**Appendix 1.** Search strategy (Ovid Medline)

1. experience\*.mp.

2. "experience\*".tw.

3. view\*.mp.

4. view\*.tw.

5. opinion\*.mp. or exp "Attitude of Health Personnel"/

6. "opinion\*".tw.

7. perceive\*.mp.

8. "perceive\*".tw.

9. perception\*.mp.

10. "perception\*".tw.

11. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10

12. researcher\*.mp. or exp Research Personnel/

13. "researcher\*".tw.

14. clinician\*.mp.

15. "clinician\*".tw.

16. exp Physicians/ or doctor\*.mp.

17. "doctor\*".tw.

18. nurse\*.mp. or exp Nurse Clinicians/

19. "nurse\*".tw.

20. exp Health Personnel/ or exp "Attitude of Health Personnel"/ or healthcare professional\*.mp.

21. healthcare professional\*.tw.

22. health care professional\*.mp.

23. health care professional\*.tw.

24. 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23

25. participa\*.mp.

26. "participa\*".tw.

27. recruit\*.mp.

28. "recruit\*".tw.

29. accru\*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]

30. "accru\*".tw.

31. take part.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]

32. take part.tw.

33. exp Patient Participation/ or enrol\*.mp.

34. "enrol\*".tw.

35. 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 34

**Appendix 2.** Included studies and their key findings

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Author (year)**  | **Country** | **Clinical speciality (condition)** | **Population and research methods** | **Type of research discussed** | **Aims** | **Key findings** |
| Asai , et al. (2004) | Japan | Primary care | **Relevant participants:** 7 physicians **Sampling strategy:** Convenience **Other participants:** 15 members of the public**Research method:** Focus groups**Analysis:** Identification of typical statements and themes | General medical research  | To explore laypersons’ attitudes towards, and experiences of, medical research and to compare them with those of physicians | * Physicians believed that an equal partnership based on trust between the patient and doctor was important in a patient’s decision to participate in research
* Physicians strongly believed in the need for medical research and the significance of its role in medical progress
 |
| Bill- Axelson et al.(2008) | Sweden | Oncology (prostate cancer) | **Relevant participants:** 5 clinicians**Sampling strategy:** Convenience **Other participants:** 9 patients with prostate cancer**Research method:** Semi- structured interviews**Analysis:** Content analysis | Randomised controlled trials | To investigate patients’ and clinicians’ experiences of randomisation with the aim of facilitating future trial recruitment | * Clinicians used a number of strategies they believed made randomisation more acceptable to their patients
* Clinicians’ own motivation for randomising patients for trials depended on the medical relevance of the research question
* A major obstacle was to maintain equipoise over time
 |
| Cambron & Evans (2003) | USA | Chiropractic | **Relevant participants:** 8 research assistants**Sampling strategy:** Convenience**Other participants:** None**Research method:** Focus group**Analysis:** Framework analysis using focus group questions | Chiropractic research | To understand the experiences and problems faced by research assistants involved in clinical trials | * Research assistants believed they were adequately trained in telephone screening and administering informed consent, but felt they required more training in administering self-report questionnaires to patients
* The majority of problems encountered were related to a lack of information
 |
| Campbell et al. (2007) | UK | Cardiovascular, Oncology,Respiratory  | **Relevant participants:** 32 members of three research teams **Sampling strategy:** Purposive and snowball **Other participants:** 13 members of an adolescent psychiatry research team **Research method:** Telephone interviews**Analysis:** Adaptive theory | Randomised controlled trials | To describe the characteristics of exemplar trials and explore the factors that are relevant to recruitment | * Common factors were identified as important for trial success: good communication between the trial centre and local collaborator, interest and timeliness of the research question, putting the needs of the patients and clinical professionals involved at the centre of the trial design, leadership and standing of the principal investigator and being backed by a strong and efficient coordinating team
 |
| Connolly et al. (2004) | USA,  | Oncology | **Relevant participants:** 20 research nurses **Sampling strategy:**  Convenience **Other participants:** 36 research nurses only completing the questionnaire**Research method:** Focus group (6 nurses), questionnaire (50 nurses), follow-up telephone interviews (14 nurses)**Analysis:** Thematic analysis | Cancer clinical trials | To identify successful strategies for clinical trial recruitment | * Three key factors were believed to be important in recruitment: the role of the research nurse, the physician’s attitude to research, and the patient’s familiarity with clinical research
* There were conflicting views on whether trust between researcher and patient was important and whether physicians needed to be educated about the value and process of clinical trials
* Focus group and telephone participants agreed that retention of patients was less of an issue as enrolees tend to be motivated to continue
 |
| Cvijovic et al. (2010) | Canada | Pharmacy | **Relevant participants:** 19 pharmacists **Sampling strategy:** Purposive **Other participants:** None**Research method:** Semi-structured interviews**Analysis:** Content analysis with constant comparison | A pharmacy-based study of adverse reactions to natural health products  | To explore how pharmacists involved in this study perceived the barriers and facilitators to participating in clinical research | * Lack of time was stated as the main reason for poor recruitment, although observations showed recruitment data collection took very little time
* ‘Lack of time’ may be a socially acceptable excuse covering underlying issues regarding research involvement
 |
| Frayne et al. (2001) | USA | Primary care (Cancer) | **Relevant participants:** 7 primary care physicians**Sampling strategy:** Convenience **Other participants:** None**Research method:** Focus groups**Analysis:** Identified key words and phrases and used a consensus approach to develop common categories | Cancer prevention trials | To assess primary care provider’s attitudes towards the recruitment of low –income and minority women to cancer prevention trials | * Factors identified as relevant to physicians were: the dual role of the physician as advocates for the patient and for research, threats to maintaining the primary care relationship and the general philosophy towards cancer prevention
* Important factors for physicians, patients and the community were: trust and commitment, the benefits of research, access to research, knowledge and recall of research, the influence of media coverage and cultural sensitivity
 |
| Grunfeld et al. (2002) | Canada | Oncology | **Relevant participants:** 24 clinical research associates, 5 data managers**Sampling strategy:** Convenience **Other participants:** None**Research method:** Focus groups**Analysis:** Content analysis | Cancer clinical trials | To seek the views of clinical research associates on the barriers and facilitators to accrual in cancer clinical trials | * The barriers and facilitators to recruitment were seen as three key categories: physician-related, patient-related and system-related
* System-related factors were seen to have the greatest impact on the ability to accrue patients to clinical trials
 |
| Halkoaho et al. (2011) | Finland | Human tissue research | **Relevant participants:** 23 researchers (representing 7 nationalities)**Sampling strategy:** Convenience**Other participants:** None**Research method:** Focus groups (12 researchers) and open ended questionnaire (19 researchers)**Analysis:** Thematic analysis | Placenta perfusion studies | To explore the views of scientists involved in human placental perfusion research on the ethical aspects of this research | * Good communication was seen as a prerequisite for recruiting participants
* It was felt to be more accurate for the study information to come from a researcher, rather than midwife
* Voluntariness, confidentially, social meaning and cultural perspectives were important factors, as was educating midwives to provide the best information to the mothers
 |
| Halkoaho et al. (2012) | Finland | Human tissue research | **Relevant participants:** 20 midwives**Sampling strategy:** Convenience**Other participants:** None**Research method:** Semi-structured interviews**Analysis:** Thematic analysis | Placenta perfusion studies | To describe the ethical aspects of the participation of midwives in placental perfusion studies | * Midwives found that the situation of recruiting mothers was difficult due to the numerous other tasks required during a birth
* Midwives stressed that timing was important, but that it was difficult to give information to the mother during birth
* Midwives considered it normal to use placentas for medical research and did not consider any ethical problems with this
 |
| Jaspers et al. (2006) | Netherlands | Oncology | **Relevant participants:** 5 radiation oncologists involved with lung cancer**Sampling strategy:** Convenience**Other participants:** 5 lung cancer patients**Research method:** Semi-structured interviews**Analysis:** Thematic analysis and triangulation with observations, internal documents | Radio-therapy studies | To discuss the ethical aspects of inclusion practice for radiotherapy patients taking part in clinical research | * Candidate research participants need better protection from unwanted factors that could influence their choice of participation
* Researchers need proper education about ethical components of research regulation
 |
| Kendall et al. (2007) | UK  | Palliative care | **Relevant participants:** 32 researchers (UK 25, Canada 3, USA 1, Sweden 1, Netherlands 1, Australia 1)**Sampling strategy:** Purposive**Other participants:** 7 cancer patients and 4 carers**Research method:** Face to face or telephone semi-structured interviews **Analysis:** Thematically analysed with interpretive approach | Palliative care research in general | To understand the key challenges in researching end of life issues and to identify ways of overcoming these | * Four key issues were identified with palliative care research: study design, recruiting participants, ethical conduct and the emotional challenges faced by participants, researchers and transcribers
* Researcher identified issues with gatekeepers, difficultly including people from different ethnic backgrounds and difficulty including those with physical, sensory or cognitive impairments
 |
| Langley et al. (2000) | UK | Oncology | **Relevant participants:** 20 clinicians (oncology 7, urology 5, general/breast surgery 4, haematology 4)**Sampling strategy:** Selected from 192 eligible clinicians who completed a questionnaire**Other participants:** None**Research method:** Semi-structured interviews**Analysis:** Constant comparison of emerging themes | Cancer randomised controlled trials | To explore clinicians’ attitudes to, and problems experienced with, recruitment into randomised controlled trials in cancer care | * Clinicians did not always find it easy to identify relevant trials or to recruit patients
* Lack of time and resources was felt to hinder recruitment
* The attitudes of clinicians to research, the design of the trial, clinicians’ concerns for individual patients and patient preference for different treatment also presented major barriers
 |
| Lawton et al. (2012) | UK | Diabetology | **Relevant participants:** 12 research nurses, 9 consultants**Sampling strategy:** Purposive**Other participants:** None**Research method:** Semi-structured interviews **Analysis:** Grounded theory | Multi-centre, UK based insulin trial  | To explore health professionals’ views of trial participation and experiences of trial delivery from inception to completion | * Interviewees highlighted mixed agendas and/or ambivalent views about involvement in pharmaceutically funded trials
* Clinicians attempted to separate research from clinical practice and to convert commercially funded work into better patient care
* Staff from different centres reported divergent interpretations of the study protocol and recruitment practices
 |
| Maslin-Prothero (2006) | UK  | Oncology (breast cancer) | **Relevant participants:** 21 multi-disciplinary teams (composition of team members not stated)**Sampling strategy:** Convenience**Other participants:** Patients**Research method:** Semi-structured interviews either as a group, or individually**Analysis:** Inductive classification and construction of a hierarchy of categories | Two breast cancer trials; one treatment trial, one prevention trial | To explore the factors influencing the recruitment of patients into two clinical trials from the perspective of the clinicians and make recommendations on how recruitment might be improved | * Trial design recommendations: ensure design is relevant, simple, and has a clear recruitment plan with flexible strategies
* Clinician/multi-disciplinary team recommendations: research should be expected and adequately funded, with appropriate training and database support
* Patients factors: provide financial incentives, a range of study sites, use previous participants to talk about their experience of trial participation, a comfortable clinic environment and choice of treatment options
 |
| Potter et al. (2009) | UK | Primary Care (diabetes) | **Relevant participants:** 10 practice nurses**Sampling strategy:** Purposive**Other participants:** None**Research method:** Semi-structured telephone interviews **Analysis:** Thematic framework approach | Randomised controlled trial of telephone support from a specialist nurse, or peer support, or routine care in diabetes | To explore the experiences of practice nurses participating in research and learn how this may have influenced recruitment for a primary care based randomised controlled trial | * Nurses who had been asked to take part in the study found it a positive experience, while nurses who had been delegated the role of recruitment by the GP felt put upon and recruited less well
* None of the nurses reported difficulty in remembering to recruit patients, but often acted as gatekeepers selecting which patients they offered the intervention to
* Nurses with dedicated time for research recruited more successfully
 |
| Resnick et al. (2003) | USA | Orthopaedic (rehabilitation) | **Relevant participants:** 8 Research nurses**Sampling strategy:** Convenience**Other participants:** None**Research method:** Written accounts from participants at yearly intervals during the study**Analysis:** Basic content analysis | Two exercise intervention trials following hip fracture | The experiences of research nurses recruiting older women into the exercise intervention studies  | * Seven qualities were perceived as increasing recruitment: caring for individuals, emphasising benefits, eliciting support from others, being an expert, using role models, using good timing and giving good first impressions
* Time restrictions and a lack of support were considered barriers to recruitment
 |
| Wright et al. (2001) | Canada | Oncology  | **Relevant participants:** 10 clinical research associates, 3 clinical data managers**Sampling strategy:** Convenience**Other participants:** None**Research method:** Focus groups**Analysis:** Thematic coding and intercoder triangulation | Phase III studies in cancer | To explore the factors that influence the decision of patients with cancer to take part in clinical trials, from the perspectives of the clinical research associate | * Researchers identified information transfer within the informed consent process as a key part of their role
* Full disclosure of information, including the content and the techniques and styles of delivery, were believed to be important predictors of recruitment success
* The key factors influencing recruitment were seen as being physician, patient and clinical research associate-related
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**Appendix 3.** Quality assessment

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  **CASP criteria** **Author** | 1. Clear statement of research aims | 2. Qualitative methodology appropriate | 3. Research design appropriate for aims | 4. Recruitment strategy appropriate and clearly defined  | 5. Data collection addresses research issue and is clearly defined | 6.Relationship between researcher and participants adequately considered | 7. Ethical issues considered | 8. Data analysis sufficiently rigorous | 9. Clear statement of findings  | 10. Is the research valuable? |
| Asai et al. 2004 | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Bill-Axelson et al. 2008 | ✓ | ✓ | ✓ | 🗶 | ✓ | 🗶 | ✓ | 🗶 | ✓ | ✓ |
| Cambron & Evans 2003 | ✓ | ✓ | ✓ | 🗶 | ✓ | 🗶 | ✓ | 🗶 | ✓ | ✓ |
| Campbell et al. 2007 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Connolly et al. 2004 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | 🗶 | ✓ | ✓ |
| Cvijovic et al. 2010 | ✓ | ✓ | ✓ | ✓ | 🗶 | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Frayne et al. 2001 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Grunfeld et al. 2002 | ✓ | ✓ | ✓ | 🗶 | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Halkoaho et al. 2011 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | 🗶 | ✓ | ✓ | ✓ |
| Halkoaho et al. 2012 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Jaspers et al. 2006 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Kendal et al. 2007 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Langley et al. 2000 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | 🗶 | ✓ | ✓ | ✓ |
| Lawton et al. 2012 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Maslin-Prothero 2006 | ✓ | ✓ | ✓ | 🗶 | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Potter et al.2009 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | ✓ | ✓ | ✓ | ✓ |
| Resnick et al. 2003 | ✓ | ✓ | ✓ | 🗶 | ✓ | 🗶 | 🗶 | ✓ | ✓ | ✓ |
| Wright et al. 2001 | ✓ | ✓ | ✓ | ✓ | ✓ | 🗶 | 🗶 | ✓ | ✓ | ✓ |