Evaluation of perspectives about clinical trial design from patients with pain, depression and/or anxiety as a component of patient engagement: a systematic scoping review

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Summarize patient perspectives, facilitators and barriers to study participation from studies of human participants of all ages with pain-related conditions, depression and/or anxiety.

# Methods

Inclusions

- Patient-specific preferences related to clinical trial design for the treatment of any pain condition OR depression OR anxiety
- Patient-specific preferences related to participation in clinical trials (barriers, time, etc.)

Exclusions

- Treatment preferences or goals of therapy, only
- Researcher preferences
- Mixed samples of patients and clinicians
- Studies reporting attrition without any other data or qualitative component

### Literature Search

ς >

patient

participant

#### PubMed/PSYCHInfo/CINAHL/Cochrane CENTRAL

engagement preference acceptability beliefs attitude attitudes perspective perspectives engagement perspective\* attitude\* belief\* opinion\* feeling\* preference\* view\*

trial clinical trials trial design clinical trial design trial trial\* conjoint analysis

depression anxiety pain migraine arthritis chronic pain (MeSH)

#### **PRISMA Flow Diagram**



*From:* Page MJ, McKenzie JE, <u>Bossuyt</u> PM, <u>Boutron</u> I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;<u>372:n</u>71. doi: 10.1136/<u>bmi.n</u>71. For more information, visit: <u>http://www.prisma-statement.org/</u>

# Findings – Study Features



Juvenile arthritis (3) Osteoarthritis (3) Pelvic pain (including endometriosis) (3) Back and/or joint not otherwise specified (2) Chronic pain not otherwise specified (2) Headache (including migraine) (2) Acute coronary syndrome; chest pain Cancer Duchenne muscular dystrophy (DMD) End of life Gout Rheumatoid arthritis Sickle cell Spinal stenosis

Rheumatoid arthritis; fibromyalgia

Back and/or joint not otherwise specified; musculoskeletal not otherwise specified; osteoarthritis; fibromyalgia; neuropathic pain not otherwise specified; chronic pain not otherwise specified; CRPS; "multiple" (not otherwise defined)

Osteoarthritis; rheumatoid arthritis; headache (including migraine); cancer; neck or shoulder pain not otherwise specified; back and/or joint not otherwise specified; fibromyalgia; neuropathic pain not otherwise specified; "other"

#### **Study Methods**



Sample Size

### Findings – Study Features

- 23/35 (66%) assessed perspectives as the primary objective
- 12/35 (34%) were pilot/feasibility studies (3 depression)
- 21/35 (60%) study *sites* were located in metropolitan areas
- Only one study described where the *sample* was from (rural/urban)
- 21/35 (60%) were conducted outside the U.S. (only)

# Findings – Study Features

- 23/35 (65%) utilized active recruitment
  - 5/35 (14%) used both active and passive techniques for recruitment (mixed)
- 17/35 (49%) noted that some or all participants had current/past participation in clinical research studies
- Age group of perspectives
  - 26/35 (74%) adults
  - 2/35 (6%) pediatric
  - 5/35 (14%) mixed
  - 2/35 (6%) not stated
- Within studies that quantified sex, most study samples were predominantly female 26/28 (93%)

#### **Race Distributions**

■ White/Caucasian ■ Black/African-American ■ Hispanic/Latino ■ Asian ■ Multiple ■ Others ■ Not Provided



### Findings – Study Features

| # Reporting |  |
|-------------|--|
| 12/35 (34%) | Educated ≥ high school (9/12)  |
| 10/35 (29%) | Lived with spouse, caregiver, or parent  |
| 10/35 (29%) | Employment inconsistently reported; 4 of these captured disability in this reporting |
| 12/35 (34%) | Disease severity inconsistently reported   |

### Barriers to Participation

4 3 5 1 1 4 5 4 1 4 1 3 1 2 1 2 1 2 2 1 1

■ Pain ■ Psych

Lack of Information or Misunderstandings Fear of Interventional Risks Embarrassment or Discomfort with Procedures **Distrust of HCPs** Too Many Study Procedures Fear of Inadequate Treatment **Disease-life Stressors** Influence of Family or Caregiver Disease-related Stigma Disinterest Fear of Unknown Safety Deception Influence of HCPs # Studies





Choice of control (4)

Interventions & Controls Choice of intervention (19)

- Past experiences

- Negative experiences/associations

- Fears about side effects or return of symptoms (6)

Access to Current/Past Treatments

Adequate treatment

(7)

Tailored treatment

(1)

Ability to take current pain medications

(1)

Functional and symptom-based outcomes

(11)

# Outcomes & Data Collection

Less invasive measures

(5)

Manageable questionnaires & frequency of administration Convenient scheduling Assessments at home, online or tele-mental health Phone contact vs in-person Tablet-based Consistency with RAs

> (# of studies) RAs-research assistants

# Motivating Factors for Participation

# Studies



### Reporting & Recruitment Considerations

- Advocate for studies to report reasons (with demographics) for declination
- Collect demographics related to site of residence (urban/rural, etc.)
- Recruitment strategies
  - Direct recruitment may benefit engagement

# Design Considerations

- Research team
  - Empathy/rapport
  - Training
  - Address fears & expectations
- Appropriate incentives for compensation of time and travel
- Flexibility with data collection methods

### Other Considerations

- For some, participation may not be related to study-specific factors
  - Stigma
  - Negative expectations of treatment
  - Burden of illness
- Value of qualitative component within RCTs to assess engagement with clinical trial participation and reasons for declination (O'Cathain 2013)

Ackerman IN, et al. Factors limiting participation in arthritis self-management programmes: an exploration of barriers and patient preferences within a randomized controlled trial. Rheumatology (Oxford). 2013 Mar;52(3):472-9. PMID: 23148089.

Barnes M, et al. Exploring patients' reasons for declining contact in a cognitive behavioural therapy randomised controlled trial in primary care. Br J Gen Pract. 2012 May;62(598):e371-7. PMID: 22546597.

Bennett MI, et al. Self-management toolkit and delivery strategy for end-of-life pain: the mixed-methods feasibility study. Health Technol Assess. 2017 Dec;21(76):1-292. PMID: 29265004.

Bove AM, et al. Patients' experience with nonsurgical treatment for lumbar spinal stenosis: a qualitative study. Spine J. 2018 Apr;18(4):639-647. doi: 10.1016/j.spinee.2017.08.254. PMID: 28870836.

Cheung YK, et al. Personal preferences for Personalised Trials among patients with chronic diseases: an empirical Bayesian analysis of a conjoint survey. BMJ Open. 2020 Jun 7;10(6):e036056. PMID: 32513886.

Cramer H, et al. Group cognitive behavioural therapy for women with depression: pilot and feasibility study for a randomised controlled trial using mixed methods. BMC Psychiatry. 2011 May 13;11:82. PMID: 21569488.

DasMahapatra P, et al. Clinical trials from the patient perspective: survey in an online patient community. BMC Health Serv Res. 2017 Feb 27;17(1):166. PMID: 28241758.

Dennin MD. Enhancing patient engagement in Parkinson's disease mental health research [Internet]. Vol. 81, Dissertation Abstracts International: Section B: The Sciences and Engineering. ProQuest Information & Learning; 2020 [cited 2021 Oct 18]. Available from:

https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-04049-039&site=ehostlive&scope=site

Denny E, et al; PRE-EMPT team. Women's experiences of medical treatment for endometriosis and its impact on PRE-EMPT trial participation: a qualitative study. Pilot Feasibility Stud. 2018 Nov 5;4:168. PMID: 30410786.

Dowrick CF, et al. Considering the case for an antidepressant drug trial involving temporary deception: a qualitative enquiry of potential participants. BMC Health Serv Res. 2007 Apr 30;7:64. PMID: 17470280.

Gaudiano BA, et al. A Randomized Survey of the Public's Expectancies and Willingness to Participate in Clinical Trials of Antidepressants Versus Psychotherapy for Depression. Prim Care Companion CNS Disord. 2016 Feb 25;18(1):10.4088/PCC.15m01879. PMID: 27247843.

Gaudiano BA, et al. Patients' treatment expectancies in clinical trials of antidepressants versus psychotherapy for depression: a study using hypothetical vignettes. Compr Psychiatry. 2013 Jan;54(1):28-33. PMID: 22794942..

Lennie KH, et al. SAT0577-HPR Patient and Public Involvement (PPI) in Informing the Osteoarthritis of the Thumb Therapy (Otter) Pilot Trial: What Matters Most to People with Thumb Base Osteoarthritis Otter Collaborations. Annals of the Rheumatic Diseases. 2013 Jun 1;72(Suppl 3):A778-.

Hissink Muller PCE, et al. Participation in a single-blinded pediatric therapeutic strategy study for juvenile idiopathic arthritis: are parents and patient-participants in equipoise? BMC Med Ethics. 2018 Dec 20;19(1):96. PMID: 30572875.

James J, et al. Patient Engagement Survey Regarding Future Double-Blinded, Randomized Controlled Trial of Tapering of Chronic Opioid Therapy. J Prim Care Community Health. 2019 Jan-Dec;10:2150132719890231. PMID: 31777325.

Leinisch-Dahlke E, et al. Patient preference in clinical trials for headache medication: the patient's view. Cephalalgia. 2004 May;24(5):347-55. PMID: 15096223.

Lenguerrand E, et al. Effect of Group-Based Outpatient Physical Therapy on Function After Total Knee Replacement: Results From a Multicenter Randomized Controlled Trial. Arthritis Care Res (Hoboken). 2020 Jun;72(6):768-777. PMID: 31033232.

Lenze EJ, et al. Older Adults' Perspectives on Clinical Research: A Focus Group and Survey Study. Am J Geriatr Psychiatry. 2016 Oct;24(10):893-902.

Midgley N, et al. The experience of adolescents participating in a randomised clinical trial in the field of mental health: a qualitative study. Trials. 2016 Jul 28;17:364. PMID: 27465740.

Middleton LJ, et al; PRE-EMPT trial collaborative group. Preventing recurrence of endometriosis by means of longacting progestogen therapy (PRE-EMPT): report of an internal pilot, multi-arm, randomised controlled trial incorporating flexible entry design and adaption of design based on feasibility of recruitment. Trials. 2017 Mar 11;18(1):121. PMID: 28283026.

Morgan EM, et al. Establishing an Updated Core Domain Set for Studies in Juvenile Idiopathic Arthritis: A Report from the OMERACT 2018 JIA Workshop. J Rheumatol. 2019 Aug;46(8):1006-1013. PMID: 30770499.

Nelson A, et al. QUALZICE: a QUALitative exploration of the experiences of the participants from the ZICE clinical trial (metastatic breast cancer) receiving intravenous or oral bisphosphonates. Trials. 2013 Oct 9;14:325. PMID: 24107437.

Paterson C, et al. "Playing their parts": the experiences of participants in a randomized sham-controlled acupuncture trial. J Altern Complement Med. 2008 Mar;14(2):199-208. PMID: 18315508.

Sherratt FC, et al. Protective parents and permissive children: what qualitative interviews with parents and children can tell us about the feasibility of juvenile idiopathic arthritis trials. Pediatr Rheumatol Online J. 2018 Dec 4;16(1):76. PMID: 30514320.

Smith SM, et al. Participant Preferences for Pharmacologic Chronic Pain Treatment Trial Characteristics: An ACTTION Adaptive Choice-Based Conjoint Study. J Pain. 2016 Nov;17(11):1198-1206. PMID: 27555429.

Stamuli E, et al. Identifying the primary outcome for a randomised controlled trial in rheumatoid arthritis: the role of a discrete choice experiment. J Foot Ankle Res. 2017 Dec 15;10:57. PMID: 29270231.

Tallon D, et al. Involving patients with depression in research: survey of patients' attitudes to participation. Br J Gen Pract. 2011 Apr;61(585):134-41. PMID: 21439170.

Taylor WJ, et al. Do patient preferences for core outcome domains for chronic gout studies support the validity of composite response criteria? Arthritis Care Res (Hoboken). 2013 Aug;65(8):1259-64. PMID: 23335569.

The Voice of the Patient. Sickle Cell Disease. US Food and Drug Administration, Patient-Focused Drug Development Initiatve. Report Date October 2014; Accessed September 21, 2021 at <u>https://www.fda.gov/media/89898/download</u>

Turk DC, et al. Identifying important outcome domains for chronic pain clinical trials: an IMMPACT survey of people with pain. Pain. 2008 Jul 15;137(2):276-285. PMID: 17937976.

van den Berg P, et al. An exploration of patients' experiences of participation in a randomised controlled trial of the Manchester Acute Coronary Syndromes (MACS) decision rule. Emerg Med J. 2017 Sep;34(9):593-598.

Vercellini P, et al. "You can't always get what you want": from doctrine to practicability of study designs for clinical investigation in endometriosis. BMC Womens Health. 2015 Oct 22;15:89. PMID: 26490454.

Verhaart IEC, et al. Muscle biopsies in clinical trials for Duchenne muscular dystrophy - Patients' and caregivers' perspective. Neuromuscul Disord. 2019 Aug;29(8):576-584. PMID: 31378431.

Wu D. Patient preference of pain measurements: a cross-sectional study based on chronic low back pain population in china. Journal of alternative and complementary medicine. 2016;22; 6(6):A139.

#### Other References

Bruhn H, Cowan EJ, Campbell MK, Constable L, Cotton S, Entwistle V, Humphreys R, Innes K, Jayacodi S, Knapp P, South A, Gillies K. Providing trial results to participants in phase III pragmatic effectiveness RCTs: a scoping review. Trials. 2021 May 24;22(1):361. doi: 10.1186/s13063-021-05300-x. PMID: 34030707; PMCID: PMC8147098.

Hughes-Morley A, Young B, Waheed W, Small N, Bower P. Factors affecting recruitment into depression trials: Systematic review, meta-synthesis and conceptual framework. J Affect Disord. 2015 Feb 1;172:274-90. doi: 10.1016/j.jad.2014.10.005. Epub 2014 Oct 16. PMID: 25451427.

O'Cathain A, Thomas KJ, Drabble SJ, Rudolph A, Hewison J. What can qualitative research do for randomised controlled trials? A systematic mapping review. BMJ Open. 2013 Jun 20;3(6):e002889. doi: 10.1136/bmjopen-2013-002889. PMID: 23794542; PMCID: PMC3669723.

Sheridan R, Martin-Kerry J, Hudson J, Parker A, Bower P, Knapp P. Why do patients take part in research? An overview of systematic reviews of psychosocial barriers and facilitators. Trials. 2020 Mar 12;21(1):259. doi: 10.1186/s13063-020-4197-3. Erratum in: Trials. 2020 Oct 8;21(1):840. PMID: 32164790; PMCID: PMC7069042.