

Occupational Therapy students: knowledge and skills regarding writing scientific articles

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From the year 2009, the Department of Occupational Therapy at the University of the Free State (UFS) has expected the final-year students to write a "scientific article" as an outcome of the fourth-year research module. These articles have to adhere to the standards of submission for publication, as specified in the South African Journal of Occupational Therapy (SAJOT)¹. The aim of this study was therefore to determine the knowledge and skills of the fourth-year Occupational Therapy students at the UFS regarding the writing of scientific articles.

The research module is presented over two semesters and consists of 16 credits. The module is presented by the departments of Occupational Therapy and Biostatistics at the UFS. At the end of the first semester, the students are expected to have the knowledge and skill to carry out basic statistical analyses and data interpretation. Towards completion of the second semester, students are expected to have acquired knowledge of the research process with respect to doing a literature study and writing a protocol.

Students work in groups of 5-7. A study leader from the department of Occupational Therapy and a biostatistician are involved in advisory and assessor capacities during the phases of planning the research project and data interpretation. The final outcome of the research module is the writing of a research article. For this purpose, two hours of lecturing time are allocated for the evaluation of the structure of published articles according to SAJOT's instructions for authors¹.

Methods

The data for this descriptive study were obtained by means of a pilot tested questionnaire completed by the students. In the questionnaire, students were asked to indicate on a scale from 0 – 5 how they would rate (i) their level of enjoyment regarding the research process, (ii) the quality of guidance given by their study leader, (iii) the knowledge of their study leader, (iv) their skill, and (v) acquired knowledge as a result of the course. The study was approved by the Ethics Committee of the Faculty of Health Sciences, UFS. All (34) fourth-year Occupational Therapy students of the year 2009 who completed an article for their fourth-year research project at the Department of Occupational Therapy, were approached to participate. Descriptive statistics, namely frequencies and percentages for categorical data and medians and percentiles for continuous data, were calculated.

Results

Twenty-nine (85.3%) students participated in the study. The students' median age was 22 years, ranging from 21 to 24 years. The phases of the research process were evaluated by the students regarding enjoyment, guidance quality, skill and knowledge (See Table 1 on page 3).

More than half (55.2%) of the students indicated low levels of enjoyment regarding the literature study at the beginning of the course. However, by the end of the process (finishing touches of the final product, 10.3%) there was a statistically significant improvement in their attitude as they became more positive towards this aspect of producing a research paper (95% Confidence Interval for the paired median difference [1 ; 3]). Although the quality of guidance by study leaders was viewed as relatively high on a score of 3, some students indicated a level of less than 3 for literature

study, data interpretation and discussion.

Most students (65.5%) indicated that they would do research in the future. Students viewed themselves as having relatively (median of 3) good skills and knowledge regarding the research phases (Table 1). Some (62.1%) students enjoyed the process of writing an article, most (93.1%) students thought they were prepared for writing an article in the future, and some (58.6%) also indicated they had the skill to write an article in future. Almost all (96.6%) students experienced obstacles during the writing of an article. The stages at which they experienced problems were as follows: 85.7% students experienced problems interpreting the results, 46.4% writing the abstract, 42.9% writing the discussion, 39.3% using references, 35.7% writing the methodology, 21.4% writing the introduction, and 7.1% writing the conclusion.

Some students (68.9%) found that their language skills were an impediment to the writing of the article. Of these, most (80.0%) thought their ability to write a good article would have benefited from exposure to scientific writing during the first two years of study.

Discussion

The students began the research process with low levels of enjoyment and then became more positive. Sixty-nine percent of students found their language skills in using a second language an obstacle. These obstacles included spelling, sentence construction, grammar and the use of English as a second language. This needs attention as Turner² notes that correct use of language, especially written language, is part of academic communication.

Students indicated a low level of skill and knowledge regarding the literature study and data interpretation. Even though students indicated the reasons for obstacles as the lack of experience and exposure, overall they had a positive view on their own skill and knowledge of writing a scientific article.

The results of this study reflect a sense of satisfaction and self-confidence, as displayed by the students' self-evaluation regarding their knowledge and skill, with reference to the writing of a scientific article. Lecturers find it encouraging to see students apply the input of their course, with writing of an article as a final outcome of the research module.

References

1. South African Journal for Occupational Therapy. Instructions to authors. http://www.otasa.org.za/otasa_journal/instruction_to_authors.html (Accessed on 12/06/09).
2. Turner J. 2004. Language as academic purpose. *Journal of English for Academic Purposes*, 3: 95-109.

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Table 1: Students' evaluation of the different phases of the research process

	Range	Median	Percentage indicating 0	Percentage indicating less than 3
Enjoyment level of student				
Literature study	0-5	2	10.3	55.2
Writing protocol	0-4	3	6.9	44.8
Data interpretation	0-4	3	6.9	24.1
Data written up in article format	0-5	3	3.4	24.1
Linking results with the literature	2-5	4	0	13.8
Finishing touches of the final product	1-5	4	0	10.3
Quality of guidance of study leader				
Literature study	1-5	3	0	41.4
Writing protocol	1-5	3	0	20.7
Data interpretation	0-5	3	6.9	44.8
Data written up in article format	1-5	3	0	27.6
Linking results with the literature	0-5	3	6.9	34.5
Finishing touches of the final product	0-5	3	10.3	31.0
Knowledge of study leader				
Literature study	1-5	4	0	10.3
Writing protocol	1-5	4	0	10.3
Data interpretation	1-5	4	0	17.2
Data written up in article format	1-5	4	0	10.3
Linking results with the literature	1-5	4	0	17.2
Finishing touches of the final product	0-5	4	3.4	17.2
Skill of student				
Literature study	1-4	3	0	27.6
Writing protocol	2-5	3	0	17.2
Data interpretation	1-5	3	0	27.6
Data written up in article format	2-5	3	0	6.9
Linking results with the literature	0-5	3	3.4	10.3
Finishing touches of the final product	2-5	4	0	3.4
Knowledge of student				
Literature study	2-5	3	0	20.7
Writing protocol	2-5	3	0	17.2
Data interpretation	0-4	3	3.4	34.5
Data written up in article format	2-5	3	0	24.1
Linking results with the literature	0-5	3	3.4	17.2
Finishing touches of the final product	1-5	3	0	13.8

Levels could be indicated from 0 to 5 (low-high)

