

FACSIAR's Evidence 'How to' Guides

Family and Community Services Insights Analysis and Research (FACSIAR)

Department of Communities and Justice

31 August 2021

Workshop agenda



1	What is evidence, the types of evidence and evidence hierarchies	15 minutes
2	Where can I find quality research and evidence?	15 minutes
3	Conducting a search	20 minutes
4	Critical appraisal	20 minutes
5	Wrap up	5 minutes

What is evidence?

Evidence is:

- factual information used as proof to support a claim or belief
- information and research selected from the best available sources to support a decision
- used to help inform decision making to achieve the most effective outcomes.

Evidence-based decision making gives managers, leaders and practitioners confidence that their decisions are supported with the best evidence of 'what works', 'what works well', 'what does not work' and 'what needs to be changed'.



How can I use evidence in my work?

Evidence can:



 Help to understand how to improve client outcomes including how evidence can support your program logic model and underpin your theory of change



 Provide insight into existing successful programs and services



 Be used to modify the programs or services you are delivering



 Help to understand how clients are experiencing services and what factors might be influencing uptake or completion

Types of evidence

There are three types of evidence:

Best available research evidence

The body of research with the most rigour and relevance to your research question or problem.

Experiential evidence

Professional expertise, insight and skills accumulated over many years.

Contextual evidence

This evidence is based on whether or not an approach is relevant and acceptable to a specific community and feasible to implement and sustain (Puddy and Wilkins 2011).

Evidence can vary in strength, quality and appropriateness for your purpose. While research is only one type of evidence, it has the advantage of greater rigour and independence when compared to other types of evidence.

Types of evidence

The three types of evidence used in decision making:



Where does evidence come from?

Evidence comes from a range of sources:

- journal articles and published literature
- analysis of statistics and data
- conference presentations and papers
- grey literature (publications by government and non-government organisations)

- interviews/surveys
- expert opinion
- magazine and news articles.

Quantitative research

- The strength of the quantitative approach is in its ability to provide insights about a very large number of people or even an entire population.
- If a researcher is interested in 'what works?' or 'which intervention is most effective?', then a quantitative approach (for example, a Randomised Control Trial (RCT) or meta-analysis) might be the most appropriate.



Main quantitative research types



Type of research or evaluation	What is it?
Randomised controlled trial (RCT)	RCTs involve randomly allocating participants into two or more groups. These groups receive different interventions, and the outcomes of the groups are compared before and after the intervention.
Quasi-experimental design	Quasi-experimental designs involve allocating participants into two or more groups. These groups receive different interventions, and the outcomes of the groups are compared before and after the intervention. Quasi-experimental trials are similar to randomised controlled trials, but without the random assignment to a treatment or control group.
Cohort studies	Studies that involve the same sample of people surveyed over several points in time, sometimes from childhood to old age.
Case-controlled studies	Compares one group with another group and looks back in time to see how the characteristics of the two groups differ.
Pre and post test	Data is collected before the program begins and again at the end of the program.
Time series	A time series is a collection of observations of data obtained through repeated measurements over time.

Adapted from Breckon J 2016 Using research evidence: A practice guide, Nesta, Alliance for Useful Evidence.

Qualitative and mixed methods research

- The qualitative approach allows exploration of a topic in greater depth and may expand upon quantitative findings. If a researcher is interested in 'Why do parents tend to drop out of an intervention at an early stage?', then a qualitative approach (for example, interviews with parents) might address the question most appropriately.
- A mixed-methods study is one which employs both quantitative and qualitative techniques to investigate the same topic or phenomenon.



Main qualitative research types

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Type of research	What is it?	Study types
Personal anecdote	An account by a person with direct experience of, or affected by, a particular issue.	 Ethnography (observation and interviews) Narrative (stories from individuals and documents) Phenomenological (interviews) Grounded theory (interviews) Case studies (interviews, documents and observations)

Adapted from Breckon J 2016 Using research evidence: A practice guide, Nesta, Alliance for Useful Evidence.

Highest levels of evidence

What is a systematic review?

Systematic reviews are generally considered as the strongest form of evidence as they summarise and synthesise the findings of multiple studies identified in comprehensive, systematic literature searches. They differ from other literature reviews because the authors:

- clearly outline their research question
- state what kind of studies will be included
- describe the literature search process in detail.

What is a meta-analysis?

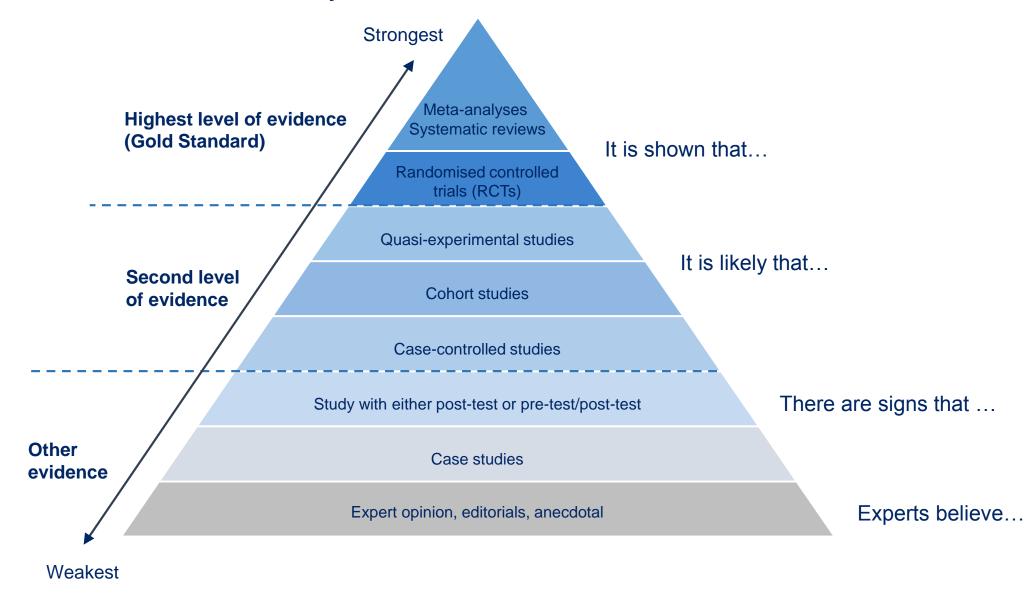
Meta-analyses are based on the combined results of many studies rather than a single evaluation. The greater the number and diversity of participants and settings included in the analysis, the more convincing is the evidence.



What is an evidence hierarchy?

- Evidence hierarchies rank different research or evaluation study designs based on the rigour of their research methods.
- Evidence hierarchies are often used in the health and medical field. They are less commonly used within social policy, as evidence with the highest indication of effectiveness are rarely available.
- Systematic reviews, meta-analyses and randomised controlled trials (RCTs), are usually at the top of evidence hierarchies.
- Case studies, expert opinion, editorials and anecdotal evidence, are usually at the bottom of evidence hierarchies.

What is an evidence hierarchy?



Examples of evidence-based programs in NSW

Evidence-based programs	Evidence	CEBC Rating
Functional Family Therapy (FFT)	 Nine RCTs Two quasi-experimental designs One pretest-posttest study with a non-equivalent control group 	Well supported by research evidence
Homebuilders	 Two RCTs One pretest-posttest with comparison group 	Supported by research evidence
Multisystemic Therapy for Child Abuse and Neglect (MST-CAN)	 One RCT One non-equivalent control group design 	Supported by research evidence
SafeCare	 Three RCTs One study that was a subset of a Controlled Clinical Trial One matched comparison group design 	Supported by research evidence
Treatment Foster Care Oregon (TFCO)	Ten RCTs	Well supported by research evidence
Triple P	 Two RCTs One quasi-experimental design One pretest-posttest study with a non-equivalent control group 	Supported by research evidence

Source: California Evidence Based Clearinghouse for Child Welfare, https://www.cebc4cw.org/

Example of a rating scale



What if limited evidence exists in a particular area?

You may need to look for other types of research evidence that have lower indications of effectiveness such as:









Where can I find quality research and evidence?



Where do I look for evidence?



How do I conduct a search?



How can I conduct a thorough search when I have limited time or resources?

DCJ published reports

You can find a number of DCJ published reports here:

Family and Community Services Insights, Analysis and Research (FACSIAR)

Full and short summaries of child, family and community services related analysis and research reports.



NSW Bureau of Crime Statistics and Research (BOSCAR)

Full and short summaries of crime and criminal justice related analysis and research reports.



Research databases and electronic collections

Databases provide access to the most current and authoritative research on a topic. The following databases are a good place to start.

- MEDLINE, CINAHL and Ageline
- Psychology & Behavioral Sciences Collection
- PsycINFO PsycARTICLES, PsycBOOKS and PsycEXTRA
- SocINDEX with Full Text
- Science Direct
- Business Source Complete and Health Business Elite



You can only access research databases through a workplace or academic library. If you don't have access, try Google Scholar.

Open access

Open access (OA) is free, unrestricted online access to research outputs such as journal articles and books. OA content is open to all, with no access fees.

- Directory of Open Access Journals (DOAJ)
- Open Access Australasia

Other databases also have free full text content as well as being good discovery tools:

- PubMed
- ERIC https://eric.ed.gov/

Some journals may have open access articles:

- SpringerOpen
- Elsevier https://www.elsevier.com/open-access
- Taylor & Francis
- Wiley
- Palgrave



Internet resources

A Google search of a topic is likely to identify sources that vary in quality and in relevance to the topic. Ask yourself the following questions:

- Who has written the information?
- Who has published it?
- Are they a trustworthy source of information?
- Are they trying to persuade me or sell me something?
- When was the information last updated?



Look for websites ending in:

- .edu or .ac Educational institutions
- .asn Association websites
- .gov or .govt Government websites
- .org Organisation websites

Other useful websites

- The DCJ Resource Centre has a number of different research and data resources.
- NSW Bureau of Crime Statistics and Research (BOCSAR)
- Australian Bureau of Statistics Quickstats
- Australian Institute of Family Studies (AIFS)
- Parenting Research Centre (PRC)
- Australian Institute of Health and Welfare (AIHW)
- Analysis and Policy Observatory (APO)
- Australian Housing and Urban Research Institute (AHURI)
- <u>Social Care Online (SCIE)</u> The UK's largest database of information and research on all aspects of social care and social work
- US Housing and Urban Development (HUD)



Where can I find systematic reviews?

Systematic reviews that appear in peer-reviewed publications or from other reputable sources and are 1-2 years old are likely to be the most up to date and thorough examinations of a topic. The most reputable sources of systematic reviews are:

• <u>The Campbell Collaboration</u> maintains a database of systematic reviews in the fields of education, social welfare, and criminal justice, with direct links to publications.



 <u>Cochrane</u> maintains a database of systematic reviews in the healthcare field that are peer-reviewed and can be downloaded from their website.



 <u>EPPI-Centre</u> is a specialist centre for developing methods for systematic reviewing and synthesis of research evidence; and developing methods for the study of the use of research. EPPI-Centre maintains a database of systematic reviews that have been conducted by and supported by the EPPI-Centre.



Evidence and gap maps

Evidence and gap maps are interactive tools designed to help policy makers and program areas that commission and use research to:



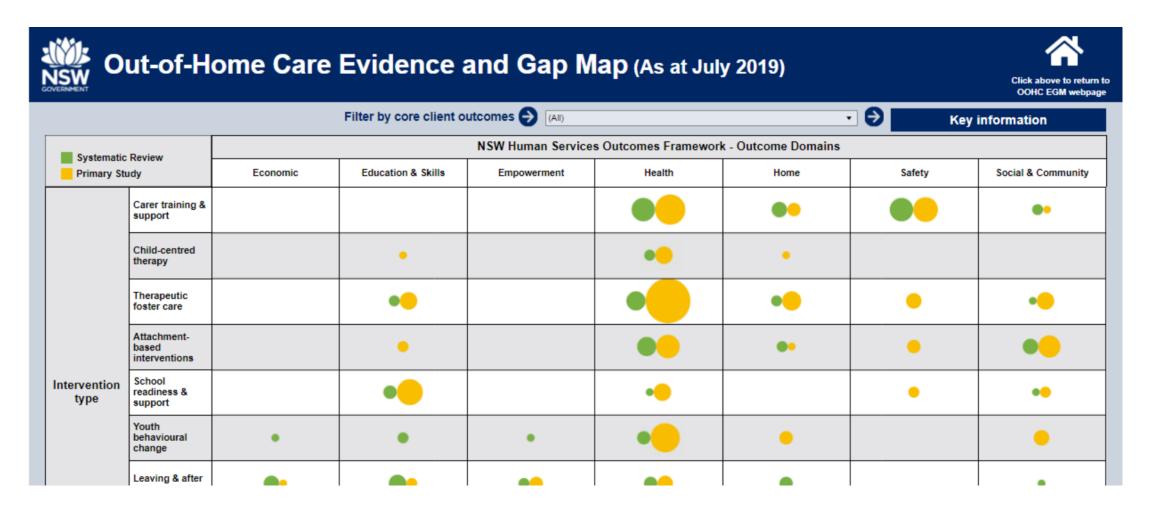
easily identify evidence of 'what works' in a particular area



identify gaps in the evidence base

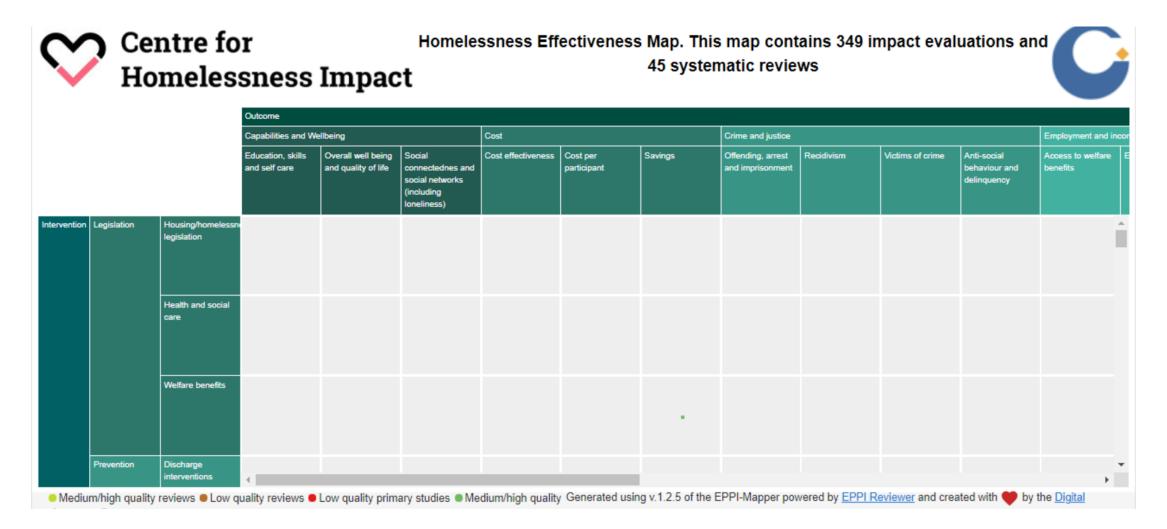
While they do not synthesise research, they do help staff to identify the most relevant and robust research. Evidence and gap maps are based on a systematic search for high-quality evidence of effective interventions.

Evidence and gap maps



Out-of-Home Care evidence and Gap Map

Evidence and gap maps

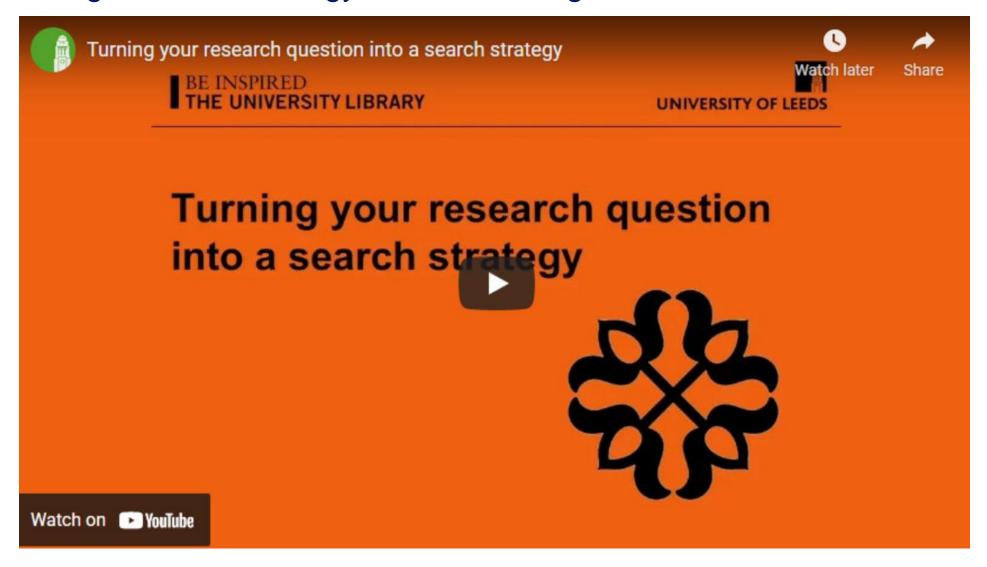


Effectiveness of Homelessness Interventions Evidence and Gap Map



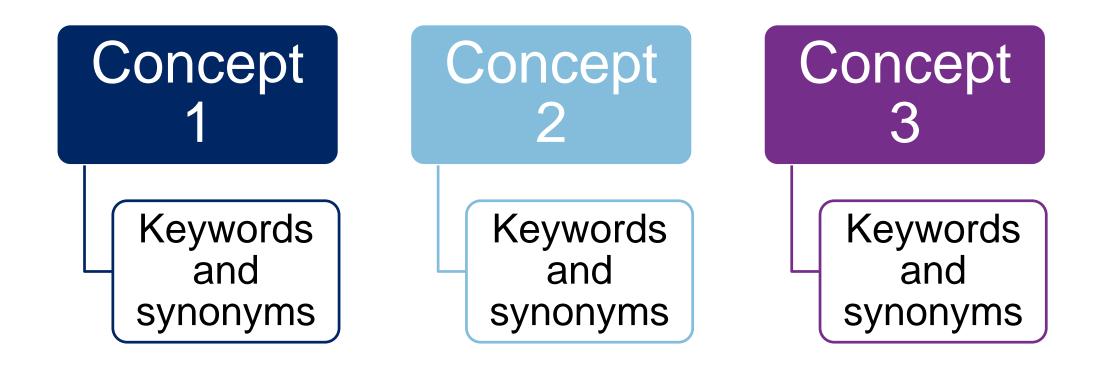
A search strategy will assist you to:

- clarify the information you are searching for
- provide clues to the resources where the information can be found
- provide structure to your information seeking
- provide a checklist or steps for you to work through.

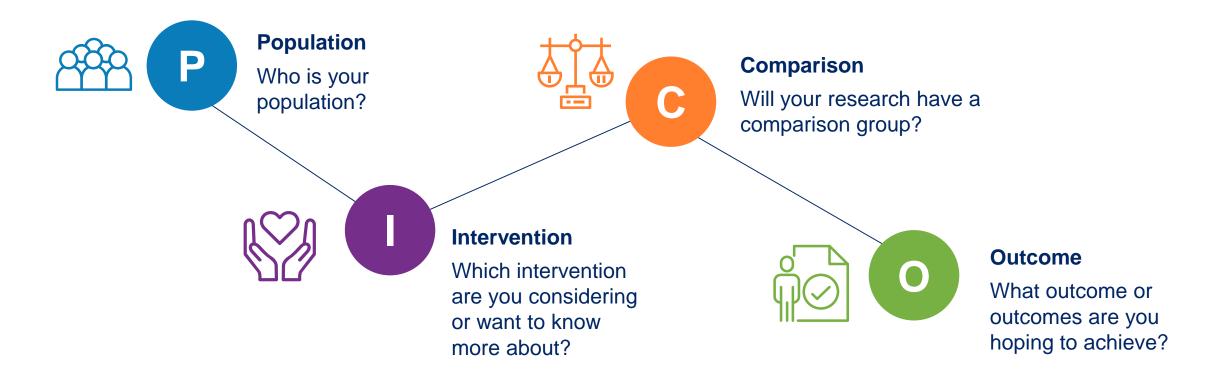


Turning your research question into a search strategy

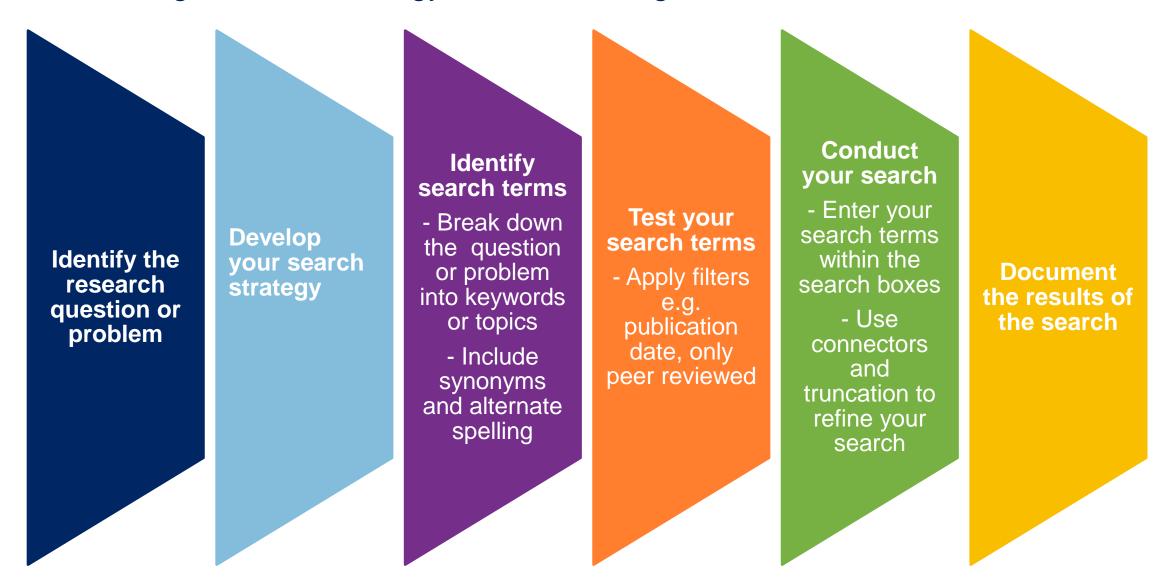
Pull out the main concepts from your research question and then think about keywords and synonyms to use in your search.



Drawing from the health and medical field, the PICO model can help you to define your research question and formulate a search strategy:

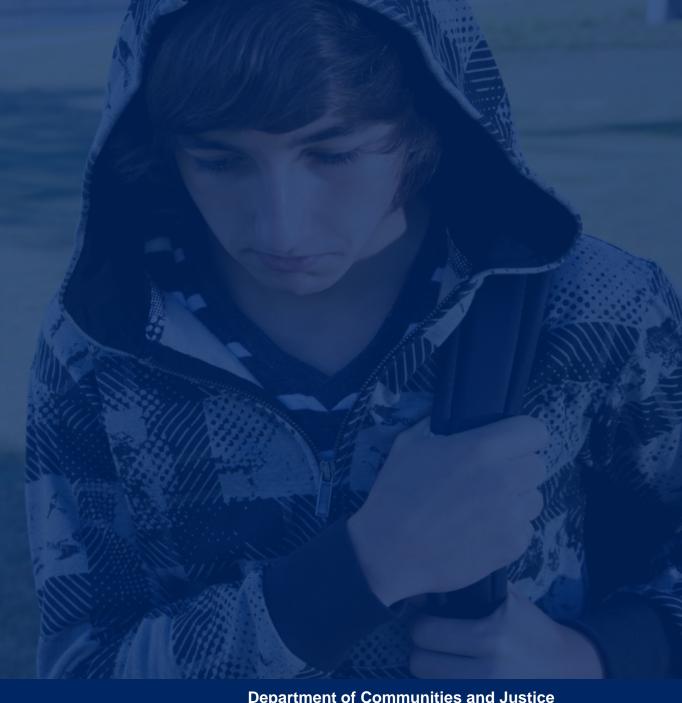


Adapted from Canberra University, Library Guide, Evidence-Based Practice in Health, Using the PICO Framework

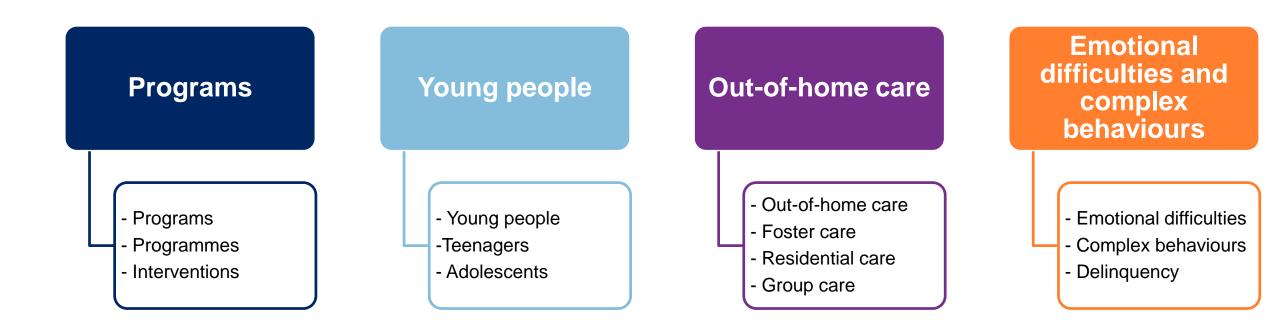


Example: What is the problem?

A service provider has been working with an increasing number of young people in out-of-home care with emotional difficulties and complex behaviours leading to an increase in placement breakdown and offending behaviours. They want to know more about programs that have been effective with this cohort.



Question: What <u>programs</u> are <u>effective</u> for <u>young people in out-of-home care</u> with <u>emotional difficulties</u> and <u>complex behaviours</u>?



Question: What <u>programs</u> are <u>effective</u> for <u>young people in out-of-home care</u> with <u>emotional difficulties</u> and <u>complex behaviours</u>?

Population	Intervention	Comparison	Outcomes
Young peopleTeenagersAdolescents	 Programs/ programmes Interventions Out-of-home care Foster care Residential care Group care 	N/A	Reduction in emotional difficulties and complex behaviours.

Google scholar search:

"young people" OR "adolescent" OR "teen*" AND "out-of-home care" OR "foster care" OR "residential care" OR "group care" AND "emotional difficulties" OR "complex behav*" OR "delinquen*" AND "program*" OR "intervention*"

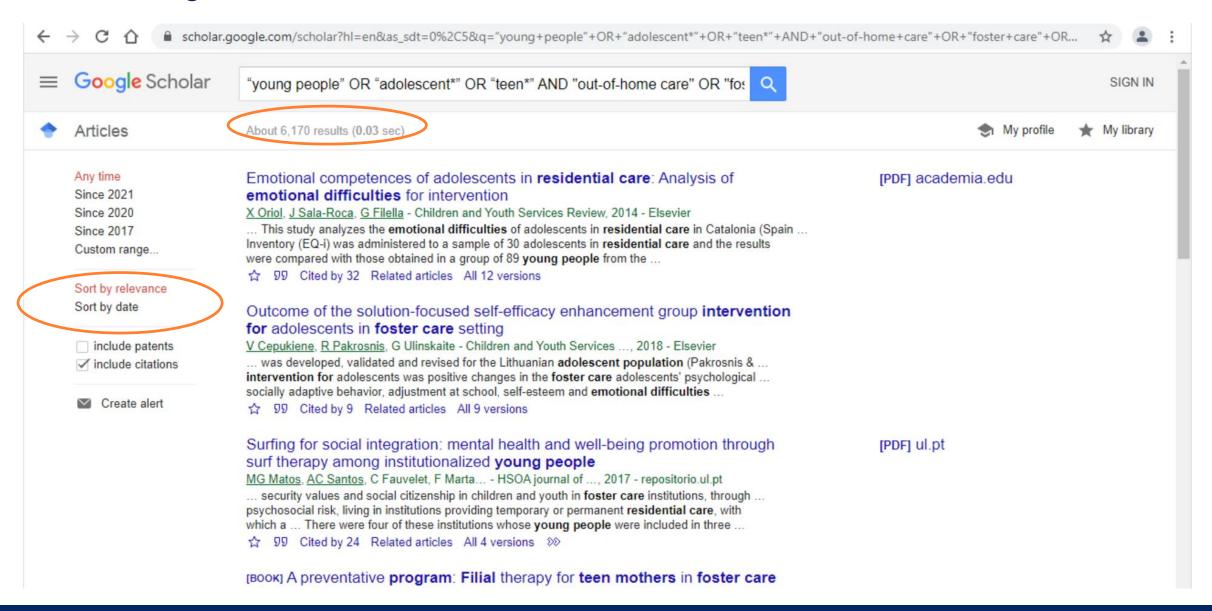
Use **OR** to broaden your search so results have either one or both search terms within.

Use **truncation** (*) to search for variations of a search term. For example:

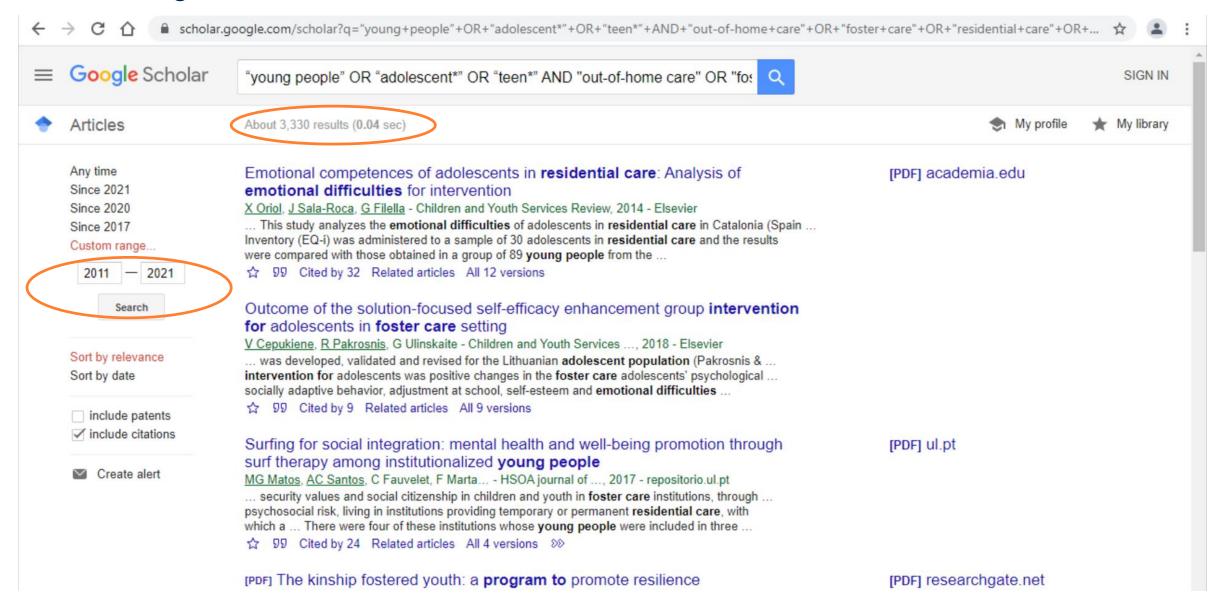
- "teen*" will search for teen, teens, teenager and teenagers
- "program*" will search for program, programs, programme, programmes and programming
- "behavio*" will search for the English spelling as well as the US spelling.

Use **AND** to connect terms so results have both terms in the same record.

Conducting a search



Conducting a search



So you have:

Identified the research question or problem

Developed your search strategy

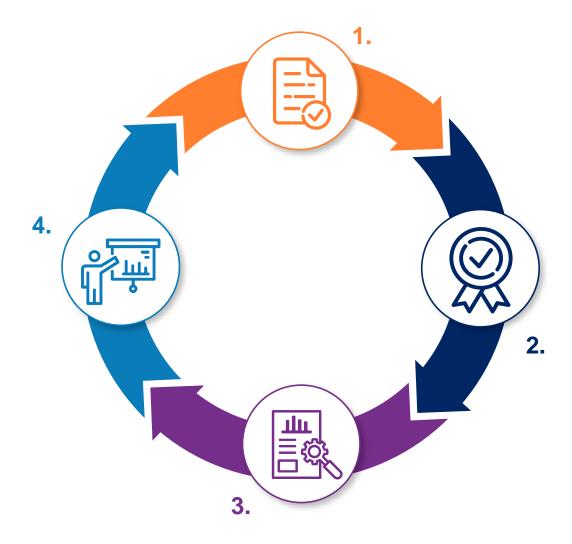
Conducted a search

Decided which articles you want to review more thoroughly

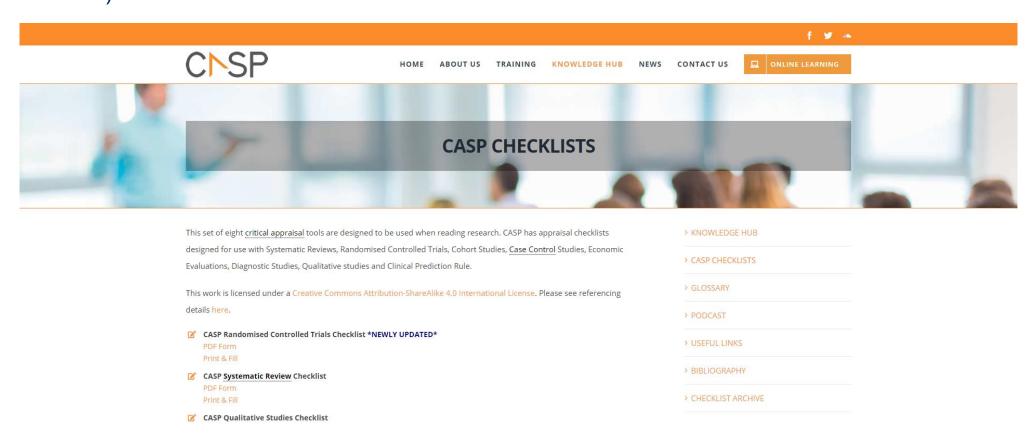
What's next?

Critical appraisal

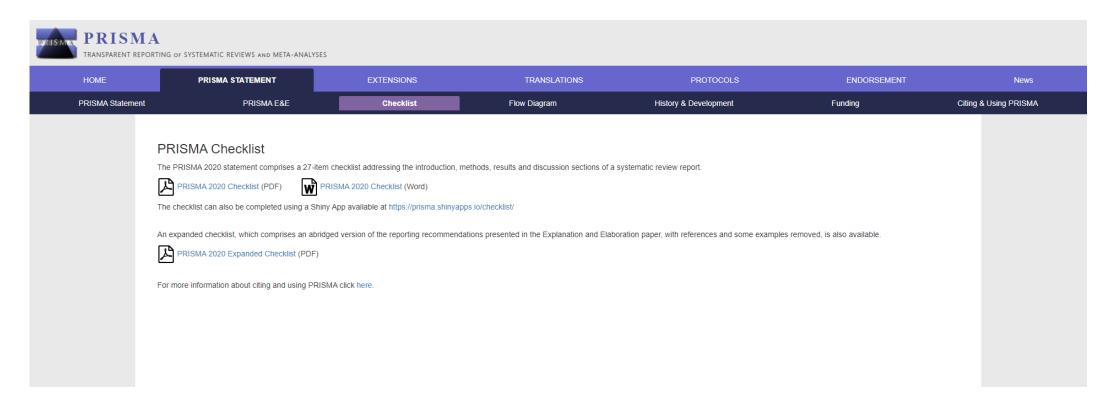
- Critical appraisal is the systematic evaluation of a research paper to identify methodological flaws and determine the quality of the evidence.
- It involves considering:
 - 1. validity and rigour of the research
 - 2. credibility of the findings
 - 3. generalisability or applicability of the findings
 - 4. how useful and relevant the findings are to your organisation or practice.



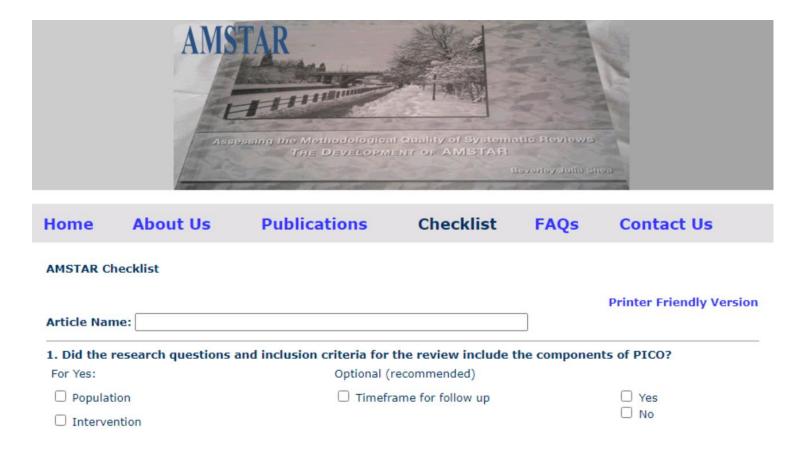
The <u>Critical Appraisal Skills Programme (CASP) checklists</u> provide eight specific guides to evaluate different types of research studies (including systematic reviews, RCTs, case control studies and qualitative research).



PRISMA checklist is a 27 item checklist designed to assist in reviewing a systematic review or meta-analysis.



The <u>AMSTAR Checklist</u> is a measurement tool to assess Systematic Reviews and consists of 11 items. This checklist is used by organisations such as Cochrane and academic researchers. A rigorous Systematic Review is one that has addressed all items on the checklist and received a score of 11.



- Are the aims/research questions of the study clearly stated?
- 2. Is the overall methodology appropriate to the research questions?
- 3. Are there clear criteria in participant selection? And is the selection of participants theoretically justified?
- 4. Are the analytical methods explicit, systematic and reproducible?
- 5. Are there evident sources of bias in the results reported?
 If so, have they been discussed?
- 6. Do the findings answer the original research questions?
- 7. Is sufficient indication provided to demonstrate that the findings and conclusions are grounded in the data?



Exercise – Critical appraisal

Harold, G, Kerr, D, Van Ryzin, M, DeGarmo, D, Rhoades, K and Leve, L 2013, 'Depressive symptom trajectories among girls in the juvenile justice system: 24-month outcomes of an RCT of Multidimensional Treatment Foster Care', *Prevention Science*, vol. 14, no. 5, pp. 437-446.

Prev Sci (2013) 14:437-446 DOI 10.1007\s11121-012-0317-y

Depressive Symptom Trajectories Among Girls in the Juvenile Justice System: 24-month Outcomes of an RCT of Multidimensional Treatment Foster Care

Gordon T. Harold - David C. R. Kerr - Mark Van Ryzin -David S. DeGarmo - Kimberly A. Rhoades - Leslie D. Leve

Published online: 17 February 2013 © Society for Prevention Research 2013

Abstract Youth depression is a significant and growing international public health problem. Youth who engage in high levels of delinquency are at particularly high risk for developing problems with depression. The present study examined the impact of a behavioral intervention designed to reduce delinquency (Multidimensional Treatment Foster Care; MTFC) compared to a group care intervention (GC; i.e., services as usual) on trajectories of depressive symptoms among adolescent girls in the juvenile justice system. MTFC has documented effects on preventing girls' recidivism, but its effects on preventing the normative rise in girls' depressive symptoms across adolescence have not been examined. This indicated prevention sample included 166 girls (13-17 years at T1) who had at least one criminal referral in the past 12 months and who were mandated to out-of-home care; girls were randomized to MTFC or GC. Intent-to-treat analyses examined the main effects of MTFC on depression symptoms and clinical cut-offs, and whether benefits were greatest for girls most at risk. Depressive symptom trajectories were specified in hierarchical linear

growth models over a 2 year period using five waves of data at 6 month intervals. Depression clinical cut-off scores were specified as nonlinear probability growth models. Results showed significantly greater rates of deceleration for girls in MTFC versus GC for depressive symptoms and for clinical cut-off scores. The MTFC intervention also showed greater benefits for girls with higher levels of initial depressive symptoms. Possible mechanisms of effect are discussed, given MTFC's effectiveness on targeted and nontargeted outcomes.

Keywords MTFC - Randomized controlled trial -Depression - Girls - Juvenile justice - Maltreatment

Adolescent depression reduces quality of life, is a risk factor for suicide, and often worsens the outcomes of physical health problems (Lewinsohn et al. 1998; Thapar et al. 2012). The continuity of depression into adulthood also has significant economic costs; according to a recent estimate, depression costs \$83.1 billion annually in the United States (Ginerobern et al. 2003). The lifetime purpulence of

Exercise – Critical appraisal

1. Are the aims/research questions of the study clearly stated?	X	The aims of the study are clearly stated in the Introduction and the section titled 'The Present Study'.
2. Is the overall methodology appropriate to the research questions?	X	 Randomised controlled trial - Participants (n=166) were randomly assigned to a treatment group (Multi-dimensional Treatment Foster Care; n= 81) and control group (services as usual group care; n=85).
3. Are there clear criteria in participant selection? And is the selection of participants theoretically justified?	×	 There is clear criteria in participant selection. Participants who did not meet this criteria or were pregnant were excluded.
4. Are the analytical methods explicit, systematic and reproducible?	×	The analytical methods are explicit, systematic and reproducible: • The study hypotheses were evaluated using hierarchical linear modelling (HLM and HGLM).
5. Are there evident sources of bias in the results reported? If so, have they been discussed?	X	No biases could be identified. The authors note a number of limitations of the study.
6. Do the findings answer the original research questions?	X	 The results showed: Chronically delinquent girls in MTFC experienced greater decreases in depressive symptoms across 2 years compared to the control group (group care). Participants with more depressive symptoms at baseline benefitted most from the MTFC intervention. Modest support for the direct effect of maltreatment on depression but no support for its moderating role.
7. Is sufficient indication provided to demonstrate that the findings and conclusions are grounded in the data?	\boxtimes	The results and discussion sections are thorough.

Exercise - Critical Appraisal

Prev Sci (2013) 14:437-446 DOI 10.1007/s11121-012-0317-1

Published in 2013

- Cited by 58
- Randomised controlled trial (RCT)
- Participants (n=166)
- Treatment group (MTFC; n= 81)
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D. C. R. Kerr

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Outcomes for girls with depressive symptoms can be further compounded by co-occurring problems with delinquency: evidence suggests a closer link between cooccurring trajectories of delinquency and depression for girls than for boys (Wiesner and Kim 2006). Moreover, rates of delinquency in girls are rising, now comprising 30 % of all juvenile arrests (Puzzanchera 2009). Therefore, interventions that can prevent the development of

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Development and piloting of a treatment

RESEARCH ARTICLE

DOI 10.1186/s13034-015-0057-4

McMillen et al. Child and Adolescent Psychiatry and Mental Health. (2015) 9-25.

foster care program for older youth with psychiatric problems

 Curtis McMillen^{1*}, Sarah Carter Narendorf², Debra Robinson³, Judy Havlicek⁴, Nicole Fedoravious⁵, Julie Bertram⁶ and David McNelly⁷

Abstract

Background: Older youth in out-of-home care often live in restrictive settings and face psychiatric issues without sufficient family support. This paper reports on the development and pilotting of a manualized treatment foster care program designed to step down older youth with high psychiatric needs from residential programs to treatment foster care homes.

Methods: A team of researchers and agency partners set out to develop a treatment foster care model for older youth based on Multi-dimensional Treatment Foster Care (MTFC). After matching youth by mental health condition and determining for whom randomization would be allowed, 14 youth were randomized to treatment as usual or a treatment foster home intervention. Stakeholders were interviewed qualitatively at multiple time points. Quantitative measures assessed mental health symptoms, days in locked facilities, employment and educational outcomes.

Results: Development efforts led to substantial variations from the MTFC model and a new model, Treatment Foster Care for Older Youth was piloted. Feasibility monitoring suggested that it was difficult, but possible to recruit and randomize youth from and out of residential homes and that foster parents could be recruited to serve them. Qualitative data pointed to some qualified clinical successes. Stakeholders viewed two team roles – that of psychiatric nurse and skills coaches – very highly. However, results also suggested that foster parents and some staff did not tolerate the intervention well and struggled to address the emotion dysregulation issues of the young people they served. Quartitative data demonstrated that the intervention was not keeping youth out of locked facilities.

Conclusions: The intervention needed further refinement prior to a broader trial. Intervention development work continued until components were developed to help address emotion regulation problems among fostered youth. Psychiatric nurses and skills coaches who work with youth in community settings hold promise as important supports for older youth with psychiatric needs.

Keywords: Foster care, Treatment foster care, Emotion regulation, Emerging adulthood

This paper describes the development and piloting of a treatment foster care intervention program for older youth from the child welfare system with mental health challenges. Treatment foster care may be positioned to play a role in improving the outcomes of transition-age youth, potentially within both child welfare and mental

health systems of care. Both systems have recognized service gaps in programming for transition-age youth with mental health challenges [1-3]. These service gaps may impede progress on the challenges and tasks of emerging adulthood in a first-world economy, such as graduating high school, starting college, gaining employment experience and avoiding incarceration. Research on early adult outcomes from young people served in foster care, mental health and special education systems have demonstrated poor functional outcomes in early adulthood, especially in the areas of employment and

CHILD & ADOLESCENT

PSYCHIATRY & MENTAL HEALTH

Open Access

- Published in 2015
- Cited by 16
- Mixed-methods
 approach using a
 randomised
 design with a
 focus on
 qualitative inquiry
- Participants (n=14)
- Treatment group (treatment foster home intervention; n=7)
- Control group (treatment as usual): n=7

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Full lot of author information is available at the end of the article

Background

Resources

FACSIAR's Evidence 'how to' guides

- What is evidence?
- What is an evidence hierarchy?
- Finding quality research and evidence
- Assessing the quality of evidence
- Common social policy research methods
- What is evaluation?
- Key Statistical Terms
- Reading and creating tables and graphs

Using evidence in Targeted Early Intervention Program



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