

Multimedia Appendix 3. Assessment of Risk of Bias. The Joanna Briggs Institute (JBI) Critical Appraisal tool. Checklist for Analytical Cross-Sectional Studies

Studies	Were the criteria for inclusion in the sample clearly defined?	Were the study subjects and the setting described in detail?	Was the exposure measured in a valid and reliable way?	Were objective, standard criteria used for measurement of the condition?	Were confounding factors identified?	Were strategies to deal with confounding factors stated?	Were the outcomes measured in a valid and reliable way?	Was appropriate statistical analysis used?	Total number of yes %*	Risk of Bias**
Alibrahim & Awad ¹	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Alliheibi ²	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Allington et al ³	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Aloweidi et al ⁴	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Baines et al ⁵	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Basch et al ⁶	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Berry et al ⁷	Yes	No	Yes	NA	No	No	Yes	NA	50 %	Moderate
Bhagianadh & Arora ⁸	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Boucher et al ⁹	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Brodziak et al ¹⁰	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Chadwick et al ¹¹	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Chan et al ¹²	NA	NA	NA	NA	Yes	Yes	Yes	Yes	100 %	Low
Choudhary et al ¹³	No	Yes	NA	NA	NA	NA	NA	Yes	67 %	Moderate
Costantino et al ¹⁴	Yes	Yes	Yes	NA	No	No	Yes	Yes	71 %	Low
Chriss et al ¹⁵	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Doyno et al ¹⁶	NA	NA	NA	NA	NA	NA	NA	NA	0	NA
Ebrahimi et al ¹⁷	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
El-Far Cardo et al ¹⁸	Yes	Yes	Yes	NA	No	No	Yes	No	57 %	Moderate
Guntuku et al ¹⁹	NA	NA	NA	NA	No	No	Yes	Yes	50 %	Moderate
Hernández-García et al ²⁰	NA	NA	NA	NA	No	No	Yes	Yes	50 %	Moderate
Herrera-Peco et al ²¹	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Herrera-Peco et al ²²	Yes	NA	NA	NA	NA	NA	Yes	Yes	100 %	Low
Hughes et al ²³	Yes	NA	NA	NA	NA	NA	Yes	NA	100 %	Low
Islam et al ²⁴	NA	NA	NA	NA	No	No	Yes	Yes	50 %	Moderate
Jennings et al ²⁵	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	86 %	Low
Kanyike et al ²⁶	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Karabela et al ²⁷	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low

Knights et al ²⁸	Yes	Yes	Yes	NA	No	No	Yes	NA	67 %	Moderate
Kwok et al ²⁹	NA	NA	NA	NA	No	No	Yes	Yes	50 %	Moderate
Larrondo-Ureta ³⁰	Yes	Yes	NA	NA	NA	NA	NA	Yes	100 %	Low
Liu & Liu ³¹	NA	NA	NA	NA	NA	NA	Yes	Yes	100 %	Low
Melton et al ³²	No	No	NA	NA	No	No	Yes	Yes	33 %	High
Park et al ³³	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Pascual-Ferra ³⁴	NA	NA	NA	NA	No	No	No	Yes	25 %	High
Petravic et al ³⁵	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Rotolo et al ³⁶	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Sallam et al ³⁷	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Sallam et al ³⁸	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Savolainen ³⁹	NA	NA	NA	NA	No	No	Yes	No	25 %	High
Sharevski & Gover ⁴⁰	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Sobkowicz & Sobkowicz ⁴¹	NA	NA	NA	NA	No	Yes	Yes	Yes	75 %	Low
Thelwall et al ⁴²	NA	NA	NA	NA	No	No	No	Yes	25 %	High
Wawrzuta et al ⁴³	NA	NA	NA	NA	No	No	Yes	NA	33 %	High
Zhang et al ⁴⁴	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low
Zhang et al ⁴⁵	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	100 %	Low

*Y=Yes; N= No; NA= Not Applicable

** Low risk of bias > 70%; Moderate risk of bias 40-70%; High risk of bias <40%. The percentage was calculated according to have many “yes” each study got relative to the applicable items.

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