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Low life jacket use among adult recreational boaters: A qualitative study of risk perception and behavior factors

Duane Alex Quistberg[a,b,d,*], Elizabeth Bennett[c], Linda Quan[b,c,d], Beth E. Ebel[a,b,c,d]

[a] Department of Epidemiology, University of Washington, Seattle, WA, USA
[b] Harborview Injury Prevention and Research Center, University of Washington, Seattle, WA, USA
[c] Seattle Children's Hospital, Seattle, WA, USA
[d] Department of Pediatrics, University of Washington, Seattle, WA, USA

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ABSTRACT

Background: Life jackets may prevent one in two drowning deaths, however, 85% of recreational boating-related drowning victims in the United States in 2012 did not wear a life jacket. This study explored behavioral factors and strategies to encourage consistent life jacket use among adult recreational boaters.
Methods: We conducted a qualitative study among boat owners who boat regularly, and explored factors associated with life jacket use by adults and child or adolescent passengers. Sixteen boaters participated in four focus groups.
Results: Most boaters reported inconsistent use of life jackets, using them only when conditions were poor. Each described episodes of unpredictable boating risk which occurred despite favorable conditions. Most required younger child passengers to wear a life jacket, but reported resistance among older children. Barriers to consistent life jacket use included discomfort and the belief that life jacket use indicated inexperience or poor swimming ability. Participants stated that laws requiring life jacket use would change behavior especially for children. The only demonstrated behavior change among group members was associated with use of inflatable life jacket devices.
Conclusions: Boating risk is inherently unpredictable; therefore interventions should focus on strategies for increasing consistent use of life jackets. Passage and enforcement of life jacket legislation for older children and adults is likely a promising approach for behavior change. Designing more comfortable, better-fitting, more appealing life jackets will be paramount to encouraging consistent use.

1. Introduction

Open-water drowning is an important public health problem in the US and around the world as the fourth leading cause of global burden of disease among injuries (Laosee et al., 2012; Lozano et al., 2012). In the US in 2012, the United States Coast Guard (USCG) reported that 459 people drowned in 4515 recreational boating incidents. Only 15% of drowning victims were known to have been wearing a personal flotation device (life jacket) (USCG, 2013). Personal flotation devices may reduce the risk of drowning by half (Cummings et al., 2011), and US federal law requires all recreational boats to carry a life jacket for each passenger (USCG, 2005).

As with seat belts and bicycle helmets, the existence of a highly effective intervention alone does not necessarily lead to increased implementation of that intervention. Life jackets are rarely used by most adults on motorboats. The national prevalence of observed life jacket use among US adult recreational boaters on open motorboats (e.g., power boats without a cabin, skiffs, and motorized rafts) was 5.3% in 2010 (USCG and JSI, 2011), a level generally consistent since 1998 (Mangione and Rangel, 2004; Mangione et al., 2012). Observed life jacket use is higher for children and adolescents (USCG and JSI, 2011). Observational studies of life jacket use report that adult life jacket use is highly predictive of child life jacket use, suggesting the importance of adults modeling consistent safety behaviors while boating (Quan et al., 1998; Chung et al., 2013).

There are limited data and few peer-reviewed published studies regarding behavioral factors associated with life jacket use by recreational boaters. Most of what is known on behavioral factors of adult recreational boaters and life jacket use comes from non-peer reviewed reports sponsored by the US Coast Guard or government agencies (Responsive Management, 2001; Groff and Ghadiali, 2003; USCG, 2003; Center for Social Marketing, 2010; Isaacs and Lavergne,

* Corresponding author at: University of Washington, 325 Ninth Ave, Box 359960, Seattle, WA 98104-2499, USA. Tel.: +1 206 744 9481; fax: +1 206 744 9962.
E-mail address: aquistbe@uw.edu (D.A. Quistberg).

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2010). These studies have reported the most common reasons for non-use are that life jackets are bulky, uncomfortable and needed only by children and weak swimmers. Peer reviewed studies of commercial fishermen and other recreational water users found similar reasons for life jacket non-use, including the belief that life jackets may not work or may be irrelevant due to cold water conditions (Nguyen et al., 2002; Baker et al., 2009; Lucas et al., 2012). These studies have not addressed or investigated the underlying reasons for these views or what might contribute to changing life jacket use behaviors. A better understanding of how recreational boaters view life jackets is needed to increase life jacket uptake and consistent use. Consistent life jacket use is important because just as a driver cannot anticipate when seatbelt use is critical, adverse boating circumstances may arise suddenly and unpredictably when life jacket use is most necessary. We wished to understand risk perception and to identify factors associated with consistent life jacket use among adult recreational boaters.

We qualitatively evaluated how such attitudes relate to risk perceptions about boating and consistent life jacket use. We were particularly interested in identifying concepts that associated with possible behavior change to guide future interventions. We also present several potential behavioral messages based on our findings.

2. Material and methods

We conducted a focus group study of recreational boat owners. We recruited participants at an annual regional boat show that draws boat enthusiasts from the Northwest US in 2008. Attendees were approached by research staff as they entered the exposition center and were invited to attend a focus group about boating. To recruit boat show attendees we approached them as they neared the entrance to the exposition center hosting the show. Due to the high volume of attendees and limited staff we were unable to track of how many people were invited to participate. We recruited adults (18 years or older) who usually used a boat less than 19 feet long and who reported low or no life jacket use ("never," "rarely," or "occasional"). In this study the term "life jacket" refers to US Coast Guard approved life jackets (also known as personal flotation devices, PFDs). The boat length criteria was selected because 80% of drownings occur among boaters on boats in this size range (USCG, 2013). If screening guidelines were met, four scheduled times were offered for participation. If a participant was accompanied by a partner or friend, the companion was also invited to participate, even if he or she did not meet the screening guideline of inconsistent life jacket use. Our recruitment goal was to conduct four focus groups with 8–10 participants in each group. Nineteen boaters agreed to participate in our focus groups; four of these were boating companions of a participant who had infrequent life jacket use. Among the 19 individuals, 16 attended their scheduled focus group. Focus groups were conducted on the boat show premises during the boat show in an enclosed room.

We developed a focus group guide using a semi-structured, exploratory approach. The moderator (DAQ) reviewed the study with participants and obtained informed consent. Participants completed a brief demographic survey and answered a short questionnaire about boating activities and life jacket use. The moderator followed the focus group guide in a discursive manner. The discussion topics were structured around general water safety knowledge and risk perception, attitudes toward life jacket use, knowledge about life jackets, and what messages could be effective for promoting life jacket use. A copy of the focus group script is attached as Appendix 1. Following the open discussion, participants were shown examples of different life jackets and asked for their perceptions and comments. A member of the research team (EB) served as a note taker for key themes. Each participant received a gift card for $20 and a waterproof boater duffel bag to thank them for their time. All groups lasted approximately 1 h.

Focus group discussions were audio-recorded and transcribed. Selections of the transcriptions were checked for accuracy by a second member of the research staff (DAQ). Key themes were identified from independent coding by three authors (DAQ, EB, and BEE). A grounded theory approach was taken to code the focus groups (Bernard, 2011). Grounded theory is useful when the researcher wishes to explore and discover new hypotheses. This method allows the researcher to inductively generate themes and theories based on the data collected; themes are organized as more is understood about the subject, thus "grounding" analysis in the data. This study was approved by the University of Washington Institutional Review Board.

Table 1
Demographic characteristics of focus groups participants ($n = 16$).

Characteristic	$n = 16$
Age in years (mean)	49 (13)
Children <18 at home	
No	75%
Yes	25%
Boated with a child in the past year	
No	31%
Yes	69%
Reported % of time life jacket used while boating	
0%	19%
1–50%	44%
51–99%	12%
100%	25%
Own any boat	
No	31%
Yes	69%
Type of boats owned	
Motorboat <19 feet long	50%
Motorboat >19 feet long	25%
Personal watercraft	6%
Non-motorized raft	19%
Canoe or Kayak	19%
Pontoon	13%
Regular boating activities	
Fishing	88%
Motoring	56%
Waterskiing	31%
Paddling	19%
Hunting	19%

3. Results

We recruited 16 boaters to participate in four focus groups. Most participants were male (88%) and were between 27 and 68 years old (Table 1). Most (69%) reported having boated with a child during the previous 12 months, and one-quarter had at least one child less than18 years old living at home. The most common boating activity was fishing (88%), followed by motoring for pleasure (56%). Most owned a motor boat (69%), and 50% of the motorboats owned were less than 19 feet long (though in screening participants stated they usually used a boat <19 feet long). Participants reported owning other watercraft, including personal watercraft (Jet Ski, WaveRunner, etc.), canoes, and pontoon boats. Most participants (63%) reported wearing a life jacket less than 50% of the time while boating. Several companions of recruited participants reported high life jacket use.

Table 2 describes the key behavioral factors which guided life jacket use, and includes illustrative quotations from participants. Participants placed high value on developing expertise and gaining experience with boating. They described a learning process where you "follow somebody who knows what they're doing," and gain specialized knowledge by learning "tricks of the trade." This

Table 2
Behavioral factors and key quotations guiding life jacket use.

Behavioral factor	Key quotes
Facilitators	
Boaters use and like routines	"The one time we needed the compass, we had it." "I always go through the whole list because everything safety wise and everything we are ever going to need is on that list."
Boating is inherently risky and unpredictable	"Once out of Westport we went north for 2 1/2 hours, fished for 15 minutes, and a big storm blew in. It took us 5 1/2 hours to get back, so that wasn't a fun trip. The weather changes so fast." "We get out there and we're pulling crab pots and he can't start the engine. And, he's got two little paddles. . .we thought we had plenty of life vests in the boat, right? Well one of them would fit me, but the other one wouldn't even begin to go around him because it was his son's. . .And so he's got the life vest but he doesn't have it." "If you are not paying attention while trying to land a fish or something, and catch a wave from the water and [you are] not wearing a life jacket, it could be a serious situation." "Usually you don't have time to put one on when something's really wrong."
Boaters understand and follow boating rules	"I always bring my fishing license. . .and [make sure] my boat is registered and all that stuff." "There're just certain things that are done in my boat and that's just the way it is and if you don't like it, go with someone else."
Disdain for inexperience, being unprepared or lacking knowledge	"With boating, more than anything else, there are so many things that you really do have to pay attention to if you go out on a boat. If you don't, you can have some serious consequences." "You really need to have some knowledge of your boat."
General barriers	
Alcohol use is prevalent	"They had an ice chest full of crabs and they had another ice chest full of beer and they had 4 crab pots. The whole boat went over. . .it could have been much, much worse for them" "When you're drinking, there's a greater chance of doing something stupid." "With a power boat, you know, you're sitting up there at the helm with the wheel and there isn't as much to do. . . you are just steering. There's a galley there and there's always somebody pouring drinks."
"Close calls" do not change behavior	"We just about drowned. We were swimming in the ocean and I jumped in when I shouldn't and I had to get rescued." "Quite a few years ago, we were fishing. . .and coming back in they had 40–60 foot swells going back across the bow and nobody had a life jacket on. They had 5 Coast Guard boats out pulling people back across the water, so that was pretty hairy. You're down in the water you see nothing but walls of green water and when you're on top of a wave you can see everything."
Inexperience may lead to overconfidence or poor preparation	"Are there things that make it more likely that drowning could occur? . . .I think more than anything it really is inexperience. I mean, I'm old and I still make mistakes. But sometimes younger people. . .you know, there's no real thought there." "It's pretty amazing that people go out so ill prepared, you know." "You know, you're out there in the water at night; you got to know what you're doing."
Life jacket use is perceived as being weak, incompetent or inexperienced	What kind of person wears a life jacket every time? "a geek! Tell-tale sign? Pocket protector." "People who wear them [life jackets] all the time are people who don't boat often."
Intervention recommendations	
Inflatable life jackets may increase consistent use	"But, finally, I think they've come out with life jackets. . .like the inflatable ones, that are automatic inflation, but they're $200. Well, I bought one. This is the way to go." "I'd be more apt to wear that [inflatable life jacket] all the time." "Well, some of them can be real cumbersome, but the new ones are great! They just drape around and you know kind of a tie in back just to keep it on." "The older you get the more stubborn you get, you know. . . 'I'm not wearing that damn thing' and 'it doesn't fit me' and so I think that's where the fit and the ease of getting it on and all the little issues that go with that."
Changing the laws	"I think they should just pass laws that anybody under a certain age has to wear one. That accomplishes it." "What's going to make people wear life jackets. . .pretty much create a law like seat belts. Probably will reach 90%."
Encourage boaters to establish immutable rules for their boats	[QUESTION] "So, when the kids get older, you just kind of give them a choice to wear them?" [ANSWER] "No. It's my boat."
Change the cost of inflatable life jackets	"They're [INFLATABLE life jackets] very expensive so most people don't have them. People don't want to spend the money." "When a boat that gets sold that has to have all this [INFLATABLE life jackets AND SAFETY EQUIPMENT] in it. . .because it's a lot easier to include them into financing a boat over 5, 6, 10 years versus having to dish out $500–$600."

learning experience purportedly builds confidence and skill. Increased experience, however, does not lead to increased life jacket use. Rather, the participants agreed that the typical person who wore a life jacket was an inexperienced boater: "People who wear [life jackets] all the time are people who don't boat often."

Experienced participants viewed inexperience as a liability and the leading contributor to perceived boating risk. As one participant related,

"I think more than anything [risk results from] . . . inexperience. Several years ago a boat sunk out there and [another boat] hit it [and it] killed one of them. It was at night. You hit a boat hard enough and kill a person and throw everybody else out into the water at night: the pilot is the one basically at fault. It could have been a log, it could have been a stump, it could have been anything. It wasn't [the fault of] the derelict boat; it had been there for months. You're out

there in the water at night; you gotta' know what you're doing."

While participants did not believe experienced boaters use life jackets regularly, they agreed that a boater should have them onboard for themselves or for passengers, especially children. Before setting off, they said the captain should check if there is a life jacket for each passenger. Life jackets should be in good shape, fit people on the boat and be easily accessible. Checking life jackets before an outing was seen as part of a typical boat safety routine: "I always have a master list I check before we go." These routines included checking the vessel for things such as sufficient fuel and oil, checking other safety equipment, and making sure there were sufficient batteries for electronic devices.

Participants were strongly in favor of children using life jackets and had rules requiring them to use a life jacket: "When we take the grandkids out, they don't get into the boat without one on. If they take it off they stay home." Making sure children wear a life jacket was one of the most important preparation steps for one participant: "I'm [concerned] about safety. . .so, the only real thing I have to check for is if I'm bringing the kids then I tell them to bring their life jackets" Participants shared that teaching children about boating and wearing life jackets "when they're young" was an essential part of boating education. Part of this education for one participant was demonstrating the importance of preparedness by making "sure they [kids] put on their life jacket, even if they're older where they're not required to wear them, have them try them on. If they're in a large boat, have them put them on once or twice, because to put it on when you need it is too late." One participant also suggested that teaching children from a young age may help them to proactively use life jackets when boating.

The desire to be well prepared for boating was related to a recurring theme: "expect the unexpected." Participants shared numerous stories of unanticipated "risky" situations such as falling overboard unexpectedly in what had been perceived as benign conditions. Although boaters articulated that bad weather or choppy water were the most serious risk factors for drowning, their responses indicated otherwise. As one boater noted, "Usually you don't have time to put one on when something's really wrong." All participants recounted experiences describing the unpredictable nature of water conditions, though these encounters with risk were not associated with consistent life jacket use. Even though several participants recited both personal and friends' stories of having one or more "close calls" in which they wished they had been wearing a life jacket, these types of experiences did not convince them to wear a life jacket subsequently. One participant acknowledged a conflict between unexpected risk and inconsistent life jacket use:

> "I've had cases where I've said, 'Oops, I should have put on my life jacket sooner.' I didn't have an accident, I didn't fall over. Nothing happened. But I thought about it after I got the life jacket on. I probably should have put it on sooner. I probably should have put it on even before I got in the water."

The participants had a wide range of opinions regarding life jackets and their use. Many believed that those who regularly used life jackets were inexperienced boaters, boaters who were poor swimmers, children, and the elderly. Participants disliked the appearance and fit of life jackets, which were widely viewed as "cumbersome," "restrictive," and "bulky." Most participants routinely went fishing, hunting and crabbing and thought a bulky life jacket interfered with these activities.

Overall, participants had negative views of life jackets; however, they had positive perceptions of newer inflatable life jackets. Participants described inflatables as lightweight, not bulky, practical, and comfortable. "Finally they've come out with life jackets. . . that are automatic inflation, but they're $200. Well, I bought one. This is the way to go." Another participant stated "I'd be more apt to wear that [inflatable life jacket] all the time." They identified several drawbacks of inflatable life jackets: higher cost, more frequent maintenance (replacing CO_2 cartridges), fear of malfunction, and the need to wear on top of outer clothing layers: "I'd be afraid it wouldn't work. I don't think it would be good enough for me."

We asked boaters to consider approaches to increase life jacket use. Several educational solutions were suggested, including sharing life jacket information at boat sales locations and educating schoolchildren. They also suggested improvements to the design of non-inflatable life jackets, suggesting changes to their appearance, comfort and functionality, such as reducing the bulk and making them look "cool" for younger boaters. Finally, participants repeatedly emphasized that making life jacket use mandatory through legislation and enforcement would be the only way to get more people to use them, even when they did not support the idea of legislation. "People don't want to wear them. So unless you tell me I have to wear that life jacket, I'm not going to."

4. Discussion

Our motivation for this study was to identify key behavioral factors which might be good targets for community-based drowning prevention efforts (Committee on Injury Violence and Poison Prevention, 2010), similar to campaigns promoting seat belts (Hanfling et al., 2000) and booster seats (Ebel et al., 2003; Lee et al., 2003; Johnston et al., 2009). Our participants' observations about life jacket use were similar some previous findings on life jacket use, such as comfort, fit and characteristics of typically life jacket users. We also heard perspectives on several themes that have not been reported in previously published literature, including the important role of parents modeling and ensuring life jacket use among children, the importance of preparedness, perceptions toward inflatable life jackets and perceptions toward potential interventions such as legislation mandating life jacket use. It is also important to note that this is the first study to qualitatively report on attitudes toward life jacket use by adult recreational boaters in the US.

Focus group participants agreed that risks while boating were inherently unpredictable, and shared glorious and detailed narratives highlighting "close calls" which arose "out of the blue". It was abundantly clear that risks arose without warning, and there was simply no time to don a life jacket if one had not been worn. Though life jackets were reportedly always present in boats, they were rarely used, and participants associated regular life jacket use with inexperience and lack of skill. We were therefore particularly interested in behavioral factors associated with consistent use of life jackets, as most open water drownings occur on boats where a life jacket was available but was not being used (USCG, 2013).

Behavioral factors were analyzed according to the Theory of Planned Behavior model of behavior change (Ajzen and Fishbein, 1980; Fishbein et al., 2001), exploring the impact of attitudes and subjective norms on intent and reported use of life jackets. Key factors influencing attitudes included comfort and ease of use, as well as perceived likelihood of coast guard enforcement for life jacket laws. Factors influencing subjective norms included self-standards of preparedness in other aspects of boating, and near universal beliefs that bulky life jackets were worn by novice boaters who were inexperienced swimmers.

Social marketing provided the structure for proposing candidate intervention messages (Glanz et al., 1997), based on key behavioral factors. Boaters in our study were methodical about safety, and valued preparedness, but consistent use of life jackets was not one of their habitual safety behaviors. Consequently, messages emphasized consistent safety behaviors, and opportunities to role-model

Table 3
Behavioral factors and candidate intervention messages.

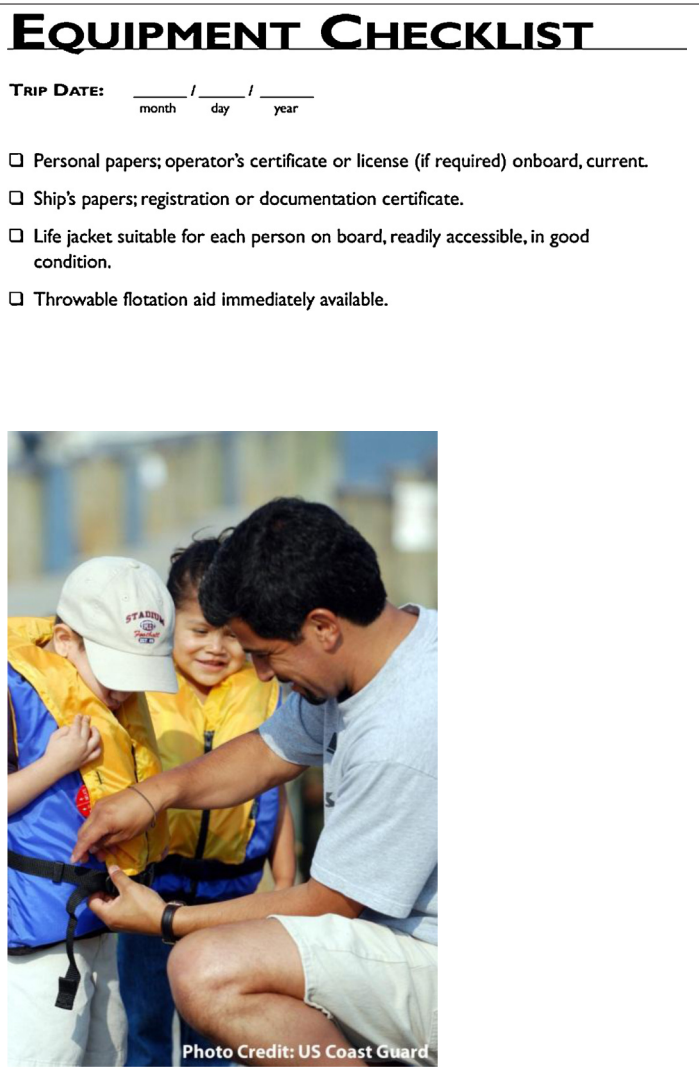
Key message	Illustrative quote	Intervention message	Illustration
Experienced boaters see themselves as organized and prepared	"We call [the safety check list] our 'camp rules'. I always go through the whole list because everything safety-wise and everything we are ever going to need is on that list."	**Check it off** Incorporate life jacket use into boating safety check behaviors	
Boaters want to teach their children to enjoy water recreation safely	"Especially with kids, make sure they put the 'life jacket on. Because to put it on when you need it is too late"	**Show your child how it's done** (tying a knot, catching a fish, buckling up the life jacket)	

Table 3 (*Continued*)

Key message	Illustrative quote	Intervention message	Illustration
Inflatable life jackets can be comfortably worn during all boating activities	"I'd be more apt to wear that [inflatable life jacket] all the time." "Some of them [life jackets] can be real cumbersome, but the new ones are great! They just drape around and you tie it in back to keep it on."	**Promote "every trip every time" adult inflatable life jacket use during active boating** Emphasize inflatable life jacket use as classy and comfortable during regular boating activity (sunny weather, fishing); polished high-end boat.	
Life jacket use required by law for children	"I think they should just pass laws that anybody under a certain age has to wear one. That accomplishes it." "What's going to make people wear life jackets? Pretty much create a law like seat belts."	**It's the law** Coast guard (wearing inflatable) giving ticket to boater with child passenger	

safety behaviors while introducing children and teens to the enjoyment of open water boating. Following the "check list" approach to safety used by boaters in these focus groups, we propose several potential intervention messages that build on the ideas of making life jacket use a part of the boating routine ("Check it off") and showing children how to boat ("Show your child how it's done") (Table 3).

Boaters clearly drew parallels to seat belt use, and every group stated that increases in life jacket use were likely only with legislation and enforcement. Consistent life jacket use was reported for users of inflatable life jackets, which were perceived as comfortable, without the stigma of bulky vests. In response, we proposed messages encouraging adults to be consistent life jacket users with inflatable life jackets ("Promote 'every trip every time' adult inflatable life jacket use during active boating"), and reminding adults that children are required to always use a life jacket ("It's the law") and the consequences of not using one.

Life jacket characteristics such as bulkiness and poor fit were mentioned as barriers to use, as others have noted (Responsive Management, 2001; USCG, 2003; Lucas et al., 2012). Several participants, however, described interest in inflatable life jackets. Regardless of the drawbacks participants mentioned about inflatable life jackets, all expressed interest and even enthusiasm about this type of life jacket. According to our participants, if prices for inflatables were lower and the maintenance was reduced, they would most likely buy and use them. Although inflatable life jackets have the potential to increase adult use, it is important to note that they are not intended for use by children and youth less than 16 years old. Encouraging life jacket manufacturers to improve comfort and fit will be a necessary step for improving consistent use. Conversely, legislation requiring life jacket use may encourage improvements in product design and appeal.

Paradoxically, while participants reported using life jackets only when risk was anticipated (e.g., stormy conditions), they shared numerous stories of unanticipated events in which they or their passengers ended up in the water. Most boat-related drowning deaths, like most boating trips, occur in good weather (60% in May to August) and in daylight hours (59% from 8:30 AM to 6:30 PM) (USCG, 2013). A recent study in Washington State showed that most fatal and nonfatal boating incidents occurred when waters were calm (Stempski et al., 2013).

Our participants valued experience, but perceived life jacket use as a hallmark of the novice and/or inexperienced boater. Changing these perceptions will likely be important to increase life jacket use, even if inflatable life jackets become more accessible and laws mandating use are implemented. This could be addressed, according to our participants, by highlighting life jacket usage on recreational fishing television shows and at boat shows. Although such activities could help make life jacket use more acceptable, the primary solution to increase life jacket use among adult boaters may ultimately be legislation mandating use. Mandating life jacket use for all boaters on crafts less than 20 feet could potentially prevent most drownings among recreational boaters. Social marketing campaigns communicating the benefit of wearing a life jacket may help improve the public perception of life jackets to make the passage of such legislation possible (Morrison et al., 2003; Salzberg and Moffat, 2004; Houston and Richardson, 2005).

This study has several limitations; the study was small and all respondents were recreational boaters in the Puget Sound area of Washington State. Due to the qualitative nature of this study and its small size, the results may not be generalizable to all recreational boaters. It should also be noted that our sample had higher reported life jacket use compared to national surveys of recreational boaters. These use rates do, however, reflect the higher observed life jacket use rates in the Pacific Northwest (Quan et al., 2011). We were encouraged to note that several observations gleaned from the focus groups echo previous research in other study populations about life jacket design and fit (Responsive Management, 2001; Nguyen et al., 2002; Lucas et al., 2012, 2013), as well as the lack of an effect of near-death experiences or "close calls" on life jacket use (Responsive Management, 2001). Other researchers have observed that participants cited concerns that life jackets were not effective at preventing drowning as a reason for non-use (Baker et al., 2009; Lucas et al., 2012). In contrast, all of our participants accepted that a life jacket could save them from drowning if they went overboard. These differences could be due to study-specific factors such as having been conducted in locations where cold-water submersion (e.g., Alaska and northern Canada) were more common. A majority of their participants believed it might be less significant than the risk of hypothermia. It is worth noting that recent research suggests that wearing a life jacket reduced the risk of drowning by 49%, controlling for the impact of water temperature (Cummings et al., 2011).

Our findings identify the value of considering legislation mandating life jacket use by recreational boaters in small boats, and the expansion of legislation governing child life jacket use. Strategies to prevent open-water drownings can come from qualitative research and the success of promoting behaviors such as consistent seat belt use (Simsekoglu and Lajunen, 2008). Designing better fitting and more comfortable life jackets could also help increase life jacket use. Future studies on this topic should measure specific factors related to life jacket use, including those that we observed in our study, in order to better understand how widespread these beliefs are and how demographic factors and other factors such as boating activity, type of boat, season, or weather relate to life jacket use. These results will help inform the design of effective strategies to promote consistent life jacket use through a combination of several modalities, potentially including targeted education, legislating use for high risk groups, enforcement, engineering more comfortable life jacket designs, and increasing the availability of inflatable life jackets.

Competing interests

We have no interests to declare.

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Appendix 1. Focus Group Script – Boating Safety Study

Bolded text is what can be read
Text in italics is optional
TEXT IN CAPS ARE ACTIONS, EXPLANATIONS, AND DIRECTIONS

I. Participant Sign-In & Welcome (10 MINUTES)

Supplies: Sign in Sheet, Name Badges, consent forms, pens

A. HAVE PARTICIPANTS SIGN-IN AND CREATE A NAME TAG WITH ONLY THEIR FIRST NAME OR NAME THEY WANT TO USE
B. INVITE PARTICIPANTS TO EAT PROVIDED FOOD
C. GIVE PARTICIPANTS THE CONSENT FORM TO READ THROUGH
D. AFTER ALL PARTICIPANTS HAVE ARRIVED

a. **I'd like to welcome you all to this discussion about boating. My name is MODERATOR and I work for the University of Washington. I will be facilitating the discussion today to help us make sure we cover the topics we are interested in. I will be asking you all questions related to our topic and will be making sure we stay on topic. This is my assistant, ASSISTANT(S). She will be taking notes for us today**.
b. **The goal of this discussion is to discuss several aspects of boating and boating safety. We hope to develop strategies to improve boating safety. Everyone's opinion and experiences are important, thus there are no right or wrong answers. We would like to hear everyone's thoughts and ideas and we expect you to all have a variety of views that can help inform the group. Additionally, since we value each person's opinions, please try not to speak over each other or attack another person's ideas. If you feel uncomfortable answering a question you may refuse to answer or comment**.

E. REVIEW CONSENT FORM

a. **Has everyone had a chance to read through the consent form you were given when you first came in?**
i. IF NO: **Let's take a few minutes then to allow you to finish reading through it**.
ii. IF YES: **Great. Let's take a minute to review it to make sure you understand your rights as a participant in a research study**.
b. REVIEW THE MAJOR POINTS OF THE CONSENT FORM
i. **Does anyone have any questions?**
ii. ANSWER ANY QUESTIONS
c. **If you agree to the terms and conditions, then please sign the form to give your consent to participate in this discussion**.

F. COLLECT THE CONSENT FORMS AFTER THEY HAVE BEEN SIGNED

Supplies: File folders

G. PARTICIPANT INTRODUCTIONS
a. **Let's take a moment now to introduce ourselves. As stated in the forms you have just signed, we will only use your first names during the discussion, and only those here in the group and on our research team will know your names. We would ask each of you to not share the names of those that participated today in the group to help maintain everyone's privacy**.
b. HAVE EVERYONE INTRODUCE THEMSELVES

H. PARTICIPANT SURVEY

Supplies: Participant survey

a. **As mentioned when we asked you to participate, the entire session will last about one and a half hours. At the end of the discussion you will be given $20 for participating. To get started, we would like you fill out a brief survey that tells us a little bit about yourself. As with the discussion questions, you may refuse to answer any of the questions in this survey**.
b. HAND OUT SURVEY
c. COLLECT SURVEYS ONCE COMPLETED

Supplies: File folder

I. START RECORDER

Supplies: tape deck, extension cord

II. Establish Rapport (5 MINUTES)
a. **Okay, does anyone have any questions before we get started?**
b. ANSWER ANY QUESTIONS

A. BOAT ROUTINE
a. **All right, let's get started. First, please describe your normal routine before going out on the water.**
b. PROMPTS

Supplies: Flip chart, markers

i. **Are there different things you do depending on how far or how long you will be out?**
ii. **What about if the weather looks bad?**

B. ASK EACH PARTICIPANT TO RESPOND TO THESE QUESTIONS

III. General Water Safety Knowledge (10 MINUTES)

A. ASSESS KNOWLEDGE OF RISK IN DIFFERENT WATER EXPOSURE SITUATIONS
a. **What are some of the risky situations you've had when you've been out in a boat?**
i. PROMPTS IF NEEDED: *big waves, someone stood up and boat tipped over, etc.*
b. RELATIONSHIP BETWEEN DROWNING AND BOAT
i. **When do you think there are risks for drowning when you're out in a boat**
ii. **Why do you think that is a risk?**
iii. **What do you do to minimize the risk of drowning?**
c. RELATIONSHIP BETWEEN DROWNING AND ALCOHOL
i. **Are there ever alcoholic beverages on board the boat?**
ii. **Do you feel safe when there is alcohol aboard? Why or why not?**
d. ABILITY TO CALCULATE THE LIKELIHOOD OF CAPSIZING/FALLING OVERBOARD AND THE PROBABILITY OF SURVIVAL
i. **How likely is it that you could capsize or fall overboard when you're out in a boat under 19 feet?**
ii. **Describe the last time you capsized or fell in the water by accident.**

IV. Attitudes toward life jacket use (15 MINUTES)

A. EXAMINE THE ATTITUDES AND BEHAVIOR SURROUNDING LIFE JACKET USE OR THE LACK THEREOF

Now we are going to take a moment to do a little exercise before we move on to the next part of our discussion. First, please write your name at the top of the note cards we are handing out. Now, we would like you to think of every word that comes to mind about life jackets. By life jackets we mean personal flotation devices, life preservers, or life vests. Use the note cards to write down every word that comes to mine when you think of life jackets. We will give you a couple of minutes to do this.

Supplies: Note cards

1. **What do you associate with life jackets?**
2. **What types of people wear life jackets all the time?**
3. **What types of people never wear life jackets?**

B. Situations that prompt an increase or decrease in life jacket usage.
1. **When do you feel comfortable not wearing a life jacket?**
2. **What are the benefits of not wearing a life jacket?**
i. PROBE: *peer pressure, cost, access, comfort, appearance, fit, reliability, how others perceive you*
3. ASK ONLY IN THE NON-USER GROUPS
i. **Are there times when you wore a life jacket?**
4. **Are there times when you didn't have a life jacket on but thought about or wished you were wearing one?**
5. **How does swimming ability affect your life jacket use?**
6. **What are some reasons people should wear life jackets?**
7. **Are there any reasons why someone should always be wearing a life jacket on a boat?**

V. Life jacket knowledge (15 MINUTES)

A. LIFE JACKET LAWS
a. **Are you aware of any laws about boating safety or life jackets?**
b. **Describe how you learned about any laws regarding boating safety.**
B. THE DIFFERENCES BETWEEN TYPES OF LIFE JACKETS
a. SHOW DIFFERENT TYPES OF LIFE JACKETS
i. **What are your impressions of each of these life jackets?**
Supplies: Flip chart, masking tape
C. WHERE TO BUY OR RECEIVE LIFE JACKETS
a. **Where did you go the last time you bought a life jacket?**
b. **Where would you go next time you wanted to buy one?**

VI. Look at the most effective ways of distributing messages about water safety and PFD use. (15 MINUTES)

A. OBSERVED LIFE JACKET ADVERTISEMENTS
a. **Has anyone seen any form of advertising for water safety?**
b. **Where else have you noticed people wearing life jackets?**
i. PROMPT: *TV, magazines, internet, news, etc.*
c. **What sort of advertising would you pay attention to regarding life jacket use?**
i. PROMPT: *TV, bulletin boards at parks, internet, etc.*

B. EFFECTIVE METHODS OF DISTRIBUTION

a. **What type of approach would you pay the most attention to?**
   i. Fear (e.g., someone drowning)
   ii. Humor (e.g. poking fun at how bulky old fashioned life jackets were in comparison to new ones)
   iii. Facts/Information (e.g., how life jackets have saved xxx lives in the past year)
   iv. True Stories (e.g., someone's life saved because the wore a life jacket)
   v. Laws (e.g., legal requirements)

Supplies: flip chart with words prewritten (include other)

b. **What do you think of the following role models in promoting life jacket use?**
   i. Parents
   ii. Athletes
   iii. Anglers/hunters on TV
   iv. TV/Movie celebrities
   v. Political Leaders
   vi. Friends

Supplies: Flip chart with words prewritten

VII. Closing (5 MINUTES)

A. LAST THOUGHTS

a. **Is there anything else you'd like to share with us about water safety and life jackets?**

Supplies: note cards

B. END FOCUS GROUP

a. **Thank you. That concludes our discussion. We really appreciate your feedback. You can collect your stipend on the way out. There is also a handout on water safety and life jackets.**

Supplies: envelopes and gift cards

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