Effective supervision in clinical practice settings: a literature review*

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Context Clinical supervision has a vital role in postgraduate and, to some extent, undergraduate medical education. However it is probably the least investigated, discussed and developed aspect of clinical education. This large-scale, interdisciplinary review of literature addressing supervision is the first from a medical education perspective.

Purpose To review the literature on effective supervision in practice settings in order to identify what is known about effective supervision.

Content The empirical basis of the literature is discussed and the literature reviewed to identify understandings and definitions of supervision and its purpose; theoretical models of supervision; availability, structure and content of supervision; effective supervision; skills and qualities of effective supervisors; and supervisor training and its effectiveness.

Conclusions The evidence only partially answers our original questions and suggests others. The supervision relationship is probably the single most important factor for the effectiveness of supervision, more important than the supervisory methods used. Feedback is essential and must be clear. It is important that the trainee has some control over and input into the supervisory process. Finding sufficient time for supervision can be a problem. Trainee behaviours and attitudes towards supervision require more investigation; some behaviours are detrimental both to patient care and learning. Current supervisory practice in medicine has very little empirical or theoretical basis. This review demonstrates the need for more structured and methodologically sound programmes of research into supervision in practice settings so that detailed models of effective supervision can be developed and thereby inform practice.

Keywords Clinical clerkship, methods; education, medical, *methods; education, medical, graduate, methods; preceptorship, *standards, methods; rev academic.

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Clinical supervision has a vital role in postgraduate medical education and, to some extent, undergraduate medical education and yet it is probably the least investigated, discussed and developed aspect of clinical teaching. The purpose of this paper is to review the literature on effective supervision in practice settings to identify what is known about effective supervision

Introduction

There is a limited amount of published medical literature addressing supervision; in particular, there are few empirical studies. Supervisory processes in related professions have potential relevance for medicine because they can offer relevant skills and insights; consequently, this review has included appropriate literature from other healthcare professions – particularly nursing, and from social work, teaching, psychology and counselling. The literature search was across academic and professional disciplines (see Table 1).

The review excluded literature relating to research supervision. Although some counselling and psychotherapy literature has been included in the review, articles including detail about transference and counter transference issues and those that concentrate on the therapeutic aspects of the supervision relationship have been excluded.

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Structure and content of the review

Supervision is a complex activity, occurring in a variety of settings, has various definitions, functions and modes of delivery. Most importantly, it is an interpersonal exchange. This complexity means that research into supervisory practice presents methodological problems and adequate research methodologies have yet to be established. Many reviewed articles had some empirical aspect; although in some cases this aspect was very weak.

Methodological problems

Two counselling and psychotherapy reviews exemplify some of these problems. Fong *et al.*[1] reviewed all the articles submitted in one year to a particular journal (*Counselor Education and Supervisor*). From 111 manuscripts, 57 were research based and 80% of these were descriptive studies. Error types were determined from the blind reviews of the articles. Research design errors included lack of a conceptual base; absent/unclear research questions; inadequate samples; unreliable/inappropriate incidents and other problems meaning that the findings were not generalizable. Analysis errors were mainly due to misuse of statistics. Some were due to piecemeal analysis. Thirty-two of 55 studies had research design problems that invalidated their findings. Ellis *et al.*[2] assessed clinical supervision research from 1981 to 1993 against major methodological validity threats. They identified numerous methodological problems which they say are probably due to a shift to 'pragmatic' field studies research and argue that 'The three central remedies [to improve the research] are explicating theory, defining constructs and formulating unambiguous hypotheses' (p. 45).

Although many of the studies had clear hypotheses, very few defined constructs or made any theoretical linkages.[3] Measurement of the supervision process and supervision outcomes is difficult;[4,5] most of the instruments are standardized self-report measures relying on the perceptions of supervisee, supervisor and client. These present a major methodological problem in deciding, how, if at all, self-reported changes or improvements affect client outcomes.

The literature searches identified approximately 300 relevant papers and books. Much of the empirical work was small scale, exploratory and qualitative. Hence it was neither appropriate to develop strong inclusion criteria for this review nor possible to perform meta-

Key learning points

- We suggest the following definition of supervision for medicine: the provision of monitoring, guidance and feedback on matters of personal, professional and educational development in the context of the doctor's care of patients. This would include the ability to anticipate a doctor's strengths and weaknesses in particular clinical situations in order to maximize patient safety.
- There is evidence that supervision has a positive effect on patient outcome and that lack of supervision is harmful for patients.
- The quality of the relationship between supervisor and trainee is probably the single most important factor for effective supervision.
- Current supervisory practice in medicine has little empirical or theoretical basis.

Table 1 Databases searched and search terms used

Database	Subject areas	Search terms
MEDLINE	Medicine and health care	1992 onwards. Clinical supervision, teaching methods and supervision; teaching standards and supervision; clinical competence and supervision; mentoring; preceptorship; resident supervision.
Cinahl	Nursing and allied health	Supervision; clinical supervision.
British Education Index (BEI)	Education	Supervision; clinical supervision.
ERIC	Education	Supervision; clinical supervision.
International ERIC	Education	Supervision; clinical supervision.
Socfile	Sociology including social work literature	Supervision; clinical supervision.
PsychLit	Psychology	Supervision; clinical supervision.

analyses. Furthermore, no other large-scale, interdisciplinary review (nor any review of supervision in medicine) was found. This review will have an additional bibliographic function. The approach adopted was to examine the literature to identify what it could contribute towards answering the following questions:

- What are the understandings and definitions of supervision and its purposes?
- What is the empirical basis for supervision.
- What are the theoretical models of supervision?
- How is supervision delivered – what is its structure and content?
- Is supervision effective and how can this be determined?
- What skills and qualities do effective supervisors need?
- What training do supervisors need and how can its effectiveness be determined?
- Does the literature describe any other issues and difficulties?†

Understandings and definitions of supervision and its purpose

Most definitions of supervision emphasize promoting professional development and ensuring patient/client safety.[6–13] Emphases vary according to professional ethos. Supervision is usually understood as a distinct intervention which is partly hierarchical and evaluative[14–16] although there is some debate, mostly in nursing, about whether a supervisor should also be a manager.[17–21] There is similar debate as to whether the supervisor should also be the assessor.[22,23] In some management literature supervision is seen as a form of quality assurance.[24,25]

Definitions of supervision embody understandings about its purposes and functions. Probably the most influential formulation of the functions of supervision in the UK literature is that of Bridget Proctor[26] who outlined three functions of supervision (based on those defined by Kadushin[27]) – normative (administrative), formative (educational), and restorative (supportive). The latter's work was empirically based whereas Proctor's was not. This idea of three functions or roles of supervision – management, education and support – is reflected across professions; for example, medicine[23]; nursing[28–31]; social work[27]; educational psychology[32,33] and teaching.[34]

Various UK documents relating to postgraduate medical education training give guidance on supervision but not a definition.[35–37] Elements in this guidance include ensuring the safety of the trainee and patient in the course of clinical care; ensuring an appropriate level and amount of clinical duties; monitoring progress; feedback on performance, both informally and through appraisal; initial and continuing education planning; ensuring provision of careers advice.

A summary is presented in Table 2.

Theoretical models of supervision

There is little discussion of theoretical models in the medical literature although Bowen and Carline[38] argue that social learning theory describes the process of professionalization. Green[39] used Schmidt *et al.*'s[40] theory of clinical reasoning to develop a theoretical account of effective clinical psychology supervision as contributing to the experiential learning cycle. Most models, certainly in the nursing literature,[19,41–43] tend to be narrative and philosophical with little or no empirical basis.[44] Most supervision models support an instrumental rather than a questioning approach.[45,46]

Counselling, psychotherapy, social work and nursing sources contain most discussion of models and theoretical approaches to supervision.[47–50] The content and style of supervision will be affected by whatever model is adopted. Counselling and psychotherapy literature offers various process and developmental models[16,51–56] indicating that supervision needs vary according to the trainees' experience and level of training. There is some

Table 2 Understandings and definitions of supervision and its purpose – summary

There appears to be general agreement that the essential aspects of supervision are that it should ensure patient/client safety and promote professional development.
There is also general agreement that supervision has three functions – educational, supportive and managerial or administrative.
On the basis of the literature review we suggest the following definition of supervision for medicine: the provision of monitoring, guidance and feedback on matters of personal, professional and educational development in the context of the doctor's care of patients. This would include the ability to anticipate a doctor's strengths and weaknesses in particular clinical situations in order to maximize patient safety.

†Note on terms: Supervisee: across the professions not all those supervised are defined as trainees, some are also novice, or indeed expert, practitioners. The term supervisee is frequently used in the literature and is used here where necessary. Patients/clients: used as an overarching term to refer to all those (excluding colleagues) with whom professionals work.

empirical support for this idea although there have been few empirical tests of theoretical models of supervision.

Glickman's Developmental Supervision approach suggests the approach must be relevant to the trainees conceptual level. This was tested[57] as part of an extensive programme to improve the teaching of physics, mechanics and electronics, that included personalized supervision for the participating teachers, further training in their academic discipline and the provision of teaching materials. The supervision approach was varied according to the researchers' assessment of the teacher's conceptual level (based on their ability to define and solve problems) – where this was low a directive approach was used; where the conceptual level was medium a collaborative approach was used and where it was high a non-directive approach was used. The authors found both quantitative and qualitative changes in the students and concluded that the supervision process should be matched to the conceptual levels in the context of the school system, programme goals and needs. There are some supporting findings from work on counselling and psychotherapy students.[58]

This section is summarized in Table 3.

Availability, structure and content of supervision in health care professions

Supervision can occur 'on the job', usually while a practical task is being carried out; informally; in a one-to-one meeting; in peer supervision; in group supervision (with or without a facilitator); and in networking (where not all participants work in the same place and/or in the same profession).[48,59]

Availability

Surveys have found that supervision in the UK is inadequate – of pre-registration house officers (PRHOs);[60] of hospital vocational training for General Practitioners (GPs);[61] of senior house officers (SHOs) in the Out-patient department although they were satisfied with supervision on the ward.[62] There is wide variation beyond individual variations in learning in the amount of supervision received by surgical SHOs and registrars before they operate unsupervised.[63] Psychiatry trainees do not always receive the stipulated minimum supervision[64,65] and are not always satisfied with levels of supervision.[66] Problems with the extent and availability of supervision have also been identified in other professions, for example nursing;[67] educational psychology[68,69] and social work.[70]

Structure and content of supervision

The environment in which learning takes place profoundly affects what is learnt and the learners' responses; clinical settings which are considered to have a positive orientation to teaching are also usually seen 'to provide high quality supervision, good social support, appropriate levels of autonomy, variety and workload'[71] (p. 706).

Generally, feedback is perceived positively by trainees.[70,72] A questionnaire survey of SHOs and their working conditions found that the better the perceived feedback the more competent the SHO felt, the less overwhelmed by responsibility they were and the better their relationship with senior staff.[73]

There is a disparity in supervisors' and trainees' views about the amount of time spent on case review. Trainees thought too much time was spent on this at the expense of theoretical, career and teaching issues. Therefore the supervision relationship should begin with discussion about structure, systematic review, planning time to cover all areas, deciding who is responsible for raising each topic and how and when the supervision process will be reviewed.[65] Supervision of Specialist Registrars (SpRs) should have ground rules, be uninterrupted, be flexible, have learning objectives, include record keeping and liaison with the programme director. Its content should encompass clinical management, teaching and research; management and administration; pastoral care; interpersonal skills and personal development.[15,74] Ritter *et al.*[75] argue that the supervision contract is necessary to create a formal structure and continuity. The contract should include such issues as the frequency and

Table 3 Theoretical models of supervision – summary

Various models are presented in the psychotherapy, social work and nursing literature.

Most models stress the need to use supervision approaches that are appropriate to the trainee's level of experience and training. There is limited empirical support for this proposition.

There are no adequate theoretical accounts of supervision in medicine; such an account of supervision in medicine would draw on ideas developed in adult learning theories, experiential and work-based learning as well as understandings about apprenticeship. The problem-based learning approach could also have relevance.

duration of supervision, appraisal and assessment, goal setting, focus and written requirements.[28,76]

Reflective practice[77] is frequently cited in health care literature and various authors[78–82] argue that reflection has a central place in supervision in order to examine any experience to identify its essential features. However, Fowler[83] cautions that total reliance on reflection may not always be appropriate in supervision because beginners need direction.

Juhnke[84] advocates solution-focused supervision for novice counselling students using a self-report questionnaire and initial supervision meetings to establish their repertoire of skills, and identify specific goals. Sessions are used for the supervisee to identify their successful intervention behaviours and decide how to continue using and developing these behaviours. Laker[85] uses three empirically determined principles of effective teaching (academic learning time, response presentation and performance feedback) as the basis for feedback to student teachers, together with comments on their class management and encouraging them to reflect on practice.

A summary is presented in Table 4.

Effective supervision

The ultimate purpose of supervision, whether stated or implied, is to improve patient/client care/experience. Therefore, improvements in outcomes for patients/clients are one major test of effective supervision. However, demonstrating that a particular supervisory intervention has a direct effect on the patient/client is extraordinarily difficult because of the multitude of other variables that could have an effect. Consequently, some researchers have attempted to side-step this cause/effect difficulty by examining the effects of supervision on the trainee/supervisee. There are a significant number of empirical studies purporting to identify the effects of supervision on trainees, clients or both.

Medicine: empirical studies of effects of supervision on patients

There is quantitative evidence that supervision can have an effect on patient outcome. Review evidence[86] suggests that increased deaths are associated with less supervision of junior doctors in surgery, anaesthesia, trauma and emergencies, obstetrics and paediatrics. Therefore patient care suffers when trainees are unsupervised even though some trainees claim to benefit from the experience that lack of supervision gives them. Furthermore, unsupervised experience can lead to the acceptance of lower standards of care because the trainee may not learn correct practice without appropriate supervision.

In the USA, strong evidence for the importance of direct supervision was obtained by comparing physicians' own findings about patients with ratings of their residents' reports and history taking, assessment of severity of the patients' illness, diagnoses, treatment and follow up plan.[87] When physicians themselves saw the patients their assessments of the residents were more critical. Patients were seen as more seriously ill, there were frequent changes in diagnosis and management and physicians rated seeing the patient themselves as very valuable. There were some acknowledged weaknesses in the study design (it was not a randomized trial, and changes in treatment were often minor).

The effects of supervision on quality of care was examined in five Harvard teaching hospitals.[88]

Table 4 Availability, structure and content of supervision – summary

There are wide variations in the frequency and amount of supervision for medical trainees in the UK. Where guidelines exist they are not always met.

Problems with the extent and availability of supervision have been identified across professions.

The learning environment is important.

Supervision can occur 'on the job', usually while a practical task is being carried out; informally; in a one-to-one meeting; in peer supervision; in group supervision; and in networking.

Feedback has been found to be very important for trainees.

Most authors agree that;

- Supervision should be structured; supervision contracts can be useful and should include detail about frequency, duration and content of supervision; appraisal and assessment and objectives.
- The content of supervision meetings should be agreed and learning objectives determined at the beginning of the supervisory relationship.
- Supervision should include clinical management; teaching and research; management and administration; pastoral care; interpersonal skills; personal development; reflection.

There is little research into the quality of supervision and its content.

Residents' compliance with process-of-care guidelines (assessed by record review), patients' satisfaction and patients' reported problems with care were measured. Over a 7-month period all 3667 patients presenting with abdominal pain, asthma/COPD, chest pain, hand laceration, head trauma and vaginal bleeding were included; residents were unaware of the purpose of the study. All patients were given a questionnaire to complete on site and some were randomly selected for a 10-day follow up interview. Analyses were adjusted for case mix, degree of urgency and chief complaints. Benefits of direct supervision applied regardless of the level of resident training and urgency of case. The authors acknowledge limits to the generalizability of the study because the five hospitals lacked emergency medicine training programmes, there may be between-hospital variations in quality and frequency of supervision; patients were not randomized to different groups and there was no control for the speciality of the attending physician.

In the trauma service in one hospital, faculty involvement was investigated, over a 12-month period, for surgical procedures and all resuscitations.[89] Faculty involvement was ranked on a five-point scale and data were matched to outcomes of death or complications reported in the weekly departmental complications conference. Results suggested that supervision had a greater impact where the supervisee/trainee was less experienced. The authors concluded that close supervision of general surgical residents during rotations to subspecialties is important and that effects of supervision can be evaluated by using probability of trauma survival data. They also argue that there is a need to establish measurable standards of supervision.

Other professions: empirical studies of effects on clients

Social work

Social workers' effectiveness and the effects of supervision on client outcomes were investigated in two geographically separate teams.[90] Cases were classified as 'risk', 'service delivery' or 'advice' and outcomes as resolved, partially resolved or not resolved. Results demonstrated that client outcomes varied according to the social workers' experience/qualifications and supervision; more risk cases were resolved with additional supervision than without and that less qualified social workers favour 'middle ground' decisions. A similar study found that client focused supervision 'appeared to increase staff use of basic communication, problem-solving and relationship skills and to improve client outcomes'[91] (p. 512).

Teaching

Targeted observation of teaching and provision of feedback resulted in improved teaching skills and increased quality and quantity of interactions with pupils.[92]

Psychotherapy

A literature review[93] found evidence of the effectiveness of supervision, including evidence that the quality of supervision relationships effects outcome evaluations. Psychotherapy clients (237) self-rated improvement was significantly greater when the supervisor and supervisee (i.e. the client's psychotherapist) theoretical orientations were congruent.[94]

Empirical studies of the effectiveness of supervision on trainees/supervisees

Most studies examining supervision from the trainees' perspective use self reports, some also include the supervisors perspective. Although their methodology is not particularly robust,[95] there are areas of congruence that indicate some ways in which supervision can be effective. One methodological problem is that although trainees report satisfaction, it might not affect their performance or be due to good supervision. Furthermore, student and supervisor emphases can be different.[96] This problem was addressed[39] by asking trainee clinical psychologists who benefited from particular supervision incidents – the trainee, or the client, or the trainee and client or someone else.

Residents who were more closely supervised (by being directly observed and observing their physician more) during continuity clinic experience, gained primary-care skills more rapidly than those who were supervised by reporting back to the physician.[97] There is little work relating to the trainees' behaviour in supervision. Medical students have strategies to appear as competent as possible which can conflict with opportunities to learn[98] because they 'perceived one-to-one consultations as problematic and risky situations in which they struggled for a balance between the opportunity to learn and the needs to perform in and manage the consultation process'[99] (p. 587).

There is compelling evidence that postgraduate trainees engage in similar behaviours.[100] Clearly some defensive behaviours are likely to have a negative effect on the supervision process.

There is evidence from literature reviews that supervisors can affect trainees – in counselling and psychotherapy;[101 102] in teaching;[103,104] in nursing;[105] and in clinical psychology.[106] Nursing preceptors had more skills apparent at higher academic levels of training.[107,108]

Giving teachers focused feedback resulted in an immediate increase in levels of performance and motivational feedback given to pupils,[92] however, these effects seem to dissipate very quickly. Effects of self supervision (student teachers scored videotapes of their classes) were compared with collaborative supervision; the collaborative model helped students increase the number of positive, specific interactions that they had with their pupils but self assessment had little effect.[109] Five factors that facilitated change in the supervised teacher's thinking and behaviour were identified using case studies.[110] The factors were: developing a collegial relationship; teachers controlled the products of supervision; continuity over time establishing a relationship; using supervisor's observations to provide focused data for reflection; and reflection. Most impetus for change occurred when actual events confounded the teachers' thinking/understanding. Behavioural changes appeared relatively early but changes in thinking took longer. Similarly in psychotherapy, training skills were acquired fairly quickly, but the ability to make treatment decisions and conceptualize cases developed more slowly and required supervision.[101]

Provision of advice, acting as a role model and feedback was crucial to effective clinical psychology supervision and differentiated it from ineffective supervision.[111] 'Excellent' psychotherapy supervisors[112] let students 'tell the story', encouraged them to understand the patient, partly by using speculation and used fewer technical words. Trainee-identified gains from supervision include – strengthened confidence, refined professional identity, increased therapeutic perception, increased ability to conceptualize and intervene, positive anticipation, strengthened supervisory alliance;[113] receiving constructive feedback, recognizing personal issues and feeling valued and respected.[68]

Trainee ratings of the effects of supervision depend on its perceived quality;[114] the amount of supervision social workers received was significantly correlated with their satisfaction with supervision.[115]

The supervisory relationship 'was a better (if not significantly better) predictor of client outcomes than supervisory skills or helpfulness'[116] (p. 71).There are similar findings across professions.[14,24,117–120] The section is summarized in Table 5.

Skills and qualities of effective supervisors

Effective supervisors give their supervisees: responsibilities for patient care; opportunities to carry out procedures; opportunities to review patients; involvement in patient care; direction and constructive feedback.[121] In the UK, the PRHO supervisor needs basic teaching skills, facilitation skills, negotiation and assertiveness skills, counselling and appraisal skills, mentoring skills, knowledge of learning resources and certification requirements.[122, 123]

Involving residents, giving them responsibility and opportunity to carry out procedures are the most important aspects of the supervisors' role.[124] During their residency supervisors became seen more as colleagues and residents considered they became more self directed. Radiography students considered the most important supervisor characteristics to be the supervisors' teaching skills and techniques, their interpersonal style and professional competence.[125]

There is agreement across schools of thought in counselling and psychotherapy about what constitutes good and bad practice.[126] Effective supervisors have empathy, offer support, flexibility, instruction, knowledge, interest in supervision, good tracking of supervisees, and are interpretative, respectful, focused and practical.[127 128] Ineffective supervisory behaviours include

Table 5 Effective supervision – summary

There is evidence that

- Supervision has a positive effect on patient outcome and that lack of supervision is harmful to patients.
- Direct supervision can effect positively patient outcome and trainee development, particularly when combined with focused feedback. It seems to help trainees gain skills more rapidly.
- Supervision has more effect when the trainee is less experienced; more complex cases may need more supervision.
- Self supervision is not effective; input from a supervisor is required.
- The quality of the supervisory relationship is extremely important. Especially important are continuity over time, supervisees control products of supervision (supervision may only be effective when this is the case) and that there is some reflection by both participants.
- Trainees may try to manipulate the supervision process in ways which conflict with opportunities to learn and that may not be beneficial to patients.
- Behavioural changes can occur relatively quickly as a result of supervision whereas changes in thinking and attitude take longer. This is particularly important where there are relatively frequent changes of supervisor.
- Trainees are able to identify many gains from supervision.

> 'Rigidity, low empathy, low support, failure to consistently track supervisee concerns, failure to teach or instruct, being indirect and intolerant, being closed, lacking respect for differences, being noncollegial, lacking in praise and encouragement, being sexist, and emphasising evaluation, weakness and deficiencies.'[128] (p. 168)

Helpful supervision events, rated both by supervisors and supervisees, include direct guidance on clinical work (trainees found it more helpful if they were encouraged to give their opinion early); joint problem solving; reassurance (not commonly given) and theory practice linking.[129] Unusually, these supervisors consistently rated feedback as more important than trainees who found directive supervision unhelpful. Supervisor trainers identified provision of advice, providing a role model and feedback as crucial to effective supervision.[111]

Empirical studies of the characteristics of effective clinical teachers have relevance to the skills of supervisors.[130–133] Such studies usually implicitly define effective teaching on the basis of positive ratings from students/trainees and/or peers.[134] Good or effective clinical teachers need knowledge of medicine and patients (which confers clinical credibility); context; learners; general principles of teaching including the importance of feedback and evaluation; case based teaching scripts.[135–140] Good/bad clinical teachers are differentiated as to encouraging communication between teacher and student; appearing to enjoy teaching; being well organized; being a positive role model; facilitating learning and availability.[141] More generally, a teachers' interpersonal behaviours, planning and preparation and the ability to run a session well are key factors in good teaching.[142] Residents' ratings of facilitatory behaviours such as regard, empathy and congruence were significantly correlated with their ratings of the learning value of the rotation.[143]

Consideration needs to be given to the use of particular supervisory strategies.[22,138,144–148] Supervisors were concerned to preserve interns' self-confidence and esteem, their relationship with the intern and to use the principles of active learning.[149] Consequently, they tended to use covert strategies to correct the interns, sometimes they would reframe questions so that the wrong answer became correct or they treated wrong answers as possible but needing further thought. The resultant lack of direct feedback could mean that the learner remains unaware of errors and their weaknesses.

A summary of this section is presented in Table 6.

Supervisor training and its effectiveness

Training for supervisors is valuable and necessary because of changes in professional education.[125,150–153] Some authors argue that the supervisees need training[154] or a daily 'training menu'.[155] Training is usually evaluated by self report/course evaluations rather than by effects on patent/client care.

Supervisor training courses are often not empirically or theoretically based. There are some training courses that are based on assessment of educational supervisors' needs.[122] Nursing, social work and teaching literature includes course descriptions emphasising understanding – the concept and purposes of supervision; trainee's training; structure and types of supervision including use of supervision contracts; giving and receiving criticism; counselling skills and interpersonal dynamics.[126,156–163]

Some criteria for supervisors have been established; in one hospital nurses are only accepted for training if they can demonstrate (by self assessment and manager's evaluation) they have appropriate teaching and interpersonal skills and professional knowledge and attitudes.[164] Future psychiatry consultants may need sufficient continuing professional development (CPD) points to qualify as an educational supervisor.[74]

Evaluation of training

Changes in supervisors' behaviour, as assessed by themselves and their trainees were demonstrated in

Table 6 Skills and qualities of effective supervisors – summary

Empirical and review evidence indicates that
Supervisors need to be clinically competent and knowledgeable; to have good teaching and interpersonal skills.
The relationship between the supervisor and trainee changes as they gain experience.
Helpful supervisory behaviours include giving direct guidance on clinical work, linking theory and practice, joint problem solving and offering feedback, reassurance and role models.
Trainees need clear feedback about their errors, corrections must be conveyed unambiguously so that trainees are aware of mistakes and any weaknesses they may have.
Ineffective supervisory behaviours include rigidity; low empathy; failure to offer support; failure to follow the supervisees concerns; not teaching; being indirect and intolerant and emphasising evaluation and negative aspects.
Assessment of supervisors' skills and selection of supervisors are not addressed.

speech-language pathology and audiology.[165] Supervisors received 10 hours of training over 8 weeks which was intended to increase the use of indirect supervisory behaviours. Previous research had demonstrated the importance of indirect styles and found that inexperience leads to a more direct style. Indirect, direct and preparatory supervisory behaviours were rated before and after training. Supervisors and trainees rated supervisors as using more indirect behaviours after training.

The Norwegian Medical Association offered an extensive training programme to senior hospital consultants because of changes in specialist training.[166] This was evaluated in two postal surveys. The training had affected motivation, increased awareness about learning need and increased interpersonal and communication skills; institutional support of the process had been vital.

Table 7 summarizes this section.

Other supervision themes

Time

There are consistent reports of difficulties in finding time for supervision. However, time taken in supervision may be counterbalanced by more effective working;[167–169] residents ordered more tests when they were less supervised.[170] Planning and time-management strategies can help more effective and efficient clinical teaching.[171, 172] Extra time needed for students has been costed[173] and optimal staff/student ratios in outpatients departments examined.[174]

Race, gender and sexuality

Supervision is a context-bound activity like any other. Most supervisory relationships have a *de facto* power relationship between the supervisor and trainee. Individual social position, particularly race, gender, social class and sexuality, also confers relative power. Issues around the operation of racism, sexism and heterosexism and homophobia are well documented; specifically there is extensive evidence demonstrating the relatively subordinate positions of women and black people throughout the professions at all levels. It is therefore reasonable to assume that these issues could affect the supervisory relationship.

A number of studies have demonstrated or argued that mentoring (by someone from a similar background) is an effective way of providing role models and support for black people, women and non-traditional students.[175–179] Matching is an important issue in mentioning and there is a need for further research on matching of personal and social characteristics.[119, 180]

Arguments are made from personal and theoretical perspectives that gender dynamics affect counselling and social work supervision.[181–183] Quantitative studies on the effects of gender are inconclusive.[184, 185]

Supervisors need to understand issues of power and social stratification including institutional racism;[186] there are some training programmes intended to address aspects of multicultural working.[187, 188] Transcultural relationships can have transforming effects[189] but there is also a need for culturally sensitive supervision.[190]

Long[191] and Russell and Greenhouse[192] discuss some of the issues raised by heterosexism and homophobia in counselling and psychotherapy supervision.

Conclusion

The evidence generated from this review has been summarized at the end of each section. It only partially answers our original questions and suggests others. The quality of supervision relationship is probably the single most important factor for the effectiveness of supervision, more important than the supervisory methods used. Feedback is an essential component of supervision and must be clear so that the trainee is aware of their strengths and weaknesses. It is important that the trainee has some control over and input into the supervisory process. Finding sufficient time for

Table 7 Supervisor training and its effectiveness – summary

The need for training is widely accepted and there is some evidence that it can be effective.
Training probably needs to include at least some of the following: understanding teaching; assessment; counselling skills; appraisal; feedback; careers advice; interpersonal skills and understanding the concept and purposes of supervision.
There may be a need for criteria for entry into or satisfactory completion of supervisor training courses.
There is some evidence that training can have a positive effect on supervisors.

Table 8 Potential research questions

In what circumstances is supervision necessary?
What sort of supervision should this be?
What is the optimal length and frequency for supervision?
How can the quality of the content of supervision be ensured and developed?
How can effective supervision be assessed?
What additional training do supervisors need?

supervision is a problem for which there are currently insufficient solutions.

Existing research is concentrated more on one to one supervision meetings than 'on the job' supervision and work-based learning although there are some studies that demonstrate the effectiveness of direct supervision. The quality of the content of supervision is an important issue not addressed in the research literature. Another area requiring more investigation is that of trainee behaviours and attitudes towards supervision; some behaviours that are detrimental to patient care and learning. There are no clear answers to specific questions such as:

- in what circumstances is supervision necessary?
- what sort of supervision should this be?
- what is the optimal length and frequency for supervision?
- how can the quality of the content of supervision be ensured and developed?
- how can effective supervision be assessed?
- what additional training do supervisors need?

Current supervisory practice in medicine has very little empirical or theoretical basis. This review demonstrates the need for more structured and methodologically sound programmes of research into supervision in practice settings so that detailed models of effective supervision can be developed and thereby inform practice. Such research programmes need to address identified methodological weaknesses (including lack of a conceptual base; absent/unclear research questions; inadequate samples; unreliable/inappropriate incidents and findings that are not generalizable); in particular they will need to formulate clear hypotheses, define constructs and make theoretical linkages. There is also a need to establish ways of assessing the effect of supervision on patient/client outcomes (Table 8).

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