A systematic review on oral and anal sexual behaviour among heterosexually active adolescents and adults in sub-Saharan Africa

Imran Morhason-Bello, Suzanna Francis, Severin Kabakama, Deborah Watson-Jones

Citation

Review question(s)
To describe estimates (prevalence) of oral and/or anal sexual behaviours

To evaluate the operational definition(s) or specific questions used to elicit responses

To describe reasons for engaging or otherwise in oral or anal sexual behaviours

To describe any perceived associated health risks or benefits of engaging in oral or anal sexual behaviour

Searches
We searched MEDLINE, EMBASE, African Wide Information, CINAHL, Global Health, Scopus and Popline databases up to 16th May 2015. For oral sex, we included oral sex, oral (sexual behaviour OR sexual practices), cunnilingus, oral vaginal contact, fellatio, oral penile contact, analingus, and oral anal contact. In the anal sex search, we used anal (anus OR anal cavity) sex or anal (sexual behaviour OR sexual practice) or ano-genital (sex or intercourse).

All searches were limited to articles within sub-Saharan Africa (SSA).

Types of study to be included
We will exclude : commentary reviews, letter to the editor, editorials, case series, and case reports. We will include other studies with exposure of interest.

Condition or domain being studied
Oral sex could mean oral contact with vagina (cunnilingus) or penile shaft (fellatio) or anus (analingus). Similarly, anal sex experience is defined as penetration (insertion) or reception of penile shaft into the anus. These two sexual behaviours are now being reported as part of the wide range of possible behaviours in heterosexual relationship. Multiple unprotected sexual (vaginal, oral and anal) intercourse is associated with increased risk of sexually transmitted infections including human immunodeficiency virus, human papillomavirus infections and some site-specific cancers. In general, published data from SSA showed that the region probably has one of the highest rate of unprotected sexual behaviour among adolescent and adults. However, it is uncertain what role oral and anal sexual behaviours play in human papillomavirus infections acquisition and sequelae.

Participants/ population
We are focusing on adolescent and adult populations up to 49 years irrespective of gender and marital status. We will exclude articles that focused exclusively on men who have sex with men (MSM), even if they have sex with both men and women, and non-consensual heterosexual intercourse.

Intervention(s), exposure(s)
Our exposures are reported oral and anal sex, including other synonyms listed in our search strategy.
**Comparator(s)/ control**
We will consider “no or none or never (oral or anal) sex”

**Context**
Apart from our target population, setting and study design, we also plan to include eligible articles that are either full text article, published abstracts or conference proceedings and unpublished data that reported (1) proportions of exposure(s), (2) odds ratio or relative risks with their confidence intervals.

**Outcome(s)**

**Primary outcomes**
Narrative or pooled estimates of proportions of oral and anal sex for adolescent and adult populations

**Secondary outcomes**
Reasons for engaging in oral and anal sexual behaviour

**Data extraction, (selection and coding)**
IMB and SK will independently extract necessary information from each study selected for the review to the agreed upon matrix; and any disagreement will be resolved first by discussion, and then by arbitration (SF or DWJ) or contact with the primary study author. The data to be extracted will include: first author’s name; journal name and publication date; country of study, population, study period, sampling method (probability or convenient), study designs, demographic information, definition of exposure of interest (oral or anal sex or both), method of interview, and measures reported about the exposure of interest (proportions and odds ratio or relative risks with their confidence interval).

**Risk of bias (quality) assessment**
The Newcastle-Ottawa quality assessment rating scale for cohorts and case-control studies, and the adapted scale for cross-sectional studies will be used to assess each eligible study.

**Strategy for data synthesis**
We plan to first perform narrative synthesis our objectives. If sufficient homogeneity exists, we will perform a meta-analysis. Random effect estimates of proportions for oral and anal sex for adolescent and adult populations will be generated with its confidence intervals separately, and the summary results will be presented in tabular form with their heterogeneity test (I-squared).

**Analysis of subgroups or subsets**
We plan to perform sensitivity analysis if a significant heterogeneity exists and thereafter, subgroup analyses based on study design, sub-regions within SSA, population (adolescent vs adult), gender status, and adjusted estimates of exposure of interest (oral or and anal sex).

**Dissemination plans**
We plan to present findings at international conference and submit for publication in peer reviewed journal

**Contact details for further information**
Dr Morhason-Bello
Department of Clinical Research, Faculty of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, WC1E 7HT
imran.morhason-bello@lshtm.ac.uk

**Organisational affiliation of the review**
None

**Review team**
Dr Imran Morhason-Bello, London School of Hygiene and Tropical Medicine, London, UK and University of Ibadan,
Ibadan, Nigeria
Dr Suzanna Francis, London School of Hygiene and Tropical Medicine, London, UK
Dr Severin Kabakama, Mwanza Intervention Trials Unit, Mwanza, Tanzania
Dr Deborah Watson-Jones, London School of Hygiene and Tropical Medicine, London, UK

Collaborators
Dr Kathy Baisley, London School of Hygiene and Tropical Medicine, London, UK
Dr Silvia de Sanjose, Catalan Institute of Oncology, Barcelona Spain
Professor Philippe Mayaud, London School of Hygiene and Tropical Medicine, London, UK

Details of any existing review of the same topic by the same authors
none

Anticipated or actual start date
16 May 2015

Anticipated completion date
30 October 2015

Funding sources/sponsors
None

Conflicts of interest
None known

Other registration details
none

Language
English

Country
England, Nigeria, Tanzania

Subject index terms status
Subject indexing assigned by CRD

Subject index terms
Adolescent; Adult; Africa South of the Sahara; Heterosexuality; Humans; Sexual Behavior

Stage of review
Ongoing

Date of registration in PROSPERO
13 August 2015

Date of publication of this revision
13 August 2015

DOI
10.15124/CRD42015025311

Stage of review at time of this submission

<table>
<thead>
<tr>
<th>Preliminary searches</th>
<th>Started</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Activity</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>Piloting of the study selection process</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Formal screening of search results against eligibility criteria</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Data extraction</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Risk of bias (quality) assessment</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Data analysis</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**PROSPERO**

*International prospective register of systematic reviews*

The information in this record has been provided by the named contact for this review. CRD has accepted this information in good faith and registered the review in PROSPERO. CRD bears no responsibility or liability for the content of this registration record, any associated files or external websites.