Revista Española
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Table 1. Main characteristics and results of the included studies.

Table A.- Scope revisions

No.	Author(s), year, title	Study objective	Study setting / participants	Method included: study design	Main results	Main strengths and limitations	Joanna Briggs Institute (JBI methodology)
1	**Gamborg ML et al., 2024.**	Explore the **association between technical (TS) and non-technical (NTS) skills** in medical education and how they correlate with each other.	Medical education studies (mainly surgery and procedural specialties) with trainees and specialists; 203 studies included.	**Scoping review** of four databases; identification and synthesis of studies that measure TS and NTS, and include correlation analysis between both.	203 studies; 46 explicitly assessed the TS–NTS correlation, of which 40 showed **a positive correlation** : those who score high on NTS tend to perform better on TS. OSATS was the most frequently used instrument for TS and NOTSS for NTS. They point out insufficient methodological depth in many studies.	**Strengths:** comprehensive and up-to-date review, specific analysis of the TS–NTS relationship, identifies the most commonly used assessment tools. **Limitations:** significant heterogeneity of designs, predominance of interventional studies with limited methodological quality, and an abundance of unvalidated self-assessment tools.	**Moderate** Overall quality comment: Recent scoping, clear and transparent method; good reproducibility
2	**Ortega et al., 2024.**	Mapping the literature on **soft skills in dental practice** from the perspective of dentists.	Dental professionals in different contexts (public and especially private sector; non-public ≈60% of studies).	**Scoping review** following the JBI Manual and PRISMA-ScR; search in BVS, MEDLINE/PubMed, APA PsycNET, Scopus and Capes Portal (2012–2022).	**Two hundred and sixty-six articles** were included ; a **sustained increase in publications** was observed over the last decade. The most researched dimension was **intrapersonal skills (37%)** , followed by interpersonal skills, communication, ethical values, and management skills. Gaps were identified in certain soft	Strengths: large number of studies, comprehensive view of soft skills in dentistry, useful for curriculum redesign. Limitations: emphasis on perception rather than clinical outcomes;	**High** Overall quality comment: Very good methodological standard, excellent for use as a model

					skills and in their integration into continuing education.	conceptual heterogeneity of "soft skills", insufficient attention to some competencies (e.g., leadership, management).	
3	**Azzouzi Widad A, 2022.**	Mapping the **soft skills teaching strategies** implemented in undergraduate nursing programs.	Bachelor's degree nursing programs; nursing students in various schools and university contexts.	**Scoping review** in PUBMED, Scopus, ScienceDirect and Web of Science (2010–2020); selection of studies on educational interventions in soft skills.	**Twelve studies** were identified that employed strategies such as simulation-based learning (5 studies), soft skills "camp" programs, an emotional intelligence model, educational escape rooms, blended learning, debate, action learning, and etiquette and personal presentation courses. Twenty soft skills emerged, with communication, teamwork, critical thinking, confidence, and situational awareness being the most prominent.	**Strengths:** Systematizes active and practical strategies, shows that experiential teaching improves soft skills in nursing. **Limitations:** Small number of studies, significant methodological variability, lack of a unified framework, and lack of long-term follow-up.	**Low** Overall quality comment: Acceptable methodology, but the report does not explicitly follow current checklists
4	**Ofori-Manteaw B et al., 2025.**	To investigate the **role, importance, and teaching strategies of soft skills** in medical radiation science (MRS) practice and training.	Professionals and students of diagnostic radiography, radiotherapy and nuclear medicine; 25 studies with diverse designs.	**Scoping review** in Scopus, PubMed, Web of Science, Emcare and CINAHL (2014–2023); data extraction by independent reviewers.	Communication was the most frequently reported soft skill (17 articles), followed by **empathy** (10). Twelve studies described training strategies (workshops, videos, simulations). These interventions showed improvements in communication, empathy, teamwork, and patient-centered	**Strengths:** First specific map of soft skills in MRS, identifies key competencies and examples of good teaching practices. **Limitations:** Heterogeneous quality and designs, varied outcome measures,	**Low** Overall quality comment: Good level of transparency and detail in the report, especially in search and selection.

					care **.**	and a scarcity of studies with patient outcomes.	
5	**Bok C et al., 2020.**	Describe the **characteristics of interprofessional communication (IPC) training programs** for medical students.	Medical students in programs that include learning with other health professions (nursing, physiotherapy, social work, etc.); 73 articles included.	**Scoping review** guided by the SEBA approach; search (2000–2018) in PubMed, ScienceDirect, JSTOR, Google Scholar, ERIC, Embase, Scopus and PsycINFO; thematic and content analysis.	Clinical practice training (CPT) programs were identified, organized around **Miller's pyramid** (knowledge, know-how, demonstration, practice), with multiple modalities (simulation, workshops, interprofessional clinical rotations). The study concludes that CPT training is a **phased, competency-based process** supported by spiral, learner-centered curricula.	**Strengths:** clear conceptual framework (Miller + SEBA), maps indications, content, assessment, and challenges of IPC in undergraduate studies. **Limitations:** high variability in programs and assessment tools, lack of standardization, and limited longitudinal evidence on impact in clinical practice.	**Low** Overall quality comment: Scoping is well-structured, but somewhat idiosyncratic in its framework.
6	**"Sancho-Cantus D et al., 2023."**	Analyze the evidence on **soft skills in health science students (especially nursing)** and explore changes after the COVID-19 pandemic.	Health science students, with a focus on nursing students; studies that address social, emotional and communicative skills and their evolution after COVID-19.	**Scoping review** following PRISMA-ScR; selection of studies on social skills and pandemic-related changes in health students.	**importance of emotional competencies** (communication, self-awareness, coping) for future professional performance is highlighted . Their influence on **academic achievement, mental health, and coping strategies is observed** , and it is suggested that the pandemic has strained and, in some cases, impaired these skills, underscoring the need to strengthen emotional intelligence in education.	**Strengths:** Novel approach to considering the impact of COVID-19 on soft skills; integrates academic and mental well-being outcomes. **Limitations:** Does not systematically include aspects such as compassion or empathy (acknowledged by the authors); evidence on post-pandemic changes is still incipient and	**High** Overall quality comment: Excellent combination of PRISMA-ScR + JBI; very good for your theoretical framework

						heterogeneous.	
7	**van Kessel G et al., 2025.**	Identify the **core components of community resilience to health emergencies** to guide policy and practice.	Review of reviews (38 evidence reviews) on community resilience in contexts of health emergencies and disasters (polio, Ebola, Zika, COVID-19, etc.).	**Scoping review of evidence reviews** with systematic search in PubMed, EMCARE, Scopus, Web of Science, PTSDpubs, APO and ProQuest (since 2014); qualitative meta-synthesis.	It identifies **10 skills** (adapting, transforming, absorbing, anticipating, preparing, preventing, self-organizing, including, connecting, and coping) and **11 types of resources** (social, economic, environmental, governance, physical infrastructure, institutional, communication, human capital, health, emergency management, and socioeconomic resources). It proposes 21 components to operationalize and measure community resilience.	**Strengths:** Mature conceptual synthesis of the community resilience construct, useful for modeling and measurement; focus on capacities and resources. **Limitations:** Based on secondary reviews (may miss nuances from primary studies), primarily focused on disaster management; lacks testing of these components in different types of health emergencies.	**Low-Moderate** Overall quality comment: Conceptually very sound, but the report could be more explicitly aligned with PRISMA-ScR/JBI
8	**Gutiérrez García J et al., 2025.**	Conceptualize nursing education and practice through the **evaluation of hard and soft skills** and synthesize definitions and strategies for evaluating soft skills.	Nursing students and nurses in clinical practice; 11 studies included out of a total of 1182 references.	**Scoping review** registered in PROSPERO; search in PubMed, CENTRAL, EMBASE, Web of Science, CINAHL and PsycINFO.	There is **consensus on the technical skills (hard skills)** that students and professionals should master, but **there is no agreement on the definition of soft skills** . Various strategies and interventions for developing these skills are described, but there is no standard framework or unified assessment system. The article underscores the need to balance technology and the humanization of care. Gutiérrez	**Strengths:** It highlights a critical gap in the definition and evaluation of soft skills in nursing, integrating historical models of care. **Limitations:** Few studies included, high conceptual and methodological heterogeneity, lack of a consensus framework, and limited evidence on impact on patient outcomes.	High Overall quality comment: Probably one of the best quality scopings in the set (registry + PRISMA-ScR + JBI).

9	**Medina-Córdoba M et al., 2024.**	Explore the literature on the **effect of interprofessional education (IPE)** on the work environment of health professionals (climate, organizational culture, organizational attachment and job satisfaction).	21 studies with professionals from medicine, nursing, psychology, occupational therapy, physiotherapy, social work, among others, in academic and non-academic hospitals, mental health institutions and community settings.	**Scoping review** guided by the PCC format. Search in multiple databases; 407 works were identified and 21 were included that evaluated IPE interventions and their impact on the organizational environment.	The IPE showed **positive effects on organizational climate and culture** , improving collaboration and the work environment. Results regarding job satisfaction and organizational attachment were mixed (positive effects and no effect, according to the study).	**Strengths:** It fills a specific gap by linking IPE and the work environment; it includes diverse contexts and professions. **Limitations:** A relatively small number of studies, high heterogeneity of designs and measures, and a scarcity of robust studies that allow for causal inferences.	**High** Overall quality comment: Very good methodological standard; the combination of IPE + organizational environment is well supported
10	**Alghanaim N et al., 2025.**	To evaluate the **effectiveness of virtual reality simulation in interprofessional education (VR-Sim IPE)** , especially for the development of non-technical skills.	12 studies with students from different health professions (undergraduate and, in some cases, postgraduate) who participated in IPE activities in virtual reality environments.	**Scoping review** following PRISMA-ScR and the Arksey & O'Malley framework. Search in Web of Science, ProQuest, Ovid, Scopus, CINAHL Plus and British Educational Index (2010–2025). Quality assessment with MERSQI, CASP and MMAT.	Most studies showed that VR-Sim IPE achieves **intermediate-to-high levels of learning effectiveness** (level 4 and some up to level 6 on the scale used). The interventions were mapped to IPE domains (ethical practice, interprofessional work, reflection) and Bloom's Taxonomy. No study assessed technical skills, only non-technical ones.	**Strengths:** updated synthesis of an emerging field; integrates several assessment frameworks (Bloom, Kirkpatrick, IPE domains). **Limitations:** few studies, heterogeneity of interventions and outcomes, and lack of evidence on impact on clinical or patient outcomes.	**Low-Moderate** Overall quality comment: Recent and well-reported scoping, very useful for the VR + IPE axis.
11	**Junod**	Investigate the	74 articles	**Scoping review** .	**large number of written**	**Strengths:** broad	

	Perron N et al., 2022.	published literature on **written assessment of communication skills** in the education of health professionals.	describing 70 written assessment instruments, applied to students and professionals from different health disciplines.	Search in PubMed, Embase, CINAHL and PsycINFO (1995–2020). Extraction of data on study characteristics, instrument, items and psychometric properties.	**instruments** were identified , most of which were created ad hoc by the authors and frequently used to measure training effects. The type of knowledge assessed was rarely specified. The psychometric properties and development process of the instruments were incompletely reported.	overview of available written instruments; provides useful information for clinical communication instructors. **Limitations:** heterogeneity of tests, poor quality of psychometric reporting, and lack of comparability between instruments; as a scoping review, it does not formally assess methodological quality.	**Low** Overall quality comment: Important and careful review, but without the formal framework of current guidelines.
12	**Robinson R et al., 2023.**	Identify, compare and contrast **empathy training programs** in health science curricula (especially nursing, nurse practitioners and pharmacy).	21 studies (mostly non-randomized quasi-experimental, 2012–2021) with nursing students, nurse practitioners, pharmacists, and other health students. Most interventions were implemented in the classroom.	**Rapid scoping review** . Search in six databases (MEDLINE, EMBASE, PubMed, CINAHL, EBSCOhost, ERIC) in the last 10 years, plus search in Google Scholar and specific journals.	Over 80% of empathy training programs used **active learning strategies** (role-playing, discussions, simulations, narratives). In general, **short-term improvements in empathy, as measured by scales , were observed** ; however, there is little standardization and limited evidence regarding long-term maintenance or the best pedagogical approach.	**Strengths:** Quickly and comprehensively maps recent interventions; highlights the role of active learning. **Limitations:** Predominance of non-randomized studies, significant variability in designs and empathy measures; insufficient evidence on sustained effects and clinical outcomes.	**Low** Overall quality comment: Useful for a quick overview; some loss of methodological depth due to the "rapid" design.

13	**Carr SE et al., 2021.**	Explore **how and why the humanities in health are used** in health professions education and how these curricula are evaluated.	24 articles describing integrated "health humanities" curricula in undergraduate programs of various health professions.	**Focused scope review** , centered on qualitative and mixed studies with outcome assessment. Search in CINAHL, ERIC, PubMed and Medline over a 5-year period.	Health humanities curricula are primarily focused on developing **perspective, reflexivity, self-reflection, and person-centered communication approaches** . However, learning outcomes and assessment strategies are described inconsistently, making it difficult to compare programs and gather evidence.	**Strengths:** It provides a conceptual synthesis of desired learning outcomes in the humanities and health; it identifies the need for generic competency frameworks. **Limitations:** Limited number of studies, variability in designs and methods, and a focus on a limited time period (5 years).	**Low-Moderate** Overall quality comment: Solid review, although the evaluation and reporting of results could be more standardized.
14	**Bookey-Bassett S et al., 2021.**	Analyze the **role of interprofessional education (IPE)** in training professionals to work in integrated care models.	32 documents on health professionals already in practice (post-bachelor's degree) in different sectors: 16 primary studies, 10 reviews and 6 reports/position papers.	**Scoping review** using the Arksey & O'Malley method. Search in CINAHL, MEDLINE, ProQuest Nursing and Allied Health and Scholars Portal (2000–2020) with terms on IPE and integrated care.	Four key themes were identified regarding the role of IPE: **(1) laying the groundwork** , (2) serving as a **building block** , (3) acting as a **catalyst** , and (4) **generating changes in practice** within integrated care models. It is concluded that IPE has a unique role, but is only one part of a broader training program. Sue Bookey-Bassett	**Strengths:** Integrates evidence from multiple document types; highlights the need for ongoing workplace IPE. **Limitations:** No formal quality assessment was conducted, and only English texts were included; the conference abstract nature limits methodological detail.	**Low** Overall quality comment: Conceptually useful, but insufficient for a formal quality assessment; best cited as supplementary evidence.
15	**Stamer T et al., 2023.**	Summarize the current state of the use of **artificial intelligence (AI) and**	12 studies with undergraduate students in health professions (medicine, other health careers)	**Scoping review** following PRISMA-ScR. Search in PubMed, Scopus, Cochrane Library, Web of Science Core	The studies are grouped into three categories: (1) AI/ML for **text analysis and information extraction** , (2) AI/ML combined with **virtual reality** , and (3) AI-powered **virtual patients** . AI is	**Strengths:** First specific synthesis of the use of AI/ML in communication training; identifies facilitating factors and	**Low-Moderate** Overall quality comment: Very current and well presented review;

		machine learning (ML) in the training of communication skills in students of health professions.	using AI/ML in communication training.	Collection and CINAHL; inductive classification of studies into thematic categories.	used to provide feedback, support individualized practice, and reduce training costs. The main barriers are the **lack of authenticity and natural fluency of the language** , as well as the limited variety of scenarios.	obstacles. **Limitations:** Small number of studies, applications restricted to a few clinical contexts and technical limitations of the systems (naturalness, accessibility).	good quality report for your AI and education section.
16	**Dahl TL, 2021.**	To offer a preliminary view of **soft skills training through immersive virtual reality (IVR) with HMD** in employees of organizations.	Employees in organizations (labor sector), in the few studies identified on soft skills training with immersive VR; the article highlights that empirical evidence is very scarce.	**Preliminary scoping review** based on the Arksey & O'Malley framework. Search for studies on the use of immersive VR with headsets (HMDs) for soft skills training in companies.	There is a **growing interest from the market** and companies offering immersive soft skills training, but the **scientific literature and empirical studies are very limited** . This highlights the need for more research on effectiveness, transferability, and results measurement.	**Strengths:** pioneer in systematizing an emerging field (soft skills + IVR + employees) and setting the research agenda. **Limitations:** very few empirical studies available, preliminary results, and no systematic quality assessment; does not allow for firm conclusions about effectiveness.	**Low** Overall quality comment: Useful for showing "evidence gap", but of limited methodological quality as formal scoping.

Table B.- Systematic reviews

No.	Author(s), year, title	Study objective	Study setting / participants	Method included: study design	Main results	Main strengths and limitations	AMSTAR 2
1	Unjai et al. (2024).	To evaluate the characteristics and effectiveness of interventions to promote	33 studies with health workers (mainly nursing and other professionals) in various	Systematic review of mixed methods (quantitative and	Interventions based on mindfulness, psychoeducation, stress management,	Strengths: broad search and mixed methods approach. Limitations: high heterogeneity of interventions, duration, and measures; scarcity of	Critically low

		resilience and passion for work in health professionals.	international clinical contexts.	qualitative studies) with convergent synthesis.	and coaching showed significant improvements in resilience and well-being; no interventions specifically targeting 'passion for work' were identified.	studies on 'passion for work'.	
2	Orih et al. (2024).	Review soft skills curricular interventions at all educational levels and evaluate their characteristics, design quality, and results.	38 studies with primary, secondary and university students; predominance of university population in different countries and disciplines.	Systematic review registered in PROSPERO; quality assessment with CASP and EPHPP.	The interventions (workshops, creative activities, projects) were associated with improvements in soft skills, employability, career planning, social-emotional learning and academic performance, as well as reductions in violence, drug use, depression and bullying.	Strengths: first review to integrate all educational levels; use of two quality tools. Limitations: scarcity of studies at the primary and secondary levels; moderate methodological quality; heterogeneity that prevents meta-analysis.	Low
3	Chanda et al (2025).	To characterize the impact of emotional intelligence training programs	40 studies (2373 participants: medical students, residents and doctors), mainly from	Systematic review of interventions in emotional	Most studies showed improvement in emotional intelligence levels	Strengths: Includes multiple levels of training and uses a theoretical framework (Kirkpatrick). Limitations: High variability in	Critically low

		on the performance of physicians, residents, and students.	the United States.	intelligence; 7 randomized trials; classification of results with the Kirkpatrick model.	and reduction of stress/burnout; few measured outcomes in patient satisfaction or organizational results.	programs and tools; few studies with clinical or organizational outcomes; lack of standardization in content and duration.	
4	Thandar, (2021).	Synthesize the evidence on the inclusion of soft skills elements in the structured clinical assessment of undergraduate nursing students.	17 studies with nursing students and teachers/preceptors in university and hospital clinical settings.	Systematic review following PRISMA of quantitative and qualitative studies on clinical competency assessment.	It was identified that clinical assessment usually focuses on technical skills, with variable incorporation of communication, professionalism and teamwork; the need to explicitly integrate soft skills into rubrics and OSCE is emphasized.	Strengths: specific focus on clinical assessment and use of PRISMA criteria. Limitations: heterogeneity of instruments, predominance of observational designs, and local context that limits generalizability.	Critically low
5	Pucer et al. (2025).	Explore how simulation contributes to the development of non-technical skills in interprofessional health teams.	22 studies with interprofessional teams (mainly doctors and nurses) in critical patient, operating room and other clinical contexts.	Systematic review (2013–2023) of simulation interventions; bias risk assessment using CASP lists.	Simulation was associated with improvements in teamwork, cooperation, situational awareness, leadership/management, and decision-making in most studies.	Strengths: specific focus on interprofessional teams, frequent use of high-fidelity simulation, and clear categorization of non-technical skills. Limitations: heterogeneity of designs and assessment tools, lack of long-term follow-up and clinical outcomes.	Critically low
6	Spaulding et al. (2021).	Evaluate the impact of interprofessional education on attitudes, collaborative skills, and collaborative behaviors.	19 studies with students from different health professions and practicing professionals; university and clinical contexts.	Systematic review with search in multiple databases (PubMed, CINAHL, Embase, ERIC) and quality assessment with Joanna Briggs tool.	Most studies showed significant improvements in attitudes towards other disciplines and in the appreciation of teamwork; studies that assessed collaborative behavior also reported positive changes.	Strengths: updated synthesis of interprofessional education programs and use of an outcomes framework. Limitations: predominance of self-reported measures, variability in the duration and content of interventions, and limited evidence on patient-centered outcomes.	Critically low
7	Aldriwesh	Describe the	16 studies from	Systematic	Most programs	Strengths: detailed map of 'how'	Critically low

	et al. (2022).	teaching and learning approaches used to implement interprofessional education in undergraduate health curricula.	universities in Western, Asian and African countries with students from different health professions.	review (2010–2019) with search in PubMed, ScienceDirect and Cochrane; analysis of types of programs and approaches (simulation, e-learning, PBL, etc.).	combine several approaches, highlighting simulation, e-learning and problem-based learning; a shortage of programs is observed in some regions and a lack of evidence on the comparative effectiveness of the different approaches.	interprofessional competence is implemented at the undergraduate level and coverage across multiple regions. Limitations: few studies per region, primarily descriptive or quasi-experimental designs, and a lack of standardized measures of interprofessional competence.	
8	Hatfield et al. (2020).	Identify and evaluate the effect of health professional training on the quality of delivery of behavior change interventions and on patients' health behaviors.	12 trials (many by clusters) with doctors, nurses and other professionals offering interventions to modify behaviors (diabetes, smoking, breastfeeding, asthma, hypertension) in several countries.	Systematic review and meta-analysis following the Cochrane Guide; comparison of additional training vs. minimum/usual training.	The training improved the quality of communication and content delivery in about half of the outcomes; the meta-analysis showed a small but significant positive change in patients' health behaviors (SMD ≈ 0.20).	Strengths: broad search, bias risk assessment, and meta-analysis of behavioral outcomes. Limitations: heterogeneity of interventions and measures, high overall risk of bias in some outcomes, and few studies with long-term follow-up.	Low
9	Mata et al. (2021).	Identify the available evidence on communication skills training programs to improve attitude, behavior, and self-efficacy in health professionals.	8 studies (trials and quasi-experimental studies) with physicians and/or nurses, mostly in primary care and hospitals; small sample sizes.	Systematic review registered in PROSPERO; search in 8 databases; use of RoB, ROBINS-I and GRADE.	The programs, which combine theoretical content and experiential learning (role-play, video, feedback), showed significant improvements in communication performance and self-efficacy in most studies.	Strengths: robust methodology, detailed program descriptions, and use of GRADE. Limitations: few studies and small samples, heterogeneity of contexts and strategies that hinders meta-analysis, and variability in measurement instruments.	Low
10	Deep et al. (2020).	Review the role of problem-based learning (PBL) in the development of soft skills.	32 studies (conceptual, review and empirical) from multiple disciplines (TVET, medicine, social sciences, engineering)	Qualitative systematic literature review with search in several databases and thematic	PBL contributes to the development of communication, leadership, conflict resolution, teamwork, critical	Strengths: comprehensive synthesis and integration of conceptual and empirical evidence; identifies contextual factors that influence the impact of PBL. Limitations: predominance of	Critically low

			and countries.	analysis.	thinking, and interpersonal skills; no negative effects were reported.	non-experimental and heterogeneous studies, scarcity of specific empirical evidence on TVET, and absence of quantitative meta-analysis.	

Table 2.- Level of evidence and grade of recommendations GRADE

Table. Level of certainty (GRADE) and grade of recommendation of systematic reviews

No.	Article	Type of review / main intervention	Main outcomes summarized	GRADE* level of certainty	Summary justification (GRADE)	Grade of recommendation (what would you do with this evidence?)
1	**Orih et al., 2024**	Systematic review of 38 studies (workshops, projects, creative approaches) at all educational levels.	Soft skills interventions improve communication, employability, career planning, SEL, academic performance and reduce violence, drug use and bullying.	**Moderate**	There is a mix of RCTs and quasi-experimental studies; quality assessment (CASP and EPHPP); consistent results, but high heterogeneity in contexts and measures → downgrades from high to moderate.	**Strong recommendation in favor** of integrating structured soft skills programs into the curriculum (with local adjustment), because there are broad benefits and few identified harms.
2	**Spaulding et al., 2021**	Systematic review of 19 studies on interprofessional education (IPE) in students and professionals.	17/19 studies show significant improvements in attitudes towards collaboration and appreciation of teamwork; 7/7 studies show improvement in collaborative behavior.	**Moderate**	Predominance of quasi-experimental designs, but very high consistency in the direction of the effect; quality assessment with the JBI tool; moderate indirectness regarding patient outcomes.	**Strong recommendation in favor** of implementing longitudinal IPE to improve collaborative attitudes and behaviors, with the caveat that solid evidence on direct clinical impact is lacking.
3	**Aldriwesh et al., 2022**	Systematic review of 16 studies on how IPE is implemented in undergraduate studies (simulation, e-learning, PBL, etc.).	It describes that simulation, e-learning and PBL are the most frequent approaches; most studies focus on implementation, not comparative effectiveness.	**Low**	Primarily descriptive studies, without robust comparators; little information on the relative effect of each approach; high heterogeneity and no meta-analysis.	**Weak/conditional recommendation in favor** of using simulation, e-learning and PBL as core IPE strategies, but the choice should be based on resources and context because evidence of superiority is limited.

4	Pucer et al., 2025	Systematic review of 22 simulation studies for non-technical skills (NTS) in interprofessional teams.	Improvements in teamwork and cooperation (in all studies), situational awareness, leadership, decision making, usually measured pre-post.	**Moderate**	Observational/pre-post studies, but very high consistency and biological plausibility; some validated instruments, although without large RCTs; moderate risk of bias.	**Weak-strong recommendation in favor** of using high-fidelity simulation to train NTS in interprofessional teams, especially in critical environments (ICU, operating room).
5	**Deep et al., 2020**	Qualitative systematic review (SLR) of studies on PBL and development of soft skills in TVET, medicine, humanities, engineering.	It concludes that PBL promotes communication, conflict resolution, leadership, and interpersonal skills; it notes that the number of empirical studies in TVET is limited.	**Low**	Based on heterogeneous observational studies, many without control groups; qualitative thematic synthesis; possible publication bias; but the direction of the effect is consistent.	**Weak/conditional recommendation in favor** of using PBL to enhance soft skills, especially as a complement to traditional methods, with a need for more well-designed RCTs.
6	**Unjai et al., 2024**	Systematic review of mixed methods (33 studies) on interventions for resilience (mindfulness, psychoeducation, coaching, stress management) in health professionals.	21/29 quantitative studies show significant improvement in resilience; all qualitative studies report improvements in psychological well-being; no specific interventions were found for "passion for work".	**Moderate**	Variety of designs (many pre-post), but large sample size, homogeneous results in direction, and methodological evaluation with MMAT; moderate indirectness versus hard results (rotation, clinical events).	**Strong recommendation to** implement resilience programs (including brief/online options) in healthcare institutions, with local monitoring of effects and feasibility.
7	**Thandar et al., 2021**	Systematic review of 17 studies on soft skills elements in the clinical assessment of nursing students.	It identifies that, if soft skills are not integrated into clinical assessment instruments, graduates may not be prepared for work; it is urgent to incorporate communication, professionalism, and teamwork into the rubrics.	**Low**	Studies that are mostly descriptive and focused on instrument development; absence of RCTs or robust comparisons; strong indirection regarding clinical outcomes.	**Weak/conditional recommendation to** review and modify nursing clinical assessments to explicitly include soft skills, while better impact studies are being developed.
8	**Hatfield et al., 2020**	Systematic review + meta-analysis of 12 RCTs on training professionals to promote	Training improves delivery quality (≈54–55% of communication and content outcomes with improvement) and produces a small but	**Moderate**	Randomized trials but with risk of bias in measuring "delivery quality"; low heterogeneity in behavioral outcomes; acceptable precision; no clear signs of publication bias.	**Strong recommendation to** offer systematic training in behavior change skills to health professionals, as part of chronic disease prevention and management programs.

		behavioral changes in patients.	significant effect on patient health behaviors (SMD 0.20; 95% CI 0.11–0.28).			
9	**Chanda et al., 2025**	Systematic review of 40 studies (7 RCTs, the rest quasi-experimental) on IE training programs in students, residents and doctors.	Most studies report an increase in EI scores (4–8% on EQ-i 2.0) and a reduction in stress/burnout; few show effects on patient or organizational satisfaction.	**Moderate (for EI/wellbeing outcomes) – Low (for patient/organization outcomes)**	A good number of studies, several with experimental design and validated tools; variability in programs and duration; limited evidence for organizational or patient-level outcomes.	**Weak-strong recommendation in favor** of including EI training in leadership and medical education programs, especially to improve well-being and interpersonal performance; more robust studies are needed to demonstrate organizational and patient benefits.
10	**de Sousa Mata et al., 2021**	Systematic review of 8 studies (RCT + quasi-experimental with control). Communication training for physicians and nurses.	Significant improvements were observed in self-efficacy, communication skills, performance assessed by OSCE/video, and the use of empathic techniques. Short programs (4 hours–2 days) with an experiential focus showed a positive impact.	Moderate	Mixture of RCTs and quasi-experimental studies with low-moderate risk of bias; consistent results; robust self-efficacy measures; validated instruments; heterogeneity in duration and content.	Strongly in favor of implementing structured and experiential CSTs as part of mandatory professional training.

Table 1. Grading of Recommendations Assessment, Development and Evaluation

GRADE by outcome of scope reviews

Outcome	Evidence reviews	Global effect	GRADE certainty	Recommendation
Clinical communication	Hatfield 2020; from Sousa Mata 2021	Consistent improvement in verbal and non-verbal communication skills	**Moderate**	**Strong support** for structured CST
Self-efficacy in communication	de Sousa Mata 2021	It increases between 8–37% depending on the instrument.	**Moderate**	**Strong in favor**
Observed communicative performance (OSCE/video)	de Sousa Mata 2021	Observable, though variable, performance improvements	**Low-Moderate**	**Weak-strong in favor**
Communication for behavior	Hatfield 2020	Small but significant effect (SMD 0.20)	**Moderate**	**Strong in favor**

change				
Empathy and effective communication	de Sousa Mata 2021	Improved confidence and empathic skills	**Low-Moderate**	**Weak-strong in favor**
Global soft skills	Orih 2024; Deep 2020; Thandar 2021	Improvements in interpersonal soft skills	**Low-Moderate**	**Weak-strong in favor**
Teamwork / IPC	Spaulding 2021; Aldriwesh 2022; Pucer 2025	Improvement of collaborative attitudes and behaviors	**Moderate**	**Strong in favor**
Resilience / well-being	Unjai 2024; Chanda 2025	Stress reduction / burnout	**Moderate**	**Strong in favor**
Results in patients	Hatfield 2020	Modest but significant effect on behavior	**Moderate**	**Strong in favor**