Barriers and strategies to increase research involvement of South African occupational therapists

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Abstract
Limited involvement in conducting and publishing research constitutes a threat to the occupational therapy profession. This article reports on the qualitative phase of a mixed methods study that aimed to explore the barriers to, and support for, South African occupational therapy research. Purposive sampling was used to identify 26 occupational therapists, with varying levels of research involvement, to participate in four focus groups. A further 12 individual, semi-structured interviews were conducted with participants with research publishing experience. Inductive reasoning identified four main themes: 1) challenges to research; 2) research education and motivation; 3) research process; and 4) research output. Factors influencing research involvement could be viewed either as a barrier or a support depending on an individual's view and circumstances. A need for both academic and clinical research, an occupational therapy research data base, scientific evidence, more knowledge and use of evidence based practice, more research skills development, streamlining the process, and more collaborative research was identified. South African occupational therapists should contribute to evidence creation through coordinated research participation and publication. A national research strategy is needed to address the identified barriers.

Key words: Research evidence based practice, research barriers

Introduction
Research evolves around the need for scientific evidence on which to base clinical practice, ownership of the knowledge base, raising the professional status, evidence-based practice (EBP) and keeping up with changes in practice. "Competence in the role of the researcher is necessary because it contributes to the development of the individual therapist, the profession and the organisation in which the therapist functions". These developmental benefits can be derived from involvement in research through conducting a research project or using research findings for implementation of changes in clinical practice. Every occupational therapist needs to play a role in research, whether it is applying research to practice (research consumer) or generating new knowledge through research (researcher or research leader). "Occupational Therapy is one profession where implementing research into practice to demonstrate its contribution to society is crucial for survival, yet the history of research within the profession might still be said to be in its infancy".

A review of the literature related to factors influencing research involvement, identified that lack of research involvement is a cause of concern in many professions and in many countries. Studies have been conducted in the United States of America (USA), Australia, United Kingdom, Sweden and Canada. The identified barriers in professions like medicine, psychology and nursing are similar to occupational therapy's, even though their national priorities.

A national research strategy has been identified as important in support of research involvement. Countries that have played a role in research have conducted research output, such as the United Kingdom, the USA, Canada and Australia, have national research strategies that involve occupational therapists directly. A national research strategy entails a coordinated effort to develop the infrastructure to support researchers, identify strategic priority research areas and make optimum use of the research initiatives that already exist. Currently there is no national occupational therapy research strategy for South Africa. Although a national research strategy for health care in South Africa exists, it is more medically focussed e.g. on diseases such as HIV/AIDS and tuberculosis. Occupational therapy has not identified its own research priorities or engaged formally with the national research strategy to determine whether occupational therapy research priorities are aligned with national priorities.

The limited research output of occupational therapists in South Africa has been highlighted but there is no empirical data about the current research involvement of occupational therapists or the barriers they experience. The quantitative first phase of the study revealed that only 32% (94/275) of all respondents had participated in research since qualifying. The research output was reported as 51% (46/91) of respondents who published and 64% (60/94) who gave oral presentations of their research. The majority (56%, 27/48), who had published had only published once. Fifty percent (18/36) of respondents with post graduate degrees had never published. Few undergraduate studies are published even though all final year students from the eight occupational therapy programmes (approximately 300 students per year) do a research project in their final year. Lack of publishing undergraduate research may be due to the small sample sizes used in order to complete the research within the limited time available, students going to do community service, lack of expectations to publish, time taken to write an article, and/or lack of skills/experience in writing.

The profession has therefore lacked evidence to inform strategies to address the limited research involvement and publication. This study aimed to explore the barriers to, support for and strategies that may increase occupational therapists' research involvement.

Methodology
This article reports the qualitative second phase of a mixed methods study in which a qualitative descriptive design was used with purposive sampling to select participants for their views and opinions across the spectrum of research involvement. Participants included those with no research experience since qualifying; those currently doing research; and experienced researchers. Data were collected using focus group discussions and individual interviews.

Four focus groups, each with different participants, were conducted with a total of 26 participants. Criteria for inclusion in the focus group discussions were participation in phase 1 of the study, residing in Gauteng, willing to participate and able to meet at the identified venue. Data were collected until saturation was reached. An interview guide was compiled based on the findings of the quantitative phase of the study in order to explore the findings in greater depth (for more detail see addendum).

Twelve semi-structured individual interviews were conducted with participants who had published in the South African Journal of Occupational Therapy (SAJOT) in the previous four years and lived and worked in Gauteng in 2009. These interviews explored how participants overcame barriers to conduct and publish research. Questions included involvement in publishing occupational therapy research, to investigate why research is conducted but not published. Suggestions for improved research participation and
Table I: Focus group participants

<table>
<thead>
<tr>
<th>Group no.</th>
<th>No. of participants (N)</th>
<th>Qualification</th>
<th>Involved in research after basic degree</th>
<th>Work category</th>
</tr>
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<td></td>
<td>PhD Masters Basic Degree</td>
<td>Diploma No Yes</td>
<td>Academic Clinician</td>
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<td>6</td>
<td>0 2 4</td>
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<td>4</td>
<td>6</td>
<td>1 1 5</td>
<td>3 3</td>
<td>1 5</td>
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<tr>
<td>Total</td>
<td>26</td>
<td>1 11 13</td>
<td>1 9 13</td>
<td>12 14</td>
</tr>
</tbody>
</table>

Table II Individual participants

<table>
<thead>
<tr>
<th>No. of participants</th>
<th>Qualification</th>
<th>Involved in research after basic degree</th>
<th>Work category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>3 6 2 1</td>
<td>12 8</td>
<td>4</td>
</tr>
</tbody>
</table>

Table III Scheme for analysis

<table>
<thead>
<tr>
<th>THEME</th>
<th>CATEGORY</th>
</tr>
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<tbody>
<tr>
<td>1. Research in the profession</td>
<td>Academic versus clinical research</td>
</tr>
<tr>
<td></td>
<td>The need for a research data base</td>
</tr>
<tr>
<td></td>
<td>The vast need for evidence</td>
</tr>
<tr>
<td></td>
<td>Current knowledge and use of EBP</td>
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<tr>
<td></td>
<td>OTASA’s role in research</td>
</tr>
<tr>
<td>2. Research education and motivation</td>
<td>Undergraduate and post graduate research skills development</td>
</tr>
<tr>
<td></td>
<td>Personal attributes, knowledge and skills</td>
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<tr>
<td>3. Research process</td>
<td>Barriers encountered in the process</td>
</tr>
<tr>
<td></td>
<td>Collaborative research</td>
</tr>
<tr>
<td>4. Research output</td>
<td>Publication of research results</td>
</tr>
<tr>
<td></td>
<td>Oral presentation of research results</td>
</tr>
</tbody>
</table>

FINDINGS AND DISCUSSION

The profile of the 26 focus group participants and 12 individual participants is shown in Table I and II respectively.

Table III indicates the themes and categories that were identified. The findings are discussed in more detail under each theme and their categories, in the following section.

Theme 1: Challenges to research in the profession

Currently, research in South Africa is mainly done by academics and students (undergraduate and post graduate) and only rarely by clinicians. Although participants realised the need for research they experienced a discrepancy between research conducted by academics and clinicians’ needs for evidence to inform their clinical practice. Three participants commented on the fact that academics and clinicians have a different understanding and needs with regard to research. Participants felt that

“Research done by academics lacks clinical application”.

One explanation for the difference of opinion of research is the so-called “theory-practice divide” because clinicians see the theory that academics value, as inappropriate to practice, while academics experience clinicians as ignorant or resistant to theory21. Clinicians often abdicate their responsibility for research because they believe that someone else will do it, for example the academics, while they only need to be concerned with the treatment of clients1. In the profession we need both theoretical research to increase the scientific knowledge base of the profession and clinical research to improve intervention.

Optimising research capacity is hindered by the lack of an accessible, centralised data base with information on completed studies, studies in process and needs for further research. A database can help aspirant researchers to identify topics that have been researched already, and help prevent unnecessary duplication of research studies, as one participant explained:

“…research is scarce and the need for evidence is vast…”.

The database will further contribute to the ability to do EBP as data from South African research studies would in many instances provide the best evidence for local clinicians. EBP is still relatively unknown worldwide and not easy for all clinicians to implement21,22. In the profession we need both theoretical research to increase the scientific knowledge base of the profession and clinical research to improve intervention.

The Occupational Therapy Association of South Africa (OTASA) plays an active role in research through its publications (SAJOT and the Focus newsletter) and bi-annual congresses that provide opportunities to present research. Study participants provided...
suggestions to increase OTASA’s contribution to research output as listed in Table IV.

Table IV: Suggestions to increase OTASA’s contribution to research

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<table>
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<tbody>
<tr>
<td>1</td>
<td>Make available a list of topics of completed research on the website.</td>
</tr>
<tr>
<td>2</td>
<td>Provide funding for research.</td>
</tr>
<tr>
<td>3</td>
<td>Organise writing weekends/retreats.</td>
</tr>
<tr>
<td>4</td>
<td>Arrange events like colloquia where specific topics would be under discussion and research related to the topic would be presented by researchers.</td>
</tr>
<tr>
<td>5</td>
<td>Determine priority national occupational therapy research needs.</td>
</tr>
<tr>
<td>6</td>
<td>Help clinicians with access to international journals through links to University departments. This could form part of collaborative research between clinicians and academics.</td>
</tr>
<tr>
<td>7</td>
<td>Provide research methodology and publication workshops as CPD events and/or at congresses.</td>
</tr>
<tr>
<td>8</td>
<td>Institute a network of writing and publication mentors.</td>
</tr>
</tbody>
</table>

Theme 2: Research education and motivation

Research education occurs mainly during undergraduate studies when students conduct their final year research project, which is a requirement stipulated in the Minimum standards of the World Federation of Occupational Therapy (WFOT). Effective methods of research education are widely discussed in international literature in both occupational therapy and other health disciplines. Education can include formal research short courses, mentorship, in-service training through participation in a research project.

Participants agreed that a passion for and appreciation of the importance of research needs to be fostered at an undergraduate level:

“A positive experience during the undergraduate research project will be sowing seeds for pursuing research after qualification”.

Providing students with the opportunity to present their research and share their information was highlighted as a method to acknowledge, recognise and encourage students’ research efforts.

Participants had conflicting opinions on the adequacy of their undergraduate research training to prepare them for conducting research after graduation. Participants who were experienced lecturers felt that knowledge was adequate, while lecturers with less experience, but who had started their own post graduate research, viewed their undergraduate level research education as ‘insufficient’. Most clinician-participants expressed the view that

“Post graduate research does not come close to what you learned as undergrad. I don’t think undergrad prepares you to do research properly when you get into the field. Doing post grad research is an enormous learning curve as undergraduate training did not prepare me adequately for independent research”.

Although undergraduate research provides a starting point for research involvement, on-going development of research abilities need to occur after qualification through attending CPD activities and in-service training of novice researchers through collaborative research with an experienced researcher.

Participants highlighted that in previous years, very few South African occupational therapists obtained post graduate qualifications. Three participants indicated that recently there has been an increase in the number of younger therapists registering for post graduate studies e.g. at one local University they now have 90 post graduate students of whom almost half are doing research by dissertation and the others through a combination of research and coursework. This could mean as one participant explained that “they have been successfully inducted into an academic culture”.

An academic culture would include being inquisitive and knowledgeable about a subject area and interested in pursuing research. Other participants however interpreted the increase in post graduate registration as a symptom that “Courses fail to provide sufficient training in undergraduate courses”.

Participants indicated that for many occupational therapists the motive for doing post graduate degrees is to increase clinical knowledge rather than to do research. An increase in post graduate registration and qualification might increase research output. Obtaining a post graduate degree however does not translate into publishing the research as there is a tendency to ‘down tools’, meaning they do not continue with scholarly activities once the research study has been submitted for a degree and no publication of the study is attempted. At some universities/institutions publication of research is not a prerequisite for obtaining a post graduate degree.

Intrinsic personal attributes that discern researchers include self-motivation, goal directedness, task orientation, perseverance, turning negative experiences into learning opportunities, a positive mindset and attitude towards research, ability to identify and access support, self-awareness associated with research and gratification from the research process. Education can include formal research short courses, mentorship, in-service training through participation in a research project.

Theme 3: Research process

The research process has some unique challenges including topic selection, time allocation, support and access to funding.

The difficulty in identifying an appropriate, researchable topic was highlighted. To refine an idea to a researchable topic requires, as one participant summarised:

“The topic must not be so big that you get de-motivated or overwhelmed by it and gain nothing, but also not too small that it becomes nonsensical”.

There was controversy amongst participants regarding the best approach to topic selection. Some participants felt strongly that an individual must select their own topics, as “Passion for the topic is the main drive for successful completion of the project”.

One participant however indicated that in retrospect she believed

“with the funding and support embedded in receiving a topic for which funding has been allocated, I could develop passion for that topic”.

Researchers often do not have sufficient knowledge and skills to understand the implications of topic selection

“One of the problems at the moment is that everyone is working on their own little research topic which does not contribute significantly to the overall progress in the profession”.

Identifying and building Universities’ research focus areas (niche) and informing potential researchers about it can contribute to topic selection and help to strengthen research capacity.

Lack of time could limit research output. All professionals face many competing claims to their time and when there are personnel shortages and high patient workloads, personal priorities and the priorities of the employer will most likely determine where time will be spent. In the Australian study of Cusick, clinician-researchers in contrast to non-researcher clinicians, saw time for research as support and a privilege afforded to them. For occupational therapists in private practice time is directly linked to their income or as they indicated.

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Theme 4: Research output

Oral presentation may be easier than publication and could even be the first step towards publication. The majority of participants found oral presentation less threatening than publication.

Participants saw the publication process as one for which few occupational therapists seem to be prepared. The participants appreciated the importance of publishing their research.

RECOMMENDATIONS FOR INDIVIDUALS, THE PROFESSION AND PRACTICE

At an individual level, occupational therapists need to be made aware of the different levels of research involvement (research consumer, researcher and research leader) and challenge themselves to reach their own highest level of functioning in this regard. Should this be on the level of consumer they need to use research to incorporate best evidence into their clinical practice through EBP. Monetary gains create a whole new perspective on research involvement and the time available for research, because with a monetary reward occupational therapists may be more amenable to become involved in research.

RECOMMENDATIONS FOR INDIVIDUALS, THE PROFESSION AND PRACTICE

At an individual level, occupational therapists need to be made aware of the different levels of research involvement (research consumer, researcher and research leader) and challenge themselves to reach their own highest level of functioning in this regard. Should this be on the level of consumer they need to use research to incorporate best evidence into their clinical practice through EBP. More workshops on EBP may equip more therapists to incorporate EBP in their day-to-day functioning. Individuals with an interest in research could be recruited by researchers to collect data as part of an in-service training in research. Researchers with experience could be recruited, perhaps through OTASA, to become national research leaders who can lead large research projects that could provide significant results for the knowledge base of the profession. Centres of research excellence could then be established where aspirant researchers could be initiated into research for example at University departments.

For the profession through OTASA, the research committee can take the lead in establishing a national occupational therapy research database containing information on undergraduate, post graduate and independent research which will improve access to research information and avoid unnecessary duplication of studies. This committee should further investigate the viability of a national research strategy. A national research strategy would include identifying priority research topics, infrastructure and capacity building through addressing the suggested actions e.g. writing retreats. Coordination of research can include fostering and informing occupational therapists on University research focus areas. Infrastructure building may include access to research funding through collaborative research projects supervised and initiated by post-doctoral candidates, to provide in service training for aspirant researchers in clinical areas and to link academics and clinicians in collaborative research.

CONCLUSION

The need for local/South African research to supply evidence that can be used in occupational therapy practice is vast. All SA occupational therapists receive research education and must have the personal attributes to be a researcher. The research process and research publication were identified as challenges and strategies by the profession to address these barriers need to be investigated.

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Appendix I

Interview schedule for focus groups

1. Introduction to research topic and preliminary results.
2. Focus group members share their own experiences of research: These serve as an ice breaker and also yield information on the crucial aspects that influence research orientation. This may also serve as a link to the following questions.
3. There seems to be a difference between what OT’s belief about research and what they do. Most agree that research is important yet only a few do it. What is your explanation for this?
4. What do you see as the value of research for occupational therapists?
5. Can occupational therapists in South Africa do evidence-based practice? The participants are asked to make a list of barriers to and support for research. They are also asked to compare their own list to the list of barriers and support that was identified in Phase I and to try and arrange it in priority order.
6. Discuss the barriers to research that you identified and how you experience it?
7. What support is available for research and how do you experience it?
8. Conclusion and wrap up.

Interview schedule for individual interviews

1. Can you please explain to me how you have been involved in publishing OT research?
2. Can you please explain to me over what period you have been involved in publishing OT research?
3. In my analysis of the results of the first part of the study I found that 80% of respondents have not published research even though 73% participated in research. Do you think that it is a common occurrence that research is conducted but not published?
4. What can be the reasons for the above mentioned?
5. The respondents indicated that they prefer to publish in the SAJOT. Is this also your experience?
6. Most of the respondents indicated that they did the research in collaboration. Would you say that this is also true from your experience?
7. Most of the respondents seem to have published only once. What do you think is the reason for this?
8. Do you have any suggestions for improving research participation amongst OT’s in South Africa?
9. Do you have any suggestions for improving publication amongst OT in South Africa?