A climate for coaching: the barriers and facilitators to implementing coaching interventions for healthcare professionals in the European Union

Authors: Eva Jansen (MPH, University College Dublin, Republic of Ireland, MSc, Maastricht University, The Netherlands)

Supervisors: Relinde J. de Koeijer-Gorissen (Dr., Institute of Health Policy and Management, Erasmus University Rotterdam, The Netherlands), Kasia Czabanowska (Department of International Health, Care and Public Health Research Institute, FHML, Maastricht University, The Netherlands), and A.P.J. de Pagter (Department of Pediatrics, Erasmus MC-Sophia Children's Hospital, Erasmus Medical Center Rotterdam, Rotterdam, The Netherlands, Department of Pediatrics, Willem-Alexander Children's Hospital, Leiden University Medical Center, Leiden, The Netherlands)

Affiliation: Department of International Health, Governance and Leadership in European Public Health Programme, FHML, Maastricht University

Abstract

Background: European Union Member States face severe personnel shortages in healthcare. Coaching has emerged as a human-centred strategy to enhance sustainable employment and retention, with benefits on both an individual- and organisational-level. While the number of efficacy studies continues to grow, knowledge about the barriers and facilitators to implementing coaching interventions among healthcare professionals remains scarce.

Aim: This mixed-studies review aimed to identify and describe common barriers and facilitators to the implementation and delivery of coaching interventions for healthcare professionals in the European Union; focusing on organisational climate, implementation process, and program characteristics.

Methods: In April 2023, three databases (PubMED, Embase, Web of Science) were searched for eligible articles. Barriers and facilitators were systematically identified and mapped onto the Consolidated Framework for Implementation Research constructs. Directed content analysis yielded thematic areas and a reporting frequency.

Results: A total of thirty (n=30) studies were included in this review, representing twenty-five (n=25) distinct coaching programs. Implementation determinants were clustered in the CFIR constructs 'Inner Setting' (8 facilitators and 4 barriers) and 'Implementation Process' (6 facilitators and 1 barrier). Commonly-reported barriers included a (*i*) limited organisational capacity, (*ii*) lack of psychological safety, (*iii*) competing work demands, and (*iv*) insufficient leadership buy-in. Commonly-reported facilitators were the (*i*) allocation of protected time for participants, as well as coaches, (*ii*) promotion through opinion leaders, (*iii*) embeddedness in existing educational or CPD programs, and (*iv*) creating a "community of practice" among coaches.

Conclusion: This study synthesized common barriers and facilitators to implementing and delivering coaching interventions for healthcare professionals. These determinants covered a broad range of CFIR constructs and highlight the need to develop a supportive organizational climate that fosters psychological safety. Future implementation strategies may be informed by the findings of this study.

Key Terms: healthcare workforce, retention, coaching, well-being, professional development, system-level solutions.

Introduction

1.1 Background

The newly termed "Mass Exodus" refers to a post-pandemic social and economic trend of employee resignation; with those most likely to leave the workforce employed in hospitality, healthcare, or education (1). In 2022, more than half of European Union (EU) Member States ranked the shortage of nurses and medical specialists as "severe" (2). These trends are likely to continue, with 47% of European respondents in a 'Clinician of the Future survey' stating they plan to leave their position within 2-3 years (3). Healthcare professionals are paramount to equitable healthcare delivery, hence, the paradox of reduced supply met with increasing demand for healthcare has significant implications for public health (4).

Healthcare attrition and turnover rates are influenced by factors both external (e.g., migration patterns and technological advancement) and internal (e.g., ageing and burn-out) to healthcare organisations (4). Recently, the COVID-19 pandemic placed an additional strain on health systems, significantly exacerbating and drawing attention to pre-existing challenges (5). Yet, Poon et al., (2022) found "intention-to-leave" determinants remained consistent pre- and post-pandemic and were predominantly associated with working conditions (6). Three specific

working conditions affect the healthcare workforce: the physical work environment, work hours and staffing levels, and organisational climate (8).

1.2 The Role of Organisational Culture and Climate

Under the Job Demands-Resources (JD-R) theory (8), working conditions, including organisational climate, can be categorised as a job demand (9; 10). This theory is further supported in a multicentre study that found a significant correlation between organisational climate, job stress, workplace burnout, and retention (11).

The JD-R theory suggests, to counterweight job demands, job resources should be provided (9). Previously, 'job resources' have leaned heavily on individual-focused interventions (12). The deep-seeded drivers of burn-out and attrition rates, however, reside within the workplace culture and environment. Hence, growing evidence suggests efforts to promote a positive organisational climate require both individual-focused and systems-level interventions (13; 14).

Where system-level solutions have been offered (e.g., increased salary, improved electronic medical records, or reduced hours), most remain reactive, silo-ed, and short-term solutions to "fill the gap" (15). Therefore, Boet et al., (2022) suggests a balanced approach to preventing distress among healthcare professionals requires both structural solutions and an enhanced (proactive) ability to cope with the inevitable stresses of practising medicine (16; 17).

1.3 Coaching

Emerging from the corporate sector, recently, coaching has gained considerable attention as a 'job resource' to enhance sustainable employment and improve retention (referred to by Randstad Risesmart 2022 as, "the enabler of the Great Retention", 18). Unlike more traditional interventions, coaching takes a human-centred approach, with a focus on proactive skill-building and personal strengths (19).

Coaching has demonstrated benefits on both an individual- and organisational-level. Namely, randomised-control trials (20), demonstrate the role of coaching to prevent exhaustion and emotional distress as well as to promote self-efficacy, work-life balance, and job resources (21; 22). In the Cleveland Clinic, peer-based coaching was associated with improved physician (n=197) retention, yielding a potential cost saving of 133 million dollars (23). Moreover, a 2022 cross-sectional study using 'best-worst scaling', reported 58% (n=154) of residents prefer professional coaching to individual- or group-based peer support (84). Lastly, coaching is increasingly being viewed as an important tool to, "shift organizational culture with a new narrative around meaning and purpose" (24).

1.4 Aim and Objectives

Despite its beneficial outcomes, the system-wide uptake and implementation of coaching interventions remains limited. Zajac et al., (2021) argues, a "cultural shift among healthcare organisations" is required to fully realise the value of promoting healthcare professional's capacity through coaching (25). Hence, additional research is needed to identify the factors that predict the likelihood of successful program implementation.

These factors can be identified through reviews of the barriers and facilitators to implementation, which intend to affect policy and practise through critical reflection on the contextual variability and reliability of identified factors (26). While previous reviews have described the implementation determinants for workplace well-being initiatives (27) and surgical (skills) coaching (28), to date, none have been published for the implementation of professional coaching among healthcare professionals.

This study seeks to identify and describe common barriers and facilitators to the implementation and delivery of coaching interventions for healthcare professionals in the EU. More specifically, the Consolidated Framework for Implementation Research (CFIR) will be used to explore the role of

organisational climate and consider the relationship between coaching program characteristics and common implementation determinants.

Theory

The Consolidated Framework for Implementation Research (CFIR) is a determinant framework from Implementation Science Research (ISR) (29). Broadly, ISR seeks to understand and explain what influences implementation outcomes (30). Under ISR, determinant frameworks outline individual determinants comprising several barriers and facilitators (independent variables) that have an impact on implementation outcomes (the dependent variable) (30). Herein, the term "determinant" is synonymous with "barrier or facilitator".

2.1 Organisational Factors and Climate

In healthcare settings, organisational-contextual features are considered important determinants to the implementation of evidence-based practices (31). Li et al. (2018) identified six organisational-contextual features and described them as interrelated and dynamic, with organisational culture and leadership being the most important to ISR (31). This finding is supported by general evidence which links organisational culture and climate to the behaviours, attitudes, and motivations of healthcare professionals (10).

There have been considerable variations in the interpretation of the concept of "organisational climate" (OC) (7). This study considers, Organisational Implementation Climate (OIC): a type of organisational climate referring to, "the extent to which there is a shared perception among employees within an organisation that highly adherent use of an innovation is prioritised, expected, supported, and rewarded" (32). Implementation studies on evidence-based practices, find the OIC can be shaped to improve implementation (33), in comparison to organisational culture which is more stable and resistant to change (34).

2.2 Selection of CFIR

The CFIR was selected as a guiding framework for conceptual and methodological reasons. Conceptually, several of its constructs (under 'Inner Setting Domain') correspond to Li et al. (2018)'s organisational-contextual features and uniquely stipulate 'Culture' (**Figure 1**). Methodologically, the CFIR offers a comprehensive taxonomy of influencing factors across several socio-ecological levels (community, organisation and individual level), making it less likely to overlook important themes and clear construct definitions, which enhance the reliability of coding (35).

In the context of this research the following definitions for generic terms of the CFIR were applied: *(1)* the "intervention" is professional development, leadership, career, or resilience coaching, *(2)* the "inner setting" is the hospital, and *(3)* the "individuals" in the context of "characteristics of individuals" are the recipients of the intervention (i.e., hospital-working healthcare professionals under ISCO-08 classification).

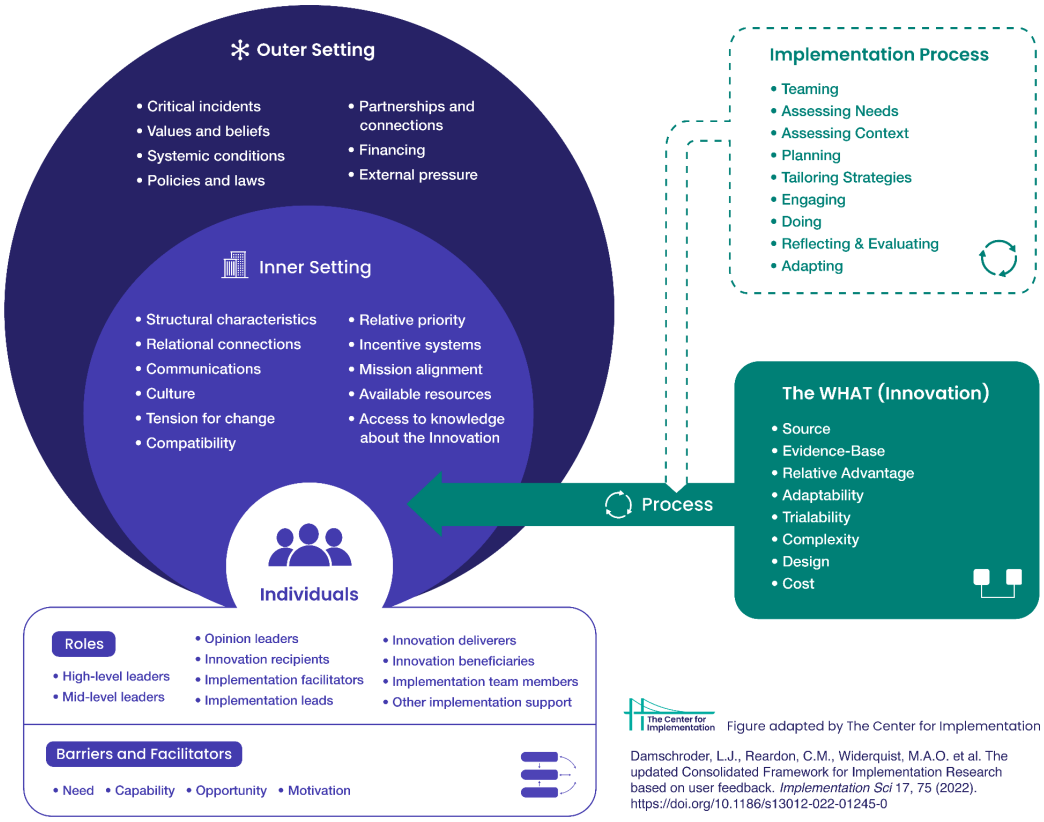

Figure 1. The Consolidated Framework for Implementation Research (CFIR) (29).

Methods

3.1 Study Design

A systematic mixed-studies review was conducted (from April to June 2023). Systematic mixed-studies reviews include qualitative, quantitative, and mixed-methods studies (85). In combining the strengths of quantitative and qualitative study findings, this type of review can provide a more comprehensive and practical understanding of complex public health interventions and programs (36, 85). The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) (37), Cochrane methodology (38), and Pluye & Nha Hong (2014)'s "seven standard systematic review steps", as specified for mixed-studies reviews, were followed.

3.2 Search Strategy, Eligibility, and Screening

Search Strategy and PICO Model

The search strategy was developed in four steps: *(1)* reviewing search strategies from previous published systematic reviews within Implementation Science; *(2)* (preliminarily) screening the literature to identify common/key terms related to coaching; *(3)* organising key terms into the PICO framework (39); and *(4)* piloting, refining, and adapting the search strategy in PubMED for use in other databases.

The final PICO and related search terms are displayed in **Table 1**. Key concepts used in the searches were "healthcare personnel", "coaching", and "well-being". To reach "barriers and facilitators", the search string included terms such as "Implementation" and "Program Evaluation".

Search terms were then combined with Boolean Operators to form a search string (**Additional file 1**). Lastly, MeSH Terms, truncation, and proximity searching were used to optimise the search string for each individual database (e.g., PubMED, EMBASE, and Web of Science). The final search strategy was validated for accuracy and completeness by a Biomedical information specialist at Medical Library, Erasmus University Rotterdam, the Netherlands.

Table 1. PICO Framework

PICO	Description	Key Terms
Population	Hospital-based healthcare workers, residents, and interns/clerks.	'Healthcare Worker', 'Health Personnel', 'Hospital Personnel', 'Healthcare Professional', 'Health Profession', Physician, Nurse, 'Nursing Staff, Resident, 'Medical Graduates', Fellows, Interns, Anaesthesiologists, Cardiologists, Dermatologists, Endocrinologists, Gastroenterologists, Geriatricians, Gynaecologists, Neurologists, Oncologists, Paediatricians, Pulmonologists, Radiologists, Rheumatologists, Surgeons Urologists.
Intervention	Coaching (professional development) as part of a program or alone-standing intervention.	'Coaching Program' 'Coaching Intervention', 'Coaching Approach', 'Coaching Project', 'Professional Coaching', 'Interprofessional Coaching', 'Individual Coaching', 'Group Coaching', 'Peer Coaching', 'Professional Developmental Coaching', 'Developmental Coaching', 'Resilience Coaching', 'Emotional Coaching', 'Strength-Based Coaching', 'Clinical Wellness Coaching', 'Surgical Coaching', 'Leadership Coaching', 'Professional Life Coaching', 'Executive Coaching', 'Virtual Coaching', 'Adaptive Coaching', 'Continuing Professional Development',
Outcome	Impact on career wellness.	Wellness, Well-Being, Wellbeing, Burnout, Burn-Out, 'Job Satisfaction', Engagement

Eligibility Criteria

A full set of inclusion and exclusion criteria as listed in **Table 2**. Articles using qualitative, quantitative, and mixed methods were included. Non-empirical (white) literature was also included to capture relevant information from sources outside the peer-reviewed literature and reduce publication bias (e.g., organisational reports, research reports, perspective pieces, and manuscripts). The search was limited to articles published from 2020 onwards in English or Dutch language. This was to prevent a significant overlap with recent systematic reviews on similar topics (40). Additional criteria for inclusion and exclusion were informed by definitions of the 'Intervention' (i.e., coaching) and 'Outcome' (i.e., career wellness). This was important to distinguish coaching from other interventions with which it is often confused (e.g., feedback, teaching, mentoring, peer support):

· Intervention - International Coaching Federation (2023) defines coaching as, *"partnering with clients in a thought-provoking and creative process that inspires them to maximise their personal and professional potential"* (41).

· Outcome - Career wellness is a relatively new term in the academic literature, described by Randstad Rise (2022) as, *"involv[ing] the personal satisfaction of employees resulting from work/life balance and achievement of personal goals"* (18).

Table 2. Inclusion and Exclusion Criteria	
Inclusion	**Exclusion**
Studies in which the population is hospital-working healthcare professionals or trainees with working experience in the hospital (following ISCO-08 classification).	Studies in which the primary population was non-hospital working healthcare professionals (e.g., dentists, medical school professors) or medical students (following ISCO-08 classification).
Studies describing a coaching program, coaching (pilot) intervention, or coaching session(s) that met the ICF (2023) standard definition. Also included those implemented as part of a multifaceted intervention (e.g., CPD/leadership program).	Studies describing a coaching program, coaching (pilot) intervention, or coaching session(s) that did not meet the ICF (2023) standard definition; involving observation of technical skills or patient interactions. Studies on coaching interventions that relied on psychological interventions (i.e., consultant-liaison psychiatry).
Studies in which coaching aimed to improve/prevent some aspect of "career wellness" (i.e., engagement, burn-out, satisfaction, work-life balance). Herein, considering both personal and professional potential.	Studies in which coaching was used to improve technical skills, performance, or patient satisfaction.
Studies written in English or Dutch published between 2020 and 2023.	Studies before 2020 and in a language other than English or Dutch.
Primary research articles (i.e., randomised control trials, pilot studies, quasi-experimental studies) of qualitative, quantitative, and mixed-method design. As well as non-empirical research articles that (using relevant theories and methods) discuss the implementation of coaching interventions.	Study protocols, commentaries, systematic reviews, meta-analyses, and letters to the editor.
Empirical studies should mention the implementation of a coaching program and employ at least one method of program evaluation (e.g., survey, semi-structured interview, focus group).	Empirical studies without any form of program evaluation and non-empirical studies without a clear reliance on empirical research literature.

Screening Process

In accordance with the PRISMA (2020) guidelines, articles went through two screening rounds (title/abstract screening and full-text screening), each round lowering the number of remaining eligible articles (37). The title/abstract screening was completed by one individual reviewer, Eva Jansen (EJ), using Rayyan (42). During the initial screening, titles and abstracts were read and included based on predefined Inclusion/Exclusion Criteria (detailed in **Table 2**). Using the software in Rayyan, duplicate studies were removed.

Any study that met the inclusion criteria based on title, abstract, or both, without meeting the exclusion criteria, was obtained in full for closer inspection (i.e., second screening round). After the first screening round, discrepancies were discussed and resolved with two co-reviewers, Dr. Relinde De Koeijer-Gorissen (RdKG) and Dr. Anne P.J. de Pagter (AdP). During a second screening round, again, one individual reviewer (EJ) read articles in full-text. The basis for inclusion or exclusion was the same as previously. Lastly, a manual screening of the reference lists was undertaken to identify additional, relevant articles.

Quality Assessment

According to Bach-Mortensen & Verboom (2019) reviews on barriers and facilitators should assess the robustness of identified factors and/or themes and provide appraisals of the level of certainty in their findings (26). Therefore, quality assessment was performed by one reviewer (EJ), using the Mixed-Methods Appraisal Tool (MMAT) (43). Eligible studies were not excluded based on their quality, to incorporate a full range of implementation experiences.

The MMAT facilitates concurrent critical appraisal of quantitative, qualitative and mixed-methods primary research in mixed-studies systematic reviews (Pluye & Nha Hong (2014, 43). By using one tool the approach is standardised and comparisons can be made across

different study methodologies (44). Further details of the MMAT criteria for qualitative, observational descriptive, and mixed-methods studies can be found in **Additional file 2**.

3.3 Data Extraction

Characteristics of Coaching Interventions

First, relevant characteristics of coaching interventions including data on publication details, study characteristics, occupation group, intervention, and outcome was extracted. While outcome measures (e.g., effectiveness, feasibility, etc.) were extracted, they were not reported on in this study, which takes coaching as an "evidence-based intervention" (22) and, therefore, focuses solely on "type 3 evidence: implementation and context" (45).

To standardise this process, the following template was designed:

#	Author (Year)	Country	Study Aim	Study Design	Coaching Intervention	Study Population	Outcome of Coaching	MMAT Score
					Type: Components: Duration/Frequency: Coach:	Occupation (no.): Demographics (%):		

A separate data extraction table was developed for 'white literature' based on reporting guidelines from Garousi et al. (2019) (46).

Barriers and Facilitators

Two in-depth readings of the included studies were performed: a first, to become familiar with and highlight all relevant text quotations and, a second, to code those highlighted quotations using the CFIR (47).

Generally, barriers and facilitators were extracted from the results and discussion sections of the included studies (48). Extractions included: *(i)* verbatim quotations from research participants; *(ii)* excerpts, quotations or entire passages from studies using documentary analysis; and *(iii)* narrative descriptive summaries of results under the following template:

#	CFIR Domain	CFIR Construct	Quotation	Barrier/Facilitator Code	Theme Code

3.4 Data Analysis

There is no best practice method to analyse barriers and facilitators (26). In this mixed-studies review, both deductive and inductive coding practices were applied.

Directed Content Analysis (DCA)

Firstly, all data was coded deductively for "best fit" (49) with a CFIR construct through directed content analysis (DCA) (47). Subsequently, data coded under each CFIR category was re-coded into barriers and facilitators.

The number of included studies describing a particular CFIR construct was reported, yielding a reporting frequency for each barrier and facilitator (50). This frequency indicated the relative importance of an identified domain, construct, or determinant. Determinants described in three or more included studies were considered "commonly reported".

The codebook to guide DCA was downloaded from the "CFIR Research Team-Center for Clinical Management Research" website and can be viewed under **Additional file 3**. In addition to these definitions, a common definition for barrier, facilitator, and implementation was consistently applied by all reviewers. While extractions from qualitative studies were coded directly against the CFIR constructs, quantitative data was first narratively synthesised and then analysed together with the extractions from qualitative studies.

Construct Relationships

The relevance and importance of barriers and facilitators is likely to be context-dependent, especially within complex health and social systems (26). Therefore, after data was coded under CFIR domains, inductive analysis focused on identifying emerging

themes among these "commonly reported" determinants.

Inductive coding was used in conjunction with DCA under CFIR constructs for two reasons: (*i*) to ensure the framework did not restrict the scope to identify novel themes and (*ii*) to identify relationships between separate CFIR constructs.

Once the coding process was complete, all themes and codes were reviewed and reconsidered. Furthermore, to minimise bias, data extraction was undertaken independently by one researcher (EJ) and reviewed by another (RdKJ).

Results

The systematic search of three databases yielded a total of 1,677 results, as shown in the PRISMA flow chart (**Figure 2**). A single (n=1) additional record was identified through manual reference list searching, resulting in a total of 30 included records, which represented 25 distinct coaching interventions/programs.

Software-assisted removal (42) (n=342 duplicates), followed by title and abstract screening by the principal investigator (EJ) (n=1284 excluded) resulted in 54 records for full-text assessment. Reasons for exclusion at full-text stage were ineligibility of intervention (i.e., containing psychological components) (n=3), outcome (i.e., assessing performance) (n=8), sample (i.e., involving students or non-hospital working health personnel) (n=5), study design (n=6), and language (n=3).

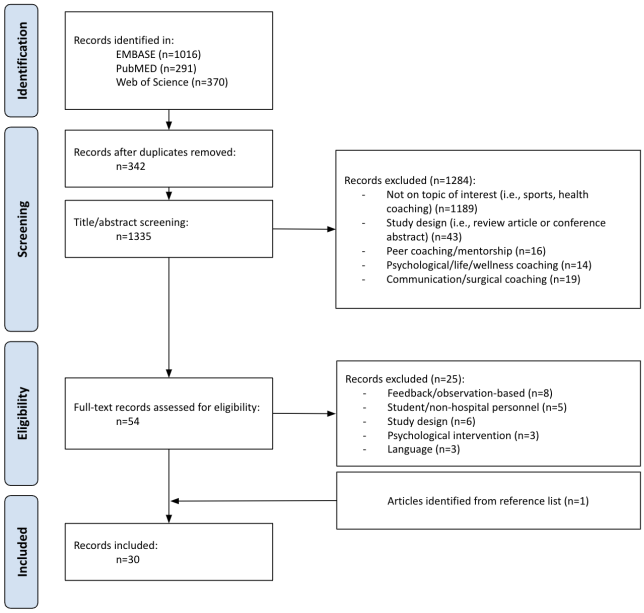

Figure 2. PRISMA Flowchart (adapted from PRISMA 2020 Statement, 2021).

4.1 Study Characteristics

A complete and detailed overview of study characteristics (including study design, coaching intervention, occupational group, and outcome) can be found in **Additional file 4** and is summarised in **Figure 3**.

In short, out of the 30 articles included, eight (n=8) were randomised control trials or quasi-experimental studies, seven (n=7) used mixed methods, another seven (n=7) were quantitative, and four (n=4) were qualitative. Five (n=5) were non-empirical reports. The majority of studies were published in North America (n=25).

Across these programs, coaching approaches included executive, professional developmental, and resilience coaching. Most coaching programs were delivered one-on-one (n=17), while others involved a group component. Participants were trainees, specialists, nurses, or a combination of occupational groups, who were recruited from multiple sites, predominantly female, and/or below the age of 35 years.

Coaches were either (novice) faculty members, physicians with experience in coaching, or professional (external) coaches. Almost half of the coaching interventions (n=11) were embedded within broader leadership, educational, or resilience programs. Lastly, the duration of coaching sessions varied, with a maximum of 60 minutes and typically offered four times within the study period.

4.2 Quality Assessment

The all five MMAT checklists were used to critically appraise included studies. Five non-empirical studies did not pass the two screening questions (S1 and S2) and, therefore, the MMAT could not be applied. Overall, the quality of evidence was low, with only four of the twenty-five appraised studies (16%) adequately addressing every question on the MMAT (refer to **Additional file 5** for further detail).

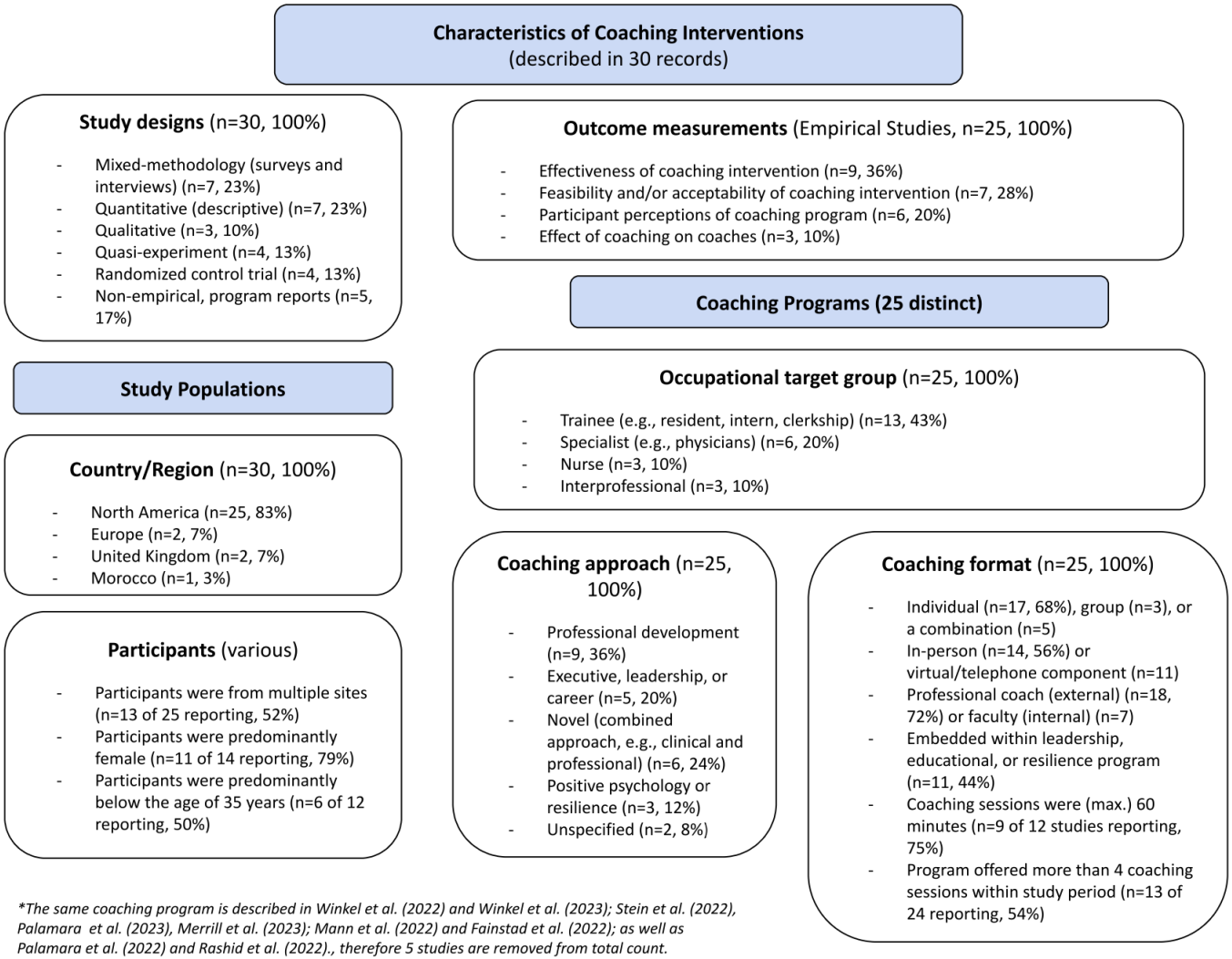

Figure 3. Visual Representation of Study Characteristics.

4.3 CFIR Domains

Commonly-reported determinants were found across all domains of the CFIR and within 20 of 39 constructs (**Figure 4**). **Table 4** provides the reporting frequency (RF), expressed as a percentage of the number of included articles (n=30, 100%).

Barriers and facilitators were concentrated in the CFIR constructs of 'Inner Setting Domain' (RF: 87%), 'Implementation Process Domain' (RF: 80%), and 'Intervention Characteristics Domain' (RF: 77%). The 'Inner Setting Domain' had the highest reporting frequency (RF: 87%) and included eight facilitators and four barriers. In contrast, the 'Individual Characteristics Domain' and the 'Outer Settings Domain' had the lowest reporting frequencies of 60% and 50%, respectively.

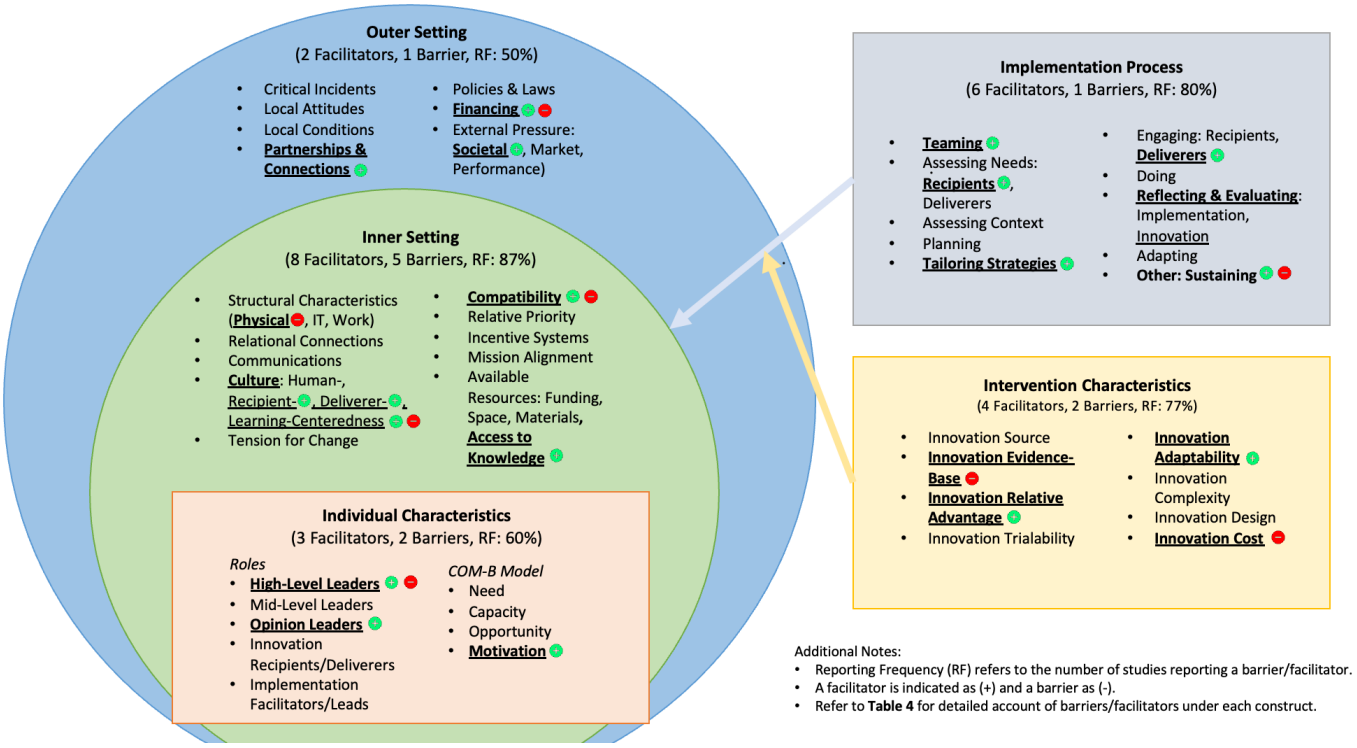

Figure 4. CFIR Constructs with Commonly-Reported Barriers/Facilitators.

Table 4. List of Commonly-Reported Barriers and Facilitators under CFIR with Reporting Frequency (RF).

Domain (RF)	Constructs (RF)	Sub-Construct (if applicable)	Barrier (RF)	[Studies No.]	Facilitator (RF)	[Studies No.]
Intervention Characteristics (n=23, 77%)	**Evidence Quality** (n=8, 27%).		(-) Limited transferability and generalizability of study findings to different settings, contexts, and participant groups (n=8, 27%).	[5, 6, 12, 17, 18, 26, 27, 30]		
	Relative Advantage + Adaptability (n=19, 63%)				(+) Adapting to individual needs, values, and/or contexts (n=10, 33%).	[4, 5, 10, 15, 16, 18, 23, 24, 27, 29]
					(+) Discussing organisational structure and teamwork (n=9, 30%).	[4, 5, 6, 12, 16, 22, 24, 25, 28]
					(+) Virtual offering (COVID-19 or national access) (n=6, 20%).	[1, 5, 14, 18, 26, 30]
	Cost + Adaptability (n=5, 17%)		(-) Limited organisational capacity (human resource or financial) across settings (n=9, 30%).	[4, 7, 15, 17, 18, 23, 27, 28, 30]	(+) Adapting to faculty-led or group-coaching (n=5, 17%).	[3, 5, 7, 13, 26]
Outer Setting (n=15, 50%)	**Partnerships & Connections + Financing** (n=11, 37%)		(-) Temporary funding from COVID-19 response or (pilot) research grants (n=2, 10%).	[23, 30]	(+) Funding through partnerships with medical associations or universities (n=10, 33%).	[5, 6, 13, 14, 18, 19, 26, 27, 28, 29]
	External Pressure	**Societal Pressure** (n=4, 13%)			(+) National or regional calls for health personnel well-being and/or professional development (n=4, 13%).	[1, 17, 21, 29]
Individual Characteristics (n=18, 60%)	**High-Level Leaders** (n=10, 33%)		(-) Insufficient organisational support and/or leadership buy-in (n=3, 10%).	[10, 15, 17]	(+) Sufficient leadership buy-in (funding, time allocation, embeddedness, and sustainability) (n=7, 23%).	[4, 8, 19, 22, 24, 26, 30]

	Opinion Leaders (n=5, 17%)		(-) Lack of diversity among program leaders (n=2, 7%).	[5, 30]	(+) Internal program champion (health personnel) (n=5, 17%).	[5, 8, 15, 17, 30]
	Motivation (n=9, 30%)				(+) Participant interest and engagement with coaching (n=9, 30%).	[1, 2, 9, 13, 23, 24, 25, 29, 30]
Inner Setting (n=26, 87%)	**Structural Characteristics**	**Work Infrastructure** (n=14, 47%)	(-) Insufficient protected time for participants (healthcare professionals) (n=12, 40%).	[1, 2, 5, 8, 9, 13, 22, 29, 30]	(+) Allocating dedicated time for coaches (n=5, 17%).	[8, 15, 16, 19, 28]
		Communications (n=7, 23%)	(-) Lack of awareness about coaching (n=2, 7%).	[7, 15]	(+) Delineating program time-commitment and responsibilities (n=7, 23%).	[7, 9, 15, 19, 22]
	Culture (n=20, 66%)	**Recipient-Centeredness** (n=9, 30%)			(+) Pairing (coach and coachee) based on personality, professional interests, and specialty (n=6, 20%).	[1, 7, 18, 23, 26, 29]
					(+) Selecting professional (external) coaches with a medical background (n=4, 13%).	[1, 4, 5, 28]
		Deliverer-Centeredness (n=11, 37%)	(-) Insufficient means to evaluate the efficacy of coaching skills (n=3, 10%).	[17, 20, 26]	(+) Offering training, guidelines, and debrief sessions to standardise coaching (n=11, 37%).	[2, 3, 6, 7, 10, 17, 18, 20, 22, 26, 28]
		Learning-Centeredness (n=14, 47%)	(-) Lack of a learning climate (n=4, 13%)	[19, 22, 28, 30]	(+) Using external or out-of-specialty coaches to protect psychological safety (n=6, 20%).	[3, 14, 17, 18, 24, 26].
					(+) Ensuring confidentiality (n=4, 13%).	[2, 12, 13, 22]
	Compatibility (n=11, 37%)		(-) Tension from competing roles (i.e., supervisory and coaching) (n=2, 7%).	[27, 28]	(+) Embeddedness in a larger educational or professional development program (n=10, 33%).	[4, 6, 7, 15, 16, 17, 19, 22, 24, 28]

Implementation Process (n=24, 80%)	**Teaming** (n=6, 20%)				(+) Developing the program and/or guidelines together with facilitators, health personnel, and/or experts (i.e., co-creation) (n=6, 20%).	[9, 14, 15, 20, 23, 27]
	Assessing Needs + Tailoring Strategies	**Innovation Recipients** (n=14, 47%)			(+) Offering coaching at multiple times and through multiple modalities (virtual) (n=6, 20%).	[5, 10, 13, 21, 25, 30]
					(+) Inform the adaptation of coaching programs through pre-assessment (n=7, 23%).	[6, 8, 17, 22, 27, 29, 30]
					(+) Contracting with participants (n=4, 13%).	[2, 6, 19, 29]
	Engaging				(+) Developing a “coaching culture” and community of practice among coaches (n=7, 23%).	[1, 9, 19, 22, 26, 27, 28]
	Reflecting & Evaluating + Sustaining	**Innovation** (n=6, 20%)	(-) Persistence of systemic factors (n=2, 7%).	[10, 30]	(+) Continuous feedback, improvement, and stakeholder dedication (n=4, 13%).	[6, 7, 15, 19]

Intervention Characteristics Domain

Commonly-reported determinants within the 'Intervention Characteristics Domain' were identified under three constructs ('Adaptability', 'Relative Advantage', 'Cost') and across 23 articles (RF: 77%).

Nineteen (n=19) articles indicated 'Adaptability' facilitated the implementation and/or delivery of a coaching intervention. Adaptations could be made to the number of participants (individual versus group coaching), mode of delivery (in-person or virtual), and type of deliverer (external or faculty coach). Under this domain, facilitators within 'Adaptability' were found to overlap with those of 'Relative Advantage'.

· In ten studies (n=10) the ability of one-on-one coaching to adapt to the unique needs and values of participants was emphasised. McGonagle et al. (2020) correlated this with, "higher levels of participant buy-in and engagement" and viewed group-coaching as a barrier to individualisation (51).

· Across nine (n=9) studies, "discussing organisational structure and teamwork" was highlighted as a 'Relative Advantage'; the added-value being able to address organisational understanding (52) and improve relationships (53).

· Six (n=6) coaching interventions were virtual (video-conferencing or telephone), which enabled program delivery during the COVID-19 pandemic and enhanced access to coaching nationally. Stein et al. (2022) stated, "due to the virtual nature of participation, vulnerable surgical trainee groups could participate from any program, regardless of size, geographic location, or resources" (54).

In nine (n=9) articles, the 'Cost', or rather, the insufficient organisational capacity to meet 'Cost', hindered program implementation and/or delivery.

· The limited capacity to resource coaching, was related to "individual faculty and structural considerations" (55) and "heterogeneity on available resources" (56). These barriers were particularly prevalent when coaching interventions were implemented across multiple sites.

To address cost- and capacity-related barriers, five (n=5) articles describe two adaptations: group-coaching and (novice) faculty coaches. Here, 'Cost' overlaps with 'Adaptability'.

· Mann et al. (2022) described one-on-one, in-person coaching as, "logistically challenging and costly" (57). Correspondingly, one coaching program (53, 57) selected group-coaching to lower costs, writing, "[group-coaching] supported delivery feasibility by maximising the number of residents who received coaching per session."

· Similarly, training internal faculty members to serve as coaches was a cost-effective means to deliver a coaching intervention, as highlighted in three articles (n=3). Both Dixon et al. (2022) and Stein et al. (2022) suggest utilising novice volunteer faculty coaches was a viable and cost-effective approach, in comparison to hiring certified coaches (54, 58).

Outer Setting Domain

Commonly-reported determinants within the 'Outer Setting Domain' were identified for three constructs, 'Partnerships & Connections', 'Financing' and 'Societal Pressure' and across eleven (n=11) articles (RF: 37%). As shown in **Figure 3**, constructs such as 'Values and Beliefs', 'Policies and Laws', and 'External Pressure' did not yield commonly-reported determinants.

· Four (n=4) coaching interventions were developed from "internal funds": one funded by the NHS Trust Funds (59), two by the associated medical school (53, 57, 60), and

one by an internal COVID-19 grant (61). Financing was considered, "vital for the implementation and subsequent success of the coaching program" in Parsons et al. (2021).

· Another four (n=4) coaching interventions were funded by larger organisations such as the Association of Women Surgeons (54, 62, 63) or a Medical Association (55, 65, 64, 65), linking 'Financing' with 'Partnerships & Connection'.

· Four (n=4) articles describe how 'Societal Pressure' contributed to driving these investments; referring to national calls to, "address the significant gap between women and men" (66) and "promote provider well-being on a systems-level in addition to individual-level resilience augmentation" (67).

· This domain also yielded a barrier: "temporary funding from COVID-19 response or (pilot) research grants." Namely, in two (n=2) articles, short-term funding mechanisms (i.e., COVID-19 grant) prevented the sustainable development (61) and availability of coaching (68). For instance, Yi-Frazier et al. (2022) stated, "this was a pilot study which limited our ability to offer the course on a larger scale" (61).

Inner Setting Domain

Within the 'Inner Setting Domain', commonly-reported were identified under five constructs 'Work Infrastructure', 'Communications', 'Recipient-Centeredness', 'Deliverer-Centeredness', 'Learner-Centeredness', and 'Compatibility' and across twenty-six (n=26) articles (RF: 87%). According to Damschroder et al. (2009) states the first 4 constructs "exist in the Inner Setting regardless of implementation and/or delivery of the innovation" (29).

First, 'Work Infrastructure' was a key barrier to the delivery of coaching interventions, both with regards to participant engagement and deliverer availability in fourteen (n=14) articles.

· In nine (n=9) articles, competing demands of participants hampered delivery of coaching. For instance, in Wolff et al. (2021) participants cited, "insufficient time/competing demands" as a reason for attrition from the program (65). The same was true for coaches, in programs using faculty coaches (55).

· Therefore, dedicated time to participate in or deliver was viewed as critical to program success in five (n=5) articles.

Second, "delineating program time-commitment and responsibilities" with participants as well as coaches emerged as a facilitator under 'Communication' from seven (n=7) studies.

· Namely, Parsons et al. (2021) emphasised, "it was critical to specifically delineate responsibilities and activities associated with the role […] to ensure that faculty have a coaching mindset in their work with learners […] but also to be able to calculate the percent of professional time" (60). Correspondingly, inadequate communication was a barrier in Naughton et al. (2023), where coaches reported not participating in the coach training due to a lack of clarity around the role of the career coach (59).

· Informational videos (69), in-person discussions with healthcare professionals (70), word-of-mouth (59), and e-mail or social media (62, 63, 54) were used to communicate information about the coaching intervention with participants.

Third, the construct 'Culture' had a relatively high RF (n=20, 67%) and determinants were specified under four sub-constructs: 'Recipient-', 'Deliverer-', 'Learner-' Centeredness.

Under ‘Recipient-Centeredness’, appropriate coach pairing was considered a key component to delivery of coaching in nine (n=9) articles.

· For instance, Gowda et al. (2022) stated, "organic relationships are essential” (71). Therefore, in some programs, participants could make coach preferences (e.g., based on videos or by ranking) or be paired with a coach based on their “personal and professional interests” (67). However, in one program, Palamara et al. (2023), given the small number of participants, self-identification demographics (e.g., age, race, etc.) were not used to make these pairings (63).

· Eight (n=8) articles used a faculty coach or coach with a medical background to improve the delivery of coaching. Namely, Winkel et al. (2023) stated, “introducing coaching by way of established faculty may have the potential to infiltrate the culture” (55).

Regarding ‘Deliverer-Centeredness’, fourteen (n=14) articles considered sufficient, timely, and/or continuous support coaches a facilitator to implementation and delivery.

· For (novice) faculty coaches, coaching was, “a distinctly new experience […] requir[ing] participants to use a different mindset, approach, and skillset” (55). Therefore, to enable the coaching process, deliverers were provided a formal training as well as step-by-step guidelines. Furthermore, three (n=3) articles stipulate a “refresher training”.

· Within this domain, one barrier was also identified: two (n=2) articles referred to insufficient means to evaluate the efficacy of coaching skills and techniques (following these trainings).

Within ‘Learning-Centeredness’ two facilitators and one barrier relating to “learning climate”, “psychological safety”, and “trust” emerged.

· The presence of a “learning climate” (i.e., opportunities for reflection, seeking feedback behaviours, etc.), was cited by two (n=2) articles as facilitator and lack thereof a barrier in two (n=2) articles. For instance, participants feared the coaching intervention would have, “implications for their permanent record” (60).

· Where “learning climate” was not specifically mentioned, articles referred to the lack of “psychological safety” as a barrier. In six (n=6) articles, participants were paired with a coach outside of their specialty (distinguishing coaching from formal evaluation) to protect psychological safety.

· For group-coaching, where psychological safety could not be protected through the same strategy, ensuring “confidentiality”, and “anonymity” were critical to implementation and delivery of group-coaching (52, 57).

Several coaching interventions that were part of a multi-component program. In eight (n=8) of the nine articles describing determinants related to ‘Compatibility’, the coaching was provided through existing educational or leadership facilitating implementation/delivery.

· Naughton et al. (2023) found that when organisations successfully aligned placements and career coaching, participants had a highly positive experience (59). On the other hand, when this alignment was lacking, participants’ perception of being valued by their organisation was diminished. Likewise two (n=2) articles suggested incorporating coaching into existing advising and mentorship programs would support implementation in low-resource settings.

· The same was true for coaches, as stated in one (n=1) article where the engagement of faculty coaches with continuous professional development improved, “their own performance and the program as a whole.” However, “tension from competing roles” was a barrier named in Winkel et al. (2023) when faculty coaches experienced increased tension between their supervisory and educational roles (55).

Individual Characteristics Domain

Commonly-reported determinants were identified within three constructs ‘High-Level Leaders’, ‘Opinion Leaders’ and ‘Motivation’ and across eighteen (n=18, 60%) articles under the ‘Individual Characteristics Domain’.

First, the degree of leadership buy-in was considered critical to program implementation and durability across ten (n=10, 33%) articles.

· Four (n=4) articles argued the lack of leadership buy-in limited the success, durability, and consistency of coaching interventions. On the other hand, three (n=3) articles, saw leadership and organisational support as, “[key] to success for sustained implementation” (54). Specifically, this regarded the allocation of funding and protected time to deliver and/or participate in coaching.

From five (n=5) articles the use of “internal program champions” (e.g., ‘Opinion Leaders’) was important to the implementation and sustainment of coaching interventions.

· Opinion leaders supported implementation, through promotion and participant engagement. In Yi-Frazier et al. (2022), the program was promoted via, “institutional announcements and through division and hospital leadership” (61); highlighting an important intersection between ‘Opinion Leaders’ and leadership buy-in under ‘High-Level Leaders’.

· Two (n=2) articles suggested “lack of diversity among program leaders” negatively influenced participant recruitment, with only one (n=1) article explicitly mentioning efforts were made to reach underrepresented groups (61).

Lastly, participant ‘Motivation’ was a frequently mentioned determinant, reported across nine (n=9) articles.

· One of the twenty-five coaching programs included was mandatory (72). Therefore, motivation from participants was seen as necessary to achieve implementation success. Johnson et al., (2020) described this phenomenon in extensive detail under a theme titled “Tension between Mandatory and Voluntary Delivery”, wherein they debated the benefits and drawbacks of making the program compulsory (73).

· Where motivation was low Wolff et al. (2021) (e.g., “learners indicated they planned to use this time to travel, spend time with loved ones”) the delivery of coaching was limited (65).

Implementation Process Domain

Commonly-reported determinants within the ‘Implementation Process Domain’ spanned four constructs ‘Teaming’, ‘Tailoring Strategies’, ‘Assessing Needs’, ‘Engaging’, and ‘Reflecting & Evaluating’, across eighteen (n=24, 80%) articles. In addition, under the domain ‘Other’ an additional construct was added by this review: ‘Sustaining’.

First, six (n=6) articles used ‘Teaming’ to support the implementation and delivery of coaching interventions. ‘Teaming’ involved program development with program leads, the International Federation of Coaching, or healthcare professionals.

In a total of fourteen (n=14) studies, ‘Tailoring Strategies’ to the context or individual

participants improved the implementation and delivery of coaching interventions.

· Most often, coaching sessions were brief and offered at various times to accommodate the "unpredictable" schedules of healthcare professionals. In one (n=1) coaching program participants could choose from multiple coaching modalities, "allow[ing] them to engage in which parts made the most sense for them"(53, 57).

· Customization was also achieved through a process known as "contracting" (n=4), which involved specifying the number of sessions, scheduling, and defining the objectives.

· Frequently (n=7), a pre-assessment was performed to guide the process of 'Tailoring Strategies' and, "maximize the benefit of the coaching program" (74). This took the form of focus groups and pre-participation surveys which provided additional insights to what participants valued in the time-limited space.

'Engaging' was mentioned across seven (n=7) articles. These articles discussed the benefit of engaging coaches and developing a 'community of practice' among coaches to enhance delivery.

· Regular discussion and debriefs between coaches was used to enhance the delivery of coaching and standardise coaching practices in six (n=6) articles. Parsons et al. (2021) stated, "successful implementation and maintenance of our coaching program requires deliberate, ongoing cultivation of a professional culture and sense of community among coaches" (60).

The construct 'Reflecting and Evaluating' was expanded to also discuss an added construct, 'Sustainability' across which a total of eleven (n=11) articles discussed relevant determinants.

· The significance of continuous program monitoring and improvement was emphasised in two articles (n=2). This could reinforce leadership buy-in. In Gascon et al. (2022), two evaluations were conducted of the program processes and outcomes to justify the costs (64).

· Leadership buy-in and adequate funding, remained essential to the ongoing delivery of coaching, as well as dedication from longitudinal coaches.

· An important barrier to the sustainability of coaching interventions was the persistence of 'systemic factors', described as, "long work hours, staffing shortages, and ongoing personal risk" (61).

Construct Relationships

The distribution of commonly-reported barriers and facilitators was found to vary according to three characteristics of coaching interventions: occupational group, type of coaching, and method of implementation.

First, regarding 'target occupational group' the implementation/delivery of eight (n=8) coaching interventions was hindered by "insufficient protected time for participants (healthcare professionals)". This spanned all occupational groups; with one article including nurses (70), specialists (69), multiple professions (61, 73, 75), and trainees (53, 57, 65, 67).

· For particular occupational groups this was described as, "staff had to take their own time to participate in this program, and thus we may have inadvertently created barriers to attendance. The number of physician attendees, for example, was limited" (61) and, "resident trainees have little agency or autonomy over their schedules and day-to-day workload" (57).

Second, regarding 'type of coaching', in studies where coaching was delivered to a group or

with a group-component, determinants were clustered in ‘Learner-Centeredness’ and ‘Relative Advantage’.

> · Four (n=4) articles stated “ensuring confidentiality” was a key facilitator to delivery, of which two involved group-coaching (52, 57). In these studies participant feedback was: “...[live coaching] wasn’t a good fit because a lot of my co-residents were around. But I still feel like I benefited from watching other people get coached (57).
>
> · Of the nine (n=9) articles in which “discussing organisational structure and teamwork” was considered a ‘Relative Advantage’, two were individual-, two were group-, and five were individual-coaching with a group-component. Therefore even in one-on-one coaching without a group-component, teamwork and organisational structure could be discussed specifically.

Additionally, in articles describing coaching delivered by an internal (novice) faculty coach or investigating the effect of coaching on faculty coaches determinants were found more frequently in ‘Deliverer-Centeredness’ and ‘Learner-Centeredness’.

> · Where “using external or out-of-specialty coaches to protect psychological safety” was reported under ‘Learner-Centeredness’, five of the six articles described faculty-led coaching interventions.
>
> · Similarly, the facilitator “offering training and guidelines to standardise coaching” was named by a total of eleven studies of which six described coaching interventions with faculty coaches.

Where multi-site implementation and organisational support were mentioned, variations were also observed across articles for 'Innovation Cost', 'High-Level Leaders', 'Work Infrastructure', 'Compatibility', and 'Tailoring Strategies'.

> · In nine (n=9) articles, “limited organisational capacity (human resource or financial)” was a barrier to implementation and delivery of coaching. Eight of those nine articles were implemented across multiple sites or included participants from multiple sites.
>
> · Ten (n=10) articles considered “sufficient leadership buy-in” a critical facilitator to implementation/delivery of coaching interventions. In three of those articles “embeddedness in a larger educational or professional development program” also supported implementation/delivery.
>
> · Furthermore, in four (n=4) articles noting “insufficient leadership buy-in”, barriers were also found under ‘Compatibility’ and ‘Deliverer-Centeredness’, and ‘Recipient-Centeredness’.
>
> · Six (n=6) articles described “offering coaching at multiple times and through multiple modalities” to support implementation/delivery. Still, three of those reported “insufficient protected time for participants (healthcare professionals)” as a barrier.

Discussion

This mixed-studies systematic review examined the determinants of implementing and delivering coaching programs for healthcare professionals using the Consolidated Framework for Implementation Research (CFIR). These findings contribute to a growing body of evidence that seeks to understand the ‘process’ (type 3 evidence), rather than merely the ‘outcome’ (type 2 evidence). In doing so, the identified determinants can inform future implementation of coaching interventions across diverse

healthcare contexts within the European Union (EU).

5.1 Summary of Findings

An interrelated set of determinants were mapped across 20 of the 39 CFIR constructs, yielding a total of twenty-three facilitators and eleven barriers (6 common). The highest reporting frequencies occurred in the 'Inner Setting Domain' (RF: 87%) (for 'Culture', RF: 66%), 'Implementation Process Domain' (RF: 80%), and 'Intervention Characteristics Domain' (for 'Relative Advantage + Adaptability', RF: 63%).

Implementation determinants that were unique to coaching were found under the 'Intervention Characteristics Domain'. Here, the flexibility of coaching interventions was considered advantageous for implementation; accommodating individual needs and organisational capabilities. However, this characteristic also brought about specific challenges and trade-offs: *(i)* first, while individualisation was viewed as a 'Relative Advantage', it created obstacles in terms of cost; *(ii)* secondly, when financial or human resource constraints were overcome by adopting a faculty-led or group coaching approach, it gave rise to barriers associated with psychological safety.

5.2 Comparison with Existing Literature

Outside of the 'Intervention Characteristics Domain', the findings of this study align with those of existing literature. Previously, implementation determinants have been identified for workplace well-being programs (76; 77) and Continuous Professional Development (CPD) programs (78) in healthcare settings. Across these studies, barriers to implementation included work pressures, financial constraints, and insufficient organisational investment, while facilitators were effective communication and advertisement, conducting a needs analysis and evaluation before, during and after implementation, and supportive organisational culture (among others).

The consistency with findings in this study implies some barriers and facilitators are generic for the healthcare sector. Additionally, commonly-reported barriers and facilitators of the 'Inner Setting' reinforce the broader narrative that organisational-contextual features significantly impact the implementation of evidence-based practices (31).

5.3 Implications for Policy and Practice in the EU

While validating existing evidence is valuable, the repetition of these findings highlights a broader issue: organisations have consistently failed to address well-known challenges. By applying the CFIR framework, this study has identified actionable barriers, levers of change, and relevant components of the implementation process; some of which will be discussed here.

First, this study drew relationships between various constructs and found where "insufficient leadership buy-in" (RF: 33%) was reported, there was also a lack of program embeddedness, protected time, effective communication, and internal funding. In contrast, Parsons et al. (2021) described institutional support and effective communication as essential to secure funding, dedicated time, and program embeddedness (60). This suggests organisational and high-level leadership support for coaching are critical antecedents to implementation.

Second, in the multi-level CFIR framework, the absence of commonly-reported determinants also provided valuable insights. Specifically,

facilitators that could enhance organisational support for interventions like coaching were not identified within the 'Policies & Law' construct of the 'Outer Setting Domain'. Likewise, a 2019 review of occupational health and safety (OHS) policies in the EU found only 35.4% of EU establishments take measures to prevent psychosocial risks at work (86). This highlights a significant gap, also emphasised by Brady & Kuiper (2023), who suggest the importance of initiatives to improve the well-being of the healthcare workforce within the EU should be incorporated in the upcoming European Mental Health Strategy (79) and the European Health Union's new "comprehensive, prevention-oriented and multi-stakeholder approach to mental health". Post-implementation outcomes can be shared in the EU's 'Public Health Best Practice Portal' a repository that facilitates the collection and exchange of good practices in workplace mental health (87).

Third, 'Culture' (RF: 66%) and 'Motivation' (RF: 30%) held a considerable number of barriers and facilitators. This implies creating access to coaching through a top-down approach alone is unlikely to ensure sustained implementation, especially where a 'learning climate' or 'psychological safety' are lacking. Inevitably, promoting work-based wellbeing requires individuals to be able to recognise and report when they need help and are struggling with current work demands (88). In healthcare organisations, the prevailing organisational culture often fosters fear of stigmatisation and reluctance to show vulnerability, which hinders the uptake of mental health services (80). In addition, healthcare professionals express concerns that accessing such services may negatively impact their medical licensure or evaluations (81; 82). On the other hand, a psychologically safe culture, in which ideas, concerns, and mistakes can be discussed without fear of interpersonal risk, offers direct benefits to healthcare professionals and the care they provide (88).

As a result, coaching programs must be sufficiently tailored to align with the legal (i.e., privacy laws) and cultural contexts (i.e., norms, attitudes, and perception of mental health) of individual EU Member State and healthcare organisations. In this study, implementation strategies were found to mitigate barriers within the organisational culture and included: targeted coach pairings, ensuring confidentiality, and a preliminary needs assessment. As well, communication through opinion leaders can help normalise a coaching culture and promote its benefits.

Collectively, these findings indicate the need for a "whole-system approach", wherein the initial implementation of coaching interventions should be led by committed, high-level leaders. Leadership buy-in is crucial for establishing access, creating the necessary structural conditions (i.e, protected time), and avoiding unintended effects (i.e., heightened job demands). However, the sustainability of coaching interventions largely relies on aligning with the preferences and priorities of those who shape, deliver, and participate in them and the overarching organisational culture. Therefore, fostering a process of so-called "co-creation" (i.e., bottom-up approach), through which program recipients, deliverers, and implementers share power and provide valuable insights on both individual and organisational level (5), may be highly supportive of implementation.

5.4 Future Research

Two areas for future research have emerged from this review:

· First, while the CFIR framework argues that 'Culture' will not change with the implementation of a specific intervention, this

study found that coaching interventions can foster discussions about organisational structure and teamwork, which are integral components of the organisational culture. This highlights the complex relationship between organisational culture, climate, and the implementation of coaching interventions. Additional research is needed to confirm the tri-directional relationship that may exist between coaching, climate improvement, and ease of implementation.

· Second, regular examination and dissemination of program processes and outcomes was found to facilitate sustained leadership and participant buy-in. However, the overall quality of included studies was rated as moderate and coaching interventions were highly heterogeneous in nature. In the future, a standardised definition and set of outcome measures (i.e., Physician Well-Being 2.0) will be necessary to reduce program variation and establish a data infrastructure that supports evaluation and quality improvement (see call in NICE guideline [NG212], 27). Measures must be meaningful to organisations (e.g., economic evaluations and patient satisfaction), as well as healthcare professionals.

5.5 Strengths and Limitations

A strength of this mixed-studies systematic review was the integration of evidence derived from diverse methodological traditions and disciplines, including non-empirical (white) literature, which provided a comprehensive understanding of implementation determinants.

As well, this study was conducted under the standardised structure of the Consolidated Framework for Implementation Research (CFIR). Finally, a multi-disciplinary approach was taken during the research process by including public health, human resources, and the healthcare profession perspectives in the research team.

Study limitations included:

· The included articles were predominantly published in the United States and describe the implementation of coaching interventions for medical trainees/specialists, rather than nurses. Similar factors identified in different contexts may relate to different issues, thereby limiting the ability to generalise findings to an EU context and for all healthcare professions.

As such, this review presents a broad overview of the factors to consider when implementing a coaching program and does not specifically investigate the transferability of such programs from a US to EU context or across all health professions. Efforts to do so will require a thoughtful and customised approach that takes into account cultural, legal, and contextual differences across EU Member States, health systems, and occupational groups.

· The reported barriers and facilitators are unlikely to remain static over time, especially the rapidly evolving nature of healthcare. Therefore, the examination of implementation determinants must be an iterative process.

· Some factors may have been more easily identified than others, due to the specific interests and biases of primary researchers. Therefore, this study may more readily report the salient, uncontroversial, and easily communicated factors, than those that are complex or unanticipated. To validate and expand the findings of this study, additional focus groups, Delphi surveys, and participant interviews will be necessary.

Conclusion

The healthcare workforce crisis is a “wicked” problem, with complex social and policy aspects and conflicting priorities. As such, it calls for multiple solutions and effort on all levels (individual, organisational, and regional). Coaching presents an low-threshold opportunity to invest in the professional, as well as the personal, development of healthcare professionals. To ensure coaching delivers its intended impact, thoughtful and targeted implementation that addresses barriers and leverages facilitators is necessary.

This mixed-studies systematic review describes the determinants of implementing and delivering coaching programs for healthcare professionals within the European Union. Using the Consolidated Framework for Implementation Research (CFIR), the study provided valuable insights into the implementation process, going beyond standard outcome-focused evidence.

Overall, the findings of this research show barriers and facilitators span multiple levels of the CFIR: the organizational (culture), team (workload, climate, psychological safety) and individual (stigma, taboo). It also highlights potential implementation strategies, such as co-creation, which unify individual and organisational needs.

In conclusion, while further research is still needed to improve the quality of evidence on coaching implementation, the findings of this review may guide future policy development and implementation strategies regarding coaching across the diverse contexts of EU Member States.

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