**Supplemental file 1 Database search strategy**

**Embase.com**

('Terminal Care'/exp OR bereave\* OR hospice\*:de,it,lnk,ab,ti OR 'advanced cancer':ab,ti OR 'advanced cancer'/de OR advanced-illness:ab,ti OR serious\*-ill\*:ab,ti OR 'end of life' OR 'terminal\* ill\*':de,it,lnk,ab,ti OR 'terminal disease'/de OR palliative\*:ab,ti OR 'palliative therapy'/exp OR ((bad OR serious) NEAR/3 news) OR (incurable NEAR/3 cancer)) AND ('professional-patient relationship'/exp OR 'health personnel attitude'/exp OR 'medical personnel'/exp OR 'health care personnel'/de OR nurse/exp OR clinician/de OR (professional\* OR doctor\* OR nurs\* OR physician\* OR personnel\* OR staff\* OR provider\* OR clinician\* OR oncologist\*):ab,ti) AND ('interpersonal communication'/mj OR conversation/mj OR 'verbal communication'/mj OR 'nonverbal communication'/mj OR 'communication skill'/mj OR 'social interaction'/mj OR (communication\* OR communicating\* OR Conversation\* OR Consult\* OR Dialogue\* OR discussing OR discussions OR disclosure\* OR (exploring NEAR/6 (patient\*) NEAR/6 (need\* OR perspective\*)) OR talk OR Meeting\* OR Visit OR Visits OR Conference\* OR Interaction\* OR Contact\* OR Talk\* OR Encounter\* OR telling):ti) AND (patient/exp OR 'patient satisfaction'/de OR 'patient attitude'/de OR outpatient/de OR family/exp OR 'family attitude'/exp OR 'professional-patient relationship'/exp OR 'patient care'/de OR (patient\* OR inpatient\* OR outpatient\* OR relatives OR family OR families):ab,ti) AND ('patient satisfaction'/de OR empathy/de OR emotion/exp OR attitude/de OR 'health personnel attitude'/exp OR 'patient attitude'/de OR 'patient preference'/de OR perception/de OR 'coping behavior'/de OR 'family attitude'/exp OR 'personal experience'/de OR (satisfact\* OR experience\* OR empath\* OR emotion\* OR attitude\* OR belief\* OR perception\* OR value\* OR view\* OR affective OR honest\* OR safe OR inviting OR trusting OR coping OR (adaptive\* NEAR/3 behav\*) OR fear\* OR anxiety\* OR preference\* OR expectation\* OR supportive\* OR caring-relation\* OR responding OR (open NEXT/1 (communication OR exploration)) OR sensitiv\* OR sens):ab,ti) NOT [conference abstract]/lim AND ([english]/lim OR [dutch]/lim)

**Medline ALL Ovid**

(exp Terminal Care/ OR bereave$.af. OR hospice$.mp. OR advanced cancer.tw. OR advanced-illness.tw. OR serious\*-ill\*.tw. OR end of life.af. OR terminal\* ill.mp. OR palliative$.tw. OR Palliative Care/ OR exp palliative therapy/ OR ((bad OR serious) ADJ3 news) OR (incurable ADJ3 cancer)) AND (exp Professional-Patient Relations/ OR exp Attitude of Health Personnel/ OR exp Health Personnel/ OR clinician/ OR (professional\* OR doctor\* OR nurs\* OR physician\* OR personnel\* OR staff\* OR provider\* OR clinician\* OR oncologist\*).ab,ti.) AND (\*Communication/ OR \* Nonverbal Communication/ OR \* Social Interaction/ OR (communication\* OR communicating\* OR Conversation\* OR Consult\* OR Dialogue\* OR discussing OR discussions OR disclosure\* OR (exploring ADJ6 (patient\*) ADJ6 (need\* OR perspective\*)) OR talk OR Meeting\* OR Visit OR Visits OR Conference\* OR Interaction\* OR Contact\* OR Talk\* OR Encounter\* OR telling).ti.) AND (exp Patients/ OR Patient Satisfaction / OR Outpatients / OR exp Family / OR exp Professional-Patient Relations / OR Patient Care / OR (patient\* OR inpatient\* OR outpatient\* OR relatives OR family OR families).ab,ti.) AND (Patient Satisfaction/ OR Personal Satisfaction/ OR Empathy/ OR exp Emotions/ OR Attitude/ OR exp Attitude of Health Personnel/ OR Patient Preference/ OR Perception/ OR Adaptation, Psychological/ OR (satisfact\* OR experience\* OR empath\* OR emotion\* OR attitude\* OR belief\* OR perception\* OR value\* OR view\* OR affective OR honest\* OR safe OR inviting OR trusting OR coping OR (adaptive\* ADJ3 behav\*) OR fear\* OR anxiety\* OR preference\* OR expectation\* OR supportive\* OR caring-relation\* OR responding OR (open ADJ (communication OR exploration)) OR sensitiv\* OR sens).ab,ti.) AND (english.la. OR dutch.la.)

**Web of Science Core Collection**

TS=((bereave\* OR hospice\* OR "advanced cancer" OR "end of life" OR "terminally ill" OR palliative\* OR ((bad OR serious) NEAR/2 news) OR (incurable NEAR/2 cancer)) AND ((professional\* OR doctor\* OR nurs\* OR physician\* OR personnel\* OR staff\* OR provider\* OR clinician\* OR oncologist\*)) AND ((patient\* OR inpatient\* OR outpatient\* OR relatives OR family OR families)) AND ((satisfact\* OR experience\* OR empath\* OR emotion\* OR attitude\* OR belief\* OR perception\* OR value\* OR view\* OR affective OR honest\* OR safe OR inviting OR trusting OR coping OR (adaptive\* NEAR/2 behav\*) OR fear\* OR anxiety\* OR preference\* OR expectation\* OR supportive\* OR caring-relation\* OR responding OR (open NEAR/1 (communication OR exploration)) OR sensitiv\* OR sens))) AND TI=((communication\* OR communicating\* OR Conversation\* OR Consult\* OR Dialogue\* OR discussing OR discussions OR disclosure\* OR (exploring NEAR/5 (patient\*) NEAR/5 (need\* OR perspective\*)) OR talk OR Meeting\* OR Visit OR Visits OR Conference\* OR Interaction\* OR Contact\* OR Talk\* OR Encounter\* OR telling)) AND DT=(article) AND LA=(English OR dutch)

**Cochrane CENTRAL register of Trials**

(((mh "Terminal Care") OR bereave\* OR hospice\*:ti,ab,kw,pt OR "advanced cancer":ab,ti OR "end of life" OR "terminally ill":ti,ab,kw,pt OR palliative\*:ab,ti OR (mh "palliative care")) OR ((bad OR serious) NEAR/3 news) OR (incurable NEAR/3 cancer)) AND ((professional\* OR doctor\* OR nurs\* OR physician\* OR personnel\* OR staff\* OR provider\* OR clinician\* OR oncologist\*):ab,ti) AND ((communication\* OR communicating\* OR Conversation\* OR Consult\* OR Dialogue\* OR discussing OR discussions OR disclosure\* OR (exploring NEAR/6 (patient\*) NEAR/6 (need\* OR perspective\*)) OR talk OR Meeting\* OR Visit OR Visits OR Conference\* OR Interaction\* OR Contact\* OR Talk\* OR Encounter\* OR telling):ti) AND ((patient\* OR inpatient\* OR outpatient\* OR relatives OR family OR families):ab,ti) AND ((satisfact\* OR experience\* OR empath\* OR emotion\* OR attitude\* OR belief\* OR perception\* OR value\* OR view\* OR affective OR honest\* OR safe OR inviting OR trusting OR coping OR (adaptive\* NEAR/3 behav\*) OR fear\* OR anxiety\* OR preference\* OR expectation\* OR supportive\* OR caring-relation\* OR responding OR (open NEXT/1 (communication OR exploration)) OR sensitiv\* OR sens):ab,ti)

**CINAHL EBSCOhost**

(MH Terminal Care+ OR MH Palliative Care OR AB(bereave\* OR hospice\* OR advanced cancer OR advanced- illness OR serious\*-ill\* OR end of life OR terminal\* ill OR palliative\* OR ((bad OR serious) N2 news) OR (incurable N2 cancer)) OR TI(bereave\* OR hospice\* OR advanced cancer OR advanced-illness OR serious\*-ill\* OR end of life OR terminal\* ill OR palliative\* OR ((bad OR serious) N2 news) OR (incurable N2 cancer))) AND (MH Professional-Patient Relations + OR MH Attitude of Health Personnel+ OR MH Health Personnel + OR TI(professional\* OR doctor\* OR nurs\* OR physician\* OR personnel\* OR staff\* OR provider\* OR clinician\* OR oncologist\*) OR AB(professional\* OR doctor\* OR nurs\* OR physician\* OR personnel\* OR staff\* OR provider\* OR clinician\* OR oncologist\*)) AND (MM Communication OR MM Nonverbal Communication OR MM Interpersonal Relations OR TI(communication\* OR communicating\* OR Conversation\* OR Consult\* OR Dialogue\* OR discussing OR discussions OR disclosure\* OR (exploring N5 (patient\*) N5 (need\* OR perspective\*)) OR talk OR Meeting\* OR Visit OR Visits OR Conference\* OR Interaction\* OR Contact\* OR Talk\* OR Encounter\* OR telling).ti.) AND (MH Patients+ OR MH Patient Satisfaction OR MH Outpatients OR MH Family + OR MH Family Attitudes OR MH Professional-Patient Relations + OR MH Patient Care OR TI(patient\* OR inpatient\* OR outpatient\* OR relatives OR family OR families) OR AB(patient\* OR inpatient\* OR outpatient\* OR relatives OR family OR families)) AND (MH Patient Satisfaction OR MH Personal Satisfaction OR MH Empathy OR MH Emotions+ OR MH Attitude OR MH Attitude of Health Personnel+ OR MH Family Attitudes OR MH Patient Preference OR MH Perception OR MH Adaptation, Psychological OR TI(satisfact\* OR experience\* OR empath\* OR emotion\* OR attitude\* OR belief\* OR perception\* OR value\* OR view\* OR affective OR honest\* OR safe OR inviting OR trusting OR coping OR (adaptive\* N2 behav\*) OR fear\* OR anxiety\* OR preference\* OR expectation\* OR supportive\* OR caring-relation\* OR responding OR (open N1 (communication OR exploration)) OR sensitiv\* OR sens) OR AB(satisfact\* OR experience\* OR empath\* OR emotion\* OR attitude\* OR belief\* OR perception\* OR value\* OR view\* OR affective OR honest\* OR safe OR inviting OR trusting OR coping OR (adaptive\* N2 behav\*) OR fear\* OR anxiety\* OR preference\* OR expectation\* OR supportive\* OR caring-relation\* OR responding OR (open N1 (communication OR exploration)) OR sensitiv\* OR sens)) AND LA(english OR dutch)

**Supplemental file 2**  **A classification of the included studies** **in addition to the characteristics in table 1**

|  |  |  |
| --- | --- | --- |
| Characteristic | | Number of studies  (n total) |
| Study design | Qualitative study (Adamson et al. 2018; Ahmed et al. 2015; Bergenholtz et al.  2020; Brom et al. 2017; Caswell et al. 2015; Cohen-Mansfield et al. 2017; Collins et al. 2018a, 2018b; Garden and Seiler 2017; Gilad et al. 2022; Hilário 2020; Hjelmfors et al. 2018; Ibañez-Masero et al. 2019; Im et al. 2019; Kim et al. 2018; Kirby et al. 2018; Kitta et al. 2021; Krawczyk and Gallagher 2016; Krug et al. 2021; Kvåle et al. 2020; Lin et al. 2018; Masefield et al. 2019; Melhem and Daneault 2017; Melis et al. 2021; Middleton-Green et al. 2019; Netsey-Afedo et al. 2020; O’Connor et al. 2020; Pini et al. 2021; Rohde et al. 2019; Scherrens et al. 2020; Schulman-Green et al. 2018; Schulz et al. 2017; Seccareccia et al. 2015; Shen et al. 2020; Steinhauser et al. 2015; Tavares et al. 2020; Timmermann et al. 2017; Villalobos et al. 2018; Voruganti et al. 2018; Washington et al. 2019; Weerasinghe and Maddalena 2016) | 41 |
| Quantitative observational study(Awdish et al. 2017; Bauman et al. 2018;  Fenton et al. 2018; Freytag et al. 2018; Goebel and Mehdorn 2018; Houben et al. 2015; Seifart et al. 2020) | 7 |
| ‘Randomized controlled trial’ (Curtis et al. 2018; Doorenbos et al. 2016;  Epstein et al. 2017; Paladino et al. 2020) | 4 |
| Mixed methods design (Abdul-Razzak et al. 2016; Applebaum et al. 2018;  Chen et al. 2021; McGinley and Waldrop 2020) | 4 |
| Continent / country | North America | 28 |
| * United States of America (Adamson et al. 2018; Applebaum et al. 2018; Awdish et al. 2017; Bauman et al. 2018; Chen et al. 2021; Curtis et al. 2018; Doorenbos et al. 2016; Epstein et al. 2017; Fenton et al. 2018; Freytag et al. 2018; Garden and Seiler 2017; Kim et al. 2018; Lin et al. 2018; McGinley and Waldrop 2020; Paladino et al. 2020; Schulman-Green et al. 2018; Shen et al. 2020; Steinhauser et al. 2015; Washington et al. 2019) | 19 |
| * Canada (Abdul-Razzak et al. 2016; Ahmed et al. 2015; Im et al. 2019; Krawczyk and Gallagher 2016; Melhem and Daneault 2017; Schulz et al. 2017; Seccareccia et al. 2015; Voruganti et al. 2018; Weerasinghe and Maddalena 2016) | 9 |
| Europe | 22 |
| * Austria (Kitta et al. 2021) | 1 |
| * Belgium (Scherrens et al. 2020) | 1 |
| * Denmark (Bergenholtz et al. 2020; Netsey-Afedo et al. 2020; Timmermann et al. 2017) | 3 |
| * Germany (Goebel and Mehdorn 2018; Krug et al. 2021; Seifart et al. 2020; Villalobos et al. 2018) | 4 |
| * Italy (Melis et al. 2021) | 1 |
| * Netherlands (Brom et al. 2017; Houben et al. 2015) | 2 |
| * Norway (Kvåle et al. 2020; Rohde et al. 2019) | 2 |
| * Portugal (Hilário 2020) | 1 |
| * Spain (Ibañez-Masero et al. 2019) | 1 |
| * Sweden (Hjelmfors et al. 2018) | 1 |
| * United Kingdom (Caswell et al. 2015; Middleton-Green et al. 2019; Pini et al. 2021; Tavares et al. 2020) | 4 |
| * 4 countries: Belgium, Ireland, Italy, United Kingdom (Masefield et al. 2019) | 1 |
| Australia (Collins et al. 2018a, 2018b; Kirby et al. 2018; O’Connor et al. 2020) | 4 |
| Israel (Cohen-Mansfield et al. 2017; Gilad et al. 2022) | 2 |
| Care setting | Hospital | 46 |
| * University hospital (1 or more) (Abdul-Razzak et al. 2016; Awdish et al. 2017; Brom et al. 2017; Caswell et al. 2015; Doorenbos et al. 2016; Goebel and Mehdorn 2018; Kitta et al. 2021; Krug et al. 2021; Kvåle et al. 2020; Seifart et al. 2020; Timmermann et al. 2017; Villalobos et al. 2018; Voruganti et al. 2018; Washington et al. 2019) | 14 |
| * General hospital (1 or more) (Bergenholtz et al. 2020; Cohen-Mansfield et al. 2017; Hjelmfors et al. 2018; Ibañez-Masero et al. 2019; Melhem and Daneault 2017; Melis et al. 2021; Netsey-Afedo et al. 2020; O’Connor et al. 2020; Rohde et al. 2019; Schulz et al. 2017;) | 10 |
| * Specialized hospital (1 or more) (Adamson et al. 2018; Ahmed et al. 2015; Applebaum et al. 2018; Chen et al. 2021; Collins et al. 2018a, 2018b; Gilad et al. 2022; Im et al. 2019; Kirby et al. 2018; Paladino et al. 2020; Pini et al. 2021; Shen et al. 2020) | 12 |
| * Palliative care unit in hospital (Hilário 2020; Seccareccia et al. 2015) * Mixture of hospitals (Epstein et al., 2017; Fenton et al. 2018; Freytag et al. 2018; Houben et al. 2015; Krawczyk and Gallagher 2016; Lin et al. 2018; Schulman-Green et al. 2018; Steinhauser et al. 2015) | 2  8 |
| Primary care (Masefield et al. 2019; Middleton-Green et  al. 2019; Weerasinghe and Maddalena 2016) | 3 |
| Hospital and primary care ( Ibañez-Masero et al. 2019; Lin  et al. 2018) | 2 |
| Hospice care (Bauman et al. 2018; McGinley and Waldrop 2020; Pini et al. 2021) | 3 |
| Nursing home (Kim et al. 2018) | 1 |
| Mixture of care settings (Curtis et al. 2018; Epstein et al. 2017; Garden and  Seiler 2017; Scherrens et al. 2020; ; Tavares et al. 2020; Washington et al. 2019) | 6 |
| Perspective studied | Patients (n total = 2021) (Abdul-Razzak et al. 2016; Adamson et al. 2018; Brom  et al. 2017; Chen et al. 2021; Collins et al. 2018a; Curtis et al. 2018; Doorenbos et al. 2016; Fenton et al. 2018; Garden and Seiler 2017; Goebel and Mehdorn 2018; Hjelmfors et al. 2018; Houben et al. 2015; Kitta et al. 2021; Kvåle et al. 2020; Lin et al. 2018; Melhem and Daneault 2017; Netsey-Afedo et al. 2020; O’Connor et al. 2020; Paladino et al. 2020; Pini et al. 2021; Rohde et al. 2019; Scherrens et al. 2020; Schulman-Green et al. 2018; Seifart et al. 2020; Tavares et al. 2020; Timmermann et al. 2017) | 26 |
| Relatives (n total = 572) (Applebaum et al. 2018; Bauman et al. 2018; Caswell  et al. 2015; Cohen-Mansfield et al. 2017; Collins et al. 2018b; Gilad et al. 2022; Ibañez-Masero et al. 2019; Kim et al. 2018; Krawczyk and Gallagher 2016; McGinley and Waldrop 2020; Steinhauser et al. 2015; Washington et al. 2019; Weerasinghe and Maddalena 2016) | 13 |
| Both patients and relatives (n total = 1219) (Ahmed et al. 2015; Awdish et al.  2017; Bergenholtz et al. 2020; Epstein et al. 2017; Freytag et al. 2018; Hilário 2020; Im et al. 2019; Kirby et al. 2018; Krug et al. 2021; Masefield et al. 2019; Melis et al. 2021; Middleton-Green et al. 2019; Schulz et al. 2017; Seccareccia et al. 2015; Shen et al. 2020; Villalobos et al. 2018; Voruganti et al. 2018) | 17 |
| Diagnosis | Advanced cancer (Adamson et al. 2018; Ahmed et al. 2015; Applebaum et al.  2018; Bauman et al. 2018; Brom et al. 2017; Chen et al. 2021; Collins et al. 2018a, 2018b; Epstein et al. 2017; Fenton et al. 2018; Freytag et al. 2018; Goebel and Mehdorn 2018; Kirby et al. 2018; Kitta et al. 2021; Krug et al. 2021; Kvåle et al. 2020; Lin et al. 2018; Melhem and Daneault 2017; Melis et al. 2021; Netsey-Afedo et al. 2020; Paladino et al. 2020; Pini et al. 2021; Rohde et al. 2019; Scherrens et al. 2020; Schulman-Green et al. 2018; Seifart et al. 2020; Shen et al. 2020; Villalobos et al. 2018; Voruganti et al. 2018; Washington et al. 2019) | 30 |
| Diversity of advanced illnesses (Abdul-Razzak et al. 2016; Awdish et al. 2017;  Bergenholtz et al. 2020; Cohen-Mansfield et al. 2017; Curtis et al. 2018; Garden and Seiler 2017; Gilad et al. 2022; Hilário 2020; Houben et al. 2015; Ibañez-Masero et al. 2019; Krawczyk and Gallagher 2016; McGinley and Waldrop 2020; Middleton-Green et al. 2019; O’Connor et al. 2020; Seccareccia et al. 2015; Steinhauser et al. 2015; Timmermann et al. 2017; Weerasinghe and Maddalena 2016) | 18 |
| Advanced heart failure (Doorenbos et al. 2016; Hjelmfors et al. 2018; Im et al.  2019; Schulz et al. 2017) | 4 |
| Advanced lung failure (Masefield et al. 2019; Tavares et al. 2020) | 2 |
| Vulnerable older people, including patients with dementia (Caswell et al.  2015; Kim et al. 2018) | 2 |
| Non-western background | Patients or relatives with a non-Western background living in a Western country (Kirby et al. 2018; Shen et al. 2020; Weerasinghe and Maddalena 2016) | 3 |
| Method of data collection | Single interview (Abdul-Razzak et al. 2016; Adamson et al. 2018; Ahmed et al.  2015; Applebaum et al. 2018; Bergenholtz et al. 2020; Brom et al. 2017 (both single and repeated interviews); Caswell et al. 2015; Chen et al. 2021; Cohen-Mansfield et al. 2017; Collins et al. 2018a, 2018b; Garden and Seiler 2017; Gilad et al. 2022; Hilário 2020; Hjelmfors et al. 2018; Ibañez-Masero et al. 2019 (following nominal groups and discussion groups); Im et al. 2019; Kim et al. 2018; Kirby et al. 2018; Kitta et al. 2021; Krawczyk and Gallagher 2016; Krug et al. 2021; Kvåle et al. 2020; Lin et al. 2018; Masefield et al. 2019 (focus groups); McGinley and Waldrop 2020; Melhem and Daneault 2017; Melis et al. 2021; Middleton-Green et al. 2019; O’Connor et al. 2020; Pini et al. 2021; Rohde et al. 2019; Scherrens et al. 2020; Schulman-Green et al. 2018; Schulz et al. 2017; Seccareccia et al. 2015; Seifart et al. 2020; Shen et al. 2020; Tavares et al. 2020; Villalobos et al. 2018; Washington et al. 2019; Weerasinghe and Maddalena 2016) | 42 |
| Single survey(s) whether or not combined with an interview (Abdul-Razzak et  al. 2016; Ahmed et al. 2015; Applebaum et al. 2018; Awdish et al. 2017;  Chen et al. 2021; Goebel and Mehdorn 2018; McGinley and Waldrop 2020;  Paladino et al. 2020; Seifart et al. 2020) | 9 |
| Repeated interview (Brom et al. 2017 (both single and repeated interviews);  Netsey-Afedo et al. 2020; Steinhauser et al. 2015 (focus groups and  interviews; Timmermann et al. 2017; Voruganti et al. 2018) | 5 |
| Repeated survey(s) (Bauman et al. 2018; Curtis et al. 2018; Doorenbos et al.  2016; Epstein et al. 2017; Fenton et al. 2018; Freytag et al. 2018; Houben et al. 2015) | 7 |

**Supplemental file 3 Quality assessment studies**

**Table 3.1 Quality assessment qualitative studies with COREQ checklist**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Personal Characteristics** | | | | | **Relationship with participants** | | | **Theo- retical frame- work** | **Participant selection** | | | | **Setting** | | | **Data collection** | | | | | | | **Data analysis** | | | | | **Reporting** | | | |  |
| **1. Interviewer/ facilitator** | **2. Credentials** | **3. Occupation** | **4. Gender** | **5. Experience and training** | **6. Relationship established** | **7. Participant knowledge of the interviewer** | **8. Interviewer characteristics** | **9. Methodological orientation and Theory** | **10. Sampling** | **11. Method of approach** | **12. Sample size** | **13. Non-participation** | **14. Setting of data collection** | **15. Presence of non- participants** | **16. Description of sample** | **17. Interview guide** | **18. Repeat interviews** | **19. Audio/visual recording** | **20. Field notes** | **21. Duration** | **22. Data saturation** | **23. Transcripts returned** | **24. Number of data coders** | **25. Description of the coding tree** | **26. Derivation of themes** | **27. Software** | **28. Participant checking** | **29. Quotations presented** | **30. Data and ﬁndings**  **consistent** | **31. Clarity of major themes** | **32. Clarity of minor themes** | **TOTAL** |
| **Adamson et al (2018)** | + | - | ± | - | + | - | - | - | + | ± | - | + | - | + | + | ± | + | + | + | - | + | - | - | + | ± | + | - | + | + | ± | + | + | 18.5 |
| **Ahmed et al**  **(2015)** | ± | - | - | - | - | ± | - | - | - | + | ± | + | - | + | + | + | + | - | + | - | - | - | - | + | - | ± | - | - | + | + | ± | - | 12.5 |
| **Bergenholtz et**  **al. (2020)** | + | - | + | - | ± | + | - | - | - | + | - | + | - | + | - | + | ± | - | + | - | + | - | - | ± | ± | ± | - | - | + | + | + | ± | 15 |
| **Brom et al. (2017)** | + | - | + | - | - | + | - | - | + | + | + | + | + | + | - | + | + | - | + | + | - | + | - | + | - | ± | - | - | + | + | + | + | 19.5 |
| **Caswell et al. (2015)** | + | - | - | - | - | - | - | - | + | + | ± | + | + | - | - | + | - | - | + | + | - | - | - | + | - | ± | + | - | + | + | + | + | 15 |
| **Cohen- Mansfield et al. (2017)** | - | + | - | - | - | - | ± | - | - | - | - | + | + | - | - | + | ± | - | - | - | - | - | - | ± | - | + | - | - | ± | + | + | + | 10 |
| **Collins et al. (patients)**  **(2018a)** | + | - | - | - | - | ± | - | - | + | + | + | + | + | - | + | + | + | - | + | - | + | + | - | + | + | + | - | - | + | + | + | + | 19.5 |
| **Collins et al. (relatives)**  **(2018b)** | + | - | + | - | - | ± | - | - | + | + | + | + | + | + | + | + | + | - | + | - | + | + | - | + | ± | + | - | - | + | + | + | + | 21 |
| **Garden and**  **Seiler (2017)** | - | - | + | - | - | - | - | - | + | + | - | + | - | - | - | + | + | - | + | - | + | - | - | - | - | + | - | + | + | + | + | + | 14 |
| **Gilad et al. (2022)** | + | - | - | - | ± | + | + | + | + | + | + | + | - | - | - | ± | ± | - | + | + | ± | - | + | + | ± | + | - | + | + | + | + | + | 20.5 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hilario (2020)** | + | - | - | - | - | - | - | - | + | + | - | + | - | ± | - | + | ± | - | + | + | ± | - | - | - | - | - | + | - | + | + | + | + | 13.5 |
| **Hjelmfors et al. (2018)** | + | + | + | - | ± | - | - | - | + | + | + | + | - | + | - | + | + | - | + | + | + | - | - | + | - | + | - | - | + | + | + | + | 19.5 |
| **Ibañez-Masero et al. (2019)** | - | - | - | - | - | - | - | - | + | + | + | + | - | + | - | + | ± | - | + | + | + | ± | - | + | ± | ± | + | - | + | + | + | + | 17 |
| **Im et al. (2019)** | + | - | - | - | + | - | + | - | + | + | - | + | + | + | - | + | - | - | + | - | + | + | - | + | - | ± | + | - | + | + | + | + | 18.5 |
| **Kim et al. (2018)** | + | + | + | - | - | - | - | - | + | + | + | + | - | - | - | + | + | - | + | + | + | - | - | + | - | ± | + | - | ± | + | + | + | 18 |
| **Kirby et al.**  **(2018)** | + | - | + | + | + | - | - | - | ± | + | + | + | + | - | - | + | - | - | + | - | + | + | - | + | - | + | + | - | + | + | + | + | 19.5 |
| **Kitta et al. (2021)** | + | - | ± | + | - | - | - | ± | + | + | - | + | + | + | - | + | + | - | + | - | + | + | - | + | - | + | + | - | + | + | + | + | 20 |
| **Krawczwk & Gallagher**  **(2016)** | + | - | - | - | - | - | - | - | + | + | + | + | + | - | - | - | - | - | - | + | ± | - | - | + | - | - | - | - | ± | ± | ± | + | 11 |
| **Krug et al. (2021)** | - | - | - | - | - | - | - | - | - | + | ± | + | - | + | + | ± | ± | - | + | - | - | ± | - | + | + | + | + | - | + | + | + | + | 15 |
| **Kvåle et al. (2020)** | + | - | + | + | + | + | + | + | + | + | - | + | ± | + | + | - | + | - | + | - | - | - | - | + | - | + | - | - | + | + | + | + | 20.5 |
| **Lin et al. (2018)** | + | - | - | - | ± | - | - | - | + | + | + | + | - | + | + | + | ± | - | + | - | + | ± | ± | + | - | ± | ± | ± | ± | + | + | + | 18 |
| **Masefield et al. (2019)** | - | - | - | - | - | - | - | - | - | - | - | + | - | - | - | - | - | - | - | ± | - | - | - | ± | - | - | - | - | ± | + | + | - | 4.5 |
| **Melhem & Daneault.**  **(2017)** | - | + | - | - | - | - | - | - | - | + | + | + | - | - | - | + | ± | + | + | - | - | + | - | + | - | + | + | + | + | + | + | + | 16.5 |
| **Melis et al. (2021)** | + | - | - | - | - | - | - | + | + | + | + | + | - | + | - | + | + | - | + | + | + | + | - | + | - | + | - | - | + | + | + | + | 19 |
| **Middleton- Green et al. (2019)** | - | - | - | - | - | - | - | - | - | + | + | + | - | + | + | + | - | - | + | - | - | - | - | - | - | - | - | - | + | ± | - | - | 8.5 |
| **Netsey-Afedo et al. (2020)** | - | + | - | - | - | - | - | - | + | + | - | + | + | + | - | ± | - | + | + | - | + | + | - | - | ± | + | - | - | + | + | + | + | 16 |
| **O’Connor et al.**  **(2020)** | + | + | - | - | + | + | - | - | + | + | + | + | + | + | ± | + | ± | - | + | - | + | - | - | + | + | + | - | - | + | + | + | + | 21 |
| **Pini et al. (2021)** | - | - | - | - | ± | - | - | - | - | + | + | + | - | + | - | + | + | - | + | - | + | - | - | + | - | ± | + | - | + | + | + | + | 15 |
| **Rohde et al.**  **(2019)** | + | + | - | - | - | + | - | + | + | + | + | + | + | + | - | + | + | - | + | - | ± | + | - | + | - | + | - | - | + | + | + | + | 20.5 |
| **Scherrens et al. (2020)** | + | + | - | + | - | + | - | - | + | + | + | + | - | + | - | + | + | - | + | - | - | + | - | + | + | + | + | - | + | + | + | + | 21 |
| **Schulman- Green et al.**  **(2018)** | + | + | - | - | + | - | - | - | + | + | + | + | - | + | - | + | + | - | ± | - | - | + | - | + | - | + | + | - | + | + | + | ± | 18 |
| **Schulz et al. (2017)** | - | + | ± | - | - | - | - | - | + | ± | - | ± | - | - | - | ± | ± | - | + | - | - | - | - | + | - | + | - | - | + | + | + | ± | 11 |
| **Seccareccia et al. (2015)** | + | + | - | - | ± | - | - | - | + | + | ± | + | - | + | + | + | + | - | + | - | + | ± | - | - | - | + | + | - | + | + | + | + | 18.5 |
| **Shen et al. (2020)** | ± | - | - | - | ± | - | - | - | + | ± | - | + | - | + | ± | + | + | - | + | - | + | + | - | + | + | + | + | - | + | + | + | + | 18 |
| **Steinhauser et al. (2015)** | - | + | - | - | ± | - | - | - | + | + | + | + | - | - | + | + | ± | - | + | - | - | - | - | - | - | ± | - | ± | + | + | + | + | 14 |
| **Tavares et al.**  **(2020)** | + | - | - | - | + | + | - | - | + | + | - | + | + | + | - | + | + | - | + | - | + | + | - | + | + | + | + | - | + | + | + | + | 21 |
| **Timmermann et al. (2017)** | - | + | + | - | - | - | - | - | + | ± | ± | + | - | + | - | ± | + | + | + | - | + | - | - | - | - | + | - | - | + | + | + | ± | 15 |
| **Villalobos et al. (2018)** | - | - | - | - | ± | - | - | - | - | - | - | + | - | - | + | + | + | - | + | - | + | ± | - | + | - | + | + | - | + | + | + | + | 14 |
| **Voruganti et al. (2018)** | + | - | - | - | - | - | - | - | + | + | + | + | - | ± | + | + | - | + | + | + | - | + | - | + | - | + | + | - | + | + | + | + | 18.5 |
| **Washington et al. (2019)** | + | + | + | - | ± | ± | - | - | ± | + | ± | + | ± | + | - | + | + | - | + | - | ± | - | - | + | ± | + | - | - | + | + | + | + | 18.5 |
| **Weerasinghe &**  **Maddalena (2016)** | - | - | - | + | - | - | ± | ± | ± | + | + | + | ± | - | - | - | ± | - | + | - | - | ± | - | + | + | + | - | - | + | + | + | + | 15 |

**Well described (+, score 1), missing or not adequately reported (-, score 0), incomplete (+/-, score 0.5)**

**Table 3.2 Cochrane adapted Risk of bias assessment observational studies**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Selection process of study population** | **Comparability of compared groups (controlled studies or in time)** | **Standardized protocol for the determinant (the hcp-**  **patient/relative communication)** | **Standardized protocol for measuring the outcome** | **Missing data with regard to inclusion or follow up/**  **incomplete outcome data** | **Adjustment for confounders** | **Selective outcome reporting** | **Total score** |
| **Awdish et al. (2017)** | + | - | + | + | + | - | + | 5 |
| **Bauman et al. (2018)** | + | NA | + | + | - | NA | - | 3 |
| **Fenton et al. (2018)** | + | + | + | + | + | + | + | 7 |
| **Freytag et al. (2018)** | + | NA | NA | + | - | - | - | 2 |
| **Goebel & Mehdorn (2018)** | + | NA | + | + | + | NA | + | 5 |
| **Houben et al. (2015)** | + | NA | NA | + | + | NA | + | 4 |
| **Seifart et al. (2020)** | - | + | NA | + | + | - | - | 3 |

NA = not applicable; + = criterion with low risk of bias, a score of 1 was assigned; - criterion with high risk of bias, a score of 0 was assigned; ? = criterion with unclear risk of bias, no score

was assigned

**Table 3.3 Quality assessment randomized controlled trials with Cochrane risk of bias tool**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Random sequence generation** | **Allocation concealment** | **Blinding of participants and**  **personnel** | **Blinding of outcome**  **assessment** | **Incomplete outcome data** | **Selective reporting** | **Other sources of bias** | **Total Score** |
| **Curtis et al. (2018)** | + | + | - | + | + | - | ? | 4 |
| **Doorenbos et al.**  **(2016)** | + | + | - | - | + | + | ? | 4 |
| **Epstein et al. (2017)** | + | + | - | + | + | + | ? | 5 |
| **Paladino et al. (2020)** | + | - | - | - | ? | ? | ? | 1 |

+ = criterion with low risk of bias, a score of 1 was assigned; - criterion with high risk of bias, a score of 0 was assigned; ? = criterion with unclear risk of bias, no score was assigned

**Table 3.4 Mixed methods studies, adapted risk of bias assessment quantitative part**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Selection process of study population** | **Comparability of compared groups**  **(controlled studies or in time)** | **Standardized protocol for determinant (hcp**  **patient/relative communication)** | **Standardized protocol for**  **measuring the outcome** | **Missing data with regard to inclusion or**  **follow up/ incomplete outcome data** | **Adjustment for confounders** | **Selective outcome reporting** | **Total score** |
| **Abdul-Razzak et al. (2016)** | + | NA | NA | + | + | NA | + | 4 |
| **Applebaum et al. (2018)** | + | NA | NA | + | - | NA | + | 3 |
| **Chen et al. (2021)** | + | NA | NA | + | - | NA | + | 3 |
| **McGinley & Waldrop (2020)** | - | NA | NA | - | - | NA | - | 0 |

NA = not applicable; + = criterion with low risk of bias, a score of 1 was assigned; - criterion with high risk of bias, a score of 0 was assigned; ? = criterion with unclear risk of bias,

no score was assigned

**Table 3.5 Mixed methods studies, quality assessment qualitative part, COREQ**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Personal Characteristics** | | | | | **Relationship with participants** | | | **Theo- retical frame**  **-work** | **Participant selection** | | | | **Setting** | | | **Data collection** | | | | | | | **Data analysis** | | | | | **Reporting** | | | |  |
| 1. Interviewer/ facilitator | 2. Credentials | 3. Occupation | 4. Gender | 5. Experience and training | 6. Relationship established | 7. Participant knowledge of the interviewer | 8. Interviewer characteristics | 9. Methodological orientation and Theory | 10. Sampling | 11. Method of approach | 12. Sample size | 13. Non-participation | 14. Setting of data collection | 15. Presence of non- participants | 16. Description of sample | 17. Interview guide | 18. Repeat interviews | 19. Audio/visual recording | 20. Field notes | 21. Duration | 22. Data saturation | 23. Transcripts returned | 24. Number of data coders | 25. Description of the coding tree | 26. Derivation of themes | 27. Software | 28. Participant checking | 29. Quotations presented | 30. Data and ﬁndings  consistent | 31. Clarity of major themes | 32. Clarity of minor themes | TOTAL |
| **Abdul-Razak et**  **al. (2016)** | + | + | - | - | - | - | - | - | + | + | + | + | - | - | + | + | - | - | - | - | - | - | - | + | - | + | - | + | + | + | + | + | 15 |
| **Applebaum et al. (2018)** | ± | - | - | - | - | - | - | - | ± | + | - | + | - | - | + | ± | + | - | + | - | - | - | - | - | - | + | - | - | + | + | + | + | 11.5 |
| **Chen et al. (2021)** | + | + | - | - | ± | - | - | - | ± | + | - | + | - | - | - | + | + | - | + | - | ± | - | - | + | + | + | + | - | ± | + | + | + | 16 |
| **McGinley & Waldrop (2020)** | + | - | - | - | - | - | - | - | + | + | + | + | + | + | + | + | ± | - | + | + | + | + | - | + | + | + | - | - | + | + | + | + | 21.5 |