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The information needs of occupational therapy students: a case study

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Keywords:	Information needs analysis, Students, health, Libraries, health care, Case studies, Questionnaires
Abstract:	<p>This article summarises a case study on the information needs of Masters level Occupational Therapy (OT) students at one English university. A mixed methods questionnaire was used to explore motivators for information-seeking, preferred information resources, and barriers inhibiting the satisfaction of information needs. Thirteen recommendations for practice were formulated, focusing on how information professionals can best facilitate OT students' learning and evidence-based research skills in preparation for clinical practice. The study was completed by Jane Morgan-Daniel, who received a Distinction for her work from Aberystwyth University, where she graduated with an MSc in Information and Library Studies in December 2016. She has written this article together with her dissertation supervisor, Hugh Preston.</p> <p>AM</p>

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Background

Few studies discuss the information needs of Occupational Therapy (OT) students, even though thirty-one British universities offer OT programmes. British pre-registration courses are accredited by The College of Occupational Therapists, whose standards specify that universities must “support the development of professionals committed to practising in an evidence-informed manner” (2014, p. 3). Through a greater understanding of OT students’ information needs, health information and library services would be better placed to support the missions of their parent institutions in relation to these standards.

The distinctive nature of OT practice further highlights the need for a focussed investigation. Practitioners help patients overcome the physical and mental effects of illness, accident or old age that are preventing them from doing the self-care, work or leisure activities that matter to them (Turner, Foster & Johnson, 2002). Interventions are evidence-based, client-centred and context dependent.

Literature review

A distinction can be made between systems-oriented and user-centred information needs literature. Systems-oriented theorists consider an information need to be a rational decision that a particular piece of information is required to solve a problem (Case, 2007). In contrast, this study is situated within the user-centred research tradition that regards information needs as dynamic, subjective and contextual. Its methodology is drawn from key commentators such as Dervin and Nilan (1986), Kuhlthau (1991) and Case (2007). Accordingly, an information need is viewed as a subjective product of an individual’s demographic background, personality and occupation. This investigation focused on occupation as the primary variable; the term occupation refers to Masters level OT students.

A thematic literature review relating to the information needs of healthcare students, qualified OTs, and OT students was undertaken. Although there are a number of studies on nursing, medical, social work and allied health students, a substantial literature gap exists regarding OT students. Three overarching themes were identified: motivators for information-seeking, preferred information resources, and barriers inhibiting the satisfaction of information needs.

The most common motivators for information-seeking were completing academic assignments, acquiring workplace skills, and adhering to evidence-based practice (EBP) on placements (Stube & Jedlika, 2007; Stronge & Cahill, 2012; Kipnis & Frisby, 2001). The following barriers to information needs resolution were discerned: information literacy (IL) skills, awareness of library collections, and the accessibility and availability of information services and resources. Preferences for particular information resources were influenced by these barriers, as well as by each user group’s tasks and role requirements (Stube & Jedlika, 2007; Stronge & Cahill, 2012; Kipnis & Frisby, 2001). These themes directly informed the study’s research objectives and methodology.

Research objectives

1. To ascertain OT students’ motivators for information-seeking

2. To determine which information sources are used and why
3. To establish the barriers inhibiting the satisfaction of information needs

Methodology

A mixed methods research design was selected (Bryman, 2012) and the research strategy was a single case study (Gray, 2013; Pickard, 2007). A university in northern England was selected as a representative case and a link with the institution was made through a key contact. The research instrument was a self-completion questionnaire and question formulation occurred thematically in relation to the study's objectives. Open questions and inductive data analysis enabled in-depth examination of the students' perceptions. Closed questions and quantitative data analysis were used concurrently to offset the potential weaknesses of an exclusively qualitative research design .

The key contact in the case study institution facilitated participant recruitment and the final sample was 27 students. The localised scope enabled intensive examination of the contextual relationships between the occupational environment and the students' information needs.

The questionnaire was piloted by the key contact and two recently qualified OTs. A faculty member administered the survey via email attachment. Informed consent was gained through a written invitation. Respondents were asked to email the completed questionnaire to the researcher or faculty member.

Patterns within the qualitative and quantitative data sets were identified through thematic analysis and non-parametric descriptive data analysis respectively.

Results

Eight questionnaires were returned, which represented a response rate of 23%. Thematic coding confirmed the presence of three overarching themes: motivators for information-seeking, preferred information resources, and barriers inhibiting the satisfaction of information needs. A number of subthemes emerged inductively. These were reviewed in relation to the total data set. The statistical results are indicative and not statistically significant or generalisable.

Findings

The findings are presented using the three Research Objectives as headings and respondent comments are included where appropriate to illustrate the points made.

Motivators for information-seeking

Completing academic assignments was a primary motivator for information-seeking. Three associated IL training needs were identified: formulating research questions, developing search strategies and critical appraisal. Participants also emphasised the acquisition of academic writing skills, presentation skills and understanding medical terminology.

Question: What services would your ideal library provide?

1
2
3 *“Regular sessions...on formulating search strategies & how to*
4 *search databases... Knowing how to search for information*
5 *effectively & efficiently would save me time during assignments.”*
6
7

8 The second motivator was EBP while on placement. Tasks prompting information-
9 seeking included: patient diagnosis, assessment, intervention planning, therapy
10 procedures and outcomes prediction, understanding client perceptions, and patient
11 education. Other EBP-related information needs included anatomy, medication side
12 effects, nursing procedures and medical prognoses. The perceived clinical relevance
13 of information was dependent upon whether it was occupation focussed, inclusive of
14 physical and mental conditions, client-centered, and applicable to the local clinical
15 setting.
16

17
18 Question: What clinical tasks prompt you to look for information?
19

20 *“understanding impacts of physical & mental conditions on*
21 *functioning”*
22

23 *“Participation in ward rounds prompted me to look for info re:*
24 *diagnoses, assessment procedures”*
25

26 *“patient diagnosis, prognosis, assessment procedures, outcome*
27 *measurement tools”*
28

29
30 The development of soft and hard workplace skills was a further motivator for
31 information-seeking. The following skills were cited: verbal communication, time
32 management, caseload prioritisation, reflective practice and resources management.
33

34 **Which information sources were used and why**

35 Preferred resources were related to the students’ occupational role requirements and
36 contextual barriers to information needs resolution. Three categories of information
37 resources were identified: human (colleagues, peers, patients, librarians), printed
38 (textbooks, journals, lecture slides and handouts) and electronic (e-journals, e-books,
39 bibliographic databases, non-subscription e-resources). A mixture of all three
40 categories were used for clinical tasks, reflecting the perceived importance of
41 integrating anecdotal and research evidence into OT practice. For questions relating to
42 patient assessment and care the respondents conveyed a preference for anecdotal
43 evidence from clinical supervisors and OTs. Colleagues’ advice was considered
44 accessible, authoritative and applicable to the local clinical environment. Only 25% of
45 the respondents selected peers and none chose library staff.
46
47

48 Published evidence was most often accessed through internet search engines even
49 though the students recognised the importance of using reputable source material to
50 answer clinical questions.
51

52
53 Question: How do you evaluate whether research evidence is useful for a specific
54 patient case?
55

56 *“Who has published the evidence and whether they have an*
57 *agenda. Has the evidence been collected [by] an objective*
58 *researcher”*
59
60

1
2
3
4 E-journals were ranked second to internet search engines but were still highly valued
5 for clinical tasks. None of the respondents reported searching bibliographic databases
6 during clinical practice, inferring that complexity of access made them unsuitable for
7 the fast-paced clinical environment. Similarly, the majority did not use point-of-care
8 tools during placements. This can perhaps be explained by the students'
9 conceptualisation of clinical relevance in comparison to the medical focus of point-of-
10 care tools. However, the participants' clinical information needs also extended to
11 understanding medical reports. This implies that the students were either unaware of
12 local subscriptions or that the potential applications of point-of-care tools within OT
13 practice were unrecognised. Textbooks and lecture slides or handouts were used to
14 answer questions on placements, but were considered far less useful for writing
15 academic assignments. This apparent inconsistency can perhaps be attributed to the
16 barriers associated with accessing subscription e-resources while on placement.
17
18

19
20 The preferred resources for non-clinical academic tasks were e-journals, internet
21 search engines and bibliographic databases. The popularity of internet search engines
22 for both clinical and non-clinical tasks indicates that the students valued interfaces
23 requiring minimal time and cognitive costs. The utilisation of bibliographic databases
24 for assignment writing, but not within clinical practice, further suggests that time
25 constraints imposed by clinical tasks acted as an accessibility barrier for resources
26 with complex search interfaces. The students used an interdisciplinary mix of
27 bibliographic databases when carrying out research. This was most likely due to the
28 multidisciplinary nature of OT practice and the relative dearth of OT specific research
29 evidence in comparison with other healthcare fields. CINAHL and OTSeeker were
30 cited most frequently, alongside the Cochrane Library, MEDLINE, PubMed and
31 PsycINFO. PubMed and the Cochrane Library do not require institutional
32 subscriptions, which perhaps explains the seemingly incongruous use of internet
33 search engines by participants with such high regard for EBP.
34
35

36 **Barriers inhibiting the satisfaction of information needs**

37 Five contextual barriers inhibited the resolution of the students' information needs:
38 library staff, IL skills, lack of awareness of library collections, and the accessibility
39 and availability of information resources and services.
40

41
42 Over one-third of the respondents stated that library staff had limited awareness of OT
43 as a distinct profession.
44

45 Question: What services would your ideal library provide?

46
47 *“Librarians that have a full understanding of the OT role, often
48 little is known about the role and scope of practice which can be
49 frustrating”*
50

51
52 *“Librarians not knowing about the role of the OT and the depth of
53 service that OT covers”*
54

55 With little knowledge of OTs' role requirements, the students felt that library staff did
56 not understand the differences between their information needs and those of other
57 healthcare students. In consequence, staff-mediated services were seen as fairly
58
59
60

1
2
3 irrelevant in terms of day-to-day OT practice. This negative perception was
4 exacerbated by lack of awareness of library resources and services.
5

6 All respondents recognised the importance of IL skills in relation to EBP on
7 placement. However, irregular library training sessions were considered a significant
8 barrier to the acquisition of IL skills. The students noted the following training needs:
9 formulating searchable questions, developing search strategies, choosing relevant
10 databases, using database limits, locating full-text articles, critical appraisal and
11 improving information-seeking confidence.
12

13
14 Question: What services would your ideal library provide?
15

16 *"Librarians available to help students search for specific research*
17 *articles, locate resources, build search strategies and build*
18 *confidence within the library environment"*
19

20 *"Regular sessions that focus on formulating search strategies &*
21 *how to search databases. We had one training session...but*
22 *required more practice"*
23

24 The accessibility of library resources was a further barrier. The perceived usefulness
25 of resources was linked to ease of access. The physical location of libraries in relation
26 to placements was considered a barrier to printed resources, alongside unsuitable
27 opening hours. Heavy workloads and time constraints during clinical practice
28 intensified the impact of these barriers. Three accessibility barriers were identified
29 within the libraries themselves: inadequate signage for OT print collections, limited
30 study space, and too few core textbooks
31

32
33 Question: What services would your ideal library provide?
34

35 *"Clear OT sections with relevant up to date resources"*
36

37 *"Longer & more appropriate opening hours"*
38

39 *"everyone wants the same book...which means long wait times or*
40 *not using that book"*
41

42 *"facilities to work in such as desk space"*
43

44
45 The popularity of textbooks on placement was most likely due to the technological
46 barriers associated with accessing subscription e-resources remotely. The following
47 problems were identified by at least one-quarter of the respondents: complex log-in
48 procedures, inconsistent Wi-Fi coverage, complicated software installation, slow
49 loading times, mobile incompatibility and a lack of computers.
50

51
52 The final barrier was the availability of resources and services. The majority felt that
53 library resources were often out-of-date, limited in scope, unrelated to OT practice,
54 not specialty specific and inapplicable to the local clinical setting. This was partially
55 attributed to the general absence of OT research literature.
56
57
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1
2
3 Question: What are the main differences between the information resources needed by
4 OT students in comparison with other Allied Health students?
5

6 *“we need in depth information covering many conditions and how*
7 *this impacts on skills & performance in everyday activities - this*
8 *research is lacking”*
9

10 As such, the students experienced difficulties locating occupation-focussed evidence.
11 This contributes towards explaining the students’ preference for human information
12 resources during clinical practice. Inconsistent service availability across placement
13 libraries was a further problem, as was lack of awareness of subscription resources.
14

15
16
17 *“electronic resources, up to date and relevant books, library*
18 *services subscribed to all journals that OT students may need”*
19

20 *“evidence that is more holistic and addresses... both mental*
21 *health conditions and physical illnesses”*
22

23 *“medical based information and sociological information due to*
24 *its holistic nature”*
25
26
27

28 **Conclusion**

29 Thirteen recommendations for practice are set out in Appendix One. These relate to
30 the associated factors found to contribute to OT students’ library use and non-use:
31 library staff skills, library space, regular user training, comprehensive collections
32 management, and targeted publicity of relevant library services and resources. It is
33 anticipated that implementation of the recommendations would influence the policies
34 and procedures of health information and library services, better enabling them to
35 support the missions of their parent institutions in relation to the College of
36 Occupational Therapists’ (2014) standards for pre-registration education.
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Appendix One: Recommendations for practice

Library staff skills	1. Ensure staff are aware of OT as a distinct profession and OTs' typical role requirements
Library space	2. Provide clear signage for OT print collections 3. Extend library opening hours
User training	4. Offer regular training on IL, citing references, structuring essays and presentation skills
Collections	5. Purchase resources covering academic and clinical writing skills, presentation skills, career development, workplace skills, and medical and nursing terminology 6. Ensure current subscriptions to the following e-journals and bibliographic databases; The British, American and Canadian Journals of Occupational Therapy, CINAHL, MEDLINE and PsycINFO 7. Regularly update print collections with new books on OT specialties 8. Liaise with university faculty members for up-to-date reading lists and student numbers to ensure sufficient numbers of core textbooks 9. Provide user-friendly authentication systems for e-resources, downloadable content, mobile compatible apps, and library catalogues with simple search interfaces
Publicity	10. Publicise the benefits of point-of-care tools 11. Publicise freely available bibliographic databases of relevance to OT students (OTSeeker, Cochrane Library, PubMed) 12. Publicise librarians' IL expertise and knowledge of OT practice through personal contact with students at the beginning of degree programmes 13. Publicise purchased printed resources and e-resources relevant to OT students