Reviewer's report

Title: Estimate of Mortality Rate and Exploration of Risk Factors among Rescuers: A Review of 225 Drowning Rescue Incidents in China

Version: 2 Date: 21 October 2014

Reviewer: Richard C Franklin

Reviewer's report:

Dear Author

Thank you for exploring an issue which is important and under-research in the scientific literature. The following comments are designed to help improve the paper.

Overall

This paper need a good proof read by a person with strong English skills, at the moment while it is able to be read it does not read well, I have provided some editorial to help you with this.

Please note you should not start a sentence with an ‘and’.

Decimal places should be to 1 decimal place.

There needs to be a limitation section as using media reported cases have been found to be biased.

Why did you not collect any information on alcohol?

When writing number the convention is for number under 12 then they should be in words eg 4 should be four, except when dealing with time, also you should not start a sentence with a number e.g 36 people drowning should be Thirty six people.

How are you dealing with cases where some of the information was unknown, these appear to disappear. If it is unknown this should be stated and the rest describes as where know...

The paper needs a limitations section.

I have provided a marked up version of the paper where I think improvements could be made from a grammar and readability perspective the following comments have to do with clarity within the paper. Please note if you see ‘reference’ or ‘evidence’ in the paper this means that the statement you have made needs a reference to back up your comment.

Introduction

Line 74 – the term ‘near-drowning’ should not be used as per the definition, it should be fatal drowning, drowning with morbidity and drowning with no morbidity.
Line 74 – Why is the comment ‘Many drowning survivors were left with permanent disability’ you do not explore this further in the paper, the term ‘Many’ should also not be used.

Line 93-95, I am not sure what you are saying here.

You should use the term ‘preventative strategies’ rather than ‘preventative suggestions’.

Material and methods

Did you perform the searches in Chinese or English or both? If you did use chines can you please add the Chinese characters / search terms to the paper.

You also need to say how many cases you found from each of the different sources.

Line 109 - It is inappropriate to use ‘etc’ in this section if the information is not contained in a table or some other section.

Line 109 – with conciseness did you mean that they lacked detail? As something can be concise that is short in length but detailed. This is a quirk of the English language.

Line 112 – again inappropriate to use ‘etc’ in this section.

Line 113 – what does ‘new-report swimmer’ mean

It would be good to have a table with all the terms you use and their definitions (this also applies to the terms and definition section.

I assume that you excluded all drowning deaths where a rescue attempt was not undertaken?

Terms and definition

Line 120 – Did all of the PDV fall into the water or did some enter the water voluntarily?

Again this information would be better in a table as would provide better clarity for reading.

Were there cases where the PDV survived and the rescuer drowned?

Data analysis

Line 145 – What does ‘clustered in the level of incident weakly’ mean?

Rescue incidents

Line 152 – are provinces and municipalities mutually exclusive?

Line 153 – do the most common provinces or municipalities also reflect the greatest population?

Line 155 – while they happen all year round they appear to be least common in winter which is similar to other studies – no need to put in all the results if they already appear in the table, just identify the most important issues.

Line 156 – note very few occur between midnight and 6am.
Line 157 – add a reference to what table this information is from or add to table 1.

Line 160 – need to define age for child

Lines 164-167 – needs more detail

PDVs

Line 174 – the last sentence needs more detail

Rescuers

Line 177 – when using a gender term such as ‘men’ this should only refer to that population otherwise use people.

Line 178 is this per incident? If so then this should be included in the text.

This section needs extra detail in a table, it needs Rescuers vs PDV. E.g. Rescuers compared with PDVS are more likely to be male, adult and a swimming (Table X)

Line 184-184 beginning with ‘Swimming to PDVs … does not make sense’

You also need a table for swimmer / non swimmer vs child / adult.

Where is the logistic regression table?

Discussion

If you are going to talk about what your results found then these should either be in the results section or in a table.

Please note I have not marked up this section in the PDF as it need a lot of work.

Line 207 – why did you pick ages 15-44 to highlight

Line 209 – how do you know there were victim-instead-of rescuers.

Line 213 – need to be rewritten does not read well.

Line 214 – what age is ‘young age’ is this same as child?

Line 215-216 – What does ‘should reach a consensus ’mean? Also needs to be rewritten. How and why ?

Line 218 – need to be rewritten

Line 219-220 – does this also mean there is a significant population exposed as well?

Line 221-222 what is the difference between fresh water and natural bodies of water?

Line 225 – what is your evidence for the statement about lakes?

Line 225-227 – what is your evidence for this sentence

Line 227-229 - what is your evidence for this sentence

Line 229-231 - what is your evidence for this sentence

Line 231-233 - what is your evidence for this sentence
Lines 234-237 – needs to be rewritten
Line 239 – what do you mean by ‘uncertain causes’
Line 240-241 - what is your evidence for this sentence
Line 241- 243 – needs to be rewritten.
Line 244 - what is your evidence for this sentence
Line 245 – What do you mean by ‘in sum’?
Line 246-248 - what is your evidence for this sentence
Line 250-251 – needs to be rewritten
Line 251-253 – this is not from your study, what are the links?
Line 255-256 - what is your evidence for this sentence
Line 256-257 – needs to be rewritten
Line 258-259 – You would normally talk about the range of rates for on-scene resuscitation
Line 259-260 - what is your evidence for this sentence
Line 264 – what do you mean by ‘were often illustrated comprehensively in reports’?
Line 265 - While news media may be a proxy for surveillance it is also likely to underestimate the number of cases and this needs to be discussed as a limitation.
Line 266 – does not make sense, needs to be rewritten.
Line 267 – what do you mean by ‘report habits’.
Line 267-269 - what is your evidence for this sentence
Line 269-270 - what is your evidence for this sentence
Line 272-274 – need to be rewritten – also why were ‘oral for help etc’ not included in study?

Conclusions
Line 277 – I am not convinced the drowning research deaths are common.
Line 278 – need to be rewritten for clarity
Line 281-282 – you have not made this argument in the previous section about on-scene resuscitation.

Reference
You need to check you reference there are a number of mistakes such as an extr ‘c’ in number 5, or the initials in number 14, number 19 is also wrong and needs a web address. Zlso you need to provide a date when you access the web resources.

Table 1.
Where are the unknowns. No need to have the notes at the bottom as you have the p vales in the table. I would also add number of PDV per event and number of rescuers per event

Table 2.
I would display this as a cross table and include unknowns.

Table 3.
Total should go underneath the lists. Add unknowns asl add location

Table 4
From gender onwards the % stats change, this needs to be fixed to be the same ass above.

Figure 1
N appears to be different form what is reported in table.

What does ‘cases due to severe variable missing’ mean? Also no mention of this in methods or limitations

What does ‘related hints respectively and consistency treatment’ mean?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare I have no competing interests