BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

**ARTICLE DETAILS**

<table>
<thead>
<tr>
<th>TITLE (PROVISIONAL)</th>
<th>Study protocol for screening and diagnosis of fetal alcohol spectrum disorders (FASD) among young people sentenced to detention in Western Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHORS</td>
<td>Passmore, Hayley; Giglia, Roslyn; Watkins, Rochelle; Mutch, Raewyn; Marriott, Rhonda; Pestell, Carmela; Zubrick, Stephen; Rainsford, Candice; Walker, Noni; Fitzpatrick, James; Freeman, Jacinta; Kippin, Natalie; Safe, Bernadette; Bower, Carol</td>
</tr>
</tbody>
</table>

**VERSION 1 - REVIEW**

**REVIEWER** Dr Clare Allely
Lecturer in Psychology, School of Health Sciences, University of Salford, Manchester, England and also affiliate member of the Gillberg Neuropsychiatry Centre, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden.

**REVIEW RETURNED** 25-Apr-2016

**GENERAL COMMENTS**

The authors present a thorough study protocol for screening and diagnosis of fetal alcohol spectrum disorders (FASD) among young people sentenced to detention in Western Australia. It is a flawless, comprehensive and rigorous protocol.

I have recently conducted, and had published, a systematic PRISMA review on fetal alcohol spectrum disorders in the criminal justice system. As a result of reviewing the literature in this area, I know that this is a relatively unexplored area which urgently requires more attention.

I strongly recommend that this study protocol is published in BMJ Open.

**REVIEWER** Jerrod Brown
The American Institute for the Advancement of Forensic Studies (AIAFS)
Concordia University, St. Paul, Minnesota
Pathways Counseling Center, Inc.

**REVIEW RETURNED** 30-Apr-2016

**GENERAL COMMENTS**

Minor recommendations below come from your introduction section:

1st sentence, “including primary effects of physical, cognitive, and behavioural deficits,” as a block can be taken out completely so the comma after cognitive is important and after deficits as the block is an interrupter, the comma after cognitive is for items in a series called a Harvard comma and highly recommended in this context.
1st sentence, single quotes here why? Why is this offset at all? If it is offset it should be double quotes but no quotes may be best.

2nd sentence What is a secondary effect in this context? Secondary effects are example 1, example 2, and example 3 which may include contact with the justice system. Primary effects was added to the 1st sentence to make this more effective.

3rd sentence Consider saying there is no prevalence rate at the start of the sentence rather than the end—Little is known about the prevalence of FASD among Australian youth engaged with the criminal justice system.

4th sentence, the study is complete and should be in the past tense. The purpose of this study was to, or the study aimed to establish a prevalence rate among...

4th sentence is the study attempting to discover a prevalence rate from the sample or a screening tool which may give a reasonable estimation of the prevalence rate during development, testing and normalization.

5th sentence It is hoped that these results will better inform those with the greatest power to effect positive change in the management and support of Australian incarcerated youths. Let’s say a prevalence rate is established, “So what?” how will that do what you have stated above in guiding effective management and support? The rate by itself is meaningless unless context can be provided. Having this rate is valuable because...(present your case here)

6th sentence good

7th sentence Young people are assessed (for what?) by a md team. The tools employed are designed for use with Australians taking into account the language and social complexities involved. What is being assessed is left implied rather than explicitly stated.

8th sentence good

9th sentence consider re-wording and changing tense of will to was to the following—Secondary source confirmatory information was gathered from a broad spectrum of sources including...

Run on sentences in general, many sentences used throughout are long and need to shortened for clarity.

You use “While in incarceration” in your paper. Consider using “while incarcerated” intentional misconduct, rather than recognizing the behaviors are a result of...

resulting in breaches of parole conditions and the potential of a return to the correctional institution.

Current Page 3-4:
There are no prevalence data for FASD among detained young people in Australia, though it is expected, based on experience elsewhere, that there will be many cases that are undiagnosed or misdiagnosed. Given that Indigenous* young people are 31 times
more likely to be in detention compared with non-Indigenous young people in Australia[14] and there is a higher risk of FASD among Aboriginal people,[15-17] a high prevalence rate of FASD among detained young people in Western Australia is anticipated.

Suggested:
Prevalence rates of FASD in the US stand at 2-5% of the population. No prevalence rate among Australian incarcerated adolescents has been established. However as has been found it US, it is believed that many cases that would otherwise have been documented have gone undiagnosed at worst, or unintentionally misdiagnosed as a similar disorder. What is known is that Indigenous* young people are 31 times more likely to be in detention than non-Indigenous Australian adolescents. Additionally there is a higher risk of FASD among Aboriginal people in comparison or than WHAT? With those considerations in mind it is anticipated that there will be a high (what is high mean here?) prevalence rate of FASD among detained young people.

Current, Page 4:
There is a critical need to determine the extent that young people with FASD are involved with the justice system, and determine the need for the development of appropriate evidence-based management strategies for these young people.

Suggested:
There is a critical need to determine the extent that young people with FASD are involved with the justice system. Once that determination is made development of appropriate evidence-based management strategies for these young people can take place.

Current Page 4:
However, the screening and diagnosis of FASD can be challenging, given that the types and severity of impairment can vary greatly for each individual, and there are often multiple barriers impeding diagnosis[12]. These include minimal awareness among health professionals regarding PAE, difficulties in obtaining confirmation of alcohol use during pregnancy and the stigma often associated with diagnosis[18,19].

Suggested:
Screening for and diagnosis of FASD can be challenging for a number of reasons. There are multiple barriers impeding diagnosis. Barriers can consist of…

Current Page 4:
Effective screening tools are essential for early identification of impairment[23], and to alleviate unnecessary demand for diagnostic assessment by limiting it to potential cases only.

Suggested:
Effective screening tools are essential for early identification of Impairment[23].

Current Page 4:
Additional information

Suggested:
Separate primary information and secondary information. Primary
information is information obtained directly from the patient. Secondary information is supplemental information obtained from sources close to the patient. Additional secondary information should be gained... Sources of secondary information include:...

Current Page 4:

By identifying the individual’s strengths and difficulties

Suggested:

strengths and challenges...

Setting, how many total members at Banksia Hill Detention Center, 75% of what number

Data collected and method of collection Page 9 - Responsible Adult - Is consent via post, email, or fax an acceptable standard of ensuring the authorized legal adult is consenting? Highly sensitive information is being sought

What challenges with environmental limitations or instabilities are there when conducting re-search within a juvenile detention centre? What are some of the specific examples so the reader has some frame of reference as to what the authors mean?

Final Comments:

Some sentences need to be shorter and less complex. Careful explanation of primary vs. secondary in-formation sources and examples of each. This will help the reader understand which is more reliable and whether the patient or other person/institution/record was the reporter. Also, when listing a percent provide some base rate number to anchor the %. 75% of the population of the detention centre is aboriginal but 75% of what? Is 75% a lot in this context? Similarly, there is a higher rate of FASD among Aboriginal than what? If some rate of FASD is known about Aboriginals, even outside the correctional environment, providing those figures would help anchor the reader. Also, what does “high” or “higher” mean this context. It was mentioned it is expected that incarcerated adolescent Australian’s will have a “high” rate of FASD but again, what does high mean there. Provide a base rate or some context for the reader. There is no way for the read-er to judge. Is it acceptable to have consent emailed, posted, or faxed when working with such a sensitive and vulnerable sample of individuals? Lastly, what specific challenges and limitations come with conducting research in a juvenile detention center? Is it confidentiality, quiet inter-view locations, scheduling, or human factors like bullying, apathy, mistrust? A possible limitation of the study is the increased probability of suggestibility and confabulation within the FASD population, how do you control for this consideration especially in relation to outright lying and malingering by study participants that may not meet FASD criteria but enjoy the researchers attention to break monotony that would otherwise be occurring.

I would also consider reviewing the following articles and adding them to your reference page:


Thank you so much for the opportunity to be able to review your article!

VERSION 1 – AUTHOR RESPONSE

Reviewer 1: Dr Clare Allely
We greatly appreciate the supportive comments of the reviewer, and thank her for drawing our attention to a recent systematic literature review on fetal alcohol spectrum disorders in the criminal justice system. This article has been referred to in the introduction and added to the reference list of the revised manuscript (reference #20).

Reviewer 2: Jerrod Brown
We thank the reviewer for his informative and helpful comments. Our response is as follows:

Abstract
1. 1st sentence
Two additional commas have been added and quotes have been removed as suggested.

2. 2nd sentence
Due to the abstract word limit, we have chosen not to provide examples of primary and secondary effects here, and have instead covered this in the Introduction. However, so as not to cause confusion by using the word “secondary”, we have changed this sentence from “Secondary effects associated with FASD include engagement with justice services” to now read “Among individuals with FASD, engagement with justice services is common.”

3. 3rd sentence
Minor changes have been made to the wording as suggested.

4. 4th sentence
As we are currently still collecting data for this study, we feel present tense is most appropriate here. We have now specified that the screening tool will be developed using the prevalence findings to clarify the study aims.

5. 5th sentence
Due to the abstract word limit, we have not been able to elaborate on the translation of the results here. However, we have discussed this in detail in the Discussion section. We have added in “Translation of these results will…” rather than the original “Results will…”

6. 7th sentence
This sentence has been re-worded into two shorter sentences as suggested, and “for FASD” has been added to specify what the young people are assessed for by the multidisciplinary team.

7. 9th sentence
Minor changes have been made to the wording as suggested. However, we have purposefully chosen not to use the word “Secondary” when referring to information gathered outside the formal clinical assessments with the young people. This is due to many individual cases in our study to date in which the presence of information (or lack thereof) gathered from responsible adults, child protection case workers, teachers and custodial officers has been the deciding factor in a young person receiving a FASD diagnosis or not. For example, this information could provide confirmation of prenatal alcohol
exposure, or could indicate that a young person is impaired in the adaptive functioning domain. We would prefer that this information is seen as of equal importance to that gathered by our multidisciplinary team, and feel that labelling information as primary and secondary may diminish this.

Introduction
8. Page 3, Paragraph 4
Minor wording changes have been made throughout the paragraph as suggested.
9. Page 4, Paragraph 1
This paragraph has been reworded to provide more clarity.
10. Page 4, Paragraph 2
Minor wording changes have been made throughout the paragraph as suggested.
11. Page 4, Paragraph 3
Minor wording changes have been made, however the term Secondary has not been used for reasons outlined above. We have also chosen not to change the phrase “the individual’s strengths and difficulties” to “the individual’s strengths and challenges” for consistency reasons. These words were chosen for use by our multidisciplinary diagnostic team after consultation with other clinicians in the field and have now been used throughout our participants’ individualised feedback reports and shared with families, carers, detention centre staff and other parties as appropriate.

Methods
12. Page 5, Paragraph 4
To provide clarification about the detention centre population, the following has been added:
“Since January 2013, the detention centre population has fluctuated between 110-207 young people, but is currently at 142 young people at the time of publication. The population consists of young people on remand, those awaiting trial or bail determination and those who have been sentenced to detention.”
13. Page 9, Table 1
Written consent from the responsible adult is a requirement of this study, but is only obtained via post, email or fax once initial contact has been carried out by the research officer in person or via telephone. To clarify this, “…after communication with the research officer has occurred in person or via telephone” has been added into the Method of Collection column in the Responsible Adult row.

Discussion
14. Page 15, Paragraph 2
The challenges that arise when conducting research within a detention centre have been discussed here, including examples of changes that were made to the research processes following the pilot test. An additional sentence has been added to this paragraph to specify possible challenges:
“These challenges could involve the space available within the detention centre for the assessments to take place, the availability of officers to escort the young people to the assessments and access to the young people if they have been involved in an incident or do not feel like participating on a particular day.”

Additional Comments
15. We accept that a possible limitation of this study is the suggestibility and confabulation common among young people with FASD. However, the clinicians involved our multidisciplinary team did take this into consideration and reviewed the relevant literature when developing each of the assessment batteries. A symptom-validity measure was originally considered for use within the neuropsychology assessment to detect malingering or effort, however a decision was made not to include it due to cross-cultural concerns, and concerns regarding use with individuals with low IQs. Currently, the clinicians aim to detect inconsistencies in the multidisciplinary team meetings for each participant and do consider the possibility of lying, suggestibility, malingering and confabulation. No changes have been made to the manuscript in response to this comment as it is anticipated that this will be
discussed in more detail in future publications regarding this study.

References
16. The suggested references have been reviewed and added to the reference list, along with some additional references (reference #12, #15, #21 and #30).

| REVIEWER       | Jerrod Brown                      |
|               | United States                     |
| REVIEW RETURNED | 27-May-2016                      |

**GENERAL COMMENTS**

Thank you again for allowing me to review your article! I made a few more comments below to consider:

Ethics and Disseminated section;

Findings will be disseminated through peer-reviewed manuscripts

Anonymized findings will be...
No personally identifiable information will be released

Page 4 of 47
It is essential that FASD is identified early

instead, identified as early as possible

Page 5 of 47 2nd Paragraph 1st sentence
There is a critical need to determine the extent that young people with FASD are involved with the justice system. (What is the need, why is it critical? Better outcomes, better quality of life, reduced recidivism? What is the benefit that makes this critical?)

In order to reduce the negative impact on society there is a critical need to determine

This block:
Additionally, there is a lack of screening instruments for FASD that are valid and reliable within an Australian context[24], and limited capacity for screening and diagnosis due to geographical, service funding and training constraints[22,25,26]. Effective screening tools are essential for early identification of impairment[15,27].

Start here:
Effective screening tools are essential for early identification of impairment[15,27]. Unfortunately, there is a lack of screening instruments for FASD that are valid and reliable within an Australian context[24]. Further complicating the issue is a limited capacity for screening and diagnosis due to geographical, service funding, and training constraints[22,25,26].

Information should also be gained from those close to the individual such as family members and teachers, and external sources including school records, family history, medical records, social services information, and in particular, any previous
Information be obtained from those close to the individual such as family members and teachers, and external sources including school records, family history, medical records, social services information, and in particular, any previous diagnoses of physical or cognitive impairment to verify what was reported by the individual.

I look forward to reading your published article.

**VERSION 2 – AUTHOR RESPONSE**

Reviewer 2: Jerrod Brown
We thank the reviewer for his comments and recommendation for publication. Our response is as follows:

1. Abstract, Ethics and Dissemination section
   “Anonymised” has been added to the 2nd sentence as suggested.
   The additional suggested sentence has been added under the Ethics and Dissemination heading in the Methods section due to the Abstract word limit.
   This addition reads “No personally identifiable information will be released without assent from the participating young person and consent from their responsible adult.”

2. Introduction, 4th paragraph, 4th sentence
   Minor wording additions have been made as suggested.

3. Introduction, 6th paragraph, 1st sentence
   Wording additions have been made as suggested.
   This sentence now reads “In order to reduce the negative impact of crime and incarceration on society there is a critical need to determine the extent that young people with FASD are involved with the justice system[20,21].”

4. Introduction, 6th paragraph, 6th, 7th and 8th sentences
   Wording changes have been made as suggested.
   This section now reads “Effective screening tools are essential for early identification of impairment[15,24]. Unfortunately, there is a lack of screening instruments for FASD that are valid and reliable within an Australian context[25]. Further complicating the issue is limited capacity for screening and diagnosis due to geographical, service funding and training constraints[22,26,27].”

5. Introduction, 7th paragraph, 2nd sentence
   Minor wording changes and additions have been made as suggested.
Study protocol for screening and diagnosis of fetal alcohol spectrum disorders (FASD) among young people sentenced to detention in Western Australia

Hayley M Passmore, Roslyn Giglia, Rochelle E Watkins, Raewyn C Mutch, Rhonda Marriott, Carmela Pestell, Stephen R Zubrick, Candice Rainsford, Noni Walker, James P Fitzpatrick, Jacinta Freeman, Natalie Kippin, Bernadette Safe and Carol Bower

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