

# ALCOHOL USE DURING AQUATIC ACTIVITIES

Perspectives from Western  
Australian school Leavers



**ROYAL LIFE SAVING**  
WESTERN AUSTRALIA



PARTNER



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Department of Health



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# ALCOHOL USE DURING AQUATIC ACTIVITIES: PERSPECTIVES FROM WESTERN AUSTRALIAN SCHOOL LEAVERS

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## EXECUTIVE SUMMARY

Every year, thousands of recently graduated school Leavers converge on designated locations around Australia to celebrate the end of their school exams and secondary school experience while preparing for the next stage of their lives.

These school Leavers events, also known as 'Schoolies' events, while generally providing fun and safe opportunities for youth to party, alcohol and drug use remain prevalent and play a role in participation in unsafe sex and fights, contributing to injuries and hospitalisations that affect the well-being of ex-students. In 2010, alcohol use contributed to the death of a young Queensland girl during her school Leavers event. Many governmental and non-governmental services exist to service the school Leavers event while ensuring overall safety but are frequently limited by a lack of direction in where and how to best deliver resources.

The Royal Life Saving Society in Western Australia (RLSSWA) coordinates the Don't Drink and Drown program with an aim to reduce alcohol-related drowning amongst young people aged 15-24 years in Western Australia (WA). Approximately 25% of drowning deaths recorded amongst young people in WA are contributed to by alcohol, with WA recording the highest rate nationally. With school Leavers events generally occurring around water and with an emphasis on aquatic activities, there is a strong need to better understand how much alcohol those attending school Leavers event are consuming, the locations in which they drink and the activities they partake in whilst consuming alcohol. A better understanding of these variables will allow for more targeted health promotion with the potential to develop new and innovative methods to communicate messages and influence attitudes towards alcohol to encourage safer behaviours.

This study aimed to build on previous research conducted at the 2016 school Leavers event and explore the usage of alcohol by school leavers during the event, with a specific focus on use during aquatic activities, factors that contributed to alcohol consumption during the event and awareness of risky behaviours. A total of 431 school leavers aged 17-18 years of age attending the school Leavers event in Dunsborough between 20-24 November 2017 completed the initial survey and a further 38 completed the post-leavers follow up survey. The results provide an insight into the drinking patterns of participants. It was positive to observe a decrease in how much alcohol school leavers intended to drink in 2017 compared to 2016. In 2017, on average, school leavers intended to drink 5-6 standard drinks compared to 7-9 standard drinks in 2016. However, despite the reduction in intended consumption, actual consumption remained consistent with the previous year with school leavers reporting to have consumed on average 5-6 drinks per day during the event.

A significant difference in drinking patterns between genders was found, with males reporting higher intended and actual levels of consumption compared to females. Alcoholic drinks that were commonly consumed were spirits mixed by themselves, pre-mixes and straight spirits that were mostly obtained through friends, parents or themselves. Alcohol was often consumed at private accommodation or in parks or public spaces.

The study found that around 34.5% (n=148) of school leavers admitted to participating in water activities after consuming alcohol prior to school Leavers event and would stop only after 3-4 standard drinks. However, the proportion of school leavers that consumed alcohol around the water and participated in aquatic activities during the school Leavers event was lower, with 26.5% (n=111) reporting to partake in this behaviour. The study also found that 62.0% (n=67) of school leavers recognised this behaviour to be risky and were also aware of the common risks associated with drinking around waterways. Most (88.3%; n=363) school leavers surveyed had heard of the Don't Drink and Drown campaign, with more than half (58.4%; n=215) hearing about the campaign at the School Leavers event or through television advertising (48.9%; n=180) prior to the event.

The post event follow-up survey found that 86.8% (n=33) of school leavers had attended at least one Don't Drink and Drown event. Fifty percent (n=19) stated that the Don't Drink and Drown campaign would influence their future behaviour because it increased their awareness and served as a reminder of the risks associated with drinking around the water.

As no prevalence data quantifying alcohol and water-based activities at school Leavers events exists in WA, these results provide a baseline measurement for future years to assess the effects of health promotion interventions and allow us to make comparisons with last year to identify common trends. Further research, longitudinally, is needed to establish and monitor trends in typical behaviours and attitudes of WA school leavers toward alcohol consumption and aquatic activities. More in depth qualitative research is required to better understand what drives these behaviours during the school Leavers event and to provide more targeted campaigns to reduce the risks of injury and drowning.

## BACKGROUND

It is suggested both by a priori and anecdotal evidence that alcohol is a significant contributor in accidental drownings, with research internationally finding that between 30%-70% of drowned persons had consumed alcohol prior to the activity.<sup>1-13</sup> While it is difficult to definitively determine whether the presence of alcohol in the bloodstream 'contributed to' or 'caused' the injury; it is accepted by researchers that alcohol plays a significant role in accidental drownings.<sup>1</sup>

Alcohol consumption contributes to the risk of drowning or injury in the water by impairing skills, coordination and judgment, causing inner ear disturbances resulting in disorientation, increasing sensation of warmth leading to hypothermia, and heightening risk of laryngospasm.<sup>14-16</sup>

A lack of demographic consistency internationally, in epidemiological data describing the proportion of drownings contributed to by alcohol makes it difficult to accurately determine the most at-risk age groups. However, data in Australia is well recorded, allowing for an accurate analysis by different variables. Previous research conducted in 2003 determined that those aged 30-45 years more frequently have alcohol detected in their system post-drowning (50%), compared to 32% of drownings in the 15-30 year age group.<sup>17, 18</sup> On average in WA, alcohol contributes to 25% of all drowning deaths recorded amongst young people aged 15-24 years, the highest proportion of any age group in this state.<sup>19</sup>

The dangers of combining drinking with any aquatic activity are demonstrated by the diversity of activities undertaken by an individual prior to their death. Driscoll, Harrison and Steenkamp<sup>20</sup>, analysed 289 Australian drownings from 1 July 2000 to 30 June 2001 (excluding Queensland), 19% of which were attributable to alcohol.<sup>20</sup> The research suggests that the majority of alcohol-related unintentional drowning deaths occurred while the person was engaging in recreational activities including swimming, surfing, rock-fishing and boating.<sup>20</sup> Data collected from a systematic review completed in 2004 found recreational swimming, boating, surfing, diving and bathing to have been undertaken immediately prior to an alcohol-related drowning. More recently, drownings associated with alcohol in one Australian state have been recorded during swimming (27.3%), falling in unintentionally (18.6%) and using watercraft (18.4%).<sup>21</sup>

Recommendations to prevent alcohol-related drownings primarily involve abstention from drinking when swimming, supervising children around the water or operating watercrafts.<sup>1, 22-28</sup> This focus on personal choice is supplemented by health promotion campaigns educating community members of the ill-effects of combining aquatic activities with alcohol.<sup>2, 27, 29-33</sup> Other methods include public service announcements facilitated by respective governments,<sup>4, 10, 34</sup> restricting the sale and promotion of alcohol at aquatic events,<sup>4, 10, 22, 34</sup> increasing the penalties and tightening the legislation for drinking and operating boats,<sup>35</sup> and utilising sobriety tests on the water.<sup>36</sup> It is important to note that these strategies are often context specific and may lack generalizability for international settings. Furthermore, many of these overarching suggestions are dated, with more recent recommendations focusing on specific age groups, situations and events where alcohol and aquatic activities are common such as the Australian school Leavers (or Schoolies) events.



## Young people, alcohol and aquatic activities

Whilst several investigations have been performed to better understand the behaviours and attitudes of young people towards mixing alcohol and aquatic activities, there are limited studies and still many gaps in knowledge in this area. Two studies of relevance were identified in this literature review, one conducted in New Zealand with 17-24 year olds,<sup>37</sup> and the other in Australian men aged 18-34.<sup>38</sup>

Sinkinson,<sup>37</sup> carried out three focus groups with seventeen New Zealand youths investigating the theme of 'voluntary risk'<sup>39</sup> in regards to alcohol and aquatic activity.<sup>37</sup> With an aim to gain an insight into the attitudes and experiences of young people consuming alcohol during recreational aquatic activities, the author included a discussion of the methods adopted by youth to ensure the safety of themselves and others.<sup>37</sup> It was recognised by the majority of participants that alcohol use during social activities in and around water increased the chance of related injury or death, self-declared to be attributable to an increased sense of confidence and impaired judgment and physical ability.<sup>37</sup> Furthermore, participants identified the level of risk to be determined by the amount of alcohol consumed and the type of environment the activity was being conducted in, with drinking around home and public pools deemed less dangerous than doing so in open water.<sup>37</sup> Only a few participants used personal rules when drinking near water, including limiting consumption and swimming in patrolled areas of beach.<sup>37</sup> The author highlighted the fine line between risk and fun that the two activities provided, stating that the relationship between the two must be addressed appropriately through well delivered education to be effective.<sup>37</sup>

Hamilton and H.<sup>38</sup>, conducted a similar study, however focused only on Australian males aged between 18-34 years (mean age 24),<sup>38</sup> the population identified as the group most likely to drown post-alcohol consumption.<sup>1, 18-21, 40</sup> With an aim to provide an understanding of the motivating determinants guiding the intentions of young Australian males to consume alcohol while in and around water, 211 men were surveyed in regards to their intentions to drink and swim in the next six months.<sup>38</sup> The Theory of Planned Behaviour was used to guide the analysis.<sup>41</sup> On average, participants intended to drink and swim to a moderate degree, with a quarter having engaged in the behaviour in the six months prior.<sup>38</sup> Intention to perform the behaviour, attitude towards drinking and swimming, subjective and group norms were identified as being the biggest predictors of engaging in drinking and swimming.<sup>38</sup> This study provided a greater insight into what motivates young Australian males to consume alcohol while partaking in recreational aquatic activities.

Although these investigations were well-conducted and methodologically sound, further research is warranted into the behaviours, motivators and attitudes of young people consuming alcohol around water to better underpin health promotion programs and ensure appropriate evaluation of campaigns.

## School Leavers event

As discussed previously, health promotion campaigns to lessen the impact of drinking and swimming are more commonly targeted at environments and events that may facilitate this behaviour, which may in turn capture the most at-risk demographics as a secondary accomplishment. One such example is the Australian school Leavers event, whereby students having completed their Year 12 exams gather for approximately a week of celebration.<sup>42-44</sup>

The 'Schoolies Festival' in South Australia (SA),<sup>43</sup> 'Schoolies' in New South Wales (NSW), Queensland (QLD) and Victoria (VIC)<sup>42</sup> and 'Leavers' in WA<sup>44</sup> operate under a similar premise, providing participating youth with access to a range of services, recreational activities, parties and festivals for a small fee.<sup>42-44</sup> Common regions of congregation include the Gold Coast, north of Brisbane; Dunsborough, south of Perth; Rottnest Island, off the WA coast; Byron Bay, on the NSW central coast; Victor Harbor, in SA and a number of additional areas across Australia. Locations such as Bali, Fiji and islands off the coast of QLD are also commonly visited by school leavers, but do not operate incorporated events.<sup>42</sup> Youth based organisations, including religious and not-for-profit are present to provide assistance, first aid services and advocate health and safety messages,<sup>31, 45-48</sup>. In addition, police support is significantly increased to enhance the welfare of attendees during this period. Nevertheless, hospitalisations and injuries are still common during these festivals,<sup>49, 50</sup> with a study in 2009 of the SA Leavers events finding that 25% of attendees presented for medical treatment, with half of these requiring transfer to hospital.<sup>50</sup> Alcohol and drug use were identified as the most frequent causes of illness and injury among participants during this period.<sup>49</sup>

## Alcohol use at Leavers

In Australia, the legal drinking age is 18 years,<sup>51</sup> yet due to mid-year age cut-offs for school enrolment across most states,<sup>52</sup> approximately half of all school leavers are underage during their leavers experience.<sup>53</sup> This further facilitates underage drinking behaviours, with 18 year old school leavers often purchasing and supplying alcohol to their underage friends, despite the threat of fines across each participating state.<sup>54</sup>

In WA prior to 2014, the majority of school leavers were 17 years of age at the conclusion of Year 12. Since the streamlining of school commencement age with the rest of Australia, 50% of WA school leavers are now 18 years of age. Yet as research has shown, alcohol will be sought after by school leavers despite their age. The results of a survey conducted at the Rottneest school Leavers event in 2009, of which 90% were underage, determined that an average of 15.80 standard drinks per day were consumed by participating students during their week long celebrations.<sup>55</sup> Additional research has shown that it was also expected by school leavers, regardless of age, that alcohol would play a significant part in their experience,<sup>55, 56</sup> with time spent prior to the event planning what and how much to buy and consume.<sup>57</sup> The theme of sneaking alcohol into celebrations also emerged in various studies, with school leavers defying car searches on the way to locations and in some instances, employing parents and guardians to assist them with buying and transporting liquor.<sup>53</sup> Some school leavers stated in interviews that their parents perceived alcohol to be a 'rite of passage' during their experience as they facilitated consumption during this period.<sup>54</sup>

A qualitative study conducted by Pettigrew et al. found that school leavers perceived alcohol to be integral to their experience, preferred quantity over alcohol quality and accepted the harms associated with excessive drinking such as hangovers and poor health.<sup>53</sup> Alcohol also assisted students with feeling 'like grown-ups', especially among those who had rented out a house for the week, with the theme of 'playing house' emerging from a number of statements.<sup>53</sup>

Alcohol-related harm during the school leavers experience has been the focus of research across the past fifteen years as the event becomes bigger, inclusive of more students and drug and alcohol use increases.<sup>56</sup> Zinkiewicz, Davey and Curd<sup>58</sup> determined that risky behaviour, injuries and harassment were significantly more prevalent among those students who stated they had consumed alcohol in the 24 hours prior,<sup>58</sup> a trend that has continued in more recently conducted studies.<sup>56, 57, 59-61</sup> Sexual experiences accompanied by an increased risk of failing to use contraceptive methods were also associated with excessive drinking.<sup>61</sup> In 2012, one in six Victorian Leavers stated they had experienced an alcohol-related accident or injury during their celebration week.<sup>59</sup> These incidents have frequently been found to not only be accepted by school leavers, but noted as somewhat of a 'Badge of Honour.'<sup>53</sup>

In one study, school leavers discussed candidly themselves and their friends drinking enough to warrant hospitalisation, perceiving it to be somewhat of the Leavers experience rather than a preventable incident.<sup>57</sup> Furthermore, despite the implementation of 'positive deviance'<sup>53</sup> methods during the early 2000s in the wake of insightful school leavers research, the rates of drunkenness, unprotected sex, drug use, injuries and police cautions remained steady during the 1999-2003 period.<sup>60</sup> No recent research has been undertaken to assess a change in trends.

The environments most frequented by school leavers are coastal, with many activities undertaken by individuals being aquatic based, presenting a difficult issue whereby alcohol, inexperienced drinkers and water are combined. Yet to date, no study has attempted to understand the combination of excessive alcohol consumption and aquatic activities while at the school Leavers event. With statistics demonstrating that 15-24-year olds in WA are most likely to experience an alcohol-related drowning, there is a strong need to better understand the motivators of school leavers to drink whilst around water, while identifying potential barriers to such harmful behaviour. With that said, the aims of this research are to qualitatively assess the knowledge and attitudes of WA school leavers who consume alcohol around water during their school Leavers event while quantitatively determining the prevalence of the behaviour. This research was conducted as part of an internal evaluation of the 'Don't Drink and Drown' program run by RLSSWA, which assists with managing deterrence activities during the school Leavers event at Rottneest Island and Dunsborough.

## STUDY AIMS AND OBJECTIVES

This study was a follow-up study from the research undertaken during the 2016 school Leavers event in Dunsborough WA, to continue to improve knowledge on the levels of alcohol consumed and the behaviours exhibited by school leavers around water.

The study aimed to explore the usage of alcohol, with a focus on use during aquatic activities and the perspectives of WA school leavers regarding the risky behaviour. The following objectives were developed to guide the research process and achieve the stated aims;

- Assess the prevalence of alcohol use at the WA school Leavers event in Dunsborough, comparing intended and actual behaviour.
- Explore contributing factors to alcohol consumption in and around aquatic environments.
- Evaluate individual knowledge of the risks associated with this behaviour.
- Measure the level of risk school leavers associated with combining alcohol and aquatic activity and determine future behavioural intentions.

It is envisioned that the results from this research will continue to inform current and future health promotion campaigns at RLSSWA targeting alcohol-related drowning, while contributing to the research literature in an emerging field.

### RESEARCH QUESTIONS

**The following research questions were addressed to achieve the stated aims of the project and tackle existing research gaps;**

1. To what extent do WA school leavers participating in the school Leavers event use alcohol while participating in aquatic activities?
2. What are the factors that facilitate alcohol consumption at WA school Leavers event?
3. Are WA school leavers aware of the risks associated with drinking and partaking in aquatic activities?

## PROJECT SIGNIFICANCE AND BENEFITS

Whilst there have been studies examining alcohol usage among school leavers, no study has specifically assessed their usage of alcohol while partaking in aquatic activities in Australia, a field that requires urgent investigation.

Furthermore, formal research into alcohol consumption by youth at this event was yet to be undertaken in Dunsborough, with previous investigations concentrated at a second school leavers location in WA, Rottnest Island.<sup>55, 56</sup> The proportion of school leavers attending events held on Rottnest Island has decreased substantially over the last five years, and in 2016, it was estimated that 8,000 students attended events held in Dunsborough and only 1,500 attended the event held on Rottnest Island. Hence, an updated understanding of the drinking behaviour of school leavers was required.

While the primary aim of this research was to investigate the combination of alcohol and water-based activities at the school Leavers event, for the benefits of future RLSSWA campaigns and scientific knowledge, an improved understanding of alcohol usage and associated behaviour by youth during these events was advantageous for many reasons. A range of support services operate during the school Leavers event to ensure the safety of all attendees and to minimise the effects of harm causing behaviours such as risky drinking. By quantifying the size of the problem, targeted modes of assistance can be organised prior to the event, to ensure services are provided in the most effective manner possible. RLSSWA has also been advocating the Don't Drink and Drown message since 2004, and since 2010 has been running deterrent events during the school Leavers event in WA. This research is needed to determine whether these messages and events are successful in increasing knowledge and awareness of the risks associated with drinking alcohol around the water and also reducing alcohol consumption and participation in water-based activities during school Leavers events.



## METHODOLOGY

This study is an extension from research undertaken in 2016, using a cross-sectional survey design<sup>62</sup> which was chosen to allow for an objective assessment of the prevalence of alcohol usage, alcohol use in combination with water-based activities, perspectives on the risks associated with this behaviour and also the awareness of the Don't Drink and Drown campaign by school leavers during the WA school Leavers event. The quantitative methodology employed is outlined in the paper by Enkel, Nimmo, Jancey and Leavy<sup>63</sup>. This study received ethics approval from Department of Health, Human Research Ethics Committee, project number 2016/46.

### Study sample and selection

#### Study population

The study population was selected from WA school leavers aged 17-18 years who graduated Year 12 in 2017.

#### Study sample

The study sample consisted of those attending the school Leavers event in Dunsborough, located in the south west of WA from 20-24 November 2017. There were approximately 8,000 students from the study population in attendance, which captured the bulk of the 2017 WA school leavers partaking in the school Leavers event. For the completion of the survey, the quality of the sample was ensured by asking participants prior to survey completion whether they were an official Leaver which was verified by observing that they were wearing an official school Leavers event wristband. Participants were also asked prior to the post event follow up survey to confirm their age to ensure only those of the study population responded.

#### Sample size

The entire WA high school leavers population is estimated at around 25,000, with approximately 8,000 students attending the school Leavers event in Dunsborough, which is a conservative estimate. Assuming a +/-5 margin of error, a confidence level of 1.96 and a standard deviation of 0.5, the necessary number of quantitative surveys required to be completed was 385, to ensure the sample was representative of the broader study population.<sup>64</sup>

### Recruitment

There were two phases of recruitment in this study; 1) school leavers participating in the short quantitative survey during the school Leavers event and 2) school leavers participating in the post-leavers event follow up survey.

- 1) It was anticipated that the majority of individuals approached to participate in the study would meet the inclusion criteria – they must be an official school leaver aged 17-18 years. Therefore, a convenience sampling method was used to recruit participants for the initial survey during the school Leavers event. School leavers were approached by members of the research team during the school Leavers event during daylight hours and asked to complete a short survey. Participants were provided with a small incentive in the form of Don't Drink and Drown campaign merchandise to participate in the research and were also provided the opportunity to enter a draw to win a \$50 voucher.
- 2) Participants for the post event follow up survey were recruited from those who completed the initial survey during the school Leavers event and indicated an interest in participating in further research. All participants that completed the post event follow up survey received a \$10 voucher as an incentive.

## Data collection

RLSSWA volunteers attending the school Leavers event in Dunsborough as part of the Don't Drink and Drown support service team were responsible for the data collection. Volunteers received training prior to attending the event to ensure consistency of data collection. To prevent social desirability bias, volunteers were in plain clothes to minimise the association with the Don't Drink and Drown brand. In addition, volunteers were all young people aged 18-24 years which allowed for a rapport to be built with school leavers. Data collection occurred in two phases for this study. Phase One was completed during the school leavers event in Dunsborough. Volunteers approached school leavers at locations throughout the Dunsborough townsite to self-complete a short, paper-based survey. All participants provided with an information sheet and were asked to sign a consent form prior to participation in the study (see Appendix 1). They were advised that participation in the research was voluntary, that all responses would be confidential and that they could withdraw from the study at any time. Volunteers remained in close proximity to the school leavers while the surveys were completed to respond to any questions and/or concerns. This also assisted in ensuring that surveys were completed individually and in full.

As part of this survey, participants were asked to provide their contact details if they were interested in participating in phase two of the study. Phase two data was collected via an online survey through SurveyMonkey. Those who had indicated that they were interested in participating in the follow-up survey were sent a link to the survey via email. Two reminder emails were sent to participants to encourage completion.

## Data gathering tools

The initial self-complete survey consisted of 31 questions that collected information on their current attitudes and behaviors in relation to the consumption of alcohol and also their participation in aquatic activities, knowledge of alcohol and water safety, awareness of the Don't Drink and Drown campaign, their intentions to consume alcohol and actual consumption during the school Leavers event and how alcohol was accessed during the school Leavers event. The post-event follow up survey consisted of 21 mostly open-ended questions that collected more detailed information about their experiences during the school Leavers event with a particular focus on alcohol use, participation in aquatic activities and factors that influenced their behaviours during the school Leavers event. See Appendix 2 for the survey tools.

## Data analysis

Quantitative data collected through surveys completed during the school Leavers event was entered into a password protected excel spreadsheet and coded for analysis. Participant details that had been recorded on surveys were removed from the data after the winners of the \$50 vouchers were drawn. Coded data was then cleaned and analysed using SPSS. Descriptive cross tabulations (including Pearson Chi-Square tests to assess statistical significance) were undertaken. Data in this report were only reported at the group level.

Data collected via the post-event follow up online survey was exported from SurveyMonkey into a password protected Excel spread sheet and coded using the thematic approach by Braun and Clarke.<sup>65</sup> Thematic analysis involved recognising, analysing and discussing patterns, or themes, within the data set.<sup>65</sup> Familiarisation with the data through immersion and repeated reading was guided by transcription of verbal data and an early identification of initial themes. Data was then organised into codes of meaningful similarity and further consolidated into potential themes within the initial code. Initial themes were discussed between co-investigators to ensure consistency. Quotes from participants that have been included in this report have been reported in a non-identifiable manner to support the themes identified.

## Data management

Hard copy data in the form of participant self-completed surveys was stored securely during the week of data collection and only handled by primary members of the research team. Once concluded, data was stored in a locked cabinet onsite at the RLSSWA head office and destroyed once the data had been entered. Consent forms from participants were scanned and stored in a password protected folder on the RLSSWA internal computer system and hard copies were stored in a locked drawer. All data was de-identified when reported upon and disseminated.

## QUANTITATIVE SCHOOL LEAVERS EVENT SURVEY RESULTS

Overall, 435 school leavers completed the quantitative surveys during the school Leavers event. Four surveys were excluded from analysis as they didn't comply with the inclusion criteria of being aged 17-18 years or information was incomplete. Data for the 429 eligible surveys has been included in this report. The surveys were completed throughout the school Leavers event, with an average of 107 surveys completed each day. See Table 1 for daily breakdown of survey completion.

Table 1: Daily survey completion, 2017

Day of the Week	Number of completed surveys	Percentage of total (%)
Monday 20 November 2017	105	24.5
Tuesday 21 November 2017	107	25.0
Wednesday 22 November 2017	112	26.0
Thursday 23 November 2017	105	24.5
<b>TOTAL</b>	<b>429</b>	<b>100.00</b>

The majority of the participants were female (59.7%; n=255), aged 17 years (55.2%; n=237) and resided in the metropolitan area (70.6 %; n=298). Of the 17.1% (n=73) of participants born overseas, most had been living in Australia for on average 16.4 years, ranging from 2 – 18 years. Full demographic details outlined in Table 2.

Table 2: Full demographic breakdown of participants in the survey during the school Leavers event

	n=429	%
<b>Sex*</b>		
Male	172	40.3
Female	255	59.7
<b>Age (years)</b>		
17	237	55.2
18	192	44.8
<b>Born in Australia**</b>		
Yes	353	82.9
No	73	17.1
<b>Home location***</b>		
Metropolitan Perth	298	70.6
Regional WA	124	29.4
<b>Days spent at the school Leavers event**</b>		
Less than 1	16	3.8
1	115	27.0
2	84	19.7
3	96	22.5
4	92	21.6
5 or more	23	5.4

Missing data: \*= 2; \*\*= 3; \*\*\*= 7;

### Alcohol use prior to the school Leavers event

A large proportion of the school leavers who participated in the study reported that they consumed alcohol either 2-4 times a month (43.8%; n=188) or monthly or less (30.5%; n=131), and on a typical day would consume 5-6 standard drinks (33.6%; n=144), with only 4.2% (n=18) not consuming alcohol at all. Most admitted to consuming six or more drinks on a single occasion monthly (33.6%; n=144) followed by less than monthly (31.0%; n=133). Overall, 15.9% (n=68) reported never consuming more than six or more drinks on a single occasion. There was a statistically significant association between the amount of alcohol consumed on a typical day when drinking and gender ( $\chi^2(5) = 66.26$ ,  $p \leq 0.0001$ ) (Figure 1) with males reporting higher levels of consumption than females. On a typical day consuming alcohol, a higher proportion of males reported drinking 10 or more drinks (26.9%; n=46) compared with females (3.9%; n=10). In addition, males most commonly reported drinking 5-6 (26.9%; n=46) or 10 or more (26.9%; n=46) drinks on a typical day consuming alcohol. In comparison, females were most likely to consume 5-6 standard drinks on a typical day of consuming alcohol (38.4%; n=98). Overall, similar proportions of males (2.9%; n=5) and females (5.1%; n=13) reported that they didn't consume alcohol.

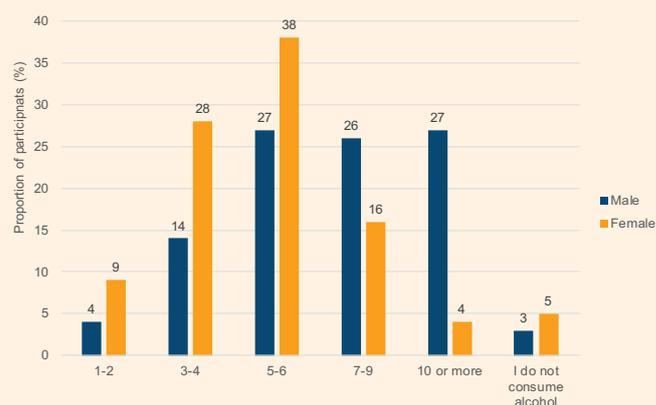


Figure 1: Level of consumption by gender

There was also a statistically significant difference observed in the association between the amount of alcohol consumed on a typical day of drinking alcohol and the participant's country of birth ( $g^2(5) = 16.27$ ,  $p = 0.006$ ) (Figure 2) with those born outside of WA reporting higher levels of consumption than those born in Australia. The majority of participants born in Australia consumed 5-6 drinks (34.9%; n= 123) on a typical day consuming alcohol compared to those born outside of Australia who were more likely to consume 7-9 drinks (34.2%; n=25) on a typical day. Participants born in Australia were also more likely to abstain from drinking with 4.8% (n=17) reporting that they didn't consume alcohol compared to 1.4% (n=1) of those born overseas.

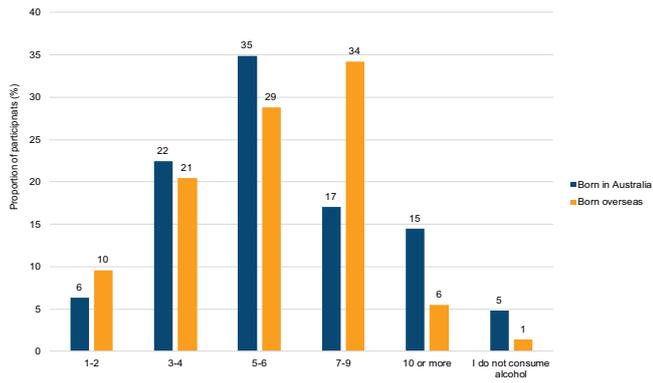


Figure 2: Level of consumption by place of birth

Overall, the majority of participants reported consuming six or more drinks on a single occasion monthly (33.6%; n=144). Males were significantly more likely to have six or more drinks monthly, weekly or daily compared to never or less than monthly for females ( $g^2(4) = 53.84, p \leq 0.0001$ ) (Figure 3).

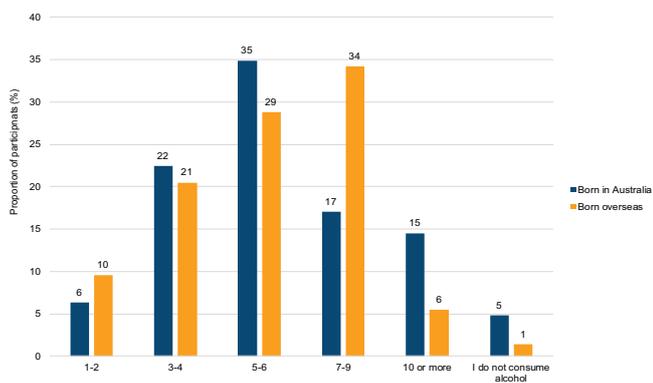


Figure 3: Consumption of six or more drinks on a single occasion by gender

Similarly, those born overseas reported drinking to excess (consuming six or more standard drinks on a single occasion) on a more regular basis than those born in Australia ( $g^2(4) = 13.75, p = 0.008$ ). Participants born overseas were almost twice as likely to report drinking six or more drinks on a single occasion on a weekly basis compared to those born in Australia (Figure 4).

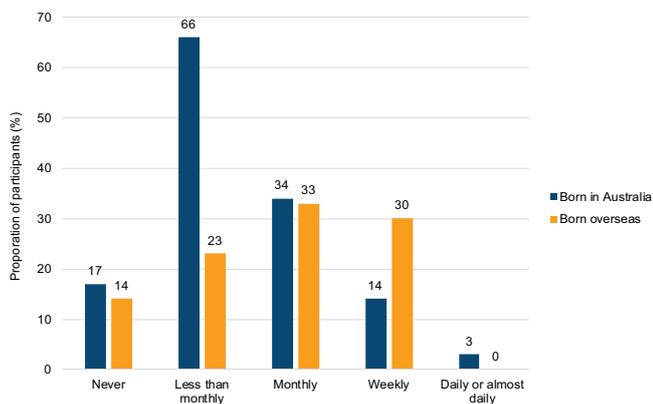


Figure 4: Consumption of six or more drinks on a single occasion by place of birth

### Water based activity and alcohol use prior to the school Leavers event

Overall, 34.5% (n=148) of participants reported that they had participated in a water-based activity while, or after consuming alcohol, with most (28.1%; n= 119) saying that they would stop participating after consuming 3-4 standard drinks. The most common activity participated in whilst drinking was swimming in a pool or spa (74.7%; n=109) followed by swimming in open water (47.9%; n=70) (figure 5). Males were more likely to report participating in water-based activities whilst or after consuming alcohol (45.9%; n=79) than females (26.3%; n=67) ( $\chi^2(1) = 17.64, p \leq 0.0001$ ).

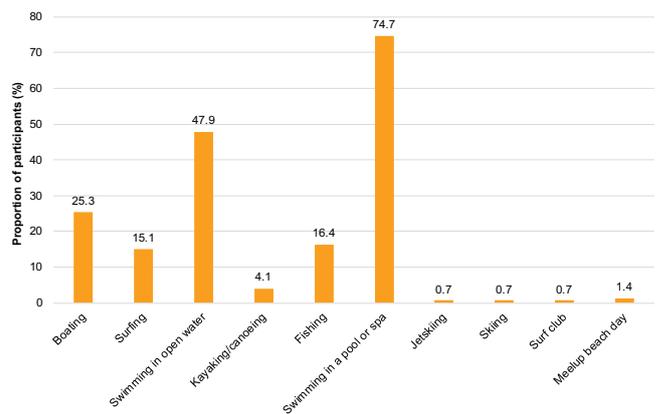


Figure 5: Water based activities participated in when consuming alcohol

Footnote: Percentages represent percent of cases as respondents could select more than one response.

In terms of knowledge, the common risks that participants associated with drinking around waterways was lack of coordination (81.7%; n=334), loss of judgment (75.8%; n=310), and slower reaction speed (70.7%; n=289) (Figure 6).

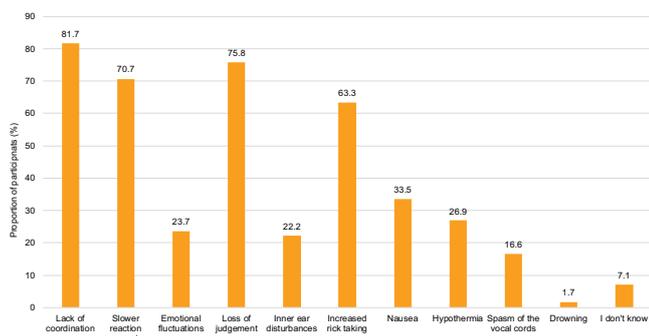


Figure 6: Common risks that participants associated with drinking around waterways

In addition, most perceived that driving a car with a Blood Alcohol Concentration (BAC) of 0.05 as dangerous (70.3%; n=289) or more dangerous (21.2%; n=87) than driving a boat with a BAC of 0.05 and as dangerous (66.4%; n=273) or more dangerous (20.9%; n=86) than swimming with a BAC of 0.05 (Figure 7).

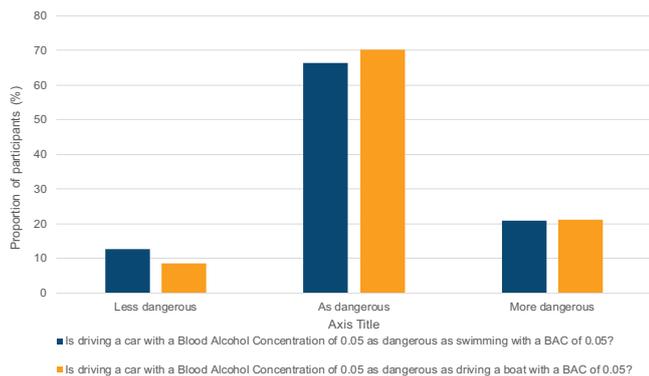


Figure 7: Perceptions of danger between risk behaviours

## Injuries and excessive alcohol consumption

Forty percent of participants (n=173) reported that they had been injured whilst consuming alcohol, with the most common injuries experienced by participants including injuries due to trips, slips, falls and bumps (45.4%; n=69), bruising, cuts and grazes (25.7%; n=39), and strains/sprains/dislocations (11.2%; n=17). Majority of injuries were classified as minor (70.9%; n=105), with only 5.4% (n=8) classified as major. Injuries were classified in the same manner as the previous reports, as major, moderate or minor. 'Major' injuries and incidences concerned any case where emergency services were called, or if CPR was required. Injuries were classified as 'moderate' if the person was advised to seek immediate medical attention following the incident. Any other incident not classified as major or moderate was considered 'minor'. There was a statistically significant association between the severity of the injury and gender, with injuries reported amongst males more likely to be major and those reported amongst females more likely to be minor. Overall, a greater proportion of major injuries occurred amongst males than females ( $\chi^2(2) = 10.359, p = 0.006$ ) (Figure 8).

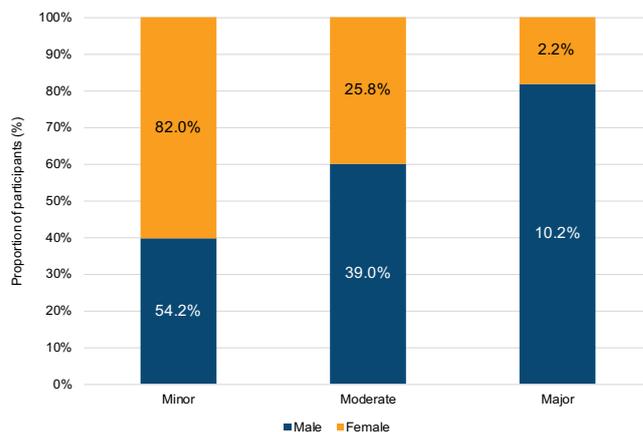


Figure 8: Severity of injury by gender



## Alcohol consumption during the school Leavers event

Most participants (92.1%; n=395) intended to drink alcohol during the school Leavers event and on average, 90.2% (n=387) had consumed alcohol when they completed the survey. Of those that intended to drink, most (26.4%; n=110) estimated they would drink 5-6 standard drinks each day which was consistent with actual consumption during the event with the average amount consumed by most participants (24.5%; n=103) each day at being 5-6 standard drinks (Figure 9).

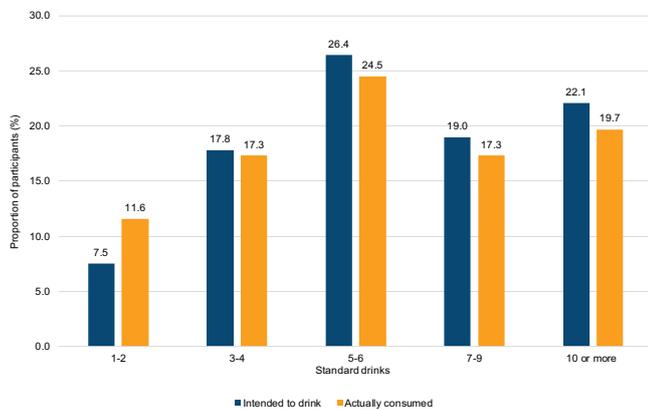


Figure 9: How much participants intended to drink versus how much they actually consumed

There was an association between the perceived ( $\chi^2(4) = 85.36, p \leq 0.0001$ ), and actual consumption of alcohol ( $\chi^2(7) = 90.27, p \leq 0.0001$ ) (Figure 10). Generally, males intended to consume greater amounts of alcohol than their female counterparts, and their actual consumption was also greater.

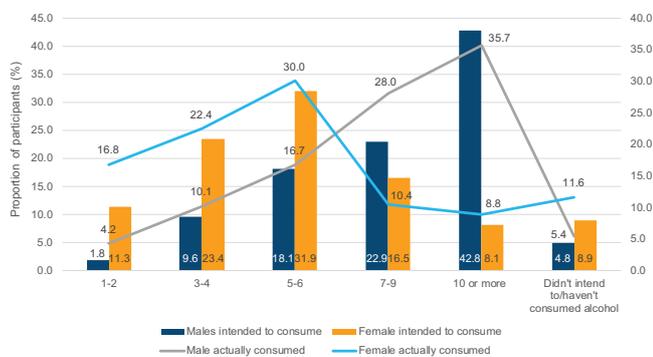


Figure 10: Intended vs. actual consumption by gender

The most common drink consumed during the school Leavers event was spirits mixed by themselves (67.7%; n=264), pre-mixed drinks (65.1%; n=254) and straight spirits (58.2%; n=227). Of those that were underage (55.2%; n=237), most obtained their alcohol through friends (44.2%; n=96), parents (17.5%; n=38) or purchased alcohol underage (10.6%; n=23). School leavers most commonly consumed alcohol in private accommodation (93.6%; n=365) or in a park/public space (21.3%; n=83). Consuming alcohol around waterways was recognised to be risky by 62% (n=67) of school leavers, however, a higher proportion (26.5%; n=111) reported that they had still consumed alcohol around waterways during the event. When consuming alcohol around waterways, 51.0% (n=52), 50.0% (n=51) and 11.8% (n=12) engaged in land activities, swimming, and relaxing, sitting or tanning on the beach, respectively (Figure 11).

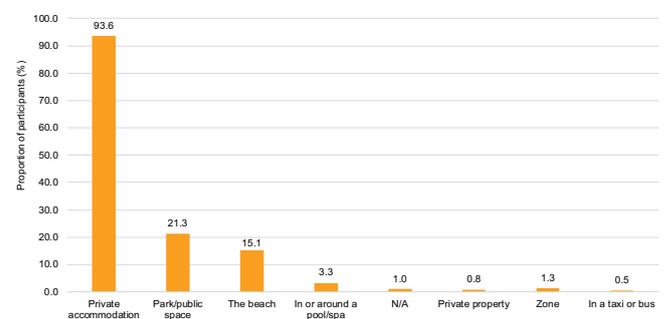
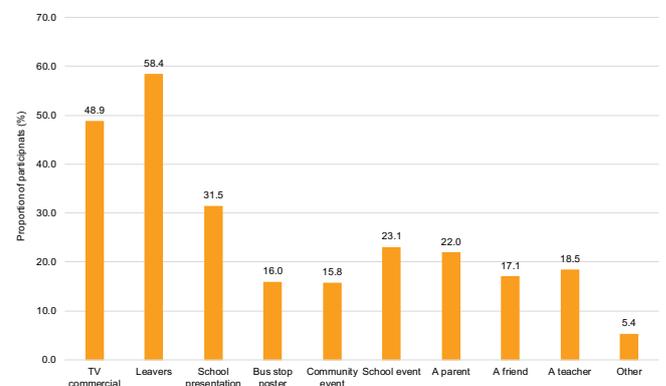


Figure 11: Where the school leavers consumed alcohol during the school Leavers event

## Don't Drink and Drown awareness

Most school leavers who participated in this study (88.3%; n=363) had heard of the Don't Drink and Drown campaign, commonly from the school Leavers event (58.4%; n=215) and TV commercials (48.9%; n=180) as shown in Figure 12.

Figure 12: Don't Drink and Drown campaign awareness – where heard/seen message



## QUALITATIVE POST-EVENT FOLLOW-UP SURVEY RESULTS

Thirty-eight school leavers completed the qualitative post-leavers follow up survey. The majority of participants were females (73.7%; n=28), aged 18 years (60.5%; n=23), and were born in Australia (97.4%; n=37), outlined in Table 3.

Table 3: Full demographic breakdown of participants that completed the post-leavers follow-up

	n=38	%
<b>Sex</b>		
Male	10	26.3
Female	28	73.7
<b>Age (years)</b>		
17	15	39.5
18	23	60.5
<b>Born in Australia</b>		
Yes	37	97.4
No	1	2.6
<b>Home location</b>		
Metropolitan Perth	30	78.9
Regional WA	8	21.1

Most (86.8%, n=33) participants attended at least one Don't Drink and Drown activities during the Leavers event. Table 4 outlines the Don't Drink and Drown events attended and/or activities participated in by respondents during the school Leavers event. In terms of whether the Don't Drink and Drown campaign had influence on the school leavers future behaviours, 50% (n=19) admitted it would influence their behaviour in the future because it increased their awareness, the activities and served as a reminder of the risks associated with the behaviour. The reasons why it wouldn't influence their behaviour was because of the way they were bought up or they already knew (64.0%; n=9), didn't see it (28.6%; n=4) or they weren't paying attention (7.1%; n=1).

Table 4. Don't Drink and Drown organised event attendance

Event	%	n
Meelup beach day	86.8	23
Completed research survey	13.2	5
Activities run on Dunsborough foreshore	5.3	2
Educational activities – e.g. beer goggles	2.6	1
Volleyball	2.6	1
All	2.6	1
Don't know	2.6	1
None	13.2	5

Most (78.9%; n=30) participants liked the organised events provided during the Leavers event. However, 44.7% (n=17) also reported that they didn't like some aspects of the organised event. Note that the percentages do not equal 100% as participants may have liked some aspects and also may not like other factors, outlined in Table 5.

Table 5. Factors participants like and did not like about the organised events

	%	n
<b>Factors that participants liked</b>		
Silent Disco	18.8	6
Organisation	15.6	5
Events	12.5	4
Friendly	9.4	3
Being with friends and meeting new people	9.4	3
Atmosphere	6.3	2
Buses	6.3	2
Security & staff	6.3	2
Exclusivity	3.1	1
Free items – giveaways, food etc.	6.3	2
Food stalls	3.1	1
Rides	3.1	1
<b>Factors that participants did not like</b>		
Crowds	26.7	8
Lines	23.3	7
Set-up	13.3	4
No phone reception	6.7	2
Ground/dust	6.7	2
Music	6.7	2
Drunk people	6.7	2
Bus timetable	3.3	1
Security	3.3	1
Not much to do at zone	3.3	1

\*Percentages based on number of responses as participant could select more than one answer

Participants also provided feedback specific to the Meelup Beach Day, which was mostly positive. Feedback is outlined in Table 6.

Table 6. Factors participants like and did not like about the Meelup beach Day

	%	n
<b>Factors that participants liked</b>		
Inflatable aqua playground	20.5	8
Everything good or no reason	17.9	7
Atmosphere, fun and chilled	17.9	7
Music	12.8	5
Catch-up with friends	10.3	4
Free stuff	7.7	3
Buses	5.1	2
Meet new people	2.6	1
Swimming	2.6	1
Food trucks	2.6	1
<b>Factors that participants did not like</b>		
Crowded	30.0	9
More shade	20.0	6
Hot	10.0	3
Long bus lines	13.0	4
Not enough to do	13.0	4
Tired	7.0	2
More water	7.0	2

\*Percentages based on number of responses for like or did not like, participant could select more than one answer

When the participants were not attending organised school Leavers events, most were at their house/ accommodation (31.9%; n=23), the beach (16.7%; n=12) or shops (12.5%; n=9). Other activities included sleeping, drinking, playing pranks/games, cooking/eating, exploring, taking photos, cleaning, watching TV, playing mini golf or hanging by the pool. Most participants reported that the school Leavers event did meet their expectations (89.5%; n=34) because it was fun and safe, the volunteers were great, it was well-organised with fun events/activities, they could catch-up with friends and meet new people, and they were drinking. Some reported that it didn't meet their expectations as the school Leavers event was boring with not enough to do during the day and not enough parties, because they weren't prepared with warm clothes, or as they had experienced conflicts during the event.

Of the participants that completed the follow-up survey, 84.2% (n=32) reported that they had consumed alcohol during the school Leavers event. Participants that did not consume alcohol mentioned the following reasons; they had taken drugs instead, they didn't like getting drunk, that they wanted to look after friends, they weren't of legal drinking age and/or didn't feel that their parents would approve. Almost all participants (97.4%; n=37), had a negative attitude towards consuming alcohol and participating in aquatic activities because they were not a strong swimmer, they believed that it was stupid/irresponsible, that they may get injured, that it was risky/dangerous and that they could drown. Most school leavers did not experience any adverse events whilst drinking during the school Leavers event, however 40% did. The types of adverse events experienced are outlined in Table 7.

Table 7. Adverse events experienced on the school Leavers event

Type of adverse event	%	n
Felt sick or vomited	31.3	5
Passed out	31.3	5
Hospital or called an ambulance	25.0	4
Overdose	6.3	1
Broken bone	6.3	1

\*Percentages based on number of responses as participant could select more than one answer

## DISCUSSION AND LIMITATIONS

This research suggests that school leavers consume alcohol at risky levels on a regular basis with the majority reporting to consume on average 5-6 standard drinks 2-4 times per month. It also revealed significant differences between levels of consumption between males and females. Males consumed a higher amount on a typical day drinking; consumed 6 or more standard drinks on a single occasion more frequently; and were more likely to participate in aquatic based activities after consuming alcohol than females.

This is consistent with the literature in this area, with the perceived approval of surrounding influences, especially friends, shown to contribute towards young male's likelihood to drink and swim, and partake in risky behaviours<sup>38, 66, 67</sup>. Significant differences were also found between those born in Australia and those born overseas. Those born overseas reported higher levels of consumption on a typical day drinking and more frequently consumed 6 or more standard drinks on a single occasion than those who were born in Australia.

The association of the school Leavers event and the consumption of alcohol was strong, with almost all participants surveyed attending the school Leavers event with the intention of drinking. In addition, at the time of completing the survey, most reported that they had already consumed alcohol. On average, school leavers intended to drink 5-6 standard drinks per day and this was consistent with actual consumption reported by participants. It was positive to observe a decrease in how much school leavers intended to drink in 2017 compared to 2016, where school leavers intended to consume 7-9 standard drinks. School leavers from 2016 and 2017 both consumed on average 5-6 per day. This indicates that school leavers now have much more realistic expectations of behaviours at the school Leavers event with intended and actual consumption found to be similar in this study. Despite this, the high levels of alcohol consumption during the event is concerning and strategies to reduce this are required. Our results also contrasts with previous research of WA school leavers events which found consumption to be between 14 and 17 standard drinks a day<sup>68</sup>.

Similarly, in relation to drinking patterns prior to the school Leavers event, this study revealed a significant difference in drinking patterns between genders, with males more likely to intend to consume higher amounts and actual consumption was also higher compared to females. On average males were more likely to intend to consume 10 or more standard drinks (42.8%; n= 71) and to actually consume 10 or more standard drinks (35.7%; n= 60). Whereas females were more likely to intend to consume 5-6 standard drinks (31.9%; n=79) and actually consume 5-6 standard drinks (30.0%; n=75). Alcoholic drinks that were commonly consumed were spirits mixed by themselves, pre-mixed drinks and straight spirits. In the literature it has been found that youth binge drinking often involved spirits. A study by Naimi, Siegel, Dejong, O'doherty and Jernigan<sup>69</sup> found in a sample of youth aged 13-20 years that spirits accounted for 43.8% of binge drinking reports.

Alcohol was mostly obtained through friends, parents or themselves. It was apparent that alcohol was obtained relatively easily by those who were underage, suggesting that more education is required to inform of the risks of supplying underage drinkers and review current strategies limiting supply. In a study by Williams, Faulkner, Scalzo and White<sup>70</sup>, also found that parents and friends to be the main supplier of alcohol to underage children aged 12-17 years. Alcohol was often consumed at private accommodation or in parks/ public spaces. This highlights the importance of working with accommodation providers to provide safe alcohol messages and ensure strategies in place to prevent binge drinking and drinking to excess.

Prior to the school Leavers event, it was found that around 35.0% of school leavers admitted to participating in water activities after consuming alcohol and would only stop participating after having 3-4 standard drinks. It appears that despite high levels of awareness around the risks of drinking and swimming, leavers continued to partake in the behaviour with 26.5% reporting to have gone swimming after drinking during the school Leavers event. The study found that 62.0% of school leavers recognised this behaviour to be risky and most school leavers were also aware of the common risk associated with drinking around waterways. It appears that despite high levels of awareness around the risks of drinking and swimming, leavers continued to partake in the behaviour with 26.5% reporting to have gone swimming after drinking during the school Leavers event. From the qualitative follow-up, whilst admitting that consuming alcohol around the water and participating in aquatic activities is dangerous, and that they wouldn't do it, one school leaver commented the following, which highlights the risk-taking behaviours of adolescents during the school Leavers event when they are surrounded by their friends:

*"I always knew that alcohol and water don't mix but I was out one day at a friend's accommodation near the beach in Busselton and we took an esky full of drinks down to the beach. We proceeded to get drunk and only a few of us went for a swim. We thought we were safe to do it because there were people on the sand who were sober and looking at the people swimming in the knee-deep water."*

This study also found that school leavers underestimated the risks of drinking and swimming with a higher percentage perceiving driving a car with a BAC of 0.05 to be as or more dangerous than driving a boat or swimming. Future strategies need to focus on addressing the issue of peer pressure and provide school leavers with the ability to make safer choices relating to drinking around the water. Injuries and adverse events as a result of drinking were common both pre and during the school Leavers event, with 40% reporting that they had been injured whilst consuming alcohol prior to attending the school Leavers event. Most of these injuries were classified as minor or moderate. Again, males were at greater risk of sustaining a moderate or major injury compared to females. The fact that males in this study were found to consume higher amounts of alcohol on a typical day, consume more than six drinks more frequently and were more likely to participate in aquatic activities whilst drinking than females likely explains this difference.

These behaviours place them at higher risk of injury and drowning. In addition, 40.0% of participants in the qualitative post-event follow up survey stated that they or their friends had experienced an adverse event while drinking during the school Leavers event. In 62.6% of cases it was minor such as feeling sick, vomiting or passing out. However, there were a number of incidents which resulted in them being taken to hospital. Serious and severe incidents not only have the potential to ruin the school leavers experience of the person involved and their friends but also places increased strain on medical services during the school Leavers event. Strategies to better inform school leavers of these adverse outcomes as a result of drinking to excess need to be incorporated into current education messages.

There was a high level of recognition of the Don't Drink and Drown campaign, with more than half of the study participants hearing about the campaign during the school Leavers event or prior to the event through TV commercials. In the qualitative post-event follow up survey it was found that 86.8% of school leavers have attended at least one Don't Drink and Drown event/activity during the Leavers week. Fifty percent stated that the Don't Drink and Drown campaign would influence their future behaviour due to increased awareness of the risks associated with mixing alcohol and water activity. Of those that said it wouldn't influence their behaviour in the future 57.1% stated this was because they were already aware of the risks and 7% due to not paying attention. This highlights that the Don't Drink and Drown campaign was effective in engaging young people both before and during the school Leavers event and that campaign messages can influence behaviour in relation to alcohol and water safety. In addition, the majority of reasons why it would not influence behaviour in the future were not related to the campaign and how it was delivered. It's important to note that 74.0% of participants in the post-event follow up survey were female which may have affected the results. Had there been equal participation in the post event follow-up survey by males and females the results would likely have been different.

The majority of participants reported that the school Leavers event met their expectations. In general, there was positive feedback about the organised events as a result of the support services involved with coordinating the school Leavers event such as the silent disco, meelup beach day event, carnival rides. School leavers liked the exclusivity of the event and the general fun atmosphere the event created. This suggests that the current event structure is appropriate and well received by the school leavers. However, some school leavers reported that they didn't like the large crowds, which resulted in long lines to enter events and get on and also the limited mobile phone reception at some event sites. Other dislikes included the music, bus timetable, security and there not being much to do at zone. Generally, the factors school leavers disliked were related to personal preferences which is hard to improve to suit every individual attending the events. However, strategies to better control crowds and limit waiting times for event entry and transport to and from events should be considered for future events.

Specifically, relating to the Don't Drink and Drown campaign, participants liked the Meelup Beach Day event, particularly the aqua playground inflatables, music, food truck options and catching-up with friends and meeting new people in a fun and chilled atmosphere. However, school leavers reported that they disliked the large crowds and felt that there wasn't enough shade, needed more water and didn't have enough to do during the day. Long bus lines were also reported as being an issue for school leavers attending the event. These are important to consider for future events to ensure high participation rates. These organised activities are vital as deterrent strategies to keep school leavers occupied during the day. In addition, as they are alcohol free events, they delay the onset of drinking. From the qualitative survey, we know that when school leavers are not participating in organised events, they are mostly staying around their accommodation (often drinking), relaxing at the beach. As commented by one member of the public:

*"What you guys are doing for the school leavers is great, we live down here and prior to you organising the activities, they used to just get up to no good, but now you have the activities it keeps them off the streets and causing trouble."*

There were a number of limitations identified in this study. We are confident that social desirability bias was minimised by the lack of self-identifying questions on the surveys, which allowed respondents to answer in a confidential manner. We are also confident that the use of younger volunteers that were relatable and open to sharing their own experiences, allowed for participants to respond truthfully in relation to their drinking behaviours and awareness of safety messages. One limitation of this study is that the study was limited to one school leavers location. Time and resource constraints meant that the research was only able to be conducted at one location. However, with previous research conducted at Rottneest Island, the fact that Dunsborough has not yet had any formal research conducted during the event, and that Dunsborough attracts a higher number of school leavers to the location it was determined that it was the most appropriate location to implement the study. Another limitation was the small sample size and high proportion of female participants in the post-event follow up qualitative survey. The addition of the qualitative post event follow-up survey was a major strength of the 2017 iteration of the research as we were able to gain more in-depth answers to attitudes and behaviours of school leavers relating to actual alcohol consumption, adverse events experienced as a result of alcohol consumption and participation in aquatic during the school Leavers event which wasn't able to be collected during the initial survey completed at the event. It also provided valuable feedback on the Don't Drink and Drown campaign and events run during the school Leavers event which can be used to inform future events.

## CONCLUSION

By replicating research performed during the school Leavers event in 2016, this study provided further insight to the typical behaviours and attitudes of WA school leavers towards alcohol consumption and combining alcohol consumption with aquatic activities. The results are consistent with other research in this area and highlights the school Leavers event as a high-risk time for alcohol consumption despite many being underage. Males in particular are identified as being a greater risk as they were found to engage in riskier behaviours including excessive alcohol consumption, especially in the presence of their friends.

This research also suggests that the Don't Drink and Drown campaign has been effective in increasing awareness of the risks associated with mixing alcohol and water activities which may contribute towards safer behaviours. However, while school leavers reported high levels of awareness relating to the risks associated with excessive alcohol consumption, this didn't translate into safer behaviours during the school Leavers event. Efforts to target the influence of peer pressure and to educate parents and older school leavers of the issues relating to secondary supply of alcohol need to be a focus of future events.

Further research longitudinally, is needed to establish and monitor trends in typical behaviours and attitudes of WA school leavers toward alcohol consumption and aquatic activities. More in depth qualitative research is also required to better understand what drives and influences these behaviours during the school Leavers event, whether this is different to other events and to provide more targeted campaigns to reduce the risks of injury and drowning. Further research that compares these findings nationally to other states would be beneficial to assist in directing future health promotion messages.



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## APPENDICES

### Appendix One – Participant Information Sheet and Consent form

<b>Title</b>	Alcohol use during aquatic activities; perspectives from Western Australian School Leavers
<b>Protocol Number</b>	#2016/46
<b>Project Sponsor</b>	Western Australian Department of Health
<b>Coordinating Principal Investigator/ Principal Investigators</b>	Ashley Ridge, Lauren Nimmo and Stephanie Green
<b>Location</b>	Dunsborough, Western Australia

#### Introduction

You are invited to take part in this research project, Alcohol use during aquatic activities; perspectives from Western Australian School Leavers. You have been invited as a 2016 WA Leaver who indicated you would wish to participate in further research with the Royal Life Saving Society of Western Australia. Your contact details were obtained from investigators who asked you to complete a survey while at Leavers. This Participant Information Sheet/Consent Form tells you about the research project. It explains the processes involved with taking part. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or local health worker. Participation in this research is voluntary. If you don't wish to take part, you don't have to. If you decide you want to take part in the research project, you will be asked to sign the consent section. By signing it you are telling us that you:

- Understand what you have read
- Consent to take part in the research project
- Consent to be involved in the research described
- Consent to the use of your personal and health information as described.

You will be given a copy of this Participant Information and Consent Form to keep. It is expected that your involvement will be no longer than forty-five minutes.

#### What is the purpose of this research?

In Western Australia, 25% of drownings among those aged 15-24 years of age involve alcohol. The Royal Life Saving Society is committed to decreasing the prevalence of alcohol related injuries and fatalities among the Western Australian community and is using the results from this study to direct future health promotion campaigns at the WA Leavers festival. In an environment whereby participants frequently combine aquatic activities and alcohol, this research will gain a greater understanding of both practices from School Leavers in a fair and welcoming environment. We aim to answer the following research questions;

4. To what extent do WA School Leavers participating in the Leavers festival use alcohol while participating in aquatic activities?
5. What are the factors that facilitate alcohol consumption at WA Leavers festivals?
6. What are the attitudes of WA Leavers towards combining alcohol and aquatic activities?
7. Are WA Leavers aware of the risks associated with drinking and partaking in aquatic activities?

We understand that alcohol use at the Leavers festival has become part of the experience. This research will not be undertaken with an aim to hold students accountable for their actions in an unfriendly or judgmental manner, but use your opinions and perspectives to ensure the safety of future Leavers whilst continuing the fun nature of the event. Furthermore, as limited research has been conducted in this field. Your participation will not only contribute to this unique scientific field of research. This research is being conducted by the Royal Life Saving Society of Western Australia, with support from the Western Australian Department of Health.

#### What does my participation involve?

If you decide to participate in this research project, we would ask you to take part in a focus group with no more than eight other members of your graduating WA cohort. A focus group is a discussion between an investigator and members of a community who share a distinct characteristic. In this instance we will be asking questions relating to the 2016 Dunsborough Leavers event which all participants included will have attended. We will be completing between eight and ten focus groups with approximately eight participants in each across the Perth area as part of this study.

### On the day

Participants will be asked to confirm their attendance at this event before being confirmed into a focus group. Questions will not be asked of each individual member, but the group as a whole. This will encourage a discussion that will use the perspectives and opinions of different participants that will formulate our overall conclusion of each question. Focus groups should take no longer than forty-five minutes. We will be holding a number of focus groups around the Perth metropolitan area and will liaise with you directly to confirm the most convenient time and place for you to participate.

If you choose to attend a focus group, a number of procedures will occur on the day. You will be asked to sign a consent form verifying your intent to participate and consenting to have the focus group audio-recorded. We will give you a copy of the consent form for you to keep. We will also ask you to wear a name badge with your first name only, ensuring an easy identification of participants during the focus group. If you recognise any of the other participants, we ask that you let a member of the team know before we begin the discussion. You are able to withdraw from the focus group if you are uncomfortable in participating with acquaintances.

Before the formal questioning begins, the investigator will outline the study aims and objectives and go through what will be asked of you all. You will be given another opportunity to withdraw from the research. A short ice-breaker will occur to ensure participants are comfortable with each other and the discussion will begin. The focus group will be managed by two investigators who will ensure participants engage appropriately with one another. The investigators will terminate the discussion at any time if they feel that participants are not being respected.

There are no costs associated with participating in this research project, nor will you be paid. However, you may be reimbursed for any reasonable travel, parking, meals and other expenses associated with the research project visit to the value of \$15.

### What happens after I participate?

Your involvement with the study will cease at the conclusion of the focus group and you will not be followed up by a member of the research team. Personal records including communication methods will be destroyed after the focus group. You will also be given an ID number to ensure that your first name is not linked to any answers obtained during the discussion.

This research project has been designed to make sure the researchers interpret the results in a fair and appropriate way and avoids investigators or participants jumping to conclusions. Answers to questions will only be analysed at the group level; however individual quotes may be used to support statements made in future reporting. Quotes will be adjusted to ensure they are non-identifying.

### Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. If you do decide to take part, you will be given this Participant Information and Consent Form to sign and you will be given a copy to keep.

### What are the possible benefits of taking part?

There will be no clear benefit to you from your participation in this research. However, we must emphasise that your participation will benefit the health and wellbeing of individuals your age in the near future.

### What are the possible risks and disadvantages of taking part?

There are no risks to you taking part in this research project. However, whilst all care will be taken to maintain privacy and confidentiality, you may experience embarrassment if one of the group members were to repeat things said in a confidential group meeting. As a result, we strongly encourage you to advise us if you are matched to a focus group with a friend or acquaintance.

### What if I withdraw from this research project?

If you do consent to participate, you may withdraw at any time. If you decide to withdraw from the project, please notify a member of the research team before you withdraw. A member of the research team will inform you if there are any special requirements linked to withdrawing. If you do withdraw, you will be asked to complete and sign a 'Withdrawal of Consent' form; this will be provided to you by the research team.

If you decide to leave the research project, the researchers will not collect additional personal information from you, although personal information already collected will be retained to ensure that the results of the research project can be measured properly and to comply with law. You should be aware that data collected up to the time you withdraw will form part of the research project results. If you do not want your data to be included, you must tell the researchers when you withdraw from the research project.

### Could this research project be stopped unexpectedly?

This research project may be stopped unexpectedly for a variety of reasons. These may include reasons such as inappropriateness of participant generated discussions, a lack of interested participants or institutional time and funding shortfalls. We will advise you in writing if the project has been terminated.

## What happens when the research project ends?

As we have stated previously, your involvement with the project ends at the conclusion of your focus group and we will not store any personal information or methods of by which the research team can contact you. However, you are invited to leave your name and email address if interested in reading the results of the research or a short summary. We will provide participants with this option at the conclusion of the discussion.

## What will happen to information about me?

By signing the consent form you consent to the research team collecting and using personal information about you for the research project. Any information obtained in connection with this research project that can identify you will remain confidential. Data will be stored on a password protected computer in an encrypted file, only accessible to members of the research team. Personal information will be deleted at the conclusion of your focus group unless you indicate you wish to receive results of the project in the future. All names will be replaced with ID numbers. Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law. The personal information that the research team collect and use is [types of information, e.g. information from questionnaires].

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified, except with your express permission. Data will only be presented at the group level and if direct quotes are used, they will be adjusted to ensure they are unidentifiable. ID numbers will be used in the place of names if required.

Any information obtained for the purpose of this research project and for the future research described that can identify you will be treated as confidential and securely stored. It will be disclosed only with your permission, or as required by law.

## Complaints and compensation

If you suffer any distress or psychological injury as a result of this research project, you should contact the research team as soon as possible. You will be assisted with arranging appropriate treatment and support.

## Who is organising and funding the research?

This research project is being conducted by The Royal Life Saving Society of Western Australia and managed by Stephanie Enkel. Funding and support is being provided by the Western Australian Department of Health. The Royal Life Saving Society may benefit financially from this research project if, for example, the project assists The Royal Life Saving Society or the Department of Health in any commercial enterprise.

You will not benefit financially from your involvement in this research project even if, for example, knowledge acquired from your information proves to be of commercial value to The Royal Life Saving Society and the Department of Health. In addition, if knowledge acquired through this research leads to discoveries that are of commercial value to The Royal Life Saving Society and the Department of Health the researchers or their institutions, there will be no financial benefit to you or your family from these discoveries. No member of the research team will receive a personal financial benefit from your involvement in this research project (other than their ordinary wages).

## Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this research project have been approved by the HREC of The Western Australian Department of Health. This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007). This statement has been developed to protect the interests of people who agree to participate in human research studies.

## Further information and who to contact

The person you may need to contact will depend on the nature of your query. If you want any further information concerning this project or if you have any problems which may be related to your involvement in the please contact Stephanie Enkel. For matters relating to research at the site at which you are participating, please contact Lauren Nimmo. Details are as below;

### Research contact person

Ashley Ridge  
Research Officer (RLSSWA)  
Telephone: 9383 8200  
Email: aridge@royallifesavingwa.com.au

### Complaints contact person

Lauren Nimmo  
Research manager (RLSSWA)  
Telephone: 9383 8200  
Email: lnimmo@royallifesavingwa.com.au

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact:

### Local HREC

Department of Health, Human Research Ethics Committee

### Local HREC Office contact

Helen Cribb  
A/Executive Officer  
08 9222 4278  
HREC@health.wa.gov.au

## Consent Form

<b>Title</b>	Alcohol use during aquatic activities; perspectives from Western Australian School Leavers
<b>Protocol Number</b>	#2016/46
<b>Project Sponsor</b>	Western Australian Department of Health
<b>Coordinating Principal Investigator/ Principal Investigators</b>	Ashley Ridge, Lauren Nimmo and Stephanie Green
<b>Location</b>	Dunsborough, Western Australia

### Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in the project.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the project without affecting my future care.

I understand that I will be given a signed copy of this document to keep.

Name of Participant (please print) \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

### Declaration by Researcher†

I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Name of researcher (please print) \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

† An appropriately qualified member of the research team must provide the explanation of, and information concerning, the research project.

Note: All parties signing the consent section must date their own signature.

## Form for Withdrawal of Participation

<b>Title</b>	Alcohol use during aquatic activities; perspectives from Western Australian School Leavers
<b>Protocol Number</b>	#2016/46
<b>Project Sponsor</b>	Western Australian Department of Health
<b>Coordinating Principal Investigator/ Principal Investigators</b>	Ashley Ridge, Lauren Nimmo and Stephanie Green
<b>Location</b>	Dunsborough, Western Australia

### Declaration by Participant

I wish to withdraw from participation in the above research project and understand that such withdrawal will not affect my routine care, or my relationships with the researchers.

Name of Participant (please print) \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

In the event that the participant's decision to withdraw is communicated verbally, the Senior Researcher must provide a description of the circumstances below.

### Declaration by Researcher†

I have given a verbal explanation of the implications of withdrawal from the research project and I believe that the participant has understood that explanation.

Name of researcher (please print) \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

† An appropriately qualified member of the research team must provide information concerning withdrawal from the research project.

Note: All parties signing the consent section must date their own signature.

### Leavers, Aquatic Activity & Alcohol Awareness Research Study

We are looking for School Leavers attending the 2016 Dunsborough Leavers festival to take a few minutes to fill out this survey looking at your drinking behaviour, current attitudes, behaviour and knowledge surrounding alcohol and the aquatic environment. Royal Life Saving welcomes your feedback and your answers will be kept confidential.

In this survey, we will ask a number of questions about 'standard drinks.' One standard drink equates to consuming 375ml of any drink with an alcohol content of 3.5%. To make this easier, please refer to the below chart when answering questions.



22. **Where have you or your friends consumed alcohol while at Leaver?** *Tick all that apply*
- Private accommodation       Park/public space       The beach       In or around a pool/spa       N/A

Other: \_\_\_\_\_

23. **Have you or your friends consumed alcohol around a waterway such as a pool, spa, beach, river or lake while at Leavers?**

Yes       No

**Please only answer Questions 24-28 if you answered 'Yes' to Question 23**

24. **If you consumed alcohol around a waterway such as a pool, spa, beach, river or lake, what activities were you doing at the time?** *Tick all that apply*

Land activities       Swimming       Surfing       Watercraft       Water sports

Other: \_\_\_\_\_

25. **While drinking around waterways, did you recognise this to be a risky activity?**

Yes       No

26. **In reference to your answer in Question 25, why or why not?**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

27. **How could you stay safe around a waterway if you chose to also consume alcohol?**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. **In reference to your answer to Question 25, is this something you would encourage your friends to do while at Leavers?**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. If you answered yes to Question 11, what happened?

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13. Have you or your friends ever been in trouble with the law after consuming alcohol?

- Yes                       No

**Your behaviour at Leavers**

14. Before attending Leavers, did you intend to drink alcohol?

- Yes                       No

15. If you answered yes to Question 14, how many standard drinks did you intend to consume each day?

- 1-2                       3-4                       5 - 6                       7-9                       10 or more

Other amount (please specify): \_\_\_\_\_

16. How many days have you spent so far at Leavers?

- Less than 1     1                       2                       3                       4                       5 or more

17. Have you consumed alcohol while at Leavers?

- Yes                       No

18. If you answered yes to Question 17, how many standard drinks on average have you consumed each day?

- 1-2                       3-4                       5 - 6                       7-9                       10 or more

Other amount (please specify) \_\_\_\_\_

19. What kinds of alcohol have you consumed while at Leavers? *Tick all that apply*

- Beer                                       Pre-mix drinks                                       Spirits mixed by you

- Wine                                       Straight spirits                                       Champagne

Other (please state): \_\_\_\_\_

I have not yet consumed alcohol

20. Please indicate what alcoholic drink you have consumed the most while at Leavers.

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21. How did you and/or your friends obtain your alcohol for Leavers? *Confidential*

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22. **Where have you or your friends consumed alcohol while at Leaver?** *Tick all that apply*
- Private accommodation       Park/public space       The beach       In or around a pool/spa       N/A

Other: \_\_\_\_\_

23. **Have you or your friends consumed alcohol around a waterway such as a pool, spa, beach, river or lake while at Leavers?**

Yes       No

**Please only answer Questions 24-28 if you answered 'Yes' to Question 23**

24. **If you consumed alcohol around a waterway such as a pool, spa, beach, river or lake, what activities were you doing at the time?** *Tick all that apply*

Land activities       Swimming       Surfing       Watercraft       Water sports

Other: \_\_\_\_\_

25. **While drinking around waterways, did you recognise this to be a risky activity?**

Yes       No

26. **In reference to your answer in Question 25, why or why not?**

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27. **How could you stay safe around a waterway if you chose to also consume alcohol?**

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28. **In reference to your answer to Question 25, is this something you would encourage your friends to do while at Leavers?**

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## Your knowledge

*BAC refers to Blood Alcohol Concentration. To drive, your BAC cannot be above 0.05.*

**29. Is driving a car with a Blood Alcohol Concentration of 0.05 as dangerous as driving a boat with a BAC of 0.05?**

- Less dangerous                       As dangerous                       More dangerous

**30. Is driving a car with a Blood Alcohol Concentration of 0.05 as dangerous as swimming with a BAC of 0.05?**

- Less dangerous                       As dangerous                       More dangerous

**31. What are the most common risks associated with drinking around waterways?**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Lack of coordination  | <input type="checkbox"/> Slower reaction speed | <input type="checkbox"/> Emotional fluctuations    |
| <input type="checkbox"/> Loss of judgment      | <input type="checkbox"/> Inner ear disturbance | <input type="checkbox"/> Increased risk taking     |
| <input type="checkbox"/> Nausea                | <input type="checkbox"/> Hypothermia           | <input type="checkbox"/> Spasm of the vocal chords |
| <input type="checkbox"/> Other (please state): | _____  |  |
| <input type="checkbox"/> I don't know          | _____  |  |

**32. Have you ever heard of 'Don't Drink and Drown before?'**

- Yes                       No

**33. If you answered yes to Question 32, where did you hear about Don't Drink and Drown?**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> TV commercial         | <input type="checkbox"/> Leavers         | <input type="checkbox"/> School presentation |
| <input type="checkbox"/> Bus stop poster       | <input type="checkbox"/> Community event | <input type="checkbox"/> School event        |
| <input type="checkbox"/> A parent              | <input type="checkbox"/> A friend        | <input type="checkbox"/> A teacher           |
| <input type="checkbox"/> Other (please state): | _____                                    |  |

**Thank you for taking the time to complete this survey! Please turn over**

We appreciate you taking the time to complete this survey. To go into the chance to win one of three \$50 vouchers of your choice, please leave your name, email and phone number below.

**This page will be separated from your survey so your name cannot be associated with your answers.**

Name: \_\_\_\_\_

Mobile number: \_\_\_\_\_

Email address: \_\_\_\_\_

As part of this study, we will also be contacting Leavers after the event to learn more about your experience. Participants will be compensated with a \$10 iTunes voucher and asked to respond to a series of questions via an online survey. This is a great opportunity to assist support services in ensuring Leavers is safe for the next cohort and understanding your experiences.

Please indicate if you would like to take part below.

- Yes! Please contact me so I can be involved.
- No thank you.

*(If you answered 'Yes', please ensure you left your contact details above.  
We will be in touch!)*

## We want to hear about your Leavers experience!

Thank you for assisting us in learning more about the time you spent at Dunsborough during Leavers. We ask that you reflect on your Leavers experience and answer the questions as best as you can. It is recommended that this survey is completed on a computer or laptop so more in-depth answers can be provided. We do not expect this survey to take longer than half an hour.

This research has been approved by the Department of Health Human Research Ethics Committee (#2016/46). Please email Lauren Nimmo at [lnimmo@royallifesavingwa.com.au](mailto:lnimmo@royallifesavingwa.com.au) for any queries.

### General Information about you

1. Your age  17  18
2. Gender  Male  Female
3. Home location  Metro  Regional
4. Were you born in Australia?  Yes  No
5. If you answered no to Question 4, where were you born? \_\_\_\_\_
6. If you answered no to Question 4, how long have you been living in Australia? \_\_\_\_\_

### Your Leavers experience

7. What were some of the events that you took part in while at Leavers? What did you like or didn't like about these events?  
\_\_\_\_\_  
\_\_\_\_\_
8. What did you and your friends do when you weren't participating in formal Leavers activities like The Zone or Beach Day?  
\_\_\_\_\_  
\_\_\_\_\_
9. Did your Leavers experience meet your expectations? Why or why not?  
\_\_\_\_\_  
\_\_\_\_\_

---

**Alcohol at Leavers**

**10. Did you and/or your friends consume alcohol while at Leavers?**

- Yes                       No

**11. How much and what kinds of alcohol did you bring down to Leavers with you?**

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- I did not consume alcohol

**12. How did alcohol consumption feature as part of your Leavers experience?**

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- I did not consume alcohol

**13. Did you or your friends experience any adverse events while consuming alcohol?**

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- I did not consume alcohol

**14. If you did not consume alcohol, what influenced this decision?**

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### Alcohol and aquatic activities while at Leavers

15. While at Leavers, did you consume alcohol while participating in aquatic activities, or participate in aquatic activities after consuming alcohol?

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16. What is your attitude towards consuming alcohol while partaking in an aquatic activity?

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### Don't Drink and Drown

17. While at Leavers, were you involved with any events run by Don't Drink and Drown?

Yes                       No

18. If so, what events were these?

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19. How would your involvement with Don't Drink and Drown change your behaviour in regards to aquatic activities and alcohol in the future?

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20. If you attended the Meelup Beach Day, what did you enjoy about it? What could be improved?

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**Final comments**

21. Do you have any final comments about your Leavers experience?

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**Thank you for participating in our survey!**

So we can thank you for your time, please provide us with your email so we can send you a \$10 voucher.  
Vouchers will only be distributed to those who have completed surveys in full with adequate detail.

**Email:**

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#### FOR MORE INFORMATION

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PO Box 28, Floreat Forum WA 6014

Call **08 9383 8200**

Email **[info@royallifesavingwa.com.au](mailto:info@royallifesavingwa.com.au)**

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