THE RESEARCH SUPERVISOR'S EXPERTISE OR POSTGRADUATE STUDENT PREPAREDNESS: WHICH IS THE REAL CONCERN?

Lizeth Roets, PhD, RN
University of South Africa:
Department of Health Studies
roetsl@unisa.ac.za

Delene Botha, PhD, RN
University of the Free State:
School of Nursing
bothade@ufs.ac.za

Leana van Vuuren
Master's degree student
University of the Free State

ABSTRACT

The increased number of postgraduate students has contributed to an increased need for competent researchers locally and internationally. This raises questions about the supervisor's competency and need for training on the one hand and the competency and preparedness of the registered postgraduate student on the other.

Eleven supervisors from a school of nursing participated in a nominal group discussion in an attempt to identify the problems experienced in their supervisory practice. The highest ranked problems identified were the need for training for themselves, students' lack of critical thinking skills and knowledge regarding the scope of postgraduate studies, the high workload of supervisors and the level of language proficiency of students.

The conclusion was that compulsory, content-focused educational programmes should be created to provide supervisors with the knowledge and skills required for the supervisory task. Managing their high workload requires supervisors to apply aspects of project management, time management and additional supervisory styles, and these topics should form part of these educational programmes. These programmes must also include elements such as assisting and/or referring students who lack critical thinking skills, language proficiency, computer literacy as well as general preparedness for postgraduate studies for comprehensive assistance.

Keywords: research; supervision; supervision training; postgraduate students

INTRODUCTION AND PROBLEM STATEMENT

It takes an academy to raise a scholar (Chiappetta-Swanson and Watt 2011, i)

Larger numbers of competent nurse researchers are urgently needed, both internationally and locally (Pearson and Brew 2010, 137). If this need is to be met, attention must be paid to the supervisory practices and competencies of supervisors. The preparedness of students who engage in postgraduate studies should equally be taken into consideration if student throughput rates are to be improved and scholars for the future are to be developed. In this article we investigate the problems that research supervisors face in their endeavours to produce quality research outputs and enhance the throughput rates of the students that they supervise.

Supervision is undertaken by a research supervisor within an institution that has specific expectations regarding the quality of the research output, as well as the success of the student. The institution is responsible for the support and development of the supervisor. Education institutions are, likewise, also accountable for the development of the students being supervised. These institutions provide the context for the supervision relationship between the student and the supervisor as well as the quality of the research conducted (Chiappetta-Swanson and Watt 2011, 2).

Supervision excellence is expected from supervisors, and the practice of appointing novice researchers as supervisors should therefore be questioned. A "novice researcher" is a person who has done no more than complete a research project as a requirement for a master's degree. Novice supervisors will probably model the supervision strategies applied by their own supervisors during their research (Bitzer and Albertyn 2011, 28).

Research supervision is not merely "an extension" of the supervisor's or another person's research project (Manathunga and Goozee 2007, 203). It should be acknowledged as a specialised level of teaching (Hodza 2007, 164), requiring special knowledge and competencies. Research supervisors have to educate, motivate and guide their students in research (Pearson and Brew 2010, 143). Therefore, they need a repertoire of special skills, competencies, knowledge and expertise to engage in supervisory dialogues and offer guidance to students with different learning and working styles, diverse social and cultural backgrounds, as well as different levels of English language proficiency. At present, the education or training of supervisors in South Africa is usually voluntary, with formal programmes or curricula being made available at only some local tertiary institutions and without evidence of focused content. Hence the need to prepare research supervisors (Severinsson 2012, 215–223). Postgraduate students need to understand that they have to contribute to their own development as scholars, consider advice and criticism and be able to identify their own shortcomings. They need to be prepared, have developed higher order thinking skills, demonstrate dedicated efforts to gain background knowledge and comply with timelines, policies and postgraduate programme requirements (Chiappetta-Swanson and Watt 2011, 7–8).

The throughput of postgraduate students in a specific school of nursing was poor: only 9% completed the degree, and of these only 11% managed to do so within the recommended two-year period (Uys and Klopper 2012, 135). This prompted the authors to investigate the difficulties experienced by research supervisors within such a context to overcome the challenges and contribute to improvement in throughput rates.

AIM

The aim of the qualitative research study was to identify the problems that research supervisors experience with regard to postgraduate supervision. The results of the study conducted made it possible to identify the real and much-debated obstacles that supervisors encounter in order to describe recommendations to overcome them.

RESEARCH METHODS

A qualitative research approach, using the nominal group technique (NGT), was implemented. The epistemological background was that of constructivism, implying that although data were systematically gathered through the NGT, multiple social realities existed and would be visible in the analysis of the data (McMillan and Schumacher 2010, 5–6).

The NGT was chosen because consensus is reached within the process, five to ten members can be accommodated per session, and it is a relatively inexpensive method from both a financial and a time perspective (Harvey and Holmes 2012, 190; Hitch, Taylor and Pepin 2015, 216–225). The four steps to conduct a nominal group as originally described by Delbecq, Van de Ven and Gustafson (1975, 67) were followed: (1) Silent generation of ideas, (2) Round-robin listing of ideas, (3) Discussion of ideas and (4) Voting and ranking of ideas. An experienced facilitator facilitated the nominal group to allow each individual to have an equal opportunity to be heard and to ensure that the process was followed as expected to ensure the trustworthiness of both the process and the data gathered.

The question posed to the supervisors was: What challenges do you experience in providing research guidance to postgraduate students?

Unit of Analysis

The unit of analysis was all research supervisors at a particular higher education institution offering master's and doctoral programmes. All 14 supervisors were invited to participate in the nominal group discussion, and of these, 11 agreed to do so. A trained and experienced facilitator facilitated the group at a time agreed upon by all participants. To ensure objectivity and prevent bias, the researcher did not participate, as she was also a supervisor at the institution.

Trustworthiness

Trustworthiness and credibility (truth value) were enhanced by member checking of the data during the nominal group process. All participants were actively involved and had an equal voice in sharing ideas, analysing the data and ranking the priority ideas. In accordance with the NGT, the participants themselves analysed the results, using both quantitative analysis (by voting and ranking the priorities) and qualitative analysis (by identifying themes for rich description) (Hitch et al. 2015, 216–225).

Dependability (consistency) was ensured by submitting the identified themes to an independent person for checking. Moreover, an external facilitator facilitated the nominal group, which enhanced confirmability (neutrality). This means that although the data and findings related to a specific school of nursing, the data trail can provide information allowing a reader to determine whether transferability (applicability) in a similar setting and situation is possible (Botma, Greeff, Mulaudzi and Wright 2010, 233).

Ethical Principles

Permission to conduct the study was received from the relevant stakeholders and ethics approval was obtained from the custodian university (ETOVS. 116/2010). All participants provided written voluntary consent after receiving the recruitment letter setting out the purpose of the study. The principles of confidentiality, autonomy, privacy and beneficence (Botma et al. 2011, 17–27) were adhered to.

DATA ANALYSIS

Data analysis was done by the participants themselves during data collection as described by Delbecq et al. (1975, 8). The participants agreed on the themes and categories identified during the nominal group process and the expert facilitator overseeing the analysis process (Hitch et al. 2015, 216–225).

RESULTS AND DISCUSSION

The participants had been involved in postgraduate supervision for periods ranging from 1 to 20 years; between them, they had assisted a total of 48 students in graduating with master's and doctoral degrees.

One nominal group discussion provided 35 inputs during the round-robin stage. The quantitative analysis involved the priority numbering and the score (1–5) that the participants allocated to each input. Five inputs received scores of 10 to 18, and these will be discussed. They were: (1) training of supervisors, (2) students' lack of critical thinking skills, (3) students' lack of knowledge regarding the scope of postgraduate studies, (4) the high workload of supervisors and (5) the level of language proficiency

of students. It is important to acknowledge that three out of the five main difficulties that supervisors experienced were related to student preparedness. This again raises the question: Is the most problematic aspect in supervisory practice the need to train research supervisors, or the difficulties associated with student preparedness, which in many instances can be linked to student selection and recruitment?

All the supervisors agreed that the greatest challenge was **their inadequate research supervision training** and a lack of experience regarding research supervision: "*Lack of experience in supervision"; "not formally trained to provide supervision".* This finding is not limited to the school of nursing in question; it applies to most tertiary institutions (Halse 2011, 557; Severinsson 2010, 400).

There is currently no standardised formal educational programme for research supervisors, either locally or abroad (Borders, Wester, Granello, Chang, Hays, Pepperell and Spurgeon 2012, 163). Some tertiary institutions in South Africa may have a compulsory programme for research supervisors, while others offer a wide range of optional research training programmes. As a result, supervisors' attendance of these programmes depends on their acknowledgement of a need to improve their knowledge and/or skills, and their willingness to take positive steps in this regard.

Anyone preparing to act as a research supervisor should reflect on how they view their own research practice and their interpersonal skills. Supervisors should be open to discussing this critically with colleagues and then deciding on a specific supervisory approach (Pearson and Brew 2010, 143). This will enable supervisors to clarify the roles and responsibilities of both the supervisor and student right at the beginning of the supervisory relationship. Research supervision is an ontological process, and supervisors should constantly reflect on their knowledge and skills in order to overcome any shortcomings (Halse 2011, 557). Research supervisors should also be committed to researching capacity development (Roets and Maritz 2013, 87).

The need for formal education of supervisors is strongly supported in the literature (Severinsson 2012, 215–223), but there is no consensus on what such an education programme should include. Pearson and Brew (2010, 149) make it clear that because of the vast differences in careers, organisations, responsibilities, institutional pressures and cohorts of students, there is no simple approach to supervisor development. Supervisors therefore need to be adaptable and cannot adopt just one specific model or set of behaviours when supervising student researchers.

Supervision also entails various managerial functions associated with research. Since supervisors need to manage the progress of the research, they need the skills of a project manager. Moreover, they need to be knowledgeable about institutional requirements such as student registration, project registration, obtaining approval from different committees and authorities and the format of the project (Halse 2011, 560) in order to guide students appropriately. Students also have a responsibility in all these elements.

Roets (2016) recommends that since students from all over the world enrol for research programmes, cultural education should form part of a research supervisor's educational programme. Culturally sensitive supervisor training programmes are important because differences in views and expectations regarding behaviour may hinder the relationship between student and supervisor (Wang and Li 2011, 109) and lead to misunderstandings that could derail the supervision process. Misunderstanding will lead to dissatisfaction on both sides and failure to produce proficient researchers.

The second-most significant problem identified was the perceived **lack of critical thinking among students**: "*Students have a lack of critical thinking skills"; "they cannot apply what they read about their study into the context of their research"; "students cannot conceptualise".* Higher-order thinking skills, which include critical thinking, problem-solving, creative thinking, metacognition and decision-making, are very important for producing a quality research study (Yen and Halili 2015, 41). At the start of the supervision process, supervisors need to identify the extent to which these skills have already been developed in each student. They must then adapt their supervisory methods to enhance the development of the students' critical thinking skills. One, but not the only, way of doing this is to assist students in establishing communities of practice. Communities of practice develop when students using the same research methodology or conducting research in the same discipline meet on a regular basis to discuss their progress and in that way learn from one another (Pearson and Brew 2010, 142). Depending on how well the students interact with one another, the supervisor may or may not need to be present at these gatherings.

Another view is that higher education institutions should pay more attention to the preparedness of their postgraduate students in the selection and recruitment process (Creech, and Aplin-Kalisz 2011, 404-409).

A perception that **students lack information or knowledge regarding the scope of postgraduate studies** was the third-most important problem identified during the nominal group – and it appears to be universal (Chiappetta-Swanson and Watt 2011, 7–8). This shortcoming can be attributed to the inadequacy or lack of information provided by the institution when students enrol for postgraduate studies and/or students' sometimes unrealistic expectations. Part of the supervisor's role entails ensuring that students understand the nature and scope of research and postgraduate studies. The deficit in knowledge and information can be overcome through effective communication both at the start of the student's studies and throughout the course. However, students also have the responsibility to be aware of and adhere to the policies of the institution (Chiappetta-Swanson and Watt 2011, 7–8).

The fourth-most significant problem identified was the **high workload of the supervisors**, resulting in them not being available for appointments and providing delayed feedback on student progress: "*high workload affects the quality of supervision"; "students request unrealistic turn-around times, given the workload of supervisors".* In the institution at which the study was conducted, as in most other higher education

institutions, the role of the supervisor consists of a triad of teaching, research and service engagement. Each of these elements entails unique responsibilities and affects the time available to supervise students (Kiley 2011, 588). Added to this supervisory role are institutional and organisational responsibilities, such as representation on internal and external committees, acting as moderator and/or external examiner, as well as ensuring personal development. Balancing all of these responsibilities is a huge challenge (Lee 2008, 267). Time management, as a skill, is therefore needed. Sharing responsibilities, such as the distribution of information, and using electronic communication and group supervision, can also help to alleviate a high workload (Kiley 2011, 588).

The level of the students' **language proficiency** was identified as the fifth-most important problem. This statement was qualified (qualitative analysis) as follows: *"Their language proficiency is poor, their usage of language, especially English"*; "*students' English academic writing is very poor*". It is not uncommon to find that students lack language skills, namely the reading, writing, interpretation or use of language (Snowden 2014, 1126–1132). These skills have to be developed for students to become competent researchers, as language proficiency affects all aspects of supervisory practices (Roets 2013, 141). Supervisors need to identify and correct language incompetencies promptly by providing or arranging for appropriate support, such as referring students to scientific writing and language support programmes.

Apart from the above 5 problems, 13 other inputs related to students being insufficiently skilled or prepared to conduct research were mentioned. These included "*students are lazy to read"; "students cannot apply methodological knowledge"; "students do not make appointments"; "students cannot appreciate constructive feedback".* It would appear that research modules at undergraduate level are inadequate to produce knowledgeable graduates who are skilled in basic research techniques. This finding was also identified in a study conducted in the Democratic Republic of the Congo (Roets 2013, 144). Other skills lacking in graduates include scientific writing, conducting literature reviews and referencing techniques.

CONCLUSION

Through the NGT, consensus was reached on the five most significant problems experienced by supervisors. These were identified as inadequate preparation for a supervision role, students' lack of critical thinking skills, students' lack of knowledge regarding postgraduate studies, supervisors' high workload and the poor language proficiency skills of students. It became clear that supervising research cannot happen by chance, and a supervisor cannot use a "one-size-fits-all" method of supervision. Higher education institutions cannot afford to have novice supervisors follow a trial-and-error method, and therefore compulsory supervisor educational programmes should be implemented without delay.

It also became evident that the obstacles that research supervisors encountered could not be attributed to their own need for specific knowledge, skills and competencies alone, but also to the underpreparedness of their students. The growing and urgent demand for more nurse researchers contributes to more students registering for postgraduate studies, and these students appear not to be equally adequately prepared.

To overcome these problems, supervisors need to gain specialised knowledge and skills through educational programmes, but these are currently limited and are not always compulsory. In addition, supervisors need to reflect critically on the way they perceive research and how they operate as research supervisors. In this regard, discussion with one another can help supervisors to adapt to different research approaches and thus apply flexible supervision styles. Narrative reports from supervisors, reflecting on their problems and successes, need to be published and shared.

The level of critical thinking skills and language proficiency of students needs to be assessed at the start of the supervision process. Adapting the supervisory process and referring students to appropriate forms of support can assist in developing these skills, but it is unrealistic to expect that these students, who were poorly prepared through the undergraduate programme, will complete a master's programme within two years. It may be necessary to adapt the recruitment and selection strategies in some higher education institutions to ensure that the students selected to enrol for postgraduate programmes are more adequately prepared for postgraduate studies.

Informing students about the scope of postgraduate studies at the start of their studies is of the utmost importance. Both the institution and research supervisors should be involved in conveying the correct, most up-to-date information. Students, on the other hand, should familiarise themselves with the information required and take responsibility for their studies. Supervisors must be able to balance their workload through creative measures such as co-supervision, group supervision, consultation and electronic interaction.

LIMITATIONS

Although this study was limited to one school of nursing at a tertiary institution, the literature shows that similar findings have emanated from a number of other studies.

FUTURE RESEARCH

Further research should focus on the development of supervisory skills, including the use of electronic programmes, to facilitate the supervision process. Improving the standard of undergraduate research presents another difficulty.

The overall goal of supervisors is to help their postgraduate students to become independent, competent researchers who will join the ranks of research communities both locally and abroad. This vision certainly requires supervisors with adequate knowledge

and skill, but equally it requires prepared and motivated students. Supervisors cannot remain solely responsible for providing the scholars of the future. Institutions should pay attention to their selection and recruitment processes, and students as adult learners should accept the responsibility of being prepared for postgraduate studies.

All stakeholders involved need to take responsibility to overcome the challenges posed in supervisory practice.

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