BARRIERS AND FACILITATORS TO PREVENTIVE INTERVENTION PROGRAMMES FOR THE DEVELOPMENT OF OBSTETRIC FISTULAS AMONG WOMEN IN SUB-SAHARAN AFRICA OF REPRODUCTIVE AGE: A SYSTEMATIC REVIEW

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INTRODUCTION

BACKGROUND
Obstetric fistula is a debilitating childbirth injury seen only in the developing world in which tears occur between the vagina and the bladder, and/or the vagina and the rectum (Bangser, 2006). It represents a major public health issue for women and their communities within developing settings, particularly in Africa and Southeast Asia. These tears result in the incontinence of bodily fluids such as urine, blood, and/or faeces (Banke-Thomas, 2013). These lead to secondary effects such as the marginalisation and social exclusion of women within their communities (WHO, 2014).

With an estimated amount of more than two million women living with untreated fistulas, worldwide, every year there are between 50,000 to 100,000 new cases of obstetric fistula, worldwide (WHO, 2014). An obstetric fistula can be treated and managed with reconstructive intravaginal surgery; however, the majority of women who develop this injury during childbirth are unable to afford this treatment (UNFPA, 2015). Furthermore, it can be prevented through timely access to competent emergency obstetric care (EmOC) on the onset of labour complications such as prolonged and obstructed labour (Fistula Foundation, 2016).

Our initial searches for systematic reviews on obstetric fistula through several databases revealed seven systematic reviews (Adler et al., 2013; Banke-Thomas et al., 2014; Bellows et al., 2014; Cowgill et al., 2015; Frajzyngier, Ruminjo and Barone, 2012; Lombard et al., 2015; Tanywe and Matchawe, 2014). Of the systematic reviews published, three examined the treatment and rehabilitation of fistulas (Bellows et al., 2015; Frajzyngier, Ruminjo and Barone, 2012; Lombard et al., 2015); another two examined the prevalence of fistulas in relation to other reproductive morbidities (Adler et al., 2013; Cowgill et al., 2015); one examined the experiences of women living with
the injury (Tanywe and Matchawe, 2014); and the last one examines preventive strategies in Sub-Saharan Africa (Banke-Thomas et al., 2014).

RATIONALE
Obstetric fistulas are a topic that requires extensive researched as they are completely preventable. Additionally, it has adverse effects on women due to the very nature of this injury. This is an injury that is completely preventable if proper measures are taken to educate women about proper birthing practices while concurrently strengthening the current health system within the various countries. Although there are various preventive programs that have been put in place, obstetric fistulas still occur in these same places. It is for this reason that our systematic review endeavours to better understand the barriers and facilitators to the preventive interventions. This is in order to then put in place tailored and impactful policies and strategies that take these factors into account in order to reduce the number of women who develop fistulas.

OBJECTIVES
The objective of this systematic review is to understand the barriers and facilitators to the preventive interventions for the development of obstetric fistulas in Sub-Saharan African women of reproductive age. This is done by examining the following factors:
1. Identify the preventive interventions that have currently been put in place to prevent the development of fistulas in Sub-Saharan African women of reproductive age;
2. Identify the barriers that serve as hindrances to expectant women accessing these preventive interventions;
3. Identify the facilitators that get expectant women to these preventive interventions in a timely manner.

SEARCH METHODS
INFORMATION SOURCES
For the purpose of this systematic review, the following electronic databases will be used to find articles published between 1960 to the present, for this systematic review:
1. PubMed,
2. EMBASE (OVID),
3. MEDLINE (OVID),
iv. Cochrane Library
v. CINAHL (EBSCO),
vi. POPLINE,
vii. Web of Science,
viii. CABI-Global health (EBSCO), and
ix. HMIC (OVID).

Additional resources include Google scholar, WHO Reproductive Health Library, as well as grey literature, which includes the cites of relevant organizations and initiatives. Additionally, relevant authors and experts in the field will be contacted for further information. A reference search will also be done, in which the bibliographies of the relevant articles will be searched as well as citation indexes, so as to reveal more sources related to our research.

SEARCH TERMS
The search strategy will include terms using MESH terms and free text of a variation of the following: obstetric fistula, prevention, and Sub-Saharan Africa. In regards to the disease, the terms ‘fistula, obstetric fistula, vaginal fistula, vesicovaginal fistula, and rectovaginal fistula’ will be used. Regarding the location, the terms ‘Africa and Africa South of the Sahara’ will be used. Search terms for the intervention will be ‘preventive health services and prevention’. A variation of these terms will be used in the various databases listed above. An example of the actual search can be seen in Table 1.

<table>
<thead>
<tr>
<th>Term number</th>
<th>Search term</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>fistula/ or exp vaginal fistula/(vesic?vaginal fistul* or recto?vaginal fistul* or obstetric fistul*)</td>
<td>20683</td>
</tr>
<tr>
<td>2</td>
<td>exp &quot;Africa South of the Sahara&quot;/ or Africa/</td>
<td>158401</td>
</tr>
<tr>
<td>3</td>
<td>exp Preventive Health Services/</td>
<td>476802</td>
</tr>
<tr>
<td>4</td>
<td>1 or 2</td>
<td>21188</td>
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<tr>
<td>5</td>
<td>prevent*</td>
<td>1014849</td>
</tr>
<tr>
<td>6</td>
<td>4 or 6</td>
<td>1389310</td>
</tr>
<tr>
<td>7</td>
<td>3 or 5 or 7</td>
<td>71</td>
</tr>
</tbody>
</table>
ELIGIBILITY CRITERIA
All articles published on the pre-selected databases will be screened. Articles examining obstetric fistula in Sub-Saharan Africa will be chosen, incorporating the following inclusion and exclusion criteria. Only articles that are in English or French will be assessed.

Articles discussing the following factors will be examined:

PROBLEM/ POPULATION
Obstetric fistula in Sub-Saharan African women of reproductive age.

INTERVENTION
Intervention programs aimed at preventing the development of obstetric fistulas within the Sub-Saharan Africa context.

COMPARATOR
Women who did not receive the preventive intervention.

OUTCOME
i. Identify the barriers to the preventive interventions, and
ii. Identify the facilitators to the preventive interventions.

INCLUSION CRITERIA
Articles that will be included will have to meet the following criteria:
   i. Published from January 1960 up to the present; in English or French
   ii. Discuss a country/ countries in Sub-Saharan Africa;
   iii. Discuss an intervention that has been implemented with the primary aim of preventing the development of fistulas;
   iv. Discuss fistulas that are a result of childbirth, restricted to vesicovaginal fistulas, and rectovaginal fistulas.

EXCLUSION CRITERIA
Articles that will be excluded will meet the following criteria:
   i. Discuss fistulas that are due to causes other than childbirth, for example, sexual trauma or surgery, and
ii. Restricted to other aspects of obstetric fistula such as treatment, repair outcomes, experiences of living with this injury etc.

ARTICLE SELECTION

Articles will be selected using the three-stage process proposed by the PRISMA protocol; this will be done by three reviewers (EL, LD, AL). In the first stage, articles will be identified through searching databases, as well as through grey literature by EL. This stage also includes the removal of duplicate articles. In the second stage, through the use of the inclusion criteria described in a previous section, the titles will be screened (EL), followed by the screening of the abstracts of the included articles (EL and LD). The articles that have been included thus far will be extracted in their full-text version and screened by EL and LD. Once the list of included articles have been finalized, a quality assessment will be carried out using the CASP checklist (EL). A third assessor (AL) would resolve any discrepancies between the two reviewers, if necessary.

DATA MANAGEMENT AND EXTRACTION

The list of articles that will be used will be managed through the reference management software, Endnote. The following pertinent data from the articles will be extracted into an Excel sheet:

i. Review author (1)
ii. Review author (2)
iii. Article title
iv. Author(s)
v. Year published
vi. Type of article
vii. Source of article
viii. Country of reference
ix. Study design
x. Year(s) study was carried out
xi. Setting
xii. Methods
xiii. Patient characteristics: age, ethnicity, parity, clinical diagnosis
xiv. Reason for inclusion
xv. Reason for exclusion
xvi. Preventive intervention implemented
xvii. Way of measuring outcomes
xviii. Outcome of the preventive intervention (1)
QUALITY ASSESSMENT

The included studies will be appraised before the synthesis of the data, using one of the suitable CASP checklists. Through the CASP checklist we can assess the following (CASP, 2014):

i. Whether the study had a clear set of objectives the researchers were working towards;

ii. Whether they used the appropriate methods to collect their data;

iii. Whether consideration was given to ethical issues; and

iv. Whether the data was analysed appropriately.

DATA SYNTHESIS

The method of data synthesis relies heavily on the type of studies that we find. If the data that we find is relatively homogeneous, we would most likely conduct a meta-analysis, in which we would combine the data from the various independent studies (Crombie and Davies, 2009). However, it is probable that a significant number of the studies are qualitative, in which case a narrative synthesis will be conducted. The narrative approach aims to identify the similarities and differences, as well as patterns within the various studies (Ryan, 2013).
REFERENCES


Tanywe, Asahngwa; Matchawe, Chelea. The experiences of women and young girls living with obstetric fistula in developing countries: a systematic review. The JBI Database of
