Table C, Supplemental Digital Content. Mixed Methods Appraisal Tool 2018 for quality assessment

(Tool developed by Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, et al. The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. Educ Inf 2018;34:285–91. https://doi.org/10.3233/EFI-180221.)

The MMAT tool is used to evaluate all included manuscripts, that contain some amount of clinical investigation. Manuscripts only describing thoughts and opinions are rated as “very low” quality of evidence. Only relevant sections of the MMAT tool is filled out.

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| **Study:**  **Cain22 1984** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? | X |  |  | Semi-structured Interview using interview guide, alternating questions to the parents |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  | X | Not stated if interviews were recorded or transscribed |
| 1.3. Are the findings adequately derived from the data? |  |  | X | No information on how data were derived from interviews |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  | X | As above |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  | X | To little information to evaluate. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? | X |  |  |  |
| 4.2. Is the sample representative of the target population? |  | X |  | Participants are volunteers, who responded to a request in a childbirth education newsletter; could introduce selection bias. |
| 4.3. Are the measurements appropriate? | X |  |  | In-home observations following a prespecified plan and defined areas of focus. |
| 4.4. Is the risk of nonresponse bias low? | X |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? | X |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Svensen23 1985** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? | X |  |  | 100 consecutive caesareans 1981-83. Approx. 75% of parents replied to the questionnaire. |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? | X |  |  | Questionnaire and medical journal review for items regarding the cs. |
| 3.3. Are there complete outcome data? |  |  | X | Protocol not available.  Complete regarding information from medical journals. 75% response rate on questionnaires. Unknown how the questionnaires were designed or if all items were reported. |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  | X | Little information on method and material. Unknown how the questionnaires were distributed, if all medical journals could be reviewed or some parents were excluded or declined to participate. |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  | X |  | Epidural anesthesia became an option in 1981, and when used, the father could attend the cs. This became routine in 1982-83, so it concerns most of the included cs, but a few (how many is unknown) was from before this change. |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Sakala24 1988** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? | X |  |  | 350 consecutive patients having cs in a single center. Note that stillbirths, congenital anomalies and gestational age<37 weeks are excluded, leaving 227 cs. |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? | X |  |  | Almost all significant differences between groups disappeared when controlling for type of anesthesia. |
| 3.3. Are there complete outcome data? |  |  | X | Protocol not available. |
| 3.4. Are the confounders accounted for in the design and analysis? |  | X |  | Patients are divided observationally, retrospectively in two groups; support person present or absent during cs. Reason for the support person being present or absent is unknown. |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  | X | It is unknown why the partner is sometimes present and sometimes absent and why general vs regional anesthesia is chosen. |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Ceronio27 1995** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? | X |  |  | The aim is to investigate how parents are affected by an unplanned cs. |
| 1.2. Are the qualitative data collection methods adequate to address the research question? | X |  |  | A small population (5 couples) was chosen.  Phenomenological approach, explorative and descriptive. Interview on day three (open) and six weeks (semi-structured) after the cs.  Interviews were transcribed and coded for content.  Authors note that the use of a tape recorder seemed to unsettle the participants. |
| 1.3. Are the findings adequately derived from the data? |  |  | X | No quotes are presented.  The population is 5 white couples from middle and higher socioeconomic group in a private clinic in South Africa, so it is probably not representative of the whole population. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  | X | Authors state that generalisation based on the limited material is not possible. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? | X |  |  | The authors are aware of the limitations of their material. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Tarkka25 2005** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? |  |  | X |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  | X | Not enough information available to evaluate. |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  | X | Not enough information available to evaluate. |
| 3.3. Are there complete outcome data? |  |  | X | Not enough information available to evaluate. |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  | X | Not enough information available to evaluate. |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  | X | Not enough information available to evaluate. |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Savage26 2007** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? | X |  |  | A postal questionnaire was circulated to all 221 clinical directors in obstetrics and gynaecology, followed by two reminders. 68.3% replied. |
| 4.2. Is the sample representative of the target population? |  |  | X | No information available on non-responders. |
| 4.3. Are the measurements appropriate? | X |  |  | National survey, broad range of questions. |
| 4.4. Is the risk of nonresponse bias low? |  | X |  | To reminders were sent out. No information available on non-responders. |
| 4.5. Is the statistical analysis appropriate to answer the research question? | X |  |  | Limited use of statistical analyses. |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **McIlmoyle42 2010** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  | X | A questionnaire was given to relevant staff at a single center. Not stated if all relevant staff was contacted, or how many in total. |
| 4.2. Is the sample representative of the target population? |  |  | X | As above. |
| 4.3. Are the measurements appropriate? | X |  |  | Four questions were asked, exploring the aim. |
| 4.4. Is the risk of nonresponse bias low? |  |  | X | Response rate not stated. Reasons for not responding not stated. Not stated what was done to improve response rate. |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  | No analyses applied. |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **McIlmoyle43 2012** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  | X | 109 questionnaires were distributed after cs, elective and emergency. Not stated how this sample was defined. |
| 4.2. Is the sample representative of the target population? |  |  | X | 109 questionnaires were completed. It seems unlikely that 100% participated, but it is not stated if anyone declined.  Not stated of there were any in- or exclusion criteria. |
| 4.3. Are the measurements appropriate? | X |  |  | Parents were asked about their experience with the recent cs. |
| 4.4. Is the risk of nonresponse bias low? |  |  | X | Not enough information available to evaluate. |
| 4.5. Is the statistical analysis appropriate to answer the research question? | X |  |  | Basic descriptive. |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Lindberg28 2013** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? | X |  |  | The aim is to describe new fathers’ experiences of care in relation to complicated childbirth. |
| 1.2. Are the qualitative data collection methods adequate to address the research question? | X |  |  | Fourteen fathers were contacted, eight consented to participate. Interviews 1,5-3 months after cs. Interview guide was used and is described. A pilot interview was held. Interviews were recorded, transcribed verbatim and reviewed. |
| 1.3. Are the findings adequately derived from the data? | X |  |  | Interviews were analyzed using content analysis. Units, then categories, then themes were formed. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? | X |  |  | Many quotes available. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? | X |  |  | Authors are aware of their limited material (8 participants) and are not generalizing findings. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Brüggemann29 2015** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  | X | The aim is to understand why hospitals in a Brazilian province prevents the presence of a companion during birth and cs. One or two persons per hospital is interviewed. Uncertain whether this number of participants will adequately answer the aim, to “understand”, but it is likely to contribute with relevant information. |
| 1.2. Are the qualitative data collection methods adequate to address the research question? | X |  |  | One nurse in charge of the childcare section per hospital (12) was interviewed, as well as five technical directors. The number of participants were sat through the theoretical saturation of data, unknown if the number was determined before collecting data.  Data were collected by telephone. Semi-structured interviews. Interviews were transcribed and reviewed. |
| 1.3. Are the findings adequately derived from the data? |  |  | X | Key Expressions, then Central Ideas were extracted from data. One quote per Central Idea is available (five). No additional material available. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  | X | As above. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  | X | A risk of bias exists as authors clearly state that a companion ought to be present. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? | X |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Hugill30 2015** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? |  | X |  | No clear aim or research question is stated. |
| S2. Do the collected data allow to address the research questions? |  |  | X |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  | X | As there is no clear research question, this can not be evaluated. |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  | X | Eight parents (three couples and two alone) were interviewed. Not stated how these participants were selected, contacted or any details of interviews (unknown timing, place, recording, transcription). |
| 1.3. Are the findings adequately derived from the data? |  |  | X | Data or analysis process is not described.  Quotes are available. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  | X | Not enough data available to evaluate. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  | X |  | Not enough data available to evaluate. A risk of bias exists as authors clearly state that they express their opinion on having the partner present during cs in general anesthesia. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Watts6 2016** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? |  | X |  | A clear aim or research question is not stated in this abstract, but can reasonably be deducted from the introduction and methods sections. |
| S2. Do the collected data allow to address the research questions? |  |  | X | Probably. |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? |  |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  |  |  |
| 1.3. Are the findings adequately derived from the data? |  |  |  |  |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  |  |  |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? | X |  |  | National UK survey including all obstetric leads. 73% response rate. |
| 4.2. Is the sample representative of the target population? |  |  | X | No available information on non-responders. |
| 4.3. Are the measurements appropriate? |  |  | X | No numbers are available, only statements like “a small number” or “the majority”. |
| 4.4. Is the risk of nonresponse bias low? |  |  | X | Not enough information available to evaluate. |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  | X | Not enough information available to evaluate. |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Kondou31 2018** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? | X |  |  | The aim is to elucidate the experiences of husbands present at emergency caesarean sections. |
| 1.2. Are the qualitative data collection methods adequate to address the research question? |  |  | X | Exclusion criteria were bad health of mother, father or infant, which limits the population somewhat.  Semi-structured interviews, interview guide used and described. Inclusion during approx. half a year. Not stated if any declined or were not contacted. Interviews recorded, transcribed, reviewed. |
| 1.3. Are the findings adequately derived from the data? |  |  | X | It is not stated which method of data analysis was applied. It is stated that “the interviewer […] collected similar responses each four sections” and it seems probable that these four sections are themes. There are further 12 categories and 28 subcategories. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? | X |  |  | Many quotes are available. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? | X |  |  |  |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Pereda-Goikoetxea32 2019** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? | X |  |  |  |
| 1.2. Are the qualitative data collection methods adequate to address the research question? | X |  |  | Participants were volunteers (43 mothers, 33 in second interview). Convenience and opportunity sampling, and theoretical sampling, apparently to ensure diversity in the sample. 57 participants were recruited, but 43 were interviewed. Not stated why some where not, or why the sample size ended at 43. However, 43 is a relatively large sample size for a qualitative study.  Interviews recorded. Open interviews, with only one opening question. |
| 1.3. Are the findings adequately derived from the data? | X |  |  | An interpretive phenomenological approach was used. Textual thematic analysis. Data analysis software was used. An analysis framework was applied, focusing on credibility, transferability, confirmability and dependability. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? | X |  |  | Examples of thematic analysis is provided. Many quotes available. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? | X |  |  | As above. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |

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| **Study:**  **Maziero33 2020** | **Methodological quality criteria** | **Responses** | | | |
| Yes | No | Can’t tell | Comments |
| Screening questions  (for all types) | S1. Are there clear research questions? | X |  |  |  |
| S2. Do the collected data allow to address the research questions? | X |  |  |  |
| *Further appraisal may not be feasible or appropriate when the answer is ‘No’ or ‘Can’t tell’ to one or both screening questions.* | | | | |
| 1. Qualitative | 1.1. Is the qualitative approach appropriate to answer the research question? | X |  |  | The aim is to describe reasons given by health care professionals for the absence of the companion in childbirth. |
| 1.2. Are the qualitative data collection methods adequate to address the research question? | X |  |  | 29 health care professionals from a single center were interviewed; randomly chosen from professional classes, personally invited. Not stated if any declined participation. Not stated on which criteria these 29 persons were chosen. Semi-structured interviews. Brief interview guide (two questions). Interviews recorded and transcribed. |
| 1.3. Are the findings adequately derived from the data? |  |  | X | Data analysis using Collective Subject Discourse technique, Key Expressions, Central Ideas, Anchorages. Not much is stated about the process of forming Central Ideas. One or two quotes available per Central Idea. |
| 1.4. Is the interpretation of results sufficiently substantiated by data? |  |  | X | A risk of bias exists due to the selection of participants and because the authors openly state that the believe a partner should be present. |
| 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? |  |  | X | As above. |
| 2. Quantitative randomized controlled trials | 2.1. Is randomization appropriately performed? |  |  |  |  |
| 2.2. Are the groups comparable at baseline? |  |  |  |  |
| 2.3. Are there complete outcome data? |  |  |  |  |
| 2.4. Are outcome assessors blinded to the intervention provided? |  |  |  |  |
| 2.5 Did the participants adhere to the assigned intervention? |  |  |  |  |
| 3. Quantitative non-randomized | 3.1. Are the participants representative of the target population? |  |  |  |  |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? |  |  |  |  |
| 3.3. Are there complete outcome data? |  |  |  |  |
| 3.4. Are the confounders accounted for in the design and analysis? |  |  |  |  |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? |  |  |  |  |
| 4. Quantitative descriptive | 4.1. Is the sampling strategy relevant to address the research question? |  |  |  |  |
| 4.2. Is the sample representative of the target population? |  |  |  |  |
| 4.3. Are the measurements appropriate? |  |  |  |  |
| 4.4. Is the risk of nonresponse bias low? |  |  |  |  |
| 4.5. Is the statistical analysis appropriate to answer the research question? |  |  |  |  |
| 5. Mixed methods | 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? |  |  |  |  |
| 5.2. Are the different components of the study effectively integrated to answer the research question? |  |  |  |  |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? |  |  |  |  |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? |  |  |  |  |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? |  |  |  |  |