

CRITICAL APPRAISAL OF ECOLOGICAL STUDIES USING THE ADAPTED APPRAISAL TOOL FROM BETRAN ET AL.

Study	Escobar et al.		Wickramasinghe et al.		Hidvegi and Nichelatti		Szigeti et al.		Sayed et al.		Berg et al.	
Reviewer	1	2	1	2	1	2	1	2	1	2	1	2
Criteria												
Study Design												
Design	2	1	1	2	2	1	1	2	1	2	1	2
Sample Size	0	1	1	1	0	0	0	0	0	0	1	1
Inclusion of units	0	1	1	0	0	0	0	1	0	0	1	1
Data aggregation	3	3	3	1	3	3	3	3	3	3	3	3
Inference	1	1	1	0	1	1	1	1	1	1	1	1
Ecologic Units	1	1	1	1	1	1	1	1	1	1	1	1
Outcome of interest	2	1	1	2	1	1	2	2	1	1	2	1
Source of Data	0	1	1	1	1	1	1	1	1	1	1	1
Statistical Methodology												
Analytic Method	1	1	1	1	1	1	1	1	1	1	1	2
Validity of Regression	1	0	1	1	0	0	1	1	0	0	1	1
Use of covariates	2	1	1	1	0	0	1	1	0	0	1	2
Adjustment of covariates	1	1	0	1	0	0	1	1	0	0	1	1
Quality of Reporting												
Statement of Design	1	1	1	1	1	1	1	1	1	1	1	0
Justification of Design	1	1	1	1	1	1	1	1	1	1	1	0
Bias and limitations	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	17	16	16	15	13	12	16	18	12	13	18	18
REVIEW												
DECISION	INCLUDE		INCLUDE		EXCLUDE		INCLUDE		EXCLUDE		INCLUDE	

(Legend: Green – include for that reviewer; Red – exclude for that reviewer)

Study	Ebina-Shibuya et al.		Abdulah & Hassan		Dolgikh		Klinger et al.	
Reviewer	1	2	1	2	1	2	1	2
Criteria								
Study Design								
Design	2	2	1	1	1	1	1	2
Sample Size	1	1	1	1	0	0	0	0
Inclusion of units	0	1	1	1	0	0	1	0
Data aggregation	3	3	3	3	3	2	3	3
Inference	1	1	1	1	1	1	1	1
Ecologic Units	1	1	1	1	1	1	1	1
Outcome of interest	1	1	1	1	1	1	2	2
Source of Data	1	1	1	1	0	0	1	1
Statistical Methodology								
Analytic Method	1	2	1	0	1	1	1	1
Validity of Regression	0	1	1	1	0	0	0	1
Use of covariates	1	2	2	2	0	0	2	2
Adjustment of covariates	1	1	0	1	0	0	1	1
Quality of Reporting								
Statement of Design	0	0	1	1	1	1	0	1
Justification of Design	1	0	1	0	1	1	0	1
Bias and limitations	1	1	1	1	0	0	1	1
TOTAL	15	18	17	16	10	9	15	18
REVIEW								
DECISION	INCLUDE		INCLUDE		EXCLUDE		INCLUDE	

(Legend: Green – include for that reviewer; Red – exclude for that reviewer)

Obnial et al.

PROSPERO ID: CRD40221244060

Study	Sharma et al.			Hensel et al.			Chimoyi et al.		
Reviewer	1	2	3	1	2	3	1	2	3
Criteria									
Study Design									
Design	2	2	1	1	1	2	1	1	2
Sample Size	0	1	1	1	0	0	0	1	1
Inclusion of units	1	0	0	1	1	0	1	1	1
Data aggregation	3	3	3	3	3	3	3	3	3
Inference	1	1	1	1	1	1	1	1	1
Ecologic Units	0	1	1	0	1	0	1	1	1
Outcome of interest	2	2	2	1	1	2	2	1	0
Source of Data	0	1	1	1	1	1	0	1	1
Statistical Methodology									
Analytic Method	1	1	1	1	1	1	1	1	1
Validity of Regression	1	0	0	1	0	1	0	1	0
Use of covariates	1	0	0	1	2	0	0	2	0
Adjustment of covariates	0	0	0	0	1	0	0	1	1
Quality of Reporting									
Statement of Design	1	0	0	0	0	1	1	1	1
Justification of Design	1	0	0	1	1	1	1	1	1
Bias and limitations	1	0	0	1	1	1	0	1	1
TOTAL	15	12	11	14	15	14	12	18	15
REVIEW									
DECISION	EXCLUDE			EXCLUDE			INCLUDE		

(Legend: Green – include for that reviewer; Red – exclude for that reviewer)

Study	Li			Ogimi et al.			Brooks et al.		
Reviewer	1	2	3	1	2	3	1	2	3
Criteria									
Study Design									
Design	1	2	1	2	1	1	2	1	2
Sample Size	0	1	1	1	0	0	1	0	0
Inclusion of units	0	1	1	1	0	0	1	1	0
Data aggregation	3	3	3	3	3	3	3	3	3
Inference	1	1	1	1	1	1	1	1	1
Ecologic Units	0	1	1	1	0	0	1	1	1
Outcome of interest	1	2	2	1	1	2	1	1	2
Source of Data	0	1	1	1	1	1	1	1	1
Statistical Methodology									
Analytic Method	1	1	1	2	1	1	2	1	1
Validity of Regression	0	1	2	0	0	1	1	0	1
Use of covariates	0	1	1	2	2	2	2	2	2
Adjustment of covariates	0	1	1	0	1	1	1	0	1
Quality of Reporting									
Statement of Design	0	1	1	0	1	1	0	0	1
Justification of Design	0	1	0	0	0	1	0	0	1
Bias and limitations	0	1	1	1	1	1	1	0	1
TOTAL	7	19	18	16	13	16	18	12	18
REVIEW									
DECISION	INCLUDE			INCLUDE			INCLUDE		

(Legend: Green – include for that reviewer; Red – exclude for that reviewer)

CRITICAL APPRAISAL OF COHORT STUDIES USING THE JBI CHECKLIST FOR COHORT STUDIES

STUDY	Chaisemartin & Chaisemartin		Rivas et al.	
	1	2	1	2
1. Were the two groups similar and recruited from the same population?	YES	YES	YES	YES
2. Were the exposures measured similarly to assign people to both exposed and unexposed groups?	YES	YES	YES	YES
3. Was the exposure measured in a valid and reliable way?	YES	YES	YES	NO
4. Were confounding factors identified?	NO	YES	YES	YES
5. Were strategies to deal with confounding factors stated?	NO	YES	YES	NO
6. Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?	YES	YES	YES	YES
7. Were the outcomes measured in a valid and reliable way?	YES	YES	YES	YES
8. Was the follow up time reported and sufficient to be long enough for outcomes to occur?	YES	YES	NO	YES
9. Was follow up complete, and if not, were the reasons to loss to follow up described and explored?	YES	NO	NO	YES
10. Were strategies to address incomplete follow up utilized?	NO	YES	NO	NO
11. Was appropriate statistical analysis used?	YES	YES	YES	YES
TOTAL	8	10	8	8
REVIEW				
DECISION	INCLUDE		INCLUDE	

(Legend: Green – include for that reviewer; Red – exclude for that reviewer)