The effects of patient online self-diagnosing in the 'smart-phone society' on the healthcare professional-patient relationship and medical authority

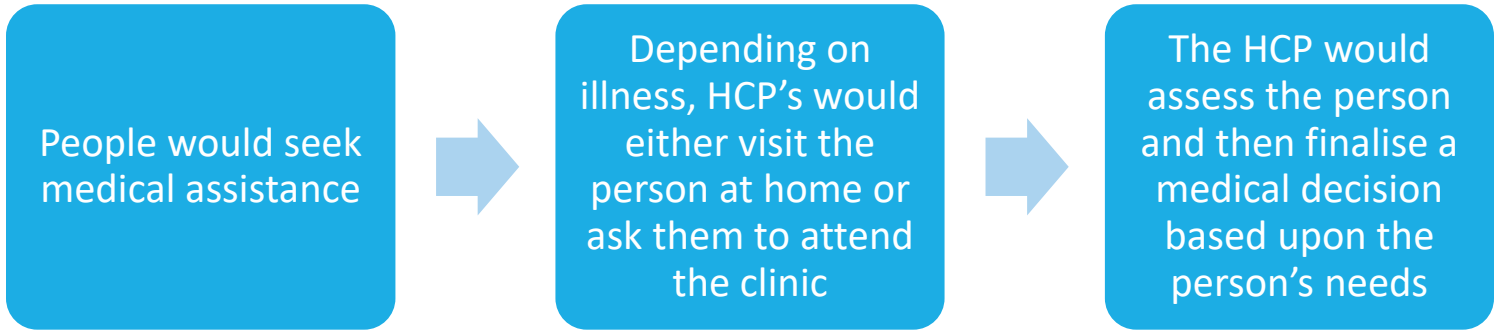
A mixed methods systematic review

Annabel Farnood
PhD student
The University of Glasgow

Supervisors: Professor Bridget Johnston & Professor Frances Mair

Background

Traditionally, patient-healthcare professional relationships were encountered as below:



Kaba & Sooriakumaran (2007)

- The wealth of health information available online has now become influential in the patient-HCP relationship (Chrismann, 2013).
- The rising use of smartphones and rapidly increasing availability of health information on the internet has led to more people using the internet as their first healthcare resource, often before seeking professional advice (Gualtieri, 2009).

Focus of the systematic review

Research questions:

1. What are the effects of patients seeking online health information on the healthcare professional-patient relationship and medical authority?

2. How do healthcare professionals perceive patients use of online health information?

3. How do public/patients perceive the use of online health information?

Methods

Search Strategy:

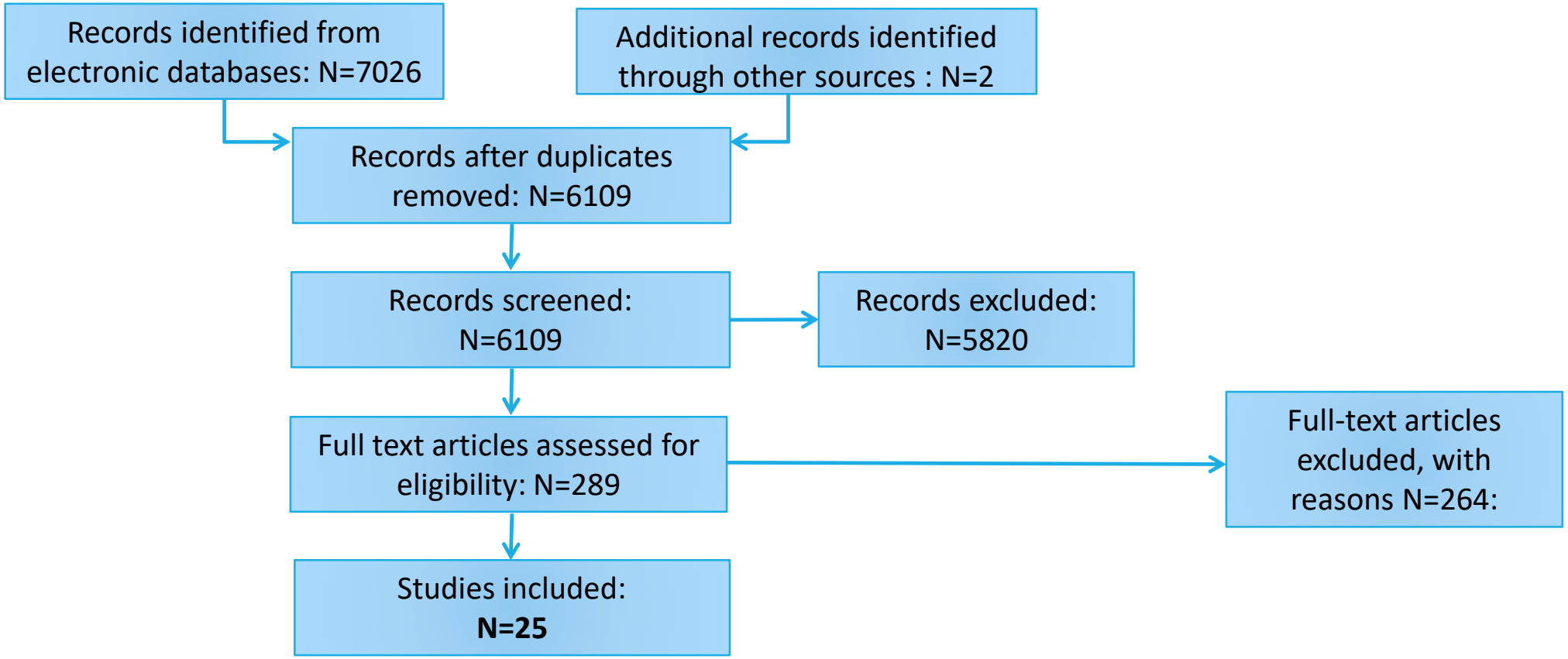
The systematic literature search was conducted using five databases: MEDLINE, EMBASE, CINAHL, ACM and SCOPUS. All searches were conducted using an 'advanced search' functionality, restricted to English language only and published between 2007 and 2018.

Key terms:
'Digital health, smart phone, health information, self-diagnosis, patient, professional

Eligibility criteria:

- 2007 onwards
- Any individual (adult) over the age of 18. This includes patients, the public and health care professionals (including nurses).
- Any 'normal' primary care setting (community, primary care clinics, home, online, education facilities) qualified for inclusion. Hospital settings were excluded as they are known to be secondary care.
- Any physical health condition.
- Must be in relation to patient online self-diagnosing and information seeking on the internet.

Results: Study Selection

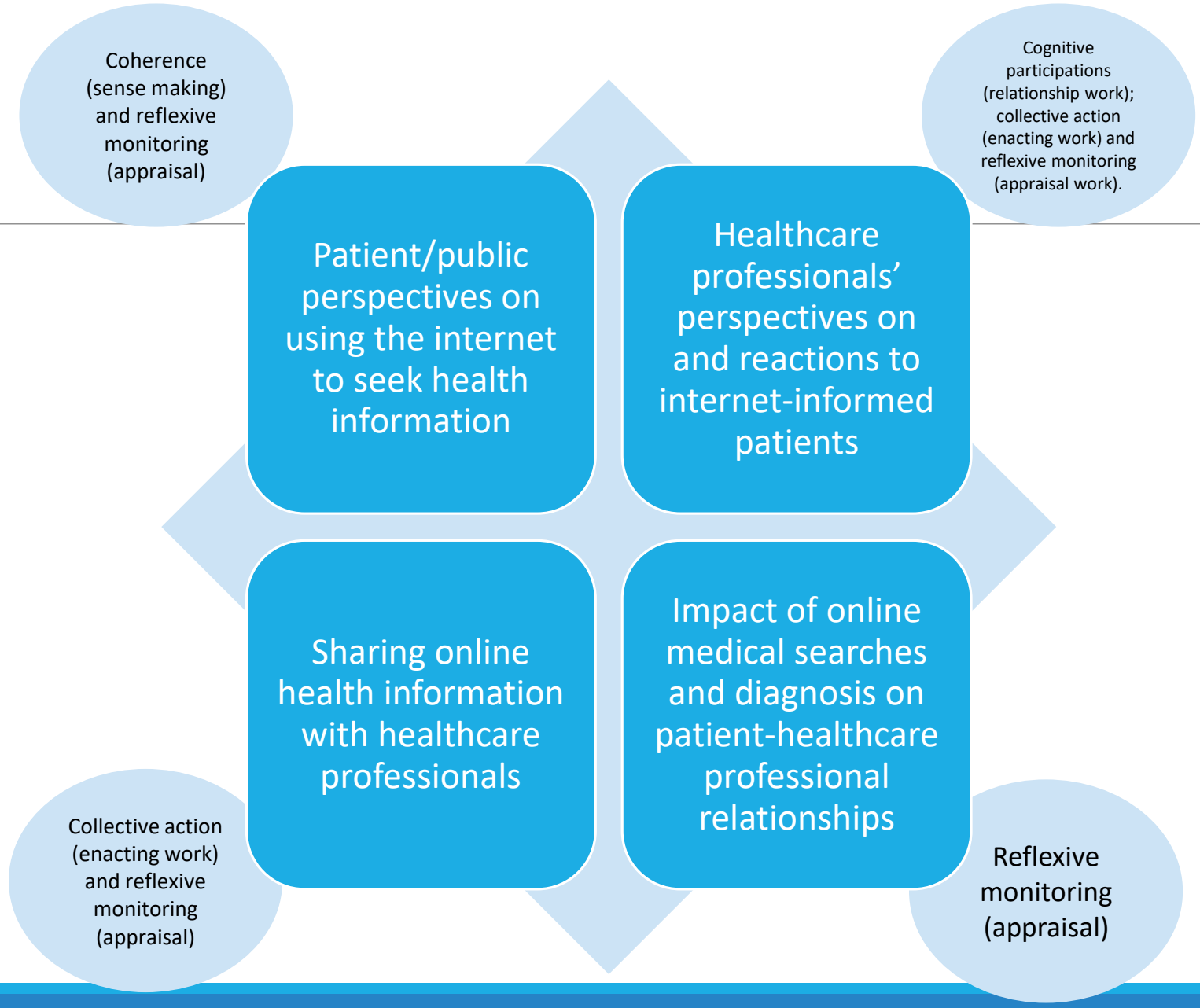


Results: Study characteristics

Characteristics (25 studies)	Summary of results
Country	UK (5) USA (6) Israel (4) Switzerland (3) Australia (2) Canada (2) China (1) Portugal (1) Austria (1)
Design	Qualitative (16) Quantitative (8) Mixed Methods (1)
Setting	Primary care (12) Community (5) Online communities (5) Universities and educational departments (3)
Healthcare providers	GP's, Primary care nurses, Hospital nurses attending educational courses
Sample size	Range: 11-714
Quality appraisal (Mixed methods appraisal tool)	Low (4) Moderate (11) Moderate-High (4) High (4)

Mapping themes to Normalisation Process Theory (NPT)

NPT is a useful framework to explain and understand how people integrate new interventions into their every day routines. It has four constructs: coherence; cognitive participation; collective action; and reflexive monitoring.



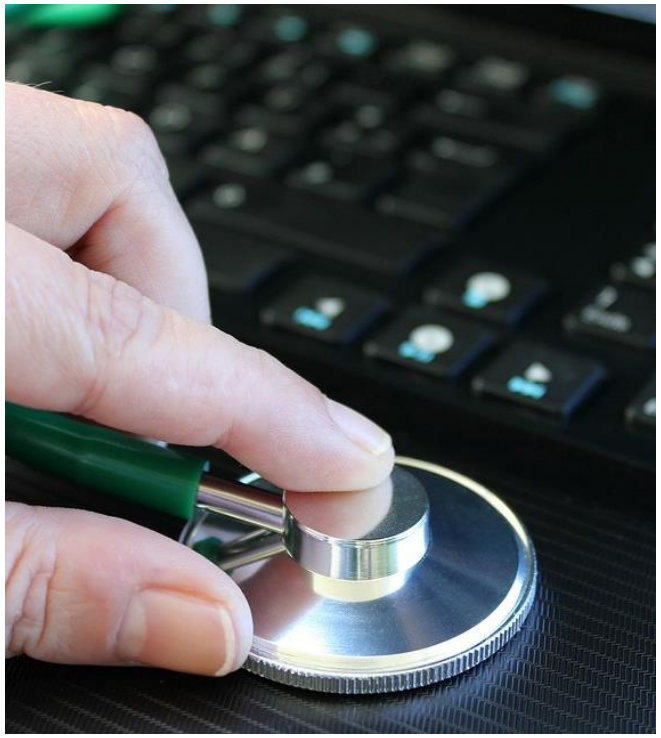
Patient/public perspectives on using the internet to seek health information

- Studies reported that the first source patients accessed for health information was the internet.
- The internet was seen as a tool for the treatment of non-serious medical issues or for self-diagnosis.
- Countries that pay for healthcare services reported internet health seeking to be money saving and time efficient.
- 24/7 accessibility.
- Preparation for consultations.

Patient/public perspectives on using the internet to seek health information

- There were reported concerns about the credibility, limitation and trustworthiness of online information.
- Overwhelming amount of information can result in masking credible sources.

Healthcare professionals' perspectives on and reactions to internet-informed patients



- Taking responsibility for their own health and be able to make decisions.
- Importance of collaboration with patients.
- Lack of trust in their medical expertise.
- The internet poses risks as patients may misinterpret information and this can also cause unnecessary medical visits.
- Preventing HCP's to do their jobs effectively.

Sharing online health information with healthcare professionals

Reasons for:

- Investing time and energy into their health and preparing for the consultation.
- Enabling better communication with HCP's.
- Positive experiences: listening, acknowledging, body language and offering further discussion.

Reasons against:

- Felt the sources online were unreliable.
- Not enough time to share in consultations.
- Some people felt they would be challenging the HCP and did not want to question or offend them.

Impact of online medical searches and diagnosis on patient-healthcare professional relationships

- Most people felt more trust in their HCP's but hoped for discussion regarding online health information.
- Some HCP's deliberately showed interest in patients research to promote further self-care.
- HCP's described their roles as changing into a 'partner to the patient'.
- Online medical searching may cause misunderstandings between the patient and HCP's.
- Studies reported patients tended to present information to the HCP to support the therapeutic relationship rather than to challenge it.

Implications for nursing

Strengths and weaknesses

Strengths

Systematic and rigorous approach taken to identify all relevant literature.

A review protocol was published to PROSPERO. Thematic analysis with conceptualisation through a theoretical lens normalisation process theory.

Limitations

- The search criterion that was used for this systematic review was broad.
- No consistently used terminology to describe the patient-HCP relationship and the aspects related to it.
- Only English language articles were searched for.
- Sources of information such as conference proceedings, theses and abstracts were not included.

Discussion

A large proportion of people found health information obtained online to be a complementary information source, that was in addition to treatment information obtained from a HCP.

It was clear that patients felt they had a better relationship with their HCP when they were able to discuss their online research with them and when their HCP responded positively to this.

Online health information has the potential to positively improve the relationship.

University of Glasgow

Thank you

Email: a.farnood.1@research.gla.ac.uk

Twitter: @AnnabelFarnood