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A SYSTEMATIC REVIEW OF SUPERVISORY RELATIONSHIPS IN GP TRAINING

A qualitative synthesis

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ABSTRACT

Objectives: The educational alliance is argued to be at the heart of supervision in medical education. This review aims to map the research field and develop a conceptualisation of the nature of such educational alliances within postgraduate supervision for General Practitioners (GPs).

Methods: An integrative review of the international literature on supervision from 2011- 2018 was undertaken, and papers assessed for relevance and quality. Data analysis incorporated framework analysis techniques. Bordin's working alliance based model of supervision was used as a springboard for synthesis, whilst allowing for the emergence of new ideas, theories and concepts from the literature.

Results: Forty-nine full texts were included for analysis. There was evidence of the importance of trust, agreement and bond in accordance with Bordin's model. The results also highlighted the importance of greater clarity on supervisory goals, and the tasks to support these goals, to effectively address competing priorities and roles within supervision. Non-hierarchical relationships were advocated, although supervisors must remain impartial in their assessment and monitoring roles. The influence of the wider practice and situated learning through legitimate peripheral participation are documented. A model of GP supervision is proposed which integrates the findings.

Conclusion: GP supervision requires a greater emphasis than is suggested by the working alliance model, both on the clarity of expectations and the appreciation of the multiple roles and competing priorities of both trainee and supervisor. Furthermore, as GP supervision develops within the rising workload of contemporary general practice, the role of the wider community of practice may become more prominent. We have adapted the working alliance model for postgraduate GP supervision emphasizing the explicit sharing of expectations relating to goals, tasks, and roles to facilitate negotiation and agreement.

INTRODUCTION

General practice (GP), or family practice, involves continuous care of patients, from the cradle to the grave, within their communities [4]. In general, training within this speciality requires the trainee to work in the same community-based practice as their supervisor. Historically, the traditional view of 'apprenticeship' has offered a lens to consider the role-modelling of professional duties from supervisor to trainee, within a longitudinal relationship [5-8]. It has been argued that this clinical supervisory relationship is the "single most important factor in the effectiveness of supervision" [1(p827)]. Akin to the 'therapeutic alliance' between a client and their therapist, the 'educational alliance' between a trainee and their supervisor is considered fundamental to the trainee's progression and development [2, 3].

The supervisor's role in the supervisory relationship has been explored within the literature. The provision of pastoral support and positive role modelling have been cited as facilitators for the educational alliance [3, 9-11], whereas insensitive communication or limited availability of supervisors have been suggested to pose a threat to the quality of the relationship [12, 13]. However, there has been little research into the contribution of the trainee to this relationship, and the particular facilitators and barriers to their contribution..

Globally, training in general practice is developing rapidly. Examples of this include changes to GP trainee working arrangements following introduction of the European Working Time Directive, the advent of Patient Centered Care Homes in the United States and rapid growth in GP trainee numbers in Australia [5, 8, 14-16]. The wider system pressures within the changing professional and political landscape of general practice may contribute to the means by which supervisory alliances are navigated in the day-to-day interaction of GP training, and may offer important avenues for consideration [6, 17]. The traditional 'apprenticeship' model of supervision in postgraduate general practice may no longer remain fit for purpose, as medical education becomes 'less personal', and as practice teams become more prominent in the trainee's learning journey [8]. 'Situated learning', where trainees learn through participation in a community of practice, may offer an alternative view of contemporary supervision [18]. This model emphasizes the trainee's participation and sense of belonging in the training practice as a whole, through meaningful work and interaction with various staff members, shifting the emphasis from the supervisory relationship in isolation.

There is a case to re-examine the literature relating to supervision, and supervisory relationships, in current postgraduate training in general practice. With a focus on the supervisory alliance itself, this review aims to understand the attributes of the supervisory relationship in general practice. We will consider the roles of both trainee and supervisor, their developing relationships, and potential facilitators and barriers to such relationships.

The terms 'educational alliance', 'working alliance' and 'supervisory alliance' appear to us to relate to one another, and are used interchangeably throughout. We have used the terms 'trainee' to describe the learner (or resident) and 'supervisor' to describe the trainer within the supervisory relationship.

Conceptual framework

Bordin's 'working alliance based model of supervision', developed from the 'therapeutic alliance' model in psychology and counselling, proposes three components: 1) mutual agreement between supervisor and trainee on the goals of supervision 2) agreement on the tasks required to reach those goals and 3) a strong emotional bond between them [2, 19-21]. Benefits of this model include its trans theoretical nature, and ability to be applied in cross-cultural supervisory arrangements due to negotiation and collaboration as key components [22]. It has been suggested that, in the absence of established educational alliances, learners may not feel safe to disclose their vulnerabilities or to truly accept the feedback given from supervisors [23].

Using Bordin's model as a guide, this review considers the literature on supervisory relationships within postgraduate GP training.

METHODS

Within Saini and Shlonsky's categorisation of qualitative synthesis methods, our approach most closely aligns with the integrative review methodology [24] . Our aim was to summarize findings across the included studies, and integrate them into a novel conceptualisation of supervisory relationships in general practice training[25]. The predetermined consideration of Bordin's Working alliance (well-defined and researched within the field of supervision) offered a useful starting point for the review process [24, 26]. However, through the identification of meanings, concepts and theories from the studies, we sought additional interpretations as the analysis evolved [25].

Ovid MEDLINE, ProQuest, ERIC and Web of Science electronic databases were searched on 1st July 2016 and then again on 18th January 2018 to identify relevant papers published between 2011 and 2018. Search terms were initially identified from an earlier systematic review of postgraduate supervision in general practice, and supplemented by terms relating to the attributes of the supervisory relationship [3] (see **Figure 1** for terms, and **Appendix 1** for MEDLINE search). Using predefined inclusion and exclusion criteria, screening of titles for relevance was initially undertaken, with subsequent review of included abstracts to identify full text articles relevant to our research aim. These papers were put forward for quality assessment (see **Figure 1**).

Quality assessment of papers

A predefined proforma, based on research appraisal tools, was developed through team discussion [28-31] (**Appendix 2**). Papers were sorted into one of 5 'trustworthiness' categories (see **Figure 1**) using agreed category definitions. This holistic judgement considered the processes by research teams to minimise bias within their study design, and the relevance of each study to our research aims [32].

The selected articles were analysed using principles of framework analysis [33, 34]. Article abstract, methods, results and discussion sections were reviewed. Through team discussion, consensus was reached to develop categories of interest to guide the analysis. For the purposes of developing a robust framework, E1 papers were analysed first, with subsequent analysis of E2 and O1 papers. The first author (DJ) reviewed all 49 papers, and each paper was independently analysed by another reviewer. QSR NVivo Version 11 was used to record the analysis. Themes were then identified through independent review and team discussion, and the E3 and O2 papers coded against these. The framework analysis approach enabled the research team to consider certain a priori areas of interest, such as Bordin's working alliance [19], but still enabled identification of emergent categories and themes.

From the outset, sensitivity to the researcher role in shaping the research process was considered, and steps taken to maintain reflexivity [35]. This included formation of a research team with a variety of vantage points of postgraduate supervision: a qualified GP (DJ), a paediatric trainee (AP) and a GP trainee (AE), alongside a researcher experienced in research within UK general practice (ID) and a researcher experienced in qualitative methods (RA). All articles were quality-assessed, categorized and analysed independently, and coding diaries kept.

Results

The search results are outlined in **Figure 1**, with 49 full text articles included for analysis**.** A summary of the E1, E2 and O1 articles included for qualitative synthesis is presented in **Appendix 3.**

Regarding the importance of the supervisory alliance, good relationships were deemed fundamental to the teaching of core clinical competencies [36], influencing career choice [17], assisting struggling trainees or those in need of remediation [37, 38], supervising trainees remotely [39] and improving trainee confidence [40]. The 'luxury' of the trainee and supervisor relationship was recognised [41], and trainees were keen to ensure that the 1:1 relationship with their supervisor was not lost [38, 42].

A number of factors were identified as as contributors to the supervisory alliance and are discussed below.

Bond

Several studies stressed the importance of the supervisor knowing the trainee as an individual and liking them [42-44]. This appeared particularly important in rural or remote supervision [39, 45, 46]. Personality 'clashes' were attributed as reasons for relationship problems or breakdown in communication [37]. For trainees, emotional distance or lack of personal contact from the supervisor was perceived to hinder their learning [47].

On the whole, supervisors appeared to trust their trainees; they had sufficient confidence that the trainee would report problems and ask for help when required, and they supported the trainee's autonomy in their consultations with patients [36, 47-49]. However, caution was advised when relying heavily on trainee self-assessment [50]. Poorly formulated questions from trainees were potentially linked to clinical incidents [51], and in random case note review of trainee consultations, 30% of supervisors (19 out of 64) identifed previously undetected patient safety issues [52].

Trainees must be able to count on their supervisor for the support they require [49]. However, the extent to which trainees experienced this support, or trusted it to happen, is less clear within the scope of this review. In one study, trainees went to their supervisor with questions for less than 7% (9130 out of 131583) of problems [53], but the reasons for this were unclear.

Agreement on goals of supervision

The supervisory relationship must navigate numerous and potentially conflicting priorities. Trainee autonomy is required for learning, but must be balanced with patient safety [43, 44, 49, 54, 55]. With educational development as the goal, supervisors aimed to support the trainee's learning needs, but monitoring and assessment in supervision risked trainee openness about their vulnerabilities [17, 45, 46, 56].

Goals depended on the trainee and context of supervision. In the case of struggling trainees, supervisors expressed concerns about patient safety, and monitoring of trainees' clinical performance became a prominent goal [43].

Disagreement or conflict in the relationship may occur if there are differing expectations of roles within supervision[57]. Conflicting goals between trainee and supervisor were perceived to

relate to decreased trainee confidence, inclusion in the practice and professional development [40].

Agreement on tasks of supervision

A variety of tasks were described to support the goals of supervision. Opportunistic case discussion, or 'corridor questions', appeared the most frequent supervision method, reported in surveys to be used at least weekly by 92% [58] to 95% [59] of the 84 supervisor respondents. Interruptions for such encounters were perceived as stressful for some supervisors, but were generally tolerated [45, 60].

However, a number of papers also advocated the importance of directive supervisory activities to identify potential problems or learning gaps [50, 52, 53, 58, 61, 62]. Such methods included direct observation of trainee consultations [37, 50, 58], randomly selecting cases for review [45, 52] or audit of test ordering [45, 61]. The extent to which such monitoring methods were implemented by supervisors, however, appears variable [52, 54, 58, 61].

Supervisor beliefs and preferences appeared to be important factors in determining the supervisory tasks undertaken. Creating environments for feedback were associated with trainee reports of higher rates and quality of feedback, although 75% of supervisor respondents (47 out of 62) did not believe this task to be important [63]. Regarding agreement, some supervisors appeared to pursue their preference of a pre-determined, fixed syllabus in teaching, rather than responding to the needs of the trainee [45 64].

Agreement on roles in supervision

The relationship was influenced by the multiple roles of the supervisor. The educator role was frequently described [36, 43, 47, 54, 65, 66], which included offering a degree of challenge to the trainee [46]. Supervisors ensured trainees were safe to practice autonomously, through having general oversight, monitoring progress, and acting as a gatekeeper [44, 67]. Other roles included role model [36, 56, 68, 69], assessor [17, 37, 43, 44, 49, 50, 66] and mentor, through providing reassurance [45, 49, 56, 70, 71] and personal support [39, 46]. Supervisors also facilitated inclusion of trainees by acting as a broker with the wider practice [40, 47, 49].

The role of educator was considered to be in tension with the supervisor's responsibility to ensure patient safety [43, 49, 50, 52, 54]. The supervisor was observed to move between their oversight, teaching, assessment and primary physician roles within a single supervisory interaction [65].

Few papers described the trainees' role, although some acknowledged that, like their supervisors, trainees face the similar tensions and changing of roles [36, 46, 65]. Explicit recogition of these multiple and changing roles in both parties was recommended at the outset of the supervision process [36, 54].

Power imbalance was considered a potential threat to supervisors and trainees in reaching agreement [50, 65, 72-74], with the assessment and monitoring role of the supervisor suggested to exaggerate this imbalance [43, 50, 73]. Non-hierarchical relationships were advocated to minimise this [39, 45, 73] and can be fostered through trainee feedback to supervisors [41, 74], and through supervisors recognising and respecting their trainees [75]. Legitimate peripheral participation

was discussed, suggesting that trainees are on a journey from 'subordinate' to 'autonomous practitioner' [65], moving from a peripheral position (in interactions with their supervisor and wider practice) to one of full participation [40, 47, 49, 65]. This suggests that power imbalance, and its influence on agreement, may diminish with time. Between supervisors and international medical graduates (IMGs), differing expectations were suggested regarding roles, hierarchy and gender [72]. Generally supervisors were reported to respond to the trainee's needs, even in instances when this conflicted with their preferred supervision style [45, 54]. Finding common ground for roles within the relationship, and teaching content, were suggested as key elements of supervisory interactions [36].

Clarity

Clarity emerged as a theme required for agreement, principally in terms of openness and explicit discussion.

Openness refers to the disclosure by trainees of their learning needs, and particular educational or personal problems arising [36, 49, 56]. Supervisors relied on trainee openness to undertake sufficient needs analysis and to tailor support [40]. The supervisor's assessment role emerged as a potential threat to trainee openness [17, 50]. Reassurance from the supervisor was viewed to create safety within the relationship, which subsequently encouraged trainee openness [56].

Supervisors often found it difficult to articulate and structure their teaching, and trainees sometimes lacked clarity on the goals or priorities of supervision [36, 45, 48, 64, 74]. To address this, supervisors were encouraged to be explicit about the purpose of the trainee's presence at the practice [76] and about what they were trying to achieve [36]. They were encouraged to clarify their multiple roles, including their assessment role [50, 54] and to be specific about how the trainee could access help [49, 73].

Personal attributes

Valuable supervisor attributes identified were enthusiasm [71, 77], encouragement [78] and being inspiring [78]. Positive trainee attributes included sufficient insight into their performance and learning needs [37], engagement with training and supervision [37, 66] and willingness to receive feedback [37]. For trainees, maturity was perceived to relate to being more proactive in supervision, whilst reduced self-confidence was related to reduced openness [36]. It is suggested that, when compared to their supervisors, trainees prefered increased flexibility in work with differing career expectations and greater work/life balance [17].

Local environment

In a number of papers the practice team supported the workload of supervision by providing additional clinical and educational input [38, 40, 41, 45, 54, 70, 75, 79], calibration of the supervisor's judgement of the trainee [37, 54], spotting struggling trainees [45] and assisting trainee orientation [45]. Additional practice support included pacing the trainee's clinical workload to support their level of confidence [42] and ensuring sufficent resource, such as rooms and equipment [42, 60]. Inclusion of the trainee in the practice was suggested to enhance their learning, confidence, autonomy and preparedness [40, 47, 49, 64, 77]. Difficult relationships with the supervisor were suggested to negatively impact this inclusion [40].

Busy practices, where educational interactions must compete with heavy clinical workload, were perceived to hinder learning [13, 42, 45, 47, 54, 55] and hierarchical practice cultures risked the trainee's sense of inclusion, leading to increased stress [40].

A number of studies either described or recommended supervisory arrangements that differed from the traditional 1:1 interaction between trainee and supervisor. These included vertical learning (involving various members of the practice team) [41, 44, 45] and remote supervision [39].

Wider environment

Beyond the practice, peer support for supervisors, such as supervisors' workshops, were perceived as useful [41, 46, 80]. Workshops for supervisors on the provision of feedback were evaluated as acceptable and satisfactory [81, 82]. GP training programmes providing placements of sufficient length were viewed postively, as they provide continuity andenable relationships to develop over time, with sufficient timetabled contact [17, 49, 54, 65, 70, 71]. The workload of documentation was viewed to threaten the supervisory relationship, largely due to unwieldy software and time burden [66].

Theoretical propositions

Some papers considered theoretical propositions relevant to this review, including theories of adult learning [45, 74], cognitive apprenticeship [36], self-regulated learning [47, 49, 54], educational alliance[44], socio-material learning [77] and situated learning (including legitimate peripheral participation) [40, 45, 49, 54, 64, 65, 77] (see **Appendix 3**). The paucity of theoretical development within these papers limits significant conclusions regarding conceptualisations, but raises the question as to whether the focus on the supervisory relationship, outside of its socio-cultural environment, is too narrow[83]. We consider this question in relation to situated learning in developing Bordin's model, below.

DISCUSSION

Despite changes to the landscape of postgraduate GP training, the supervisory relationship remains prominent, with a number of the studies highlighting the importance of 1:1 relationships between trainee and supervisor. However, these relationships must navigate numerous competing priorities and goals, balancing trainee educational support and autonomy, training programme and practice requirements, alongside patient safety. Such competing interests have been described as ubiquitous in healthcare supervisory settings [57]. The results also suggested contextual threats to supervisory relationships, such as the clinical workload of trainee and supervisor (which impacts on time for meaningful interaction), the documentation burden of postgraduate training and the risk that the supervisor's assessment role exaggerates the power imbalance between them.

Many of the attributes of Bordin's supervisory working alliance are observable within our review, such as the personal connection and mutual trust within his concept of 'bond'[19]. However, these attributes must also navigate the tensions within the broader context of postgraduate GP training. For example, whilst supervisors appear to rely heavily on supervisory tasks underpinned by 'trust', such as the trainee's ad–hoc self-assessment of problems, the potential pitfall of undetected unconscious incompetence when using these methods is evident. Monitoring activities to detect learning deficits are advocated, but implemented to varying degrees by supervisors. Entrustment is an increasingly popular term

within postgraduate education, with 'entrustable professional activities' referring to those tasks that the supervisor judges the trainee can perform unsupervised [84, 85],encapsulating the tension of trust and monitoring undertaken by supervisors.

Agreement of goals and tasks, central to the working alliance, has been cited as mediating the supervisor's dualistic roles of trainee development and assessment [86]. In this review, relationship problems arising from disagreement are described, and the pursuit of finding common ground is highlighted by both trainees and supervisors. Agreement is an attribute of Bordin's model and thus may offer a useful lens to consider how these tensions are negotiated. This was also discussed in studies with IMGs suggesting that the working alliance model offers potential to describe supervisory relationships within a cross-cultural setting [87].

Developing Bordin's model: what does our model add?

The supervisory relationship within general practice is complex. We suggest that the working alliance model, comprised of negotiation and agreement of goals and tasks in the context of an emotional bond, may begin to describe this complexity. However, our findings suggest that additional factors should be considered. **Figure 2** outlines our model of General Practice Supervision, which builds upon these elements. Our review suggests that GP supervision can be particularly problematic where clarity is lacking. Furthermore, overestimation, often on the part of the supervisor, can occur regarding the quality of the working alliance [2, 88]. Clarity on goals and tasks is described by Bordin as an important element of agreement [19, 22], and we suggest that this relates to sufficient openness on the part of the trainee regarding their particular learning needs, and explicit discussion from the supervisor on their particular agenda and role. Highlighting it as a distinct element within our model enables a greater focus on the trainee's perspective of the quality of the relationship, whilst also referring to an alliance where both parties are clear on the trainee's needs and how these will be addressed.

This review indicates that navigating multiple roles is key to a successful supervisory relationship, influenced by the particular beliefs, preferences and characteristics of the supervisor and trainee. The complexity of competing roles for the supervisor and trainee is not included within Bordin's model [22]. However roles, and the personal attributes that can influence them, are considered within our model, and offer scope for further exploration.

The review and wider literature advocate non-hierarchical, peer-like relationships to mediate the risk of significant power imbalance between trainee and supervisor [89]. It is suggested that these non-hierarchical relationships develop over time, as the trainee grows professionally and the working alliance adapts. However, the monitoring and assessment roles of the supervisor raise questions as to whether this relationship is ever truly equal. The dynamic and changing nature of these power relationships is represented by the term 'relationships' within the model.

The findings suggest contextual factors that may be important facilitators or hindrances to the development and maintenance of the supervisory relationship. The influences of the training practice have been termed 'local environment' within the model, and the term 'wider environment' refers to the support and requirements of the regional and national training programmes.

Rising clinical workloads were cited as particular threats, as was the administrative workload related to supervision. To enable the development of relationship over time, a number of studies highlighted the importance of training placements of sufficient length, which is often determined by the wider training environment. This time to develop interpersonal continuity has been described as important for trust and authenticity within supervision [70]. The training practice also may present an opportunity to mediate the rising pressure on supervisors. In some studies, a range of practice staff facilitated learning between various trainees. This type of shared learning, in a community of practice, may represent a contemporary change to the 1:1 supervisory interaction, and has been perceived as beneficial by participants when combined with traditional supervision [38].

Learning within a 'community of practice' refers to the work of Lave and Wenger [90], and their concept of 'situated learning' is discussed either directly or implicitly by a number of studies in the review. Interaction with the training practice culture appears to influence the trainee's confidence, based largely on their perception of inclusion and belonging. A focus on the 1:1 interaction alone within the educational alliance may fail to consider the important influence of the 'community of practice', and the supervisor's role in brokering this inclusion [3]. Our model conceptualised this inclusion by a circle, encompassing the educational alliance within their community of practice, or 'local environment'.

This integrative systematic review has provided a rich overview of papers with multiple research approaches, including commentaries. However, a double hermeneutic is involved as the review's conclusions represent interpretation of papers, which are social constructs in themselves [91]. The analytic approach and diversity in the research team attempted to mitigate the issue. The search strategy specifically aimed to review supervisory relationships of a sufficient duration, and may have under-represented supervisory experiences in locations where educational continuity is not encouraged. Evaluation of the suggested model is recommended, in varying participant, geographical and supervisory contexts.

CONCLUSION

The aim of this review was to consider the attributes of supervisory relationships in general practice, and how such working alliances are created and maintained. The model presented is a synthesis of the literature findings, and describes the importance of the emotional bond in supervision, alongside agreement of goals and tasks. In addition, Bordin's working alliance model has been developed to emphasize the need for clarity between supervisor and trainee on the trainee's educational needs, and the means by which these will be addressed. Positive working alliances appear to be linked to non-hierarchical relationships and the ability to negotiate the tensions, multiple priorities and roles within supervision. This offers an important area of development for trainees and their supervisors. Furthermore, working alliances in GP supervision may also need to include the whole training practice and wider training environment, which appear closely linked to the trainee's learning and progression.

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