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Understanding of empathetic communication in acute hospital settings: a scoping review

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ABSTRACT

Objective Empathy and empathy education have been reviewed a number of times through systematic reviews and meta-analyses; however, the topic of 'empathetic communication' remains poorly understood when considering engaging in hospital-based research. Therefore, this scoping review aimed to explore the existing literature concerning empathetic communication in hospital settings and to evaluate the definitions presented.

Design Scoping review.

Data sources Systematic searches of the PubMed, CINAHL, Cochrane, PsycINFO, and PsycArticles databases were conducted.

Study selection All English studies in which empathetic communication in hospital settings were explored. The search terms used included empathy, communication, hospital settings, providers, and consumers.

Data extraction Data were assessed through the use of a pre-set analysis tool.

Results After conducting the searches, 419 articles were identified, of which 26 were included in this review. No single article specifically defined the term 'empathetic communication'; however, 33 unique definitions of 'empathy' were identified, of which 23 considered communication to be a component of empathy. There was a considerable lack of consistency between the empathy definitions, with some classifying communication in empathy as an ability and others classifying it as a dynamic process.

Conclusion Future and contextually focused research is needed to develop a consistent and clear definition of empathetic communication and empathy within a hospital setting to better build positive healthcare cultures.

Practice implications Inconsistencies between definitions of empathy in empathetic communication research could reduce the efficacy of future research gains and impact the translation of research findings into clinical practice.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first review of current knowledge about 'empathetic communication' within acute hospital settings.
⇒ Identification of how empathetic communication was defined and measure for research purposes in acute hospital settings was performed.
⇒ While five databases were searched, and multiple search terms were used, the amount of literature on this topic was relatively small.
⇒ This review has identified the need for a consistent definition of empathetic communication for use in clinical settings.

INTRODUCTION

Empathy and empathetic communication are important elements in effective patient-centred care.[1–3] Patient-centred communication is foundational in building trusting relationships between healthcare providers and patients.[4] There is evidence to suggest that empathetic provider–patient communication can lead to better outcomes,[5] treatment adherence,[6] and patient satisfaction.[7 8] A fundamental element of high-quality healthcare is for clinicians to recognise and respond to individual and families' perspectives. Developing an understanding of differing perspectives and cultures builds responsibility, adaptability and empathetic communication skills that are critical in ensuring patients receive high-quality care and for developing therapeutic provider–patient relationships.[9 10] Therefore, the development of empathetic communication should be the cornerstone for all health service provider–patient interactions.

Empathy is a broad umbrella term commonly described as consisting of different dimensions—including cognitive empathy, the ability to understand another's mental state and affective empathy, the ability to respond to another's mental state with an appropriate emotion.[11] These are independent from one another,[12] and empathy as a whole is modifiable with interventions.[13] A component of affective empathy often described is empathic concern—displaying compassion/sympathy in response to another's suffering.[14] However, there remains significant inconsistency among scholars about the

terms 'cognitive empathy' and 'affective empathy' and how they are defined impacts the method of measurement, for example, observable interpersonal behaviour or self-reports.[15 16] Empathy and empathy education have been reviewed a number of times though systematic reviews and meta-analyses[16–19]; however, the topic of 'empathetic communication' remains poorly understood when considering engaging in hospital-based research.

In 2020, a feasibility research project was conducted that aimed to establish a positive healthcare culture across several different inpatient wards/units in a hospital in Aotearoa/New Zealand (Author). The feasibility study aimed to determine whether an empathy education programme could be implemented, and whether the proposed research measurement tools employed to assess staff empathy levels and patients' reports of staff empathy were valid. The study measures intended to capture patients' perceptions of staff empathy during care interactions post-intervention. The feasibility study highlighted that there was an unclear understanding of what constituted 'empathetic communication' or how to observe or measure this meaningfully. As a result of the feasibility study, the research team knew there was a need to understand how empathetic communication was defined and measured in hospital-based clinically focused research. This feasibility study was the genesis of this scoping review presented in this paper.

No review to date has explored the current knowledge regarding definitions of 'empathetic communication' as a distinct concept. Identifying a formal definition will help inform future research that can assist in implementing empathetic communication in practice, enabling researchers to standardise and test interventions with the aim of enhancing patient care and the quality of the therapeutic relationship. The purpose of this scoping review is to ascertain current definitions of empathetic communication and explore what research is available that addresses empathetic communication. A scoping review method employs a highly structured approach to identify a range of literature available about a topic; this assists researchers to determine future possible steps in the research area.[20] Three research questions were used to guide this review:

1. What definitions of empathetic communication are used for research purposes in hospital settings?
2. What tools have been used to measure empathetic communication?
3. What types of research have been conducted about empathetic communication?

METHODS

Search strategy

The scoping review methodology developed by Arksey and O'Malley[20] was used. The scoping review has been conducted in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews reporting statement.[21] Literature searches were performed using the PubMed, CINAHL, Cochrane, PsycINFO and PsycArticles databases. Five search terms in combination were searched for in titles and/or abstracts published after 1 January 2011: 'empathy', 'communication', 'healthcare', 'provider' and 'patient'. Various synonyms for each were used to ensure as much literature as possible was captured in the searches.

The search terms used for each database were the same and are presented in online supplemental information along with the different filters used for each database (online supplemental tables 1-3).

To be included in the review papers needed to be peer reviewed and identify empathetic communication as the focus of their research (see box 1). All empirical research were included to consider different aspects of conceptualising and measuring empathetic communication.

All identified article titles and abstracts were screened according to the inclusion/exclusion criteria (box 1) by three researchers (JH-T, HR and KM-H) using Rayyan,[22] and any conflicts were resolved via discussion with a fourth researcher (CH). Full-text articles were then examined the same way.

Box 1 Inclusion and exclusion criteria

Inclusion criteria

⇒ Discussed/assessed empathetic communication.
⇒ Focused on the provider–patient relationship.
⇒ Based in a secondary, tertiary, acute care or hospital setting.
⇒ Measured empathy.
⇒ Empathy included as part of the study design.

Exclusion criteria

⇒ Animal studies.
⇒ Editorials and opinion pieces.
⇒ Studies involving children.
⇒ Non-English language publications.
⇒ Published before 1 January 2011.

Data extraction

Data were extracted by one researcher (JH-T) into a data-charting form created in Microsoft Excel jointly developed by all researchers on the research team. Data included were:

- Title, first author, year of publication, country.
- Study design.
- Definition of empathetic communication.
- Definition of empathy.
- Definition of communication.
- Empathy measurement tools, and whether empathetic communication was measured from the perspective of another person.
- Interventions used in studies.
- Purpose of study.
- Study population and setting.
- Summary of conclusions.

Where doubt arose as to whether the extracted data matched what was being included, a decision was made by two researchers (HR and CH).

Data analysis

Extracted definitions were then imported into NVivo12 (QSR International) for thematic analysis. Themes were developed by the research team through an iterative process of identifying consistent concepts, ideas and words within the definitions, and grouping these accordingly; this approach was in keeping with the chosen method that guided this review.[20] Themes coded for included examining the roles of communication within empathy definitions, different components of empathy within definitions and whether the definitions defined a linear process.

Patient and public involvement

No patients were involved in the design of this study.

RESULTS

Included studies

A total of 419 articles were identified: 283 from PubMed, 82 from CINAHL, 42 from PsycArticles, 12 from Cochrane and 0 from PsycINFO. Fifty-seven duplicates were removed using the Rayyan detection tool.[22] One further duplicate was removed manually.

The screening process led to 307 articles being excluded based on the inclusion/exclusion criteria, leaving 54 articles included. After examining the full text of the remaining articles, 28 articles were excluded based on the inclusion/exclusion criteria, leaving 26 articles included in the review (figure 1). See online supplemental table 4.

Study locations and designs

Eleven studies (42%) were conducted in Europe,[23–33] six (23%) in Asia,[34–39] five (19%) in North America,[40–44] three (12%) in Brazil[45–47] and one (4%) in Australia.[48] Twenty-one studies (81%) were published in or after 2017,[23–25 27 28 31–36 39–48] with the earliest studies being published in 2014.[26 29 37]

Sixteen studies (62%) were cross-sectional studies,[23 25–29 32 35 37 43 45–47 49–51] four (15%) were qualitative studies,[24 34 44 48] three (12%) were mixed-methods studies,[30 31 40] and there was one (4%) prospective cohort study,[42] one quasi-experimental study[39] and one (4%) randomised controlled trial.[36]

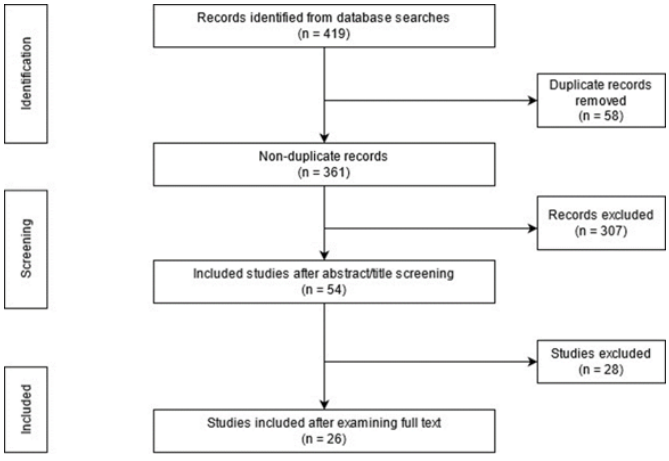

Figure 1 PRISMA diagram representing the scoping review literature search. PRISMA, Preferred Reporting Items for Systematic reviews and Meta-Analyses.

Definitions of empathetic communication, empathy and communication

'Empathetic' and 'empathic' were assumed to be equivalent terms, where empathic was used in the recorded definition this was left unchanged in online supplemental table 4. None of the 26 examined studies included an explicit definition of 'empathetic communication'. However, 21 studies defined empathy at least once,[23–29 32–39 42–44 46–48] with a total number of 36 definitions of 'empathy' (see online supplemental table 4). Each of these 21 studies provided a definition of empathy that referenced communication in some way as a component of empathy. Most definitions of empathy were described as 'empathy', though others defined 'physician empathy,[27 29 42] 'medical empathy',[27 44] 'clinical empathy',[44] 'relational empathy',[23] 'nursing empathy'[34] and ' therapist empathy'.[34] These all referred specifically to empathy from the provider to the patient in a provider–patient relationship, and otherwise appeared to be the same as the other definitions of empathy. Two studies also defined empathic episodes[32 48]; one describing the processes that allow someone to recognise the emotional state of another both on an intrapersonal level and behaviourally,[32] and the other as a four-component linear process leading to someone responding to the experiences of another.[48] One study referred to empathy as 'perceived warmth'.[47]

Two definitions of empathy appeared to be identical to a definition by Kurtz *et al*,[39 44 52] where it is defined as a two-phase process where the first involves understanding and appreciating another's feelings and emotions and the second communicating understanding back in a supportive way. Two definitions simply described empathy as the essence of all nurse–client communication and nurse–patient interaction, respectively,[34 48] which appear to be identical. Most notably, 6 of the 36 definitions cited an article by Mercer and Reynolds,[23 25 26 29 42 46 53] which concludes that empathy is an ability that involves three components—understanding a patient, communicating that understanding, and acting on that understanding with the patient in a helpful way. Three definitions appeared to be identical to this definition[23 26 29]; however, two of these definitions in two articles by Steinhausen *et al*[26 29] further develop the definition of empathy by emphasising that 'the physician's sensitivity to patient concerns' is also essential. Like many of the definitions, Mercer and Reynolds[53] characterise empathy as an ability to communicate rather than a dynamic process of 'empathetic communication'. Treating the definition by Steinhausen *et al* as distinct from, but similar to, Mercer and

Reynolds' definition, results in 33 unique definitions of empathy.

Communication is clearly recognised as an important aspect of empathy. Twenty-three of 33 (70%) unique definitions referenced communication as part of the definition,[23–29 32–39 42–44 46–48] using verbs like 'communicate', 'convey'and 'share'. Thirteen (57%) of these referred to empathy being an ability or capacity to communicate in some way,[23 25–29 33 35 36 43 46 47] while nine (39%) referred to communication being a dynamic process or behaviour of empathy.[24 27 34 37–39 42 44] One (3%) unique definition describes empathy differently—describing it as 'the essence of all nurse–client communication'.[34 48]

Three of 33 (9%) unique definitions described empathy as a linear step-by-step process.[39 48 54] For example, first understanding and appreciating another's feelings and then communicating back to them in a supportive manner.[39]

Eleven of 33 (33%) unique definitions explicitly mention cognitive empathy, which is also described as perspective taking,[32 48] and affective/emotional empathy as separate components of their definition.[24 32 34 37 44 46–48] However, many of the definitions mention features of cognitive empathy, but do not explicitly define it. Cognitive empathy is described as having an ability to understand someone else's perspective, feelings or emotions in the identified definitions,[32 34 46–48] and 15 of 22 (68%) definitions that did not explicitly mention cognitive and emotional empathy, mentioned understanding someone else's perspective, feelings or emotions in their definition.[23 25–29 32–39 43 44]

Emotional and affective empathy were considered to be equivalent by Savieto *et al*,[46] describing them as 'the ability to put oneself in another person's shoes', and Wu[34] considered affective empathy as partaking in the same feelings as someone else is experiencing them, and both of these appear to be similar. However, a definition mentioned by Gerace *et al*[48] describes emotional empathy as being part of 'emotional reactions to another person's experiences', and a definition mentioned by Brooke *et al*[47] describes an affective component of empathy being the ability to share the emotions of others. Another definition mentioned by Moreno-Poyato *et al*[32] considers affective empathy to consist of two dimensions—the 'tendency to experience feelings oriented towards others such as compassion and concern' or 'empathic concern', and the tendency to emotionally react based on another's suffering, which is consistent with the definition noted by Gerace *et al*.[48] These multiple definitions suggest that there are possibly inconsistencies in how emotional and affective empathy are defined.

Furthermore, two authors' definitions mention behavioural empathy as another component, defining it as 'effectively communicating the understanding of the situation'[46] and having a 'cognitive and affective part, and is the expression of understanding the patient's perspective with recognition of the patient's situation and a feeling of identification with the patient's suffering".[24]

One definition of 'therapist empathy' is split into other components, including 'sharing empathy': 'sequences where the therapist displays that he/she has something in common with the patient' and 'nuturant empathy': 'characterised by the therapist being supportive, security providing or totally attentive' as well as cognitive and affective components.[34]

No studies explicitly defined communication. However, one study described that both 'health communication and the doctor–patient relationship' are 'the means by which the physician can convey the intended information to the patient'.[33] While it appears that the provider–patient relationship is fundamental to communication, the authors do not elaborate on what this means.

Empathetic communication measurement tools

Despite the lack of a formal and consistent definition of 'empathetic communication', there were a number of studies that measured 'empathetic communication' in some way. Of the 26 studies, 21 (81%) measured empathetic communication from another person's perspective.[23–30 33–35 39–48] Twelve studies (57%) used the Consultation and Relational Empathy (CARE) Measure,[23 25–27 29 30 35 42 43 45–47] a 10-question patient-completed questionnaire used to evaluate provider empathy in a consultation.[55] Five studies (24%) recorded provider empathy qualitatively.[24 34 40 44 48] Three studies (14%) used the Jefferson Scale of Patient's Perceptions of Physician Empathy (JSPPPE),[28 33 45] a five-question patient-completed questionnaire like CARE used to evaluate provider empathy.[56] One study used both JSPPPE and CARE,[45] and one study used both CARE and Warmometer,[47] a tool used to measure the perceived warmth (considered to be equivalent to empathy by the study) of the patient–provider relationship from the patient's perspective. One study used the Active Empathetic Listening Scale,[41] an 11-item tool evaluating three subscales of someone else's listening—sensing, processing and responding. One study's research team designed a Global Rating Scale for assessing empathetic communication,[39] which was based on four strategies of an empathy model by Pehrson *et al*.[4]: that included recognising or eliciting a patient's empathetic opportunity, working towards a shared understanding of the patient's emotion/experience, empathetically responding to the emotion/experience and facilitating coping and connecting to social support.

The CARE measure was created based on numerous concepts of empathy, including the definition of empathy by Mercer and Reynolds,[53 55] which was the most frequently cited definition found in this scoping review. The JSPPPE was developed based on various literature sources; however, these sources were not specified by the original authors.[56] The Warmometer was developed based on theoretical assumptions about warmth between humans, though the original paper notes that it found that 'physician warmth' is a broader and more genuine concept than physician empathy as it combines multiple

personality attributes.[57] This seemingly contradicts the study included in this scoping review that translates and validates the JSPPPE for use in Brazil,[47] which appears to define empathy as 'perceived warmth', the ability of someone, either the healthcare provider or patient, to share and understand the emotions of others.

Types of research about empathetic communication

Of the 21 studies measuring empathetic communication from another person's perspective, six (29%) compared patient-rated provider empathy measurements with other measures such as treatment outcomes and patient satisfaction.[25–27 29 35 43] Five studies (24%) identified empathy or empathetic responses thematically,[24 34 40 44 48] by coding physicians' responses to patients expressing negative emotion as empathetic, neutral and non-empathetic,[40] by coding nurse and patient interview responses into aspects of empathy,[24 34 48] and coding instances of empathy into three themes: understanding patients' experiences, communicating that understanding and acting on the understanding.[44] Two studies (10%) compared patient-rated provider empathy measurements between two groups—family medicine and hospital consultations[33] and in-person and telemedicine consultations.[42] Two studies (10%) aimed to validate patient-rated provider empathy measurement tools (CARE[23] and Warmometer[47]), both assessing empathy in the process. Two studies (10%) compared patient-rated empathetic communication measurements after an intervention: asking a patient a question about dignity[30] and after simulation-based empathetic communication training.[39] One study measured active empathetic listening of nurses from the patient's perspective.[41]

DISCUSSION AND CONCLUSION

Discussion

Although many definitions were found that describe communication as part of empathy, there was a lack of consistency across them. Some tended to describe empathy as an ability or capacity to communicate, while others described it as a dynamic process. Similarly, several definitions defined empathy using terms like 'clinical empathy' and 'physician empathy', seemingly restricting their definition to a particular group of clinicians despite appearing similar to broader definitions of 'empathy'. The value of professional distinctions is unclear in the context of the broad definitional similarities. Furthermore, we identified an instance of one empathy definition contradicting the tool used in the study,[47] equating perceived warmth to empathy when the article discussing the tool's creation clearly differentiates the two.[57] Several studies noted the lack of clarity and numerous inconsistencies between definitions of empathy in the literature,[27 28 39 44 48] and one study mentioned the difficulty of defining a vague concept like empathy.[24] Without a clear definition of empathy, empathetic communication is not easy to build a consentient body of knowledge or develop high-quality and transferrable research within a hospital setting.

No definition of 'empathetic communication' was described in the studies despite multiple uses of the term in the included studies.[23 25 26 33 37 40 44 48] While not positioned as a definition of empathetic communication, one study identifies features that are core components of it, these being the need to feel listened to, validated and understood,[25] yet the three articles cited in this study to support the assertion do not define empathetic communication.[58–60] Further research could aim to define empathetic communication and to explore the differences (or not) between it and empathy, especially given that many sources seem to consider communication as part of empathy. From this definition, meaningful and useful behavioural measures could be created that can be used within clinically focused research that can be replicated across settings.

None of the identified definitions of empathy included a component relating to culture. This may be a result of empathy being traditionally defined by clinicians and from Western countries.[61] There are linkages between the concept of empathy and culture,[61 62] and articles about empathy research from a wide range of countries have been included in this review (despite articles in English only being included), which suggests that future research should consider cultural influences and differences when crafting a clear definition of both empathy and empathetic communication. We argue that culture is critically important in healthcare and future definitional work ought to be conducted in partnership with communities.

Nearly a third of the unique definitions split empathy into cognitive and affective components. While other components such as behavioural empathy were less commonly described,[24 46] features of these and cognitive/affective empathy were often described inexplicitly. Few studies suggested that empathy was a linear process, which suggests that this would likely not be part of a clear definition compared with the different components of empathy described. These issues need to be explored before research tools can be developed, tested and replicated within clinical environments.

One study in this review cited a 1994 article when describing two definitions of empathy.[44] The authors describe 'empathic communication' as developed by their experiences with a physician–patient communication workshop and mention that 'complete communication of this sort includes appreciation of the patient's feelings, support of his or her past actions, and, often, promise of help in the future' in reference to physician–patient interactions.[63] If this was to be considered a definition of 'empathetic communication', it shares the importance of understanding another's feelings with many of the definitions found in this review,[23–29 32–39 43 44 46–48] though none mention supporting another's actions or promising help, which may be due to this definition being developed specifically for the physician–patient relationship. They also mention that they define empathetic communication

as a cognitive skill, that is, 'an ability to take another's viewpoint, infer his feelings and put oneself in his shoes' rather than an affective one—'an ability to construct for oneself another's emotional experience'.[63] However, putting 'oneself in another person's shoes' was also described as emotional/affective empathy by two definitions found in this review,[34 46] which suggests that cognitive and emotional/affective empathy are possibly often used interchangeably.

Several of the definitions of empathy found in this review mention that empathy involves conveying an understanding of both cognitive and affective empathy, but a precise definition of affective empathy appears to be unclear. This is relatively unsurprising given the inconsistencies seen between the identified definitions. Other reviews examining how empathy is characterised in literature since 2001[64–66] also obtained similar results to our findings in regards to developing a robust research platform for future research. The authors identified that researchers tended to identify empathy as a multidimensional concept that aligns with many definitions we identified, and they further identified multiple inconsistencies between definitions. They discussed the benefits of avoiding using words such as 'empathy' and instead describing what an author means by empathy directly, which could possibly avoid confusion and debate regarding its definition; the authors of this paper concur with the use of language that directly describes what is meant and is being measured.

Practice implications

The numerous differences between empathy definitions could potentially lead researchers to base their study methods using definitions of empathy that widely differ from one another, leading to potential inconsistencies within empathy research. For example, a qualitative study found in this review coded instances of empathy according to a linear model of empathy,[48] while two other qualitative studies that were included coded instances of empathy as components of multifaceted non-linear definitions of empathy,[24 34] thus highlighting incompatibility. This could ultimately make it harder to synthesise empathy research findings into delivering effective, therapeutic care using empathetic communication. A concept analysis would lead to the identification of key components and a definition of 'empathetic communication' from which tools could be developed for use in research.

Limitations

This scoping review has some methodological limitations. For example, the method requires that a rigorous search strategy be employed so that other researchers can reimplement this particular review. In doing so, researchers are required to identify search terms and discipline boundaries that restrict the type of articles that will be identified. In this instance, the terms 'empathy' and 'empathetic communication' formed the basis of the inclusion criteria; as a result, sibling concepts were not explored. Equally, research that used measurement tools specifically designed to measure empathy were not included in the review because empathy or empathetic communication was not research objective. For example, researchers examining healthcare interactions using the CARE measurement tool widely used to measure empathy, were missing from this review if the research focused was not specific to empathy. This is a limitation of scoping review design and highlights the need for consistency of definitions, and measurement thereof, in clinical research.

CONCLUSION

No precise definition of 'empathetic communication' within the hospital setting is identifiable, and there is a considerable lack of a consistent and clear definition of empathy. For example, the role of communication in empathy varies between being described as an ability to communicate and also as a dynamic process. However, among the 33 unique definitions of empathy found in this review, common themes arose—that communication is an important part of empathy, that empathy is not a linear process, and that different components such as cognitive and emotional empathy exist. These findings can potentially pave the way for future research to develop a consistent definition of empathy and empathetic communication for use in clinical settings. The findings of the review highlight that there is additional work needed to define 'empathetic communication' and associated behaviours that would lead to the development of observable clinically focused measurement tools for use in research; the first step being a concept analysis of the term.

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Supplementary Information

Supplementary Table 1 - PubMed search terms (Literature search performed 16 November 2021)

(“empath*”[Title/Abstract])
AND ((“communicat*”[Title/Abstract]) OR (“relation*”[Title/Abstract]))
AND ((“hospital”[Title/Abstract]) OR (“hospitals”[Title/Abstract]) OR (“acute care”[Title/Abstract]) OR (“secondary care”[Title/Abstract]) OR (“tertiary care”[Title/Abstract]))
AND ((“worker*”[Title/Abstract]) OR (“professional*”[Title/Abstract]) OR (“practitioner*”[Title/Abstract]) OR (“physician*”[Title/Abstract]) OR (“nurse*”[Title/Abstract]) OR (“doctor*”[Title/Abstract]) OR (“provider*”[Title/Abstract]))
AND ((“consumer*”[Title/Abstract]) OR (“patient*”[Title/Abstract]))

Filters: Clinical Study, Clinical Trial, Clinical Trial, Phase II, Clinical Trial, Phase III, Clinical Trial, Phase IV, Comparative Study, Controlled Clinical Trial, Corrected and Republished Article, Evaluation Study, Journal Article, Multicenter Study, Observational Study, Pragmatic Clinical Trial, Randomized Controlled Trial, Review, Systematic Review, Validation Study, from 2011/1/1 - 3000/12/12, English.

Supplementary Table 2 – Cochrane search terms (Literature search performed 16 November 2021)

Within ‘Record Title’ and ‘Abstract’ fields:

“empath*”
AND ((“communicat*”) OR (“relation*”))
AND ((“hospital*”) OR ("acute care") OR ("secondary care") OR ("tertiary care"))
AND ((“worker*”) OR (“professional*”) OR (“provider*”) OR (“doctor*”) OR (“nurse*”) OR (“physician*”) OR (“practitioner*”))
AND ((“consumer*”) OR (“patient*”))

Filters: Publication Year from 2011 to 2021

Supplementary Table 3 – PsycArticles, PsycINFO, & CINAHL search terms (Literature searches performed 16 November 2021)

(AB “empath*” OR TI “empath*”)
AND ((AB “communicat*” OR AB “relation*”) OR (TI “communicat*” OR TI “relation*”))
AND ((AB “hospital*” OR AB "acute care" OR AB "secondary care" OR AB "tertiary care") OR (TI “hospital*” OR TI "acute care" OR TI "secondary care" OR TI "tertiary care"))
AND ((AB “worker*” OR AB “professional* OR AB “provider*” OR AB “doctor*” OR AB “nurse*” OR AB “physician*” OR AB “practitioner*”) OR (TI “worker*” OR TI “professional* OR TI “provider*” OR TI “doctor*” OR TI “nurse*” OR TI “physician*” OR TI “practitioner*”))
AND ((AB “consumer*” OR AB “patient*”) OR (TI “consumer*” OR TI “patient*”))

Filters (PsycArticles & PsycINFO): Date: After 01 January 2011, Clinical Case Study, Clinical Trial, Empirical Study, Field Study, Focus Group, Followup Study, Interview, Longitudinal Study, Non-Clinical Case Study, Prospective Study, Qualitative Study, Quantitative Study, Retrospective Study, Systematic Review, English

Supplementary Table 4 – characteristics of examined studies

Study	Study design	Empathy definitions & cited sources of definitions used	Measurement of empathetic communication	Purpose of study	Participants & setting	Study outcomes
Bikker et al., 2017 (UK)(1)	Cross-sectional	**Relational empathy (Mercer & Reynolds, 2002)**: the practitioner's ability to a) "understand the patient's situation, perspective and feelings (and their attached meanings); b) communicate that understanding and check its accuracy, and c) act on that understanding with the patient in a helpful (therapeutic) way".(2)	CARE measure completed by patients.	To check the reliability and validity of CARE with sexual health nurses.	n = 943 patients from a public specialist genito-urinary medicine and reproductive drop-in clinic of a Scottish Health Board.	The findings support construct validity and some evidence of reliability, though inter-rater reliability could not be calculated due to a lack of variance between CARE scores.
Weiss et al., 2017 (USA) (3)	Mixed-methods	N/A	Qualitative analysis (identified "empathic, neutral, and nonempathic verbal responses by hospitalists to their patients' expressions of negative emotion").	To assess the association between the frequency of empathic physician responses with patient anxiety, ratings of communication, and encounter length during hospital admission encounters.	n = 76 patients of n = 27 hospitalist physicians on the general medical service at 2 urban hospitals that are part of an academic medical centre.	Responding empathically when patients express negative emotion was associated with less patient anxiety and higher ratings of communication but not a longer encounter length.
Simões et al., 2019 (Portugal) (4)	Cross-sectional	**Empathy (Ramos, 2009; Charon, 2001):** is characterised as the ability to perceive the situation, perspective and feelings of the patient and communicate this understanding to them.(5, 6)	JSPPPE measure (Portuguese version) completed by patients.	To compare Family Medicine consultations and Hospital consultations in terms of empathic communication and the doctor–patient relationship in patients with multimorbidity.	n = 30 elderly people with multimorbidity in a social community centre and who had at least one visit the previous year with a	There is a greater degree of empathy felt by patients in Family Medicine consultations compared to Hospital consultations.

					family physician and a hospital physician.	
Gerace et al., 2018 (Australia) (7)	Qualitative	**Empathy (Kunyk & Olson, 2001):** The essence of all nurse-client communication.[a](8) **Empathy:** The term is generally used to describe two areas. The first is referred to as perspective taking or **cognitive empathy (Dal Santo et al., 2014; Gerace et al., 2013)**, and involves taking another person's perspective. The second **(Lamothe et al., 2014)** involves emotional reactions to another person's experiences, which are considered outcomes of perspective taking. It encompasses the terms emotional empathy, empathic concern, compassion, sympathy, and personal distress **(Batson, 2011).**(9-12) **Empathy episode (Davis, 1994)**: organised into four constructs having to do with the responses of one individual to the experiences of another': The model is linear, with proximal constructs demonstrating the strongest relations to one another. The four model components are: (i) antecedents, including dispositional tendencies, type of situation, and empathiser–target similarity; (ii) processes in which an empathiser might engage, the most cognitively complex being perspective taking; (iii) intrapersonal outcomes, which are a result of empathic processes, and include experiencing the same or similar affect to the target (parallel outcomes), experiencing affect that is a response to the target (reactive outcomes; e.g. sympathy, compassion, personal distress), and non-affective outcomes, including accurate inferences of the target's perspective, and attributions for their behaviour; and (iv) interpersonal outcomes, including helping and inhibition of aggression.(13)	Qualitative analysis (nurses and consumers were asked about their conflict situating and questions about empathy, and these were coded using a framework based on Davis' 1994 definition).	To explore how empathic processes operate when there is conflict between mental health nurses and consumers, and how empathic understanding can be accomplished to facilitate conflict resolution and positive consumer outcomes.	n = 13 nurses, n = 7 consumers. Nurses were required to have ≥1 year of experience working in an acute psychiatric setting. Participants in the consumer group were required to have experienced an acute psychiatric inpatient admission, but not be in current receipt of inpatient care.	Nurses are mindful of their role and responsibilities, which influences experienced and expressed empathy towards consumers. Consumers want relationships involving understanding and connection, which unfold through time spent together.
Wu, 2021 (China) (14)	Qualitative	**Nursing empathy (Wu, 2019)** could be characterised by nurses' ability to understand the feeling, experiences or psycho-social ability of their patients.(15)	Qualitative analysis (used 'Conversation	To conduct a qualitative study of actual nurse-patient	n = 6 nurses, n = 14 patients	Conversation analysis was useful for studying

		Empathy (Peplau, 1952; Kalish, 1973; Benner & Wrubel, 1989): The essence of all nurse-patient interaction.[a](16-18) **Therapist empathy (Bachelor, 1988):** can be classified into four types, namely cognitive, affective, sharing, and nurturant empathy. Cognitive empathy: utterances used by the therapist to demonstrate understanding of the thoughts, feeling, or behaviour of the patient. Sharing empathy: he sequences where the therapist displays that he/she has something in common with the patient, specifically, his/her personal opinions or experiences are similar to the patient's ongoing situation and thereby the patient does not feel alone. Affective: in the sequences where the therapist shows that he/she partakes of the same feelings the client is personally experiencing at that moment. Nuturant: which is characterised by the therapist being supportive, security providing or totally attentive.(19)	analysis' to look for instances of Bachelor's definition of therapist empathy).	conversations through which empathy was achieved.	in two Chinese hospitals.	empathy within the nurse-patient interaction. Instances of all four therapist empathy types were identified.
Bernardo et al., 2019 (Brazil) (20)	Cross-sectional	N/A	JSPPPE & CARE measures (Portuguese versions) completed by patients.	To investigate associations between self-assessed empathy levels by physicians in training and empathy levels as perceived by their patients after clinical encounters, and to examine the validity and reliability of patient assessments to measure empathy in physicians in training.	n = 566 patients, n = 86 physicians in training in three public teaching hospitals in Brazil.	There were non-significant correlations between the patient assessments and physicians in training self-assessments. Both JSPPPE and CARE measures were found to be valid and reliable.
Savieto et al., 2019 (Brazil) (21)	Cross-sectional	**Empathy (Mercer & Reynolds, 2002; Wiseman, 2007; Coulehan et al., 2001):** Even though the concept of empathy encompasses several aspects, the individual's capacity to understand the feelings of another person and show the other this understanding represents its core. It is embased [sic] on three pillars: cognitive (the intellectual ability to understand feelings); affective or emotional (the ability to put oneself in	CARE measure (Portuguese version).	To adapt the CARE measure (Brazilian version) for nurses; to evaluate the concurrence between empathy self-reported by nurses and that perceived by	n = 93 patients, n = 15 triage nurses in the Emergency Department of a	The Brazilian version of CARE was adapted for nurses successfully. A statistically significant difference between the

		another person's shoes, as in the English expression “walk a mile in his moccasins”); behavioural (represented by effectively communicating the understanding of the situation).(2, 22, 23)		patients; to correlate self-compassion to the empathy self-reported by nurses and perceived by patients.	philanthropic private hospital.	empathy self-reported by the nurses and that observed by the patients was found, and the patients perceived the nurses as more empathetic compared to the self-assessment.
Myers et al., 2020 (USA) (24)	Cross-sectional	N/A	Active Empathetic Listening scale completed by patients to evaluate the nurses.	To distinguish between effective and ineffective nurse Active Empathetic Listening behaviours as perceived by adult inpatients from an acute care hospital.	n = 244 adults who experienced inpatient acute care hospitalisation.	The study suggests that active empathetic listening skills influence a positive patient experience.
Ter Beest et al., 2018 (Netherlands) (25)	Qualitative	**Empathy (Hojat, 2016):** where cognition and emotion, understanding and feeling are four important elements to understand the patient's perspective. Defined in the context of patient care as a predominantly cognitive attribute that involves an understanding of the patient’s experiences, concerns and perspectives, combined with a capacity to communicate this understanding and an intention to help.(26) **Empathy (Derksen, Bensing & Lagro-Janssen, 2013):** defined as three aspects: as an attitude, as a competence and as a behaviour. These three aspects are useful for education because they make the complex concept of empathy more concrete and applicable. Attitude is based on moral standards such as respectfulness, interest in the other person and receptivity. Competency includes the empathic skills of stepping into the patient’s world, the communication skills clarify and reconstruct the patient’s feelings and thoughts, and relational skills to foster trust and give the patient space to tell the stories of their illness. Behaviour has a cognitive and affective part, and is the expression of understanding the patient’s perspective with recognition of the patient’s	Qualitative analysis - reflections following the students doing a simulation were done, looking for themes "in experiencing the patient perspective and the development of empathy".	To explore what nursing students learn about empathy in the nurse–patient relationship, while they lie in bed as a patient seeing the nurse from another perspective.	n = 75 bachelor nursing students entered a hospital simulation.	Aspects of empathy as described in the definition by Derksen, Bensing & Lagro-Janssen were identified. Themes identified from the students reflecting on the simulation were endurance, silent scream for contact, scary dependency, and confrontation with the role of the patient.

		situation and a feeling of identification with the patient's suffering.(27) **Empathy (Alma & Smaling, 2006):** placing oneself imaginatively in another's experiential world while feeling into his or her experiences.(28)				
Cheshire et al., 2019 (USA) (29)	Prospective cohort	**Physician empathy (Mercer & Reynolds, 2002)**: includes nonverbal expressions of concern and compassion, is an essential element in the clinical relationship.(2)	CARE measure completed by patients.	To compare patients' perceptions of physician empathy in telemedicine consultations compared to in-person consultations during clinical encounters for acute stroke.	n = 50 telemedicine patients, n = 20 in-person patients.	There was no difference between telemedicine and in-person visits in patient perception of physician empathy in acute stroke care.
Walsh et al., 2019 (Ireland) (30)	Cross-sectional	**Empathy (Eagle & Wolitzky, 1997; Mercer & Reynolds, 2002; Hopayian & Notley, 2014; Menendez et al., 2015; Han & Pappas, 2018)**: A multifaceted construct, which incorporates the ability to understand and share the feelings, thoughts or attitudes of another, and is an essential component of the patient-physician relationship.(2, 31-34)	CARE measure completed by patients.	To examine the relationship between patient-rated physician empathy and patient satisfaction after a single new pain clinic consultation.	n = 140 patients completed a questionnaire after a pain clinic outpatient consultation.	Patient-rated physician empathy was strongly correlated with patient satisfaction.
Steinhausen et al., 2014 (Germany) (35)	Cross-sectional	**Empathy (Mercer & Reynolds, 2002):** The physicians ability to understand the patient's situation, perspective and feelings, to communicate that understanding and check its accuracy, and to act on that understanding with the patient in a helpful (therapeutic) way as well as the physician's sensitivity to patient concerns.[b](2)	CARE measure (German version) completed by patients.	To analyse whether patients' perception of their medical treatment outcome is higher among patients who experienced a higher empathy by trauma surgeons during their stay in hospital.	n = 120 patients hospitalised at a German trauma-surgical ward of a level one trauma center completed a questionnaire.	Patients who rated physician empathy on the CARE scale as 41 or higher compared to patients rating it as 30 or less have a higher probability to have a better self-perceived medical treatment outcome.

Lelorain et al., 2018 (France) (36)	Cross-sectional	**Physician empathy (Hojat, 2007):** The physician's ability to understand the affective and physical experiences of patients and convey this understanding to them.(37) **Medical empathy (Fung & Mercer, 2007):** Two types of empathy can be distinguished: a rather passive empathy of listening and compassion, whereby the physician listens attentively to patients and shows them compassion; and an active and positive empathy whereby the physician tries to give control and options to patients (e.g. providing a great deal of information and shared-decision making) and stays positive.(38)	CARE measure completed by patients.	To study the prognostic role of patient perception of physician empathy in cancer patient survival.	n = 179 thoracic cancer patients in an outpatient setting completed a questionnaire.	In bad news consultations, higher patient perception of physician listening and compassion empathy was associated with a higher risk of death in lung cancer patients.
Katsari et al., 2020 (Greece) (39)	Cross-sectional	**Empathy (Derksen, Bensing & Lagro-Janssen, 2013):** Some of its key components can be unanimously recognised, namely, the physician's potential (a) to acknowledge the inner experiences as well as emotional state of the patient, (b) to communicate this acknowledgment to the patient, and (c) to adopt a positive and therapeutic behaviour.(27)	JSPPPE measure (Greek version) completed by patients.	To translate, culturally adapt, and validate the JSPPPE questionnaire for the Greek population (Gr-JSPPPE) and estimate physicians' self-assessed empathy and patients' perceptions of physicians' empathy, investigate their relationship, and assess their predictors.	n = 189 patients and n = 17 physicians from a Greek internal medicine clinic.	Substantial evidence for the reliability and validity of the Gr-JSPPPE was found, and physician empathy assessed by a self-reported scale was inversely associated with patient perceptions of physician empathy.
Dobransky et al., 2020 (Canada) (40)	Cross-sectional	**Empathy (Rogers, 1975):** An often-cited definition of empathy emphasises the ability to visualise oneself in the situation of another, by imagining thoughts, feelings, and state of being from their perspective. The ability to recognise and validate worries, anxieties, and emotional needs that facilitate an appropriate response and exemplifies that a patient is more than their diagnosis.(41)	CARE measure completed by patients.	To report orthopaedic surgeon empathy in a multispecialty practice and explore its association with *orthopaedic* patient experience.	n = 1134 patients undergoing elective orthopaedic procedures in a tertiary care centre completed the CARE measure.	Empathy as perceived by the patients was associated with surgeon respect and careful listening, though there was no significant correlation.

Steinhausen et al., 2014 (Germany) (42)	Cross-sectional	**Physician empathy (Steinhausen et al., 2014, Mercer & Reynolds, 2002):** Physician's ability to understand the patient's situation, perspective and feelings, to communicate that understanding and check its accuracy, and to act on that understanding with the patient in a helpful (therapeutic) way as well as the physician's sensitivity to patient concerns.[b](2, 35)	CARE measure (German version) completed by patients.	To investigate accident casualties' long-term subjective evaluation of treatment outcome 6 weeks and 12 months after discharge and its relation to the experienced surgeon's empathy during hospital treatment after trauma in consideration of patient-, injury-, and health-related factors.	n = 136 patients after discharge from a trauma surgical general ward were followed up over 12 months.	Physician empathy as perceived by the patients is the strongest predictor for a higher level of trauma patients' subjective evaluation of treatment outcome 6 weeks and 12 months after discharge from the hospital.
Shao et al., 2018 (China) (43)	Quasi-experimental	**Empathy (Kurtz, Silverman & Draper, 1998):** a two-phase process: (a) understand and appreciate another person's feelings and emotions and (b) communicate understanding back to the patient in a supportive way.[c](44)	Global Rating Scale (GRS) designed by the research team completed by standardised patients evaluating nurses' empathetic communication behaviours	To determine whether simulation-based empathic communication training could positively affect the ability of NICU nurses to recognise and respond with empathy to parents' emotions.	n = 32 NICU nurses from a Chinese hospital participated in simulation-based training.	The mean GRS score significantly increased post-training. The nurses' self-reported attitude and confidence concerning their empathy skills as well as their understanding of empathic communication reflected significant improvement.
Johnston et al., 2015 (UK) (45)	Mixed-methods	N/A	CARE measure completed by patients.	To explore the effectiveness of the patient dignity question (PDQ) as an intervention to improve person-centred care, and to determine its overall acceptability for patients, families and staff.	n = 30 patients with palliative care needs from acute care wards in Scotland.	The median CARE score after the PDQ did not increase, though the lower & upper quartile scores increased. The PDQ has potential to be a valuable and an acceptable tool in

						providing patient-centred care.
Wu et al., 2021 (China) (46)	Cross-sectional	**Empathy (Mercer et al., 2004):** is the ability to understand the patient's perspective and feelings, as well as sharing and acting on this understanding during interpersonal interactions.(47)	CARE measure (Chinese version) completed by patients.	To explore the relationship between the physician-patient relationship, physician empathy, and patient trust.	n = 3289 patients from 103 hospitals in China.	Patients' evaluation of the physician-patient relationship was directly & indirectly predicted by their perception of physician empathy & patient overall trust.
Torres-Vigil et al., 2021 (USA) (48)	Qualitative	**Clinical empathy (Platt and Keller, 1994; Pehrson et al., 2016):** a learned intellectual process that requires (provider) understanding of (patient) feelings and the adoption of cognitive empathy versus affective empathy which involves the understanding of a person's feeling.(49, 50) **Clinical empathy (Robieux et al., 2018; Eisenburg, 2000):** an effective response to the emotions of others. Organised into six dimensions: 1) patient-physician encounter, 2) standing in another person's shoes, 3) adjustment to patient, 4) communication skills, 5) building interpersonal relationship and giving information and 6) teaching skills.(51, 52) **Empathy (Pehrson et al., 2016):** described as a two-stage process involving the understanding and appreciation of another person's predicament or feelings and the communication of that understanding back to the patient in a supportive manner.[c](50) **Medical empathy (Platt & Keller, 1994; Lelorain et al., 2012):** Medical empathy necessitates the skills needed to both capture patient perspectives and communicate this understanding in a warm and compassionate manner to the patient.(49, 53)	Qualitative analysis – instances of empathy were identified from nurse-patient telephone calls.	To describe the nature and key elements of therapeutic calls made by nurses to advanced cancer patients to understand what may have previously contributed to improvements in patients who received nurse-telephone interventions.	n = 95 advanced cancer patients from a tertiary hospital received telephone calls from a nurse	Supporting patients with empathy was the overall theme, with three themes regarding empathy identified: understanding patient's experiences, communicating the understanding of patients' experiences, and acting on the understanding of patients' experiences.
Brooke et al.,2018 (Brazil) (54)	Cross-sectional	**Perceived warmth/empathy (Shamay-Tsoory, Aharon-Peretz, & Perry, 2009):** a social-emotional ability with affective and cognitive components. These components refer to the ability to share and understand the emotions of others, respectively.(55)	CARE and Warmometer (Brazilian Portuguese versions) measures	To translate and validate Warmometer, a visual tool for assessing warmth in patient-provider relationships, for use in Brazilian Portuguese.	n = 32 pregnant women managed at an antenatal care clinic of a large	Warmometer was translated, culturally adapted, and validated for use in Brazilian Portuguese.

			completed by patients.		public university hospital in Brazil.	
Chen et al., 2021 (China) (56)	Randomised controlled trial	**Empathy (Riess, 2017):** the ability to understand and experience the inner world of patients, which is commonly referred to as transpositional consideration. Specifically, Empathy in doctor-patient communication: (1) With the help of the patient's words, expressions and behaviours, physicians strive to penetrate into the patient's inner world, judge another person's feelings by one's own, and share the patient's emotional experience. (2) Understanding the connection between the patient's various psychological activities, and the connection between the patient's emotions and their experience and personality. (3) Physicians convey their understanding of the patient to obtain the patient's approval.(57)	N/A (empathy self-reported via Jefferson Scale of Empathy; communication self-reported via the Liverpool Communication Skills Assessment Scale).	To explore and examine the effects of loving-kindness meditation (LKM) on doctors' mindfulness, empathy, and communication skills.	n = 106 doctors recruited from a hospital in China were randomly divided to a loving kindness meditation training group and a control group.	The empathy and communication skills of the LKM group were significantly improved compared with those of the control group, but the level of mindfulness did not significantly change.
Parvan et al., 2014 (Iran) (58)	Cross-sectional	**Empathy (Kruijver et al., 2000):** the ability to put one in the place of others and to better understand their feelings and experiences. This concept has two emotional and cognitive components. Emotional component involves listening to the patient's words, gestures, and voice about their feelings. Cognitive empathy component requires the therapist to precisely observe the patient's behaviour and be aware of the meaning by their observations. This component requires careful observation of the patient and knowing the meaning of an observed behaviour.(59)	N/A (empathy self-reported via La Monica Empathy Profile).	To discuss and determine empathy from the viewpoint of nurses.	n = 154 nurses from teaching hospitals of Tabriz University of Medical Sciences completed a questionnaire based on the La Monica Empathy Profile.	Touching the patient was considered the most effective method in the non-verbal behaviour dimension of empathy. Nurses were not always able to control their stress and were not always able to be with their patients.
		Empathy (Carl Rogers, no source given): a process that involves being sensitive to other people's feelings and having emotional bond with them.				
		Empathy (Zeighami, Rafiie & Parvizi, 2012): empathy is described in four steps. The first step is the beginning of empathy, where the empathetic [sic] feels and understands the person's feelings. In the second stage, by expressing empathy he/she states their understanding of the feeling. In the third stage that is named receiving empathy the person realises that he/she is heard and understood. In the final stage				

		or feedback or new expression, the person examines his/her being understood and enters the first stage again.(60) **Empathy (Khodabakash & Mansoori, 2011):** In Adam Smith's moral philosophy, empathy is defined as "the experience of fellow-feeling".(61)				
Buyuk et al.,2015 (Turkey) (62)	Cross-sectional	**Empathy (Dökmen, 1988, Rogers, 1983 (source not given))**: a process in which a person puts himself in another person's place, understands his thoughts and feelings correctly and conveys it to that person. It makes the communication process of higher quality when the person knows how the message he tries to convey will be understood and perceived and when he tries to communicate taking that into consideration.(63)	N/A (empathy self-reported via Empathetic Skill Scale).	To measure and evaluate the empathic skills of nurses working in oncology units.	n = 50 nurses working in the oncology clinics of two hospitals in a Turkish city.	Nurses with a bachelor's degree, those who chose the profession of their own accord, and those reported having difficulties in communication with patients had better empathetic skills.
Sweeney & Baker, 2018 (UK) (64)	Mixed-methods	N/A	N/A (empathy self-reported via Patient-Practitioner Orientation Scale (PPOS)).	To assess the change in empathy in medical students following a video and group discussion intervention.	n = 48 medical students at the University of Manchester. The intervention was developed at the Royal Bolton Hospital.	PPOS scores improved from a mean of 78.8 to 82 following the intervention, suggesting an improvement in patient-centred attitudes. The students reported changes in their approach to patients and their attitude towards the patient's perspective & the impact of communication.

Moreno-Poyato et al., 2021 (Spain) (65)	Cross-sectional	**Empathy (Rogers, 1972; Turkel, Watson, & Giovannoni, 2018):** can be considered as being the intention, on behalf of the nurse, to remain within the patient's framework of reference, understanding the patient's feelings and demonstrating this understanding in detail.(66, 67) **Empathy/empathic episode (Davis, 1983 & 1994):** a multidimensional construct that includes cognitive and affective factors. An empathic episode is constituted by the experiential background of the person who empathises, supported by the processes of cognitive construction that enable the recognition of the emotional experience of the other from these experiences and by the cognitive and emotional responses that arise in the person who empathises, both on an intrapersonal level and on an interpersonal behavioural level. (13, 68) **Empathy defined by the Interpersonal Reactivity Index (Davis, 1983):** four empathic responses are measured; two are cognitive responses: (a) the tendency to adopt the psychological point of view of others, a dimension which was termed the perspective-taking (PT) scale, and (b) the capacity to imagine the situation and feelings of others (specifically fictitious characters), a factor which was termed the fantasy (F) scale. Furthermore, affective empathy is comprised of another two dimensions: (c) the tendency to experience feelings oriented towards others, such as compassion and concern (empathic concern; EC) and d) the tendency to emotionally react based on the other's suffering.(68)	N/A (empathy self-reported by a questionnaire based on the Interpersonal Reactivity Index).	To examine whether the dimensions of empathy influence the nurse–patient therapeutic relationship within mental health units.	n = 198 nurses working in mental health units completed questionnaires.	A significant relationship between the dimensions of empathy and the nurse-patient therapeutic relationship was found.

CARE = Consultation and Relational Empathy. JSPPPE = Jefferson Scale of Patient's Perceptions of Physician Empathy

[a] Duplicate definition

[b] Duplicate definition

[c] Duplicate definition

Supplementary table references

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