We16-30 Writing Up and Dissemination

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What are we trying to achieve?

- Explicit description of Review Methods
- Transparent presentation of Data
- Trustworthiness of Authors' Analysis and Conclusions
- Starting Point for Reader's Own Observations

What is required?

- Conformity to Published Reporting Standards (e.g. PRISMA, formerly QUOROM)
- Use of Good Practice in Presentation (e.g. STARLITE for literature searches)
- Imaginative Use of Data Display

PRISMA

- **P**referred **R**eporting **I**tems for **S**ystematic Reviews and **M**eta-**A**nalyses.
- Evidence-based minimum set of items for reporting systematic reviews and meta-analyses.
- Aim of PRISMA Statement: to help authors improve reporting of systematic reviews and meta-analyses.
- Focus on randomized trials, but PRISMA also basis for reporting systematic reviews of other types of research, particularly evaluations of interventions.
- May be useful for critical appraisal of published systematic reviews (not quality assessment instrument to gauge quality of a systematic review).

The PRISMA Statement

- Consists of 27-item checklist and four-phase flow diagram.
- Evolving document subject to periodic change as new evidence emerges.
- Update and expansion of now-out dated QUOROM Statement.
- Website (http://www.prisma-statement.org/) contains current definitive version of PRISMA Statement.

27-item Checklist (Items 1 & 2)

1. **Title**: Identify report as systematic review [meta-analysis, or both] *(? Qualitative Systematic Review/ Qualitative Meta-Synthesis/ Qualitative Evidence Synthesis?)*
2. **Abstract:** Provide 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.

27-item Checklist – Items 3 & 4

INTRODUCTION		
Rationale	3	**Describe rationale for review** in context of what is already known.
Objectives	4	**Provide explicit statement of questions being addressed** with reference to participants, interventions, comparisons, outcomes, and study design (PICOS). *(?SPICE?)*

27-Item Checklist (Items 5-8, Methods)

Protocol & registration	5	**Indicate if review protocol exists**, if and where it can be accessed (e.g., Web address), etc.
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, contact with authors to identify additional studies) in 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.

27-item Checklist (Items 9-12, Methods)

Study selection	9	State **process for selecting studies** (i.e., screening, eligibility, included in systematic review).
Data collection process	10	Describe **method of data extraction** from reports and any processes for obtaining and confirming data from investigators.
Data items	11	List and **define all variables** *(?subject data/author data?/substantiated?)* for which data were sought and assumptions and simplifications made.
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies *(?Reflexivity?)*

27-item Checklist

Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.

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Analysis

Section/ topic	#	Checklist item
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.

27-item Checklist (Items 17-20, Results)

Study selection	17	**Numbers of studies screened**, assessed for eligibility, and included in review, with reasons for exclusions at each stage, ideally with **flow diagram**.
Study characteristics	18	For each study, **present characteristics for which data were extracted** and provide citations.
Risk of bias within studies	19	Present **data on risk of bias** of each study.
Results of individual studies	20	For all outcomes considered provide: (a) summary data (b) effect estimates and confidence intervals, ideally with a forest plot.

27-item Checklist (Items 21-23, Results)

Synthesis of results	21	**Present results of each meta-analysis** done, including confidence intervals and measures of consistency. *(?reciprocal translation, line-of-argument synthesis?)*
Risk of bias across studies	22	Present results of any **assessment of risk of bias across studies**.
Additional analysis	23	Give **results of additional analyses**, if done (?Disconfirming case analysis?)

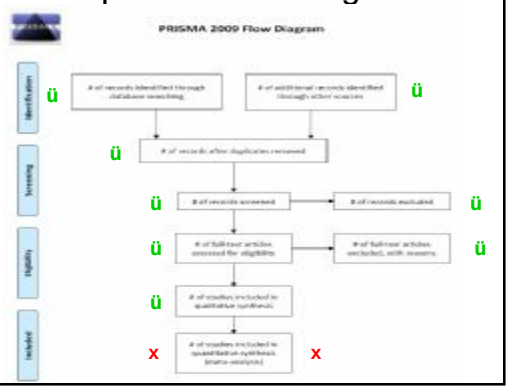
27-item Checklist (Items 24-26, Results)

Summary of evidence	24	**Summarize main findings including strength of evidence** for each main outcome (?theme?); consider **relevance to key groups** (e.g., healthcare providers, users, and policy makers).
Limitations	25	**Discuss limitations at study and outcome (?theme?) level** and at review-level (e.g., incomplete retrieval of identified research, reporting bias).
Conclusions	26	Provide a **general interpretation of results in context of other evidence**, and implications for future research

27-item Checklist (Item 27, Funding)

Funding	27	Describe **sources of funding** for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.

Four-phase Flow Diagram



PRISMA – Explanation & Elaboration

- **PRISMA Explanation and Elaboration document** (http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.1000100) explains and illustrates principles underlying PRISMA Statement.
- To be used in conjunction with PRISMA Statement.
- Part of broader effort, to improve reporting of different types of health research, and in turn to improve quality of research used in healthcare decision-making – EQUATOR Network

Equator Network (http://www.equator-network.org/)

What is STARLITE?

- STARLITE is a proposal for a framework for reporting the literature searching in systematic reviews and health technology assessments
- It is an acronym – STAndards for Reporting LITErature searches
- But it is also a mnemonic…….

STARLITE

S - Sampling Strategy
T - Type of Studies
A - Approaches
R - Range of Years (Start Date-End Date)
L - Limits
I - Inclusion and Exclusions
T - Terms Used
E - Electronic Sources

Why is STARLITE needed?

- No standard for reporting of literature searching
- Considerable variation in practice
- Decisions taken in searching impact on final review
- Poor searching introduces possibility of publication bias
- Several unilateral attempts to define best practice
- Existing best practice based on effectiveness reviews/HTAs
- PRISMA has very little detail relating to literature searching

Why is STARLITE needed?

PRISMA items relating to literature searching

	Fully or Partially Present	Absent
Sampling Strategy	**43**	**0**
Type of Study	**7**	**36**
Approaches	**28**	**15**
Range of Years	**40**	**3**
Limits (e.g. English)	**43**	**0**
Inclusion and Exclusions	**8**	**35**
Terms Used	**27**	**16**
Electronic Sources	**40**	**3**

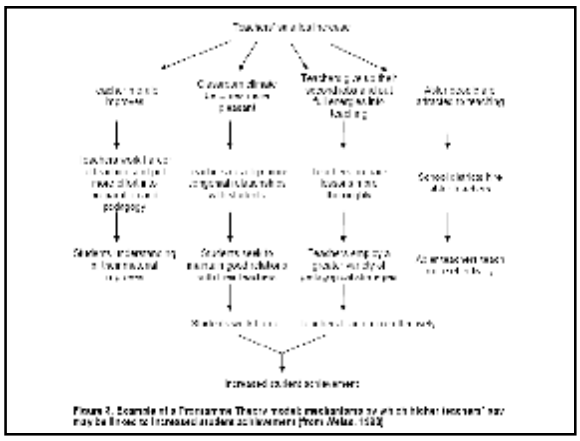
What is STARLITE not?

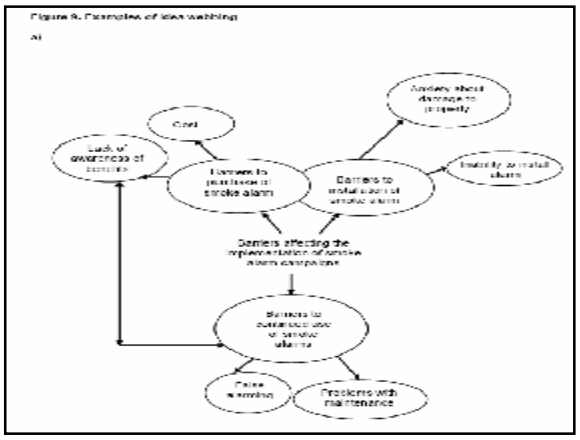
- Not yet full standard – “Towards” – needs tighter specification of data elements and formats
- Not yet consensual framework – Phase 1 was “literary warrant”, now requires Phase 2 “user warrant” and endorsement.

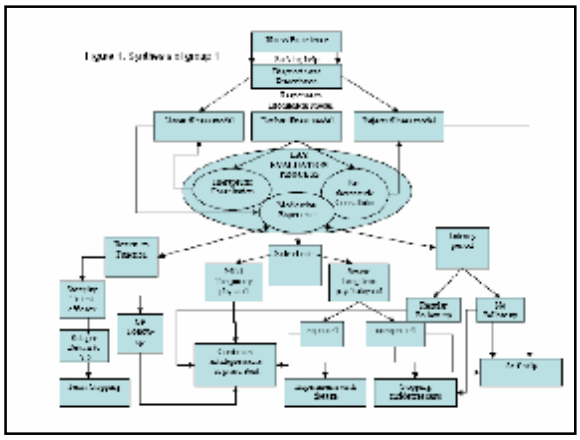
Good Practice?

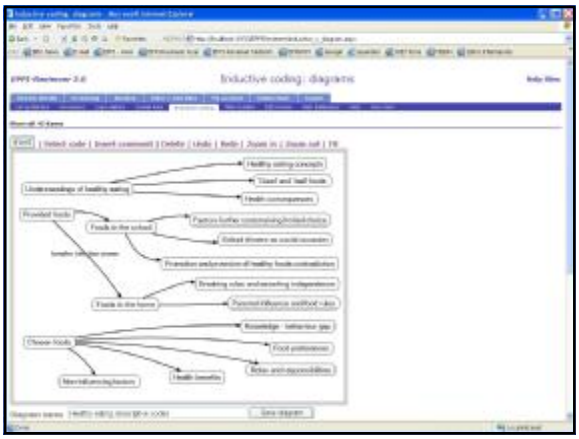
Four purposes for data presentation

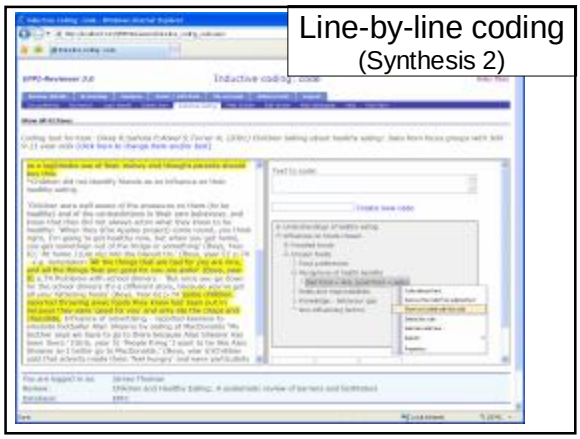
- **Formative** – to aid conduct of review and insights from findings
- **Summative** – as an output from the review process
- **Integrative** – bringing together quantitative and qualitative elements *(Covered in Previous Session*)
- **Audit** – to increase confidence in robustness











Line-by-line coding
(Synthesis 2)

Synthesis 2: Thematic analysis

1) Children don't see it as their role to be interested in health.

2) Children do not see future health consequences as personally relevant or credible.

3) Fruit, vegetables and confectionary have very different meanings for children.

4) Children actively seek ways to exercise their own choices with regard to foods.

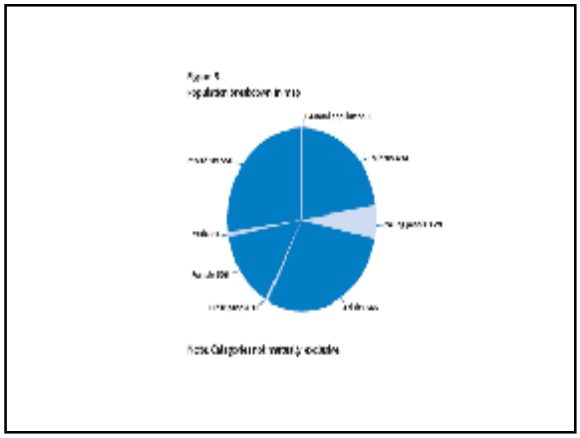
5) Children value eating as a social occasion.

6) Children recognise contradiction between what is promoted and what is provided.

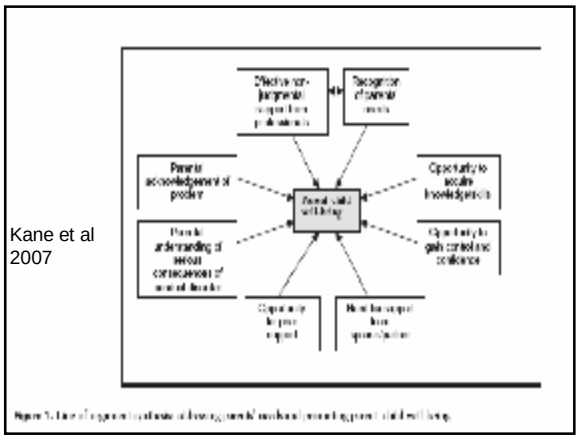
Children consider taste, not health, to be a key influence on their food choice

Food labelled as healthy may lead children to reject them ('I don't like it so it must be healthy')

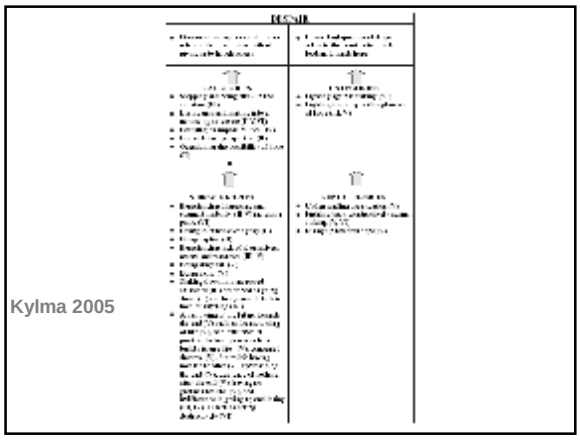
Buying healthy foods not seen as a legitimate use of their pocket money



Kane et al 2007



Kylma 2005

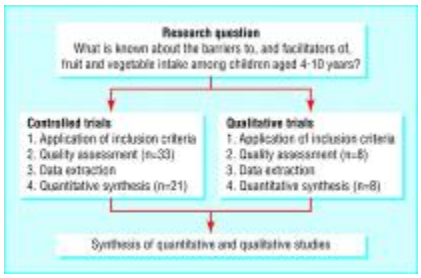


Audit - Transparency

- 'Given the involvement of the researcher in the research process, the question is not whether the data are biased, but to what extent has the researcher rendered transparent the processes by which data have been collected, analysed and presented' (Popay et al, 1998, p. 348).

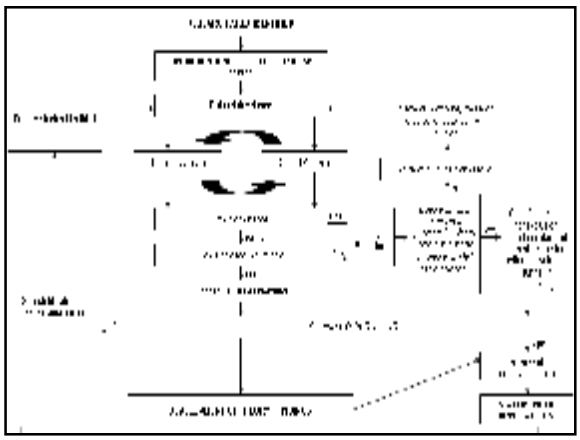
Overall Process

Fig 1 Stages of the review



Thomas, J. et al. BMJ 2004;328:1010-1012

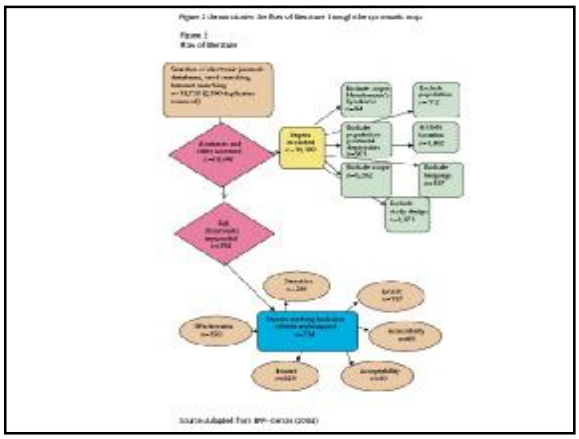
BMJ



Search Process

Table 1. Final search criteria and search terms using the SPICE(S) tool

Setting	Perspective	Intervention	Comparison	Evaluation	Social science method
Depression	*Patient View*	*Antidepressants*	*GP and Patient views*	*Anti-depressant use over time*	*Qualitative*
Depression; Depressive disorder; Depress$.tw.	Attitude to health; Patient satisfaction; Patient$ adj3 view$; Patient care; Patient Compliance; Patient acceptance of health care; Patient participation; Treatment refusal; Patient preference	Antidepressive agents; Antidepress$.tw	Physician-patient relations	Communication; Decision making; Consultation.tw.	Qualitative research; Qualitative.tw.; Qualitative adj research; Grounded adj theory; Ethnograph$; Qualitative adj studies; Interview$; Focus groups; Nursing research.tw.; nursing research/ or nursing evaluation research/ or exp nursing methodology research/ Field studies; Ethnonursing research; Field studies.tw.; Fieldwork.tw.



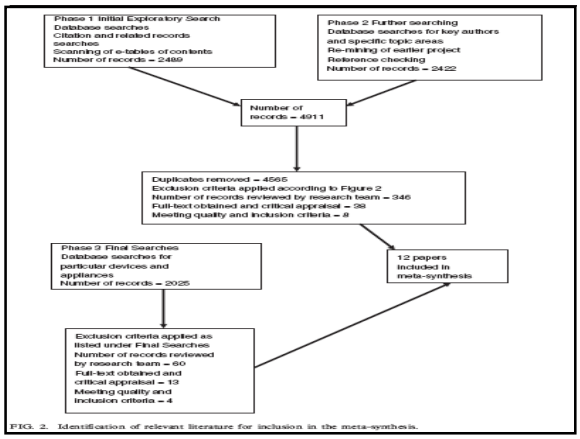


FIG. 2. Identification of relevant literature for inclusion in the meta-synthesis.

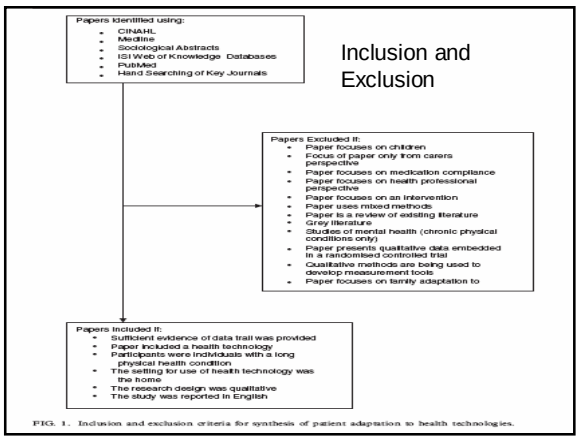


FIG. 1. Inclusion and exclusion criteria for synthesis of patient adaptation to health technologies.

Inclusion and Exclusion

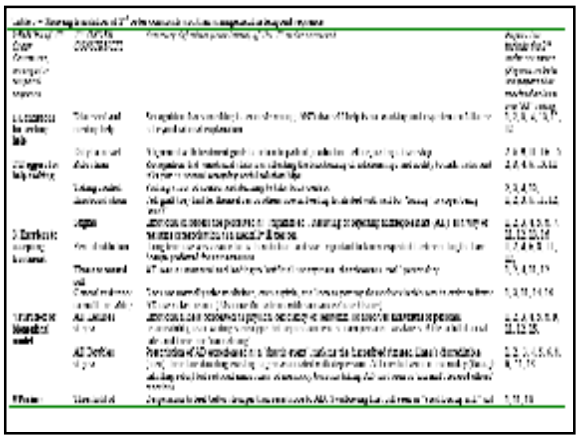
Synthesis

Table 4 – Definition of 1st, 2nd and 3rd order constructs, based on Noblit and Hare (1988)

First order constructs	Patients views, accounts and interpretations of their experiences of using anti-depressants	Interpretations of experience
Second order constructs	The authors views and interpretations (expressed in terms of themes and concepts) of patients views of antidepressant use.	Interpretations of interpretations of experience
Third order constructs	The views and interpretations of the synthesis team, (expressed in terms of themes and key concepts)	Interpretations of interpretations of interpretations of experience

TABLE 2. *Main results from the meta-synthesis*

Synthesis of main findings	Line of argument synthesis
Managing multiple uncertainties Heightened awareness of health deteriorating Continuous feelings of uncertainty about the future New vulnerability to technological failure Living in hope of technological advances Technology imposed a routine that facilitated a sense of control and certainty	Adaptation, accommodation and integration of a technology are an extension of identifying and living life with a chronic condition
The reconstruction of identity Moral imperative to accept a technology Process of comprehension as to how technology will impact upon illness identity. Technology perceived as a signifier of illness Presumption that others will make inaccurate assumptions about the individual. Reconstruction of identity that retains a part of pre-illness identity	The integration of a technology or device into the user's life world can be viewed as an extension of existing 'illness work'
The struggle to remain autonomous while allowing dependence Technology helped maintain some level of independence Devices permitted a greater sense of self-regulation Human qualities attached to the technology that aided engagement A new autonomy brought dependence on the technology and others Changes to relationships with health professionals experienced Health professional's views perceived to dominate	
Coming to terms with living a technology-assisted life Integration involved a process of normalization New values and norms incorporated following the introduction of a technology Balance needed between illness regimen and daily life Alterations made to minimize intrusion	The introduction of a technology imposes a new time frame on the individual that must be adhered to, to meet the needs of the technology
Usability of devices Acceptance linked to user competency and user friendliness of the device Usability linked to perceived simplicity, convenience and hygiene of the technology	



Example of synthesising translations across illness groups

'Rejecters/sceptics' Dowell & Hudson (general medication)

Reject medication due to their values, bypassing testing process.

'Purposeful non-adherence' Johnson et al (hypertension)

A conscious decision not to take drugs, possibly following testing

'Active users' Dowell & Hudson (general medication)

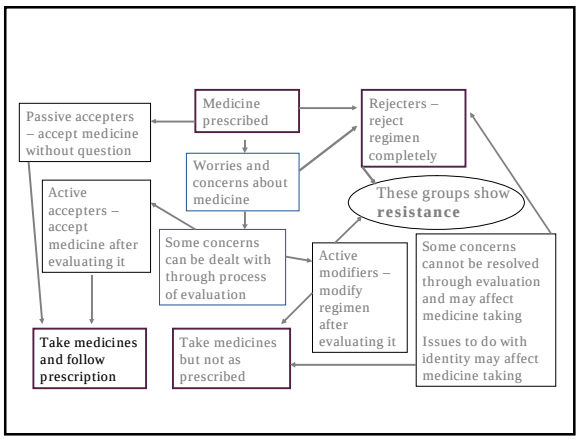
Conscious decision to modify regimen, following testing and deliberation

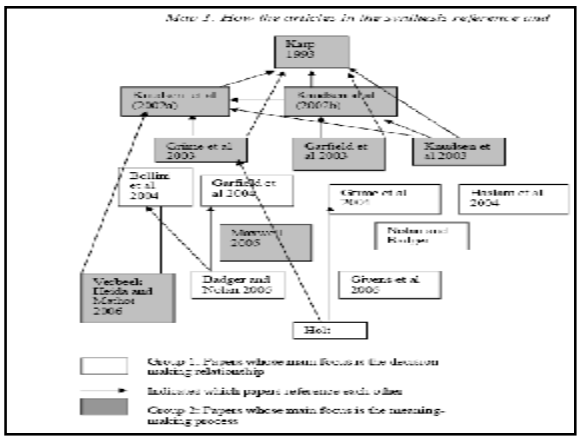
'Unorthodox Accounts' Britten (general medication)

'Self-help repertoire' Lumme-Sandt et al (general medication)

'Justifiers and Excusers' (Siegel et al (HIV)

Excuses offered by those who 'admit behaviour wrong but deny responsibility'. *Justifications* offered by those who 'take responsibility for behaviour yet deny it has negative consequences'.





Watch This Space!

- David Moher and Colleagues are currently producing Book on Reporting Standards
- Cochrane Qualitative Methods Group currently contributing Chapter on Reporting of Qualitative Research
- Discussions Ongoing about Standards for Reporting Qualitative Evidence Syntheses