Journal of Psychiatric and Mental Health Nursing, 2014, **21**, 834–840

A guide to critiquing a research paper on clinical supervision: enhancing skills for practice

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Keywords: clinical supervision, critiquing skills, effectiveness, quantitative research, research critique

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Accepted for publication: 30 March 2014

doi: 10.1111/jpm.12161

Accessible summary

- This paper aims to do two things: First, we want to show the reader how to critique a published research paper. The second aim is to take the reader through the various stages of critiquing using a guide.
- In the paper, we explain at each stage the research terms that can deter the novice critic from reading and understanding the findings in research.
- From this we hope the reader will have developed an ability to do their own critiquing, so that they are better informed about the quality of research that influences nursing practice.

Abstract

In this paper we have taken a previously published paper on the effectiveness of clinical supervision and undertaken a systematic critique of the merits of this quantitative research using a recognized critiquing framework compiled by Coughlan *et al.* (2007). Our purpose was twofold: First, we wanted to demonstrate the various stages of critiquing a paper in order that the reader might make an informed judgment of the quality and relevance of the research. The reader/critic is then able to decide whether to use this research in their own practice. Second, we wanted to assist the reader to develop their own critical, analytical skills through methodically appraising the merits of published research. Nursing as an evidence-based profession requires nurses at both pre- and post-registration level to be able to understand, synthesize and critique research, this being a fundamental part of many nursing curricula. These have become core skills to acquire because implementing up-to-date evidence is the cornerstone of contemporary nursing practice. We have provided in this paper a template for critiquing, which is based on our combined experiences as academics specifically in teaching at the bachelor, master's and doctoral levels.

Introduction

Understanding, synthesizing and critiquing research is a fundamental part of all nursing curricula at both pre- and post-registration (NMC 2011).This requirement has emerged as the cornerstone of evidence-based nursing practice. Therefore developing and maintaining skills of critiquing research has become a core skill. The purpose of this paper is to show how two nurse academics have taken a published research paper and systematically appraised it using the critiquing framework by Coughlan *et al.* (2007). The paper chosen to be critiqued was co-written by one of the authors of this paper and is titled 'Factors Influencing the Effectiveness of Clinical Supervision' by Edwards *et al.* (2005) published in the *Journal of Psychiatric and Mental Health Nursing*.

This paper reported on findings from a study conducted with community mental health nurses (CMHNs) in Wales which aimed to identify the factors that may influence the effectiveness of clinical supervision in practice. This was the first paper of two published from a study exploring clinical supervision and burnout. High levels of stress and burnout

had been found in this population in previous studies conducted by the same authors (Burnard *et al.* 2000, Edwards *et al.* 2000).

Our rationale for choosing to critique this quantitative paper is that we felt the topic would be relevant to nurses who are considering having clinical supervision and for managers thinking of implementing this in their service/organization. If the factors that make clinical supervision effective as found in this paper are valid and reliable, then this will prepare the supervisee for the process and facilitate the manager to implement clinical supervision in a more effective way. Although clinical supervision is deemed a necessary adjunct to professional practice, many areas of practice pay lip-service to implementing it in a formal, structured way.

Developing and maintaining the skill

A common task on many academic modules includes the need for students to learn how to critique research articles. This task is set at different levels and in varying specialities; nevertheless the principles remain the same. This paper aims to demonstrate how a critique could be undertaken using a specific research article and a recognized critiquing framework.

Using a framework

This critique will employ a critiquing tool developed by Coughlan *et al.* (2007), although other tools will be drawn upon where more depth or explanation is required. The Coughlan *et al.* (2007) tool is specific to quantitative research and divides the critique into two sections for clarity. The two sections and their criteria are now laid out and the article critiqued accordingly.

Section one – elements influencing the believability of the research

The believability of the research is important, but inevitably this section will be brief as the main critique will focus on the robustness of the research methodology and methods.

Writing style

Is the report well written – concise, grammatically correct, avoid the use of jargon? Is it well laid out and organised?

The paper is written for a relatively specialist audience who would likely be interested in clinical supervision. Even so, jargon is kept to a minimum with a concise style and correct grammatical phrasing.

Author

Do the researcher(s) qualifications/positions indicate a degree of knowledge in this particular field?

A brief Google search on the researchers showed that they have varied expertise which bodes well for a credible research study. It retrieved a wealth of publications relating to this topic by the researchers, which indicates standing in the field. A more in-depth search revealed their different theoretical perspectives and underpinning philosophies ranging from positivist to constructivist/interpretive standpoints (for further reading see Jolley 2013). This informs the reader of potential biases of the research from inception to dissemination. The article will be critiqued on its own merit, keeping in mind how the perspectives can influence the reader's interpretation of the research (Moule & Goodman 2009).

Report title

Is the title clear, accurate and unambiguous?

The title is clear, but could be misleading. The reader is directed to the section on Operational Definitions below.

Abstract

Does the abstract offer a clear overview of the study, including the research problem, sample, methodology, findings and recommendations?

The structure and length of this section is normally stipulated by the journal. Notwithstanding this, as suggested by Parahoo (2006), the abstract has successfully provided a short summary of what the research was about, how it was carried out and what was found.

Section two – elements influencing the robustness of the research

Purpose/research problem

Is the purpose of the study/research problem clearly identified?

Yes, but we would refer the reader to the section headed Operational Definitions.

Logical consistency

Does the research report follow the steps of the research process in a logical manner? Do these steps naturally flow and are the links clear?

Yes, the article follows a recognized convention of research reporting using a logical, linear recommended process of introduction, method, results and discussion (Sollaci & Pereira 2004).

Literature review

Is the review logically organised? Does it offer a balanced critical analysis of the literature? Is the majority of the literature of recent origin? Is it mainly from primary sources and of an empirical nature?

The literature review is incorporated into the introduction rather than being in a separate section, which can mislead those new to critiquing. The study was published in 2005, and estimating that it would take approximately one year from submission to publication, it would be expected that literature published up to 2003 could be included in this section, which was indeed the case (p. 406). To confirm this, a brief search by the authors was undertaken of the term 'clinical supervision' for peer-reviewed research articles published from 1980 to 2003 in Cumulative Index to Nursing and Allied Health Literature which revealed 254 results, confirming that clinical supervision was increasingly being studied up to this time.

Critical analysis of the literature is balanced and centres on the lack of measurable evidence of the impact of clinical supervision. Three studies which address effectiveness of clinical supervision of varying methods and validity are cited, but the researchers claim that lack of a validated assessment tool has precluded accurate measurement of effectiveness of clinical supervision thus far.

Theoretical framework

Has a conceptual or theoretical framework been identified? Is the framework adequately described? Is the framework appropriate?

To be of use to the critic, any theoretical framework needs to be simple and explicit. This may be in the form of a theory which is a 'creative and rigorous structuring of ideas that project a tentative, purposeful and systematic view of phenomena' (Chinn & Kramer 1995, p. 72). This provides a 'hook' on which to place ideas and questions.

The use of a theoretical framework is often absent in published research using a quantitative approach because researchers have not linked their work to a specific theory (Polit & Beck 2006), because the research is pragmatic and would not be enhanced by theory (Moule & Goodman 2009) or because of journal word count restrictions (Boswell & Cannon 2014).

Proctor's model of clinical supervision (1986) loosely underpins this work (p. 408). However, it is not described in the study, and although more details on the model can be found elsewhere (Winstanley & White 2003), the reader is not directed to further work. This raises an important issue in that in order to fully critique research, the critic is commonly required to search additional sources for information beyond the research study. This may include other research or articles by the researcher. Boswell & Cannon (2014) advise a clear link between theory and the research question, but this is not explained by the researchers in this study (Edwards *et al.* 2005).

Aims/objectives/research question/hypotheses

Have aims and objectives, a research question or hypothesis been identified? If so are they clearly stated? Do they reflect the information presented in the literature review?

An overarching research question is posed on p. 407, which is followed by a very similar aim. They are both clear and concise, and are based on eliciting the factors that impact on the success/effectiveness of clinical supervision. The aim is operationalized into five specific measurable research questions which were derived from Winstanley's doctoral work (2000) and include the supervisor choice, session length, frequency of sessions, location and group versus one-to-one supervision.

Sample

Has the target population been clearly identified? How was the sample selected? Was it a probability or non-probability sample? Is it of adequate size? Are the inclusion/exclusion criteria clearly identified?

The whole population of 817 CMHNs in all National Health Service (NHS) Trusts in Wales was targeted, which would theoretically ensure representation (Maltby *et al.* 2010). The target population is considered an intellectually appropriate group for a survey. However, the response rate was 260 (32%), which casts doubt on whether a third of the population was sufficient to find a clinically or statistically significant effect (Maltby *et al.* 2010). The researchers specify potential reasons for the lack of recruitment in the limitations section. The distinction between statistical and clinical significance is an important one and is highlighted in the data analysis section.

Questionnaires were distributed directly by mailing potential participants with the questionnaire and consent form or indirectly through team leaders to the CMHN teams. Reminders were sent through the same route which is deemed good practice to minimize the number of non-responders (Polit & Beck 2006). All CMHNs in Wales were eligible, but they were only allowed to complete the questionnaire if they had completed six or more clinical supervision sessions in their present or previous posts (presumably to ensure that they were sufficiently experienced with clinical supervision). Therefore, this limits the population to a number that is essentially unknown. It is difficult

to know whether the 32% response rate is low or indeed very good.

Timing of the survey was stated by the researchers as a limitation and is likely to have had an impact on response rate. Potential participants were undergoing a period of change and completing a questionnaire may not have been a priority at that time. The researchers made an effort to locate the sample, but relocation of teams meant that they were dependent on managers to forward the questionnaires. The authors noted that the researchers were unable to comment on the characteristics of those not responding and are therefore cautious about generalizing their findings.

Ethical considerations

Were the participants fully informed about the nature of the research? Was the autonomy/confidentiality of the participants guaranteed? Were the participants protected from harm? Was ethical permission granted for the study?

Coughlan *et al.* (2007) follow Moule & Goodman (2009) in that they highlight autonomy, confidentiality, protection from harm and permission for the study as key ethical principles to consider in research.

Autonomy is a primary ethical principle and potential participants may have maintained this by not responding to the request to consent and return the questionnaire (see limitations section). Beneficence may have been unwittingly compromised as the research was stated to have been an additional burden as workplace change occurred for many of the population at the time of the research/data collection. However, research is usually planned to occur within a given timescale and this timing may have been unavoidable. Readers were reassured that confidentiality was maintained as study data were stored according to university regulations (Edwards *et al.* 2005). Having studied a copy of the clinical supervision questionnaire (Winstanley & White 2003), it is judged unlikely that harm, or maleficence, would have come to any of the participants in answering the questions posed.

Regarding permission, all UK NHS research requires ethical approval from a research ethics committee (NRES 2013). A brief statement in the text confirms this. Brevity is an accepted, common approach in articles with restricted word limit and the critic is normally left to judge whether the key ethical principles associated with research have been met. Instructions for authors on the publisher's website verify that articles would only be accepted if an appropriate NHS ethics review had been undertaken. To confirm that ethical and legal parameters were met for the article, the Royal College of Nursing ethics guidelines (RCN 2009) and Research Governance Framework for Health and Social Care (DH 2005) were accessed.

Operational definitions

Are all the terms, theories and concepts mentioned in the study clearly defined?

The term clinical supervision is key to this paper and was defined at the start using the Department of Health definition (1993), and although it is debated and compared with other definitions a decade later, it nevertheless remains a constructive definition (Winstanley & White 2003).

The title centres on the term effectiveness which is not defined. Effectiveness is defined as 'the degree to which something is successful in producing a desired result; success' (Oxford Dictionary 2012). The result desired, or effectiveness will differ depending on the stakeholder, for example a supervisor may think that clinical supervision is effective if it boosts morale of the supervisees, whereas a manager may measure effectiveness in more economic forms. In this study, the literature review claims that management boards of NHS Trusts will require measurable evidence of effectiveness of clinical supervision, and yet the studies cited, and indeed this research study refer to effectiveness from a clinical supervisee's perspective (Edwards *et al.* 2005). The reader is referred to the Discussion for more detail on this issue.

Methodology

Is the research design clearly identified? Has the data gathering instrument been described? Is the instrument appropriate? How was it developed? Were reliability and validity testing undertaken and the results discussed? Was a pilot study undertaken?

The research design is clearly outlined as a descriptive, quantitative survey (Edwards *et al.* 2005). Commonly a pilot study is undertaken to minimize the number of typographical or more fundamental errors (Parahoo 2006). In this case no pilot was performed which may have been because the questions were replicated from Winstanley (2000). As Boswell & Cannon (2014) advocate, the data gathered and analysed seemed to be trustworthy to enable the reader to be able to make decisions based on the evidence provided.

The main data gathering measurement tool was the Manchester Clinical Supervision Scale (MCSS). This is an internationally validated tool derived from the Clinical Supervision Evaluation Programme (Butterworth *et al.* 1997). It was developed 'to measure the effectiveness of clinical supervision *per se*'' (Winstanley & White 2003). In addition to this scale, professional data were gathered using a demographic questionnaire compiled by the researchers and, as is convention, this was not reproduced in the article.

Examining whether the tool 'truthfully measures what it purports to measure' (Boswell & Cannon 2014, p. 321) is

termed validity and is crucial to any instrument used in research. A brief history of the MCSS tool was provided on p. 406. To be an informed critic, it is often necessary to search specialist databases in order to locate copies of the actual data gathering instruments because traditionally these are not published alongside the article normally because of word limits or copyright restrictions (Maltby *et al.* 2010). The reader is directed to a full reproduction of the MCSS measurement scale which can be found in Winstanley & White (2003).

For further information on trustworthiness of the tool, Winstanley & White (2003) confirm to the reader that validation has developed from iteration. The tool has been refined, further validated and translated into other languages following this research and the reader is directed to Winstanley & White (2011) for further reading regarding this.

There are multiple types of validation or ways to verify that the tool measured what it set out to measure, the main ones being content-related, criterion-related and construct-related. Content-related validity is confirmed when the reader examines the questions in the MCSS and determines that it can be judged to measure the content of clinical supervision. This is also termed face validity (Moule & Goodman 2009). Second, criterion-related validity compares data collected with other measurement tools. However, measuring clinical supervision was a challenge for the researchers as it is a complex phenomenon. At the time of the research (Edwards *et al.* 2005), the MCSS tool was in its early stage of development plus there were no other tools to measure the effectiveness of clinical supervision and this remains the case.

Lastly, a measurement tool would have construct-related validity if it could be said to measure the exact construct of clinical supervision. In developing the MCSS, the researchers explain that an exploratory factor analysis was applied to ensure that only items statistically significant to clinical supervision were used on the scale. This reassures the reader that it was the construct of clinical supervision that was examined and not another, similar construct such as counselling.

Reliability focuses on consistency of the data measurement tool. The tool should be stable, producing for example the same results for measurement in one person over time (Moule & Goodman 2009). This is internal consistency and can be shown through test–retest reliability (administering the questionnaire on two occasions and comparing the results). It is the most popular way of determining reliability and the nearer the score to 1.0 the more reliable the test (Boswell & Cannon 2014). Once again the authors accessed another source as Winstanley & White (2003, p. 26) state that the 'intra-class correlation coefficients for test–retest reliability were all above 0.9'. Inter-rater reliability refers to the consistency of measurement between raters (or researchers). Edwards *et al.* (2005) did not mention reliability, given that at the time the use of the MCSS was at an exploratory stage. It would be helpful had the researchers commented to this effect.

Data analysis/results

What type of data and statistical analysis was undertaken? Was it appropriate? How many of the sample participated? Significance of the findings?

Data were presented in both tabular and narrative formats, which allows the reader to examine the tables and then to understand them via the narrative which explains their content. The actual results will not be reiterated in this paper, instead the reader is referred to the original paper (Edwards *et al.* 2005). The results section often concerns the novice critic when specific statistical tests are outlined and the detail of data analysis is presented.

Descriptive statistics simply describe data found in the research; for example, in table 1 the data summarizes the average scores for the seven factors identified in the MCSS (Edwards *et al.* 2005). Inferential statistics are more powerful than descriptive statistics in that they endeavour to find an association between two or more variables. These more complex inferential statistics are used in later tables where answers to the five questions posed by the researchers are sought. This is achieved by seeking a relationship between the five research questions and the MCSS scores.

P values are one of the most perplexing statistics for novice critics but are crucial to understanding whether a relationship between variables is present and above all whether statistical significance has occurred. *P* stands for probability, in this case the probability of the hypothesis, or research question, being 'true'. When setting the significance level, one has to be aware of type I and type II errors. A type I error would be to reject a true null hypothesis and a type II error would be to accept a false null hypothesis (Hazard-Munro 2005). If the significance level is set low, for example, at 0.01 instead of the convention of 0.05, then there would be only a 1% (1 in 100) chance that a significant result could occur by chance alone. This will make it more difficult to achieve a significant result and increase the risk of a type II error.

A level of significance is sometimes chosen by researchers, but generally a significant result means that there is a 95% chance that the hypothesis is true. This is normally expressed as a proportion or in this case 0.05. In this study, it is accepted that there is a risk that in 5% of cases the relationship is unproven, or that the hypothesis is unfounded. The larger the sample size the more statistical 'power' these calculations have (Hazard-Munro 2005).

Examples of positive *P* values, meaning that clinical supervision showed statistical significance, can be found in the end column of tables 2, 3 and 4. For example, the longer and more frequent the sessions, the more likely it is to show statistically the effectiveness of clinical supervision.

A non-significant result means that any relationship between the variables could have occurred by chance. An example of this can be found in table 5 where comparisons were made between one-to-one and group clinical supervision and no difference was found between the two delivery modes. It is worthy of note that statistically significant results do not equate to clinical importance (Hazard-Munro 2005). To translate statistical significance into clinical meaning requires the critical knowledge and wisdom of the practitioner. The MCSS uses a Likert response scale (Jolley 2013), with responses ranging from strongly disagree (0) to strongly agree (4), providing ordinal data. In this research, a number is allocated to the coding, but the numbers are limited to assigning a rank to a response. They cannot be calculated in a true numerical sense (Parahoo 2006).

The Kolmogrov–Smirnov one-sample test is used to determine whether data are normally distributed (Edwards *et al.* 2005). When this test was applied it showed a *P* value of 0.9, showing that data were not normally distributed, whereas data with a normal distribution would have a *P* value of equal or less than 0.05. Edwards *et al.* (2005) explain that although the median is the appropriate measure for central tendency, the mean and standard deviation were included for clarity.

As the data were non-normally distributed, or 'distribution free' data (Hazard-Munro 2005), weaker non-parametric tests were used including the Mann–Whitney *U*-test which was used for the ordinal data to compare two independent groups, in this case frequency and length of the clinical supervision session. Non-normal distribution of data was not highlighted by the researchers in their study limitations but is signalled by the use of a non-parametric test. The Kruskal–Wallis test was used correctly to compare more than two groups, in this case choosing a supervisor, location of sessions and number of sessions. Had the data been parametric, or normally distributed, analysis of variance (ANOVA test) would have been used (Hazard-Munro 2005).

Discussion

Are the findings linked back to the literature review? If a hypothesis was identified was it supported? Were the strengths and limitations of the study including generalizability discussed? Was a recommendation for further research made?

The findings are linked back to the literature and the studies cited are congruent with the date of the published article. The aim of the study was met in that the factors that influenced the effectiveness of clinical supervision for CMHNs were not only identified, but also explored. However, it could be argued that the factors were identified before the research commenced through the five research questions posed on length, frequency, choice of supervisor, location, one-to-one or group supervision. The findings from this study give the potential supervisee and supervisor confidence that following the process of structured formal clinical supervision either on a one-to-one or a group basis, at regular monthly periods, for an average of 60 minutes each time and where these sessions are held away from the workplace can enhance the outcomes. Choice of supervisor is also an important factor in that those CMHNs who choose their supervisor are more likely to build trust, establish a rapport, and seek advice and support on confidential and sensitive issues from that person.

Regarding strengths and limitations of the study, at the time of the research, the MCSS was in the earliest stage of its development. Nevertheless, this tool has been proven to be a valid and reliable instrument to measure those factors that can influence the effectiveness of clinical supervision in clinical practice (Winstanley 2000, Winstanley & White 2003, Winstanley & White 2011).

The inclusion of Proctor's model as a theoretical basis for the research appears to be extraneous and does not serve the purpose of drawing out knowledge as far as can be ascertained by this critique. The research was based on the five questions used by Winstanley (2000), but it also drew on seven factors within the 36 items of the questionnaire. The questions and factors intersected in the results (see tables 1, 3, 4 and 5) and at times the analysis and consequent interpretation of both issues was perplexing and noted that this may also present problems for novice critics. The low response rate was a concern and it has been noted that the original researchers were unable to comment on the characteristics of those not responding and are therefore cautious about generalizing their findings. Nevertheless, given that respondents were excluded if they had not had experience of at least six sessions of clinical supervision, it is possible that the true percentage of eligible participants might be somewhat higher, although it is not possible to declare this with any certainty.

A major weakness of the study is that interpretation of the term effectiveness is left to the reader. If the reader is a supervisee/supervisor or potential supervisee/supervisor, then the study is likely to be of use as the factors influencing clinical supervision can be put into place to ensure that the session is as effective as possible. However, if managers read the title, they may be disappointed to find that

effectiveness is limited to measurement from the supervisee's perspective. It is more likely that a manager would be seeking external measures of effectiveness or 'proof that it works', such as evidence of patient empathy, reduced stress levels and burnout in staff, reduced sickness rates and a reduction in rates of staff disciplinary measures. This negates the use of this research to persuade management boards of NHS Health Boards that there is measureable evidence that 'clinical supervision deserves continued investment of resources' (Edwards *et al.* 2005, p. 406).

No recommendations were made for future research which was a deficit as it would be interesting to look at the supervisor's views in contrast to the supervisee's. The research would also benefit from replication in a larger population and other fields of nursing, for example adult nursing.

References
Were all the books, journals and other media alluded to in the study accurately referenced?
Yes.

Conclusion

It is all too common for readers of research to accept the findings without issue. We have demonstrated how to undertake a more thorough critique on a research article using Coughlan *et al.*'s (2007) critiquing framework. A major message from this critique is that critics need to look beyond the study in question to reveal factors which aid the critique. Although this took added time and effort, it resulted in a more comprehensive critique.

References

Boswell C. & Cannon S. (2014) *Introduction to Nursing Research*. Jones and Bartlett Publishers, Inc., Burlington, MA.

Burnard P., Edwards D., Fothergill A., *et al.* (2000) Community mental health nurses in Wales: self-reported stressors and coping strategies. *Journal of Psychiatric and Mental Health Nursing* **7**, 523–528.

Butterworth T., Carson J., White E., *et al.* (1997) It is good to talk: an evaluation of clinical supervision and mentorship in England and Scotland. University of Manchester, Manchester.

Chinn P. & Kramer M. (1995) *Theory and Nursing: A Systematic Approach*. CV Mosby, St Louis.

Coughlan M., Cronin P. & Ryan F. (2007) Step-by-step guide to critiquing research. Part 1: quantitative research. *British Journal of Nursing* **16**, 658–663.

Department of Health (1993) A Vision for the Future: The Nursing, Midwifery and Health Visiting Contribution to Health and Health Care. London: HMSO.

DH (2005) Research Governance Framework Health and Social Care: Annex updated 2008. In: Department of Health (ed.). London.

Edwards D., Cooper L., Burnard P., *et al.* (2005) Factors influencing the effectiveness of clinical supervision. *Journal of Psychiatric and Mental Health Nursing* **12**, 405–414.

Edwards D., Burnard P., Coyle D., *et al.* (2000) Stressors, moderators and stress outcomes: findings from the all-Wales community mental health nurse study. *Journal of Psychiatric and Mental Health Nursing* **7**, 529–537.

Hazard-Munro B. (2005) *Statistical Methods for Health Care Research*. Lippincott Williams and Wilkins, Philadelphia, PA.

Jolley J. (2013) *Introducing Research and Evidence-Based Practice for Nursing and Healthcare Professionals*. Pearson Education Ltd, Harlow.

Maltby J., Williams G., McGarry J., *et al.* (2010) *Research Methods for Nursing and Healthcare*. Peason Educationd Ltd, Harlow.

Moule P. & Goodman M. (2009) *Nursing Research: An Introduction*. Sage Publications Ltd, London.

NMC (2011) *Education Standards: Standards for Competence* [Online]. London: Nursing and Midwifery Council. Available at: http://standards.nmc-uk.org/PreRegNursing/statutory/competencies/Pages/Competencies.aspx (accessed 25 April 2014).

NRES (2013) *The Role of the RECs* [Online]. Health Research Authority. Available at: http://www.nres.nhs.uk/about-the-national-research-ethics-service/about-recs/role-of-recs/ (accessed 25 April 2014).

Oxford Dictionary (2012) *Paperback Oxford English Dictionary*. Oxford University Press, Oxford.

Parahoo K. (2006) *Nursing Research: Principles, Process and Issues*. Macmillan Press Ltd, Basingstoke.

Polit D. & Beck C. (2006) *Essentials of Nursing Research: Methods, Appraisal and Utilization*. Lippincott, Williams and Wilkins, Philadelphia, PA.

Proctor B. (1986) Supervision: a cooperative exercise in accountability. In: *Enabling and Ensuring* (eds Marken, M. & Payne, M.), pp. 32–48. University of Chicago Press, Chicago.

RCN (2009) *Research Ethics: RCN Guidance for Nurses*. Royal College of Nursing, London.

Sollaci L.B. & Pereira M.G. (2004) The introduction, methods, results, and discussion (IMRAD) structure: a fifty-year survey. *Journal of Medical Library Association* **92**, 364–367.

Winstanley J. (2000) *Clinical supervision: development of an evaluation Instrument*. PhD Thesis. University of Manchester.

Winstanley J. & White E. (2003) Clinical supervision: models, measures and best practice. *Nurse Researcher* **10**, 7–38.

Winstanley J. & White E. (2011) The MCSS-26: revision of the Manchester Clinical Supervision Scale using the Rasch measurement model. *Journal of Nursing Management* **19**, 160–178.