Persistent Precarious Employment Systematic Review

Risk of bias template

Data to be recorded	Question	Options	EPHPP notes to reviewer	AP notes to reviewer
Study ID				
ID				
First author				
Year published				
Representativeness of target population	Are the individuals selected to participate in the study likely to be representative of the target population?	1 Very likely 2 Somewhat likely 3 Not likely 4 Can't tell	Participants are more likely to be representative of the target population if they are randomly selected from a comprehensive list of individuals in the target population (score very likely). They may not be representative if they are referred from a source (e.g. clinic) in a systematic manner (score somewhat likely) or self-referred (score not likely).	This should be the target population of the study rather than the review.
Participation Rate	What percentage of selected individuals agreed to participate?	1 80 - 100% agreement 2 60 – 79% agreement 3 less than 60% agreement 4 Not applicable 5 Can't tell	Refers to the % of subjects in the control and intervention groups that agreed to participate in the study before they were assigned to intervention or control groups.	For large surveys response rate may be published elsewhere. For administrative data the response rate is likely to be 100%.
Selection Bias Quality		1 Good/Strong 2 Fair/Moderate 3 Poor/Weak	Good: The selected individuals are very likely to be representative of the target population (Q1 is 1) and there is greater than 80% participation (Q2 is 1). Fair: The selected individuals are at least somewhat likely to be representative of the target population (Q1 is 1 or 2); and there is 60 - 79% participation (Q2 is 2). 'Moderate' may also be assigned if Q1 is 1 or 2 and Q2 is 5 (can't tell). Poor: The selected individuals are not likely to be representative of the target population (Q1 is 3); or there is less than 60% participation (Q2 is 3) or selection is not described (Q1 is 4); and the level of participation is not described (Q2 is 5).	Think about importance of individual scores (e.g. how non-response dealt with)

Study Design	Indicate the study design	1 Randomized controlled trial 2 Controlled clinical trial 3 Cohort 4 Case-control or case-crossover 5 Interrupted time series 6 Cross-sectional 7 Other specify 8 Can't tell		Amended from original. Cohort and cross-sectional are most likely designs.
Randomized	Was the study described as randomized? If NO, go to Component C.	1 No 2 Yes	Score YES, if the authors used words such as random allocation, randomly assigned, and random assignment. Score NO, if no mention of randomization is made.	Applies to allocation of exposure rather than sampling frame. Unlikely to have randomized studies in review. Relatively low importance to this review
Randomized (Method Specified)	If Yes, was the method of randomization described?	1 No 2 Yes	Score YES, if the authors describe any method used to generate a random allocation sequence. Score NO, if the authors do not describe the allocation method or describe methods of allocation such as alternation, case record numbers, dates of birth, day of the week, and any allocation procedure that is entirely transparent before assignment, such as an open list of random numbers of assignments. If NO is scored, then the study is a controlled clinical trial.	Apply this to sampling frame for observational studies.

Randomized (Appropriate)	If Yes, was the method appropriate?	1 No 2 Yes 3 Can't tell	Score YES, if the randomization sequence allowed each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. Examples of appropriate approaches include assignment of subjects by a central office unaware of subject characteristics, or sequentially numbered, sealed, opaque envelopes. Score NO, if the randomization sequence is open to the individuals responsible for recruiting and allocating participants or providing the intervention, since those individuals can influence the allocation process, either knowingly or unknowingly. If NO is scored, then the study is a controlled clinical trial.	Apply this to sampling frame for observational studies. Added option 3
Study Design Quality			Good: will be assigned to those articles that described RCTs and CCTs. Fair: will be assigned to those that described a cohort analytic study, a case control study, a cohort design, or an interrupted time series. Weak: will be assigned to those that used any other method or did not state the method used.	Typically for this review: Fair = cohort, weak = cross-sectional (depending on exposure design, e.g. a cross-sectional study that includes questions that provide a very detailed employment history may be considered fair)
Group Differences Pre-Exposure	Were there important differences between groups prior to the exposure?	1 Yes 2 No 3 Can't tell	The following are examples of confounders: 1 Race 2 Sex 3 Marital status/family 4 Age 5 SES (income or class) 6 Education 7 Health status 8 Pre-exposure score on outcome measure	Sufficient to list these as covariates. Whether a variable is a confounder or mediator may vary by study. Age and sex should always be adjusted for as a minimum.

% Confounders Controlled	If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?	1 80 – 100% (most) 2 60 – 79% (some) 3 Less than 60% (few or none) 4 Can't Tell		This is less about how many confounders are controlled for and more about whether the important ones have been. Consider study design, not just analysis - e.g. are confounders accounted for by sample frame, stratified analysis, natural
Over adjustment	Is there potential for over-adjustment to have occurred?	1 Yes 2 No 3 Can't tell		Additional question Can include: Over adjustment bias (adjusting for mediator) Unnecessary over adjustment (variable unrelated to exposure and outcome of interest, or related to exposure only) See: Schisterman et al 2009 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2744485/)
Confounder Quality			Good: will be assigned to those articles that controlled for at least 80% of relevant confounders: (Q1 is 2) or (Q2 is 1); and (Q3 is 2). Fair: will be given to those studies that controlled for 60 – 79% of relevant confounders: (Q1 is 1) and (Q2 is 2); or (Q3 is 2). Poor: will be assigned when less than 60% of relevant confounders were controlled (Q1 is 1) and (Q2 is 3) or control of confounders was not described (Q1 is 3) and (Q2 is 4); and (Q3 is 1 or 3).	Changed to include Q3
Researcher Awareness	Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?	1 Yes 2 No 3 Can't tell		Code YES if study is specifically about precarious employment.
Participants Awareness	Were the study participants aware of the research question?	1 Yes 2 No 3 Can't tell		Code YES if study is specifically about precarious employment.

Blinding Quality			Good: The outcome assessor is not aware of the exposure status of participants (Q1 is 2); and the study participants are not aware of the research question (Q2 is 2). Fair: The outcome assessor is not aware of the exposure status of participants (Q1 is 1; or the study participants are not aware of the research question (Q2 is 1). Poor: The outcome assessor is aware of the intervention status of participants (Q1 is 1); and the study participants are aware of the research question (Q2 is 1); or blinding is not described (Q1 is 3 and Q2 is 3).	coding guidance corrected from EPHPP dictionary
Data Collection Tool Validity	Were data collection tools shown to be valid?	1 Yes 2 No 3 Can't tell		Surveys: have validated/well recognised measures been used Administrative data: are measure clearly defined
Data Collection Tool Reliability	Were data collection tools shown to be reliable?	1 Yes 2 No 3 Can't tell		Surveys: are participants expected to recall historical information Administrative data: is data quality discussed, are there substantive issues
Data Collection Methods Quality			Good: The data collection tools have been shown to be valid (Q1 is 1); and the data collection tools have been shown to be reliable (Q2 is 1). Fair: The data collection tools have been shown to be valid (Q1 is 1); and the data collection tools have not been shown to be reliable (Q2 is 2) or reliability is not described (Q2 is 3). Poor: The data collection tools have not been shown to be valid (Q1 is 2); or both reliability and validity are not described (Q1 is 3 and Q2 is 3).	

Withdrawals and Drop-Outs Reported	Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?	1 Yes 2 No 3 Can't tell 4 Not Applicable (i.e. one time surveys or interviews)		
Attrition	Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).	1 80 -100% 2 70 - 79% 3 60 - 69% 4 50 - 59% 5 Less than 50% 6 Can't tell 7 Not Applicable (i.e. Retrospective case-control)		
Method for dealing with withdrawals/drop-outs	Were steps taken to minimise potential bias arising from withdrawals/drop-outs?	1 Yes 2 No 3 Can't tell 4 Not Applicable (i.e. one time surveys or interviews)		Additional question (examples include inverse probability weighting, imputation)
Withdrawals and Drop-Outs Quality			Good: will be assigned when the follow-up rate is 80% or greater (Q1 is 1) and (Q2 is 1) and (Q3 is 1). Fair: will be assigned when the follow-up rate is 60 – 79% (Q2 is 2) or (follow-up rate is 50-59% and Q3 is 1) or (Q1 is 4) or (Q2 is 5) or (Q3 is 1). Poor: will be assigned when a follow-up rate is less than 60% (Q2 is 4 or if the withdrawals and drop-outs were not described (Q1 is No or Q2 is 4); or (Q3 is 2 or 3). Not Applicable: if Q1 is 4 or Q2 is 5.	Amended to reflect additional question and to include moderate scoring for studies with 50-59% follow-up and steps to minimise potential bias for drop-outs
% Participants in Exposure	What percentage of participants received the allocated exposure of interest?	1 80 -100% 2 60 - 79% 3 less than 60% 4 Can't tell		
Consistency of Exposure Measured	Was there sufficient consistency of the exposure measured?	1 Yes/Good 2 No/Poor 3 Can't tell		Wording amended How good a measure of persistent precarious employment is the exposure measure?

Contamination/Co-Exposure	Is it likely that subjects received an unintended exposure or intervention (contamination or co-intervention) that may influence the results?	1 Yes 2 No 3 Can't tell		Not a major concern for this review as studies typically observational rather than intervention.
Exposure Integrity Quality			Good: Q2 is 1; Q1 is 1 or 2; Q3 is 2 Fair: Q2 is 1; Q2 is 3; Q3 is 2 Poor: Q2 is 2 or 3	AP added domain rating
Unit of allocation	Indicate the unit of allocation	1 Individual 2 Household 3 Workplace/company 4 Region/country		Amended from original to include household
Unit of analysis	Indicate the unit of analysis	1 Individual 2 Household 3 Workplace/company 4 Region/country		Amended from original to include household Should match unit of allocation
Appropriateness of Statistical Methods	Are the statistical methods appropriate for the study design?	1 Yes 2 No 3 Can't tell		
Analysis Quality			Good: Q3 is 1; Q1 and 2 are the same unit level Fair: Q3 is 1; Q1 and 2 are not the same level Poor: Q3 is 2 or 3	AP added domain rating. Allocation status question removed as not relevant to review
Global Rating		Strong Moderate Weak	1 STRONG (no WEAK ratings) 2 MODERATE (one WEAK rating) 3 WEAK (two or more WEAK ratings)	
Discrepancy (Reason)				Base on global rating rather than individual scores
Final Decision				
Additional Notes				