Association between mistreatment/obstetric violence during childbirth and perinatal outcomes: a systematic review
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Review Team
Ms. Caitlin Williams, University of North Carolina at Chapel Hill
Dr. Karen Klein, Instituto de Efectividad Clínica y Sanitaria
Dr. Malena Correa, Instituto de Efectividad Clínica y Sanitaria
Ms. Gabriela Cormick, Instituto de Efectividad Clínica y Sanitaria
Ms. Celeste Jerez, Instituto Interdisciplinaria de Estudios de Género, Facultad de Filosofía y Letras, Universidad de Buenos Aires
Dr. Agustín Ciapponi, Instituto de Efectividad Clínica y Sanitaria
Mr. Daniel Comandé, Instituto de Efectividad Clínica y Sanitaria
Dr. José Belizán, Instituto de Efectividad Clínica y Sanitaria
Dr. Fernando Althabe, Instituto de Efectividad Clínica y Sanitaria

Background

Description of the condition

Each year, approximately 303,000 women die from complications of pregnancy and childbirth. Global efforts to reduce maternal mortality have primarily focused on ensuring women have access to timely, quality emergency obstetric care, generally by attempting to increase rates of facility delivery as potentially life-threatening complications can arise without warning. However, poor quality care, including disrespectful and abusive care, may affect care-seeking behavior and undermine efforts to convince women to give birth in a facility, ultimately thwarting maternal mortality reduction campaigns. Thus, efforts have recently begun to incorporate women’s experiences and perceptions of care into measurements of quality of care.

Currently there is no scientific consensus for how disrespect and abuse or mistreatment (referred to as “mistreatment” from here on for brevity) during childbirth should be defined or measured, making an accurate estimation of prevalence difficult. However, an emerging body of literature suggests that mistreatment is pervasive, both in the public and private sectors. More research is needed to determine the exact root causes – many of which may be context-specific – in order to begin developing and testing effective interventions to combat mistreatment during childbirth.

Description of mistreatment during childbirth

Bohren et al. (2015) synthesized an overarching typology with seven distinct types of mistreatment: physical abuse; sexual abuse; verbal abuse; stigma and discrimination; failure to meet professional standards of care; poor rapport between women and providers; and health system conditions and constraints. Grouped underneath each of these higher-order categories are a number of more specific elements, including unconsented care, negligence and abandonment, disclosing one’s HIV status, etc. For our analysis, we will use Bohren et al.’s typology, expanding it if necessary to include new phenomena uncovered in the qualitative literature.

How mistreatment during childbirth might affect health outcomes

Much of the current attention to mistreatment has focused on its effect on women’s care-seeking behavior at the time of birth, either because a woman’s experience of mistreatment during childbirth discourages her from returning to a health facility for a subsequent birth, or because a woman’s perception that she will be mistreated at a health facility prevents her from seeking care in the first place. However, we propose that there may also be a direct association between mistreatment and adverse maternal, perinatal and infant outcomes in the same birth.

In particular, mistreatment may contribute to maternal postpartum depression and post-traumatic stress disorder, particularly in cases of extreme abuse. Mistreatment may also be associated with decreased rates of breastfeeding initiation. Negligence and abandonment of the woman by medical professionals may increase the risk that
complications go unnoticed and result in adverse health outcomes. Finally, experiences of mistreatment may also affect more proximal care-seeking behavior, such as that related to the postpartum visit or infant health visits.

*Why it is important to do this review*

In 2015, Bohren et al. conducted a systematic literature review to identify the various dimensions of mistreatment and develop a typology to guide future research efforts. However, this review did not directly examine the effect of mistreatment on health outcomes. Rather, in accordance with Bowser and Hill’s 2010 landscape analysis, it assumed that mistreatment during childbirth functioned as an upstream factor that influenced women’s decision to seek out facility delivery in subsequent pregnancies, exposing women and neonates to the risks associated with labor and delivery birth without the assistance of a skilled birth attendant. Though this pathway is generally perceived as intuitive and many experts agree on its validity, it has not yet been definitively demonstrated that there is actually a direct correlation between experiences of mistreatment, low rates of institutional delivery, and adverse maternal and perinatal outcomes.

In addition, while this mechanism may help explain high rates of adverse maternal and perinatal outcomes in contexts where rates of facility delivery are low, it may not be applicable to contexts where institutional delivery is the norm, such as many Latin American and Caribbean (LAC) countries.

An extensive body of literature exists on mistreatment during childbirth in Latin America and the Caribbean, though much of it has been developed by legal scholars, anthropologists, and feminist scholars and so lies outside of the purview of Bohren et al.’s 2015 review. This literature indicates that mistreatment may exist in many clinical settings across the region, but may not affect rates of institutional delivery, which typically surpass 80% of all births. However, some of this literature also refers to other adverse outcomes, including stillbirth and maternal mortality, suggesting a need to identify other pathways by which mistreatment may contribute to poor outcomes.

Thus, this review will address two important gaps in the literature: 1) determining whether there is an association between mistreatment and adverse outcomes; and 2) identifying pathways through which mistreatment may contribute to adverse health outcomes related to the same pregnancy. Taken together, this information will contribute to the development a research agenda for the emerging field of study around what is alternately called obstetric mistreatment, disrespect and abuse during childbirth, obstetric violence, and respectful maternity care.

**Objectives**

**Primary Objective:** Determine whether there is an association between mistreatment during facility delivery and adverse maternal, perinatal and/or infant health outcomes related to the same pregnancy.

**Secondary Objective:** Explore potential pathways through which mistreatment may contribute to adverse health outcomes.

**Methods**

**Inclusion Criteria**

This review will include quantitative, qualitative, and mixed-methods studies that discuss specific maternal, perinatal, and infant health outcomes as they relate to mistreatment during labor and delivery. Analysis of quantitative and qualitative data will be conducted separately.

In order to address Objective 1, quantitative data will be used to calculate the odds of experiencing an adverse outcome between women who experienced mistreatment and those who did not (experience of mistreatment measure either by per self-report or by direct observation).

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1 Per UNICEF, the exceptions to this rule are Bolivia (71% institutional deliveries), Guatemala (65%), and Haiti (36%).
In order to address Objective 2, qualitative data will be used to identify the potential pathways through which mistreatment during childbirth may be associated with adverse health outcomes either during labor and delivery, or in the postpartum period through the infant’s first birthday.

**Types of studies**

Included studies will be drawn from a wide variety of literatures including, but not limited to, those pertaining to medicine, public health, law, anthropology, sociology, and feminist critique. The review will also include grey literature pertaining to mistreatment and maternal and perinatal health outcomes, such as human rights reports. The review will include studies published since 2000, the year that marked the launch of the Millennium Development Goals (MDG 5 (Reduce maternal mortality by 75%) contributed to a dramatic increase in the focus placed on ensuring that women gave birth in health facilities with the aid of a skilled birth attendant).

**Types of participants**

This study will include all women of reproductive age who have given birth in a health facility under the supervision of a skilled birth attendant (physicians, midwives, nurses) and students or residents within these professions. The context for this review is any level of health facility globally that regularly provides labor and delivery care (health post, community-level health centers, rural or urban hospitals, regardless of whether they pertain to the public or private health sector).

**Phenomena of interest**

Experiences of mistreatment, disrespectful and abusive treatment, and/or obstetric violence reported by women or observed by trained professionals during labor, delivery and the immediate postpartum period (first 48 hours or hospital discharge, whichever occurs first) within a health facility.

**Types of outcome measures**

Outcomes measures of interest for this study cover the temporal range of the labor and delivery period to the late postpartum period (1 year postpartum). See Table 1 below for proposed metrics:

<table>
<thead>
<tr>
<th>Table 1: Proposed outcomes</th>
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<tr>
<td>Maternal mortality</td>
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<tr>
<td>Maternal morbidity</td>
</tr>
<tr>
<td>Stillbirth</td>
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<tr>
<td>Infant mortality</td>
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<td>Infant morbidity</td>
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**Search Strategy**

The search strategy aims to find both peer-reviewed and grey literature that describes the nature of the relationship between mistreatment during labor and delivery and select adverse maternal, perinatal, and infant health outcomes. We will utilize a three-step search strategy to identify studies meeting the above inclusion criteria: (1) we will conduct a comprehensive search of electronic bibliographic databases for published work, both peer-reviewed and grey literature, on mistreatment and indicators of interest; (2) we will search the reference lists of primary studies included in the review; and (3) we will hand-search the archives of select human rights organizations that are known to publish reports on mistreatment and obstetric violence, and the archives of the government offices charged with managing cases of mistreatment and obstetric violence in countries with an established legal framework around obstetric violence (Argentina, Mexico, and Venezuela). Given that this is a rapidly-evolving area, all searches will be re-run immediately prior to analysis with new studies retrieved for inclusion, to ensure that the final review includes the most current information.

Moreover, we will contact relevant subject experts for suggestions of additional studies to include. The search will not have any language restrictions.
Dissertations that meet the inclusion criteria, are indexed in the selected databases, and retrieved in the search will be included. In the event that we find studies with unpublished data that may be of use in the analysis, we will contact the corresponding authors to solicit access to relevant data.

**Databases**

The databases to be searched include MEDLINE (using PubMed), CINAHL, Embase, the Cochrane Library, LILACS, PsychINFO, and SocINDEX.

To identify relevant grey literature, we will conduct the same search in the WHO Global Health Library, Popline, and Google Scholar.

We will hand-search the archives of Amnesty International, the Center for Reproductive Rights, the Grupo de Información en Reproducción Elegida, the Observatorio de Violencia Obstétrica – Chile, and the Rede pela Humanização do Parto e do Nascimento, as well as the appropriate government entities charged with handling reports of mistreatment/obstetric violence in the three countries with pertinent active legislation (Argentina, Mexico, and Venezuela).

**Search Terms**

Keywords will be used for the search, and include obstetric violence, disrespect and abuse, disrespectful care, respectful care, dehumanizing care, unconsented care, parturition, childbirth, birth, pregnant, pregnancy, labor/labour, and delivery.

**Data collection and analysis**

**Selection of studies**

Citations identified in the search will be imported into Covidence ([https://www.covidence.org](https://www.covidence.org)) and de-duplicated. Covidence is an online software designed to facilitate the initial stages of systematic reviews by allowing independent revision of references and resolution of discrepancies, while also incorporating quality assessment. The initial screening will be conducted by comparing the titles and abstracts of all identified citations to the eligibility criteria detailed above. Any study deemed irrelevant based on the title and abstract will be excluded with the reason for exclusion noted. If relevance is not clear based on the title and abstract, the full-text will be obtained and reviewed to determine whether the study merits inclusion. This initial screening will be conducted by two investigators, with discrepancies resolved through discussion and consensus.

Studies that investigate the effect of mistreatment outside of health facilities (e.g., perpetrated by a traditional birth attendant) or at a moment other than labor and delivery (e.g., childhood experience of mistreatment, or mistreatment during antenatal care) will be excluded. Studies that do not use primary data will also be excluded.

For the quantitative portion of the analysis, any study that does not distinguish between women who experienced mistreatment and those who did not will be excluded. Studies included in this section must have information on both women’s experiences of mistreatment and also one or more of the indicators of interest.

For the qualitative portion of the analysis, studies published in a language other than English, French, Spanish, or Portuguese will be excluded. Studies included in this section must contain qualitative data on women’s experiences of mistreatment during childbirth and one of more of the indicators of interest.

**Data extraction and management**

We will use a standardized spreadsheet to extract data regarding: publication details, study objectives, study design, study details (date and follow-up), study setting, population details (n, demographics), provider information, dimensions of mistreatment discussed, health outcomes observed, data collection, analysis methods, themes, and conclusions.

**Assessment of risk of bias/methodological quality**

**Quantitative Analysis:** The quality of the included studies will be assessed using an online adaptation of the Newcastle – Ottawa Quality Assessment Scale (NOS scale;
http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp) for non-randomized studies in meta-analyses. Two reviewers will independently assess the quality of each included study. Discrepancies in ratings between reviewers will be discussed and if consensus is not reached a third reviewer will be consulted. No studies will be excluded based on the quality rating, but rather, the quality rating will serve to guide researchers in assessing confidence of a study’s findings.

The NOS scale for cohort studies assesses three main domains.

The first domain evaluates the selection of the exposed, non-exposed cohorts and the ascertainment of exposure. For the purpose of this review, we are defining a study as at low risk of bias if the exposed cohort was derived from the general community, if the non-exposed cohort was drawn from the same source as the exposed cohort, and if women’s experiences of mistreatment were identified using a validated measure (e.g., direct observation or structured interview). Conversely, the study will be classified as at high risk of bias if the cohorts were derived from a special group or there was no description of how women’s experiences of mistreatment were identified. The first domain also evaluates the certitude that the cohorts did not have the outcome at the beginning of the study. The outcomes of interest all develop as a result of birth, or in the postpartum period, while the study period of interest is during labor and delivery. Thus, temporally it is impossible for cohort members to have the outcomes at the start of the study.

The second domain assesses comparability of the cohorts. We are defining a study as at low risk of bias if the study controlled for variables affecting risk of developing perinatal complications such as age or parity, and as high risk of bias if results were not adjusted.

The third domain the outcome, by evaluating how the outcome was assessed, whether the follow-up time was sufficient to develop the outcome, and whether an adequate number of subjects are accounted for in the follow-up period. We will classify the study as at low risk of bias if the outcomes were identified through record linkages or direct observation as part of the study protocol, and as high risk of bias if they were identified through self-report. For the second element, we will consider a study at low risk of bias if it allowed enough time for the outcome in question to have developed/occurred (e.g., complication during childbirth, scheduled immunization of infant). Finally, we will define a study as at low risk of bias if fewer than 10% of participants were lost to follow-up (e.g., late postpartum interview), or if an adequate description is provided of those lost to follow-up.

**Qualitative Analysis:** The quality of the included studies will be assessed using an online adaptation of the Critical Appraisal Skills Programme (CASP) quality-assessment tool for qualitative studies (http://www.casp-uk.net/#!casp-tools-checklists/c18f8), which will afford reviewers a space to document potential methodological challenges to the primary studies. Each primary study will be assigned a quality rating of “high”, “medium”, or “low” based on evaluation by two reviewers and active discussion until consensus is reached in the case of rating discrepancies. If no consensus is reached, a third reviewer will be consulted. No studies will be excluded based on the quality rating, but rather, the quality rating will serve to guide researchers in assessing confidence of a study’s findings.

**Measures of treatment effect**

N/A

**Unit of analysis issues**

As definitions of obstetric mistreatment and its dimensions have not yet been codified, we expect to find considerable heterogeneity among the studies in terms of the exposure. For the purposes of addressing the primary objective, we will use a broad “mistreatment” category that includes any type of mistreatment of women by providers during facility-delivery, regardless of the specific dimension(s) discussed. If sufficient detail is available about distinct dimensions of mistreatment and their relation to adverse health outcomes, we will break out the potential pathways in accordance with distinct dimensions of mistreatment, rather than the overarching mistreatment category.

**Dealing with missing data**

N/A
Assessment of heterogeneity
N/A

Assessment of reporting biases

The assessment of reporting biases is covered in the Newcastle – Ottawa Quality Assessment Scale described above (see “Assessment of risk of bias/methodological quality” above).

Data synthesis

Quantitative analysis: In order to address the primary objective, we will calculate the association between a general category of mistreatment and each outcome of interest. Specifically, we will conduct a meta-analysis of crude and adjusted odds ratios (OR and aOR) with 95 % confidence intervals (CI) using the generic inverse variant method.

We will also conduct sub-group analysis by each dimension of mistreatment, as categorized by Bohren et al., to account for variability in definitions of mistreatment across studies, given that the definition has evolved considerably over the last few years of research.

We will use women who did not experience mistreatment as the reference group. We note that this may introduce bias given that some studies rely on self-report and women may not necessarily recognize mistreatment as such, if it is normalized within the context of maternity care.

When available data do not permit meta-analysis (e.g. incompatible definitions of mistreatment reported), we will summarize data in narrative form without further attempt at quantitative synthesis.

Qualitative analysis: In order to facilitate data synthesis, we will develop a spreadsheet of all extracted data and conduct an initial round of coding using thematic analysis methods. We propose using a mix of inductive and deductive methods, using the framework developed by Bohren et al. as a starting point for deductive coding of mistreatment and the below third- and second-order health outcomes themes (Table 3), and then adding additional codes inductively as needed to capture phenomena not well-described with the initial dimensions. All text will be classified into one or more mistreatment themes and one or more health outcomes themes in an iterative manner. Results will be abstracted based on the health outcomes domains, in order to help establish potential pathways by which mistreatment may lead to adverse health outcomes.

<table>
<thead>
<tr>
<th>Table 3: Proposed deductive coding framework</th>
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<tbody>
<tr>
<td>Mistreatment</td>
</tr>
<tr>
<td>Third-order themes</td>
</tr>
<tr>
<td><strong>Third-order themes (Bohren et al., 2015)</strong></td>
</tr>
</tbody>
</table>
| Physical abuse | Use of force  
Physical restraint |
| Sexual abuse | Sexual abuse |
| Verbal abuse | Harsh language  
Threats and blaming |
| Stigma and discrimination | Discrimination based on sociodemographic conditions  
Discrimination based on medical conditions |
| Failure to meet professional standards of care | Lack of informed consent and confidentiality  
Physical examinations and procedures  
Neglect and abandonment |
| Poor rapport between women and providers | Ineffective communication  
Lack of supportive care  
Loss of autonomy |
| Maternal health (physical) | Maternal mortality/morbidity  
Use of family planning |
| Maternal health (mental) | Postpartum depression  
Postpartum PTSD |
| Infant health | Stillbirth  
Infant mortality/morbidity  
Bonding  
Breastfeeding  
Infant weight gain  
Immunization  
First newborn visit |
| Health system conditions and constraints | Lack of resources | Lack of policies | Family culture | 
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### Subgroup analysis and investigation of heterogeneity

For description of subgroup analysis, see “Data synthesis” above.

### Sensitivity analysis

N/A

### Contributions of authors

CW and KK developed the review protocol. DC developed and refined the search strategy. CW, KK, MC and GC will conduct the screening of articles, data extraction, and analysis. CW will take the lead in synthesizing and writing up results, with input from the whole team. CJ will provide additional technical support for the analysis of qualitative results. AC, JB and FA will provide technical oversight, content support, and project management and coordination.

### Potential conflict of interest

None known.