Activity 3: Instructions

- With your group examine and discuss two (or more) examples of integration
- Identify whether the examples use comparison or connection
    - **Comparison**: the results of independently conducted QES and quantitative / effectiveness synthesis are compared - the findings of one type of evidence are used to help to explain the findings of the other.
    - **Connection**: results from one synthesis are used to inform the focus and / or conduct of another synthesis.
- Identify what is being compared / connected and how using the table
- Use the first column of the table to indicate the description that best fits with your selected review(s)
- Consider the value / limitations of the approaches you have considered

Review #	Type	Aim	What to compare	Comparison tool
	Compare	To understand weight of evidence supporting QES themes / gaps in evidence.	QES themes *compared with* **SRIE findings**	Matrix
	Compare	To understand extent to which interventions reflect needs / preferences identified in QES.	QES themes *compared with* **Individual interventions**	Matrix
	Compare	To understand whether effectiveness evidence supports overarching QES theory.	QES theory compared with **SRIE findings**	Annotated logic model
	Compare	To illustrate how results of QES and effectiveness synthesis are discordant	QES themes *compared with* **SRIE findings**	Line of argument
	Connect	To derive hypotheses from QES that can then be tested using effectiveness / quantitative data.	QES themes *inform* **SRIE**	Sub-group analysis
	Connect	QES to identify intervention, contextual or implementation factors that may influence outcomes. Combinations of factors tested via QCA.	QES themes *inform* **Analysis of intervention complexity**	Qualitative comparative analysis (QCA)
	Connect	Findings of effectiveness research used as framework to guide extraction / synthesis for the QES.	Effectiveness synthesis informs **QES**	Framework

Integration examples

Integration example #1 – Houghton et al (2017)

Review: Houghton et al (2017) Factors that impact on recruitment to randomised trials in health care: a qualitative evidence synthesis

Review objectives: To explore potential trial participants' views and experiences of the recruitment process for participation […] and to explore to what extent barriers and facilitators identified are addressed by strategies to improve recruitment evaluated in previous reviews of the effects of interventions including a Cochrane Methodology Review.

Integration methods: QES findings were integrated with two previous intervention effectiveness reviews (Gardner et al 2020; Treweek et al 2018).

Value of integration: QES enabled development of key questions that trialists can ask when developing recruitment strategies to ensure participant centred approaches. Matching these to the effectiveness evidence identified gaps (i.e. as indicated in the table below there was no evidence from the Gardner review matching QES findings 1-3) and recommendations for future research.

Example findings from integration: (Note: only the first few rows of the matrix are presented)

Juxtaposing the findings in matrix			
Summary of qualitative findings	**Implications for trialists**	**Treweek Review**	**Gardner Review**
TRIAL INFLUENCES ON THE DECISION TO PARTICIPATE			
Communication of trial information			
Finding 1: Trial information delivered verbally during face-to-face contact can be less confusing than written trial information.	*Will trial information be delivered verbally with face-to-face contact?*	[D2] Researcher reading out the consent details (GRADE: very low).	
Finding 2: Written trial information may be beneficial as an adjunct to verbal information and facilitates time and space for reflection without the added influence of recruiters' presence.	*Will written information be offered as a supplement to / in addition to verbal information?*	[C3] Giving quotes from previous participants in SMS messages (GRADE: moderate). [D3] Easy to read consent form (no GRADE).	
Finding 3: The person delivering trial information should have good communication skills, be approachable, trustworthy, person-centred and knowledgeable with a good ability to address potential participants' queries. Consideration needs to be given to whether a clinician or a researcher is the most appropriate person to provide the trial information.	*Is the person delivering the trial information approachable, trustworthy, participant-centred and knowledgeable with a good ability to address queries? Has the recruitment strategy identified whether a clinician or a researcher is the most appropriate person to provide the trial information?*	E18] Trained recruiters from a similar ethnic background to study population already taking part in a trial as lay advocates (no GRADE).	

Integration example #2 – Lester et al (2019)

Review: (Lester et al 2019) What helps to support people affected by Adverse Childhood Experiences (ACEs)? A review of evidence.

Review objectives: To gather, assess and present evidence on what helps to mitigate the harmful impacts of ACEs through a review of reviews on the effectiveness of interventions for people affected by ACEs, a QES on the experiences and service needs of people in the UK affected by ACEs, and a stakeholder consultation with young people with lived experiences of ACEs in the UK.

Integration methods: A narrative line-of-argument was used to illustrate key areas of discord between the types of interventions examined in systematic reviews and the findings of the QES and stakeholder consultation.

Value of integration: The integration exposed the fundamental disconnect between the types of interventions examined in systematic reviews and people's needs as revealed in the QES and consultation findings.

Key findings from integration:

When comparing the evidence on people's experiences and needs with the evidence about available interventions areas of discordance were identified:

First, the importance of day-to-day practical and emotional support underpinned by relationships with a trusted adult (or mentor/ peer(s)) was consistently highlighted in the qualitative evidence. By contrast, the evidence relating to interventions focused on individualised 'crisis point' approaches. In the short term these psychological interventions did improve mental health but failed to address the multifaceted and ongoing needs identified by young people in the views synthesis and the stakeholder work.

Second, whilst the views evidence highlighted that young people valued consistency and stability, many of the interventions evaluated in systematic reviews were short-term in nature and so were unable to address this need.

Third, whilst the qualitative evidence revealed that children and young people felt the attributes of supportive adults were more important for providing effective support than their professional role, the interventions evaluated in the systematic reviews tended to be delivered by staff otherwise unknown to the young person in community or clinical settings.

Integration example #3 – Foley et al (2022)

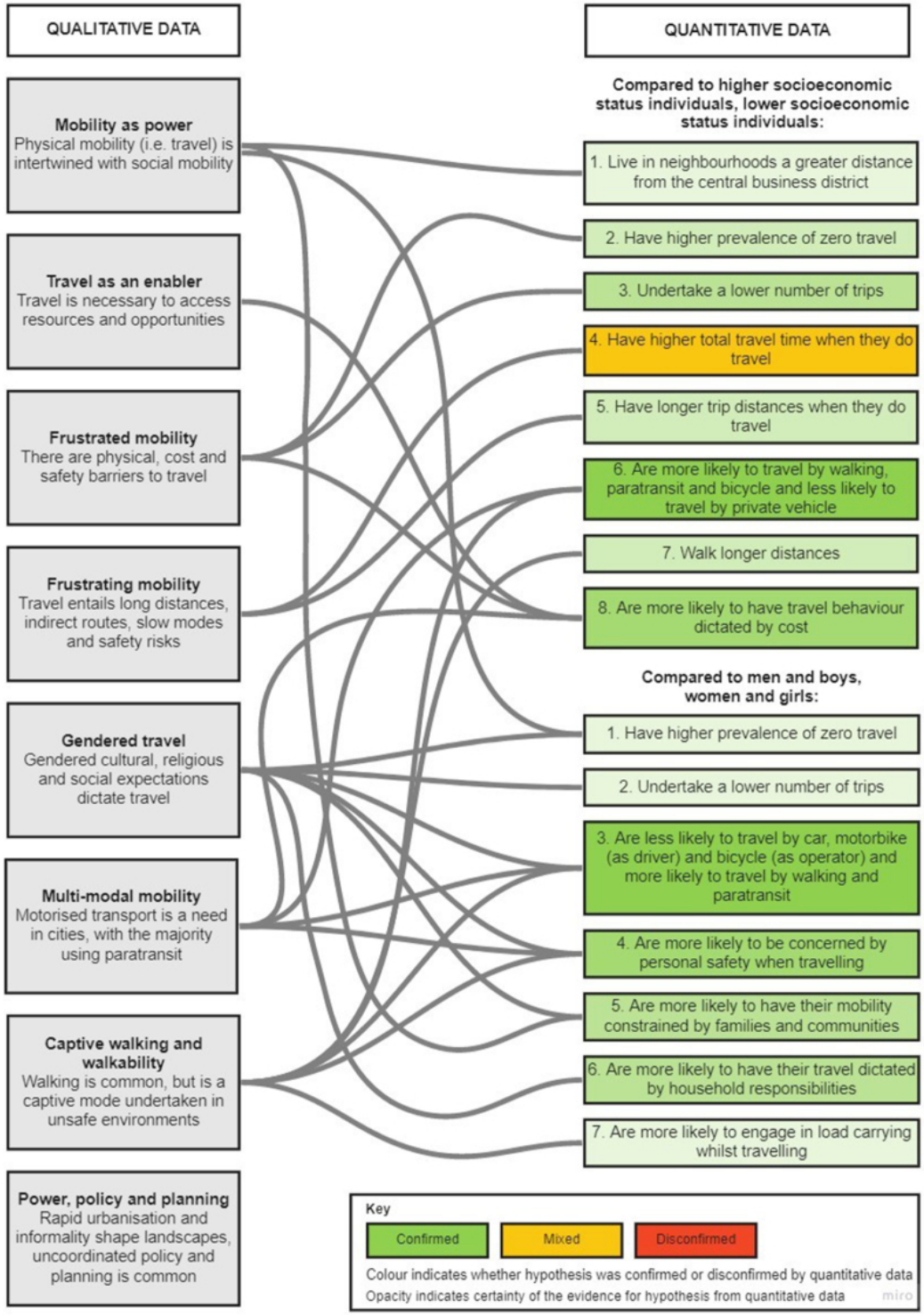
Review: (Foley et al 2022) Socioeconomic and gendered inequities in travel behaviour in Africa: Mixed-method systematic review and meta-ethnography

Review objectives: To explore socioeconomic and gendered differences in travel behaviour in Africa, to develop an understanding of travel-related inequity.

Integration methods: Insights from the QES were used to generate hypothesised patterns of predictions. The quantitative evidence was then examined to see whether these patterns could be observed.

Value of integration: The qualitative data gave rich information on the production and experience of travel inequity; the quantitative data enabled the identification of differences in travel behaviour at scale across multiple countries.

Example findings from integration:



Integration example #4 – Borhen et al (2019)

Review: (Bohren et al 2019) Perceptions and experiences of labour companionship: a qualitative evidence synthesis

Review objectives: To describe and explore the perceptions and experiences of women, partners, community members, healthcare providers and administrators, and other key stakeholders regarding labour companionship; to identify factors affecting successful implementation and sustainability of labour companionship; and to explore how the findings of this review can enhance understanding of the related Cochrane systematic review of interventions.

Integration methods: Interventions included in the intervention review were examined to see whether they addressed features of labour companionship identified as important in the QES.

Value of integration: Provides a useful summary of how the synthesised qualitative findings are reflected in the content of the interventions in the studies included in the related Cochrane systematic review of interventions (Bohren et al 2017). The findings show that most interventions included in the Bohren 2017 review did not include the key features of labour companionship identified in the qualitative evidence synthesis.

Example findings from integration:

Matrix model applying key findings from the qualitative synthesis to studies included in the Cochrane intervention review (Bohren 2017)

Studies included in the relevant Cochrane intervention review	Was the intervention designed to address the following factors?						
	1	2	3	4	5	6	7
Akbarzadeh 2014	?	?	?	?	?	N/A	N
Bréart - Belgium 1992	?	N	?	?	?	N/A	N
Bréart - France 1992	?	N	?	?	?	N/A	N
Bréart - Greece 1992	?	N	?	?	?	N/A	N
Bruggemann 2007	?	?	?	N	?	N	Y
Campbell 2006	?	Y	?	?	?	Y	Y
Cogan 1998	?	N	?	?	?	N/A	N
Dickinson 2002	Y	?	?	N/A	Y	N/A	Y
Gagnon 1997	Y	N	?	N/A	Y	N/A	N
Hans 2013	Y	Y	?	Y	Y	N/A	Y
Hemminki 1990a	?	N	?	?	?	N	N
Hemminki 1990b	?	N	?	?	?	N/A	N
Hodnett 1989	?	y	?	?	?	N/A	N
Hodnett 2002	Y	N	?	?	?	N/A	N
Hofmeyer 1991	?	N	?	?	?	N	N
Isbir 2015	?	N	?	?	?	N/A	N
Kashanian 2010	?	N	*	N/A	?	N/A	N
Kennell 1991	?	N	N	?	?	N/A	N
Klaus 1986	?	N	N	?	?	N/A	N
Langer 1998	?	N	Y	?	?	N/A	N
Madi 1999	?	N	N	?	?	N	Y
McGrath 2008	?	Y	?	?	?	N/A	N
Morhason-Bello 2009	Y	Y	?	?	Y	N	Y
Safarzadeh 2012	?	?	Y	?	?	?	Y
Thomassen 2003	?	?	?	?	?	N/A	N
Torres 1999	?	Y	Y	?	Y	Y	Y
Yuenyong 2012	Y	Y	?	?	?	Y	Y

Y=Yes, N=No, N/A=Not applicable, ?=Not reported

*Women in intervention group were in a private room. Women in the control group were in a labour ward with 5-7 women in labour in the same room.

1. Were providers trained on the benefits of labour companionship prior to implementation?
2. Were women educated about the benefits of labour companionship prior to implementation?
3. Was the labour ward structured or restructured in a way to ensure that privacy can be maintained for all women?
4. Were providers trained on how to integrate companions into the care team?
5. Were clear roles and expectations set for companions and providers?
6. For trials with lay companions, was training for companions on how to support women integrated into antenatal care?
7. Did the woman choose her own companion?

Integration example #5 – Melendez-Torres et al (2019)

Review: (Melendez-Torres et al 2019) Developing and testing intervention theory by incorporating a views synthesis into a qualitative comparative analysis of intervention effectiveness

Review objectives: To identify the critical features of successful weight management programmes (WMPs) for adults.

Integration methods: QES provided working theory to structure a QCA, specifically (a) by suggesting specific intervention features and sharpening the focus on the most salient features to be examined, (b) by supporting interpretation of findings, and (c) by bounding data analysis to prevent data dredging.

Value of integration: In addition to indicating specific intervention features to test, the QES also helped to sharpen the focus on the most salient features to be examined, supported interpretation of findings, and ensured that we avoided data dredging.

Example findings from integration:

Critical feature	Example view	Most effective interventions (n=10)	Least effective interventions (n=10)
Good quality provider relation-ships	'You feel that some-body's batting for you'	**All 10** most effective interventions had: Provider-user relationships emphasised AND Characteristics perceived to foster self-regulation.	**All 10** least effective interventions had: **NO** emphasis on provider relationships. OR An emphasis on provider relationships BUT **NO** self regulation characteristics.
Provider direction and support	'I need someone to take my hand and take me over'	**All 10** most effective interventions had: Provider-set energy-intake goals AND Provider-set exercise goals AND EITHER direct provision of exercise OR provider-set weight goals.	**All 10** least effective interventions had: **NO** provider-set energy-intake goals AND **NO** provider-set exercise goal AND **NO** direct provision of exercise. OR Direct provision of exercise AND provider-set exercise goals BUT **NO** provider-set energy-intake goals AND **NO** provider-set weight goals.
Oppor-tunities for peer relation-ships	'You wanted to come back and hear how the guys were getting on'	All interventions with both of the following characteristics (n=5) were in the most effective group*: Group work AND Targeted at a specific population group.	All interventions with both of the following characteristics **(n=5)** were in the least effective group*: **NO** group work AND **NO** population targeting

* Some WMPs with *either* group work *or* targeting (n=5) were most effective, but the presence of both conditions appears to ensure greater effectiveness.

Integration example #6 – Murray et al (2019)

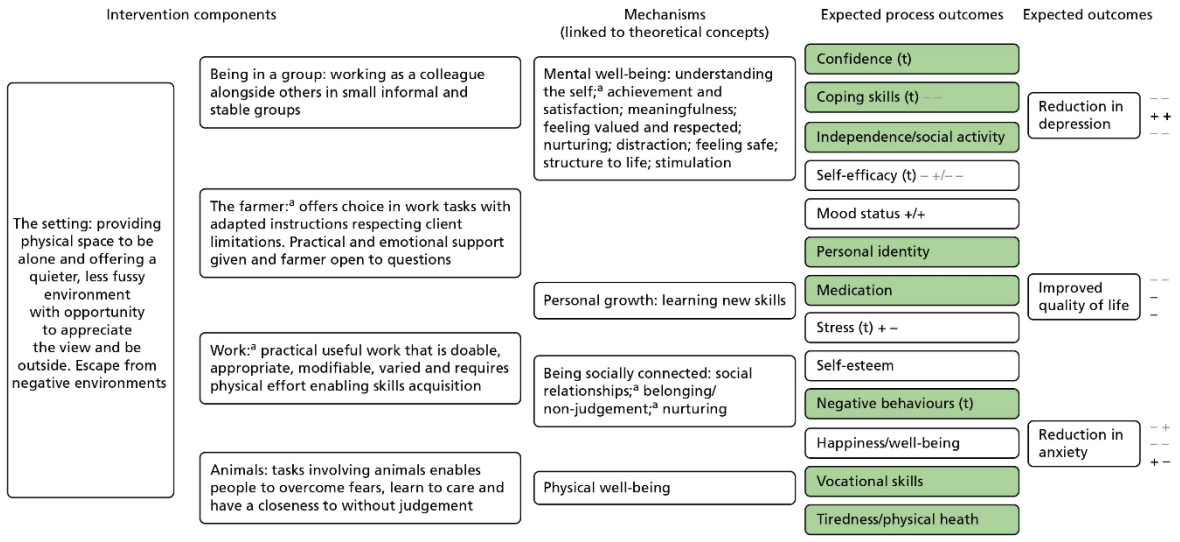
Review: (Murray et al 2019) The impact of care farms on quality of life, depression and anxiety among different population groups: A systematic review

Review objectives: To systematically review the available evidence of the effects of CFs on quality of life, health and social well-being on service users […] to understand the mechanisms of change for different population groups.

Integration methods: Logic models depicting care farming components, mechanisms and proximal outcomes were developed using qualitative evidence. The effectiveness evidence was then mapped onto both the proximal and endpoint health outcomes (anxiety, depression and health-related quality of life) to identify whether outcomes in the logic models were supported by the evidence base.

Value of integration: Communicates the complexity of the intervention theory juxtaposed against the nature, extent and direction of effectiveness evidence.

Example findings from integration:



Logic model for combined mental ill health and substance misuse group. a, Mechanisms that were most frequently found and with greatest spread across studies. Grey and black symbols show quantitative evidence for which – means no significant difference and + means significant difference; grey represents RCT evidence; two symbols beside each other show different time points within the same study; and shaded process outcomes equate to evidence from qualitative literature. t, theory based.

Integration example #7 – Flemming (2010)

Review: Flemming (2010) Synthesis of quantitative and qualitative research: an example using Critical Interpretive Synthesis

Review objectives: To synthesize quantitative research, in the form of an effectiveness review and a guideline, with qualitative research to examine the use of morphine to treat cancer-related pain.

Integration methods: The findings from the effectiveness review interface with and drive the synthesis of qualitative research. An integrative grid in which columns were organised around the findings from effectiveness reviews and each was populated by relevant findings from individual qualitative studies.

Value of integration: The interface between quantitative and qualitative research demonstrated how the practical enactment of effective interventions can alter in relation to other elements, for example threats to health, interaction with healthcare professionals and perceived meaning of the intervention.

Example findings from integration:

	Opioid of first choice is morphine	If pain returns on a regular basis, regular dose should be increased and rescue medication taken	For patients on normal release medication a double dose should be taken at bedtime	Successful pain management requires adequate analgesia without adverse effects
Coyle 2004	Morphine is viewed as positive to relieve pain Good analgesia leads to a sense of control	Poorly controlled pain is interpreted as worsening disease Unlimited analgesia is required for a comfortable death		Adverse effects are a burden Cognitive side effects lead to 'loss of self' Opioids are a burden because of side effects
Ersek *et al.* 1999	Need to prove pain to get analgesia Patients took opioids regularly to improve functioning Side effects are tolerated		Patients wake at night in pain as they can't afford sustained release preparations	Functionality more important than pain relief Adverse effects are a deterrent Analgesic use altered because of side effects Side effects seen as a sign of addiction
Johnston-Taylor *et al.* 1993	Morphine works so it gets taken despite side effects	Patients had conflict over management of opioids, what, when how to take?	Fear that pain will increase towards death	Negative connotations associated with morphine use because of side effects Carers have concerns over side effects and addiction Nurses concerns over side effects