PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Stressful life events and resilience among carers of Aboriginal children in urban New South Wales: cross sectional findings from the Study of Environment on Aboriginal Resilience and Child Health (SEARCH)
AUTHORS	Young, Christian; Craig, Jonathan; Clapham, Kathleen; Williams, Sandra; Williamson, Anna

VERSION 1 – REVIEW

REVIEWER	Shanti Raman University of New South Wales, School of Women's & Children's Health, Australia
REVIEW RETURNED	08-Feb-2018

GENERAL COMMENTS	General: Very important work and I commend the authors on taking on this topic. Resilience is a big topic and the different definitions and explorations especially in indigenous societies makes it more challenging. Given that this is in the urban setting it would have been nice to know if cultural connection or cultural factors played a role in resilience building. Abstract Last sentence: The availability of (appropriate and relevant) health and support services may go some way to preventing these factors. Background I would have liked at least 1 more sentence to describe the complexity of the 'resilience' concept, difficulties with measuring it adequately and also that more recently researchers have become interested in resilience not just at an individual level but as a feature of whole communities. Methods Unnecessary detail: We don't need to know that everyone was given a Participant Information Sheet! What was the justification/thought process of picking the K10 and SLE to explore resilience? Discussion Worth making a bold opening statement: This is the first study in Australia to explore the resilience profile of caregivers of urban Aboriginal children..(words to that effect) I would also have liked a little bit more nuance and context in the description of resilience. That then explains the limitations a bit better. References 2. Not a full reference. Where is the Journal title?

	Stressful life events and resilience among carers of Aboriginal children in urban settings General: Very important work and I commend the authors on taking on this topic. Resilience is a big topic and the different definitions and explorations especially in indigenous societies makes it more challenging. Given that this is in the urban setting it would have been nice to know if cultural connection or cultural factors played a role in resilience building. Abstract Last sentence: The availability of (appropriate and relevant) health and support services may go some way to preventing these factors.

REVIEWER	Deborah Askew The University of Queensland, Australia
REVIEW RETURNED	16-Feb-2018

GENERAL COMMENTS	Thank you for the opportunity to review this promising manuscript which I read with interest. The justification given for this paper is the desire to identify #factors that help caregivers of Aboriginal children maintain positive functioning despite adversity", particularly as these factors could be incorporated into "initiatives designed to enhance resilience". The stated aim of the study was to measure the resilience of caregivers of Aboriginal children and to determine individual, family and community-level factors that are associated with resilience. However, and sadly, rather than approaching this question from a strengths base, the authors have chosen to apply a deficit lens. The focus of the results and discussion is not on the 72% of participants who met the criteria for resilience, but rather on the 28% who are labelled as less resilient. The subsequent analyses identify factors associated with less resilience. That 72% of participants are resilient, and had 3 or more stressful events in the preceding 12 months raises a number of questions for me. Does the non-indigenous population display this level of resilience? What is it about Aboriginal people that despite considerable adversity, there is resilience? What are the factors associated with resilience? These questions were not explored in the paper, rather the paper focusses on factors associated with less resilience. Participants in this study had experienced stressful life events at a far higher rate than the non-Indigenous population: of note; 45% had

	a family member (or close friend) in hospital; 40% had a family member badly hurt, injured or sick; and 34% had had a family member pass away in the preceding 12 months. The authors state that these results potentially reflect "well-documented discrepancies between Aboriginal and non-Aboriginal health outcomes". I would suggest that there is nothing "potential" about this – it is absolutely a reflection of the health disparities (not discrepancies!!) between Aboriginal and Torres Strait Islander and non-Indigenous health outcomes, and it is surprising that the authors do not take stance. I also feel that the authors have missed an opportunity with these data by not reporting which stressful events occurred together. Potential initiatives to reduce the occurrence of the vulnerability factors or common stressful life events are proposed. The initiatives focus on improving health outcomes through an individual behaviourist approach such as healthy eating, chronic disease education and self-management approaches. This is a rather simplistic view of health, and gives no recognition of the impact of the social determinants of health. It also does not consider that disparities in health outcomes are a reflection of broader societal disparities. That one of the vulnerability factors is problems with alcohol lends weight to this argument, particularly when alcohol is viewed as a symptom of poor social and emotional wellbeing. There is no indication given as to who provided ethical approval for this study, or if the ACCHOs had any involvement in the conception and design of this particular study. I note that the Aboriginal member of the research team was provided with the results of the data analysis, but a culturally appropriate and decolonised research approach would have been to include her at the beginning of the study when the research question(s) and the analysis plan were being developed. It was disappointing to see the authors describing the compromises that were made between variables that the researchers wanted included in the survey and those that the ACCHOs wanted included as a limitation of the study. Doing collaborative research with Aboriginal people requires giving the Aboriginal people a voice in the research team, and respecting that voice. In summary, I believe that this has the potential to be a great paper. But, I believe that it needs to be written from a strengths based perspective, it needs Aboriginal representation from the conceptualisation of the study through to the dissemination of the outcomes, it needs to consider the disparity in health outcomes of Aboriginal and non-Aboriginal people through a social determinants

	of health lens, and consider initiatives to address the disparities from a societal perspective, rather than from an individual behaviourist perspective.

VERSION 1 – AUTHOR RESPONSE

Editorial Requests:

Please revise your title so that it includes your study design. This is the preferred format for the journal.
As suggested, the title has been changed to “Stressful life events and resilience among carers of Aboriginal children in urban New South Wales: cross sectional findings from the Study of Environment on Aboriginal Resilience and Child Health (SEARCH)”
(Page 1)

Please include the relevant page number(s) from the manuscript next to each reporting item in the STROBE checklist or state 'n/a' next to items that are not applicable to your study.
Relevant page numbers are now included.
(STROBE Checklist)

Response to reviewer #1

General: Very important work and I commend the authors on taking on this topic. Resilience is a big topic and the different definitions and explorations especially in indigenous societies makes it more challenging. Given that this is in the urban setting it would have been nice to know if cultural connection or cultural factors played a role in resilience building.
Caregivers were asked how often they participated in Indigenous groups/clubs (see Supplementary table 2), however participation was not found to be associated with resilience.

Abstract
Last sentence: The availability of (appropriate and relevant) health and support services may go some way to preventing these factors.
The conclusion has been rewritten to incorporate some changes in the analysis and to acknowledge the important role social determinants play in determining health outcomes (see comments from reviewer #2).

“Caregivers of urban Aboriginal children experienced a large number of stressful events, the most common being the poor health of close family members, but most exhibited resilience. Resilience was associated with stable family environments and good physical health. The high number of stressful life events that caregivers experience is reflective of broader inequalities that Aboriginal communities face. The availability of easily-accessible and long-term health and support services may go some way to reducing this inequality and improving social and emotional wellbeing for Aboriginal families.”
(Page 2)

Background
I would have liked at least 1 more sentence to describe the complexity of the ‘resilience’ concept, difficulties with measuring it adequately and also that more recently researchers have become interested in resilience not just at an individual level but as a feature of whole communities.
As suggested a sentence describing the measurement issues surrounding the construct of resilience has been added.

“While the importance of resilience as a framework for individual, family and community level health is increasingly recognised,1 the various methods in which adversity and positive adaption can be defined and measured pose conceptual challenges for quantitative research of resilience in this context.2”
(Page 4, paragraph 2)

Methods
Unnecessary detail: We don’t need to know that everyone was given a Participant Information Sheet!
As suggested, this detail has been deleted.
(Page 5, paragraph 2)

What was the justification/thought process of picking the K10 and SLE to explore resilience?
The SLE and the K10 have shown to be acceptable measures of adversity and psychological function in Aboriginal populations. This justification is outlined in the following statements.

“The SLE scale was adapted from a similar scale used in the Western Australian Aboriginal Child Health Survey (WAACHS)3 and is available online (Supplementary table 1). Previous research has found that three or more stressful life events within a 12-month period increased the risk of a number of psychological and social problems.” (Page 5, paragraph 3)

“In this way, the number of stressful life events was used as a proxy for adversity, which is necessary when defining resilience.”
(Page 7, paragraph 1)

“The K10 is a widely used screening tool used to detect the frequency and severity of symptoms of anxiety and depression.”
(Page 7, paragraph 2)

“The K10 has demonstrated sound psychometric properties in Australian Aboriginal adults.”
(Page 7, paragraph 2)

“This scale [the SLE] has been used before in a large-scale study with Aboriginal people3 and was therefore unaltered for comparative purposes. We note that other, non-mental health measures could be used to measure positive adaption. Given concerns regarding the prevalence of poor mental health in Aboriginal communities4 and that the K10 has been validated with Aboriginal populations,5 we believe that the K10 is appropriate for measuring resilience in this setting.”
(Page 20, paragraph 2)

Discussion
Worth making a bold opening statement: This is the first study in Australia to explore the resilience profile of caregivers of urban Aboriginal children. (words to that effect).
As suggested the opening sentence of the discussion now reads, “To our knowledge, this is the first study in Australia to quantitatively explore the resilience profile of caregivers of urban Aboriginal children.”
(Page 17, paragraph 2)

I would also have liked a little bit more nuance and context in the description of resilience. That then explains the limitations a bit better.
Measurement issues surrounding the construct of resilience are now mentioned in the introduction, “While the importance of resilience as a framework for individual, family and community level health is increasingly recognised,1 the various methods in which adversity and positive adaption can be defined and measured pose conceptual challenges for quantitative research of resilience in this

context.2" (Page 4, paragraph 2), and in the discussion, "Due to the range of variables that can be used to measure positive adaption and adversity it is possible to define resilience using contrasting methodologies, and thus derive different results based upon the criteria employed."
(Page 20, paragraph 2)

References
2. Not a full reference. Where is the Journal title?
This citation has been changed to, "Anderson I, Baum F, Bentley M (eds) 2007, Beyond Bandaids: Exploring the Underlying Social Determinants of Aboriginal Health. Papers from the Social Determinants of Aboriginal Health Workshop, Adelaide, July 2004, CRC for Aboriginal Health, Darwin."
(References)

Response to reviewer #2

However, and sadly, rather than approaching this question from a strengths base, the authors have chosen to apply a deficit lens. The focus of the results and discussion is not on the 72% of participants who met the criteria for resilience, but rather on the 28% who are labeled as less resilient. The subsequent analyses identify factors associated with less resilience.
It was unfortunate that our intent, focusing on the strengths base, was not as apparent as we would have hoped for. To expand this further, some variables with binary independent categories have been reframed. For example, the association between a 'limiting health problem and less resilience' has been changed to reflect an association between the 'absence of a limiting health problem and resilience'. The results and discussion section have been rewritten to accommodate these changes. The term 'vulnerability factor' has been removed throughout.

That 72% of participants are resilient, and had 3 or more stressful events in the preceding 12 months raises a number of questions for me. Does the non-indigenous population display this level of resilience?
We are unaware of any similar study in non-Aboriginal populations and thus unfortunately cannot answer this question.

What is it about Aboriginal people that despite considerable adversity, there is resilience? What are the factors associated with resilience? These questions were not explored in the paper, rather the paper focusses on factors associated with less resilience.
The main aim of this study was to identify factors associated with resilience. A number of variables plausibly related to resilience were included (see Supplementary Table 2). As previously stated, where possible, reference categories have been changed to align with a more strengths-based approach.

Participants in this study had experienced stressful life events at a far higher rate than the non-Indigenous population: of note, 45% had a family member (or close friend) in hospital; 40% had a family member badly hurt, injured or sick; and 34% had a family member pass away in the preceding 12 months. The authors state that these potentially reflect "well-documented discrepancies between Aboriginal and non-Aboriginal health outcomes". I would suggest there is nothing "potential" about this – it is absolutely a reflection of the health disparities (not discrepancies!!) between Aboriginal and Torres Strait Islander and non-Indigenous health outcomes, and it is surprising that the authors do not take this stance.

As suggested, this sentence has been changed to "These events, related to the poor health of family members, reflect well-documented disparities between Aboriginal and non-Aboriginal health outcomes."

(Page 17, paragraph 3)

I also feel that the authors have missed an opportunity with these data by not reporting which stressful events occurred together.

As suggested, a table indicating correlations between stressful life events has been included with the following relevant text. (Table 2)

“Table 2 shows correlations between each of the stressful life. Almost all of the correlation coefficients were positive with strengths ranging from negligible to medium. Health related stressful events appeared to cluster together with the largest association between participants who had a family member who was hurt or sick, and those who had a family member in hospital (r=.72, p<.001). Drug and alcohol problems were associated with children who had been upset due to family arguments (r=.41, p<.001), and a family member who had been arrested or was in gaol (r=.39, p<.001).
(Page 11, paragraph 2)

“Stressful life events were seen to aggregate, with the presence of one event often being associated with one or more other stressful events, however, most correlations were not strong. Aligning with results from the WAACHS, health-related stressful events appeared to cluster together. Similarly, other associations between substance use and incarceration, and between having children who were badly scared and having children who were upset by family arguments were also observed.7
(Page 17, paragraph 3)

Potential initiatives to reduce the occurrence of the vulnerability factors or common stressful life events are proposed. The initiatives focus on improving health outcomes through an individual behaviorist approach such healthy eating, chronic disease education and self-management approaches. This is a rather simplistic view health and gives no recognition of the impact of social determinants of health. It also does not consider that disparities in health outcomes are a reflection of broader societal disparities. That one of the vulnerability factors is problems with alcohol lends weight to this argument, particularly when alcohol is viewed as a symptom of poor social and emotional wellbeing.

The paragraph discussing Aboriginal health has been rewritten to include the important role social determinants play in determining health outcomes.
(Page 19, paragraph 2)

There is no indication as to who provided ethical approval for this study or if the ACCHOs had any involvement in the conception and design of this particular study.

See the revised ‘Aboriginal representation’ paragraph.
(Page 8, paragraph 4)

The University of Sydney and the Aboriginal Health and Medical Council (AHMRC) granted ethics approval for this study, as stated at the end of the manuscript. “Ethics approval was obtained by the University of Sydney (8506) and the Aboriginal Health and Medical Research Council (586/06).”
(Page 5, paragraph 2)

I note that an Aboriginal member of the research team was provided with the results of the data analysis, but a culturally appropriate and decolonised research approach would have been to include her at the beginning of the study when the research question(s) and the analysis plan were being developed.

The paragraph titled “Aboriginal representation” did not accurately reflect the contribution that Aboriginal people have made to this study. This oversight has been amended and the collaboration between researchers and the Aboriginal community has been described more thoroughly.

“This study has been conducted as part of SEARCH, and has therefore involved the Aboriginal community at all stages of its development. SEARCH began extensive consultations with five Aboriginal Community Controlled Health Services (ACCHSs) in 2004 in order to identify community research priorities. Resilience, and the risk and protective factors associated with it, was identified from the outset as a key research priority. Partner communities were heavily involved in drafting and approving the SEARCH questionnaires. Two authors on this paper are Aboriginal people and have contributed to the study design (KC) and interpretation of results (KC, SW). Partner ACCHSs own the data arising from SEARCH. The final draft of this manuscript was approved by the governing bodies of each partner ACCHSs and the Aboriginal Health and Medical Research Council of New South Wales.”
(Page 8, paragraph 4)

It was disappointing to see the authors describing the compromises that were made between variables that the researchers wanted included in the survey and those that the ACCHOs wanted included as a limitation of the study. Doing collaborative research with Aboriginal people requires giving the Aboriginal people a voice in the research team, and respecting that voice.

Including variables that have been identified by the Aboriginal community is a major strength of the SEARCH study, and of this paper. As we state in the paper “…as survey items were determined by the ACCHSs the results of this study are directly relevant to the concerns and priorities voiced by the communities that are partners in SEARCH.”
(Page 20, paragraph 2)

In summary, I believe this has the potential to be a great paper. But, I believe that it needs to be written from a strengths based perspective, it needs Aboriginal representation from the conceptualization of the study through the dissemination of the outcomes, it needs to consider the disparity in health outcomes of Aboriginal and non-Aboriginal people through a social determinants lens, and consider initiatives to address disparities from a societal perspective, rather than from an individualistic behaviorist perspective.

As suggested, variables have been framed from a strengths-based perspective, and the important role social determinants play in determining health outcomes is now discussed. The level of participation and partnership of Aboriginal people has been described more thoroughly.

References

1. Schipper ELF, Langston L. A comparative overview of resilience measurement frameworks. Working Paper 422. London, United Kingdom: Overseas Development Institute; 2015.
2. Luthar SS. Methodological and conceptual issues in research on childhood resilience. Journal of Child psychology and Psychiatry 1993;34:441-53.
3. Silburn S, Zubrick S, De Maio J, et al. The Western Australian Aboriginal child health survey: Strengthening the capacity of Aboriginal children, families and communities. Perth: Curtin University of technology and telethon institute for child health research 2006.
4. Jorm AF, Bourchier SJ, Cvetkovski S, Stewart G. Mental health of Indigenous Australians: a review of findings from community surveys. Med J Aust 2012;196:118-21.

5. McNamara BJ, Banks E, Gubhaju L, et al. Measuring psychological distress in older Aboriginal and Torres Strait Islanders Australians: a comparison of the K-10 and K-5. Australian and New Zealand journal of public health 2014;38:567-73.
6. Hopkins KD, Zubrick SR, Taylor CL. Resilience amongst Australian Aboriginal youth: An ecological analysis of factors associated with psychosocial functioning in high and low family risk contexts. PloS one 2014;9.
7. Zubrick S, Silburn S, Lawrence D, Mitrou F, Dalby R, Blair E. The Western Australian Aboriginal Child Health Survey: the social and emotional wellbeing of Aboriginal children and young people. Perth: Curtin University of Technology and Telethon Institute for Child Health Research, 2005. International Journal of Epidemiology 2005;35:888-901.a

VERSION 2 – REVIEW

REVIEWER	Deborah Askew The University of Queensland Australia
REVIEW RETURNED	03-Apr-2018

GENERAL COMMENTS	The authors have completed a commendable revision of the original paper that addresses my concerns.

REVIEWER	Shanti Raman University of New South Wales, Australia
REVIEW RETURNED	05-Apr-2018

GENERAL COMMENTS	I am satisfied that the authors have responded to the reviewers comments and suggestion adequately. I still think that there are more aspects of resilience that are left unanswered, but within the constraints of a quantitative study and responding to community perceptions this is the best available analysis.