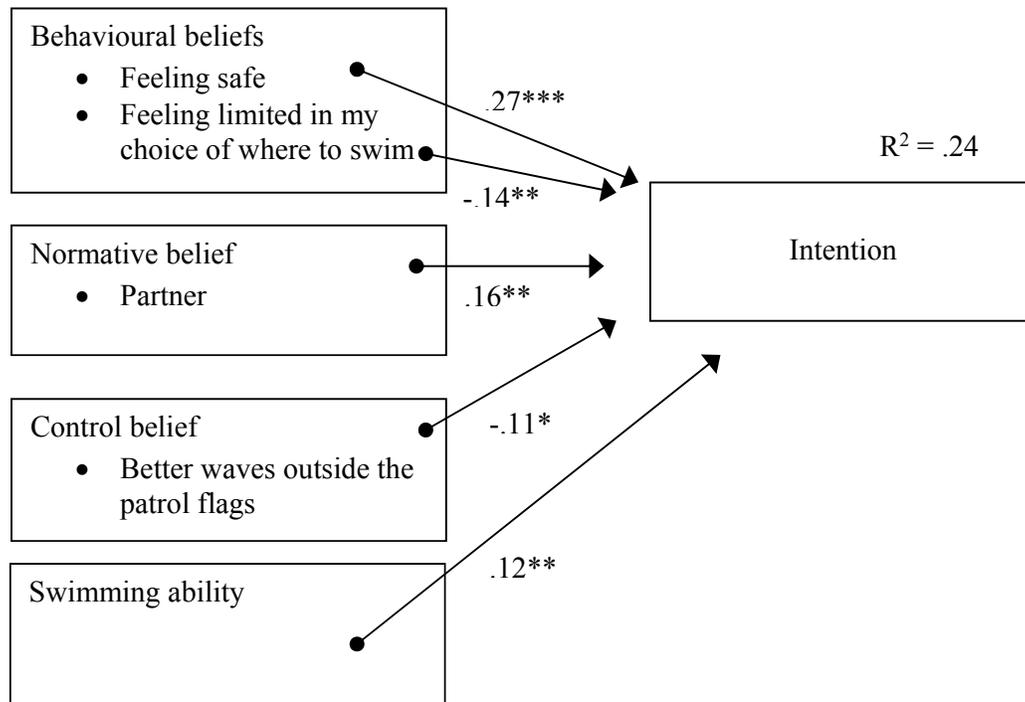
Figure 1. Critical belief-based targets for intentions to swim between the patrol flags

$F(9,451) = 16.18$, *p*< .001; ΔR^2=.23; *p* <.05, **p* < .01, ***p* < .001