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Research Article

Experiences of Nurses in the Clinical Supervision of Nursing Students: Findings from a Systematic Review and Their Application to Radiography

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Abstract: Clinical supervision allows students to safely apply theory into practice under the guidance of supervisors. Several primary research studies have been conducted on the experiences of nurses in the clinical supervision of students. However, no study has systematically brought these studies together and applied the findings to a radiography context. This has been necessitated due to a lack of research on this topic in radiography. The aim of this study was, therefore, to systematically review the evidence relating to the experiences of nurses in the clinical supervision of nursing students and apply the findings to radiography. In achieving this aim, a qualitative systematic review was conducted. Databases, nursing journals, and cited references were searched for relevant primary studies. Seven studies were identified and included in the review. Data extraction was performed using an extraction form and the National Institute for Health and Care Excellence (NICE) checklist for qualitative studies to critically appraise the studies. Following thematic data analysis, four themes emerged: the role of clinical supervision, and the experiences of supervisors relating to the managerial, educational and supportive functions of clinical supervision. These findings have provided a template for supporting supervisors in the clinical learning environment. There are many lessons to be learnt from the nursing profession where the experiences of clinical supervisors is well researched. It is recommended that clinical supervisors are appropriately supported through the provision of adequate resources, protected time, training, adequate preparation of students and shared responsibilities amongst supervisors.

Keywords: Qualitative, Systematic review, Clinical placement, Clinical supervision, Clinical supervisor, Radiographer, Radiography student, Experience.

INTRODUCTION

This study focuses on reviewing the experiences of nurses in their role as clinical supervisors of nursing students and the findings applied to a radiography context. Clinical education is a vital component of healthcare professionals' curriculum globally. It provides opportunities to students to apply theory taught in the classroom into practice under the supervision of clinical supervisors. The University of Ottawa (2011) defines clinical supervision as the process by which a student and an experienced healthcare practitioner work together with the goal of improving the student's clinical competencies. This means that supervisors perform a dual role by providing patient care and at the same time faciliting the learning process of students. This makes the role to be demanding and complex. Therefore, to perform this role

efficiently and effectively, supervisors should receive adequate support from all stakeholders involved in the clinical education programme.

There are five key players in clinical education: training institutions, clinical departments, supervisors, students, and patients. Firstly, training institutions have a responsibility to ensure that students are adequately prepared for placements and that supervisors are supported (College of radiographers, 2012; Walsh, 2014). Secondly, clinical departments should have enough staff and a range of learning resources on hand for students to use to follow up their experiences (Walsh, 2014).Thirdly, supervisors should manage resources, teach students, be role models, provide feedback and assess students on their performance and support students with difficulties.

Fourthly, students should have a positive attitude towards learning and be proactive in identifying their own learning needs (College of Radiographers, 2012; Harden & Laidlaw, 2017). Lastly, patients should be willing to participate in the training of healthcare professionals.

Clinical teaching and learning takes place in a sociotechnical environment, often whilst working with critically ill patients. According to the Irish Nursing board (2013), the quality of the clinical learning environment is influenced by many internal and external factors, such as the dynamics, democratic structures and processes, working relationships, communication and interpersonal relations between clinical staff and students. Thus, supervisors experience many opportunities and challenges in the facilitation of practice-based learning for students.

Many studies from the nursing profession have investigated the experiences of nurses regarding the clinical supervision of nursing students. Unfortunately, the researcher did not find any published research study on the experiences of radiographers in the supervision of radiography students. Most of the literature appropriate to the topic is from the nursing profession. It is not unreasonable to draw parallels from the nursing profession to radiography, since both have very similar clinical supervision patterns in their educational programmes. The question to ask is "What can the radiography profession learn from the experiences of nurses in the clinical supervision of students during their placements?".

In this study, the terms *clinical supervision* and *supervisor* mean *mentoring* and *mentor* respectively. This is because clinical supervision and supervisor are the terminologies used in the radiography profession regarding the facilitation of practice-based learning for students.

Aim of the Study
The aim of this study was to systematically review the evidence relating to the experiences of nurses in the clinical supervision of nursing students and apply the findings to radiography.

The specific objectives of the study were:
- To search for primary qualitative research studies on the experiences of nurses in the clinical supervision of nursing students.
- To collect data on the experiences of nurses in the clinical supervision of nursing students.
- To critically appraise all relevant primary studies for review.

- To systematically extract data from the included primary studies.
- To synthesise the evidence on the experiences of nurses in the clinical supervision of nursing students.
- To apply the findings of the review to radiography profession.
- To suggest strategies to improve the experiences of clinical supervisors.

Research Question
This study sought to answer the following research question:

"What are the experiences of nurses in the clinical supervision of nursing students?"

METHODOLOGY
The systematic review method was employed to gather the existing experiences of nurses in the clinical supervision of nursing students. Yannascoli *et al.,* (2013) define a systematic review as a research method that comprehensively and reproducibly collects, appraises, and synthesises all available empirical evidence that meets pre-defined criteria in order to answer a research question. In order to achieve the purpose of this study, a qualitative approach was utilised in getting a deeper understanding of the experiences of nurses in the clinical supervision of nursing students during their placements (Polit & Beck, 2017).

This study was conducted using the five main stages for conducting a systematic review described by Khan *et al.,* (2011). These are: formulation of the research question, searching and identifying relevant literature, data synthesis and analysis, presentation and discussion of the findings of the review.

Formulation of the Research Question
The population, exposure and outcome (PEO) format was used to formulate the research question as it is applicable to qualitative reviews (Khan *et al.,* 2011; Bettany-Saltikov, 2012). The following are the components:
Population- Nurses.
Exposure-Clinical supervision of nursing students.
Outcome or themes- Experiences in the clinical supervision of nursing students.

Searching and Identifying Relevant Literature
The main purpose of the literature search was to generate a comprehensive list of primary studies suitable for answering the research question. A literature search was conducted using the inclusion and exclusion criteria shown in Table 1.

Table 1: Inclusion and exclusion criteria for the study

Inclusion and exclusion criteria		
Parameters	**Inclusion criteria**	**Exclusion criteria**
Type of studies	Primary research	Expert opinions, systematic reviews, book reviews, case reports
Population	Nurses	Student nurses, radiographers and other healthcare professionals
Phenomenon	Studies that focus on clinical supervision or mentorship of nursing students	Studies that focus on clinical supervision or mentorship of newly qualified nurses
Research design	Qualitative	Quantitative and mixed methods research
Level of evidence	Studies with a high level of evidence	Studies with poor methodology (low level evidence)
Publication date	Studies published from 2015 to 2019	Studies published before 2015
Language	Studies written in English	Studies not written in English
Location and availability	Studies carried out all over the world which can be obtained with reasonable resources and time	Studies which are difficult and costly to obtain

The primary studies conducted using quantitative research design were excluded as they do not provide people's life experiences adequately to meet the objective of this study (Bettany-Saltikov, 2012; Polit & Beck, 2017). Mixed methods studies were also excluded because they contain quantitative research design. A quick scoping search revealed no published study conducted on the experiences of radiographers in the clinical supervision of students. Therefore, it was pointless to state it as an inclusion criteria. Due to constantly changing in the clinical education, studies published before 1st January 2015 were also excluded. Furthermore, non-English studies were excluded due to a lack of resources for translation.

Searching for Relevant Literature

The literature search was conducted as widely as possible, through a whole range of sources, to ensure that the sample was unbiased (Yannascoli *et al.,* 2013; Denscombe, 2017). Due to the differences in terminologies amongst countries and considering that in the nursing profession, they interchange the words *clinical supervision* and *mentorship*, both words were included as search keywords. The literature search was performed in June 2019, using the terms "*Experiences of nurses AND Clinical supervision or mentoring of nursing students.* The term *preceptorship* was not included in the search team because it is an old term which was used in nursing.

With the help of a local and experienced medical librarian, the searches were conducted in 3 stages: database searching, manual searching and snowballing (cited references). Firstly, the aim of searching in databases was to identify studies which have been stored electronically. There exists no database which covers all publications for all journals (Khan *et al.,* 2011). Therefore, the electronic literature searches were performed using 4 databases: The Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed/MEDLINE, ScienceDirect and Cochrane Library. Secondly, due to the inaccurate or incomplete indexing of articles and journals in databases, manual searching of the literature was required during the search process (Denscombe, 2017). Therefore, hand searching of key nursing journals was conducted to avoid missing relevant literature. The journals searched include Africa Journal of Nursing and Midwifery, EAS Journal of Nursing and Midwifery, Health SA Gesondheid, Nursing Education in Practice, British Journal of Nursing, Open Journal of Nursing and Nursing Education Today. Thirdly, cited references from the identified studies relating to nursing experiences in the supervision of nursing students were also searched in order to avoid missing any relevant literature.

Selection of Relevant Studies

The section of relevant studies was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline and the process was performed by two reviewers. The first search of articles from databases (N=972) and other sources (N=5) yielded a total of 977 articles. After removing 6 duplicates, a total of 971 articles were screened by reading of the titles and abstracts using the inclusion and exclusion criteria (Table 1). Following initial screening, 12 potential studies were retrieved for full-text review and quality assessment.

The evaluation of the selected research studies (N=12) was carried out by two reviewers using the National Institute for Health and Care Excellence (NICE) appraisal tool for qualitative studies (2018). Any differences were reconciled by mutual agreement. This ensured that studies were assessed for potential threats to the quality of studies, such as description bias, selection bias, measurement bias, analytic bias and

interpretation bias (Yannascoli *et al.,* 2013). The NICE appraisal tool was chosen because it has been validated, used by the reviewers before and contains only 7 sections, allowing a rapid evaluation of each study. Studies were ranked in three categories of quality: high, moderate and low, according to the proportion of the total items with which they complied on the evaluation

checklist. Of 12 studies included for quality assessment, 5 were excluded due to low methodology quality and 7 were included for this review. The final included studies were conducted in Australia (N=3), Uganda (N=1), South Africa (N=1), Malawi (N=1) and Sweden (N=1). The literature search and selection process is illustrated in Figure 1.
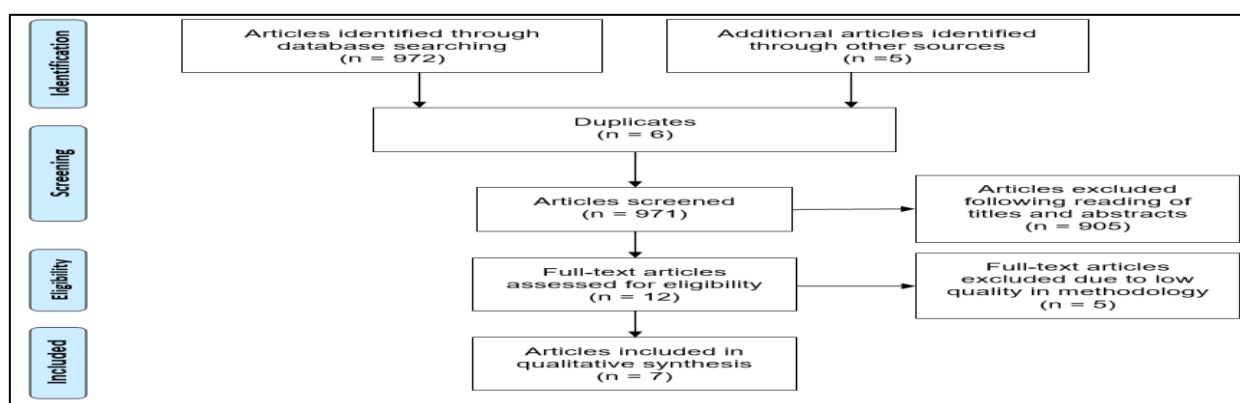

Figure 1: PRISMA flow chart showing literature search and selection process

The final included studies and their characteristics are presented in Table 2,

Table 2: **Characteristics of included studies (N=7)**

No	Author	Year	Title	Data collection method	No. of participants	Publisher or Journal	Country
1	Bos *et al.,*	2015	Clinical supervision in primary health care: experiences of district nurses as clinical supervisors - a qualitative study	Focus group	24	BMC Nursing	Sweden
2	Bvumbwe *et al.,*	2015	Registered nurses' experiences with clinical teaching environment in Malawi	Focus group	32	Open Journal of Nursing	Malawi
3	Needham *et al.,*	2016	Best practice in clinical facilitation of undergraduate nursing students	Focus group and interviews	11	Nurse Education in Practice	Australia
4	Mubeezi & Gidman	2017	Mentoring student nurses in Uganda: a phenomenological study of mentors' perceptions of their own knowledge and skills	Interviews	5	Nurse Education in Practice	Uganda
5	Setati & Nkosi	2017	The perceptions of professional nurses on student mentorship in clinical areas: A study in Polokwane municipality hospitals, Limpopo province	Interviews	16	Health SA Gesondheid	South Africa
6	Newton *et al.,*	2018	Registered nurses' experiences supervising international nursing students in the clinical setting	Interviews	16	Collegian	Australia
7	Bowen *et al.,*	2019	Registered nurses' experience of mentoring undergraduate nursing students in a rural context: a qualitative descriptive study	Interviews	9	Contemporary Nurse	Australia

Data Synthesis and Analysis

Data extraction of the included studies was performed by the two reviewers and any differences were reconciled by mutual agreement. In order to standardise the process, the reviewers employed a data extraction form recommended by Denscombe (2017).

The data extraction form (Appendix 2) acted as a kind of checklist with all the important issues the reviewers needed to record about each included study: title of the study, authors, year of publication, period when the research was conducted, country where the study was performed, methodology, finding, recommendation and

evaluation - reviewer assessment of reliability of the methods and validity of the study findings.

After finishing the data extraction process, data synthesis and analysis began which involved the organisation of findings, looking for themes and identification of patterns (Denscombe, 2017). Following thematic analysis, four themes and fourteen sub-themes emerged (Table 3).

Table 3. Four main themes and fourteen sub-themes which emerged during data analysis

Themes	Sub-themes
Theme 1: Role of the clinical supervision of students during their placements	• Understanding the meaning of clinical supervision • Benefits of clinical supervision
Theme 2: Experiences of supervisors related to the managerial function of clinical supervision	• Orientation of students to clinical environment • Material resources • Human resources and work overload • Time constraints • Increased number of students • Language and culture of international students
Theme 3: Experiences of supervisors related to the educational function of clinical supervision	• Knowledge and skills • Preparation of students for placement • Attitudes of students towards learning
Theme 4: Experiences of supervisors related to the supportive function of clinical supervision	• Support from training institutions • Support from hospital and departmental management • Support from colleagues

RESULTS

The finding of this study are presented in the four themes and fourteen sub-themes which emerged from the data analysis.

Theme 1: The Role of the Clinical Supervision of Students

All included studies reported the roles of supervisors in the facilitation of practice-based learning for students. In this theme, two sub-themes emerged: understanding the meaning of clinical supervision and its benefits.

It was evident that supervisors' understanding of the supervision of students varied widely. Studies identified six main roles: management of resources, teaching, role modelling, giving feedback to students, assessment of students on competence, and supporting students. One supervisor explained the role of the facilitation of learning:

"Supervising is being a leader, being a teacher, a supervisor, being all what you will be to the students" (Setati & Nkosi, 2017, p 133).

Other supervisors described clinical supervision as giving opportunities to students to apply theory into practice; *"Supervising to me is helping the students to transfer what they have had in class as theory, when they are for practicum, then you help them have hands on" (Mubeezi & Gidman, 2017, p 97).*

Another supervisor added that;
"It is designed to facilitate the student moving into the practical world in a supported environment and doing it with people who are currently practising rather than academics who are not there doing the clinical hands-on stuff as much anymore" (Bowen et al., 2018, p7).

The above comments indicate that clinical supervision of students is multifaceted, and supervisors transform their roles to fit the needs of their students.

Although supervisors described the role to be demanding and complex, this study found that clinical supervision can also benefit supervisors. Supervisors appreciated the opportunity to learn from students:

"The students can share with us as much as we can share with them and that there are things they might be getting taught differently to you that we didn't get and...it goes hand in hand, we're teaching them and they're teaching us " (Bowen et al., 2018, p9).

In another study by Setati and Nkosi (2017, p 134), supervisors reported that supervision of students encouraged them to revise theory and practicals in order to be up to date.

Some supervisors reported their own satisfaction from improved student performance and competency as a benefit in the facilitation of practice-based learning. This is best expressed in the following comment:

"You get a lot of satisfaction out of hopefully teaching someone to improve, to help them when

they get out in the workforce" (Bowen et al., 2018, p9).

Some supervisors appreciated the positive feedback from students regarding their facilitation of practice-based learning as commented below:

"One of my favourite students of all time wrote me a thank you card, and she even rang me a few weeks later to say how much she had learnt and how much she had got out of it....it makes me want to do it again..." (Bowen et al., 2018, p9).

The above comments show that supervision is not just one-way traffic; It has benefits to both students and supervisors.

Theme 2: Experiences of Supervisors Related to the Managerial Function of Clinical Supervision

All studies included in this review revealed experiences of supervisors relating to the managerial function of the clinical supervision of students. In this theme, six sub-themes emerged: orientation of students to the clinical learning environment, material resources, human resources and work overload, time constraints, increased number of students, and language and culture of foreign students.

Orientation of students is the first step in creating a conducive learning environment for students. Supervisors explained that a comprehensive orientation of students to clinical departments can help them to acquire necessary information such as knowing the staff and relevant policies. One supervisor suggested:

"There needs to be far greater foundational underpinning of what actually happens in the ward and the orientation process before they even start" (Newton et al., 2018, p538).

The three studies conducted in Africa revealed a lack sufficient material resources to fulfil all the requirements of patient care as well as the training of students. The shortage of resources included medical supplies and teaching materials: *"Our clinical area lacks appropriate resources for teaching students. Imagine even the mere gloves are an issue. How can students do some procedures without protecting themselves" (Bvumbwe et al., 2015, p 930).* Another supervisor added: *"We do not have books available for reference or access to journals" (Setati & Nkosi, 2017, p 135).*

The shortage of medical supplies resulted in improvising which inhibited the abilities of supervisors in teaching best practices to students:

"There is too much improvising in most hospitals. Now what happens is that no matter how you want to teach students ideal things, you are left with no choice due to lack of resources. This issue of resources is getting out of hand. At my hospital we now ask colleges to provide students with basic clinical resources when coming for the placement" (Bvumbwe et al., 2015, p 930).

Shortage of staff was another challenge reported in all the studies included in this review. One supervisor complained: *"There is a shortage of manpower in this hospital" (Setati & Nkosi, 2017, p 135).* The shortage of manpower resulted in increased workload for the limited staff. This is seen in the following extract:

"Sometimes our ward could be very busy and leaves students to be my last priority" (Bvumbwe et al., 2015, p 932).

All included studies in this study revealed that supervisors had experienced limited time to supervise students due to the commitment of clinical and managerial duties. One supervisor commented that: *"You find that most of the time we are few, you get tired in a short time and the time you want to interact with students, you are exhausted, you can't think very well" (Mubeezi & Gidman, 2017, p 99).* Because of increased workload, it was also difficult to find time to reflect on their experiences:

"If there is difficulty in finding time for reflection, we try at the end of the day or between home visits" (Bos et al., 2015, p 6).

While the challenge of human and material resources was evident in studies from Africa, inversely the number of students also increased. This negatively affected supervisors due to limited human and material resources, and a large supervisor to student ratio:

"We have too many students in a ward at the same time. Sometimes you find the number of students to be double the number of patients in your ward" (Bvumbwe et al., 2015, p 931).

The other managerial challenge to clinical supervision identified in this review is related to unpreparedness and a lack of support in the supervision of foreign students. The main challenges were language barriers and cultural differences:

"I think a lot of it comes from the language barrier. . .you know, they might just need the extra help. But. . .it is really, difficult to tell, and I don't really, I

don't think I'm good at it. . .determining whether it is just the international student, or it is the language barrier or not" (Newton et al., 2018, p 538).

The above comments indicate that supervisors experienced both facilitating and inhibiting factors to the creation of a conducive learning environment for students. They suggested a number of strategies to support them such as recruitment of more staff, protected time for clinical teaching activities, provision of standardised orientation programmes and supply of more medical and teaching materials.

Theme 3: Experiences of Supervisors Related to the Educational Function of Clinical Supervision

All studies included in this study revealed experiences of supervisors relating to the educational function of the clinical supervision of students. In this theme, three sub-themes emerged: knowledge and skills of supervisors, preparation of students for clinical placement, and attitudes of students towards learning.

From the reviewed studies, supervisors had knowledge and skills relating to their profession. This was reported as a positive experience in the facilitation of practice-based learning for students. However, some supervisors perceived some gaps in their knowledge and skills which they suggested could be filled through continuing professional development (CPD). When asked if they felt suitably prepared to supervise students, one supervisor replied:

"Yes, because I believe according to what I had at school and the experience in the field, I can able to supervise students. And to some extent 'No' because some of these things are changing; medicine, nursing are dynamic, maybe you need some refresher courses that you are up to date" (Mubeezi & Gidman, 2017, p 98).

Findings in this study also revealed that supervisors lacked knowledge in clinical teaching and learning. This hindered supervisors' abilities in the facilitation of students' learning. Some supervisors complained how difficult it was to assess students on their competence and performance due to a lack of training:

"We don't like the assessment stage. We have difficulty rating students on their performances...." *(Bos et al., 2015, p 5).*

One study revealed that students lacked the required knowledge for clinical practice. Supervisors reported being frustrated due to loss of time in trying to teach theory before allowing them to practice:

"So, it takes you a lot of time to introduce a topic that they have not learnt in class and you find they do not understand what you are teaching them because they have not been introduced to it before!" (Mubeezi & Gidman, 2017, p 99).

Four out of seven studies revealed attitudes of students towards learning on their placement. Students with a positive attitude to learning provided positive experiences for their supervisors:

"The people who want to learn seem to get so much out of learning, I love that and that makes me want to do it again" (Bowen et al., 2018, p 7).

However, most supervisors were dissatisfied with negative attitudes of students towards learning. Supervisors expected students to be serious, interested and self-initiating in the learning process. One supervisor noted that:

"We have come across students who are really not serious, they are not committed, you try to make sure they learn something; they think you are being too hard on them" (Mubeezi & Gidman, 2017, p 99).

Other supervisors reported their concerns when students lacked initiative:

"Some students just stand and watch you and haven't got a clue. They can't see that they could do something to help, they just stand and watch and wait for you to tell them something!" (Bowen et al., 2018, p 6).

Some supervisors complained of students' absenteeism which inhibited their ability in teaching and providing patient care. One supervisor said: *"Students hide, they are nowhere to be found in the unit. Students, they dodge" (Setati & Nkosi, 2017, p 135).*

The negative attitude of students impacted on the time lost for teaching and led to weak working relationships as students were seen to be difficult to supervise.

The comments above indicate that supervisors experienced both facilitating and inhibiting factors to the clinical supervision of students. In order to improve the experiences of supervisors, a number of strategies to support them were suggested, such as the introduction of teaching allowances or rewards, acquiring and improving knowledge by attending clinical supervision training programme and refresher courses, provision of CPD learning activities, and the improvement of

students' preparation for placement, which includes the introduction of simulations and educating students on the importance of taking responsibility for their own learning.

Theme 4: Experiences of Supervisors Related to the Supportive Function of Clinical Supervision

All studies included in this study revealed experiences of supervisors relating to the supportive function of the clinical supervision of students. In this theme, three sub-themes emerged: support from the training institutions, support from hospital and departmental management, and support from colleagues.

One study revealed good relationships and communication between academic and clinical staff. In a study by Bvumbwe *at al.,* (2015) noted that some supervisors were satisfied with the support received from the college because academic staff provided the required support and guidance:

> *"Some colleges give adequate attention to student's clinical supervision. There is always a teacher coming with students when they are coming for the first time" (p 930).*

Another supervisor in the same study added:

> *"The colleges invite us for briefing before they send students" (p 930).*

However, six studies revealed poor relationships and communication between academic and clinical staff. Supervisors complained that tutors from the colleges were also expected to form part of the team in clinical supervision and to inform clinical departments on students who had social problems and learning difficulties. One supervisor complained about poor communication:

> *"It is difficult to communicate with the tutors and there is a lack of information from tutors with regard to students" (Setati & Nkosi, 2017, p 135).*

In another study, supervisors felt that universities did not support them sufficiently: *"Unfortunately, no one from the university has been here, and we were given many practical tasks" (Bos et al., 2015, p 3).* In a study by Bvumbwe *at al.,* (2015), some supervisors also complained about infrequent visits by the academic staff and little guidance in the supervision of students: *"Academic staff may come only for assessments" (p 930).*

Supervisors indicated that much as one might enjoy teaching students during their placement, the little support and guidance received frustrates them. Some supervisors reported a lack of preparation: *"I want more information about the curriculum and assessment method. I want to be prepared" (Bos et al., 2015, p 4).* This negatively affected the abilities of supervisors in the facilitation of practice-based learning for students.

Three out of seven studies in this study revealed a lack of support from the hospital and departmental managements. Supervisors complained that their managers have less interest in the training of students and do not allocate time for teaching activities:

> *"Supervising students must come from the manager. The manager talking to students. Never, no, no" (Bos et al., 2015, p 4).*

In another study by Bvumbwe *et al.,* (2015, p 932), supervisors reported feeling demotivated and stressed due to a lack of clear role expectation from their managers. Departmental manager paid more attention to patient care than student training. Bowen *et al.,* (2018), also found that supervisors were frustrated due to a lack of recognition of the role of student supervisor; *"The lack of support from hospital administration and departmental management for me is quite frustrating" (p 6).* It was suggested that there was a need to educate managers about the importance of clinical supervision and importance of providing protected time for teaching and learning activities.

The studies revealed a lack of shared responsibility in the supervision of students. In a study by Bos *et al.,* (2015), one supervisor said: *"We have poor support within our own profession" (p 4).* Bowen *at al.,* (2018), also found a lack of support from colleagues frustrating: *"Peers expect that I take the heaviest workload as well as the students" (p 6).* Some supervisors also felt they did not get help and support from their colleagues and this led to an unconducive clinical learning environment for students.

Although some supervisors were frustrated at the lack of support from colleagues, some appreciated the support from designated supervisors who had overall responsibility for the students. In a study by Bowen *at al.,* (2018, p 8), supervisors appreciated designated supervisors' involvement in supporting the completion of complex tasks and assessments of students. Some senior supervisors also understood the importance of supporting colleagues who are new to the role: *"I think the new supervisors need much more support and I tend to give that to the new ones during our networking sessions, because some of them are really quite lost. I think just supporting them will help to overcome inconsistency, so they are aware of what the expectations are" (Needham et al., 2016, p135).*

This review revealed that the support received by supervisors from colleagues was a positive experience in the clinical supervision of students.

DISCUSSION

The findings of this review are discussed in relation to the existing literature, and any conclusions are made in a radiography context.

The Role of the Clinical Supervision of Students

This study revealed that supervisors understand the meaning of supervision of students to be a multifaceted role which involves three main functions: managerial, educational and supportive.

Firstly, supervisors are responsible for the management of resources. This function has been identified in literature which involves the creation of a conducive learning environment for students (University of Ottawa, 2011; Walsh, 2014). This means that a conducive learning environment should have learning resources, staff, placement profiles, educational audits, evaluation of placements, and a preparatory training programme. Secondly, the educational function involves imparting appropriate knowledge, attitudes and skills to students (Baker & Latham, 2013). This study identified four areas related to the educational function of clinical supervision: clinical teaching, role modelling, giving feedback and assessment of students. Thirdly, the supportive function involves supporting students with learning problems as well as stakeholders supporting clinical supervisors.

It is well known that students benefit from clinical supervision and applying theory into practice. However, this study found the rewards of being involved in the training of students to supervisors. The identified benefits include being updated by and learning from the students, and increased job satisfaction. Other benefits reported in the literature are an increased professional role, developing teaching and management skills, helping to maintain the standards of own's profession and protecting the public (Walsh, 2014). This is a reminder to radiographers that supervision of students is not one-way traffic; it is beneficial to both supervisors and students. Thus, commitment to this role is essential in order to produce the next generation of radiographers.

Experiences of Supervisors Related to the Managerial Function of Clinical Supervision

Students should undergo a comprehensive orientation on the first day of their placement in order to acquire necessary information. This study found that orientation was even more important to international students in order to be introduced to the culture of the community and to the learning opportunities available. During the orientation process, students should be provided with a placement profile and a professionalism policy statement. Walsh (2014) describes a placement profile as a file containing the summary of the placement details, such as a welcome statement, description of the clinical area and services it provides, staff contact details, students' and supervisors' responsibilities, copy of last educational audit and placement evaluation forms. The professionalism policy statement should contain acceptable and unacceptable behaviours to which students will be held accountable.

In this study, supervisors reported an inadequate supply of medical supplies, teaching material and shortage of staff. This resulted in improvising and an increased work overload. This challenge has also been identified in studies conducted on radiography students' experiences of their placements. In a study conducted in the UK by Fowler and Wilford (2016), a majority (68.9%) of students reported that radiographers were too busy to give feedback. In another study conducted in Nigeria by Ohagwu et al., (2016), radiography students reported an acute shortage of teaching material and equipment. This is a timely reminder to the schools of radiography and placement providers to provide adequate resources in order to improve the experiences of both supervisors and students.

Clinical supervision of students requires time for planning, teaching, giving feedback, assessment and documentations. Unfortunately, this study found time constraints in providing patient care and in the supervision of students. The review also revealed that the time for teaching activities was at the discretion of managers. This implies a lack of parity and consistency. Therefore, supervisors suggested the provision of protected time. This strategy has been reported in the literature but is not widely implemented. For example, a survey conducted in the UK by Kendall-Raynor (2013), found that only 20% of health institutions offer protected time for supervision of nursing students, with another 20% admitting offering an adjustment to existing workload for supervisors. This finding shows that radiography managers need to have a written policy on protected time for clinical supervision activities.

This study found the increased number of students to be a challenge in the supervision of students due to limited resources. This challenge was also identified in a study conducted by Ohagwu et al., (2016) on the experiences of radiography students during their placement in Nigeria. In this study, students reported the increased number of students as an inhibiting factor to learning due to increased student-supervisor ratio. In another study conducted in Canada

by Bolderston and Morgan (2010), radiography students preferred a one-to-one ratio as the optimal learning experience as it allowed them to practice their skills effectively. This finding serves as a reminder to schools of radiography to enroll only as many students as can be sufficiently handled by clinical departments.

Experiences of Supervisors Related to the Educational Function of Clinical Supervision

This study found that supervisors had adequate knowledge and skills in nursing, but most of them lacked it in educational principles related to the supervision of students. Those who undertook the training were confident and skilful in the facilitation of practice-based learning for students. The findings are consistent with radiography literature. The majority of the radiographers who supervise students are often ill prepared and most of them learn on the job (Sutton, 2013; Cunningham et al., 2015). However, the College of Radiographers of the UK (2012) states that radiographers should be educationally prepared to fulfil the role of the supervision of students during their placements. This means being knowledgeable and competent in both radiography and teaching. Harden and Laidlaw (2017) state that clinical teaching is best delivered when there is an understanding and application of the educational principles. This finding serves as a reminder to schools of radiography and managers to provide training to radiographers before being given the responsibility of the supervision of students.

This review found that some training institutions did not adequately prepare their students for placement as they lacked knowledge. This forced supervisors to teach theory as well as practicals which was a challenge due to limited time and workload. Students should adequately cover theory and practice their skills through simulation before being sent for placements. Harden and Laidlaw (2017) explain that in simulations, students can learn a procedure in a risk-free environment without causing harm and can manage crisis events by practising and rehearsing so that they are better prepared should such events occur in real practice. Therefore, it is important for academic staff to adequately cover theory and undertake simulation or demonstrations of radiographic techniques before sending students for practice.

The role of the supervisor has changed from one of information provider to a facilitator of learning (College of Radiographers, 2012; Harden & Laidlaw, 2017). This means that students should take more responsibility for their own learning during placement. Unfortunately, this study found that most of student had a negative attitude towards learning. This hindered the abilities of supervisors in the facilitation of learning as students had little interest. This problem is not limited to nursing alone but occurs in radiography as well. A study conducted in the UK by Sutton (2013) on radiography students' experiences also found a lack of interest by some students who always waited for instructions. According to Harden and Laidlaw (2017), students take responsibility for their own learning by setting goals, assessing their own learning, and adjusting their learning approach with the help of their supervisors. Therefore, schools of radiography should educate students about the importance of taking a proactive approach as it prepares them for life-long learning.

Experiences of Supervisors Related to the Supportive Function of Clinical Supervision

The training institutions have a responsibility to support supervisors by ensuring that they are appropriately qualified, resourced and competent to fulfil their roles (College of Radiographers, 2012; Walsh, 2014). Unfortunately, this study found that supervisors were dissatisfied with the support received from the training institutions. There was a lack of communication on the learning outcomes and students with learning difficulties, lack of support in terms of training, and less involvement in the supervision of students. These finding serves as a timely reminder to schools of radiography to support supervisors through provision of training and guidelines, networking and collaborating research activities with radiographers. These strategies could improve the experiences of supervisors.

Hospitals affiliated with various training institutions have a responsibility to support supervisors in the supervision of students. The hospital and departmental managements should ensure that there is a policy on the management of students' placement, adequate human and material resources, set the maximum number of students that the department can manage, and that there are quality assurance programmes in place (College of Radiographers, 2006; Baker & Latham, 2013; Walsh, 2014). However, this study found that supervisors were dissatisfied with the support received from managements. Supervisors complained of their managers' lack of interest. This is a reminder to radiography managers to adequately support radiographers in the supervision of students.

This study revealed that most of the supervisors were satisfied with the support received from their colleagues. However, some complained of a lack of shared responsibilities as other clinical staff were not interested in the supervision of students. According to the College of Radiographers of the UK (2006), supervisors should take responsibility and ownership of students' learning, accept responsibility

for ensuring good learning opportunities, play a role in sharing their practice and assessing students, provide appropriate feedback to students and network with academic staff. Therefore, radiographers should be reminded through professional bodies, such as the Radiological Society of Zambia (RSZ) that supervision of students is a professional obligation for radiographers (RSZ, 2018).

CONCLUSION AND RECOMMEDATIONS

The findings of this review have provided rich information about the experiences of nurses in the clinical supervision of nursing students. Due to a lack of research in radiography, the findings have been applied to a radiography context and have provided a template for supporting radiographers in the facilitation of practice-based learning. This review revealed that there are many lessons to be learnt from the nursing

profession on this subject, where the experiences of supervisors are well researched, and supervision of students is evidenced-based. However, there is a need to investigate the experiences of radiographers in the supervision of radiography students in both developing and developed countries. The findings of this review and future research in radiography on this subject will help the schools of radiography, X-ray department managements and professional bodies to support radiographers appropriately.

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