Scoping Reviews: A Different Lens on the Evidence

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Overview

- **Purpose and use of scoping reviews**
- **Scoping vs. systematic reviews**
- **5 steps in a scoping review**
- **Samples, strategies**
- **Your ideas for scoping reviews in addiction**

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informa
healthcare

ARTICLES

A scoping review to improve conceptual clarity of interprofessional interventions

Scott Reeves[1], Joanne Goldman[2], John Gilbert[3], Joshua Tepper[4], Ivan Silver[5], Esther Suter[6] and Merrick Zwarenstein[7]

Interprofessional education (IPE) and interprofessional collaboration (IPC) have been identified in health education and health care as playing an important role in improving health care services and patient outcomes. Despite a growth in the amount of research in these areas, poor conceptualizations of these interprofessional activities have persisted. Given the conceptual challenges, a scoping review of the interprofessional field was undertaken to map the literature available in order to identify key concepts, theories and sources of evidence. The objective of this review was to develop a

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Scoping Review: Definition

- **Exploratory project, preliminary**
- **Systematic selection, collection, and summarization of the relevant research (and often non-research) literature in a broad area**
- **Identification of key concepts, theories, sources of evidence, and gaps in the research**

Levac, Colquhoun & O'Brien (2010)

Purposes: Scoping Review

- **To identify and examine the extent, range, and nature of existing research and other related activity**
- **To summarize, synthesize, and disseminate research findings**
- **To determine value for undertaking a full systematic review**
- **To identify research gaps in the existing literature**

Levac, Colquhoun & O'Brien (2010)

Systematic Review

- **Focused on a narrow research question**
- **Focused on highest-quality evidence, methodological rigor**
- **Often involves statistical synthesis of data across studies**

Purposes: Systematic Review

- To identify, appraise, synthesize, and communicate all empirical evidence that meets pre-specified eligibility criteria to answer a highly focused research question, typically related to healthcare interventions

- To highlight areas where future research is required

Cochrane Handbook for Systematic Reviews of Interventions: http://handbook.cochrane.org/

SCOPING REVIEW	SYSTEMATIC REVIEW
Literature review	Literature review
Systematic selection, collection, appraisal, synthesis of literature	Systematic selection, collection, appraisal, synthesis of literature
Focus on broad topic area , concept, or questions	Focus on very specific research question
Inclusion/exclusion can be developed post hoc	Inclusion/exclusion usually defined at outset
Includes diverse scope, quality, types of evidence	Includes best evidence
Qualitatively-oriented summary (more descriptive or aggregative)	Quantitatively-oriented summary
----	Formal international collaborative efforts and reporting standards

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SCOPING REVIEW QUESTIONS	SYSTEMATIC REVIEW QUESTIONS
Is socioeconomic affluence associated with a more advanced stage of change for health behaviors?	What is the efficacy and acceptability of QTc screening for preventing cardiac-related morbidity and mortality in methadone-treated patients with opioid dependence?
What treatments are used to treat substance dependence in the English prison system and how effective are they?	Do interventions that reduce the cost of smoking cessation treatment increase quit rates, quit attempts, or use of treatments?
Does eliminating user fees increase utilization of health services in Africa?	What is the efficacy of psychostimulants for cocaine dependence on cocaine use, sustained cocaine abstinence, and retention in treatment?
What is known about the effects of medical tourism in destination and departure countries?	What is the effectiveness of AA or 12-step facilitation programs compared to other psychosocial interventions in reducing alcohol intake, achieving abstinence, maintaining abstinence, improving the quality of life of affected people and their families, and reducing alcohol associated accidents and health problems?

Int. J. Social Research Methodology
Vol. 8, No. 1, February 2005, pp. 19–32

Routledge

Scoping Studies: Towards a Methodological Framework
Hilary Arksey & Lisa O'Malley

Levac et al. Implementation Science 2010, 5:69
http://www.implementationscience.com/content/5/1/69

IMPLEMENTATION SCIENCE

DEBATE   Open Access

Scoping studies: advancing the methodology
Danielle Levac[1*], Heather Colquhoun[1], Kelly K O'Brien[1,2]

Original Article

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A Scoping Review of Interdisciplinary Collaboration in Addictions Education and Training
Lauren M. Broyles, PhD, RN □ James W. Conley, BA □ John D. Harding Jr., BA □ Adam J. Gordon, MD, MPH

Our Team

- Lauren Broyles, PhD, RN
- James Conley, BA
- John (Dan) Harding, Jr., BA
- Adam Gordon, MD, MPH

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STAGE 1: Identifying the Research Question(s)

- BROAD: "What is the state of interdisciplinary collaboration in addictions education (ICAE)?"

- BETTER: "What are the existing and emerging programs, curricula, and initiatives in ICAE?"

STAGE 1: Identifying the Research Question(s)

1. How is ICAE is defined?
2. Who are the individuals involved in ICAE?
3. What is the content and format of ICAE initiatives?
4. What are the outcomes of various ICAE initiatives?
5. What are the benefits and drawbacks of ICAE?

STAGE 1: Identifying the Research Question(s)

6. What are the actual facilitators, barriers, and challenges associated with the development and the implementation of ICAE initiatives?
7. What do people involved in ICAE think?
8. What are the emerging orientations, initiatives, and research questions in ICAE?

STAGE 2: Identifying Relevant Studies

breadth

depth

STAGE 2: Identifying Relevant Studies

- **INTERDISCIPLINARY EDUCATION:** occasions when two or more professions learn from and about each other to improve collaboration and quality of care
- **INTERDISCIPLINARY:** various health professionals working together
- **INTERDISCIPLINARY COLLABORATION:** $\geq$ 2 disciplines working together to achieve common goals

STAGE 2: Identifying Relevant Studies

VARIETY OF TEACHERS

VARIETY OF LEARNERS

EDUCATION

PARTNERSHIPS

CLINICAL

COLLABORATION

TRANSDISCIPLINARY

MULTIDISCIPLINARY

INTERDISCIPLINARY

INTERSPECIALTY

VARIETY OF SETTINGS

INTERPROFESSIONAL

MULTIPROFESSIONAL

STAGE 2: Identifying Relevant Studies

CLUSTER A	CLUSTER B	CLUSTER C	CLUSTER D
• Interdisciplinary	• Collaboration	• Addiction	• Education
• Multidisciplinary		• Alcohol	• Training
• Interprofessional		• Drugs	• Continuing education
		• Substance use	
		• Substance abuse	
		• Substance dependence	

Grey Literature

"That which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers"

Fourth International Conference on Grey Literature (1999)

Types of Grey Literature

Conference papers	Blogs	Government document
Standards	Lectures	Technical reports
Patents	Announcement	Scientific reports
Newsletters	Course materials	Bibliographies
Brochures/pamphlets	Bulletins	Non-commercial translations
Research reports	Bulletin boards	Trade magazines
Policy statements	Catalogues	Repair manuals
Annual reports	Posters	Preprints
Business documents	Press releases	E-prints
Dissertations	Essays	Memoranda
Patient handouts	Speeches	Legislation
Fact sheets	Statistics	Symposia
Leaflets	Tenders	White papers
Working papers	Interviews	Surveys
Abstracts	Directories	Guidelines
Book chapters	Programs/Projects	Toolkits
Bulletins	Questionnaires	

ADVANTAGES	DISADVANTAGES
Recent	Exists outside traditional academic channels
Unique	Uncertain quality and credibility
Exists outside traditional academic channels	May be "unbalanced" and reflect limited interests, agendas, or perspectives
Often synthesizes scientific literature	May be difficult to document/reference (incomplete or inaccurate authorship/dates)
Often "translates" scientific literature for real-world application/use/policy	
Reflection of the (non-academic) field; adds context	
Can influence future research, conceptualization, and orientation of the field	

How "Low" Can You Go?

Tyndall J. (2008)

Types of Grey Literature

Conference papers	Blogs	Government documents
Standards	Lectures	Technical reports
Patents	Announcement	Scientific reports
Newsletters	Course materials	Bibliographies
Brochures/pamphlets	Bulletins	Non-commercial translations
Research reports	Bulletin boards	Trade magazines
Policy statements	Catalogues	Repair manuals
Annual reports	Posters	Preprints
Business documents	Press releases	E-prints
Dissertations	Essays	Memoranda
Patient handouts	Speeches	Legislation
Fact sheets	Statistics	Symposia
Leaflets	Tenders	White papers
Working papers	Interviews	Surveys
Abstracts	Directories	Guidelines
Book chapters	Programs/Projects	Toolkits
Bulletins	Questionnaires	

AACODS		YES	NO	?
Authority	Identifying who is responsible for the intellectual content.			
	Individual author: • Associated with a reputable organisation? • Professional qualifications or considerable experience? • Produced/published other work (grey/black) in the field? • Recognised expert, identified in other sources? • Cited by others? (use Google Scholar as a quick check) • Higher degree student under "expert" supervision?			
	Organisation or group: • Is the organisation reputable? (e.g. W.H.O) • Is the organisation an authority in the field?			
	In all cases: • Does the item have a detailed reference list or bibliography?			
Accuracy	• Does the item have a clearly stated aim or brief? • Is so, is this met? • Does it have a stated methodology? • If so, is it adhered to? • Has it been peer-reviewed? • Has it been edited by a reputable authority? • Supported by authoritative, documented references or credible sources? • Is it representative of work in the field? • If No, is it a valid counterbalance?			

Tyndall J. (2008)

Slide 1: Grey Literature

Grey Literature

This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of the World Health Organization

**Learning together
to work together
for health**

Interdisciplinary Education For Collaborative, Patient-Centred Practice

Research and Findings Report

Health Canada Santé Canada

February 20, 2004

Report of a WHO Study Group on Multiprofessional Education of Health Personnel: the Team Approach

Slide 2: STAGE 3 & 4

**STAGE 3: Selecting Studies
STAGE 4: Charting the Data**

- **Interplay between Stages 3 and 4**
- **Systematic data extraction**

Slide 3: Data extraction form

ID: Date: Source:

Author(s):

Title:

Citation:

Learners:
- Undergraduate student ☐
- Graduate student ☐
- Health Professional student ☐
- Licensed Healthcare Professional ☐
- Other ☐

Publication type: Further details
- peer-reviewed paper ☐
- non peer-reviewed paper ☐
- published report ☐
- unpublished report ☐
- other ☐

Corresponding author & email:

Additional reports or data:

Population: Further details
- High income country (exclude) ☐
- Upper middle income country ☐
- Lower middle income country ☐
- Low income country ☐

Intervention:
- BDK ☐
- BDK with other related activity ☐
- Other kit ☐
- Other ☐

- Intrapartum use only ☐
- Intrapartum + postnatal ☐
- Intrapartum + other ☐
- Not intrapartum (exclude) ☐

Slide 4: Paper charting example

Paper: Liefooghe et al. Perception and social consequences of TB: A focus group study of TB pts in Sialkot, Pakistan. Soc Sci Med 1995;41(12):1685-1692.

Study focus and methods:
Aim: To explore the cultural factors influencing perceptions of TB and their effect on treatment adherence.
Research Questions: Not stated.
Method: Focus groups with hospitalised patients with TB undergoing 8 weeks of supervised therapy (directly observed therapy).
Sample: 3 female and 3 male focus groups each with 8 pts (48pts in total). Mean age overall 35yrs (± 15.5yrs). Men 40yrs (± 15.7 yrs), Women 29yrs (± 13.2 yrs). 86% Muslim; 14% Christian. Women are much younger than men in the sample. 72% new pts. 14% relapsed, 14% readmitted defaulters.
Context: Participants in-patients in TB hospital in Pakistan.

Approaches to data analysis and interpretation: Focus groups were tape recorded and transcribed. 3 researchers independently analysed transcripts thematically. Findings between the 3 researchers were then compared.

Factors shaping individual decision making in relation to TB diagnosis and treatment:
Social action, persistence and creativity: Once recovered from the shock of diagnosis, families were generally supportive (although not all women received the same support as men). Some women hid their diagnosis.
Material circumstances and resources: TXR is expensive (2 months salary for average worker). Pts (especially women) dependent on families for money for treatment. Not all willing to pay, others make large sacrifices. Some pts unable to work due to illness/hospitalisation. Because this form of directly observed therapy required being an in-patient for the first 8 weeks, the cost of hospitalisation was prohibitive for some families (in particular women who may have been reliant on their husband and in-laws for money).
Lay and professional knowledge systems about the causes and consequences of TB and its treatment: Lay: individual's explanatory models did not always coincide with the medical model (especially concerning the curability of disease and pregnancy) and professionals saw this as a barrier to treatment Most pts said that TB is a major problem and contagious. Others did not perceive TB to be infectious and attributed it to other causes. TB was perceived to be a family (not individual) disease. Pts hoped for a cure but not all were convinced they would be cured. Diagnosis causes deep distress in families. Some feel they have been punished by God. Women stopped taking TB medication during pregnancy as they believed that intolerance to the drugs increased. Pregnancy was also thought in one area to reactivate TB.
Public discourse around TB and social stigma attaching to it: Negative family attitudes impacted on treatment access and adherence. Pts very shocked by diagnosis- some rejected /denied diagnosis. Treatment defaulting by

Slide 5: STAGE 3 & 4

**STAGE 3: Selecting Studies
STAGE 4: Charting the Data**

- **First pass ranking re: relevance**
- **Group discussion**
- **Two main criteria for continued inclusion**
- **Final review = 30 articles/documents**
  - **90 abstracts**
  - **63 articles reviewed/charted**
  - **28 articles + 2 documents = 30**

Slide 6: STAGE 5

STAGE 5: Collating, Summarizing, and Reporting the Results

- **Guided by the initial 8 research questions**
  1. **How is ICAE is defined?**
  2. **Who are the individuals involved in ICAE?**
  3. **What is the content and format of ICAE initiatives?**

How is ICAE is defined?

Who are the individuals involved in ICAE?

1. **Undergraduate college students**

2. **Prelicensure health professional students**

3. **Postlicensure health professionals**

4. **Health professional faculty members in academia**

What is the content and format of ICAE initiatives?

CONTENT	FORMAT
Biopsychosocial aspects of addiction	Traditional classroom lecture
SBIRT	Web-based learning modules
Addictions recovery	Community based service learning experiences
Dual diagnosis	Expert- and peer-led workshops/discussion
Tobacco cessation and policy	Small group exercises
Interdisciplinary teamwork strategies for addictions service or education	
Addictions content + formal interdisciplinary research training	

TEACHING MODALITIES IN ICAE
Lecture
Case exemplars/clinical vignettes
Problem-based learning activities
Objective structured clinical examinations/clinical role-playing with other learners or standardized patients
On-site coaching and feedback
Mentored research experiences

STAGE 5: …Reporting the Results

- **Commentary**
- **Gaps**
- **Implications**
- **Calls to action**

Process Summary

Stage #	Stage	Month	Team Members
1	Identifying the RQ	1	Lauren, Adam, James, Dan
2	Identifying Relevant Articles	1-2	Lauren, James, Dan
3-4	Selecting Studies and Charting the Data	1-2	James and Dan
5	Collating and Summarizing Results	3	Lauren, James, Dan
	Reporting the Results (Manuscript preparation)	4	Lauren, James, Adam

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Conclusions

- **New tool for your toolbox**
- **Narrowness of topic, state of the field shapes the content and tone**
- **Inherent tension, iterativeness, messiness**
- **BUT. . .be rigorous and systematic**
- **What could SCR teach SYSR?**

Your Ideas and Questions

- **What topics or questions might be appropriate for a scoping review in your world?**
- **What would be good reasons for undertaking a scoping review in this area?**
- **What main questions and sub-questions would you ask?**

Review objective

This scoping review will assess the available evidence on both positive and negative effects of birth delivery kits (BDKs)[1]. The following specific objectives will be addressed:

1. What are the main components of a BDK?
2. What are the circumstances in which BDKs are currently used?
3. What are the effects of BDKs on maternal[2] and newborn[3] outcomes?
4. Can BDKs act as a stimulus or catalyst to improving the quality of care?
5. Are there any negative effects from BDKs?

Hundley, et al., 2012

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PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	