

## Supplement C: Methodological appraisal of included studies

according to the JBI Manual for Evidence Synthesis

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Study 1: Biagioli et al., 2017

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A.
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	adequate			

Study 2: Biagioli et al., 2016

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	adequate			

Study 3: Day et al., 2011a

Checklist for Analytical Cross Sectional Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the criteria for inclusion in the sample clearly defined?				
2. Were the study subjects and the setting described in detail?				
3. Was the exposure measured in a valid and reliable way?				
4. Were objective, standard criteria used for measurement of the condition?				
5. Were confounding factors identified?				
6. Were strategies to deal with confounding factors stated?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Moderate	Inclusion and exclusion criteria were not described		

#### Study 4: Day et al., 2011b

##### Checklist for Cohort Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the two groups similar and recruited from the same population?				
2. Were the exposures measured similarly to assign people to both exposed and unexposed groups?				
3. Was the exposure measured in a valid and reliable way?				
4. Were confounding factors identified?				
5. Were strategies to deal with confounding factors stated?				
6. Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was the follow up time reported and sufficient to be long enough for outcomes to occur?				
9. Was follow up complete, and if not, were the reasons to loss to follow up described and explored?				
10. Were strategies to address incomplete follow up utilized?				
11. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Inadequate	Unclear whether participants showed symptoms/outcomes at baseline or developed them during study process		

#### Study 5: Findik et al., 2012

##### Checklist for Quasi-Experimental Studies (JBI)

	Yes	No	Unclear	N/A
1. Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?				
2. Were the participants included in any comparisons similar?				
3. Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?				
4. Was there a control group?				
5. Were there multiple measurements of the outcome both pre and post the intervention/exposure?				
6. Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?				
7. Were the outcomes of participants included in any comparisons measured in the same way?				
8. Were outcomes measured in a reliable way?				
9. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Inadequate	No group similarities were calculated, no control group with non-isolated was present, the difference in treatment is discordant, there was only one survey time point, and data analysis is not allowed		

Study 6: Goldsack et al., 2014

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	Inadequate	Survey method inappropriate, anchor examples unclear, no information on ethical standards		

Study 7: Guilley-Lerondeau et al., 2016

Checklist for Cohort Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the two groups similar and recruited from the same population?				
2. Were the exposures measured similarly to assign people to both exposed and unexposed groups?				
3. Was the exposure measured in a valid and reliable way?				
4. Were confounding factors identified?				
5. Were strategies to deal with confounding factors stated?				
6. Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was the follow up time reported and sufficient to be long enough for outcomes to occur?				
9. Was follow up complete, and if not, were the reasons to loss to follow up described and explored?				
10. Were strategies to address incomplete follow up utilized?				
11. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Moderate	Unclear whether participants showed outcomes of interest at baseline, no strategies to deal with incomplete follow-up		

Study 8: Hao et al., 2020 (1)

Checklist for Analytical Cross Sectional Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the criteria for inclusion in the sample clearly defined?				
2. Were the study subjects and the setting described in detail?				
3. Was the exposure measured in a valid and reliable way?				
4. Were objective, standard criteria used for measurement of the condition?				
5. Were confounding factors identified?				
6. Were strategies to deal with confounding factors stated?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Adequate			

Study 8: Hao et al., 2020 (2)

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	Adequate			

Study 9: Hereng et al., 2019

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	Inadequate	Data collection and data analysis inappropriate to the research question		

Study 10: Hu et al., 2020

Checklist for Analytical Cross Sectional Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the criteria for inclusion in the sample clearly defined?				
2. Were the study subjects and the setting described in detail?				
3. Was the exposure measured in a valid and reliable way?				
4. Were objective, standard criteria used for measurement of the condition?				
5. Were confounding factors identified?				
6. Were strategies to deal with confounding factors stated?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Adequate			

Study 11: Ibert et al., 2017

Checklist for Analytical Cross Sectional Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the criteria for inclusion in the sample clearly defined?				
2. Were the study subjects and the setting described in detail?				
3. Was the exposure measured in a valid and reliable way?				
4. Were objective, standard criteria used for measurement of the condition?				
5. Were confounding factors identified?				
6. Were strategies to deal with confounding factors stated?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	Inadequate	Insufficient information on eligibility criteria, inappropriate statistical analyses		

Study 12: Jesus et al., 2019

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	Adequate			

Study 13: Livorsi et al., 2015

Checklist for Case Control Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the groups comparable other than the presence of disease in cases or the absence of disease in controls?				
2. Were cases and controls matched appropriately?				
3. Were the same criteria used for identification of cases and controls?				
4. Was exposure measured in a standard, valid and reliable way?				
5. Was exposure measured in the same way for cases and controls?				
6. Were confounding factors identified?				
7. Were strategies to deal with confounding factors stated?				
8. Were outcomes assessed in a standard, valid and reliable way for cases and controls?				
9. Was the exposure period of interest long enough to be meaningful?				
10. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	adequate			

Study 14: Lupión-Mendoza et al., 2015 (1)

Checklist for Case Control Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the groups comparable other than the presence of disease in cases or the absence of disease in controls?				
2. Were cases and controls matched appropriately?				
3. Were the same criteria used for identification of cases and controls?				
4. Was exposure measured in a standard, valid and reliable way?				
5. Was exposure measured in the same way for cases and controls?				
6. Were confounding factors identified?				
7. Were strategies to deal with confounding factors stated?				
8. Were outcomes assessed in a standard, valid and reliable way for cases and controls?				
9. Was the exposure period of interest long enough to be meaningful?				
10. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	adequate			



Study 14: Lupión-Mendoza et al., 2015 (2)

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	moderate	Influence of researchers on research unclear, no explicit philosophical perspective, anchor examples insufficient, no information on theoretical background available		

Study 15: Pei et al., 2021

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	Adequate			

Study 16: Russell et al., 2011

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	adequate			

Study 17: Shaban et al., 2020

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	adequate			

Study 18: Siddiqui et al., 2019

Checklist for Case Control Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the groups comparable other than the presence of disease in cases or the absence of disease in controls?				
2. Were cases and controls matched appropriately?				
3. Were the same criteria used for identification of cases and controls?				
4. Was exposure measured in a standard, valid and reliable way?				
5. Was exposure measured in the same way for cases and controls?				
6. Were confounding factors identified?				
7. Were strategies to deal with confounding factors stated?				
8. Were outcomes assessed in a standard, valid and reliable way for cases and controls?				
9. Was the exposure period of interest long enough to be meaningful?				
10. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	adequate			

Study 19: Son et al., 2021

Checklist for Qualitative Research (JBI)

	Yes	No	Unclear	N/A
1. Is there congruity between the stated philosophical perspective and the research methodology?				
2. Is there congruity between the research methodology and the research question or objectives?				
3. Is there congruity between the research methodology and the methods used to collect data?				
4. Is there congruity between the research methodology and the representation and analysis of data?				
5. Is there congruity between the research methodology and the interpretation of results?				
6. Is there a statement locating the researcher culturally or theoretically?				
7. Is the influence of the researcher on the research, and vice- versa, addressed?				
8. Are participants, and their voices, adequately represented?				
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?				
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?				
<b>Overall appraisal</b>	Adequate			

Study 20: Vinski et al., 2012

Checklist for Analytical Cross Sectional Studies (JBI)

	Yes	No	Unclear	N/A
1. Were the criteria for inclusion in the sample clearly defined?				
2. Were the study subjects and the setting described in detail?				
3. Was the exposure measured in a valid and reliable way?				
4. Were objective, standard criteria used for measurement of the condition?				
5. Were confounding factors identified?				
6. Were strategies to deal with confounding factors stated?				
7. Were the outcomes measured in a valid and reliable way?				
8. Was appropriate statistical analysis used?				
<b>Overall appraisal</b>	<b>Moderate</b>	Outcomes were measured with HCAHPS, which according to Westbrook et al. (2014) is not reliable or valid, no strategy was described and used with confounders identified		