**Reviewer’s report**

**Title:** The role of oxytocin receptor gene (OXTR) DNA methylation (DNAm) in human social and emotional behaviour: a systematic narrative review.

**Version:** 0  **Date:** 09 Jan 2018

**Reviewer:** Nicholas Mischel

**Reviewer's report:**

Thanks for this nicely done resubmission. The clarification that this is done as a narrative synthesis of research identified via a systematic search rather than a systematic search AND systematic synthesis is well stated. The hint that DNAm of the OXTR gene may positively or negatively associated with certain types of impairments is an interesting finding that is highlighted.

At your discretion, request a few changes in the interest of increasing transparency and one's ability to reproduce the result of the systematic search.

Background

Pg5 ln12-14

"The purpose of this systematic review is to bring together the emerging evidence on relationships between OXTR DNAm and human socio-emotional functioning."

This is an example where the term "systematic review" is used and could be taken to describe both the processes used to identify manuscripts to review and the processes used to analyze and present the data from those manuscripts. Prefer to consistently use "narrative" in describing the processes used to analyze and present the data from those manuscripts and "systematic" only when describing the processes used to identify manuscripts to include in the analysis. Specifically, consistently being clear that this is a narrative analysis and presentation of data identified via a systematic and reproducible search process is important. The phrase "systematic narrative review" used in the title is good to describe the manuscript as a whole.

Methods:

Requesting more detail for the systematic search process.

Under "search strategy and inclusion criteria" pg 5 ln 52-54
"The search terms used were: 'oxytocin gene' or 'oxytocin receptor gene' and 'epigenetics' or 'DNA methylation'."

There may be a way to clarify which terms were grouped and the exact number of single searches performed. This could be taken as though 3 different searches were done (one for 'oxytocin gene', one for 'oxytocin receptor gene' and 'epigenetics', and one for 'DNA methylation'), or 4 different searches were done, each search using one of 'oxytocin gene' or 'oxytocin receptor gene' and one of 'epigenetics' or 'DNA methylation'. The latter would probably be assumed by most readers.

pg 6 ln 5-9

"Manual identification of studies was also employed by examining the reference lists of original research articles retrieved, as well as reviews published in this area."

Please describe somewhere whether any of the 19 studies were identified in this manner and which studies.

Please include more description of the manual identification process in the interest of increasing the ability of one to reproduce the search and screening results. Answers to these questions could be put in the methods section or shown in figures.

Did you examine the reference lists of the 73 articles left after abstract screening plus reviews that were excluded during abstract screening? Were any reviews that returned in the initial searches excluded from reference list examination? For which reason(s)? Was a manuscript identified for abstract or manuscript screening from a reference list based on the title, or were all manuscripts in a reference list screened by abstract? What criteria were used to include/exclude a manuscript from abstract or full text screening that was identified from a reference list and not database query?

Results

Under "maternal care" pg10 ln54-56

"Of the 44 SNPs examined, 68% where associated with proximal DNAm levels."

Replace "where" with "were"?
"discussion" last paragraph pg15 ln24-27

"The downside of these studies is the factor analysis is a data driven process and does not necessarily make biological sense"

replace with "...THAT factor analysis..."

Figures:

1. The numbers in the PRISMA diagram don't follow. 73 should be remaining after abstract screening and 19 remaining after full review rather than 374 and 73. In addition, could add where articles were included in title/abstract review and full text review which were identified from searching a reference list rather than searching the databases.

For "full review" The exclusion reason #3 seems to be inherent in #1 and unnecessary to specify.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
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Acceptable
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