

Appendix 1

Source: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42016051608 fitted into a table for the purpose of this manuscript.

	Inclusion	Exclusion
Population	Adults (18+/-) invited to CRC ^a screening in a mass screening programme or in a scientific CRC screening trial (Average risk of CRC and asymptomatic regarding signs of CRC). Mixed populations are included if data is stratified for our target group.	<p>People at higher than average risk of CRC. People with family history of CRC, known genetic susceptibility to CRC or known IBD.</p> <p>Non-screening populations (symptomatic, earlier or current diagnosis of CRC)</p>
Intervention	Invitation to or participation in CRC mass screening programmes or participation in CRC screening scientific trials, regardless of screening method. Mass screening is defined as systematic screening of the general population. For qualitative studies, the focus of the study should be to test for content validity of any given questionnaire designed to/aiming to measure psychosocial consequences from CRC screening.	<p>Genetic testing for increased risk of CRC.</p> <p>Qualitative studies examining experience of CRC screening.</p>
Outcomes	Any study investigating psychosocial /psychological consequences/aspects, quality of life, or health-related quality of life (HRQoL) from CRC screening, regardless of measures used to assess the consequences.	Perceived psychological harms of screening, i.e. what people expect to experience. Harms of screening in the view of physicians or other health professionals. Any study not reporting about psychological harms in title, abstract or full text. Single items on psychological harms i.e. one question on anxiety, fear or embarrassment related to the screening experience
Study design	Types of original research: RCTs, CCTs, cohort studies, case-control studies, cross-sectional studies	Systematic reviews ^a and case reports. Any article not related to original data/research: Journalism, editorials, narrative reviews, and opinions as letters or comments. Letters are included if original research just published in a letter.

Notes: ^aReference lists in reviews deemed relevant to the research question will be scrutinized for studies not found via the search strategy.

Abbreviations: CRC, Colorectal cancer; IBD, Inflammatory Bowel Disease.

Full citation: Emma Grundtvig Gram, Jessica á Rogvi, Anders Agerbeck, Frederik Handberg Martiny, Anne Katrine Lykke Bie, John Brandt Brodersen. Psychosocial consequences of colorectal cancer screening in the general population: a systematic review on the adequacy of measurement properties. PROSPERO 2016 CRD42016051608 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42016051608

Appendix 2

((((((((((("Psychosocial aspects" OR "Psychosocial consequences" OR "Psychosocial harms" OR "Psychosocial effects" OR "Psychosocial distress" OR "Psychosocial impact" OR "Psychosocial factors" OR "Psychosocial outcomes" OR "Psychological aspects" OR "Psychological consequences" OR "Psychological harms" OR "Psychological effects" OR "Psychological distress" OR "Psychological impact" OR "Psychological factors" OR "Psychological outcomes" OR "Quality of Life"[Mesh] OR "quality of life" OR Depress* OR Stress OR Anxiety OR Worry OR Fear OR "Mental disorders"[Mesh] OR "Mental disorder" OR "Well being" OR "Adverse effect" OR "Mental health"[Mesh] OR "Mental health" OR Emotion*)) OR anxi*)) OR depression)) OR "Emotions"[Mesh]) OR (Emotions OR emotion))) AND (Mass screening OR "Mass screening"[Mesh] OR Early detection of cancer OR "Early detection of cancer"[Mesh] OR Screening)) AND (((colorectal polyp*) OR ((colorectal tumor*) OR (("colorectal tumor") OR ("colorectal tumors") OR ("Colorectal Neoplasms"[Mesh]) OR ("colorectal cancer") OR ("colorectal neoplasms" OR "bowel cancer" OR "colorectal polyps" OR "colorectal carcinoma")))))))) OR "colorectal carcinomas")

Reasons		Pico		
1	Other/does not address key question	a	Population	
2	(Barriers for) adherence to screening	b	Intervention	
3	Acceptance of CRC screening	c	Outcomes	
4	Single item	d	Study design	
5	No original data			
6	Mixed population/ high risk population			
7	No psychological harm investigated			
8	included/found			
9	Not screening or CRC screening setting			
Author - Year (alphabetically ordered)	Reference	Reason(s) for exclusion	Reasons	Pico
Albrecht et al. 2016	Albrecht H, Gallitz J, Hable R, Vieth M, Tontini GE, Neurath MF, Riemann JF, Neumann H. The Offer of Advanced Imaging Techniques Leads to Higher Acceptance Rates for Screening Colonoscopy - a Prospective Study. <i>Asian Pac J Cancer Prev.</i> 2016;17(8):3871-5. PMID: 27644632.	Not relevant to key question.	3	c
Alduraywish et al. 2020	Alduraywish SA, Altamimi LA, Almajed AA, Kokandi BA, Alqahtani RS, Alghaihb SG, Aldakheel FM. Barriers of colorectal cancer screening test among adults in the Saudi Population: A Cross-Sectional study. <i>Prev Med Rep.</i> 2020 Oct 26;20:101235. doi: 10.1016/j.pmedr.2020.101235. PMID: 33194537; PMCID: PMC7645071.	Perceived barriers investigated.	2	c
Amsellem, Marni Sholiton	Amsellem, M. S. (2006). "Individual factors associated with adherence to referral for colonoscopy in a low-ses minority population." <i>Dissertation Abstracts International: Section B: The Sciences and Engineering</i> 66.	Study report perceived barriers to adherence to colorectal cancer screening and not experienced/actual harms encountered by screening participants.	2	c
Anonymous 2016	Anonymous (2016). "Variation in uptake of bowel cancer screening." <i>Drug and Therapeutics Bulletin</i> 54: 26-27.	Article refers to the original study: "Effects of evidence-based strategies to reduce the socioeconomic gradient of uptake in the English NHS Bowel Cancer Screening Programme (ASCEND): four cluster-randomised controlled trials." - This study is not relevant to key question.	3	c
Arveux et al. 1992	Arveux P, Durand G, Milan C, Bedenne L, Lévy D, Doan BD, Faivre J. Views of a general population on mass screening for colorectal cancer: the Burgundy Study. <i>Prev Med.</i> 1992 Sep;21(5):574-81. doi: 10.1016/0091-7435(92)90065-p. PMID: 1438107.	Only single item on anxiety related to CRC screening; no other data relevant to key question	4	c
Axon et al 2004	Axon AT, Beilenhoff U, James T, Ladas SD, Larsen E, Neumann CS, Nowak A, Schöfl R, Tveit KM. Legal and Ethical Considerations: Group 4 Report. ESGE/UEGF Colorectal Cancer--Public Awareness Campaign. The Public/Professional Interface Workshop: Oslo, Norway, June 20 - 22, 2003. <i>Endoscopy.</i> 2004 Apr;36(4):362-5. doi: 10.1055/s-2004-814289. PMID: 15057692.	No original data. Recommendations based on other studies.	5	d
Baker et al. 2001	Psychosocial factors that influence participation in colorectal cancer screening (2001) <i>Journal of Psychosocial Oncology: Introduction</i> Vol 19, Num 3-4, 165 p.	Not an original article, introduction to paper, no data reported.	5	d

Barnett et al. 2016	Barnett KN, Weller D, Smith S, Orbell S, Vedsted P, Steele RJC, Melia JW, Moss SM, Patnick J, Campbell C. Understanding of a negative bowel screening result and potential impact on future symptom appraisal and help-seeking behaviour: a focus group study. <i>Health Expect.</i> 2017 Aug;20(4):584-592. doi: 10.1111/hex.12484. Epub 2016 Jul 14. PMID: 27414462; PMCID: PMC5512994.	Qualitative study not relevant to key question	1	d
Bazalinski et al 2020	Bazaliński, Dariusz, Dorota Kaczmarek, and Dariusz Bujalski. "Pain and anxiety in patients undergoing preventive colon endoscopy." <i>Contemporary Oncology/Współczesna Onkologia</i> 14.5 (2010): 326-332.	Population is a mix of high risk and average risk without stratified data on each population	6	b
Cinnor et al 2020	Cinnor, Birtukan, David G. Perdue, and Adam Kim. "Mo1613 IDENTIFYING BARRIERS TO ADHERENCE TO SURVEILLANCE COLONOSCOPY." <i>Gastroenterology</i> 158.6 (2020): S-916.	No published full text paper. Authors not reached.	5	d
Brodersen et al. 2007	Brodersen J, McKenna SP, Doward LC, Thorsen H. Measuring the psychosocial consequences of screening. <i>Health Qual Life Outcomes.</i> 2007 Jan 8;5:3. doi: 10.1186/1477-7525-5-3. PMID: 17210071; PMCID: PMC1770907.	No original data, and not specific to colorectal cancer.	5	d
Brouse et al. 2004	Brouse, Corey H., et al. "Barriers to colorectal cancer screening in a low income, urban population: a descriptive study." <i>Health Education</i> (2004).	Describes barriers, and not consequences of screening.	2	c
Busch et al. 2009	Busch, H. P. "Screening/health checks: can the patient only win? Whole body magnetic resonance imaging approaches to tumour screening." <i>Radiation protection dosimetry</i> 135.2 (2009): 95-97.	No original data. Subject irrelevant to key question.	5	d
Campos-Outcalt et al. 2009	Campos-Outcalt, Doug. "Preventive services: the good, the bad, and the unproven: latest recommendations from the USPSTF reinforce some long-standing advisories and contradict others." <i>Journal of Family Practice</i> 58.7 (2009): 374-378.	Narrative review - No original data presented.	5	d
Chapple et al. 2008	Chapple A, Ziebland S, Hewitson P, McPherson A. What affects the uptake of screening for bowel cancer using a faecal occult blood test (FOBT): a qualitative study. <i>Soc Sci Med.</i> 2008 Jun; 66(12): 2425-35. doi: 10.1016/j.socscimed.2008.02.009. Epub 2008 Mar 21. PMID: 18358581.	Data not relevant to key question	5	d
Clarke et al. 2021	Clarke N, Kearney PM, Gallagher P, McNamara D, O'Morain CA, Sharp L. Negative emotions and cancer fatalism are independently associated with uptake of Faecal Immunochemical Test-based colorectal cancer screening: Results from a population-based study. <i>Prev Med.</i> 2021 Apr;145:106430. doi: 10.1016/j.ypmed.2021.106430. Epub 2021 Jan 19. PMID: 33482227.	Only single items on fear and negative emotional attitudes as well as analyses on uptake-associated fear and negative emotional attitudes.	4	c
Costa et al. 2017	Costa, Ana Rute, et al. "Cancer screening in Portugal: sex differences in prevalence, awareness of organized programmes and perception of benefits and adverse effects." <i>Health Expectations</i> 20.2 (2017): 211-220.	Not relevant to key question	2	c
De Jonge et al. 2012	De Jonge, Vincent, et al. "The incidence of 30-day adverse events after colonoscopy among outpatients in the Netherlands." <i>Official journal of the American College of Gastroenterology ACG</i> 107.6 (2012): 878-884.	The article only describes the physical adverse effects of colonoscopy in a screening setting and has no psychological outcome measures.	7	c

Denis et al. 2013	Denis, Bernard, Isabelle Gendre, and Philippe Perrin. "S1134 Adverse Effects of an Organized Colorectal Cancer Screening Program With Guaiac-Based Fecal Occult Blood Test." <i>Gastroenterology</i> 5.138 (2010): S-187.	The article only describes the physical adverse effects of colonoscopy in a screening setting and has no psychological outcome measures.	7	c
Denters et al. 2013	Denters, M. J., et al. "Patient burden of colonoscopy after positive fecal immunochemical testing for colorectal cancer screening." <i>Endoscopy</i> 45.05 (2013): 342-349.	No data on key question, burden defined as pain, embarrassment and burden of procedure	7	c
Denters et al. 2010	Denters, Maaike, et al. "S1127 Participants in a Colorectal Cancer Screening Program Having a False Positive Test Result, Experience Adverse Psychological Symptoms up to 6 Weeks After the Colonoscopy." <i>Gastroenterology</i> 5.138 (2010): S-186.	Abstract corresponding to full-text article already included ("FIT false-positives in colorectal cancer screening experience psychological distress up to 6 weeks after colonoscopy")	8	d
Efuni et al. 2015	Efuni, Elizaveta, et al. "Optimism and barriers to colonoscopy in low-income Latinos at average risk for colorectal cancer." <i>Psycho-Oncology</i> 24.9 (2015): 1138-1144.	Describes barriers, and not consequences of screening.	2	c
Fursland 1999	Fursland, E. "Back to front." <i>Nursing Times</i> 95.1 (1999): 26-28.	Subject irrelevant to key question. Journalism.	1	d
Fyffe et al. 2008	Fyffe, Denise C., et al. "Knowledge and barriers related to prostate and colorectal cancer prevention in underserved black men." <i>Journal of the National Medical Association</i> 100.10 (2008): 1161-1167.	Study investigates black males' perspectives about colorectal cancer screening - Not the actual experience of participating in screening for colorectal cancer. There irrelevant to research question.	2	c
Ghanouni et al. 2016	Ghanouni, Alex, et al. "Patients' experience of colonoscopy in the English bowel cancer screening programme." <i>Endoscopy</i> 48.03 (2016): 232-240.	Study not relevant to key question.	3	c
Ghanouni, A., et al. (2013)	Ghanouni, A., et al. "An interview study analysing patients' experiences and perceptions of non-laxative or full-laxative preparation with faecal tagging prior to CT colonography." <i>Clinical radiology</i> 68.5 (2013): 472-478.	Outcomes reported not relevant to key question - comparison of laxatives and patient burden in relation to the specific laxative/non-laxative event.	7	c
Gostoli et al 2021	Gostoli, Sara, et al. "The clinical utility of a comprehensive psychosomatic assessment in the program for colorectal cancer prevention: a cross-sectional study." <i>Scientific Reports</i> 11.1 (2021): 1-11.	Reverse causality; psychometric assessment to determine the psychological profile among attenders.	1	b
Helander et al 2017 (abstract)	Helander, Sanni, et al. "Psychosocial effects of colorectal cancer screening." <i>PSYCHO-ONCOLOGY</i> . Vol. 26. 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY, 2017.	Investigating lifestyle changes and symptom perception with a lifestyle score of CRC risk related lifestyle factors	7	c
Helander et al. 2018	Helander, Sanni, et al. "Lifestyle in population-based colorectal cancer screening over 2-year follow-up." <i>The European Journal of Public Health</i> 28.2 (2018): 333-338.	Not relevant to key question	7	c
Homa, K	Homa, Katarzyna. "Acceptance of screening colonoscopy for the prevention of colorectal cancer." <i>Annales Academiae Medicae Stetinensis</i> . Vol. 50. No. 2. 2004.	Study not relevant to key question;	3	c
Hunleth et al. 2016	Hunleth, Jean M., et al. "Beyond adherence: Health care disparities and the struggle to get screened for colon cancer." <i>Qualitative health research</i> 26.1 (2016): 17-31.	Qualitative study not relevant to key question	2	c
Hunleth et al. 2019	Hunleth, Jean M., et al. "Complicating 'the good result': narratives of colorectal cancer screening when cancer is not found." <i>Journal of psychosocial oncology</i> 37.4 (2019): 509-525.	Narrative analysis, not relevant to key question	1	d
Javadzade et al. 2014	Javadzade, Seyed Homamodin, et al. "Barriers related to fecal occult blood test for colorectal cancer screening in moderate risk individuals." <i>Journal of education and health promotion</i> 3 (2014).	The article only describes perceived barriers to participation in colorectal cancer screening.	2	c

Johnson et al. 2006	Johnson, D. B. "The effects of an abnormal cancer screening test on health related quality of life." <i>Int J Cancer Res</i> 2 (2006): 277-289.	Data on PLCO trial participants, not isolated to CRC screening participants.	1	a
Kirkegaard et al. 2018	Kirkegaard, Pia, et al. "Waiting for diagnostic colonoscopy: a qualitative exploration of screening participants' experiences in a FIT-based colorectal cancer screening program." <i>Patient preference and adherence</i> 12 (2018): 845.	Qualitative study, not developing a questionnaire or investigating content validity of existing questionnaire	1	a
Kirkøen et al. 2017	Kirkøen, Benedicte, et al. "Acceptability of two colorectal cancer screening tests: pain as a key determinant in sigmoidoscopy." <i>Endoscopy</i> 49.11 (2017): 1075-1086.	Single item on pain. Other items not relevant to key question	7	c
Knudsen et al. 2016	Knudsen, Amy B., et al. "Estimation of benefits, burden, and harms of colorectal cancer screening strategies: modeling study for the US Preventive Services Task Force." <i>Jama</i> 315.23 (2016): 2595-2609.	The article is a modelling study reviewing the different screening methods and has no psychological outcome measures.	7	d
Kremers et al. 2000	Kremers, Stef PJ, et al. "Participation in a sigmoidoscopic colorectal cancer screening program: a pilot study." <i>Cancer Epidemiology Biomarkers & Prevention</i> 9.10 (2000): 1127-1130.	The study explores the reasons for participating or not participating in a screening programme and not the psychological consequences of participation.	2	c
Larsen et al. 2019	Gabel, Pernille, et al. "Knowledge, attitudes, and worries among different health literacy groups before receiving first invitation to colorectal cancer screening: Cross-sectional study." <i>Preventive Medicine Reports</i> 14 (2019): 100876.	Investigates perceived barriers and not actual consequences/experiences of the screening programme	2	c
Mahabaleshwarkar et al. 2013	Mahabaleshwarkar, Rohan, et al. "Association between health-related quality of life and colorectal cancer screening." <i>Population Health Management</i> 16.3 (2013): 178-189.	The study examines the association between HRQoL and screening uptake, and not the consequences of the screening on HRQoL	3	c
Mant et al 1990	Mant, D., et al. "Experiences of patients with false positive results from colorectal cancer screening." <i>British Journal of General Practice</i> 40.339 (1990): 423-425.	The study only uses single items to investigate worry, disruption and distress	4	c
McCarthy et al. 2002	McCarthy, A. (2002). "Combining the old & new against colon cancer." <i>CURE: Cancer Updates, Research & Education</i> 1: 30-37.	No original data.	5	d
McGovern et al. 2004	McGovern, Patricia M., et al. "False-positive cancer screens and health-related quality of life." <i>Cancer Nursing</i> 27.5 (2004): 347-352.	Mixed data, qualitative study not relevant to key question	1	d
McGregor et al. 2017	McGregor, Lesley M., et al. "Adaptation, double identity and persuading others: a qualitative study on the psychological impact of a screen-detected colorectal cancer diagnosis." (2017).	Qualitative study, not developing a questionnaire or investigating content validity of existing questionnaire	1	d
Miles et al. 2003	Miles, Anne, Jane Wardle, and Wendy Atkin. "Receiving a screen-detected diagnosis of cancer: the experience of participants in the UK flexible sigmoidoscopy trial." <i>Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer</i> 12.8 (2003): 784-802.	Qualitative study not relevant to key question	1	d
Mitchell et al. 2012	Mitchell, Kimberly A., et al. "Development and psychometric testing of the colonoscopy embarrassment scale." <i>Western journal of nursing research</i> 34.4 (2012): 548-564.	The article is about item-validation of a colonoscopy embarrassment scale, with no questions on psychosocial consequences of participating in CRC screening .	7	c
Moayyedi 2007	Moayyedi, Paul. "Colorectal cancer screening lacks evidence of benefit." <i>Cleveland Clinic journal of medicine</i> 74.8 (2007): 545-549.	Narrative review. No original data presented.	5	d
Neale et al. 1989	Neale, Anne Victoria, Raymond Y. Demers, and Sandra Herman. "Compliance with colorectal cancer screening in a high-risk occupational group." <i>Journal of occupational medicine</i> (1989): 1007-1012.	The study examines compliers vs. non-compliers in screening, and does not look at psychosocial consequences of attending screening but reasons for non-participation.	2	c
Nicholson et al. 2005	Nicholson, Fiona B., and Melvyn G. Korman. "Acceptance of flexible sigmoidoscopy and colonoscopy for screening and surveillance in colorectal cancer prevention." <i>Journal of medical screening</i> 12.2 (2005): 89-95.	The study only used single items to investigate pain embarrassment and acceptability	2	d

Niv et al. 2012	Niv, Yaron, et al. "Impact of colonoscopy on quality of life." <i>European journal of gastroenterology & hepatology</i> 24.7 (2012): 781-786.	The study examines the effect of colonoscopy in all situations/for all indications on quality of life. The study population is therefore not relevant for this study since specific analyses for different groups of participants are not presented.	6	a
O'Donnell et al. 2010	O'Donnell, Suzy, et al. "Adherence to mammography and colorectal cancer screening in women 50–80 years of age: the role of psychological distress." <i>Women's Health Issues</i> 20.5 (2010): 343-349.	Describes the perceived barriers to screening, and not the actual consequences of attending colorectal cancer screening	2	c
Plumb et al. 2016	Plumb, Andrew A., et al. "Patient experience of CT colonography and colonoscopy after fecal occult blood test in a national screening programme." <i>European radiology</i> 27.3 (2017): 1052-1063.	No scale scores, but only single items reported	4	c
Pruyn et al. 2021	Pruyn, J. F. A., and W. J. A. Van den Heuvel. "Anxiety, control and information-seeking behavior in screening for cancer." <i>Stress and anxiety</i> . Washington, DC: Hemisphere Publishing Corporation 14 (1988): 183-95.	Study not relevant to key question	1	d
Ratnapradipa et al. 2021	Ratnapradipa, Kendra L., et al. "Cross-sectional Study of Colorectal Cancer Screening Barriers in a Latino-Serving Federally Qualified Health Center." <i>Journal of Cancer Education</i> (2021): 1-8.	Mixed population of both invited and not invited to screening. No stratified data on invited/not invited	6	a
Reeder 2011	Reeder, Anthony I. "It's a small price to pay for life": faecal occult blood test (FOBT) screening for colorectal cancer, perceived barriers and facilitators." <i>NZ Med J</i> 124.1331 (2011): 11-7.	Study investigates perceived barriers and facilitators for participation in screening and doesn't report any experienced/actual harms of participating in screening.	2	c
Riemann, J F	Is aggressive screening dangerous? J.F. Riemann. <i>Birgt ein aggressives Screening auch Gefahren?</i> . 2012; 30: 183-186. doi: 10.5414/VDX00735.	Narrative review. No original data presented.	5	d
Roukema, Jan Anne 2013	Roukema, J. A. (2013). "[Population screening: there are no certainties]. [Dutch]." <i>Nederlands tijdschrift voor geneeskunde</i> 156: A5384.	No original data. Recommendations based on other studies.	5	d
Schroy & Heeren, 2005	Schroy III, Paul C., and Timothy C. Heeren. "Patient perceptions of stool-based DNA testing for colorectal cancer screening." <i>American journal of preventive medicine</i> 28.2 (2005): 208-214.	No scales, only 25 single items questionnaire	4	c
Segura 2011	Segura, Andreu. "Colorectal cancer screening: actions speak louder than words and the cart goes after the horse." <i>Gaceta sanitaria</i> 25.4 (2011): 331-332.	Narrative review. No original data presented.	5	d
Senore et al. 2018	Senore, Carlo, et al. "Flexible sigmoidoscopy and CT colonography screening: patients' experience with and factors for undergoing screening-insight from the PROTEUS colon trial." (2018): 873-883.	Four single items on Discomfort, Anxiety, embarrassment and pain	4	c
Sikora 2022	Sikora, Karol. "Cancer screening." <i>Medicine</i> (2022).	Narrative review. No original data presented.	5	d
Steele, R J C	Steele, R. J. C., et al. "A demonstration pilot trial for colorectal cancer screening in the United Kingdom: a new concept in the introduction of healthcare strategies." <i>Journal of Medical Screening</i> 8.4 (2001): 197-203.	A feasibility study. The article describes the conduction of a pilot trial and presents no original data for analysis.	1	d
Suzuki et al. 2015	Suzuki, Rie, Phyllis M. Wallace, and Eusebius Small. "Race, health-related quality of life and colorectal cancer screening rates in the National Health Interview Survey." <i>American journal of health behavior</i> 39.1 (2015): 132-139.	Not relevant to key question. Investigating HRQoL and screening rates independently and in general and not in relation to a CRC screening situation	9	b

Swalduz et al. 2014	Swalduz, Aurelie, et al. "Assessment of screening in women cancers and in 75 years older in Loire department." <i>Bulletin du Cancer</i> 101.9 (2014): 808-812.	Study describes screening rates for various cancers, including colorectal cancer. No psychosocial outcomes are reported.	3	c
Swan et al. 2010	Swan, J. Shannon, et al. "Initial development of the Temporary Utilities Index: a multiattribute system for classifying the functional health impact of diagnostic testing." <i>Quality of Life Research</i> 19.3 (2010): 401-412.	The study is an item validation study and doesn't investigate the actual/experienced psychological harms of screening.	7	c
Tashiro, Atsushi	Tashiro, Atsushi, Naoshi Tanaka, and Satoshi Tsukioka. "COMPLIANCE AFTER COLORECTAL CANCER SCREENING AND HEALTH-RELATED QUALITY OF LIFE DOMAINS IN GERIATRIC JAPANESE." <i>Journal of the American Geriatrics Society</i> 53.11 (2005): 2034-2035.	The study examines how HRQoL affects compliance with treatment following a positive iFOBt test and doesn't examine any psychological consequences of participation in the screening programme.	2	c
Taylor et al. 2004	Taylor, Kathryn L., et al. "Quality of life and trial adherence among participants in the prostate, lung, colorectal, and ovarian cancer screening trial." <i>Journal of the National Cancer Institute</i> 96.14 (2004): 1083-1094.	Study investigates the impact on HRQoL for participants in the PLCO-trial. There are no colorectal cancer specific analyses presented as data for different cancers is merged.	2	c
Toft et al. 2019	Toft, Eva Lykke, et al. "Psychosocial consequences of receiving false-positive colorectal cancer screening results: a qualitative study." <i>Scandinavian Journal of Primary Health Care</i> 37.2 (2019): 145-154.	Qualitative study not developing a questionnaire or investigating content validity of existing questionnaire	1	d
Wackerbarth et al. (2005).	Wackerbarth, Sarah B., Jane C. Peters, and Steven A. Haist. "'Do We Really Need All That Equipment?': Factors Influencing Colorectal Cancer Screening Decisions." <i>Qualitative Health Research</i> 15.4 (2005): 539-554.	Investigating barriers of CRC screening and not after a CRC screening event but in general. Furthermore, none of the predefined questions involved psychosocial consequences of CRC screening.	2	c
Fritzell et al. 2020	Fritzell, Kaisa, et al. "Gender, having a positive FIT and type of hospital are important factors for colonoscopy experience in colorectal cancer screening—findings from the SCREESCO study." <i>Scandinavian Journal of Gastroenterology</i> 55.11 (2020): 1354-1362.	Only using single items on worry and discomfort. No scale score presented	4	c
Winawer et al. 1987	Winawer, Sidney J., et al. "Patient response to sigmoidoscopy: a randomized, controlled trial of rigid and flexible sigmoidoscopy." <i>Cancer</i> 60.8 (1987): 1905-1908.	Three single items on three different concepts	4	c
Wong et al. 2015	Wong, Martin CS, et al. "Regret on choice of colorectal cancer screening modality was associated with poorer screening compliance: a 4-year prospective cohort study." <i>Plos one</i> 10.4 (2015): e0125782.	Not relevant to key question. The study investigates regret on CRC screening and it's association with screening compliance. The questions did not have any psychosocial component	2	c
Ylitalo et al. 2019	Ylitalo, Kelly R., et al. "Barriers and facilitators of colorectal cancer screening in a federally qualified health center (FQHC)." <i>The Journal of the American Board of Family Medicine</i> 32.2 (2019): 180-190.	Only single items on fear of abnormal findings and fear of embarrassment	4	c
Wangmar et al. 2018	Wangmar, Johanna, et al. "Are anxiety levels associated with the decision to participate in a Swedish colorectal cancer screening programme? A nationwide cross-sectional study." <i>BMJ open</i> 8.12 (2018): e025109.	Regards the impact of making a decision to be screened or not and not impact of the actual screening	1	c
Choi et al. 2019	Choi, EunHee, JaeHee Jeon, and JinHee Kim. "Factors influencing colonoscopy behaviour among Koreans with a positive faecal occult blood tests." <i>European Journal of Cancer Care</i> 28.2 (2019): e13008.	Investigates perceived barriers and not actual consequences/experiences of the screening programme	2	c

Schoen et al. 2000	Schoen, Robert E., et al. "Patient satisfaction with screening flexible sigmoidoscopy." Archives of Internal Medicine 160.12 (2000): 1790-1796.	Measures (dis)satisfaction, including convenience, accessibility, staff interpersonal skills, physical surroundings, perceived technical competence, pain, discomfort, expectations and beliefs, and general satisfaction, and hence not psychosocial consequences.	3	c
von Wagner et al. 2012	von Wagner, Christian, et al. "Patient acceptability and psychologic consequences of CT colonography compared with those of colonoscopy: results from a multicenter randomized controlled trial of symptomatic patients." Radiology 263.3 (2012): 723-731.	The population is symptomatic patients and therefore not a screening context-	6	a

Appendix 4 – Changes in protocol

	Protocol		
	17 Nov 2016	10 Feb 2020	17 Oct 2022
Stage	Preliminary searches done but no formal screening of results or data extraction	Formal screening of results done. Data extraction not started	Data extraction and risk of bias assessment done
Main outcomes	Negative psychosocial consequences For qualitative studies, the systematic review aims to establish the potential psychosocial consequences of being invited to or participating in CRC mass screening or participating in a CRC screening scientific trial.	Adequacy of measurement properties. For qualitative studies, the primary outcome will be content validity.	No change
Risk of bias assessment	One review author, with expertise in the specific area, will assess the adequacy of measurements used in the included studies (2-9). The instruments (questionnaires, scales, patient-reported outcome measures) used to measure the psychosocial consequences of CRC screening in the included studies will all be assessed for content validity (content relevance and content coverage) and statistical measurement properties: validity, reliability, unidimensionality and differential item function (invariance) (10). The latter two properties will only be assessed if instruments encompass one or more scales (10,11).	Two authors will assess the adequacy of measurements used in the included studies using the COSMIN risk-of-bias-checklist (1). If a condition-specific instrument has been used, then boxes 1a and 1b will be assessed. If a condition-specific instrument has not been used, then these boxes will be skipped, and boxes 2a-c will be addressed. If the overall score in boxes 2a-c is “adequate” or above, then box 3 will be used to assess test for unidimensionality (structural validity). If the studies have tested for unidimensionality, boxes 4-10 will be assessed, otherwise, boxes 4-10 will not be assessed. Tests for unidimensionality will only be assessed if instruments encompasses one or more scales (2, 3). No general risk of bias-assessment will be performed, since this is not in the scope of this review.	No change
Other changes	-	No change	More members joined the review team and assisted with updating the search, data extraction and assessment of methodological quality.